

New Zealand Department of Scientific and Industrial Research
GEOPHYSICS DIVISION

NEW ZEALAND

SEISMOLOGICAL
REPORT

1970

SEISMOLOGICAL OBSERVATORY BULLETIN

E-157



New Zealand Department of Scientific and Industrial Research
GEOPHYSICS DIVISION

NEW ZEALAND
SEISMOLOGICAL
REPORT
1970

SEISMOLOGICAL OBSERVATORY BULLETIN

E-157



THE OBSERVATORY'S POSTAL ADDRESS IS

SEISMOLOGICAL OBSERVATORY
P O BOX 1320
WELLINGTON
NEW ZEALAND

ALL MEASUREMENT AND INTERPRETATION OF RECORDS
IS CARRIED OUT AT THE CENTRAL STATION.
REQUESTS AND COMMUNICATIONS SHOULD THEREFORE
BE SENT TO THE SUPERINTENDENT AT THE ABOVE ADDRESS.

Published in 1978

CONTENTS

	<u>Page</u>
Scientific Staff	4
Introduction	5
Stations of the New Zealand Network	
The Network in 1970	7
Three-Letter Station Codes	7
Index of Station Positions	8
Station Timing Arrangements	9
Instrumentation and Lithology	9
Earthquakes in the New Zealand Region	
Principal Earthquakes in 1970	13
Instrumentally Determined Origins	17
List of Origins	18
Station Readings for N.Z. Earthquakes	35
Felt Earthquakes	
The Felt Reporting System	297
Places Reporting Felt Earthquakes in 1970	300
Earthquakes Felt in Standard Localities	314
Unconfirmed Reports	319
Felt Earthquake Reports from outside New Zealand	321
Publications by Staff Members	322
Exchange Agreements	325
List of Maps	328

SCIENTIFIC STAFF

WELLINGTON

Superintendent: R.D. Adams, M.A., M.Sc. (N.Z.), Ph.D.
(Cantab.).

Seismologists: R.A. Arms, B.Sc. (N.Z.), M.A. (Calif.);
G.A. Eiby, M.Sc.; M.A. Lowry, B.Sc.;
M.G. Muir, M.Sc.; M.J. Randall, M.Sc.,
Ph.D. (Calif.); A.A. Thomson, M.Sc.;
D.E. Ware, B.Sc.

Senior
Technical Officer: R.H. Orr.

Technical Officers: J.F.H. Harper; R.C. Martindale;
J.H.P. Sorenson.

Technicians: P.M. Green; M.R. Huband; G.K. Jackson;
R.D. Maunder; L. Urquhart.

Typist: J.C. Koot.

APIA

Observer-in-Charge: P.D. Müller, B.Sc.
Observer/Technician: I. Anapu.

RAROTONGA

Observer-in-Charge: R.P. Phillips (until May).
B.P. Dundas (from May).

RAOUL ISLAND

Observer: R.T. Mulligan.

CAMPBELL ISLAND

Observer: P.J. Owens.

SCOTT BASE

Observer: R.J. McKerrow.

VANDA

Observer: P.J. Liddell.

INTRODUCTION

The appearance of the New Zealand Seismological Report for 1970 closes a gap in the published data that has persisted for some years. This gap originated when an accelerated demand for data by the International Seismological Centre coincided with the unusually heavy burden already placed on the Observatory staff by the occurrence of the Inangahua earthquake in 1968 May, and the numerous aftershocks that followed. It was decided to concentrate upon keeping current work up to date, with the result that publication of the 1971 Report followed that for 1967. Teleseismic readings were sent to the international data centres as manuscript or punched cards.

In layout and content this Report is similar to that for 1971, except that the section dealing with distant earthquakes has been omitted, the information being already available in the publications of the International Seismological Centre. At present, all Reports up to that for 1976 have either appeared or are in the press. The annual volumes are now ready for printing in the latter half of the following year. Seismologists and others urgently requiring data not yet published are invited to ask whether relevant sections can be made available in manuscript form.

It is appropriate to note that the staff listed in the preceding section are those working at the Observatory in 1970. The present volume also owes much to their successors, who are appropriately listed in the Reports for subsequent years.

CONTENTS

STATIONS OF THE NEW ZEALAND NETWORK

THE NETWORK IN 1970

In 1970, the New Zealand seismograph network consisted of 25 stations within the two main islands of New Zealand, and 9 others covering a region extending across the south-west Pacific from Samoa, Fiji and Rarotonga to the Antarctic. The stations are of two kinds, one having short-period instruments intended to record shocks originating within about a thousand kilometres, and the other having long-period instruments designed to provide information about distant earthquakes and the physical conditions in the Earth's interior. These functions interlock, and every seismograph yields information of use in both fields. No new stations were added during the year and there were no major changes to the equipment.

THREE-LETTER STATION CODES

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

Afiamalu	AFI	Gebbies Pass	GPZ	Rarotonga	RAR
Apia	API	Gisborne	GNZ	Roxburgh	ROX
Auckland	AUC	Great Barrier	GBZ	Scott Base	SBA
Campbell Island	CBZ	Kaimata	KAI	Suva	SUV
Cape Reinga	CRZ	Karapiro	KRP	Taradale	TRZ
Castlepoint	CAZ	Mangahao	MNG	Tarata	TNZ
Chateau	CNZ	Milford Sound	MSZ	Tuai	TUA
Chatham Islands	CIZ	Monowai	MNW	Vanda	VND
Christchurch	CHR	Mount John	MJZ	Waipapa Point	WPZ
Cobb River	COB	Oamaru	OMZ	Wairakei	WNZ
East Cape	ECZ	Onerahi	ONE	Wellington	WEL
		Raoul Island	RAO		

INDEX OF STATION POSITIONS

STN	LATITUDE			LONGITUDE			ALT M	GEOCENTRIC DIRECTION COSINES					
	D	M	S	D	M	S'		A	B	C			
AFI	13	54	34 S	171	46	38 W	706	-0,961	070	-0,138	881	-0,238	865
API	13	48	26 S	171	46	30 W	2	-0,961	482	-0,138	979	-0,237	142
AUC	36	51	36 S	174	46	41 E	79	-0,799	711	+0,072	996	-0,597	271
CAZ	40	54	15 S	176	13	34 E	6	-0,756	343	+0,049	889	-0,652	270
CBZ	52	33	03 S	169	09	33 E	30	-0,599	744	+0,114	849	-0,791	907
CHR	43	31	58 S	172	37	36 E	8	-0,721	282	+0,093	336	-0,686	324
CIZ	43	57	18 S	176	33	56 W	49	-0,720	923	-0,043	266	-0,691	663
CNZ	39	12	00 S	175	32	51 E	1116	-0,774	682	+0,060	322	-0,629	467
COB	41	05	16 S	172	44	02 E	213	-0,749	824	+0,095	603	-0,654	694
CRZ	34	25	55 S	172	40	47 E	140	-0,619	834	+0,105	317	-0,562	833
ECZ	37	41	37 S	178	32	46 E	40	-0,793	026	+0,020	126	-0,608	855
GBZ	36	13	04 S	175	28	52 E	70	-0,806	157	+0,063	712	-0,588	262
GNZ	38	38	39 S	178	01	21 E	30	-0,782	622	+0,027	021	-0,621	911
GPZ	43	41	47 S	172	38	40 E	225	-0,719	365	+0,092	861	-0,688	397
KAI	42	31	33 S	171	24	31 E	82	-0,730	944	+0,110	432	-0,673	443
KRP	37	55	30 S	175	32	15 E	64	-0,788	423	+0,061	530	-0,612	049
HJZ	43	59	14 S	170	27	58 E	1000	-0,711	861	+0,119	537	-0,692	069
MNQ	40	37	07 S	175	28	59 E	396	-0,755	859	+0,059	953	-0,648	488
MNW	45	46	49 S	167	37	07 E	155	-0,683	548	+0,150	034	-0,714	315
MSZ	44	40	14 S	167	55	01 E	38	-0,697	720	+0,149	361	-0,700	627
OMZ	45	04	14 S	170	54	53 E	95	-0,699	729	+0,111	893	-0,705	591
ONE	35	46	33 S	174	21	45 E	30	-0,809	242	+0,079	881	-0,582	020
RAD	29	15	1 S	177	55	1 W	110	-0,873	304	-0,031	742	-0,486	140
RAR	21	12	45 S	159	46	24 W	28	-0,875	524	-0,322	592	-0,359	711
ROX	45	28	33 S	169	19	13 E	106	-0,691	423	+0,130	391	-0,710	586
SBA	77	51	01 S	166	45	22 E	38	-0,206	194	+0,048	529	-0,977	307
SUV	18	08	56 S	178	27	26 E	6	-0,950	524	+0,025	599	-0,309	595
TNZ	39	11	14 S	174	22	49 E	123	-0,773	432	+0,076	103	-0,629	294
TRZ	39	33	12 S	176	49	17 E	17	-0,771	946	+0,042	868	-0,634	241
TUA	38	48	29 S	177	09	02 E	274	-0,780	343	+0,038	839	-0,624	145
WEL	41	17	10 S	174	46	06 E	122	-0,750	486	+0,068	717	-0,657	304
WNZ	38	37	53 S	176	06	10 E	350	-0,781	415	+0,053	232	-0,621	736
WPZ	46	39	37 S	168	50	59 E	15	-0,675	767	+0,133	195	-0,724	982
VND	77	31	26 S	161	40	19 E	150	-0,206	396	+0,068	371	-0,976	077

TIMING ARRANGEMENTS

The Seismological Observatory is administratively responsible for the New Zealand Time Service, which broadcasts 15 sets of time signals daily through the stations of the New Zealand Broadcasting Corporation. These signals, whose error seldom exceeds 20 msec, are automatically impressed upon the records at all stations within New Zealand. The arrangements used have been described by B.H. Olsson (N.Z. Journal of Science and Technology, Vol. 37B, pp. 115-8, 1955 Sep.). Minute marks are derived from a quartz crystal clock, except at Wairakei, which has an electric pendulum clock of the Synchronome type. Stations of the World-Wide Standard Seismograph Network have the timing arrangements usual at such stations. At Suva, the operator records several time-signals a day by depressing a hand-key when the signal is heard.

All times in this Report are given in Universal Time. New Zealand Standard Time is 12 hours and Daylight Time 13 h in advance of U.T.

INSTRUMENTATION AND LITHOLOGY

Stations are listed in the alphabetical order of their international three-letter code designations. Pendulum and galvanometer periods T_0 and T_g are given in seconds. The damping of electromagnetic instruments, when not listed, may be assumed to be critical. Magnifications listed are for the period of maximum response.

Instrument	Compt	T_0	T_g	Damping	Magnification
API AFIAMALU					
World-Wide Standard Station.					
Foundation: Basaltic lava flows.					
Benioff	ZNE	1.0	0.75		12 500 at 1.0 sec
Press-Ewing	ZNE	15	100		750 at 15 sec
API APIA					
Foundation: Coral sand on Recent and Pleistocene basalt.					
Willmore I (Photo-cell amplifier used with pen-and-ink recorder)					
	Z	0.7	0.5		
AUC AUCKLAND					
Foundation: Volcanic beds on Tertiary sandstone and mudstone.					
Willmore I (Photo-cell amplifier used with pen-and-ink recorder)					
	Z	1	2		7 600 at 0.8 sec
GAZ CASTLEPOINT					
Foundation: Mudstone.					
Sprengnether	ZNE	15	100		150 (nominal)

Instrument	Compt	To	Tg	Damping	Magnification
CBZ CHRISTCHURCH					
Foundation: Alluvial sands, silts, and gravel.					
Willmore I (Photo-cell amplifier used with pen-and-ink recorder).					
	Z	1	0.5		4 700 at 0.6 sec (max.)
CIZ CHATHAM ISLANDS					
Foundation: Clay over basalt.					
Willmore II	Z	1.0	0.25		4 440 at 0.2 sec
	N	1.0	0.25		5 110 at 0.2 sec
	E	1.0	0.25		4 400 at 0.2 sec
GNZ CHATEAU					
Foundation: Volcanic ash and lava.					
Willmore I	Z	1.0	0.25		44 980 at 0.3 sec
COB COBB RIVER					
Foundation: Schist.					
Willmore II	Z	1.0	0.25		27 450 at 0.2 sec
CRZ CAPE REINGA					
Foundation: Cretaceous basic volcanics.					
Willmore II	Z	1.0	0.25		9 345 at 0.25 sec
	N	1.0	0.25		10 200 at 0.20 sec
	E	1.0	0.25		9 785 at 0.20 sec
ECZ EAST CAPE					
Foundation: Mudstone and sandstone.					
Willmore II	Z	1.0	0.25		5 200 at 0.3 sec
GBZ GREAT BARRIER					
Foundation: Tertiary volcanics.					
Willmore II	Z	1.0	0.25		23 750 at 0.25 sec
GNZ GISBORNE					
Foundation: Alluvium on Tertiary mudstone.					
Willmore II	Z	1.0	0.25		23 970 at 0.25 sec
	N	1.0	0.25		25 550 at 0.2 sec
	E	1.0	0.25		26 110 at 0.2 sec
GPZ GEBBIES PASS					
Foundation: Rhyolite.					
Wood-Anderson	N	0.8		crit.	2 800
KAI KAIMATA					
Foundation: Moraine and river gravels over Tertiary mudstone and sandstone.					
Wood-Anderson	X	0.8		crit.	2 800
This instrument is oriented so that the X-component lies north-east.					

	Instrument	Compt	To	Tg	Damping	Magnification
KRP	KARAPIRO					
	Foundation:	Greywacke.				
	Benioff	Z	1.0	0.25		36 500 at 0.3 sec
		N	1.0	0.25		40 000 approximately
		E	1.0	0.25		43 200 at 0.5 sec
MJZ	MOUNT JOHN					
	Foundation:	Greywacke.				
	Willmore II	Z	1.0	0.25		30 480 at 0.25 sec
		N				43 600 at 0.25 sec
		E				41 050 at 0.25 sec
MNG	MANGAHAO					
	Foundation:	Greywacke.				
	Willmore II	Z	1.0	0.25		48 600 at 0.3 sec
MNW	MONOWAI					
	Foundation:	Tertiary sandstone.				
	Willmore II	Z	1.0	0.25		28 800 at 0.25 sec
MSZ	MILFORD SOUND					
	Foundation:	Gneiss.				
	Willmore II	Z	1	0.25		52 650 at 0.25 sec
ONZ	OAMARU					
	Foundation:	Recent deposits overlying Tertiary limestone.				
	Willmore II	Z	1.0	0.2		9 355 at 0.2 sec
ONE	ONERAHI					
	Foundation:	Basalt.				
	Wood-Anderson	E	0.8		crit.	2 800
RAO	RAOUL ISLAND					
	Foundation:	Volcanic rock.				
	Willmore II	Z	1.0	0.25		4 800 at 0.25 sec
RAR	RAROTONGA					
	World-Wide Standard Station.					
	Foundation:	Basalt.				
	Benioff	ZNE	1.0	0.75		6 250 at 1 sec
	Press-Ewing	ZNE	15	100		375 at 15 sec
ROX	ROXBURGH					
	Foundation:	Chlorite schist.				
	Willmore I	Z	1.0	0.25		12 100 at 0.25 sec
	Galitzin	Z	12	12		200 approximately
		NE	24	24		300 approximately

	Instrument	Compt	To	Tg	Damping	Magnification
SBA	SCOTT BASE					
	World-Wide Standard Station.					
	Foundation: Frozen basaltic debris resting on lava-flows.					
	Benioff	ZNE	1.0	0.75		6 250 (summer) 25 000 (winter)
	Press-Ewing	ZNE	30	100		750 (summer) 1 500 (winter)
SUV	SUVA					
	Foundation: Hard fine-grained calcareous marl.					
	Willmore II	Z	1.0	0.25		13 000 at 0.2 sec
TNZ	TARATA					
	Foundation: Pleistocene mudstone.					
	Willmore II	Z	1.0	0.25		7 000 at 0.2 sec
TRZ	TARADALE					
	Foundation: Quaternary sands and silts overlying Tertiary limestone.					
	Willmore II	Z	1.0	0.25		5 545 at 0.25 sec
TUA	TUAI					
	Foundation: Thick Tertiary sandstone and mudstone.					
	Willmore II	Z	1.0	0.25		7 500 at 0.2 sec
VND	VANDA					
	Foundation: Granite gneiss intruded by quartz porphyry dykes.					
	Willmore II	Z	1	0.25		50 000 at 0.2 sec
WEL	WELLINGTON					
	World-Wide Standard Station.					
	Foundation: Greywacke.					
	Benioff	ZNE	1.0	0.75		6 250 at 1.0 sec
	Press-Ewing	ZNE	15	100		750 at 15 sec
	Willmore II	Z	1.0	0.25		22 750 at 0.20 sec
	Wood-Anderson	NE	0.8		crit.	1 400
	Imamura	Z	1		5:1	1
		NE	4		5:1	1
	The Willmore Z instrument is operated at the bottom of a borehole approximately 60 metres deep.					
WNZ	WAIRAKEI					
	Foundation: Pumice breccia.					
	Willmore I	Z	1.0	0.25		300 approximately
WPZ	WAIKAPA POINT					
	Foundation: Sand overlying Jurassic sediments.					
	Willmore II	Z	1	0.25		3 000 at 0.2 sec

EARTHQUAKES IN THE NEW ZEALAND REGION

PRINCIPAL EARTHQUAKES IN 1970

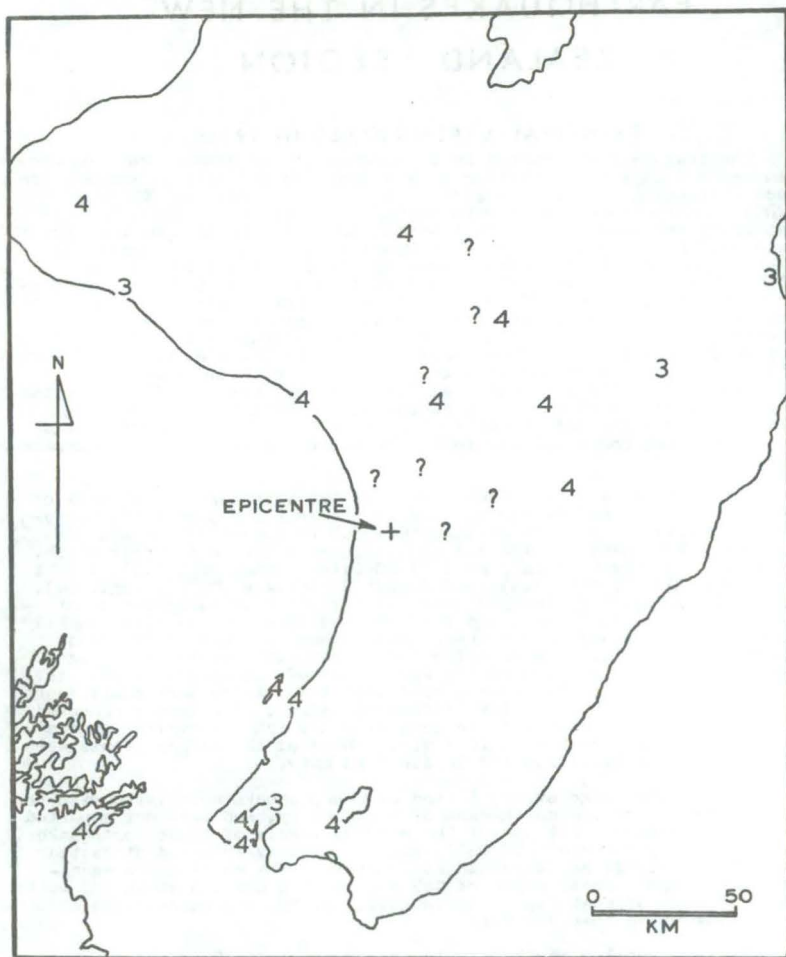
The year 1970 was marked by an absence of earthquakes causing more than minor damage or attracting very widespread attention. Indeed, the shock attracting most public attention was one on January 20 (Origin 70/051) centred more than 300 km beyond the Kermadec Islands, between that group and Tonga. This earthquake was felt over an unusually great distance. Not only was it felt on Raoul Island, where the intensity reached MM5, and at scattered places on the east coast of the North Island, but also in Christchurch and at Apia in Western Samoa, two places separated by some 3,600 km. Because of their restricted distribution in azimuth, New Zealand stations alone cannot provide an adequate location of a shock at this distance. The epicentre and focal depth adopted (80 km) are therefore those assigned by the U.S. Coast and Geodetic Survey, who also assign a magnitude (m_b) of 6.5. This value is also assigned by the International Seismological Centre. In this magnitude range, values of m_b should be consistent with the values of M_L allotted to New Zealand shocks in this report. Considering the large area over which the shock was felt, the USCGS and ISC magnitudes appear anomalous.

The most noteworthy seismic event of the year was the outbreak of a swarm of small shallow earthquakes in the southern part of the Coromandel Peninsula. A shock of magnitude 3.7 on August 12 (Origin 70/455) was followed by many similar and smaller events during the next month. The largest events were on August 13 (Origin 70/462, mag. 4.3), August 26 (Origin 70/507, mag. 4.6), and August 27 (Origin 70/511, mag. 4.4). The shock on August 13 damaged some old buildings on sandy water-saturated foundations in Thames, and this and the later shocks also cracked house foundations and caused other minor damage at Puru, a few kilometres to the north. The distribution of recording stations is such that very precise location of the epicentres of the smaller shocks is not possible, but it can be concluded that the origins were confined to an area of not more than a few kilometres radius. The damage observed on a visit to the region and the area within which the smaller shocks were felt is consistent with this view. Some of the larger events were felt on the Hauraki Plains and in Auckland city.

Most of the large events listed are deep shocks associated with the Kermadec Trench to the north-east of the country, and were not reported felt in New Zealand, but one of the more southerly of these earthquakes, that on January 8 (Origin 70/021), was very widely felt and attracted attention in places as far south as Westport. The shock had a magnitude of 6.6 and a focal depth of 159 km, and was centred about 350 km to the north-east of East Cape. An intensity of MM5 was experienced at several places in that vicinity.

The only shallow earthquake to exceed magnitude 6 occurred on March 30 (Origin 70/180). Its epicentre lay on the Macquarie Ridge, some 400 km south-west of the South Island. Its magnitude was 6.1, and it was felt at several places in south-eastern Otago, including the city of Dunedin, but no intensities above MM4 were reported.

The largest event strictly within the main New Zealand seismic regions was a shock of magnitude 5.8 on July 27 (Origin 70/427, see Map 3) with a depth of 129 km, centred near East Cape. The felt area was confined to the eastern Bay of Plenty and northern Hawke's Bay, except for an isolated report from Paraparaumu Beach, with no intensities above MM4.



Distribution of Felt Intensities in the Earthquake
of 1970 Dec. 18 (Origin 70/810)

The numbers represent Modified Mercalli intensities. Where a question-mark is shown, the shock was felt but no other information is available. It does not seem justifiable to suggest isoseismals.

A shock of magnitude 5.2 on March 12 (Origin 70/153) which was fairly widely reported in the Central North Island had a focal depth of 99 km, and an epicentre just east of Lake Taupo.

None of the shallow shocks was large. The more important are a shock of magnitude 5.3 on August 13 (Origin 70/464) in the Lake Coleridge area, felt near the epicentre and at a number of places in Westland, and one of magnitude 5.1 on September 28 (Origin 70/618), with a somewhat unusual epicentre on the southern flank of the Chatham Rise. It was felt on Banks Peninsula. Unusual wave movements some two and a half hours after the shock were reported from the mouth of the Waiho River. This seems too late for them to be related to the earthquake. Seas were high at the time.

On December 18 a shock of magnitude 5.1 centred between the lower reaches of the Manawatu and Rangitikei rivers was followed an hour and a quarter later by an aftershock of magnitude 4.9 with almost the same epicentre (Origins 70/810 and 811). Both attracted widespread attention in southern Taranaki and throughout the Wellington province. No material damage was reported, but there were brief interruptions to power and telephone services. There were several smaller aftershocks.

Other shallow earthquakes calling for comment occurred on February 14 (Origin 70/110), May 1 (Origin 70/242), and June 17 (Origin 70/336). The first of these, of magnitude 4.9 was centred in the eastern Wairarapa and was felt throughout the Wellington province and in central parts of the North Island with intensities of MM4 or less. The second shock, also of magnitude 4.9, affected north Canterbury and was centred west of Kaikoura. The shock on June 17, with the slightly smaller magnitude of 4.8 was reported to have produced an intensity of MM5 in Hastings and was felt at a number of places in central and western Hawke's Bay, near the epicentre. Southern Hawke's Bay experienced a shock of magnitude 5.0 on September 25 (Origin 70/611) which produced isolated felt reports from the central part of the island and from just north of Wellington.

Two shocks felt in Southland and Otago both had deeper than normal foci, near the northern end of Lake Te Anau. The first, on June 12 (Origin 70/327, See Map 3) was of magnitude 5.3 and 121 km deep; the second, on December 3, magnitude 5.0, at a depth of 97 km.

Finally, attention should be drawn to three small shallow earthquakes in normally quiescent areas. The shock on October 18 (Origin 70/680) originated about 20 or 30 km west of Oamaru, and was not reported felt, having a magnitude of only 3.4. The two later shocks (Origins 70/748 and 749) occurred within 15 minutes of one another on November 23. Their epicentres are close to Timaru, where they were both felt. The earlier one was also felt at Hunter, and the later one in Oamaru. Their magnitudes were 3.8 and 4.2 respectively. Although shocks in this region are infrequent, they have on occasion reached damaging intensity.

The following table gives a summary of the seismicity recorded in New Zealand during 1970. The data are based on the records of the New Zealand Seismological Service, which operated during the year at 12 stations. The stations were: Auckland, Christchurch, Dunedin, Hamilton, Invercargill, Napier, Nelson, Palmerston North, Rotorua, Tairāhema, Timaru, and Wellington. The table shows the number of earthquakes recorded at each station, and the total number of earthquakes recorded in New Zealand. The earthquakes are classified according to their magnitude, and the table also shows the total number of earthquakes of each magnitude class. The data are as follows:

Table 1. Summary of seismicity recorded in New Zealand during 1970. The table shows the number of earthquakes recorded at each station, and the total number of earthquakes recorded in New Zealand. The earthquakes are classified according to their magnitude, and the table also shows the total number of earthquakes of each magnitude class. The data are as follows:

Table 2. Summary of seismicity recorded in New Zealand during 1970. The table shows the number of earthquakes recorded at each station, and the total number of earthquakes recorded in New Zealand. The earthquakes are classified according to their magnitude, and the table also shows the total number of earthquakes of each magnitude class. The data are as follows:

Table 3. Summary of seismicity recorded in New Zealand during 1970. The table shows the number of earthquakes recorded at each station, and the total number of earthquakes recorded in New Zealand. The earthquakes are classified according to their magnitude, and the table also shows the total number of earthquakes of each magnitude class. The data are as follows:

Table 4. Summary of seismicity recorded in New Zealand during 1970. The table shows the number of earthquakes recorded at each station, and the total number of earthquakes recorded in New Zealand. The earthquakes are classified according to their magnitude, and the table also shows the total number of earthquakes of each magnitude class. The data are as follows:

INSTRUMENTALLY DETERMINED ORIGINS

The following chronological list of the origins of New Zealand earthquakes is a summary of the determinations included in the next section of the Report, in which the detailed readings for each recording station are given. The Reference Number allocated in the first column of this list is used to identify the same shock in other sections of the Report. Date, Origin Time, Latitude and Longitude should be self-explanatory. All times are given in Universal Time. New Zealand Standard Time is 12 hours and New Zealand Daylight Time 13 hours in advance of U.T. Focal depths are given in kilometres, but it should be noted that when shocks are within the crust, the computer is normally restricted to solutions at depths of 12 or 33 km. The shallower depth is assigned if either of the phases Pg or Sg has been identified, and the greater depth if P* or S* is present without Pg or Sg. Quantities so restricted are identified by the letter R. The magnitude given conforms with Richter's original magnitude scale and is a mean of all separate determinations shown with the detailed station readings. S E is the standard error of the time residuals (in seconds), of those phases that have been used in obtaining the solution. In cases where the number of readings is exactly the number needed for a formal solution the letters ND (Not Defined) appear. NUM OBS is the number of separate phase readings used, and NUM STN the number of stations that recorded the shock, whether the readings were used in the epicentral solution or not.

The lists are intended to contain all shocks of magnitude 4.0 and above within the New Zealand region, together with those shocks of lower magnitude or beyond the boundary of the region, that have been reported felt. The boundary of the region is taken at approximately 100 from Wellington. Because accurate distance estimates cannot be made until the final stages of the interpretation, the readings of a few local shocks near the boundary may have been included only in the distant readings published by the International Seismological Centre, and vice versa. An asterisk following a reference number indicates that the shock is known to have been felt.

REF	MO	DAY	TIME H M S	LAT DEG	LONG DEG	DEPTH KM	MAG	S E SEC	NUM OBS	NUM STN
70/	001	JAN	01 03 39 44.4	37.44S	177 04E	238	4.2	1.3	13	9
	002		01 08 52 13.5	39.05S	176 28E	173	4.0	1.1	16	10
	003		01 17 48 49.1	37.16S	177 63E	305	4.0	1.3	13	9
	004		02 14 05 40.0	37.48S	177 79E	170	4.4	1.2	16	10
	005		04 00 41 52.7	37.18S	174 69E	12 R	4.0	0.8	16	6
	006		04 01 02 51.7	33.60S	179 14W	269	5.4	1.3	19	12
	007		04 02 11 23.1	33.33S	179 29W	33 R	4.6	1.3	23	14
	008		04 04 36 29.0	40.47S	174 01E	12 R	3.8	1.0	21	10
	009		04 05 41 44.6	41.30S	177 98E	33 R	4.1	0.7	23	10
	010		04 07 39 01.9	37.50S	177 20E	196	4.1	1.2	14	10
	011		04 11 50 26.5	41.97S	171 91E	12 R	3.6	0.9	18	7
	012		05 18 22 48.6	44.96S	167 83E	87	3.8	1.8	13	9
	013		06 04 49 03.4	40.49S	176 58E	12 R	3.8	0.9	16	7
	014		06 06 51 21.3	37.28S	177 82E	119	4.2	1.7	11	8
	015		06 08 21 15.9	31.64S	179 29E	333		1.2	7	5
	016		06 17 56 23.8	42.08S	171 83E	12 P	3.9	1.0	23	9
	017		07 23 55 20.6	33.57S	176 88E	186	4.5	1.5	19	12
	018		08 07 39 44.1	41.37S	178 00E	33 R	4.1	1.2	18	8
	019		08 10 53 30.0	37.33S	179 29E	122	3.9	1.5	14	8
	020		08 17 04 31.8	41.15S	177 65E	33 R	4.3	0.8	21	12
	021*		08 17 12 39.9	33.01S	179 33E	189 R	6.0	2.7	14	13
	022*		09 06 44 42.4	39.92S	178 19E	12 R	4.1	0.9	18	9
	023		09 18 53 44.6	33.81S	178 93W	256	4.7	1.2	13	10
	024		10 19 19 56.6	41.16S	172 57E	12 R	3.9	0.8	16	9
	025		11 12 29 15.7	33.72S	175 63E	148	4.0	1.0	12	7
	026		11 20 32 34.3	33.45S	178 90E	314	4.4	0.8	12	9
	027		12 03 01 59.9	33.66S	175 92E	141	3.9	1.1	10	7
	028		12 05 28 22.2	34.57S	179 62E	234	4.6	1.4	16	12
	029		12 18 22 32.2	37.99S	176 12E	220	4.0	1.4	11	8
	030		13 03 41 10.7	40.43S	174 48E	12 R	3.8	0.8	13	8
	031		13 08 23 29.0	42.56S	172 22E	12 R	3.6	0.6	14	7
	032		14 17 17 46.4	41.03S	173 94E	33 R	4.0	1.0	19	11
	033		14 19 51 16.4	38.07S	176 31E	177	4.0	0.7	10	7
	034		14 23 31 18.2	41.35S	177 92E	33 R	4.0	1.6	12	8
	035		15 00 18 10.3	41.28S	177 91E	33 R	3.9	1.1	12	6
	036		15 12 26 44.4	39.24S	177 63E	12 R	4.1	0.9	10	3
	037		15 23 53 51.6	41.22S	177 93E	33 R	3.9	0.5	12	8
	038		16 04 42 29.2	39.48S	175 63E	12 R	3.7	0.7	13	7
	039		16 10 40 05.6	40.44S	173 64E	201	4.1	1.8	12	9
	040		16 16 43 41.0	42.63S	172 34E	12 R	3.7	0.8	17	9
	041		16 18 56 51.9	37.02S	176 85E	247	4.1	1.7	9	6
	042		17 03 35 29.1	37.30S	177 74E	33 R	4.0	0.8	14	8
	043		17 14 50 20.0	32.62S	179 53W	464	5.3	1.7	9	6
	044		17 17 10 38.4	33.53S	175 72E	149	4.2	0.9	12	7
	045		17 20 46 47.9	33.41S	175 62E	164	4.0	1.4	9	5
	046		17 21 25 21.6	39.30S	177 45E	12 R	3.7	1.7	10	6
	047		17 22 17 32.2	40.35S	175 79E	12 R	4.1	0.8	12	7
	048		18 11 55 16.0	40.57S	173 85E	116	3.8	1.4	10	7
	049		18 15 04 40.7	35.64S	178 13E	33 R	4.0	0.4	10	6
	050		19 02 15 16.9	41.06S	177 63E	33 R	3.8	1.0	10	6

REF	NUM	ORIGIN	TIME	LAT	LONG	DEPTH	MAG	S E	NUM	NUM
		H	M	DEG	DEG	KM		SEC	OBS	STN
70/	051*	JAN	20	07 19	23.8S	177 34	80	6.5		
	052		20	15 24	39.40S	175 81E	195	4.1	0.9	13 9
	053		21	00 41	41.31S	173 33E	121	4.2	1.3	12 9
	054*		21	00 49	41.49S	172 88E	144	4.6	1.2	24 16
	055*		22	19 25	NEAR ROTORUA			2.5		
	056		23	05 05	39.77S	176 54E	12	4.1	1.3	23 9
	057		23	10 39	39.14S	176 36E	171	3.9	1.1	13 8
	058		23	15 08	36.44S	178 72E	187	4.6	1.4	13 9
	059		24	17 06	38.31S	176 01E	167	3.8	1.0	10 7
	060		25	06 49	36.49S	177 51E	316	4.4	1.8	11 8
	061*		25	08 03	37.71S	176 66E	33	3.8	1.6	8 4
	062		25	10 56	41.42S	172 89E	140	4.3	0.9	19 15
	063		26	04 13	39.49S	175 93E	174	4.3	1.5	17 11
	064		27	04 08	39.44S	176 32E	105	4.6	1.4	20 12
	065		27	06 58	33.76S	179 84W	308	4.4	1.5	8 7
	066		29	02 00	44.97S	167 63E	106	4.7	0.8	11 7
	067		29	07 30	37.85S	179 22E	33	4.0	1.2	13 8
	068		29	09 34	37.94S	176 83E	166	4.7	1.1	18 10
	069		29	13 20	42.24S	172 85E	33	4.0	0.5	15 7
	070*		29	16 55	38.92S	178 00E	33	3.9	0.7	13 8
	071		30	04 46	43.11S	167 78E	149	4.9	1.3	13 9
	072		30	04 46	37.20S	177 62E	179	4.1	1.4	8 5
	073		30	09 10	39.99S	178 88E	299	4.1	1.5	7 5
	074		31	09 53	32.86S	179 63W	438	5.7	1.7	16 9
	075		31	20 07	38.83S	175 87E	12	3.8	0.9	14 7
	076	FEB	01	00 41	39.64S	175 11W	33	5.2	4.7	8 5
	077		01	04 46	40.81S	176 89E	12	4.2	0.9	13 6
	078*		01	14 36	42.44S	172 74E	12	3.9	0.8	17 7
	079		01	17 01	37.43S	177 57E	160	4.5	1.1	16 9
	080		01	20 37	40.69S	173 63E	206	5.0	1.2	12 8
	081		03	07 23	38.39S	175 88E	166	4.2	1.4	13 8
	082*		03	09 24	41.77S	171 92E	12	3.6	0.7	6 3
	083		03	09 43	37.84S	178 46W	33	4.0	0.6	6 4
	084		03	21 23	42.12S	171 98E	12	4.5	1.5	24 10
	085		04	16 19	37.86S	176 24E	242	4.0	1.1	8 6
	086		04	21 20	39.15S	175 09E	153	4.1	1.4	12 7
	087*		05	06 42	41.79S	172 33E	12	3.6	R	0 2
	088		05	10 54	36.31S	178 80E	259	4.4	0.9	7 5
	089		05	14 56	39.99S	175 10E	77	3.9	0.7	8 5
	090		05	17 07	37.44S	178 74W	12	4.8	0.8	12 7
	091		05	21 34	45.01S	167 71E	12	4.7	0.5	10 5
	092		07	17 20	34.75S	179 87E	335	5.0	0.9	11 6
	093		08	18 05	38.38S	175 90E	183	4.2	1.3	10 5
	094		09	02 37	38.74S	175 88E	123	4.4	0.7	11 6
	095		09	07 02	45.06S	167 64E	89	4.1	1.2	9 6
	096		09	11 58	40.46S	174 39E	12	3.8	0.2	6 3
	097		09	23 17	39.59S	175 91E	161	4.3	1.5	9 6
	098		10	02 04	42.31S	174 03E	12	3.8	0.5	6 4
	099		10	06 30	37.31S	178 57W	33	4.1	1.2	6 4
	100*		10	12 14	41.66S	172 04E	12	4.1	0.8	19 7

REF	NUM		ORIGIN TIME			LAT	LONG	DEPTH	MAG	S E	NUM	NUM	
			H	M	S	DEG	DEG	KM	SEC	OBS	STN		
70/	101	FEB	10	21	02	13.5	37.173	177 09E	12 R	4.3	1.0	9	3
	102		10	21	56	56.0	39.958	177 20E	12 R	4.4	0.8	12	3
	103*		11	07	33	27.9	40.293	175 44E	12 R	4.2	1.6	17	7
	104		11	08	36	32.3	37.373	177 34E	229	4.7	0.7	13	6
	105		12	06	39	45.0	37.883	176 47E	250	4.6	1.0	11	6
	106		12	18	01	59.3	39.463	175 94E	165	3.9	1.3	9	7
	107*		13	10	32	47.5	41.763	171 71E	12 R	3.5	1.3	8	3
	108*		14	04	06	35.4	41.723	172 00E	12 R	3.8	0.8	13	6
	109		14	05	53	19.9	48.653	164 89E	12 R	4.8	0.8	6	4
	110*		14	09	20	05.2	40.753	176 08E	12 R	4.9	1.2	16	11
	111		14	12	30	51.5	37.323	176 93E	228	4.2	0.7	10	5
	112		14	19	13	10.5	36.903	179 19W	12 R	3.9	0.6	5	3
	113		15	08	10	26.3	42.723	171 12E	12 R	3.6	1.2	15	6
	114		15	15	27	50.5	39.243	176 19E	149	3.5	1.3	8	4
	115		15	23	54	13.0	49.003	167 72E	122	3.6	0.4	6	4
	116		16	07	31	39.3	37.263	178 51W	33 R	3.8	0.4	4	3
	117		16	23	03	08.6	39.243	176 22E	97	3.8	0.1	5	3
	118		17	02	43	56.9	44.643	168 29E	89	3.9	1.1	11	6
	119		17	03	57	00.5	39.213	177 94E	12 R	4.0	1.0	9	4
	120		17	05	56	17.8	39.973	176 20E	12 R	4.1	1.1	14	7
	121		18	01	15	14.7	37.793	175 75E	297	4.0	1.7	8	5
	122		18	16	49	40.4	36.293	178 62E	12 R	5.0	1.2	16	8
	123		20	00	04	54.3	37.723	176 76E	149	4.1	1.3	10	5
	124*		20	04	24	44.6	41.963	171 92E	12 R	4.3	0.7	10	8
	125		20	09	24	47.2	41.733	172 39E	12 R	3.6	0.9	5	3
	126		20	12	39	14.2	39.613	178 70E	291	4.2	0.6	9	5
	127*		21	08	18	44.0	40.923	175 81E	33 R	3.9	1.1	8	4
	128		21	14	38	23.4	44.823	169 63E	12 R	4.5	0.8	9	7
	129		22	10	36	33.5	49.733	168 00E	12 R	3.7	0.9	7	4
	130*		22	14	24		NEAR ROTORUA						
	131*		22	20	49	25.6	41.513	172 14E	12 R	3.6	0.6	9	4
	132		23	00	24	11.0	39.283	175 36E	173	4.1	1.8	13	7
	133		24	16	31	38.9	40.473	173 98E	82	4.0	1.6	15	8
	134		24	23	45	48.4	40.193	174 87E	33 R	4.0	0.9	14	6
	135		25	22	47	08.9	37.783	177 42E	12 R	3.7	0.7	9	4
	136		26	04	51	51.4	39.063	176 60E	164	4.1	1.1	12	6
	137*		28	13	51	05.6	37.833	176 59E	12 R	4.4	0.9	12	4
	138	MAR	01	19	50	13.0	36.473	177 09E	12 R	4.2	1.0	12	8
	139		01	21	08	15.9	39.343	175 77E	320	4.1	1.1	11	8
	140		01	22	09	22.0	36.623	177 24E	12 R	4.0	0.8	14	7
	141		02	05	19	47.1	44.973	167 61E	33 R	4.3	0.6	12	9
	142		03	01	29	35.1	41.483	173 72E	12 R	3.9	1.1	20	10
	143		03	03	50	41.8	39.503	177 35E	33 R	3.9	0.8	13	8
	144		03	04	28	31.4	37.403	177 28E	12 R	4.4	1.2	21	10
	145*		03	16	35	25.8	37.763	176 81E	12 R	4.1	0.8	18	8
	146*		05	16	55	58.4	43.233	173 23E	33 R	4.0	0.9	19	11
	147*		06	15	11	21.0	37.973	176 71E	12 R	2.9	R	0	2
	148*		06	15	36	56.5	37.973	176 72E	12 R	3.1	1.0	6	3
	149		08	12	26	11.0	37.323	176 93E	303	4.3	1.2	17	9
	150		08	15	52	47.5	38.833	179 68E	236	4.2	0.5	15	9

REF NUM	ORIGIN TIME			LAT DEG	LONG DEG	DEPTH KM	MAG	S E SEC	NUM OBS	NUM STN	
	H	M	S								
70/ 151	MAR	10	05 59	35.6	33.393	178 92W	249	5.7	1.7	22	15
152		11	14 59	55.5	33.923	178 47W	281	4.5	1.9	11	8
153*		12	12 45	26.8	38.753	176 13E	99	5.2	1.5	17	12
154		12	20 17	18.1	40.713	176 61E	12 R	3.9	1.2	14	8
155*		13	20 16	17.9	41.823	171 67E	12 P	4.0	1.0	14	10
156*		14	05 02	47.2	41.203	172 72E	12 R	4.1	1.1	23	10
157*		14	14 17	39.8	38.653	176 98E	12 R	3.5	0.7	11	5
158		15	12 31	31.4	34.803	179 32E	336	4.5	1.9	12	6
159*		15	16 38	52.3	39.553	177 10E	33 R	4.0	0.8	11	6
160*		15	23 26	59.8	40.253	174 33E	12 R	4.3	0.8	21	11
161*		17	04 54	48.0	39.863	176 33E	12 R	4.0	0.8	11	5
162		17	21 45	03.7	44.653	168 15E	77	4.4	0.5	13	7
163*		18	07 29	45.0	41.613	171 78E	12 R	3.9	0.7	19	8
164		19	08 15	24.2	39.173	177 65E	33 R	3.9	0.8	13	7
165*		21	12 04	09.9	41.873	172 13E	12 R	4.3	0.9	20	8
166		22	10 18	33.1	42.183	177 01E	12 R	4.3	1.0	17	8
167*		22	23 13	02.3	40.963	174 27E	12 R	4.3	1.3	16	8
168*		23	10 38	21.2	33.623	175 59E	202	4.6	1.7	21	11
169		25	08 01	27.9	37.643	179 08E	12 P	4.3	0.5	11	6
170		25	13 30	37.5	39.363	177 76E	33 R	4.0	1.1	13	7
171		25	21 37	22.0	36.873	177 66E	276	4.3	1.3	12	6
172		26	06 07	39.9	40.603	174 57E	85	4.2	0.8	11	6
173		26	09 06	04.4	39.163	176 44E	170	4.2	0.8	15	8
174		27	07 08	11.2	41.393	174 60E	70	3.9	1.6	11	6
175*		27	13 47	11.5	39.423	174 74E	36	4.1	1.0	14	8
176*		27	15 11	56.8	39.393	175 64E	102	4.8	1.0	17	10
177		27	19 15	03.9	41.943	174 15E	33 R	3.7	1.4	8	6
178		28	11 16	21.1	37.153	177 29E	12 R	4.5	0.9	17	8
179*		30	13 00	23.1	39.143	175 08E	12 R	3.3	0.9	11	4
180*		30	20 40	52.2	49.603	164 21E	33 R	6.1	1.6	17	10
181		31	09 43	51.2	39.813	175 84E	208	4.1	1.5	8	5
182	APR	01	08 19	51.5	44.543	169 93E	12 R	3.2	0.6	11	4
183		03	05 19	29.0	38.163	178 43E	96	4.6	1.6	15	9
184		03	08 39	56.2	39.133	174 81E	215	4.8	1.2	17	10
185*		03	13 23	50.2	40.103	176 69E	33 R	4.5	0.8	24	14
186*		04	08 39	43.2	39.313	173 60E	12 R	3.7	0.8	12	6
187		04	17 27	15.6	37.413	177 53E	167	4.2	1.2	18	9
188		04	19 45	06.8	36.243	177 82E	251	4.3	0.9	11	7
189		05	19 37	53.7	49.073	168 11E	157	4.4	1.1	10	6
190		06	00 10	10.6	39.353	175 98E	170	3.9	0.7	11	6
191		06	16 21	27.7	38.693	178 68E	33 R	4.0	1.1	11	6
192		07	12 45	21.1	32.943	179 33W	420	4.8	1.2	14	8
193*		10	10 46	53.8	41.683	171 69E	12 R	3.8	1.3	13	6
194		10	21 01	56.4	41.003	173 64E	103	4.1	1.0	11	8
195		11	13 34	26.7	40.353	174 35E	12 R	4.0	0.4	10	6
196		11	23 09	48.8	39.103	174 91E	233	5.1	1.2	16	11
197		13	08 31	35.2	40.533	174 43E	58	4.2	0.5	8	5
198		14	15 48	29.6	39.703	178 83E	33 R	4.1	1.4	10	6
199		15	00 17	56.5	44.743	167 73E	104	4.5	1.6	13	8
200		16	03 50	51.7	40.123	175 20E	33 R	3.7	1.2	8	6

REF	NUM		ORIGIN TIME			LAT	LONG	DEPTH	MAG	S E	NUM	NUM	
			H	M	S	DEG	DEG	KM	SEC	ONS	STN		
70/	201	APR	16	04	13	10.6	34.81S	179 40W	270	5.0	1.1	15	11
	202		16	07	43	46.8	34.13S	179 90W	272	5.2	1.1	17	11
	203		17	03	21	32.9	37.71S	179 24E	33 R	3.9	0.5	6	4
	204*		17	08	41	34.3	41.55S	171 80E	12 R	4.3	0.3	14	8
	205		17	09	36	03.7	33.37S	177 64E	76	4.0	0.8	10	7
	206*		17	09	45	33.0	41.51S	171 97E	12 R	3.6	1.7	7	5
	207		17	22	24	37.6	39.94S	172 74E	12 R	3.9	0.6	15	7
	208		19	11	13	31.8	35.48S	179 87W	316	4.5	1.7	11	7
	209		19	14	23	01.0	40.69S	173 85E	94	4.4	1.0	13	8
	210*		19	17	08	47.4	39.13S	175 81E	12 R	3.9	1.0	13	7
	211		19	19	57	17.3	37.26S	177 95E	169	4.3	0.9	15	9
	212*		21	04	44	17.6	39.02S	176 69E	12 R	3.8	1.2	13	6
	213		21	04	56	46.4	37.97S	176 82E	12 R	3.8	0.7	15	5
	214*		21	08	22	24.9	37.33S	176 29E	166	4.3	0.9	11	7
	215*		21	08	49	13.1	39.99S	174 32E	88	3.9	0.4	12	6
	216		21	11	19	41.4	39.25S	177 05E	12 R	3.7	1.1	18	7
	217		21	12	06	40.3	43.63S	170 75E	12 R	3.8	1.0	20	8
	218		22	00	19	27.9	40.29S	176 50E	12 R	3.8	0.6	16	8
	219*		22	08	07	49.0	41.84S	171 73E	12 R	3.5	0.7	16	7
	220		22	10	43	42.6	39.81S	178 39E	12 R	4.2	0.4	22	10
	221*		22	18	32	27.0	40.71S	174 93E	77	4.5	0.5	20	13
	222		23	00	42	44.0	39.33S	176 18E	184	4.9	0.9	26	17
	223		23	10	03	26.5	35.57S	178 50E	168	4.2	0.7	14	8
	224*		24	09	42	58.2	39.25S	174 89E	12 R	3.8	0.8	17	7
	225		24	11	09	46.6	41.29S	173 79E	12 R	3.7	1.2	17	7
	226		24	11	26	28.2	37.09S	177 33E	94	4.1	0.7	18	11
	227*		24	19	42	20.1	37.59S	177 20E	12 R	3.5	0.2	6	4
	228		25	11	43	13.4	32.30S	176 22W	259	6.4	1.6	18	9
	229		25	12	14	46.7	37.62S	176 91E	68	4.3	0.6	18	12
	230		25	13	56	44.7	37.07S	177 09E	280	4.7	0.6	19	11
	231*		25	16	50	48.9	40.29S	175 41E	33 R	3.7	0.6	13	7
	232		25	19	18	15.1	39.44S	176 20E	136	4.1	0.6	13	8
	233		26	07	40	57.2	39.76S	175 11E	147	3.6	1.2	10	6
	234		27	05	15	16.4	37.14S	177 52E	207	3.9	0.5	11	7
	235		27	22	35	49.6	34.86S	179 19W	306	5.2	0.6	17	10
	236		28	08	21	29.2	34.63S	178 68W	318	4.9	1.2	12	8
	237		28	16	56	56.5	39.53S	176 00E	134	4.1	0.9	17	9
	238		29	00	19	31.6	36.66S	177 53E	33 R	3.8	1.1	13	7
	239*		29	20	43	11.8	40.47S	174 37E	36	4.4	0.7	16	11
	240		29	21	58	58.9	45.21S	167 60E	125	4.0	1.0	12	7
	241		30	10	25	59.1	35.54S	178 21E	229	4.4	2.0	14	10
	242*	MAY	01	15	24	12.3	42.49S	173 47E	12 R	4.9	1.4	28	15
	243*		02	01	05	00.6	39.31S	174 94E	12 R	3.9	1.3	12	5
	244		02	01	53	57.4	37.43S	177 79E	96	4.4	1.4	8	4
	245		02	20	14	23.4	33.35S	175 98E	159	4.3	0.5	10	6
	246		03	14	16	00.3	33.64S	178 99W	265	4.5	1.7	11	7
	247		04	17	44	44.3	37.84S	176 40E	183	4.2	1.4	9	6
	248		06	22	25	40.3	38.09S	176 89E	12 R	4.4	1.7	14	7
	249		07	10	34	02.3	33.72S	177 80W	355	4.9	2.4	12	6
	250		07	10	46	16.8	50.18S	164 23E	33 R	4.5	0.8	5	4

REF	NUM	ORIGIN	TIME			LAT DEG	LONG DEG	DEPTH KM	MAG	S E SEC	HJM DMS	NUM STN
			H	M	S							
70/	251	MAY 09	00	26	51.6	40.813	173 29E	184	4.4	1.6	19	12
	252*	09	07	33	22.0	39.613	176 43E	12 P	4.0	1.7	19	9
	253*	11	06	51	08.9	42.223	172 10E	12 P	4.7	2.1	28	12
	254	11	09	19	12.8	35.245	178 69E	271	4.7	1.6	14	9
	255	12	15	23	33.3	41.153	172 70E	12 R	4.0	1.7	16	8
	256	13	15	43	19.8	34.009	178 64W	241	5.3	1.6	16	14
	257	15	19	32	46.8	33.999	179 27W	271	4.7	2.0	11	8
	258	16	08	59	28.6	37.983	178 91E	113	3.7	1.1	7	4
	259	17	07	34	36.9	37.983	175 89E	266	3.8	1.1	8	5
	260	17	22	54	11.1	46.443	166 72E	12 R	3.8	1.5	8	5
	261	18	00	04	39.4	39.249	176 18E	168	3.7	0.8	7	4
	262	18	00	22	47.3	37.393	177 53E	143	4.6	1.6	16	10
	263	18	15	16	39.9	33.903	178 69W	294	4.7	1.5	11	8
	264	19	04	12	38.3	39.103	176 32E	163	3.7	0.8	6	5
	265	19	15	08	18.8	37.153	177 02E	253	4.2	0.8	11	7
	266	19	19	35	18.0	38.663	175 79E	183	3.9	1.8	10	7
	267	19	20	18	18.3	32.013	178 17W	364	5.5	2.4	12	9
	268	20	00	19	37.1	31.693	179 34W	505	6.1	2.0	16	11
	269	21	05	43	27.9	33.763	178 69E	12 R	3.8	0.7	9	6
	270	21	13	11	03.0	46.973	165 49E	12 R	4.1	0.6	11	6
	271	21	14	53	01.1	47.663	166 20E	33 R	4.1	2.3	10	5
	272	21	15	50	59.1	37.733	177 43E	12 R	3.7	1.5	12	8
	273	23	20	45	22.4	46.983	165 67E	12 R	3.8	1.8	6	3
	274*	23	21	08	37.9	43.173	169 08E	12 R	4.5	1.0	15	7
	275	24	12	39	44.2	38.063	177 17E	95	3.8	1.3	11	8
	276	24	17	20	01.6	37.433	177 49E	176	4.1	1.4	11	7
	277	24	18	15	22.2	34.009	179 20W	372	4.6	2.0	10	6
	278	24	19	34	50.2	33.313	178 64E	278	4.7	2.7	13	8
	279	24	21	29	40.3	41.873	171 93E	12 R	3.7	1.2	15	8
	280	25	02	29	01.1	39.283	176 01E	33 R	4.0	1.7	19	8
	281	25	02	42	04.1	38.643	176 02E	138	3.9	1.5	10	7
	282	25	18	41	15.4	36.763	177 34E	297	4.0	1.5	9	6
	283	25	23	20	31.2	39.563	174 98E	124	4.1	1.1	15	8
	284	26	04	15	08.9	41.023	176 20E	12 R	3.7	1.3	8	5
	285	26	06	21	34.1	40.313	175 34E	12 R	3.6	1.9	12	7
	286	26	07	22	10.2	37.793	176 28E	309	4.1	1.1	12	7
	287	26	07	23	34.1	38.513	175 91E	207	3.8	1.7	10	6
	288	27	13	31	34.1	34.473	178 57E	267	4.6	2.4	16	11
	289	27	18	15	10.0	39.093	175 07E	213	4.1	1.3	14	8
	290	27	23	30	13.2	41.783	172 03E	12 R	3.9	1.5	21	10
	291*	28	06	01	50.0	39.223	177 23E	12 R	3.5	1.5	11	6
	292	28	07	53	21.4	37.483	177 72E	164	4.0	1.7	14	8
	293	28	09	33	14.4	35.163	179 02W	270	5.0	3.2	13	13
	294*	29	01	34	07.3	39.013	176 90E	12 R	4.0	1.8	17	9
	295	29	05	18	31.6	41.153	172 51E	12 R	3.7	0.9	14	10
	296	29	05	39	42.7	39.873	173 12E	12 R	3.8	1.7	19	8
	297	29	08	30	22.8	37.293	176 73E	222	4.2	1.6	13	9
	298	29	15	27	18.7	41.943	171 81E	12 R	3.5	1.3	21	10
	299*	29	22	20	53.0	33.443	176 24E	117	5.0	1.5	25	15
	300	30	13	25	09.1	31.753	175 85E	147	4.5	0.9	17	11

REF	NUM	MO	ORIGIN TIME			LAT	LONG	DEPTH	MAG	S E	NUM	NUM	
			H	M	S	DEG	DEG	KM	SEC	ORS	STN		
70/	301	MAY	31	05	49	05.3	33.603	175 86E	194	4.1	1.6	16	9
	302		31	07	51	08.6	41.873	174 43E	12 R	3.7	0.9	12	8
	303		31	17	42	30.4	44.123	166 92E	12 R	4.0	2.2	7	5
	304*	JUN	01	09	48	53.8	41.033	172 53E	12 R	3.7	0.9	6	5
	305		01	16	01	46.1	33.173	175 32E	24	4.3	0.1	5	3
	306*		01	23	52	10	HAIRAKEI			3.5			
	307*		01	23	52	40	HAIRAKEI			3.5			
	308*		01	23	52	50	HAIRAKEI			3.5			
	309*		01	23	54	00	HAIRAKEI			3.5			
	310*		02	22	44	25.0	39.303	174 60E	12 R		R	0	2
	311		03	17	46	49.2	33.133	174 33E	12 R	3.6	1.4	7	5
	312*		04	09	54	33.2	41.783	171 89E	12 R	3.7	0.9	4	5
	313*		04	10	02	21.4	41.713	171 90E	12 R	3.4	1.7	7	3
	314*		04	13	05	15.0	40.983	172 49E	12 R	4.4	0.7	6	6
	315*		04	16	54	31.5	37.163	176 97E	327	4.2	ND	4	3
	316*		05	09	29	36.3	43.013	167 59E	104	4.5	0.8	6	4
	317*		05	12	42	18.4	40.443	174 47E	12 R	4.4	1.7	14	8
	318*		05	17	06	30.0	37.423	177 45E	167	5.1	1.2	14	13
	319		06	22	02	54.1	39.663	174 73E	107	4.0	1.2	12	7
	320		07	02	08	20.5	47.153	165 13E	33 R	4.3	R	0	3
	321		08	12	05	53.6	38.873	175 88E	109	4.1	0.5	7	4
	322*		08	19	15	51.6	39.223	174 84E	33 R	4.5	2.1	8	6
	323		10	06	58	40.2	40.263	176 69E	12 R	4.0	0.5	4	3
	324*		10	11	00	22.4	41.713	171 63E	33 R	4.1	1.4	9	7
	325		11	00	40		NEAR CHATHAM IS			4.0			
	326		11	07	21	55.8	34.203	179 28W	277	4.9	0.7	7	6
	327*		12	14	50	50.0	43.063	167 84E	121	5.3	1.0	13	8
	328*		13	20	38	04.4	41.553	174 73E	33 R	4.3	1.3	5	4
	329		14	02	35	03.3	33.643	177 93E	42	4.3	0.9	6	5
	330		14	20	40	21.6	44.833	169 62E	12 R	3.5	1.4	13	5
	331*		15	05	47	52.4	33.193	174 80E	12 R	4.6	1.4	9	7
	332*		15	16	29	08.2	41.053	172 58E	12 R	3.9	0.9	6	4
	333		15	21	20	03.8	33.483	175 93E	157	4.3	1.6	8	7
	334		15	22	33	57.7	38.883	176 06E	116	4.4	1.2	10	8
	335		16	14	54	17.1	38.353	176 30E	150	4.3	1.2	15	8
	336*		17	03	40	44.7	33.493	176 57E	33 R	4.8	1.7	18	9
	337*		17	06	59	01.7	40.193	174 82E	12 R	4.1	1.3	11	5
	338*		17	07	34	22.4	40.203	174 90E	12 R	3.8	0.4	6	3
	339		17	14	13	17.8	44.933	167 70E	80	3.9	0.9	9	5
	340		17	20	26	49.4	33.083	174 69E	33 R	3.8	1.9	9	6
	341		18	06	05	16.8	33.203	178 14E	12 R	4.1	0.9	8	4
	342*		19	01	17	21.7	40.433	172 85E	12 R	3.9	1.3	8	5
	343		19	11	13	17.3	43.833	168 33E	33 R	4.4	1.0	11	5
	344		20	00	55	18.6	33.803	178 43E	12 R	4.2	1.4	9	5
	345		21	00	17	43.6	37.773	177 94E	12 R	3.9	2.1	8	5
	346*		25	11	08	53.9	40.973	175 34E	12 R	3.7	1.9	6	3
	347		27	17	37	02.1	33.503	175 73E	154	4.1	1.2	8	6
	348*		28	16	28	09.9	40.043	175 25E	12 R	4.0	1.4	13	7
	349		28	17	53	02.1	40.243	174 80E	51	4.0	0.7	12	6
	350		29	05	29	20.9	33.493	176 11E	162	4.2	1.3	12	6

REF	NUM		ORIGIN	TIME	LAT	LONG	DEPTH	MAG	S E	NUM	NUM
			H M S	M S	DEG	DEG	KM		SEC	DBS	STN
70/	351	JUL	29 05 43	16.2	31.503	178 53W	457	6.6	1.8	14	8
	352		29 07 48	31.9	37.323	178 94E	33 R	4.2	1.1	7	5
	353		30 12 05	34.6	39.013	176 24E	199	4.5	0.7	15	9
	354		30 12 45	38.5	37.143	179 44E	33 R	4.6	1.9	7	5
	355		30 18 56	33.0	37.493	179 65E	12 R	4.5	1.6	11	6
	356*		30 20 47	59.1	39.463	177 49E	12 R	4.0	1.9	12	5
	357	JUL	01 03 58	54.6	33.713	178 43W	296	4.8	5.1	12	10
	358*		01 09 25	53.4	39.543	177 22E	33 R	3.7	1.3	12	6
	359		01 10 06	33.7	33.263	178 99W	358	4.8	1.6	17	12
	360		01 12 00	43.9	33.423	178 30W	281	5.1	3.3	14	11
	361		01 21 41	39.3	37.383	178 03E	12 R	4.0	1.0	9	6
	362		02 01 30	00.1	32.963	178 61W	282	5.1	1.1	20	14
	363*		02 08 10	08.3	40.923	172 79E	12 R	3.5	0.5	7	6
	364		02 22 22	49.2	37.033	178 41E	12 R	4.2	1.0	6	3
	365		03 01 40	15.2	37.453	178 01E	12 R	3.7	1.0	9	6
	366*		03 03 01	11.6	39.273	174 77E	12 R	4.4	1.2	22	14
	367		03 05 11	34.6	41.103	172 82E	12 R	3.8	1.3	13	5
	368		03 05 41	27.8	39.423	175 73E	177	4.1	2.1	13	9
	369		03 10 21	44.6	33.243	178 98W	33 R	5.7	2.5	29	17
	370		03 10 55	40.1	39.653	174 67E	133	4.3	1.5	17	10
	371*		03 14 46	24.7	40.963	172 72E	12 R	4.2	1.2	21	9
	372		03 14 51	09.4	33.443	178 88W	274	5.0	1.7	15	11
	373		03 17 19	06.1	37.783	179 23E	33 R	4.1	2.1	10	7
	374		03 17 22	43.1	37.273	179 49E	12 R	4.3	1.1	16	12
	375		03 22 41	25.5	33.213	178 40W	33 R	5.0	3.0	16	12
	376		04 02 01	47.3	39.693	174 28E	207	4.5	1.6	16	10
	377		04 03 35	29.6	38.193	176 17E	167	4.1	0.7	13	8
	378		05 00 03	33.1	38.573	175 70E	213	4.5	0.7	16	11
	379		05 16 38	40.0	43.073	167 71E	124	4.4	0.9	10	6
	380		07 01 58	48.8	40.233	173 54E	178	4.1	0.8	8	4
	381*		07 19 31	13.5	39.773	176 32E	12 R	3.0	0.1	4	3
	382*		10 09 23	19.6	38.753	174 04E	12 R	4.4	0.9	13	6
	383		10 16 06	11.6	44.843	167 72E	81	4.0	0.9	8	5
	384		10 16 42	40.9	32.593	179 51W	423	5.2	1.7	6	5
	385		11 03 56	42.3	34.813	178 83W	12 R	4.5	2.1	8	6
	386		11 04 40	18.3	39.823	175 16E	227	5.0	1.2	16	10
	387		11 08 43	59.9	47.143	165 00E	12 R	4.0	1.1	15	6
	388		11 15 16	51.9	34.373	178 33W	33 R	4.8	2.2	15	11
	389		11 18 09	24.4	33.963	179 41W	228	5.0	0.7	13	11
	390*		13 00 48	11.5	39.783	174 13E	132	4.1	0.5	9	5
	391*		13 15 27	28.8	39.193	174 88E	33 R	4.0	0.9	14	6
	392		13 16 43	02.6	39.423	177 17E	33 R	3.9	0.8	13	8
	393		16 08 56	03.1	40.893	175 49E	12 R	3.9	0.5	14	6
	394		16 11 40	25.9	34.863	179 63E	33 R	4.2	2.0	9	8
	395		17 10 36	48.5	41.723	174 23E	12 P	3.9	0.5	14	7
	396		18 02 41	05.0	41.933	172 63E	12 R	4.2	1.0	21	10
	397		18 15 50	31.9	41.203	175 89E	33 R	3.8	0.4	10	6
	398		18 16 49	44.5	39.973	175 17E	228	4.7	1.2	16	10
	399		19 11 35	13.5	45.773	166 89E	12 R	4.1	1.0	14	5
	400*		19 17 04	26.2	39.913	175 13E	219	5.3	1.4	21	14

REF	JUN	ORIGIN TIME			LAT DEG	LONG DEG	DEPTH KM	MAG	S E SEC	NUM OBS	NUM STN	
		H	M	S								
70/	401	JUL	20	11 39	37.7	43.473	173 83E	12 R	3.7	1.0	14	5
	402		20	13 31	09.0	42.543	173 83E	12 R	3.7	0.6	14	5
	403		21	00 09	34.7	33.513	175 80E	149	4.2	1.2	13	8
	404		21	04 23	13.0	37.363	177 32E	134	4.1	1.3	10	8
	405		22	17 12	10.7	37.203	176 73E	248	4.2	1.1	10	6
	406*		23	00 07	16.2	41.463	171 93E	12 R	4.4	0.9	26	12
	407*		23	03 25	11.9	39.313	173 54E	12 R	4.4	1.0	18	7
	408		23	03 27	17.1	39.323	173 54E	12 R	3.8	1.1	15	5
	409*		23	08 16	44.2	37.903	176 62E	12 R	4.0	0.5	10	5
	410		23	18 06	55.6	36.673	177 87E	233	4.3	0.7	9	6
	411		24	10 19	28.3	37.433	176 39E	298	4.1	1.1	9	6
	412*		24	12 29	27.8	40.623	173 51E	176	3.9	1.5	7	4
	413*		25	07 54	14.7	39.313	173 63E	12 R	4.1	0.6	16	7
	414*		25	07 59	31.7	39.293	173 55E	12 R	3.9	0.8	14	6
	415		25	15 59	04.1	39.703	178 91W	232	5.1	0.5	14	10
	416		25	19 16	39.4	37.563	176 39E	331	4.4	0.6	14	9
	417*		25	21 53	04.7	41.353	174 54E	33 R	4.5	1.1	18	11
	418		26	00 18	23.6	41.343	174 55E	33 R	4.1	0.7	9	5
	419		26	02 24	30.1	37.723	176 41E	195	4.2	0.9	9	5
	420		26	08 59	06.6	42.073	173 95E	33 R	3.8	0.8	13	6
	421*		26	12 02	42.5	37.673	178 21E	33 R	4.6	0.9	21	13
	422		26	21 59	14.3	36.933	177 34E	33 R	4.0	1.0	10	5
	423		27	00 33	24.5	39.813	179 62E	33 R	4.9	1.1	18	11
	424*		27	05 09	53.5	41.193	174 37E	12 R	3.8	1.8	11	7
	425		27	07 42	55.9	37.573	177 33E	152	4.1	1.3	12	8
	426		27	10 38	26.4	39.933	178 63E	335	4.4	0.6	13	9
	427*		27	12 31	18.6	37.863	177 60E	130	5.8	1.6	18	14
	428*		27	14 56	05.7	43.403	170 97E	33 R	4.3	0.8	12	6
	429*		27	18 37	25.0	40.013	176 61E	12 R	3.9	1.6	18	8
	430		27	23 44	27.2	37.763	176 39E	296	4.1	0.8	8	6
	431*		28	14 09	55.2	39.223	177 69E	12 R	4.1	1.1	13	6
	432		28	16 07	23.3	34.923	179 83E	447	4.4	1.3	8	5
	433		29	04 18	37.5	39.623	175 83E	158	4.1	1.4	13	9
	434		29	04 50	00.9	37.653	176 48E	220	4.7	1.3	18	11
	435		29	23 14	30.9	39.233	176 00E	195	4.6	1.4	17	10
	436		30	06 05	06.5	39.893	177 75E	33 R	3.9	0.6	12	7
	437*		30	19 45	33.2	37.483	177 53E	12 R	4.5	1.5	23	13
	438*		31	00 15	40.8	44.173	168 01E	12 R	4.4	0.5	17	9
	439		31	00 36	33.5	44.273	167 78E	12 R	4.1	0.7	11	6
	440		31	03 36	58.5	46.343	166 82E	12 R	3.9	1.2	15	6
	441		31	20 44	45.2	39.723	175 52E	187	4.9	1.0	22	15
	442	AUG	02	10 36	33.0	37.503	176 76E	188	3.7	1.5	6	4
	443		03	14 19	46.1	35.923	177 62E	268	4.3	1.5	12	7
	444		04	07 25	25.9	37.963	177 53E	97	3.9	1.3	7	4
	445		04	14 01	18.4	41.563	173 73E	33 R	4.2	1.5	14	9
	446		04	16 25	40.7	39.473	175 81E	165	3.6	1.1	10	6
	447*		04	20 33	46.1	39.003	176 20E	12 R	2.9	1.0	0	1
	448		05	18 02	13.8	39.913	175 63E	115	4.5	1.2	14	9
	449		06	18 12	45.2	36.903	178 2E	119	3.9	1.3	8	5
	450		07	00 23	30.1	34.363	179 37E	367	4.8	0.7	7	4

REF	NUM		ORIGIN TIME			LAT	LONG	DEPTH	MAG	S E	IJM	NUM	
			H	M	S	DEG	DEG	KM	SEC	OBS	STN		
70/	451	AUG	11	01	47	47.9	33.433	176 23E	63	4.4	1.4	14	10
	452		11	05	57	49.9	43.103	167 43E	99	4.1	0.8	11	7
	453		11	18	12	09.6	40.363	173 43E	186	4.3	0.6	8	5
	454		12	03	57	45.3	39.793	174 31E	113	4.1	1.0	10	6
	455*		12	06	16	46.9	35.949	175 64E	12 R	3.7	1.6	13	7
	456		12	08	16	13.0	37.563	178 23E	33 R	4.1	1.2	7	5
	457		12	11	03	20.0	39.343	176 7E	168	3.8	0.9	7	5
	458*		12	15	33	30.8	41.073	172 57E	12 R	3.7	1.0	9	4
	459		12	16	05	37.7	37.003	175 83E	12 R	3.4	0.3	6	3
	460		12	18	57	39.5	37.003	175 72E	12 R	3.6	0.3	6	3
	461		12	21	35	16.0	35.833	177 23E	231	4.2	1.4	7	5
	462*		13	00	03	05.0	37.023	175 63E	12 R	4.3	1.4	15	10
	463		13	07	24	32.1	37.803	176 56E	222	4.0	0.7	7	4
	464*		13	22	48	06.8	43.063	171 31E	12 R	5.3	1.5	24	15
	465		13	22	54	25.9	42.993	171 26E	12 R	4.3	1.5	19	7
	466		14	02	23	51.0	43.043	171 33E	12 R	3.6	1.1	16	7
	467		14	13	40	01.2	37.443	175 94E	33 R	4.0	1.7	9	5
	468		15	00	49	32.1	40.033	174 70E	33 R	4.5	1.4	20	11
	469*		15	05	47	19.2	37.003	175 72E	12 R	3.5	0.2	6	3
	470*		15	10	46	54.5	36.973	175 67E	12 R	3.5	0.7	7	3
	471*		15	18	10	51.7	37.023	175 63E	12 R	3.9	1.1	13	5
	472		15	18	11	40.0	37.003	175 60E	12 R	3.9	R	0	3
	473*		16	15	46	09.4	37.973	177 13E	12 R	4.5	1.4	23	12
	474*		16	16	04	33.5	37.003	175 64E	12 R	3.8	1.2	16	6
	475*		16	23	07	27.1	36.943	175 67E	12 R	4.4	1.3	15	6
	476		17	00	56	46.1	36.983	178 11E	226	3.7	1.6	7	4
	477		17	04	56	29.9	39.213	174 93E	221	4.6	1.4	12	8
	478*		17	13	37	37.0	36.973	175 57E	12 R	4.1	1.6	14	6
	479		17	20	27	57.0	38.033	176 23E	197	4.2	1.3	12	7
	480		18	01	26	00.2	36.123	179 94W	182	5.3	1.2	18	12
	481		18	03	12	12.6	37.573	176 56E	184	4.2	1.7	17	11
	482		18	18	29	52.6	40.063	174 39E	33 R	4.1	1.2	15	8
	483		18	21	33	37.1	43.343	167 06E	33 R	3.8	0.9	9	5
	484		19	01	56	13.6	47.323	165 94E	12 R	3.8	1.7	9	4
	485		19	13	45	04.3	37.113	177 66E	161	4.8	0.9	14	9
	486*		19	15	28	23.6	37.013	175 52E	12 R	4.2	1.5	15	8
	487		21	06	48	47.6	38.263	176 00E	185	4.0	1.2	9	5
	488*		21	09	41	05.3	37.023	175 86E	12 R	3.4	0.6	5	4
	489*		21	17	35	44.3	37.003	175 65E	12 R	3.5	0.1	4	3
	490*		21	20	45	21.0	37.003	175 60E	12 R	2.9	R	-	2
	491*		22	02	13	45.0	37.003	175 60E	12 R	3.4	R	0	2
	492		22	02	28	39.8	42.003	171 94E	12 R	3.5	0.7	9	4
	493		22	08	22	30.8	33.473	178 53W	459	5.4	1.8	10	6
	494*		22	14	04	44.5	41.123	172 66E	12 R	3.7	0.4	8	3
	495*		22	15	30	04.2	41.113	172 62E	12 R	3.2	0.2	4	3
	496*		22	18	08	55.0	37.003	175 60E	12 R	3.1	R	-	2
	497*		22	18	22	02.0	37.003	175 60E	12 R	3.2	R	-	2
	498*		22	22	14	31.7	41.993	171 94E	12 R	3.8	1.5	1	5
	499		23	04	07	15.5	33.733	173 93E	12 R	4.4	1.4	14	7
	500*		23	11	08	15.0	37.003	175 60E	12 R	3.0	R	-	2

REF	NUM	ORIGIN TIME			LAT	LONG	DEPTH	MAG	S	E	NJH	NJH'			
		H	M	S	DEG	DEG	KM	SEC		03S	03S	STN			
70/	501*	AUG	24	06	05	41.6	38.693	177	79E	33	R	4.5	1.4	11	8
	502*		24	07	42	03.5	36.943	175	67E	12	R	3.4	1.7	11	5
	503*		24	14	07	04.3	36.983	175	60E	12	R	3.3	0.6	7	4
	504*		25	16	07	12.7	35.943	175	82E	12	R	3.5	1.1	7	4
	505		26	07	13	20.5	34.173	179	24W	525		4.8	2.0	11	7
	506*		26	15	25	42.0	37.003	175	60E	12	R	2.8		0	2
	507*		26	17	45	20.5	36.983	175	69E	12	R	4.6	1.4	27	12
	508*		26	17	48	08.3	37.003	175	67E	12	R	4.0	1.6	11	7
	509*		26	20	04	04.0	40.603	174	80E	12	R	3.4		0	1
	510		26	22	41	39.7	37.133	177	84E	180		3.9	4.1	5	4
	511*		27	16	04	17.4	37.013	175	62E	12	R	4.4	1.4	14	9
	512		27	16	19	47.7	37.003	175	60E	12	R	3.2		0	2
	513		28	10	06	07.8	34.263	179	73W	226		6.1	2.0	11	9
	514		28	22	47	45.6	36.153	179	40W	172		5.1	1.2	13	8
	515*		28	23	25	45.6	37.003	175	63E	12	R	3.8	1.8	6	5
	516		29	00	31	43.2	33.583	179	25W	254		5.1	1.6	14	9
	517		29	19	10	08.8	44.023	166	89E	12	R	4.3	1.3	12	5
	518		30	01	07	55.1	39.593	174	78E	111		3.8	0.5	8	5
	519		30	19	59	16.4	40.303	175	16E	33	R	3.8	1.4	10	5
	520*		31	22	11	57.1	43.283	167	95E	12	R	3.9	0.7	8	5
	521	SEP	01	00	41	44.0	42.083	172	11E	12	R	4.1	1.1	23	11
	522*		01	11	42	37.6	37.003	175	68E	12	R	3.4	0.3	10	5
	523*		02	03	52	23.6	36.983	175	89E	12	R	3.6	1.7	8	4
	524		02	06	21	52.0	32.873	179	39E	470		5.5	1.5	12	9
	525		02	09	47	42.0	44.993	167	73E	109		4.3	1.0	10	7
	526		02	16	18	04.4	41.823	174	30E	12	R	3.7	1.1	12	6
	527*		02	17	15	04.3	40.873	174	93E	33	R	3.8	1.5	16	10
	528		02	17	26	49.0	39.233	174	80E	216		4.0	1.7	10	6
	529*		02	20	00	02.6	36.993	175	62E	12	R	3.4	1.0	9	5
	530		02	22	59	30.2	36.603	179	20E	194		4.5	1.3	8	6
	531*		02	23	01	33.1	36.953	175	72E	12	R	3.9	1.2	8	4
	532		03	16	20	25.5	40.453	174	91E	33	R	4.0	1.0	15	9
	533*		03	17	03	56.5	43.123	171	70E	12	R	4.5	1.4	22	9
	534		04	00	14	37.1	41.023	172	59E	12	R	3.9	1.5	12	8
	535		04	01	45	25.5	39.833	173	93E	33	R	4.2	0.9	10	5
	536*		05	05	36	16.4	47.253	167	62E	33	R	4.9	1.6	16	9
	537		05	06	50	37.7	41.723	174	42E	12	R	3.8	1.3	12	6
	538		05	08	40	21.2	33.663	175	51E	171		4.0	1.3	13	8
	539*		05	15	33	07.2	36.983	175	63E	12	R	3.4	1.6	9	4
	540		05	18	12	37.4	33.143	179	75E	682		4.8	0.6	7	5
	541		05	18	30	18.8	33.623	177	84E	33	R	3.8	0.7	7	6
	542*		05	19	25	50.8	36.963	176	00E	12	R	3.3	1.2	6	3
	543*		05	20	27	48.5	36.993	175	79E	12	R	3.2	0.9	6	3
	544		06	02	48	26.5	41.503	173	78E	33	R	4.2	1.1	11	6
	545		06	03	52	42.7	43.333	167	64E	142		3.9	0.3	5	3
	546*		07	00	46	39.2	36.913	175	70E	12	R	3.6	1.2	5	3
	547*		07	00	47	35.2	37.003	175	60E	12	R	3.0		0	2
	548		07	03	24	40.9	40.143	176	93E	33	R	3.9	1.3	12	7
	549*		07	05	49	40.0	37.003	175	60E	12	R	2.9		0	1
	550*		07	13	29	49.2	39.513	176	40E	12	R	4.4	1.7	14	8

REF	NUM	ORIGIN	TIME	LAT	LONG	DEPTH	MAG	S E	NJH	NUM
			H M S	DEG	DEG	KM		SEC	03S	STN
70/	551+	SEP	07 17 12 46.2	37.003	175 30E	12 R	3.2	R	0	1
	552+		07 22 25 22.1	37.003	175 61E	12 R	3.4	1.5	10	5
	553		08 05 25 10.3	42.133	174 23E	33 R	3.8	1.5	6	4
	554+		08 09 32 28.0	37.003	175 60E	12 R	3.0	R	0	2
	555+		08 09 41 31.8	37.973	175 65E	12 R	3.7	1.0	12	5
	556+		08 09 43 46.0	37.003	175 60E	12 R	2.9	R	0	2
	557+		08 10 51 27.8	37.993	175 66E	12 R	3.2	0.4	5	3
	558+		08 13 34 43.9	37.973	175 63E	12 R	3.1	0.3	4	3
	559+		08 15 43 08.0	37.003	175 60E	12 R	2.6	R	0	2
	560+		08 16 01 05.0	37.003	175 60E	12 R	2.6	R	0	2
	561+		08 18 02 33.4	37.023	175 63E	12 R	3.6	1.4	9	5
	562+		08 18 56 49.5	37.003	175 60E	12 R	2.6	R	0	2
	563+		08 19 00 20.0	37.003	175 60E	12 R	2.7	R	0	2
	564+		08 19 41 03.1	37.963	175 72E	12 R	3.5	0.6	8	4
	565+		09 10 18 42.1	37.973	175 93E	12 R	3.0	0.5	4	2
	566+		09 15 46 47.6	37.003	175 60E	12 R	2.9	R	0	2
	567		10 06 19 04.6	37.973	176 60E	12 R	3.7	0.1	5	3
	563		10 08 54 42.5	33.333	177 73E	33 R	4.4	3.0	11	6
	569+		10 17 32 22.3	37.823	178 03E	33 R	4.8	1.2	23	13
	570		10 18 26 03.6	37.963	177 47E	91	4.1	1.3	13	8
	571		11 11 56 39.0	43.113	167 50E	95	4.3	1.0	9	5
	572		11 15 48 50.9	40.393	175 47E	12 R	3.8	2.0	15	7
	573+		12 15 56 51.7	37.003	175 60E	12 R	3.3	R	0	2
	574+		12 18 25 36.7	41.453	171 97E	12 R	4.7	1.2	17	10
	575+		12 18 49 54.0	37.003	175 60E	12 R	3.3	R	0	2
	576		12 23 53 00.6	36.983	175 73E	12 R	3.8	0.0	5	3
	577		13 13 02 34.1	37.243	178 79W	33 R	4.1	1.6	14	8
	578		13 14 38 21.8	37.133	175 94E	196	4.1	1.2	16	10
	579		13 15 41 57.9	37.083	176 12E	186	4.4	0.9	17	10
	580		14 10 18 07.7	37.783	175 67E	153	4.5	1.3	17	9
	581		15 03 26 18.0	37.003	175 60E	12 R	3.0	R	0	3
	582+		15 03 41 04.3	37.003	175 60E	12 R	3.4	0.9	7	4
	583		15 04 36 22.3	37.973	176 08E	241	5.2	1.2	19	11
	584+		15 19 27 36.9	44.183	169 28E	33 R	4.4	1.4	14	8
	585		16 14 39 49.5	37.053	174 94E	209	4.5	1.5	14	8
	586		16 14 57 37.1	43.053	167 64E	33 R	4.9	1.3	15	8
	587		16 17 25 48.4	34.033	179 42W	33 R	4.7	3.3	11	7
	588		16 21 54 06.9	32.613	179 09E	342	5.5	3.5	16	12
	589		17 11 26 52.8	32.693	178 56W	33 R	5.6	3.2	18	10
	590		17 13 26 47.8	37.453	177 11E	166	4.3	1.2	14	8
	591		18 02 36 09.9	14.793	179 57W	33 R	4.5	1.3	8	6
	592		18 13 35 56.1	41.793	177 64E	33 R	4.2	1.7	16	11
	593		18 21 27 03.6	37.663	177 21E	167	4.4	0.8	12	8
	594+		19 18 23 24.4	37.113	175 53E	12 R	2.7	0.7	7	3
	595+		19 19 23 04.0	37.013	175 59E	12 R	3.4	0.6	7	4
	596		20 05 40 02.4	37.643	175 64E	176	4.6	1.3	15	8
	597		20 13 57 54.6	37.643	177 4E	187	4.5	1.0	15	9
	598		20 14 19 02.5	40.273	176 73E	33 R	3.9	0.8	16	9
	599+		21 08 08 25.3	40.533	173 58E	199	4.7	1.7	16	11
	600+		21 08 39 33.5	37.013	175 70E	12 R	3.4	0.6	7	4

REF	MON	ORIGIN TIME H M S	LAT DEG	LONG DEG	DEPTH KM	MAG	S E SEC	NUM OBS	NUM STN
70/	SEP	21 11 03 25.0	37.023	175 67E	12 R	3.2	0.3	7	4
602*	21	11 03 41.5	37.003	175 62E	12 R	3.4	0.7	7	4
603*	21	11 07 11.5	37.003	175 60E	12 R	2.5	P		2
604*	21	11 50 35.9	33.813	178 36E	33 R	4.6	1.0	21	12
605*	21	13 09 56.1	41.383	173 84E	33 R	4.0	1.2	20	11
606	22	08 32 35.5	32.843	179 79W	539	5.8	3.1	8	5
607	22	15 33 02.5	40.963	174 54E	12 R	3.8	1.6	13	8
608	24	05 20 29.8	44.703	168 23E	57	3.9	2.4	9	5
609*	24	23 25 04.0	33.603	176 10E	12 R	2.7	R		1
610*	25	01 42 25.0	39.783	175 15E	33 R	4.2	1.2	17	9
611*	25	02 11 00.1	39.823	176 76E	12 R	5.0	1.3	21	10
612	25	14 43 53.2	33.383	177 01E	33 R	3.8	1.3	8	4
613	26	12 53 27.2	33.423	179 63W	33 P	4.5	4.4	9	5
614	26	21 58 18.5	41.293	172 70E	12 R	4.0	1.1	14	8
615*	27	02 09 08.0	40.913	174 29E	12 R	4.4	0.9	15	9
616*	27	11 17 17.0	46.213	165 87E	12 R	4.3	1.9	7	3
617	28	08 01 50.1	40.283	173 81E	166	4.2	1.6	12	6
618*	28	19 01 24.1	44.643	173 62E	33 R	5.1	1.3	27	15
619	29	09 58 19.6	37.903	176 53E	182	3.9	1.7	7	4
620	29	13 52 31.2	40.963	176 60E	12 R	3.8	1.4	13	8
621	30	03 17 14.5	43.033	167 69E	33 R	3.9	1.3	9	5
622	30	07 40 20.1	43.723	167 07E	33 R	4.2	3.2	5	3
623	OCT	01 16 07 16.5	43.073	167 67E	110	3.8	0.9	7	4
624*	02	10 00 06.2	33.933	178 23E	12 R	4.0	1.8	16	9
625	02	15 17 40.3	37.403	176 02E	295	3.9	1.1	9	6
626	03	02 03 49.9	37.343	177 20E	199	4.2	1.9	10	8
627	03	21 13 52.1	43.063	167 64E	136	4.1	0.6	6	4
628*	05	05 37 48.0	38.753	176 00E	12 R	R	R	0	1
629*	05	08 32 30.0	33.003	176 00E	12 R	R	R	0	1
630*	05	23 20 01.9	38.913	175 71E	12 R	3.7	1.5	11	7
631*	05	23 50 50.9	39.003	175 62E	12 R	3.7	0.5	9	7
632*	06	00 51 45.4	33.893	175 63E	12 R	3.8	1.3	11	8
633*	06	00 55 33.9	39.003	175 73E	12 R	3.6	1.4	9	7
634*	06	02 42 27.1	38.933	175 71E	12 R	3.9	1.5	15	8
635	06	02 43 44.1	39.053	175 99E	12 R	3.8	1.3	9	8
636*	06	03 06 34.0	33.703	175 90E	12 R	3.7	R	0	2
637*	06	03 37 15.7	33.963	175 66E	12 R	4.0	1.1	17	9
638*	06	03 38 43.0	39.003	175 70E	12 R	3.5	R	0	3
639*	06	04 43 42.4	33.613	176 90E	33 R	4.7	1.2	17	9
640*	06	09 11 00.5	38.953	175 76E	12 R	3.6	0.7	10	7
641*	06	15 35 26.5	33.993	175 65E	12 R	4.3	1.2	14	9
642*	06	15 56 53.3	33.953	175 72E	12 R	4.1	1.2	15	9
643	06	16 01 18.5	39.043	175 75E	12 R	3.8	1.3	16	10
644	06	16 26 10.8	39.063	175 73E	12 R	3.9	0.9	12	8
645	06	18 04 01.3	34.703	179 79W	134	4.8	0.7	16	10
646*	06	23 40 35.9	33.953	175 69E	12 R	3.5	1.6	11	7
647*	07	00 12 02.1	33.963	175 70E	12 R	3.6	1.4	12	7
648*	07	00 59 20.7	39.073	175 59E	12 P	3.7	1.6	10	7
649*	07	01 06 47.6	39.023	175 71E	12 R	4.1	1.2	13	9
650*	07	01 09 00.5	33.903	175 65E	12 R	3.6	1.7	8	7

REF	NUM		ORIGIN TIME			LAT	LONG	DEPTH	MAG	S E	NUM	NUM	
			H	M	S	DEG	DEG	KM	SEC	ORS	STN		
70/	651	OCT	07	01	35	46.3	39.313	176 27E	330	4.3	1.8	9	7
	652		07	09	54	35.2	39.333	175 79E	85	3.8	1.1	15	9
	653		07	16	03	17.8	38.963	175 72E	12 R	3.9	1.5	15	8
	654		08	06	34	30.4	39.133	178 40E	12 R	4.4	1.2	17	9
	655		08	10	00	23.2	39.033	175 69E	12 R	3.8	1.2	14	8
	656*		08	19	34	40.7	40.443	174 59E	33 R	4.8	1.4	19	12
	657		09	08	10	06.6	39.513	175 91E	211	4.2	0.8	13	8
	658		09	12	54	32.7	32.093	179 91E	490	5.3	1.6	16	10
	659		09	15	34	43.4	44.933	167 84E	12 R	3.9	1.7	7	5
	660		10	02	44	16.5	37.283	178 56E	158	4.4	1.3	16	10
	661		10	13	51	03.9	40.463	173 65E	171	4.2	1.8	15	10
	662		11	00	53	34.3	39.593	178 58E	257	5.6	1.4	21	13
	663		11	05	19	50.0	39.883	175 69E	12 R	3.8	1.4	12	9
	664		11	07	39	08.6	36.473	177 24E	252	4.2	2.1	13	7
	665*		11	09	48	29.4	40.903	173 77E	33 R	4.3	1.3	18	11
	666		12	09	41	18.6	39.013	178 85W	224	4.6	1.3	15	10
	667		12	13	36	01.4	34.833	179 53W	12 R	4.8	1.5	19	10
	668*		12	18	04	06.9	40.603	176 49E	12 R	4.2	1.7	17	10
	669		13	08	12	01.0	32.683	177 02W	353	5.5	1.9	15	9
	670		14	00	13	51.9	39.113	179 55W	214	4.4	1.5	13	7
	671		14	03	10	59.6	33.843	178 54W	237	4.4	2.4	11	8
	672*		14	08	32	49.5	39.423	174 85E	149	4.9	1.4	17	11
	673		14	09	05	57.0	33.063	177 33W	286	6.0	1.1	12	10
	674		14	15	23	18.4	38.843	176 89E	33 R	3.9	1.6	14	7
	675		15	05	07	08.6	32.763	179 24W	180		1.9	7	7
	676		15	14	24	58.4	39.273	178 75W	283	4.3	1.6	7	6
	677*		16	07	20	39.1	40.863	174 49E	33 R	4.1	0.8	11	9
	678*		16	18	07	46.5	41.633	171 61E	12 R	3.9	1.5	13	7
	679		17	21	38	41.5	32.313	179 60W	327	5.5	1.8	11	8
	680		18	02	54	53.3	49.023	170 61E	12 R	3.4	1.3	7	4
	681		18	04	56	22.5	34.693	179 36E	298	5.0	1.8	19	11
	682		18	09	04	17.0	39.633	179 42W	245	4.5	2.3	17	10
	683		18	13	29	14.3	39.583	178 90W	33 R	4.5	1.6	15	11
	684		18	15	23	05.6	37.173	177 67E	284	4.4	1.5	13	7
	685		18	15	41	08.0	39.533	179 21W	213	4.3	1.3	13	9
	686		18	15	43	53.5	39.743	179 65W	199	4.5	1.4	15	12
	687		18	18	28	45.4	39.653	179 62W	33 R	5.1	2.0	20	13
	688		18	20	47	01.2	36.253	178 54E	295	4.5	1.4	13	6
	689		19	04	56	43.6	39.483	175 63E	188	4.1	2.0	13	8
	690*		21	07	52	39.5	37.703	177 13E	175	5.1	1.1	22	14
	691*		21	19	00	55.9	40.133	174 77E	12 R	4.3	1.4	23	10
	692		21	20	19	13.7	37.363	177 99E	159	4.5	2.0	15	9
	693		22	15	39	50.3	34.943	179 41W	340	4.5	2.0	10	6
	694		23	15	31	22.8	37.243	176 65E	303	4.0	1.6	8	6
	695		25	03	01	58.8	37.213	177 35E	156	4.0	1.2	8	6
	696*		26	02	30	29.2	41.153	175 77E	12 R	4.5	1.1	21	10
	697		26	04	23	35.9	39.333	176 25E	154	3.8	1.0	13	8
	698		26	05	06	22.4	37.913	176 19E	187	4.1	0.9	14	8
	699		27	06	11	10.6	39.493	175 87E	166	3.7	1.5	11	7
	700		27	14	22	17.0	37.073	179 20E	153	3.7	1.3	12	7

REF	NUM		ORIGIN TIME			LAT	LONG	DEPTH	MAG	S E	NUM	NUM	
			H	M	S	DEG	DEG	KM	SEC	ORBS	STN		
700/	701	OCT	27	15	19	53.0	33.06S	178 29W	280	5.7	1.7	11	9
	702		28	06	15	43.9	32.88S	178 13W	283	5.3	1.7	13	10
	703		30	05	58	05.4	43.33S	166 52E	12 R	4.6	1.6	12	7
	704		30	07	27	43.0	33.73S	179 2W	415	4.6	1.7	8	9
	705	NOV	01	08	18	45.1	39.61S	175 61E	174	4.3	1.2	23	16
	706*		02	02	53	13	NEAR HAIRAKEI						
	707*		02	22	19	41.8	39.60S	176 20E	12 R	3.2	1.1	9	5
	708		03	08	39	44.5	39.71S	175 74E	170	4.2	2.2	20	15
	709*		03	10	10	53.0	42.01S	172 30E	12 R	3.8	1.8	36	12
	710		03	10	17	14.5	39.25S	174 99E	12 R	3.6	1.5	19	9
	711		03	19	24	05.4	36.31S	178 04E	12 R	4.2	2.3	40	18
	712		04	19	22	21.3	33.17S	177 41E	33 R	4.0	3.2	9	9
	713		04	20	35	34.7	43.38S	166 98E	33 R	4.4	2.0	20	10
	714*		05	00	02	30.6	40.11S	174 87E	12 R	4.0	1.5	37	17
	715*		06	00	33	05.3	39.44S	178 54E	114	4.8	1.6	19	16
	716		06	05	12	34.9	43.94S	167 89E	33 R	4.1	1.2	15	8
	717		07	07	44	56.1	39.02S	179 97W	250	6.0	1.2	21	16
	718		08	11	13	41.7	39.58S	174 44E	222	4.1	1.7	13	9
	719		09	09	24	33.2	40.67S	175 02E	12 R	3.9	1.9	14	9
	720		10	08	41	47.8	39.56S	175 92E	164	4.3	1.4	17	10
	721		10	13	47	33.8	32.37S	177 64W	292	6.0	1.4	13	10
	722		12	00	18	56.8	43.30S	167 36E	12 R	4.5	1.0	13	7
	723		12	07	31	01.7	36.97S	179 90E	33 R	4.9	1.3	20	13
	724		12	09	04	20.6	38.29S	175 90E	195	4.9	1.8	22	13
	725		12	10	18	31.6	37.97S	178 69W	33 R	4.2	1.9	8	6
	726		12	12	21	56.6	36.85S	179 64W	33 R	4.0	1.4	8	6
	727		12	14	34	35.5	36.90S	179 42W	33 R	4.1	1.8	9	7
	728		12	17	27	29.5	37.05S	176 85E	299	4.7	1.1	18	12
	729		12	19	34	57.1	43.27S	167 23E	12 R	3.8	0.7	13	6
	730		13	05	33	21.5	36.85S	179 78E	146	4.4	1.2	11	10
	731		13	06	26	58.4	35.85S	179 43E	147	4.4	1.8	11	10
	732*		13	14	13	43.8	41.26S	175 88E	33 R	4.3	1.2	12	9
	733		14	14	29	36.6	34.87S	179 60E	157	4.3	1.3	16	13
	734		15	00	47	14.1	43.78S	167 22E	76	4.0	1.3	13	7
	735*		15	11	17	27.1	39.45S	175 68E	111	4.7	1.4	17	13
	736		15	22	58	05.7	49.36S	163 42E	33 R	5.1	2.5	13	8
	737		16	15	06	18.1	49.04S	167 53E	136	4.1	1.9	12	7
	738		17	07	09	39.1	34.13S	179 99W	229	4.8	1.9	13	9
	739		17	16	34	24.8	39.93S	177 35E	33 R	4.3	1.5	13	9
	740		19	08	07	10.9	37.15S	177 58E	289	4.2	0.9	10	8
	741		20	18	56	35.5	38.91S	178 70E	33 R	4.4	1.4	14	8
	742		21	07	40	30.6	39.46S	178 55E	86	3.7	1.2	10	7
	743*		22	05	37								
	744		22	06	42	40.5	40.50S	173 48E	177	3.8	1.7	11	8
	745		22	06	48	31.3	35.92S	179 68E	12 R	4.6	1.4	14	10
	746		22	06	53	42.4	35.99S	179 84E	12 R	4.4	1.4	16	10
	747		22	07	33	52.0	37.13S	179 78E	33 P	4.0	2.8	10	8
	746*		23	13	37	16.2	44.50S	171 19E	12 R	3.8	1.3	20	8
	749*		23	13	52	23.1	44.51S	171 14E	12 R	4.2	1.1	23	11
	750*		23	22	30	03.7	39.26S	176 62E	12 R	4.2	1.4	17	9

LOCAL EARTHQUAKE ORIGINS

33

REF NUM		ORIGIN TIME		LAT	LONG	DEPTH	MAG	S E	NUM	NUM
		H M S		DEG	DEG	KM		SEC	OBS	STN
70/	751	NOV 24	05 04 48.2	46.463	166 60E	12 R	3.6	1.7	13	5
	752	24	05 35 17.9	34.043	178 03W	281	4.8	1.1	13	10
	753	24	13 41 21.5	36.453	178 26E	259	4.2	0.8	13	8
	754*	24	19 01 41.1	41.523	171 86E	12 R	3.8	1.2	19	9
	755	25	14 36 08.4	40.793	176 71E	33 R	3.7	1.6	14	8
	756	25	19 46 08.2	37.913	176 29E	202	4.3	1.2	15	9
	757	25	21 42 05.9	40.123	174 88E	33 R	3.6	1.1	13	6
	758	26	04 01 06.7	39.403	177 09E	33 R	4.1	1.8	20	10
	759*	26	09 07 24.7	41.583	171 98E	33 R	3.4	1.5	14	7
	760	26	21 53 03.1	44.733	168 35E	33 R	4.3	1.1	17	8
	761	27	23 31 36.2	39.213	174 80E	224	4.2	1.2	13	7
	762	27	23 53 36.9	38.223	177 23E	33 R	3.6	2.3	13	7
	763	28	01 29 17.8	36.163	179 56W	33 R	4.8	2.1	20	12
	764*	28	03 44 44.0	40.923	174 89E	33 R	4.1	1.5	13	8
	765*	28	06 25 17.2	41.463	172 21E	12 R	4.3	1.8	23	13
	766	28	09 26 22.7	39.173	174 98E	170	3.7	1.5	13	8
	767	28	15 04 18.2	49.113	167 65E	82	3.9	1.9	8	5
	768	29	08 23 09.9	41.733	174 58E	12 R	3.6	1.0	11	8
	769	30	03 10 52.0	34.163	179 44W	289	4.2	2.2	5	3
	770	30	11 32 15.7	40.213	174 83E	12 R	3.9	1.5	14	8
	771	30	12 51 40.5	39.813	175 80E	158	4.4	1.6	13	9
	772	02	01 38 52.8	38.433	175 89E	182	3.9	1.2	11	7
	773	02	22 32 39.0	34.003	179 63W	311	4.6	1.9	9	6
	774	03	03 44 21.8	37.983	176 26E	196	4.0	1.3	12	8
	775	03	04 50 01.3	45.093	167 46E	71	3.8	0.7	7	4
	776*	03	10 08 25.9	44.993	167 64E	97	5.0	1.8	17	9
	777	04	08 29 15.8	39.013	175 08E	222	5.0	1.6	31	18
	778*	05	00 54 59	NEAR TAUPO (41)						
	779	05	05 01 28.6	49.903	164 69E	33 R	4.2	2.3	8	6
	780*	05	06 02 44.0	40.863	175 63E	12 R	4.2	2.3	47	20
	781*	05	07 18 25.5	40.813	175 58E	12 R	3.4	1.4	13	6
	782	06	07 52 37.5	43.173	170 54E	12 R	4.0	1.9	33	12
	783	07	13 09 42.4	37.283	176 61E	293	4.0	0.7	17	11
	784*	07	17 44 22.8	49.043	167 58E	33 R	5.1	1.7	33	18
	785*	08	09 03 36.2	49.893	166 43E	12 R	4.2	2.8	18	8
	786	08	22 11 21.2	31.743	179 25W	441	5.6	1.8	19	13
	787	11	03 03 13.8	44.293	167 91E	33 R	4.2	2.3	20	11
	788	11	06 00 41.6	35.363	178 63E	274	4.6	1.8	26	20
	789	11	11 46 08.5	34.483	179 75E	293	4.1	1.3	18	14
	790	11	18 43 01.8	33.603	179 72E	228	4.1	2.7	13	11
	791	11	20 45 00.5	31.473	179 63W	229	5.6	4.3	23	18
	792	12	20 47 24.0	36.303	179 24E	216	4.4	1.3	27	16
	793	13	04 04 27.7	38.363	176 19E	12 R	3.7	1.6	20	10
	794	13	09 42 31.7	38.513	175 84E	184	4.2	1.6	22	14
	795	13	19 51 11.7	49.753	164 51E	33 R	4.0	1.1	7	4
	796*	13	23 54 49.9	41.283	174 37E	42	3.7	0.1	6	4
	797	14	17 38 18.9	39.083	176 17E	206	4.3	1.2	14	8
	798	15	07 03 53.8	40.423	173 55E	163	3.8	1.5	9	6
	799*	15	09 12 00.7	41.283	175 21E	12 R	4.2	1.6	14	7
	800	15	11 06 15.8	39.493	178 91E	33 R	3.9	1.0	9	5

REF	NUM	DATE	ORIGIN TIME			LAT DEG	LONG DEG	DEPTH KM	MAG	S E		NUM ORS	NUM STN
			H	M	S					SEC	ORS		
70/	801	DEC 15	18	33	45.2	37.453	176 91E	185	3.7	1.2	8	5	
	802	15	23	15	01.5	43.013	167 61E	105	4.1	0.8	10	6	
	803	16	02	57	06.2	40.583	176 73E	33 R	3.9	0.7	11	5	
	804*	16	11	11	53.6	42.033	174 53E	33 R	4.6	1.2	27	17	
	805	17	01	59	09.4	37.683	177 23E	144	4.2	1.8	13	8	
	806	17	15	33	14.5	33.473	179 34W	449	4.6	0.2	5	4	
	807	17	17	02	03.0	44.243	167 73E	12 R	3.5	1.3	6	4	
	808	18	00	12	42.0	44.173	166 99E	12 R	4.2	0.5	10	6	
	809	18	00	36	11.4	43.953	163 92E	33 R	4.8	1.7	11	7	
	810*	18	04	13	29.7	40.313	175 47E	33 R	5.1	1.8	28	17	
	811*	18	05	35	07.3	40.313	175 44E	33 R	4.9	1.6	28	17	
	812*	18	06	26	28.3	40.243	175 44E	33 R	3.5	1.2	12	7	
	813*	18	10	13	43.0	38.153	176 27E	12 R	2.6	R	0	1	
	814*	18	22	09	19.8	40.253	175 41E	33 R	4.3	1.2	16	9	
	815	19	10	49	42.9	49.393	164 11E	33 R	4.3	4.1	7	4	
	816	19	13	02	39.5	38.403	176 00E	173	4.2	1.0	15	10	
	817*	20	02	37	19.4	38.323	177 15E	33 R	4.4	1.4	19	10	
	818	20	09	57	03.4	43.243	167 34E	12 R	3.9	0.7	13	7	
	819	21	19	52	47.4	37.053	176 95E	304	4.7	1.3	15	11	
	820	26	07	13	44.7	38.543	175 89E	163	4.1	1.2	14	8	
	821	26	08	38	50.3	32.303	177 93W	33 R	5.8	2.3	10	10	
	822	26	15	38	02.0	32.033	179 69W	534	5.1	1.0	14	10	
	823*	27	23	39	22.5	38.083	176 20E	171	4.4	1.1	13	8	
	824	28	06	29	46.7	43.243	167 25E	12 R	3.9	1.0	12	7	
	825*	28	16	22	28.1	39.783	174 94E	130	4.7	1.9	15	10	
	826	28	16	56	56.9	38.733	177 43E	103	4.1	1.9	15	9	
	827	28	21	48	08.7	44.213	168 58E	12 R	3.9	1.7	14	8	
	828	30	03	22	36.5	40.503	171 86E	33 R	4.3	2.0	15	10	
	829	30	10	40	06.0	49.153	164 07E	33 R	4.2	2.7	7	6	
	830	31	16	02	01.6	39.153	175 04E	157	3.9	1.6	16	9	
	831*	31	16	58	29.7	41.253	174 40E	97	4.0	1.3	17	10	

STATION READINGS FOR NEW ZEALAND EARTHQUAKES

This section contains origin times, epicentres, focal depths, magnitudes, and station readings of those earthquakes in the New Zealand region that could be located from instrumental data. In general, origins are calculated for all sufficiently well-recorded earthquakes within 10° of Wellington. The calculations are carried out by an Elliott 503 digital computer using a programme developed by R.M. Hamilton, similar to that described by B.A. Bolt (Geophysical Journal: Vol. 3, pp. 433-40, 1960). A provisional origin is repeatedly adjusted to obtain the best agreement between observed arrival-times for the various phases, and times computed from tables. More precisely, the origin is adjusted to minimise the sum of the squares of the residuals (observed minus computed arrival-times).

The earthquake origins are determined using the phases Pn, P* and Pg, and the corresponding S phases. In computing travel times, it is assumed that the New Zealand crust is 33 km thick, and is divided into two uniform layers by a discontinuity at a depth of 12 km. Above the discontinuity the velocities of P and S are 5.5 and 3.3 km/sec respectively (Pg and Sg) and below it they are 6.5 and 3.7 km/sec (P* and S*). Travel times for Pn and Sn waves, which travel in the mantle, are derived from the Jeffreys-Bullen "Seismological Tables" (British Assn. for the advancement of Science, 1958), but modified by multiplying the times by 0.96. Several studies have shown that times in the table are too great to fit the New Zealand observations. The result of applying this correction is to raise the adopted Pn velocity from about 7.8 to 8.1 km/sec, and the Sn velocity from about 4.4 to 4.6 km/sec. These values are close to those reported.

In general all four parameters of the earthquake origin are calculated (origin time, latitude, longitude, and focal depth). In some cases however, the focal depth is not allowed to vary, but is restricted to a certain depth. This is most commonly done for crustal earthquakes, which are assigned nominal depths of either 12 or 33 km, according to the crustal phases present, and to the goodness of fit of the resultant solutions. Parameters that have been restricted are identified by the letter R appearing in the place where the standard error is usually printed.

Solutions are attempted whenever sufficient readings are available. The minimum requirement to determine an epicentre is a total of three readings at two stations, plus a felt report to resolve the ambiguity.

Only sufficient stations to provide an adequate solution are read. It is not possible to use the number of stations apparently reporting as the basis of statistical investigations of magnitude or detectability.

In using the results in this section, it is essential to keep in mind that the position of earthquakes whose epicentres lie outside the network of seismograph stations can be very uncertain, even though the readings may be consistent with the computed origin (i.e., the residuals are small). Because of the presence of systematic errors, the true origin could be very different from the one calculated. Great care should therefore be taken not to attach significance to an epicentre in

an unusual place or a focus at an unusual depth if the recording stations used are not well distributed about the epicentre.

EXPLANATION OF DATA

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

The standard error is derived from the equation

$$SE = \sqrt{\frac{\sum_{i=1}^n r_i^2}{n - m}}$$

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

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

Magnitudes are M_L as defined by C.F. Richter (Bull. Seismol. Soc. America: Vol. 25, pp.1-32, 1935) obtained either from the maximum amplitude of the S-group as recorded on a Wood-Anderson seismograph adjusted to standard constants (W-A), or by using equivalent relationships for the maximum P and S amplitudes recorded on a vertical Willmore seismograph (WP or WS). These relationships were empirically derived by A.A. Thomson from a comparison between records of the same earthquakes on the two types of seismograph.

Residuals are listed for all readings used in calculating the origin, and in certain other cases. An asterisk following a residual indicates that the reading was not used in the solution. Residuals are automatically excluded when their absolute value exceeds twice the standard error (calculated with that residual). When an asterisk also appears against the station identification, its readings have purposely been excluded by the operator. These provisions guard against the inclusion of spurious or wrongly identified phases, and against the biasing of solutions by a predominance of stations at large distances or in particular azimuths.

LOCAL EARTHQUAKES

37

JAN 01		H	M	S									70/ 001	
		03	39	44.4	37.44S	177.04E	239	KM	SE	1.3	AVG	MAG		4.2
				+ 1.4	0.12	0.14	14							
							DIR	RES	DIST	AZ	W-A	W	P	W S
ECZ	P	03	40	19.0				-0.9	1.23	102		4.3		4.1
TUA	EP	03	40	21.0				0.1	1.37	176		3.8		4.2
	ES			48.9				-0.6						
GNZ	P	03	40	21.9				0.5	1.43	147		3.9		4.2
	IS			48.1				-1.9						
CNZ	P	03	40	28.4				1.1	2.11	213				
TRZ	EP	03	40	28.9				1.2	2.12	185				4.2
	S			41 03				2.5						
MNG	EIP	03	40	41.0			D	-0.1	3.40	200		4.4		4.1
	ES			41 24.9				-0.3						
HEL	ES	03	41	43				0.4	4.23	204				4.2
COB	ES	03	41	57.0				-1.3	4.94	221				3.8
GPZ	ES	03	42	46.0				-0.8	7.09	207	4.7			

JAN 01		H	M	S									70/ 002	
		08	52	13.5	38.05S	176.25E	173	KM	SE	1.1	AVG	MAG		4.0
				+ 0.9	0.04	0.03	6							
							DIR	RES	DIST	AZ	W-A	W	P	W S
KRP	P	08	52	38.0				0.1	0.57	282				
	S			55.9				-0.9						
TUA	P	08	52	42.0				1.1	1.04	137		4.4		4.3
	S			53 04				1.9						
CNZ	P	08	52	44.0				1.1	1.27	205		3.4		
	ES			53 06				0.3						
GNZ	P	08	52	48.9				0.6	1.52	114		3.9		4.0
	S			53 08.0				-1.8						
TRZ	S	08	53	11.2				0.5	1.57	164				4.2
ECZ	EP	08	52	49.0				0.2	1.85	80		4.1		
	ES			53 15				-1.0						
MNG	P	08	52	57.9				-0.0	2.63	193		4.1		3.6
	S			53 31				-1.1						
HEL	EP	08	53	08.0				0.2	3.43	199	4.1	4.2		4.1
	S			48.0				-1.6						
COB	ES	08	54	04.9				0.3	4.07	221		3.4		3.7
GPZ	ES	08	54	50				-5.7*	6.27	205	4.2			

JAN 01		H	M	S									70/ 003	
		17	48	49.1	37.16S	177.60E	305	KM	SE	1.3	AVG	MAG		4.0
				+ 1.4	0.12	0.13	10							
							DIR	RES	DIST	AZ	W-A	W	P	W S
ECZ	EP	17	49	30.0				0.2	0.92	126		4.2		4.1
GNZ	P	17	49	33.8				0.5	1.52	168		4.0		4.1
	S			50 06.3				-1.1						
TUA	EP	17	49	33.3				-0.8	1.68	192		3.7		4.3
	ES			50 09				-0.4						
TRZ	S	17	50	23				2.3	2.47	194				4.0
CNZ	ES	17	50	23				0.0	2.60	218				
MNG	P	17	49	53.0				-1.2	3.83	205		4.0		3.8
	E			50 38										
	S			45				-0.1						
HEL	ES	17	51	04				2.1	4.67	207				4.1
COB	EP	17	50	13				0.4	5.45	222		3.6		3.9
	S			31 17				-1.1						
GPZ	ES	17	52	03				-3.3	7.54	209	4.8			

JAN 02		H	M	S									70/ 004	
		14	05	40.0	37.48S	177.79E	170	KM	SE	1.2	AVG	MAG		4.4
				+ 1.0	0.05	0.07	9							
							DIR	RES	DIST	AZ	W-A	W	P	W S
ECZ	IP	14	06	02.2			U	-2.2	0.64	110		5.1		
GNZ	IP	14	06	08.9			U	0.6	1.18	171		4.4		4.7
	IS			27.1				-3.1*						

TUA	P	14 06	11.0	0.4	1.42	200	4.5	5.0		
	IS		13.9	-0.4						
KRP	IP	14 06	15.7	0.9	1.84	255	4.4			
TRZ	P	14 06	20.3	1.4	2.21	200	4.6	4.6		
	S		50.9	1.7						
GBZ	EP	14 06	19.0	-0.4	2.24	303	4.1			
GNZ	EP	14 06	24.1	2.0	2.46	225	4.4	4.2		
	S		54.0	-0.5						
TNZ						3.18	236		4.4	
MNG	P	14 06	36.3	-0.3	3.62	209	4.1	4.1		
	S		07 19.1	-1.2						
WEL	P	14 06	47.2	-0.4	4.47	211	4.8	4.4	4.5	
	S		07 38.3	-0.9						
COB	P	14 06	59.0	0.2	5.33	226	4.1	3.6		
	S		07 59.0	-0.9						
GPZ*	S	14 08	45.0	-2.7*	7.34	211	4.7			
CIZ*	P	14 07	38.0	7.0*	7.76	148				
	ES		09 02	4.3*						
HJZ*	EP	14 07	42.0	0.5*	8.55	218				
	ES		07 13	-3.4*						
HSZ*	EP	14 08	06.0	1.0*	10.35	223				
	ES		09 59	-3.6*						
JAN 04	H M S								70/ 005	
	00 41	52.7	39.18S	174.68E	12 KM	SE 0.8	AVG MAG	4.0		
		+ 0.3	0.02	0.02						
GNZ	IP*	00 42	04.6	D	DIR	RES	DIST	AZ	W-A	W P W S
	PG		07.0			0.5	0.67	92		3.8 4.2
	S*		14.9			-0.1				
KRP	PN	00 42	18.0			-0.0	1.42	28		3.8 4.0
	ISN		36.9			-0.3				
	SG		41			0.1				
MNG	PN	00 42	18.7			-1.1	1.56	157		4.0 3.9
	PG		25.0			0.7				
TRZ	EP*	00 42	24.1			1.1	1.70	103		3.9
	ESQ		49.9			-0.6				
WEL	PN	00 42	27.1			0.1	2.10	178	3.9	4.1 4.3
	SN		52.3			0.2				
	S*		43 00			2.3*				
COB	PN	00 42	30.9			-0.4	2.42	218		4.1 3.9
	P*		35.8			1.6				
	SN		43 00			-0.1				
	ES*		06			-1.1				
GPZ*	ESN	00 43	52			-4.8*	4.76	198		4.1
JAN 04	H M S								70/ 006	
	01 02	51.7	33.60S	179.01W	269 KM	SE 1.3	AVG MAG	5.4		
		+ 1.1	0.06	0.11						
ECZ	EP	01 04	02.0	D	DIR	RES	DIST	AZ	W-A	W P W S
	S		58.0			-1.2	4.54	205		5.7 5.6
GBZ	P	01 04	11.0			-0.3	5.23	239		4.4
GNZ	P	01 04	15.0			-0.6	5.58	205		5.3 5.1
	S		05 23			1.7				
ONE	P	01 04	20.0			0.7	5.88	246	5.3	
TUA	P	01 04	22.0			0.6	6.05	210		
	ES		05 30			-1.8				
KRP	P	01 04	24.2			1.1	6.19	224		
TRZ	EP	01 04	32			1.0	6.82	208		
	S		05 51			2.1				
CRZ	P	01 04	32.0			-0.7	6.95	261		
CHZ	EP	01 04	35.3			1.2	7.10	217		
MNG	EP	01 04	43.7			-0.5	8.27	211		
	S		06 21			-0.4				
WEL	EP	01 05	00			0.1	9.13	211	6.0	
	S		06 39.0			-1.7				

JAN 04	H M S			41.30S	177.93E	33 KM	SE	1.7	AVG MAG	70/009	4.1
	05	41	44.6								
				0.02	0.02						
						DIR	RES	DIST	AZ	W-A	P W S
	TRZ	EPN	05 42 15				0.4	1.95	333		4.3 4.3
		EP*	19				-0.4				
		ESN	38				0.7				
		ES*	45				-0.3				
	MNG	PN	05 42 15				-0.4	2.01	289		3.6 4.0
		ES*	47				0.1				
	WEL	PN	05 42 20.3				-0.5	2.42	269	4.0	3.9 4.1
		EP*	28				0.7				
		S*	59				-0.2				
	TJA	EPN	05 42 23				-0.0	2.57	345		4.6
		EP*	30				0.2				
	GNZ	PN	05 42 24				-0.2	2.65	1		3.9 3.9
		EP*	31				-0.3				
		SN	53				-1.3				
		ES*	43 07				0.8				
	CNZ	EPN	05 42 26				-0.3	2.80	318		3.9 4.1
		SN	57				-1.0				
	TNZ							3.47	306		3.6 4.2
	KRP	EPN	05 42 41				0.3	3.86	330		
		EP*	51				-0.9				
	COB	PN	05 42 42.3				0.4	3.96	271		4.4 4.2
		ESN	43 27				0.8				
	GPZ	ESN	05 43 41				-1.0	4.61	237	4.1	
	MJZ	ESN	05 44 20				0.8	6.16	242		

JAN 04	H M S			37.50S	177.20E	196 KM	SE	1.2	AVG MAG	70/010	4.1
	07	39	01.9								
				0.06	0.05						
						DIR	RES	DIST	AZ	W-A	W P W S
	ECZ	EP	07 39 30				-2.0	1.09	101		
	GNZ	IP	07 39 34.3			U	0.5	1.31	151		4.5 4.4
		IS	57.9				-0.7				
	KRP	P	07 39 35.8				1.4	1.39	252		
		S	59.0				-0.7				
	TRZ	EP	07 39 43				1.5	2.07	188		4.0 4.4
		S	40 13				1.5				
	CNZ	S	07 40 12				-0.8	2.14	217		3.6 3.4
	MNG	P	07 39 57.3				0.7	3.39	203		3.5 3.8
		S	40 39				0.1				
	WEL	S	07 40 57				-0.4	4.23	206	4.6	4.2
	COB	S	07 41 15				0.3	4.99	223		4.1
	GPZ	S	07 42 03				-0.9	7.09	208	4.4	
	MJZ	ES	07 42 30				-1.0	8.25	216		

JAN 04	H M S			41.97S	171.91E	12 KM	SE	0.9	AVG MAG	70/011	3.6
	11	50	26.5								
				0.02	0.03						
						DIR	RES	DIST	AZ	W-A	W P W S
	KAI	EP*	11 50 38.0				-1.0	0.67	213	3.4	
		SQ	49.3				0.1				
	COB	P*	11 50 49.7				-0.3	1.08	35		3.8 4.0
		PN	46.7				-0.5				
		S*	51 00.3				-0.2				
		SN	01.2				-1.2				
	GPZ	SN	11 51 19.0				-1.2	1.81	163	3.1	
	WEL	EP*	11 51 06				-0.1	2.25	73		3.6
		EPQ	11				-1.1				
		S*	36				0.2				
	MJZ	EPN	11 51 03				-0.2	2.28	207		3.4 3.3
		EPG	12.3				-0.1				
		ES*	37.3				0.8				
		ESQ	44				0.6				

LOCAL EARTHQUAKES

41

MNG	EPN	11 51 14.3	1.3	3.01	65	3.7	3.5			
	P*	20.3	1.7							
	ES*	59	0.3							
CNZ				3.91	46	3.7	3.6			
KRP	ESN	11 52 35	3.9	4.91	36					
MNW*	ESN	11 52 31	-3.2*	4.91	218					
JAN 05	H M S	18 22 48.6	44.96S	167.83E	87 KM	SE	1.8	AVG MAG	70/ 012	3.8
		+ 1.3	0.07	0.07	15					
HSZ	IP	18 23 02.1	JIR	RES	DIST	AZ	W-A	W P	W S	
MNW	IP	18 23 08.8	J	3.0	0.29	12				
	S	18.0		2.1	0.84	190	4.3	4.1		
ROX	P	18 23 12.0		-2.3						
	S	28		0.7						
WPZ	EP	18 23 19.0		1.3	1.17	117	4.1	4.3		
MJZ	P	18 23 23.0		-0.2	1.84	158	3.9	3.7		
	E	37.0		0.0	2.12	64	2.6	2.7		
	S	49.9		1.1						
KAI	ES	18 24 25		1.1	3.55	48	4.3			
GPZ	ES	18 24 24		-3.0	3.68	72	3.8			
COB	EP	18 24 06		-0.6	5.28	45	3.8	3.9		
	ES	25 05		-1.7						
MNG	ES	18 25 53		1.4	7.10	55				
JAN 06	H M S	04 49 03.4	40.49S	176.58E	12 KM	SE	0.9	AVG MAG	70/ 013	3.8
		+ 0.6	0.02	0.03	7					
MNG	IP*	04 49 18.8	DIR	RES	DIST	AZ	W-A	W P	W S	
	ES*	30	U	-0.2	0.85	261	4.0	4.2		
TRZ	P*	04 49 21.0		-0.5						
	SG	37		0.1	0.96	11	4.0	4.0		
CNZ	PN	04 49 30.8		1.1						
	PQ	34.1		0.8	1.52	328	3.5	3.8		
	SN	50		-0.1						
	SG	54.2		0.4						
WEL	PG	04 49 36		-0.5	1.59	239	3.3	4.0	3.8	
	SN	52		0.4						
	ESQ	56		0.9						
TUA	PN?	04 49 31		-1.0	1.74	15	4.4	3.6		
	ESN	54		-0.6						
TNZ					2.14	307	3.8	3.5		
KRP	ES*	04 50 30		4.0*	2.69	342				
COB	EPN	04 49 49		-0.8	2.98	257	3.7	3.9		
	EP*	57		1.5						
	S*	50 35		0.4						
JAN 06	H M S	06 51 21.3	37.28S	177.82E	119 KM	SE	1.7	AVG MAG	70/ 014	4.2
		+ 1.8	0.09	0.07	13					
ECZ	EP	06 51 40.5	DIR	RES	DIST	AZ	W-A	W P	W S	
	I	43.2		-0.4	0.71	126	4.7	4.4		
	S	56.8		0.9						
GNZ	IP	06 51 48.0	U	0.3	1.37	173	4.0	4.2		
	S	52 08		0.2						
TUA					1.62	199	4.4			
KRP	IP	06 51 54.5	DNE	0.3	1.93	250				
	S	52 18.5		-0.5						
TRZ	ES	06 52 35		4.9*	2.40	199	4.4	4.3		
CNZ	EP	06 52 04.0		3.4	2.63	222	4.0	3.8		
MNG	P	06 52 17.0		-2.2	3.80	208	3.8	3.9		
	E	19.8								
	ES	53 01		-2.5						
COB	S	05 53 46.3		2.5	5.49	225				3.6

GPZ		ES	06 54 35	1.1	7.53	210	4.9				
H M S								70/ 015			
JAN 06	08 21 15.9		32.64S 179.29E	333 KM	SE	1.2					
	+ - 1.8		0.15 0.34	39							
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
GNZ	P	08 22	49.0		1.3	6.08	189				
	S	23	59		-0.7						
KRP	P	08 22	48.0		0.1	6.10	209				
CNZ	EP	09 23	01		-0.2	7.21	204				
MNG	EP	08 23	15.7		-1.2	8.53	200				
	I		17.0								
	ES		24 53		0.7						
WEL	P?	08 23	27.0		0.1	9.35	201				
MAGNITUDE APPROXIMATELY 4.1											
H M S								70/ 016			
JAN 06	17 56 23.8		42.08S 171.83E	12 KM	SE	1.0	AVG MAG	3.9			
	+ - 0.3		0.02 0.02	7							
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
KAI	EP*	17 56	33		-1.2	0.55	215				
	S*		40.0		-1.9						
COB	P*	17 56	44.1		-1.3	1.20	35	4.2	4.3		
	S*		57 01		-0.5						
GPZ	EPN	17 56	52		-1.0	1.72	160	3.8			
	SN		57 14.3		0.2						
	S*		17.0		-0.3						
HJZ	PN	17 56	59.3		0.7	2.15	207	3.7	3.7		
	SN		57 26		1.3						
	S*		30.8		0.6						
WEL	EP*	17 57	04		-0.9	2.34	71	3.6	4.1	4.0	
	PG		11		-0.2						
	S*		35.5		-0.2						
MNG	PN	17 57	11.9		0.0	3.11	63	4.1	3.7		
	P*		10.5		0.3						
	SN		48.7		0.7						
	S*		58 00		1.0						
MSZ	EPN	17 57	23.9		2.0	3.85	226	3.8	3.9		
	SN		58 06		0.0						
CNZ						4.03	46	4.1	4.2		
MNW	ESN	17 58	31		2.4*	4.79	218	3.8			
KRP	EPN	17 57	38.3		0.7	5.03	36				
H M S								70/ 017			
JAN 07	23 55 20.6		38.57S 176.08E	185 KM	SE	1.5	AVG MAG	4.5			
	+ - 1.0		0.06 0.07	10							
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
CNZ	EIP	23 55	48.9	D	1.4	0.75	213	4.4	3.9		
KRP	IP	23 55	47.0	DSE	-0.6	0.77	326	4.6			
	S		56 04.6		-3.8*						
TUA	P?	23 55	48		-0.2	0.87	106	4.7	4.9		
	E		49.5								
	S		56 07.3		-1.7						
TRZ	P	23 55	52.1		1.9	1.14	150	5.1	4.7		
	S		56 14.3		1.3						
TNZ						1.46	245	4.1	3.7		
GNZ	EP?	23 55	54		0.4	1.53	93	3.9	4.3		
	IS		56 17.0		-2.1						
MNG	IP	23 56	01.9	U	2.3	2.10	192	5.4	4.4		
	IS		30.1		0.7						
ECZ	P?	23 56	01		1.1	2.14	67	4.6	4.3		
	S		29		-1.2						
WEL	P	23 56	10.3	D	1.4	2.89	200	4.5	4.9	4.4	
	S		46.0		-0.1						
COB	EP	23 56	17.3		0.0	3.60	225	3.8	4.3		
	S		57 01		-0.4						
KAI	ES	23 57	40		-0.7	5.31	220	4.9			

LOCAL EARTHQUAKES

GPZ		ES	23 57 49	-1.6	5.74	206	4.9			
MJZ		S	23 58 15.0	-2.1	6.86	216				
JAN 08	H M S		41.37S 178.00E	33 KM	SE	1.2	AVG MAG	70/ 018		
	07 39 44.1		0.04 0.04	7			4.1			
		+ 0.9								
	TRZ	EPN	07 40 16	0.9	2.02	333	W-A	W P	W S	
		ESN	40	1.5				4.4	4.2	
		ES*	48	1.1						
	MNG	EPN	07 40 15	-0.5	2.05	291		4.1	4.0	
		I	32.0							
		ESN	38	-1.1						
		S*	47	-0.7						
	WEL	EPN	07 40 21.3	0.7	2.44	271	3.7	3.9	3.9	
		ESN	47	-1.6						
	TUA	PN	07 40 24	0.5	2.64	345		4.6	4.4	
		EP*	30	-0.6						
	GNZ	P*	07 40 32	0.0	2.72	0		4.1	4.0	
		SN	54	-1.5						
	CNZ	PN	07 40 27.8	1.1	2.87	318		3.9	4.1	
	TNZ				3.52	307		3.9	4.2	
	KRP	EPN?	07 40 40	-1.2	3.93	330				
		ESN	41 23	-2.0						
		ES*	45	1.0						
	COB	PN	07 40 42.6	0.7	3.98	272		3.8	4.2	
		SN	41 28.0	1.7						
	GPZ				4.59	238	3.8			
JAN 08	H M S		37.33S 179.29E	122 KM	SE	1.5	AVG MAG	70/ 019		
	10 53 30.0		0.08 0.09	9			3.9			
		+ 1.5								
	ECZ	P	10 53 48.9	-0.9	0.70	238	W-A	W P	W S	
		S	54 03	-1.9				4.3	4.5	
	GNZ	EP	10 54 01	1.2	1.65	217		3.7	3.6	
		S	23	0.7						
	TUA	P	10 54 09.0	1.8	2.24	228		4.1	3.9	
		S	37	1.7						
	TRZ	EP?	10 54 17	0.3	2.95	220		3.9	4.3	
		S	53	1.0						
	KRP	P	10 54 19.0	1.2	3.04	258				
		ES	54	-0.0						
	CNZ	EP?	10 54 35	-1.4	3.49	237		3.6	3.5	
	MNG	ES	55 27	-0.3	4.43	221		2.9	3.0	
	WEL	S	10 55 46	-2.1	5.28	220	4.6		4.2	
	COB	ES	10 56 12	-1.4	6.33	232				
JAN 08	H M S		41.15S 177.66E	33 KM	SE	0.8	AVG MAG	70/ 020		
	17 04 31.8		0.02 0.03	7			4.3			
		+ 0.4								
	TRZ	EPN	17 04 58.2	-0.3	1.71	338	W-A	W P	W S	
		SN	05 18	-0.7				4.3	4.4	
		S*	24.9	-0.5						
	MNG	EPN	17 04 58.0	-0.9	1.73	287		3.9	4.4	
		SN	05 19	-0.1						
	WEL	PN	17 05 04.4	-0.6	2.18	265	4.0	4.1	4.5	
		SN	30	-0.1						
	TUA	PN	17 05 06.6	-0.9	2.37	350		4.7	4.4	
		P*	13.9	0.2						
	GNZ	EPN	17 05 09.4	-0.1	2.52	7		4.3	4.0	
		ESN	37.9	-0.4						
		S*	51	1.7						
	CNZ	EPN	17 05 10.3	0.3	2.53	320				
	TNZ				3.18	357		4.1	4.3	

LOCAL EARTHQUAKES

45

MSZ* EP 17 15 33 -5.8* 13.02 219
 I 37.0
 S 17 50 -9.9*
 EPCP 24 08
 MNW* P 17 15 46 -4.6* 13.96 216
 *SP 16 33
 S 18 15 -5.1*
 PCP 24 11
 ESCS 27 55
 CBZ* P 17 16 51.2 2.3* 18.97 199
 FELT FROM BAY OF PLENTY TO CENTRAL CANTERBURY. MAXIMUM
 INTENSITY MM V EASTERN BAY OF PLENTY. ALSO FELT RAOUK I., MM III
 DEPTH RESTRICTED TO A TREE WITH OVERSEAS READINGS
 FREE RUN GIVES DEPTH OF 232 KM

JAN 09	H	M	S	38.92S	178.19E	12 KM	SE 0.9	AVG MAG	70/ 022				
	06 44	42.4		0.02	0.03				4.1				
		+ 0.4											
				H <th>M</th> <th>S</th> <th>DIR</th> <th>RES</th> <th>DIST</th> <th>AZ</th> <th>W-A</th> <th>W P</th> <th>W S</th>	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
GNZ	IP*	06 44	49.2			UNE	0.7	0.30	336				
TUA	P*	06 44	57.0			U	-0.3	0.81	277		4.8	4.8	
	S*	45	07				-1.4						
TRZ	EPG	06 45	07.0				-0.4	1.23	238		4.2	4.2	
ECZ	P*	06 45	04				-0.9	1.25	13		4.3	4.2	
	ES*	22					0.3						
CNZ	PN	06 45	16.9				0.3	2.07	261		4.1	3.9	
	P*	19.8					1.0						
KRP	P*	06 45	23.0				0.2	2.30	295				
	ES*	53					-0.1						
MNG	EPN	06 45	24.9				-0.3	2.69	230		3.6	3.4	
	EP*	28.9					-0.9						
	EPG	36					-0.7						
WEL	ESN	06 46	15.9				-1.1	3.53	227	4.3		4.1	
COB	EPN	06 45	53.9				1.5	4.71	241		3.8	3.6	
	EP*	46	04				-0.1						
	ESN	46	46				0.8						
	ES*	47	07				1.4						
	FELT OKAIHAU (36)												

JAN 09	H	M	S	33.81S	178.95W	256 KM	SE 1.2	AVG MAG	70/ 023				
	18 53	44.6		0.07	0.14				4.7				
		+ 1.4											
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	EP	18 54	53.7				0.1	4.37	207		4.9	4.4	
GNZ	P	18 55	06.7				0.7	5.41	206		4.5	4.2	
	ES	56	09				-0.7						
TUA	P	18 55	12.9				0.8	5.89	211		4.8	4.8	
KRP	EP	18 55	14.8				0.5	6.07	226				
TRZ	EP	18 55	23				1.3	6.66	209				
	ES	56	38				0.3						
CNZ	EP	18 55	25				-0.5	6.96	218				
CRZ	P	18 55	24.9				-0.7	6.97	263				
MNG	EP	18 55	38				-2.1	8.11	212				
	ES	57	10				-0.6						
WEL	ES	18 57	29				-1.0	8.97	212	5.0			
COB	ES	18 57	51				1.8	9.81	220				

JAN 10	H	M	S	41.16S	172.57E	12 KM	SE 0.8	AVG MAG	70/ 024				
	19 19	56.6		0.02	0.02				3.9				
		+ 0.3											
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
COB	IP*	19 19	58.0				-2.1*	0.14	60				
KAI	EP*	19 20	24.8				-0.6	1.62	212		3.7		
	S*	46.9					0.0						
WEL	P*	19 20	25.8				-0.3	1.66	95		3.9	4.3	4.4
	PG	29.3					-0.6						
	ES*	49					0.8						

	MNG	E	19 20 33.9				2.27	77		4.3	4.0
		IP*	35.0			-1.6					
		PG	43.3			0.9					
		S*	21 06			-0.6					
	TNZ						2.41	36		4.3	
	GPZ	ESN	19 21 08			0.8	2.54	179	3.2		
		ES*	15			0.5					
	GNZ	PN	19 20 44.0			0.3	3.01	50		4.1	4.2
	HJZ	EPG	19 21 01			-0.8	3.22	208		3.7	3.5
		ESN	24			0.5					
	TRZ						3.62	65			
	KRP	EPN	19 20 56			-0.1	3.96	36			
		ES*	21 58			0.7					
	MSZ	EPN	19 21 09			0.2	4.90	223		3.3	3.4
JAN 11	H M S		38.72S	175.68E	148 KM		SE	1.0		AVG MAG	70/025
	12 29 15.7		0.03	0.03	9						4.0
	+ 0.8										
		H M S			DIR RES		DIST	AZ	W-A	W P	W S
	KRP	IP	12 29 39.3		DSW	0.6	0.80	352		4.1	
		S	56.7			-0.1					
	TUA	P	12 29 42.3			0.4	1.15	95		4.4	4.3
		S	30 02.0			0.0					
	TRZ	P	12 29 44.0			1.4	1.21	134		4.3	4.1
		S	30 04			0.9					
	GNZ	ES	12 29 49.0		U	-0.1	1.83	88		4.2	4.0
		P	30 13.0			-1.8					
	MNG						1.90	185		4.3	4.2
	GBZ	P	12 29 57			-0.4	2.50	356		3.2	
	WEL	ES	12 30 32			-0.8	2.66	195	3.9		4.0
	COB	EP?	12 30 08			0.7	3.28	223		3.6	3.4
		ES	46			-0.8					
JAN 11	H M S		35.45S	178.90E	314 KM		SE	0.8		AVG MAG	70/026
	20 32 34.3		0.07	0.12	9						4.4
	+ 1.0										
		H M S			DIR RES		DIST	AZ	W-A	W P	W S
	ECZ	P	20 33 24.8			0.1	2.26	187		4.3	4.6
		ES	34 05.3			1.4					
	GNZ	P	20 33 33.7			-0.4	3.27	192		4.5	4.4
		I	34.8								
		ES	34 20			-0.8					
	KRP	P	20 33 38.2			0.0	3.67	227			
	TRZ	ES	20 34 42			-0.8	4.42	201			4.6
	GNZ	P	20 33 48			-0.4	4.60	215		4.0	3.7
	MNG						5.83	207		4.1	4.0
	WEL	ES	20 35 30			0.1	6.67	208	4.9		
	COB	EP	20 34 22			0.1	7.43	219			
		ES	35 46			-0.4					
	GPZ	ES	20 36 33			0.1	9.55	208	4.8		
	HJZ	ES	20 36 59.3			0.8	10.72	215			
JAN 12	H M S		38.66S	175.92E	141 KM		SE	1.1		AVG MAG	70/027
	01 59.9		0.05	0.04	12						3.9
	+ 1.4										
		H M S			DIR RES		DIST	AZ	W-A	W P	W S
	GNZ	IP	03 02 22.1		U	1.1	0.62	228			
	KRP	P	03 02 22.4		D	0.2	0.79	337		3.5	
		S	39			-0.4					
	TUA	P	03 02 24.1			0.4	0.97	99		3.8	4.2
		S	42.0			-0.0					
	TRZ	P	03 02 26.9			1.6	1.14	142			
	GNZ	IS	03 02 53.0			-1.3	1.65	90			3.6
	MNG						1.99	190		4.5	3.9
	WEL	P	03 02 44.0			-0.8	2.77	198	3.9	4.2	4.0
		S	03 19.0			-0.1					
	COB	S	03 03 34			-0.5	3.45	224			3.8

LOCAL EARTHQUAKES

47

JAN 12		H	M	S				70/ 028						
		05	28	22.2	34.57S	179.62E	234 KM	SE 1.4	AVG MAG	4.6				
				+ 1.6	0.06	0.13	17							
					H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	EP	05	29	18					1.2	3.24	195		5.0	4.7
GBZ	EP	05	29	21				-2.0	3.76	243			3.4	
GNZ	P	05	29	28.9				-0.2	4.26	197			4.5	4.4
	S		30	19				-1.9						
KRP	P	05	29	36.6			U	2.2	4.70	223				
TRZ	P	05	29	45				1.3	5.45	203			4.8	4.8
	S		30	49				1.7						
CNZ	P	05	29	46				-0.3	5.66	214			4.1	
CRZ	P	05	29	47.5				0.2	5.74	269			4.5	
MNG	P	05	30	00.0				-1.7	6.87	207				
	ES		31	19				-0.6						
WEL	ES	05	31	39				-0.1	7.72	208		5.1		
COB	EP	05	30	22				-0.4	8.48	218				
	ES		31	58				1.5						
GPZ	ES	05	32	45				0.0	10.60	209		4.9		
MJZ	ES	05	33	11				-0.8	11.77	214				

JAN 12		H	M	S				70/ 029						
		18	22	32.2	37.99S	176.12E	220 KM	SE 1.4	AVG MAG	4.0				
				+ 1.7	0.07	0.06	12							
					H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	P	18	23	01.9			U	0.3	0.47	278				
	ES			24				-0.2						
TUA	EP	18	23	05				-0.1	1.15	135			4.0	4.1
CNZ	P	18	23	07.0				0.9	1.28	200			3.7	
GNZ	P	18	23	09.7				0.7	1.63	114			4.2	4.0
	S			36				-1.5						
TRZ	ES	18	23	40				2.2	1.65	161				4.3
MNG	P	18	23	19.0			U	-0.5	2.67	191			4.0	3.8
	S			54.0				-2.2						
WEL	ES	18	24	13				0.7	3.45	197				
COB	ES	18	24	25				-0.2	4.05	219				3.7

JAN 13		H	M	S				70/ 030						
		03	41	10.7	40.43S	174.46E	12 KM	SE 0.6	AVG MAG	3.8				
				+ 0.3	0.01	0.02	3							
					H <td>M <td>S</td> <td>DIR</td> <td>RES</td> <td>DIST</td> <td>AZ</td> <td>W-A</td> <td>W P</td> <td>W S</td> </td>	M <td>S</td> <td>DIR</td> <td>RES</td> <td>DIST</td> <td>AZ</td> <td>W-A</td> <td>W P</td> <td>W S</td>	S	DIR	RES	DIST	AZ	W-A	W P	W S
MNG	IP*	03	41	25.0			U	-0.5	0.80	104			4.3	4.0
	S*			36				-0.5						
WEL	P*	03	41	28				1.0	0.89	165		3.2	3.5	3.6
	S*			39				-0.1						
	SN			42.5				0.1						
TNZ	EPG	03	41	34.5				-1.3	1.24	357			3.5	3.7
	SG			53				0.4						
COB	PN	03	41	36.0				-0.5	1.47	243			4.1	4.1
	SN			56.0				0.3						
CNZ	PN	03	41	36				-0.8	1.48	35			3.7	3.8
	SN			56				-0.1						
TRZ	ESN	03	42	09				0.8	2.01	65				
KRP	ESN	03	42	25				1.3	2.63	19				
GPZ	ESN	03	42	40				-3.1*	3.54	202		3.7		

JAN 13		H	M	S				70/ 031						
		08	23	29.0	42.56S	172.22E	12 KM	SE 0.6	AVG MAG	3.6				
				+ 0.2	0.02	0.02	3							
					H <td>M <td>S</td> <td>DIR</td> <td>RES</td> <td>DIST</td> <td>AZ</td> <td>W-A</td> <td>W P</td> <td>W S</td> </td>	M <td>S</td> <td>DIR</td> <td>RES</td> <td>DIST</td> <td>AZ</td> <td>W-A</td> <td>W P</td> <td>W S</td>	S	DIR	RES	DIST	AZ	W-A	W P	W S
KAI	IS*	08	23	49.0				0.2	0.60	273			3.3	
GPZ									1.18	165			3.2	
COB	EPN	08	23	54.5				-0.7	1.52	15			3.9	4.0
	P*			56.0				-0.0						
	S*			24				-0.2						
MJZ	EPN	08	24	01				0.2	1.92	221			3.5	

LOCAL EARTHQUAKES

COB		PH	23 32	15.0	-0.2	3.92	272	4.1	4.0
		SN		59	0.1				
H H S									70/ 035
JAN 15	00 18	10.3	41.28S	177.91E	33 KM	SE	1.1	AVG MAG	3.9
	+ 1.1		0.04	0.03	?				
	H M S		DIR	RES	DIST	AZ	W-A	W P	W S
TRZ	EP*	00 18 46		1.6	1.91	334		4.1	4.1
	ES*	19 10		0.1					
MNG	EPN	00 18 40		-0.4	1.96	289		3.8	3.8
	P*	46		0.5					
	SN	19 03		-0.1					
	S*	11.3		0.7					
WEL	ESN	00 19 11		-2.2	2.37	269	3.4		3.8
GNZ	ESN	00 19 20		0.4	2.63	2			3.8
	ES*	30		-1.4					
CNZ	EPN	00 18 51		-0.4	2.75	318		3.6	3.8
COB	PN	00 19 07.3		0.3	3.91	271		4.3	4.3
	SN	51.3		0.6					
MJZ*	ESN	00 20 47		2.8*	6.12	241			
H H S									70/ 036
JAN 15	12 26	44.4	39.24S	177.63E	12 KM	SE	0.9	AVG MAG	4.1
	+ 0.7		0.04	0.03	?				
	H M S		DIR	RES	DIST	AZ	W-A	W P	W S
TUA	IP*	12 26 55.0	U	-0.2	0.47	319		4.7	4.4
	S*	27 02.9		-0.3					
GNZ	P*	12 26 57.1		0.3	0.67	27		3.9	4.3
	PG	57.9		-0.1					
	SG	27 08.3		1.4					
	SN	09.3		-1.8					
CNZ	EPN	12 27 12		-0.2	1.62	271		3.9	3.7
	P*	14		0.9					
	PG	17.3		0.3					
	S*	34.6		-3.1					
H H S									70/ 037
JAN 15	23 53	51.6	41.22S	177.99E	33 KM	SE	0.5	AVG MAG	3.9
	+ 0.4		0.02	0.02	?				
	H M S		DIR	RES	DIST	AZ	W-A	W P	W S
TRZ	ESN	23 54 43		0.3	1.89	332		4.1	4.1
MNG	EPN	23 54 22		-0.1	1.98	287		3.7	3.8
	ESN	45		-0.1					
WEL	ESN	23 54 53		-2.7*	2.42	267	3.6		3.8
TUA	EPN	23 54 29		-0.1	2.49	345		4.3	4.2
	ESN	58		0.5					
GNZ	EPN	23 54 30		-0.2	2.58	1		3.9	3.8
	SN	59 00		0.5					
CNZ	PN	23 54 32.3		-0.2	2.75	317		3.7	3.8
	ESN	35 03		-0.6					
KRP	EP*	23 54 57.0		-0.8	3.79	329			
COB	PN	23 54 49.0		-0.1	3.96	270		3.8	4.2
	SN	55 34		0.7					
H H S									70/ 038
JAN 16	04 42	29.2	39.48S	175.63E	12 KM	SE	0.7	AVG MAG	3.7
	+ 0.2		0.01	0.01	?				
	H M S		DIR	RES	DIST	AZ	W-A	W P	W S
CNZ	P*	04 42 34.1	D	-1.1	0.28	347			
	S*	39		-0.4					
TRZ	EPG	04 42 48		-0.1	0.93	95		3.7	3.6
	ESG	43 01		0.4					
TNZ					1.01	286		3.8	3.6
MNG	P*	04 42 48.8	D	-1.1	1.15	186		4.2	
TUA	EP*	04 42 53.3		-0.1	1.36	61		3.7	3.6
	ES*	43 12		0.3					
KRP	PN	04 42 56		-0.2	1.55	357			

LOCAL EARTHQUAKES

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	PN	03	35	42.5	D	0.1	0.73	122		4.6	4.2
GNZ	PN	03	35	50.9		-0.0	1.35	171		3.9	4.0
	SN			36 07		-0.3					
	S*			12		0.0					
TUA	PN	03	35	53.9		-0.1	1.58	198		4.2	4.1
	EP*			58		0.4					
	ESN			36 12		-0.8					
	ES*			20		1.3					
KRP	PN	03	35	57.9		-0.2	1.87	250			
GBZ	EPN?	03	36	01		-0.6	2.13	300			
	EP*			07		0.1					
TRZ	ES*	03	36	41		-1.2	2.37	198		4.3	4.1
MNG							3.76	208		3.9	3.7
WEL	ESN	03	37	24		-2.4*	4.61	209			
COB	EPN?	03	36	48		1.3	5.44	224		3.5	3.6
	ESN			37 46.3		0.0					
<p>JAN 17 14 50 20.0 32.62S 179.59W 464 KM SE 1.7 AVG MAG 70/ 043 5.3</p> <p>+ - 2.3 0.27 0.53 37</p>											
ECZ					DIR	RES	DIST	AZ	W-A	W P	W S
GNZ	EP	14	51	59		-0.0	5.29	196			5.0
	S			53 17		-0.3	6.32	197			
KRP	P	14	52	04.0		1.8	6.63	216			
TUA	EP	14	52	03		-0.2	6.72	202			
	ES			53 23		-1.9					
TRZ	S	14	53	41		1.1	7.51	202			
WEL	ES	14	54	26		1.9	9.76	206	5.5		
COB	EP	14	52	42		-1.5	10.45	214			
	ES			54 37		-0.9					
GPZ							12.63	207	5.3		
<p>JAN 17 17 10 38.4 38.93S 179.72E 149 KM SE 0.9 AVG MAG 70/ 044 4.2</p> <p>+ - 0.6 0.02 0.03 6</p>											
KRP	EP	17	11	01	DIR	RES	DIST	AZ	W-A	W P	W S
	S			17.6		0.6	0.62	346			
TUA	EP	17	11	05.5		0.2	1.15	105		4.2	4.4
	ES			24		-0.8					
TRZ	P	17	11	08.0		1.5	1.34	141		4.6	4.4
	ES			28		-0.0					
GNZ	P	17	11	12.0		0.5	1.81	94		3.8	4.1
	S			36		-1.0					
MNG							2.10	185		4.0	4.2
GBZ	P?	17	11	16.9		-0.7	2.31	355			
WEL	S	17	12	00		0.0	2.85	195	4.2		4.3
COB	EP	17	11	31.5		-0.7	3.44	221		3.6	4.1
	S			12 13		-0.4					
<p>JAN 17 20 46 47.9 38.41S 179.62E 164 KM SE 1.4 AVG MAG 70/ 045 4.0</p> <p>+ - 1.6 0.05 0.06 12</p>											
KRP	P	20	47	10.5	DIR	RES	DIST	AZ	W-A	W P	W S
	S			29.2		-0.4	0.49	352			
TUA	EP	20	47	16		0.5	1.26	109		4.4	4.3
	ES			36.3		-2.0					
TRZ	EP?	20	47	19.6		1.1	1.47	141		3.9	4.2
	ES			44		1.9					
MNG*							2.21	183		4.2	3.9
WEL	ES	20	48	12		-0.5	2.94	193			4.0
COB	EP?	20	47	43		0.5	3.48	219		3.6	3.6
	ES			48 24		-0.6					

		I	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
COB	IP.	00	49	34.0		0.4	0.42	344			
WEL	IP	00	49	43.0	J	1.1	1.43	82	4.0	4.9	5.0
	S		50	03.3		-0.1					
KAI	SP	00	49	44.2		1.5	1.51	226	4.7		
	S		50	04.0		-1.3					
CHR	ES	00	49	52			2.05	185			
	S		50	16		-0.2					
HNG	IP	00	49	51.0	U	0.8	2.15	67		4.7	
	E			55.4							
	ES		50	03							
	S			18.8		0.4					
GPZ	PS	00	49	52.9		2.0	2.21	185	4.6		
	S		50	19.0		-0.7					
TNZ	PS	00	49	56.6		0.9	2.57	27		4.7	4.9
MJZ	PP	00	50	02.5		0.6	3.06	215		4.1	4.3
	E			05.0							
	S			38.0		-1.0					
CNZ	PP	00	50	01.9		-0.0	3.06	42		4.9	5.1
TRZ	ES	00	50	50		-1.0	3.57	58			4.9
OMZ	PS	00	50	13.9		1.7	3.85	201		4.7	4.8
	S			57		-0.5					
KRP	PS	00	50	15.4	NE	-0.2	4.11	31			
	E			25.7							
TUA*	EP	00	50	19		1.8*	4.23	52			
	ES			51.04		-2.4*					
ROX*	EP	00	50	23.0		-1.1*	4.75	212		4.6	4.5
	S			51.15		-3.8*					
MSZ	PS	00	50	24.2		-1.0	4.83	227		4.6	4.7
	S			51.16		-4.6*					
GNZ	EP	00	50	26.0		0.4	4.86	56		4.3	4.8
	S			51.19		-2.4					
GBZ	EP	00	50	35.5		-0.5	5.64	22		4.1	
MNW	P	00	50	38.0		0.7	5.74	220		4.7	4.3
	S			51.41		-1.5					
CRZ*	EP	00	50	55.9		0.9*	7.05	359			
FELT	WELLINGTON (68) YH III										

JAN 22 H M S NEAR ROTORUA 70/ 055
 19 25 DIR RES DIST APPROX. MAG 2.5
 KRP PN 19 26 04.5 W-A W P W S
 (SN) 11
 FELT ROTORUA (33) MH IV

JAN 23 H M S 39.77S 176.54E 12 KM SE 1.3 70/ 056
 05 05 33.5 0.02 0.02 r AVG MAG 4.1
 +/- 0.4
 H M S DIR RES DIST AZ W-A W P W S
 TRZ P* 05 05 38.0 D -1.8 0.31 45
 S* 43 -1.4
 SG 43.9 -0.6
 CHZ IP* 05 05 50.1 D -0.8 0.96 306 4.6 4.4
 SG 06 06 0.1
 TUA EP* 05 05 52 -0.9 1.07 27 4.1 4.2
 E 52.8
 HNG IP* 05 05 54.0 U -0.6 1.17 223 4.3 4.0
 IS* 06 12.1 1.8
 GNZ EPG 05 06 07.2 1.1 1.61 46 3.7 3.8
 ESQ 30 2.1
 TNZ EPN 05 06 01.3 -1.8 1.77 289 4.2 3.9
 P* 04 -0.8
 PG 07.9 -1.4
 SG 33 -0.2
 KRP EPN 05 06 07.5 1.1 2.00 337
 SN 33.0 2.3

JAN 26		H	M	S	38.49S 175.93E		174 KM	SE 1.5	AVG MAG	70/ 063
		04	13	22.6	0.05 0.05		9			4.3
				+ 1.1			DIR RES	DIST AZ	W-A	W P W S
KRP	IP	04	13	47.3			DSE -0.3	0.64 331		
	S			14 04.8			-2.0			
CNZ	P	04	13	50.2			1.9	0.77 203	3.6	3.9
TUA	P	04	13	50.2			0.3	1.01 109	4.4	4.6
	S			14 10.0			-1.0			
TRZ	ES	04	14	16			1.0	1.27 147		4.7
TNZ	EP	04	13	56			2.6	1.40 240	4.0	
GNZ	P	04	13	56.1			0.2	1.65 96	4.5	3.9
	S			14 21			-0.5			
MNG	IP	04	14	02.8			1.4	2.16 189	4.9	4.1
	E			24.7						
	S			31			-0.3			
WEL	P	04	14	11			0.1	2.93 197	4.1	4.6 4.1
	S			48			0.0			
COB	P	04	14	18.2			-0.7	3.58 222	4.3	4.2
	S			15 03			0.8			
GPZ	S	04	15	50			-3.0	5.76 204	4.4	
MJZ	EP	04	15	01			-0.8	6.86 215		
	S			16 15			-4.0*			

JAN 27		H	M	S	39.44S 176.32E		105 KM	SE 1.4	AVG MAG	70/ 064
		04	08	58.7	0.03 0.04		7			4.6
				+ 2.6			DIR RES	DIST AZ	W-A	W P W S
TRZ	IP	04	09	15.0			U 0.3	0.41 107		
	S			26.3			-0.5			
CNZ	IP	04	09	17.0			U 0.7	0.64 291		
TUA	P	04	09	19.1			D 0.4	0.90 46	4.9	4.9
	S			32			-2.0			
MNG	IP	04	09	25.0			D 1.1	1.34 208	4.5	4.7
	S			44			1.1			
TNZ	P	04	09	27.9			1.8	1.52 279	4.5	4.4
GNZ	IP	04	09	27.6			D 1.2	1.55 60	4.5	4.6
	S			47.0			-0.1			
KRP	IP	04	09	27.8			DSE 0.5	1.63 338	4.4	4.2
	IS			47.2			-1.5			
WEL	P	04	09	33.8			U 1.3	2.19 212	4.4	4.6 4.5
	S			10 02			0.7			
COB	P	04	09	48.0			-0.2	3.20 238	4.4	4.5
	S			10 25			-0.7			
KAI								4.83 229	4.7	
GPZ	EP	04	10	13.0			-0.7	5.07 212	4.9	
	ES			11 08.0			-3.5			
MJZ	P	04	10	31.0			0.3	6.31 222		
	ES			11 37			-4.9*			
OMZ	P	04	10	38.7			-0.2	6.91 214		
CIZ*	S	04	11	54			-4.3*	6.98 133		
MSZ*	S	04	12	21			-5.7*	8.15 227		

JAN 27		H	M	S	33.76S 179.84W		308 KM	SE 1.5	AVG MAG	70/ 065
		06	58	57.9	0.18 0.31		34			4.4
				+ 2.8			DIR RES	DIST AZ	W-A	W P W S
GNZ	S	07	01	20			-1.1	5.17 199		4.2
KRP	EP	07	00	24			0.8	5.60 221	3.6	
TRZ	ES	07	01	49			2.3	6.37 204		
CNZ	ES	07	01	50			-1.1	6.58 213		
MNG	EP	07	00	49			-0.7	7.80 207		
	S			02 18			0.3			
WEL	ES	07	02	36			-0.4	8.64 208	5.5	
COB	ES	07	02	53			-0.1	9.40 217		

JAN 29		H	M	S								70/ 066
	02 00	21.5	44.97S	167.63E	105 KM	SE	0.8	AVG	MAG			4.7
		+ 0.6	0.04	0.04	7							
			H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
MSZ	IP		02 00	37.6			0.2	0.36	35			
MNW	IP		02 00	39.9	D		-0.9	0.81	180			
ROX	P		02 00	47.1			0.8	1.30	114		4.7	5.1
	IS			01 05.0			0.0					
WPZ	P		02 00	53			-0.5	1.90	154		4.6	4.7
	E			01 16								
HJZ	P		02 00	58.8			0.5	2.26	65		3.9	4.5
	E			01 11								
	S			26			0.2					
OHZ	IP		02 01	00.2	D		0.9	2.33	94		5.2	5.2
	S			27			-0.6					
KAI								3.67	50		4.6	
GPZ								3.82	72		4.6	
COB	P		02 01	41.2			0.4	5.39	46		4.2	4.4
	S			02 41			-1.1					
MNG*	EP		02 02	12.0			3.9*	7.23	56			
JAN 29		H	M	S								70/ 067
	07 30	36.9	37.85S	179.22E	33 KM	SE	1.2	AVG	MAG			4.0
		+ 0.9	0.04	0.05	R							
			H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	PN		07 30	48.0			0.3	0.56	286		4.4	4.5
	SN			59			-0.6					
GNZ	EPN		07 30	58			1.0	1.23	229		3.8	3.7
	S*			31 17.8			1.6					
TRZ	EPN		07 31	19			0.1	2.53	227		4.0	4.2
	EP*			21			-0.6					
	ESN			45			1.2					
KRP	EPN		07 31	20			-0.1	2.92	267			
	ESN			53			-0.0					
CNZ	EPN		07 31	25			1.2	3.18	244		3.7	
MNG	EPN		07 31	33			-2.1	4.01	225		3.7	3.7
	ESN			32 19			-0.7					
WEL	ESN		07 32	39			-1.3	4.86	224		4.4	4.2
COB	ESN		07 33	12			4.9*	5.97	235			3.9
JAN 29		H	M	S								70/ 068
	09 34	49.6	37.94S	176.83E	166 KM	SE	1.1	AVG	MAG			4.7
		+ 0.7	0.02	0.03	S							
			H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
WNZ								0.90	219		5.1	5.3
TUA	P		09 35	15.7			0.4	0.91	164		4.7	4.8
	S			35.3			0.7					
KRP	IP		09 35	16.7	DE		0.6	1.02	270		4.5	4.0
	IS			36.1			-0.5					
GNZ	IP		09 35	18.0	USM		0.4	1.18	127		5.0	
	S			37.3			-1.8					
ECZ	P		09 35	19.5			-0.0	1.38	80		4.8	4.7
	S			42			-0.5					
CNZ	P		09 35	24			2.2	1.61	218			
TRZ	P		09 35	23.7			1.9	1.61	180		4.9	4.9
	S			50			3.4*					
GBZ								2.03	328		3.8	4.7
TNZ								2.29	236		4.4	
MNG	P		09 35	36.9			0.2	2.87	201		4.8	4.8
	S			36 13.0			0.2					
ONE	EP		09 35	37			-0.3	2.93	317		4.2	
	ES			36 14			0.0					
WEL	P		09 35	46.4			-0.8	3.70	205		5.3	4.9
	S			36 31			-0.5					
COB	P		09 35	56.0			-1.0	4.46	224		4.6	4.8
	S			36 48			-1.1					

LOCAL EARTHQUAKES

59

GPZ*	S	09 37 34	-4.9*	6.57	208	5.3
MJZ*	S	09 38 01	-5.4*	7.72	217	
CIZ*	EP	09 36 44	2.6*	7.82	142	
	ES	38 07	-1.7*			
OMZ*	EP?	09 36 48.0	-1.0*	8.39	210	
	ES	38 19	-3.3*			
MSZ*	EP	09 37 09.0	1.6*	9.49	222	
	ES	38 44	-4.2*			

JAN 29 H M S 42.248 172.83E 33 KM SE 0.5 AVG MAG 70/ 069
 * - 0.1 0.01 0.01

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KAI							1.11	254	3.4		
COB	PN	13 20	31.0			-0.4	1.15	356		4.5	4.5
	SN		46			0.3					
GPZ	EPN	13 20	36			0.2	1.47	186	3.5		
	SN		53.3			-0.1					
HEL	PN	13 20	39.1			-0.2	1.72	57	3.7	4.3	4.1
	P.		42			-1.2*					
	SN		59			-0.5					
	S*		21 07.0			0.8					
MJZ	EPN	13 20	50			0.4	2.47	224		3.6	3.4
	SN		21 18.0			0.2					
MNG	PN	13 20	49.3	D		-0.9	2.55	52		4.2	4.0
	E		59								
	SN		21 19.8			0.0					
	S*		31			-0.1					
TNZ							3.26	21		4.1	4.2
TRZ							4.03	50			4.5
HSZ	ESN	13 22	03			-0.2	4.34	234			3.5
TUA							4.74	45			4.3
KRP	PN	13 21	21.0			-0.0	4.77	26		4.2	
	ESN		22 14			0.3					
GNZ*	SN	13 22	24			-3.2*	5.33	49			4.1

JAN 29 H M S 38.92S 178.00E 33 KM SE 0.7 AVG MAG 70/ 070
 * - 0.4 0.02 0.02

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
GNZ	IPN	16 55	16.1			0.3	0.27	3			
TUA	IPN	16 55	20.9	U		0.2	0.68	279		4.7	4.8
	SN		30			0.2					
TRZ	EP*	16 55	28			-0.8	1.12	235		4.2	3.9
	SN		39.5			-1.1					
ECZ	EPN	16 55	29			-0.1	1.29	19			
KRP	EPN?	16 55	40.7			-0.6	2.18	296			
	EP*		46			-0.8					
	ES*		56 16			0.4					
MNG	PN	16 55	47.5			0.7	2.58	228		3.7	3.5
	ESN		56 17			0.8					
HEL	ESN	16 56	40			3.1*	3.43	225			3.6
COB	EPN?	16 56	14			-0.3	4.59	240		3.5	3.6
	ESN		57 06			0.9					

FELT GISBORNE (45) MM III

JAN 30 H M S 45.11S 167.78E 14? KM SE 1.3 AVG MAG 70/ 071
 * - 1.1 0.05 0.06

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
MSZ	IP	04 46	37.9	U		-0.9	0.45	13			
ROX	IP	04 46	45.3	U		1.5	1.15	109		5.0	5.1
	IS		47 04			0.1					
WPZ	P	04 46	49.6			-0.1	1.72	155		5.0	5.4
	E		53								
	S		47 13			-1.5					
OMZ	S	04 47	26			1.1	2.22	90			5.3

LOCAL EARTHQUAKES

JAN 31		H	M	S	38.83S 175.87E		12 KM	SE	0.9	AVG MAG	70/ 075		
		+ 0.3			0.02 0.02		R				3.8		
		H	M	S	DIR	RES	DIST	AZ		W-A	W P	W S	
CNZ	IP*	20	07	11.2	U	-1.0	0.45	214					
KRP	P*	20	07	21.0	U	0.4	0.94	344					
	PN			22.3		-0.1							
	S*			33.6		0.2							
TUA	EP*	20	07	22		0.4	1.00	89		4.0	4.2		
	PG			25		1.2							
	ESN			36		-1.5							
	SG			37		-0.3							
TRZ	EP*	20	07	23		0.4	1.03	135		4.0	3.9		
TNZ							1.22	252		3.8	3.6		
MNG	P*	20	07	35.0		-0.5	1.81	189		4.0	3.3		
	PQ			39.8		-0.4							
	S*			08 01		1.4							
HEL	EP*	20	07	49		0.0	2.60	199		4.0			
COB	ES*	20	08	44		-0.4	3.30	226		3.7	3.5		
FEB 01		H	M	S	35.64S 175.11W		33 KM	SE	4.7	AVG MAG	70/ 076		
		+ 6.3			0.75 0.59		R				5.2		
		H	M	S	DIR	RES	DIST	AZ		W-A	W P	W S	
ECZ	P	00	42	44.8		-7.3	5.49	246		5.4	5.0		
	S			43 53.8		1.3							
GNZ	P	00	43	07.2		4.9	6.25	239					
	S			44 13.9		2.8							
KRP*	EP	00	43	16.0		-7.7*	7.84	250					
CNZ	P	00	43	29.7		0.7	8.24	242					
MNG	EP	00	43	40.0		1.9	8.92	233					
	ES			49 10.0		-4.5							
HEL	ES	00	45	34.0		0.2	9.73	232					
FEB 01		H	M	S	40.81S 176.85E		12 KM	SE	0.9	AVG MAG	70/ 077		
		+ 0.7			0.03 0.04		R				4.2		
		H	M	S	DIR	RES	DIST	AZ		W-A	W P	W S	
MNG	IP*	04	47	14.2	D	-1.1	1.06	280		4.3	4.4		
	I			25.8									
TRZ	PN	04	47	19.8		0.6	1.26	359		4.4	4.4		
	PG			23.3		1.6							
	SN			36.3		-0.0							
HEL	PN	04	47	23.3		-1.0	1.64	253		3.6	4.4	4.1	
	I			31.8									
	SN			44.9		-0.3							
	SG			52.6		1.0							
CNZ	PN	04	47	27.9		-0.1	1.90	328		4.4	4.4		
	IP*			29.2		-0.4							
	IS*			54.2		-0.6							
	ISG			48 02.7		2.6*							
KRP	EP*	04	47	49		-0.5	3.06	340		3.7			
COB	EP*	04	47	51		0.2	3.13	264		4.2	4.1		
	S*			48 32.4		0.5							
FEB 01		H	M	S	42.44S 172.74E		12 KM	SE	0.8	AVG MAG	70/ 078		
		+ 0.2			0.01 0.02		R				3.9		
		H	M	S	DIR	RES	DIST	AZ		W-A	W P	W S	
KAI	P*	14	36	31.0		-0.3	0.99	264		3.4			
	E(SG)			38.0									
				47.6		0.9							
GPZ	P*	14	36	37.2		1.2	1.26	183					
	S*			52.0		-0.9							
COB	IPN	14	36	37.5		-0.0	1.35	360		4.4	4.5		
	SN			55.2		-0.4							

LOCAL EARTHQUAKES

63

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	IP	07	23	31.3	D	-0.6	0.54	330		3.8	3.4
	S			49.4		-0.5					
CNZ	P	07	23	35.2		1.5	0.85	198		4.1	3.6
	E			59.7							
TRZ	P	07	23	39.9		1.5	1.37	148		4.5	4.6
	S			24 02.7		1.5					
TNZ	P	07	23	40.4		1.7	1.41	235		4.1	
GNZ	P	07	23	41.8		0.2	1.70	99		4.2	4.5
	I			24 03.9							
	S			05.1		-2.0					
MNG	IP	07	23	47.8	U	0.1	2.24	188		4.8	4.2
	S			24 17.3		-0.7					
WEL	E	07	23	55.2			3.01	196	4.6	4.3	4.4
	S			24 33.8		-0.9					
COB	P	07	24	04		-1.0	3.62	221			4.3
	S			47.8		-0.7					
FEB 03											
	H M S	09	24	14.9						70/	082
	+	0.5								AVG	MAG
											3.6
	H M S	41.77S	171.92E		12 KM		SE	0.7			
		0.04	0.05		R						
KAI	PG	09	24	32	DIR	-0.1	0.84	206	3.2		
	S*			42.0		0.0					
	E			43.6							
COB	P*	09	24	31.1		-0.6	0.92	42		3.7	3.9
	S*			44.4		0.3					
MNG	EP*	09	25	07		0.9	2.93	68		3.7	
	ES*			44		-0.5					
FELT WESTPORT (79) MM IV AND REEFTON (86)											
FEB 03											
	H M S	09	45	04.7						70/	083
	+	0.7								AVG	MAG
											4.0
	H M S	37.84S	178.46W		33 KM		SE	0.6			
		0.07	0.04		R						
GNZ	PN	09	45	47.3	DIR	-0.1	2.88	253	W-A	4.1	4.1
	SN			46 20.1		0.1					
TRZ	PN	09	46	03.0		-0.6	4.07	244		4.5	4.4
KRP	EPN?	09	46	13		0.1	4.75	267		3.8	3.9
	E			57.4							
CNZ							4.89	252			3.9
MNG	PN	09	46	23.2		0.7	5.46	238		4.0	3.6
	SN			47 22.4		-0.1					
FEB 03											
	H M S	21	23	46.0						70/	084
	+	0.4								AVG	MAG
											4.5
	H M S	42.12S	171.98E		12 KM		SE	1.5			
		0.03	0.03		R						
KAI	P*	21	23	57.2	DIR	0.1	0.59	226	W-A		
	PG			59.0		0.9					
	I			57.7							
	S*			24 05.0		-0.3					
COB	IP*	21	24	06.8	U	-0.4	1.18	29			
	S*			22		-1.0					
QPZ	P*	21	24	15.9		0.6	1.65	163	4.1		
	S*			37.6		0.3					
MJZ	EPN	21	24	21.8		0.6	2.17	210		4.4	4.2
	E(SN)			48		0.7					
WEL	P*	21	24	26.2		0.6	2.25	69	4.2	4.7	4.7
	PG			32.0		0.4					
	S*			56.4		1.1					
	SG			00.7		-1.2					
MNG	PN	21	24	34.9		1.9	3.03	62		4.7	4.5
	P*			39.2		0.2					
	PG			44.2		-3.2					
	S*			25 17.2		-1.7					
	I			26.4							

LOCAL EARTHQUAKES

65

FEB 05		H	M	S	39.95S 175.10E		77 KM	5F	0.7	AVG MAG	70/ 089
		+	-	0.6	0.02	0.02	8				3.9
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
MNG	P	14	56	58.4		-0.1	0.72	157		4.1	4.1
	I			59.2							
	I			57							
	S			10.7		0.0					
TNZ	P	14	57	01.4		0.4	0.95	324		3.8	3.6
	S			14.8		-0.3					
WEL	S	14	57	24.2		-0.1	1.35	191	3.5		3.9
	I			25.1							
COB	EP	14	57	15.5		-1.1	2.13	237		4.1	4.0
	I			16.7							
	S			42.8		0.8					
GNZ	S	14	57	54.7		0.2	2.62	61			3.7
FEB 05		H	M	S	37.44S 178.74W		12 KM	SE	0.8	AVG MAG	70/ 090
		+	-	0.9	0.06	0.03	9				4.8
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	PN	17	07	51.3		0.3	2.17	262			
	IP*			54.2		0.2					
	SN			08		-0.6					
	E			25.2							
GNZ	PN	17	08	00.9		0.8	2.82	244		4.6	4.6
	IP*			04.6		-0.7					
	SN			34.2		0.8					
TRZ	PN	17	08	18.0		1.1	4.07	237		4.7	4.8
	E			09							
KRP	EPN	17	08	23.0		-0.5	4.56	262		5.2	5.0
	E			09							
MNG	EPN	17	08	35.3		-0.8	5.51	233		4.4	4.3
	SN			09		0.5					
WEL	SN	17	09	56.2		-1.2	6.33	231	5.3		
COB	E(PN)	17	09	03.9		0.0	7.55	238			
	SN			10		-3.0*					
FEB 05		H	M	S	45.01S 167.71E		12 KM	SE	0.5	AVG MAG	70/ 091
		+	-	0.3	0.01	0.02	9				4.7
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ROX	EPQ	21	34	26.9	D	0.3	1.23	113		4.5	5.1
	I			31.0							
	IS*			39.4		-0.8					
	SQ			44.0		0.8					
WPZ	PN	21	34	32.3		0.1	1.84	155		4.9	4.9
	IP*			33.8		-0.2					
	I			34.1							
	SN			54.8		-0.0					
MJZ	PN	21	34	37.6	UN	0.2	2.22	64		4.3	4.6
	I			50.0							
	SN			35		-0.3					
OHZ	PN	21	34	39.8	D	1.6*	2.28	93		4.7	5.1
	I			35							
	SN			00.2		-0.1					
	SN			05.3		-3.8*					
GPZ*	SN	21	35	38		3.78	71		4.6		
COB	EPN	21	35	20.2		0.1	5.38	45		4.4	4.5
	E			36		19.4					
FEB 07		H	M	S	34.75S 179.87E		335 KM	SE	0.9	AVG MAG	70/ 092
		+	-	1.0	0.11	0.13	11				5.0
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	EP	17	21	13.0		1.3	3.13	200		5.1	5.0
	ES			58.6		-0.0					

	GNZ	P	17 21 20.3	-1.7	4.16	200		4.9	4.8
		S	22 17.4	0.1					
	KRP	EP	17 21 28	-0.2	4.72	227		4.4	
	MNG	EP	17 21 52.7	0.5	6.82	239			
		ES	23 11	-0.4					
	WEL	EP	17 22 03.0	0.4	7.67	210	5.7		
		ES	23 30	0.3					
	COB	EP	17 22 12.0	-0.3	8.48	220			
		ES	23 47.3	0.1					
FEB 08	H M S		38.738S 175.90E	183 KM	SE	1.3		AVG MAG	70/ 093
	18 05 00.1		0.05 0.05	10				4.2	
		+ 1.3							
	KRP	P	H M S DIR RES	DIST	AZ	W-A	W P	W S	
		S	18 05 25.9 0.3	0.53	328		3.8	3.2	
		S	45	-0.2					
	TRZ	P	18 05 32.6 1.1	1.38	149		4.5	4.7	
		S	57.3	1.6					
	GNZ	P	18 05 39.1 0.6	1.69	100		4.1	4.1	
		S	58.9	-2.1					
	MNG								
	WEL	P	18 05 49.4 -0.5	2.26	188	4.5	4.7	4.2	
		S	06 27.8 -0.5	3.03	196		4.6	4.3	
	COB	P	18 05 58 0.5	3.64	221		4.2	4.1	
		S	06 41 -0.8						
FEB 09	H M S		38.74S 175.88E	123 KM	SE	0.7		AVG MAG	70/ 094
	02 37 50.0		0.03 0.02	7				4.4	
		+ 0.7							
	KRP	P	H M S DIR RES	DIST	AZ	W-A	W P	W S	
		S	02 38 11.4 0.1	0.86	341		3.7	3.5	
		S	27.9	0.3					
	TUA								
	TNZ	P	02 38 16.0 0.6	0.99	94		4.5	4.9	
		S	34.0	-0.7	1.25	249		4.2	4.5
		S	34.9						
		S	35.4						
	GNZ	P	02 38 20.1 -0.1	1.68	87		4.9	4.2	
		S	42.4	-0.7					
	MNG	IP	02 38 23.9 1.0	1.90	189		4.5	4.3	
		S	48.3	0.6					
	WEL	P	02 38 32.8 -0.4	2.68	198	4.4	4.5	4.5	
		S	39 05.9 -0.0						
	COB	S	02 39 21.3 -0.7	3.37	225			4.6	
FEB 09	H M S		45.06S 167.64E	89 KM	SE	1.2		AVG MAG	70/ 095
	07 02 06.4		0.05 0.05	15				4.1	
		+ 1.6							
	MSZ	IP.	H M S DIR RES	DIST	AZ	W-A	W P	W S	
		IP	07 02 21.7 0.8	0.43	27				
		S	07 02 23.0 -0.4	0.72	181		4.1	4.4	
		S	35.3	-1.0					
	ROX	P	07 02 30.6 0.9	1.26	110		3.9	4.3	
		S	48.3	1.4					
	WPZ	E(S)	07 02 59 -0.0	1.81	153			4.2	
	MJZ	S	07 03 09.2 -1.1	2.29	63			3.6	
	OMZ	P	07 02 43.9 0.3	2.32	92		4.4	4.3	
		S	03 10.3 -0.9						
FEB 09	H M S		40.46S 174.39E	12 KM	SE	1.2		AVG MAG	70/ 096
	11 58 02.7		0.01 0.00	2				3.8	
		+ 0.1							
	MNG	IP*	H M S DIR RES	DIST	AZ	W-A	W P	W S	
		S*	11 58 18.1 -0.1	0.85	101		3.8	3.8	
		S*	29.8	0.1					
	WEL	P*	11 58 18.9 0.2	0.87	161	3.5	3.8	4.1	
		S*	30.4	-0.1					

LOCAL EARTHQUAKES

67

COB		PN	11 58	27.5	-0.1	1.41	243	3.9	4.0
		SN		46.3	0.0				
FEB 09	H M S		38.59S	175.91E	161 KM	SE	1.5	AVG MAG	70/ 097 4.3
	23 17 12.1		0.06	0.06	14				
		+ - 1.8							
KRP	P		23 17	36.3	DIR RES	DIST	AZ	W-A	W P W S
	S			54.2		0.73	336		3.9 3.7
TNZ	P		23 17	42.9		1.8	1.33	243	4.1
GNZ	S		23 18	09.0		-0.3	1.65	92	4.0
MNG	IP		23 17	50.1	U	1.3	2.05	189	4.6 4.7
	S			18 16.0		-1.1			
HEL	S		23 18	34.8		0.9	2.83	198	4.5 4.7
COB	E(P)		23 18	05		-1.9	3.49	223	4.1 4.5
	S			48.4		-0.5			
FEB 10	H M S		42.31S	174.05E	12 KM	SE	0.5	AVG MAG	70/ 098 3.8
	02 04 59.9		0.01	0.02	9				
		+ - 0.3							
HEL	IP*		02 05	21.1	U	0.2	1.16	28	3.8 4.5 4.3
	S*			39.9		-0.6			
COB	PN		02 05	26.9		-0.2	1.57	321	4.1 3.8
	S*			48.8		0.0			
GPZ	SG		02 05	58		-0.1	1.72	216	3.2
MNG*	PN		02 05	31.8		-1.1*	2.01	33	3.7 3.6
	SN			56.2		-1.1*			
	S*			06 03.3		1.3*			
MJZ*	E(PG)		02 06	03		0.2*	3.11	236	3.7 3.4
	E(S*)			32		-3.0*			
KRP	E(P*)		02 06	19.2		0.6	4.53	15	4.0
FEB 10	H M S		37.31S	178.57W	33 KM	SE	1.2	AVG MAG	70/ 099 4.1
	06 30 05.8		0.11	0.09	9				
		+ - 1.5							
GNZ	PN		06 30	51.6	DIR RES	DIST	AZ	W-A	W P W S
	SN			31 29.0		1.3	3.01	243	4.4 4.2
KRP	E(PN)		06 31	14		0.8			
	E(SN)			32 05		0.3	4.72	261	4.0 3.9
MNG	EPN		06 31	26.8		-0.8			
	ESN			32 28.2		-0.0	5.69	233	4.0 4.0
COB	E		06 33	08		-1.1	7.74	238	
FEB 10	H M S		41.66S	172.04E	12 KM	SE	0.8	AVG MAG	70/ 100 4.1
	12 14 11.0		0.02	0.02	9				
		+ - 0.3							
COB	P*		12 14	25.8	DIR RES	DIST	AZ	W-A	W P W S
	I(S*)			35.8		0.4	0.78	42	4.2
KAI	EP*		12 14	29.0		0.1	0.98	208	4.1
	S*			41.9		-0.2			
	SG			43.2		-1.0			
GPZ	EPN?		12 14	44.3		-0.7	2.08	168	3.8
	SN			15 10.0		-0.1			
	P*			14 48.0		0.3			
	PG			54.7		1.5			
HEL	EPN		12 14	46.0		1.0	2.09	80	4.0 4.3 4.4
	P*			48.6		0.8			
	PG			52.7		-0.5			
	I			15 05.7					
	S*			14.8		-0.5			
	SG			18.7		-2.7*			
MJZ	EPN		12 14	52		-0.2	2.59	206	3.8 3.7
	SN			15 22.0		-1.0			
MNG	EPN		12 14	54.3		-0.1	2.80	69	4.4 4.1

LOCAL EARTHQUAKES

		S*	42.8	2.1							
		GNZ SN	07 34	39.1	-0.7	2.59	51	4.7			
		FELT OPIKI (61) M4 IV									
FEB 11	H M S	08 36 32.3	37.375	177.34E	229 KM	SE	0.7	AVG MAG	70/ 104	4.7	
		+ - 0.8	0.04	0.04	5						
	ECZ		H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
	GNZ	IP	08 37	08.3	UW	0.3	1.01 109	4.9	5.7	5.1	
		I		28.4			1.38 157		4.9	5.1	
		I		31.2							
	TUA	IP	08 37	09.0		0.5	1.44 186	4.8	4.9		
		I		31.2							
		S		36.3							
	KRP	IP	08 37	08.9	DNE	-0.2	1.53 248	4.7	3.8		
		S		37.8		0.0					
	MNG	IP	08 37	29.3		-1.1	3.55 203	4.3	4.7		
		ES		38 15.7		0.2					
	WEL	P	08 37	41.1		0.6	4.39 206	5.1	4.4	4.6	
		S		38 33.1		-0.4					
	COB	S	08 38	31.0		0.5	5.15 222	4.3	4.5		
FEB 12	H M S	06 39 45.0	37.885	176.47E	250 KM	SE	1.0	AVG MAG	70/ 105	4.6	
		+ - 1.1	0.05	0.06	7						
	KRP	IP	06 40	18.2	D	-0.7	0.74 267	4.3	3.7		
		S		45.1		-0.2					
	TUA	P	06 40	21.0		0.4	1.07 150	4.9	5.0		
		S		49.0		0.7					
	GNZ	IP	06 40	23.9	U	0.3	1.44 122	4.8	5.1		
		I		44.0							
		S		52.0		-0.7					
	CNZ	P	06 40	24.9		1.2	1.50 208	4.3	4.1		
	CNZ*	P	06 40	24.9		1.2*	1.50 208				
		S		57.6		4.2*					
	ECZ						1.66 84	4.8	4.7		
	MNG	I(P)	06 40	34.9	U	-1.3	2.84 195	4.8	4.6		
		I(S)		41 15.0		-1.0					
	WEL	P	06 40	45.1		-0.0	3.64 201	4.7	4.6	4.5	
		S		41 33.2		1.3					
	COB*	EP	06 40	51		-2.0*	4.31 221	4.4	4.5		
FEB 12	H M S	18 01 59.3	38.46S	175.94E	165 KM	SE	1.3	AVG MAG	70/ 106	3.9	
		+ - 1.8	0.06	0.07	15						
	KRP	IP	18 02	23.2	D	0.2	0.62 329	3.6	3.3		
		S		41.0		-0.4					
	CNZ	P	18 02	25.7		1.6	0.80 202	3.8	3.3		
	GNZ	P	18 02	32.0		0.3	1.64 97	4.0	4.0		
		E		50.2							
	GNZ	P	18 02	32.0		0.3	1.64 97				
	MNG	IP	18 02	36.0	U	-1.8	2.18 189	4.5	4.1		
		S		03 06.1		-1.3					
	WEL	S	18 03	25.9		1.2	2.96 197	4.3	4.0		
	COB	S	18 03	38.8		-0.0	3.60 222			4.3	
FEB 13	H M S	10 32 47.5	41.76S	171.71E	12 KM	SE	1.3	AVG MAG	70/ 107	3.5	
		+ - 1.8	0.12	0.20	3						
	KAI	P*	10 33	02.3	DIR	RES	DIST	AZ	W-A	W P	W S
		PG		04.0		0.0	0.80 196	3.3			
		S*		11.0		0.2					
				11.0		-2.2					

	COB	SG		16.7		2.0														
		EP*	10 33	06.0		0.0	1.02	49				3.6	3.8							
		EPQ		08.4		0.2														
		ES*		19.9		0.2														
	MNG	EP*	10 33	40.6		-0.4	3.06	69				3.5								
	FELT WESTPORT (79) MM III																			
FEB 14		H M S																		70/108
		04 06	35.4	41.72S	172.00E	12 KM	SE	0.8				AVG MAG	3.8							
		+-	0.3	0.02	0.02	3														
	COB	IP*		H M S		DIR	RES	DIST	AZ	W-A	W P	W S								
		S*	04 06	50.7		U	-0.1	0.84	41			4.1	4.4							
	KAI	EP*	04 06	51.3			-0.6													
		S*	04 06	51.3			-0.9	0.92	208	3.7										
	GPZ	EPN	04 07	09.0			-2.1*													
		S*	04 07	09.0			0.2	2.03	167		2.9	3.1								
		S*		37.0			-1.2													
	WEL	EPN	04 07	10.3			0.4	2.12	79	3.6	3.7	4.2								
		S*		41.4			0.6													
	HJZ	PN	04 07	16.1			0.4	2.53	206		3.8	3.5								
		E		23.0																
		SN		47.0			1.0													
		S*		53.9			0.6													
		SG		08 01.7			0.8													
	MNG							2.85	68		4.0	3.9								
	MSZ	EPN	04 07	38.0			-0.2	4.20	224		3.7	3.9								
		SN	08 08	25.0			-0.9													
	FELT PAENGA (80)																			
FEB 14		H M S																		70/109
		05 53	19.9	48.65S	164.89E	12 KM	SE	0.8				AVG MAG	4.8							
		+-	1.1	0.08	0.09	3														
	MNW	PN	05 54	11.1		DIR	RES	DIST	AZ	W-A	W P	W S								
	ROX	PN	05 54	25.0			-1.0	3.42	34		5.1	4.8								
	MSZ	PN	05 54	27.4			-0.2	4.39	45		4.7	5.0								
		SN		55 17.3			0.8	4.49	29		5.1	4.8								
	OMZ	EPN	05 54	40.0			0.0	5.47	51		4.6	4.5								
		SN		55 41.0			0.4													
	HJZ*	EPN	05 54	52.0			0.0	6.06	42											
		P*		55 03.9			4.5*													
		E		56 01.0			-0.8*													
FEB 14		H M S																		70/110
		09 20	05.2	40.75S	176.08E	12 KM	SE	1.2				AVG MAG	4.9							
		+-	0.5	0.03	0.04	3														
	MNG	IPQ	09 20	16.0		DIR	RES	DIST	AZ	W-A	W P	W S								
	WEL	IP*	09 20	27.4			1.0	0.47	286											
		S*	09 20	41.9			1.9	1.13	241	5.0										
	GNZ	PN	09 20	31.7			1.2													
	TNZ	PN	09 20	37.7			-1.1	1.60	345		5.0									
		SN		21 01.4			-0.8	2.03	320		5.4	5.5								
	TUA	PN	09 20	39.4			-1.7													
	COB	PN	09 20	49.0			-0.1	2.11	23		5.0									
	GNZ	PN	09 20	46.3			-0.9	2.56	261											
		E		21 04.3			0.3	2.58	36		4.6	4.6								
		SN		17.3			0.6													
	KRP	PN	09 20	49.4			-0.4	2.85	351		5.1	5.3								
		E		56.7																
		SN		21 25.0			1.6													
	GPZ	SN	09 21	47.4			-0.9	3.89	220	5.0										
	KAI	P*	09 21	13.0			-0.4	3.92	242											
	HJZ	PN	09 21	23.2			1.0	5.27	230		4.3	4.2								
		SN		22 20.0			-1.4													
	MSZ*	PN	09 21	54.0			5.2*	7.17	234											
		SN		23 05.0			-1.9*													
	FELT WIDELY IN SOUTHERN PARTS OF THE NORTH ISLAND. MAXIMUM INTENSITY MM IV																			

LOCAL EARTHQUAKES

FEB 14		H	M	S			229 KM	SE	0.7	AVG MAG	70/ 111
		12	30	51.5	37.32S	176.93E	3				4.2
				+ 0.8	0.05	0.04					
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	P	12	31	26.0		-0.2	1.26	241		3.7	3.1
	S			52.6		-0.4					
TUA	P	12	31	28.0		-0.0	1.50	173		4.3	4.3
	S			56.0		-0.3					
GNZ	IP	12	31	29.3	U	0.6	1.58	147		4.7	4.4
	S			57.2		-0.3					
GNZ	P	12	31	35.0		0.9	2.17	210		3.7	3.7
	S			32 08.0		0.8					
	E			14.2							
HNG							3.48	198		4.8	4.2
WEL	P	12	31	57.7		-0.9	4.30	202	4.6	4.3	4.4
	S			32 50.6		-0.1					
COB	S	12	33	04.1		-1.6*	4.98	220			4.0

FEB 14		H	M	S			12 KM	SE	0.6	AVG MAG	70/ 112
		19	13	10.5	36.90S	179.19W	3				3.9
				+ 0.9	0.06	0.05					
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
GNZ	EPN	19	13	54.0		-0.6	2.81	231		4.3	4.1
	SN			14 28.0		0.2					
KRP	EPN	19	14	19.0		0.2	4.32	255		3.8	3.4
	SN			15 03.7		-0.2					
GNZ	EPN	19	14	21.0		0.4	4.75	239		4.1	4.0
	E			15 18.8							
HNG							5.98	227		3.8	3.9
COB	EPN	19	14	58		-0.1*	7.55	234			
	P*			15 19.4		-1.4*					

FEB 15		H	M	S			12 KM	SE	1.2	AVG MAG	70/ 113
		08	10	26.3	42.72S	171.12E	3				3.6
				+ 0.4	0.02	0.03					
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KAI	EP*	08	10	32.2		-0.1	0.29	49	3.1		
	S*			36.0		-0.6					
				43.3							
HJZ	IP	08	10	52.3		-1.3	1.36	200		3.6	3.7
	SG			11 12.0		-0.1					
GPZ	EPN	08	10	51.0		-1.4	1.49	132	3.3		
	S*			11 13.0		0.4					
COB	EP*	08	11	01.8		-0.2	2.03	37		4.0	4.1
	S*			30.2		1.4					
	SG			34.0		-0.6					
GNZ	EPN	08	11	05.0		1.0	2.36	183		3.6	3.6
	SN			33.0		0.8					
MSZ	EP*	08	11	18.6		-0.7	3.03	229		3.3	3.6
	PG			28.5		0.9					
	SN			50.8		2.2					
	SG			12 06.8		-1.8					

FEB 15		H	M	S			149 KM	SE	1.3	AVG MAG	70/ 114
		15	27	50.5	38.24S	176.19E	12				3.5
				+ 1.7	0.08	0.05					
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	IP	15	28	11.9		-0.6	0.60	301		3.9	2.8
	S			29.9		0.4					
TUA	P	15	28	15.3		0.4	0.95	127		3.8	4.2
	S			32.0		-1.7					
GNZ	P	15	28	15.0		-1.1	1.09	207		3.1	3.1
	S			37.0		1.1					
GNZ	P	15	28	21.0		0.7	1.50	106		3.3	3.7
	S			44.0		0.8					

FEB 15	H M S	45.00S	167.72E	122 KM	SE 0.4	AVG MAG	70/ 115
	23 54 13.0	0.03	0.02	3			3.6
	+ 0.6						
MSZ	IP	23 54 30.9	DIR	RES	DIST	AZ	W-A W P W S
	S	44.0	U	0.3	0.35	23	
ROX	S	23 54 56.7		-0.1	1.23	114	3.6
MJZ	P	23 54 49.4		-0.3	2.21	64	3.1 3.4
	S	55 17.4		0.0			
OMZ	S	23 55 19.0		0.3	2.26	93	3.6 4.1
FEB 16	H M S	37.26S	178.51W	33 KM	SE 0.4	AVG MAG	70/ 116
	07 31 39.3	0.08	0.05	3			3.8
	+ 0.7						
GNZ	PN	07 32 25.0	DIR	RES	DIST	AZ	W-A W P W S
	SN	59.2		0.3	3.07	242	4.1 4.1
TRZ*	SN	07 33 32.3		-0.0	2.6*	237	4.3
KRP	EPN	07 32 47.8		-0.1	4.77	260	3.4 3.5
	E	33 35.3					
MNG	EPN	07 33 01.0		-0.2	5.76	233	3.4 3.9
	E	34 49.0					
FEB 16	H M S	38.24S	176.22E	97 KM	SE 0.1	AVG MAG	70/ 117
	23 03 08.6	0.04	0.02	2			3.8
	+ 0.2						
KRP	P	23 03 25.2	DIR	RES	DIST	AZ	W-A W P W S
	S	38.0		-0.1	0.62	300	3.6 3.5
TUA	P	23 03 28.3		0.0	0.93	128	4.4 3.7
	S	43.0		0.1			
GNZ	P	23 03 35.0		-0.0	1.47	106	4.0
FEB 17	H M S	44.64S	168.29E	89 KM	SE 1.1	AVG MAG	70/ 118
	02 48 56.9	0.03	0.04	8			3.9
	+ 0.8						
MSZ	P	02 49 10.8	DIR	RES	DIST	AZ	W-A W P W S
	S	20.7		0.5	0.26	262	
ROX	S	02 49 34.2		0.2	1.12	139	4.0
MNW	IP	02 49 19.8		-0.3	1.24	202	4.1 3.9
	IS	36.0		-0.1			
MJZ	IP	02 49 26.0	D	-1.1	0.3	68	3.8 3.5
	P	47.0		0.0	1.70		
OMZ	P	02 49 30.0		1.4	1.93	104	4.2 4.0
	S	52.0		0.0			
COB	EP	02 50 09.6		1.0	4.83	44	3.8 3.8
	ES	51 01.8		-1.9			
FEB 17	H M S	39.21S	177.96E	12 KM	SE 1.0	AVG MAG	70/ 119
	03 57 00.5	0.02	0.03	3			4.0
	+ 0.6						
GNZ	PG	03 57 12.0	DIR	RES	DIST	AZ	W-A W P W S
	SN	25.0		-0.2	0.57	5	3.1 3.9
	E	29.0		-0.4			
TUA	P*	03 57 15.4		1.1	0.75	302	4.3 4.7
	E	18.0					
	E	19.2					
	S*	24.0		-0.6			
	SQ	26.0		0.1			
TRZ	EPG	03 57 20.7		1.0	0.94	248	4.0 4.5
	SN	33.3		-0.1			
MNG	PN	03 57 39.0		0.6	2.37	233	3.6 3.9
	E	56.0					
	SN	58 05.0		-1.5			

LOCAL EARTHQUAKES

	WEL*	ESN	03 58 24.0	-2.8*	3.20	229				4.0
	COB*	SN	03 58 53.0	-3.3*	4.42	243				3.9
FEB 17	H	M	S							70/ 120
	05	56	17.8							4.1
			+ 0.4							
			38.37S	176.20E	12 KM	SE	1.1	AVG MAG		
			0.02	0.02						
			H	M	S	DIR	RES	DIST	AZ	W-A
	TUA	PN	03 56 35.1				0.4	0.78	108	4.6
		SG					-0.3			4.4
	KRP	IPG	03 56 36.3	J			1.3	0.83	320	4.1
		SG					4.1*			3.5
	TRZ	PG	05 56 41.0				0.9	1.09	154	4.5
		E								4.4
		SG								
			43.2							
		E								
		SG								
			56.8							
		E								
			57 06.1							
	GNZ	PN	03 56 42.2				-1.0	1.43	94	3.9
		PG								3.9
		ISN	57 01.0							3.9
		E								
			08.6							
	MNG	PN	05 56 52.4				0.0	2.12	195	
		SG					-0.5			
	WEL	PN	05 57 02.0	D			-1.6	2.93	202	3.9
		SN					-0.0			4.4
		E								4.2
			38.0							
			41.0							
	COB	PN	05 57 12.3				-1.1	3.67	226	3.9
		SN					0.4			3.7
FEB 18	H	M	S							70/ 121
	01	15	14.7							4.0
			+ 2.5							
			37.79S	175.79E	297 KM	SE	1.7	AVG MAG		
			0.16	0.17						
			H	M	S	DIR	RES	DIST	AZ	W-A
	TNZ	EP	01 15 59.0				-0.7	1.76	217	3.8
		ER								3.5
			16 20.3							
	GNZ	P	01 16 02.3				0.9	1.98	116	4.3
		S								3.9
			37.8							
	MNG	P	01 16 07.8				-1.3	2.83	184	4.2
		S					-1.8			4.3
			49.6							
	WEL	S	01 17 07.3				2.4	3.57	192	4.4
	COB	EP	01 16 21.6				-0.0	4.03	214	3.8
		ES					0.5			3.8
			17 14.4							
FEB 18	H	M	S							70/ 122
	16	49	40.4							5.0
			+ 0.8							
			36.25S	178.62E	12 KM	SE	1.2	AVG MAG		
			0.03	0.04						
			H	M	S	DIR	RES	DIST	AZ	W-A
	GNZ	IPN	16 50 19.9	U			0.7	2.43	191	5.1
		SN					0.7			4.9
			48.8							
	TUA	EPN	16 50 24.3				-0.1	2.80	204	5.2
		P*					-1.7			5.5
		SG					-1.7			
			51 13.3							
		E								
			13.3							
	KRP	IPN	16 50 27.4	U			0.7	2.97	235	4.9
		P*					0.6			4.2
			33.0							
		SN	51 02.4							
	ONE	EPN	16 50 33.0				-0.4	3.48	277	4.4
		S*					0.3			
			51 27.0							
	TRZ	EPN	15 50 34.0				-0.9	3.59	203	5.2
		SN					1.9			5.6
			51 18.0							
		S*					1.1			
			31.0							
	CNZ	EPN	16 50 38.1				0.1	3.82	219	
	TNZ	S*	16 51 54.2				-1.8	4.46	228	4.7
	MNG*	EPN	16 50 51.0				-3.0*	5.00	208	4.8
		P*					-2.9*			5.1
			51 04.3				-0.1*			
		SN								
			50.2							
	WEL*	EPN	16 51 03.5				-1.8*	5.86	210	5.7
		P*					2.3*			4.8
			22.0							5.3
		SN	52 14.2				3.5*			

	COB*	EPN	16 51 13.0		-3.3*	6.67	222							
	KAI					8.39	219		5.4					
	HJZ	EPN	16 51 59.0		-0.4	9.93	216							
		E	53 41.3											
FEB 20	H	M	S									70/	123	
	00	04	54.3	37.72S	176.74E	149 KM	SE	1.3	AVG	1.0	4.1			
			+ - 1.4	0.03	0.05	11								
	KRP	IP	00 05 19.7	U	DIR	RES	DIST	AZ	W-A	W	P	W	S	
		IS	37.0			0.9	0.99	258		3.9	3.4			
	TUA	P	00 05 19.9			-1.0								
		S	41.7			-0.5	1.13	164		4.5	4.3			
	GNZ	IP	00 05 23.9			1.4								
		IS	43.3			-1.1	1.36	133		4.4	4.6			
	GNZ	P	00 05 26.1			-0.9								
		S	53.1			-0.5	1.75	212		3.7	3.5			
	TRZ	EP	00 05 27.3			1.2								
		ES	52.2			-0.4	1.83	178		4.1	4.3			
	MNG*	IP	00 05 39.2			-1.2								
		S	06 13.2			-3.9*	3.06	199		4.1	4.1			
						-7.1*								
FEB 20	H	M	S									70/	124	
	04	24	44.6	41.96S	171.92E	12 KM	SE	0.7	AVG	1.0	4.3			
			+ - 0.3	0.03	0.03	3								
	KAI													
	COB	IP*	04 25 03.9	D	DIR	RES	DIST	AZ	W-A	W	P	W	S	
	WEL	P*	04 25 23.9			-0.1	0.68	214		4.5				
		SQ	59.9			-0.3	2.24	73		4.1	4.6	4.7		
	HJZ	PN	04 25 21.1			-0.4								
		SN	50.0			-0.3	2.29	207		4.2	4.1			
	MNG	EPN	04 25 31.1			1.2								
		P*	38.0			-0.1	3.00	65		4.8	4.4			
	OMZ	P*	04 25 43.2			0.9								
	TNZ	E	04 25 40.2			2.8*	3.19	193		4.7	4.5			
		S*	26 27.0			3.35	3.35	35		4.4	4.2			
	GNZ	E	04 25 46.0			0.2								
		E	26 49.8				3.90	46						
	MSZ						3.98	226		4.2	4.3			
	ROX*	SN	04 26 27.4			-2.6*	3.99	207		4.3				
	KRP*	EPN	04 25 59.0			1.2*	4.90	36		4.2	4.2			
		PQ	26 24.1			0.4*								
		SN	53.4			1.4*								
		S*	27 12.7			-0.8*								
	MNW	EPN	04 25 57.0			-0.1	4.92	218		4.0	4.2			
		SN	26 51.7			-0.9								
	GNZ*	ESN	04 27 12.8			1.0*	5.72	57		3.9				
	FELT WESTPORT (79), MANGLES VALLEY (80), HOKITIKA (91), MM IV													
FEB 20	H	M	S									70/	125	
	09	24	47.2	41.73S	172.35E	12 KM	SE	0.9	AVG	1.0	3.6			
			+ - 1.4	0.04	0.09	3								
	KAI													
	WEL	PN	09 25 19.3			1.0	1.06	221		2.7				
		SN	41.3			0.0	1.87	77		3.4	3.9	3.9		
	MNG	PN	09 25 28.2	U	DIR	RES	DIST	AZ	W-A	W	P	W	S	
		SN	59.0			-0.4	2.61	66		4.0	3.4			
	TNZ	SN	09 26 08.5			-0.7								
		SN				0.0	2.98	32				3.8		
FEB 20	H	M	S									70/	126	
	12	39	14.2	35.61S	178.70E	291 KM	SE	0.6	AVG	1.0	4.2			
			+ - 0.7	0.05	0.05	5								
	GNZ	P	12 40 09.7			DIR	RES	DIST	AZ	W-A	W	P	W	S
		S	54.6				-0.5	3.07	190		4.3	4.3		
							0.3							

LOCAL EARTHQUAKES

75

KRP	IP	12 40 15.0		0 9	3.43	227		4.1	3.3
	S	41 00.6		-0.4					
TRZ	EP	12 40 23.0		0.3	4.20	200		4.4	4.4
	ES	41 20.0		3.7*					
MNG	P	12 40 38.9		-0.2	5.60	206		4.5	3.9
	S	41 45.3		-0.3					
WEL	P	12 40 49.0		-0.3	6.45	207	4.9		
	S	42 04.3		0.4					
COB*	EP	12 40 58.4		-0.1*	7.20	219			
	ES	42 22.0		1.5*					
FEB 21	H M S	08 18 44.0	40.92S	175.81E	33 KM	SE	1.1	AVG MAG	70/ 127
		+ 0.9	0.07	0.06	?				3.9
	H M S				DIR	RES	DIST	AZ	W-A
MNG	IPN	08 18 52.8			U	-0.0	0.39	320	W P W S
	ISN	56.5				-0.7			
WEL	IPN	08 18 59.0				-0.3	0.87	244	3.6 3.8 4.3
	ISN	19 10.0				-0.5			
	S*	13.6				0.8			
TRZ	EP*	08 19 10.9				-1.4	1.57	30	3.7 3.7
	S*	34.6				1.4			
COB	PN	08 19 20.0				0.7	2.33	265	3.9 4.0
	FELT	WAIKAWA (65) PONATAHI (70)			MM III				
FEB 21	H M S	14 38 23.4	44.82S	169.63E	12 KM	SE	0.8	AVG MAG	70/ 128
		+ 0.4	0.02	0.02	?				4.5
	H M S				DIR	RES	DIST	AZ	W-A
ROX	IP*	14 38 35.8			U	-0.5	0.69	198	4.1 4.4
	S*	46				1.2			
OMZ	IP*	14 38 40.1			D	-0.6	0.95	106	5.0 5.0
	S*	54				0.5			
MJZ	IP*	14 38 40.9			U	-1.2	1.03	36	4.9 4.5
	S*	97				1.0			
MNH	P*	14 38 54.5				0.7	1.71	235	4.7 4.5
	S*	39 21				4.5*			
HPZ	P*	14 38 56.8				-0.5	1.92	196	4.5 4.3
	S*	39 23				0.3			
GPZ	E*	14 38 56.8					2.44	64	4.4
KAI	E	14 38 56.8					2.63	30	4.2
FEB 22	H M S	10 36 33.5	45.73S	168.00E	12 KM	SE	0.9	AVG MAG	70/ 129
		+ 0.5	0.06	0.03	?				3.7
	H M S				DIR	RES	DIST	AZ	W-A
MNH	PQ	10 36 39.0				-0.4	0.27	259	
	E	46.5							
ROX	EP*	10 36 52.2				1.2	0.96	75	3.6 3.8
	SN	37 06.1				-0.6			
MSZ							1.06	357	4.2 4.0
OMZ	EP*	10 37 12.0				0.6	2.15	73	3.7 3.8
	ES*	39.0				-0.9			
MJZ	EP*	10 37 17.0				0.2	2.47	46	3.3 3.4
	ESQ	56.8				-0.0			
FEB 22	H M S	14 24							70/ 130
			NEAR ROTORUA						
	H M S				DIR	RES	DIST	AZ	W-A
KRP	EP	14 26 07							W P W S
	FELT	ROTORUA							
FEB 22	H M S	20 49 25.6	41.51S	172.14E	12 KM	SE	0.6	AVG MAG	70/ 131
		+ 0.4	0.03	0.03	?				3.6

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
COB	IP*	20	49	37.4		0.3	0.61	47		4.0	4.1
	PN			40.2		-0.3					
KAI	IS*			46.0		0.4					
	EP*	20	49	46.7		0.3	1.15	208	2.6		
WEL	S*			50 01.0		-0.1					
	PN	20	49	59.0		-0.3	1.99	84	3.3	4.0	4.1
MNG	SN			50 23.4		1.0					
	EPN	20	50	07.3		-0.5	2.68	72		3.9	4.0
MUJ*	E			10.4							
	S*			42.3							
MUJ*	EPN	20	50	10.0		-0.9	2.77	206		3.1	3.1
	ESN			44.1		2.3*					
FELT MURCHISON (80) MM IV											
FEB 23		H	M	S							70/132
	00	24	11.0	39.28S	175.36E	173 KM	SE	1.8	AVG	HAG	4.1
			1.3	0.08	0.06	10					
TNZ	EP	00	24	36.6	DIR	RES	DIST	AZ	W-A	W P	W S
	ES			56.4		0.1	0.77	277		3.7	3.5
MNG	IP	00	24	43.7		2.6	1.34	176		4.3	4.4
	S			25 04.2		-0.1					
WEL	P	00	24	49.3		1.3	2.05	193	4.2	4.1	4.5
	S			25 18.0		0.6					
GNZ	IP	00	24	50.9		1.0	2.17	74		4.4	4.3
	S			25 17.0		-2.8					
COB	EP	00	24	56.3		0.2	2.70	227		4.2	4.1
	S			25 30.5		-0.7					
KAI	ES	00	25	09.0		-0.6	4.41	222	4.4		
	EP	00	25	39.7		1.5	5.96	216		3.6	3.6
				26 43.0		-3.0					
FEB 24		H	M	S							70/133
	16	31	38.9	40.47S	173.98E	82 KM	SE	1.6	AVG	HAG	4.0
			0.6	0.04	0.05	12					
WEL	P	16	31	58.1	DIR	RES	DIST	AZ	W-A	W P	W S
	S			32 13.2		-0.3	1.01	144	3.9	4.3	4.6
COB	P	16	32	00.8		0.6	1.13	236		4.0	4.3
	S			17.0		0.9					
TNZ	P	16	32	03.2		0.6	1.32	14		3.9	4.5
	S			19.6		-0.7					
CNZ	P	16	32	08.1		-0.0	1.75	44		4.3	4.4
	S			30.0		0.3					
KRP	EP	16	32	22.6		-0.3	2.81	26		3.9	4.0
	S			54.2		-1.8					
GNZ	EP	16	32	36.0		2.1	3.62	61		3.6	3.9
	S			33 11.3		-4.4*					
MUJ	EP	16	32	44.2		-0.3	4.38	215		3.4	3.6
	S			33 31.6		-3.0					
MSZ	EP	16	33	11.4		2.7	6.14	225			
	S			34 17.6		-0.5					
FEB 24		H	M	S							70/134
	23	45	48.4	40.19S	174.87E	33 KM	SE	0.9	AVG	HAG	4.0
			0.3	0.01	0.02	3					
MNG	IPN	23	46	00.9	DIR	RES	DIST	AZ	W-A	W P	W S
	SN			09.0		0.6	0.63	133		3.9	3.9
WEL	PN	23	46	06.4		0					
	SN			19.3		-0.3	1.10	184	3.5	4.4	4.3
CNZ	S*			24.3		-0.9					
	IPN	23	46	07.0		0.6	1.12	28		4.2	4.2
	P*			09.0		-0.1					
	SN			22.3		1.5					

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	EPN	19	50	41.7		-0.0	1.69	137		4.7	
KRP	PN	19	50	44.6		-0.0	1.91	220		4.4	4.2
	PG			50.0		-1.6					
	I			58.1							
	SN		51	08.7		0.8					
	SG			17.7		0.4					
GNZ	EPN	19	50	49.8		-0.0	2.29	161		4.4	4.2
ONE	PG	19	51	00.8		1.0	2.31	287	4.1		
	SG			31.1		0.1					
TNZ	EP*	19	51	12.0		-1.2	3.45	218		4.3	
CRZ	SG	19	52	31.7		-0.7	4.13	298		4.1	
MNG	EPN	19	51	17.0		-0.5	4.33	196		3.6	
COB	EPN	19	51	38		1.8	5.73	215		4.3	
MAR 01	H M S	21	08	15.9							70/ 139
				+ 1.2							4.1
				0.07		0.08					
	H M S	21	08	57.0	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	EP	21	08	57.0		0.2	0.45	336			
CNZ	P	21	08	58.3		0.2	0.88	191		3.5	3.6
	ES		09	30.8		-0.4					
TRZ	E(S)	21	09	38.3		1.9	1.46	146			4.4
GNZ	P	21	09	03.0		-0.3	1.79	100		4.2	3.9
	S			38.3		-1.8					
ECZ	E(S)	21	09	47.6		0.6	2.29	74			4.5
MNG	P	21	09	08.0		0.9	2.29	185		3.9	4.0
	S			46.4		-0.6					
ONE							2.79	336	4.1		
COB	P	21	09	19.0		-0.5	3.61	219		4.4	
GPZ	ES	21	10	54.1		-0.1	5.85	203	4.5		
MAR 01	H M S	22	09	22.0							70/ 140
				+ 0.4							4.0
				0.02		0.02					
	H M S	22	09	47.1	DIR	RES	DIST	AZ	W-A	W P	W S
GBZ		22	09	47.1		-1.1	1.48	285			
ECZ	EPN			49.0		0.4	1.49	136		4.5	4.1
	P*			14.0		1.5					
	SG		10	14.0		1.5					
KRP	EPN	22	09	53.3		0.0	1.88	226		4.1	3.9
	E			57.2							
	S*		10	20.8		0.6					
	SG			25.0		-0.5					
GNZ	EPN	22	09	56.5		0.1	2.11	163		3.9	4.0
	P*			58.2		-1.0					
	S*		10	26.3		-0.9					
ONE	S*	22	10	38.6		0.5	2.48	289	3.5		
CNZ	EP*	22	10	12.7		-0.0	2.90	207		3.9	3.7
	SN			42.0		0.5					
TNZ	P*	22	10	21.0		-0.6	3.42	221		3.9	
MNG	EPN	22	10	25.4		0.4	4.22	199		3.4	
MAR 02	H M S	05	19	47.1							70/ 141
				+ 0.4							4.3
				0.02		0.03					
	H M S	05	19	56.5	DIR	RES	DIST	AZ	W-A	W P	W S
MSZ	IP*	05	19	56.5		0.8	0.37	36			
MNW	IPN	05	20	01.2		-0.3	0.81	179		4.2	4.3
	ISN			12.3		0.2					
ROX	IPN	05	20	07.9	D	-0.5	1.31	113		4.5	4.5
	ISN			24.3		-0.0					
WPZ	PN	05	20	16.6		0.1	1.90	153		3.9	4.6
	SN			38.3		-0.3					
HJZ	PN	05	20	21.0		-0.5	2.27	65		3.7	3.9
	E			30.8							
	SN			48.1		0.6					

LOCAL EARTHQUAKES

		H	M	S		DIR	RES	DIST	AZ	H-A	W P	W S	
MAR 03	OHZ	IPN	05	20	23.5	D	0.9	2.35	94		4.6		
	KAI	E	05	21	06.0			3.68	50	4.4			
		E			27.0								
	GPZ	E	05	21	08			3.83	72				
	COB	PN	05	21	04.0		-0.2	5.40	46		4.4	4.3	
		SN		22	02.7		-0.9						
			H	M	S							70/142	
			01	29	35.1	41.48S	173.72E	12 KM	SE	1.1	AVG	MAG	3.9
					+ 0.3	0.02	0.02	?					
			H	M	S		DIR	RES	DIST	AZ	H-A	W P	W S
		WEL	PQ	01	29	51.3		0.1	0.81	77	3.3	3.9	4.0
			I			59.6							
			ISN			30	06.1		0.9				
			I			11.2							
		COB	IP*	01	29	50.3		-0.2	0.84	297		4.2	4.1
		IS*			30	01.3		-0.6					
	MNG	IPN	01	30	01.7	D	-0.8	1.59	58		4.6	4.3	
		IP*			03.0		-0.3						
		I			04.9								
		I			34.5								
		I			38.0								
	KAI	EPN	01	30	08.8		0.6	2.01	238	3.8			
		SN			31.1		-1.5						
	TNZ	EPN	01	30	13.4		0.7	2.34	13		4.1	4.1	
		IP*			15.0		-1.3						
		SN			43.0		2.4						
	GPZ*	EPQ	01	30	21		-1.8*	2.36	199	3.3			
		SQ			55.0		0.4*						
	GNZ	EPN	01	30	17.1		-0.2	2.67	32		3.9	4.4	
		P*			21.9		0.0						
		I			26.7								
		I			52.2								
		I			59.8								
	MJZ	EPN	01	30	27.9		-0.5	3.47	223		3.8	3.8	
		SN			31	09.9		2.0					
	KRP	EPN	01	30	33.4		0.7	3.82	22		3.7	3.8	
		SN			31	16.0		-0.3					
		S*			32.0		0.6						
	GNZ	SN	01	31	27.2		-2.1	4.35	51			3.7	
	HSZ	PN	01	30	52.7		-0.1	5.31	231		3.7	3.8	
		SN			31	49.0		-3.4*					
MAR 03			H	M	S							70/143	
			03	50	41.8	39.50S	177.39E	33 KM	SE	0.8	AVG	MAG	3.9
					+ 0.4	0.02	0.02	?					
			H	M	S		DIR	RES	DIST	AZ	H-A	W P	W S
		TRZ	IP*	03	50	51.2		0.2	0.41	262			
			IS*			58.6		0.9					
		TUA	IPN	03	50	54.7	D	-0.1	0.71	347		4.5	4.5
			IS*			51	09.8		-0.0				
		GNZ	EP*	03	51	02.0		1.5	1.00	32		3.7	4.0
			SN			11.0		-0.5					
			I			20.7							
		GNZ	PN	03	51	04.3	U	-0.4	1.43	282		4.6	4.4
			ISN			22.1		0.2					
			I			38.1							
		MNG	EPN	03	51	10.1		0.0	1.82	231		2.9	3.4
		SN			30.7		-0.6						
	KRP	EPN	03	51	12.7		-1.5	2.12	317				
		E			43.6								
	TNZ	EP*	03	51	23.1		1	2.32	277		3.8	3.3	
		ES*			53.8		0.1						
	COB	EP*	03	51	47.2		-2.2*	3.87	244		3.7		

MAR 03		H	M	S	37.40S	177.23E	12 KM	SE	1.2	AVG MAG	70/ 144
		+	-	0.7	0.04	0.03	?				4.4
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	PG	04	28	54.7	U	2.0	1.05	107		5.2	4.5
	I			56.5							
GNZ	IPG	04	28	59.0	U	-0.2	1.37	155		4.1	4.4
	ISG			29 17.3		0.0					
TUA	PG	04	28	59.9		-0.0	1.41	184		4.5	4.9
	SG			29 19.0		0.0					
KRP	IPG	04	29	01.3	U	0.4	1.48	249		4.3	3.3
	SG			21.9		0.5					
TRZ	EPG	04	29	13.3		-2.0	2.18	189		4.6	4.7
	SG			46.5		1.7					
CNZ	IP*	04	29	11.7	D	0.7	2.25	217		4.6	4.1
	ISG			49.3		1.9					
	I			30 06.4							
TNZ	P*	04	29	21.9	D	-0.1	2.90	231		4.2	
MNG	EPN	04	29	25.0		0.3	3.50	203		4.4	4.1
	P*			31.1		-1.3					
	PG			40.0		-2.3					
	SN			30 04.6		-0.5					
WEL	PN	04	29	36.0		-0.0	4.34	206	4.5	4.6	4.5
	P*			45.6		-1.1					
	SN			30 23.3		-1.3					
COB	PN	04	29	46.4		0.2	5.10	222		4.3	4.2
	SN			30 44.9		1.3					
MAR 03		H	M	S	37.76S	176.81E	12 KM	SE	0.8	AVG MAG	70/ 145
		+	-	0.4	0.02	0.01	?				4.1
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	EPN	16	35	46.1		0.3	1.02	260		3.5	3.2
TUA	IP*	16	35	44.0		-1.4	1.08	166		5.2	4.6
	IPN			45.0		-1.6					
	S*			59.0		-1.0					
GNZ	IPN	16	35	49.1	U	-0.4	1.30	133		4.7	4.3
	IPG			53.0		0.8					
	ISG			36 09.9		0.1					
ECZ	IPN	16	35	50.4	U	-0.1	1.38	88		4.8	4.5
	PG			53.3		-0.4					
	S*			36 09.0		0.2					
	SG			12.9		0.6					
CNZ	PG	16	36	01.3		0.0	1.75	214		3.6	3.6
TRZ	EPN	16	35	56.0		0.1	1.79	180		4.2	4.2
	P*			58.1		0.5					
	SG			36 27.0		0.7					
MNG	EPN	16	36	13.3		0.4	3.04	200		3.7	3.1
	EP*			17.0		-1.9*					
	PG			28.6		1.3					
COB	EP*	16	36	45		-0.4	4.59	222		3.8	
FELT	OPOTIKI (35) MM III, OHOPE (28) MM IV										
MAR 05		H	M	S	43.23S	173.23E	33 KM	SE	0.9	AVG MAG	70/ 146
		+	-	0.3	0.02	0.03	?				4.0
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
GPZ	EPN	16	56	10.3		0.4	0.64	222			
	ISN			19.4		0.2					
KAI	SN	16	56	39.3		-0.7	1.51	297	3.7		
MJZ	IPN	16	56	32.2		1.0	2.15	248		3.6	3.6
	ISN			56.0		0.0					
COB	PN	16	56	31.2	U	-0.2	2.17	350		4.5	4.1
	SN			56.3		0.4					
WEL	IPN	16	56	31.9	D	-0.6	2.25	31	4.0	4.5	4.3
	SN			57.0		-1.3					

LOCAL EARTHQUAKES

81

	OMZ	IPN	16 56 36.7	0 9	2.49	221		4.2	4.5					
		SN	57 04.0	-0.2										
		S*	14.0	-1.2										
	MNG	IPN	16 56 43.0	D -1.2	3.10	34		3.7	4.1					
	ROX				3.60	230			3.7					
	TNZ	EPN	16 56 59.9	1.7	4.13	12			4.0					
		ESN	57 44.1	-0.0										
	TRZ	ESN	16 57 55.3	0.3	4.55	38			4.1					
	MNW	EPN	16 57 06.1	-0.9	4.76	236		3.8	3.9					
		SN	59.9	0.4										
	KRP	EPN	16 57 18.3	0.4	5.58	19		3.5	3.6					
	FELT ALLANDALE (110) MM IV													
MAR 06	H	M	S					70/	147					
	15	11	21.0	37.97S	176.71E	12 KM	SE ND	AVG MAG	2.9					
		R		R										
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
	KRP	EP*	15 11 37.0					-0.9*	0.93	272		2.7	2.6	
		ES*	51.2					0.7*						
	GNZ	P*	15 11 43.0					-0.2*	1.23	124		3.3	2.9	
		SG	12 02.3					-0.4*						
	FELT TE TEKO (34) MM III													
MAR 06	H	M	S					70/	148					
	15	36	56.5	37.97S	176.72E	12 KM	SE 1.0	AVG MAG	3.1					
		+ 0.8		0.06	0.03									
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
	TUA	EP*	15 37 11.8					-1.1	0.90	158		3.3	3.4	
		SG	27.1					0.1						
	KRP	P*	15 37 13.0					-0.8	0.93	273		2.9	2.7	
		SG	29.0					0.8						
	GNZ	P*	15 37 18.3					-0.2	1.23	124		3.4	3.1	
		SG	38.9					1.0						
	FELT TE TEKO (34) MM III													
MAR 08	H	M	S					70/	149					
	12	26	11.0	37.32S	176.93E	303 KM	SE 1.2	AVG MAG	4.3					
		+ 0.9		0.08	0.08									
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
	KRP	P	12 26 51.9				D	-1.4	1.26	241		3.9		
	ECZ	EP	12 26 53.1					-0.7	1.34	107		4.4	4.2	
		ES	27 27.8					0.8						
	TUA	IP	12 26 59.0					0.2	1.50	173		5.	4.3	
		S	27 27.9					-0.8						
	GNZ	IP	12 26 59.8				U	0.5	1.58	147		4.7	4.4	
		I	57.0											
		IS	27 28.2					-1.5						
		I	32.7											
	GNZ	P	12 26 59.9				D	0.2	2.17	210		4.0	3.6	
		S	27 39.7					2.0						
	TRZ	P	12 27 01.3					1.1	2.24	182		4.7	4.6	
		S	40.0					1.4						
	MNG	P	12 27 11.7					-0.5	3.48	198		4.7	4.1	
		S	59.0					-1.2						
	WEL	P	12 27 21.7					0.6	4.30	202		4.6	4.5	4.3
		S	28 16.0					-0.1						
	GOB	EP	12 27 29.6					0.9	4.08	220		3.9	4.0	
		S	28 28.9					-1.1						
MAR 08	H	M	S					70/	150					
	15	52	47.5	35.83S	179.69E	236 KM	SE 0.5	AVG MAG	4.2					
		+ 0.5		0.04	0.04									
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
	ECZ	P	15 53 29.4					-0.3	2.07	206		4.6	4.4	
		S	54 01.9					-0.5						
	GNZ	P	15 53 41.2					0.5	3.10	205		3.9	4.3	
		S	54 21.8					0.2						

TUA	P	15 53 46.7	0.4	3.59	213	4.4	4.6		
	S	54 32.0	0.0						
KRP	P	15 53 50.3	0.0	3.92	237	3.9	3.8		
	S	54 39.2	0.2						
TRZ	EP	15 53 56.9	1.5*	4.35	211	4.2	4.4		
	S	54 49.2	0.9						
CHZ	EP	15 53 59.9	0.2	4.70	223	4.1			
MNG	EP	15 54 13.8	0.2	5.81	213	4.1	4.1		
	S	55 20.2	-0.5						
WEL	S	15 55 40.1	-0.1	6.67	214				
COB	EP	15 54 35	-0.9	7.56	224				
	ES	56 00.7	-0.0						
MAR 10	H M S	05 59 35.6	33.39S	178.99W	249 KM	SE	1.7	AVG MAG	70/ 151
		+ 1.3	0.07	0.08	17				5.7
	H M S		DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	P	06 00 49.7		0.9	4.74	204		6.0	5.8
GNZ	P	06 00 59.9		-1.6	5.77	204		5.4	5.4
	S	02 09.2		0.6					
TUA	P	06 01 08.3		0.9	6.24	209			
KRP	P	06 01 08.8		0.1	6.35	223			
CRZ	P	06 01 16.4		-0.6	7.00	259			
	S	02 37.1		0.8					
TRZ	EP	06 01 16.7		-0.4	7.01	208			
CHZ	P	06 01 20.0		-0.3	7.28	216			
TNZ	EP	06 01 31.7		3.6	7.88	221			
MNG	P	06 01 33.1		-2.4	8.46	210			
	S	03 10.0		0.5					
WEL	EP	06 01 43.0		-3.3	9.31	210	6.0		
	S	03 27.2		-1.7					
COB	EP	06 01 55.3		-1.2	10.12	218			
	S	03 47.0		-0.3					
CIZ	EP	06 02 09.5		5.4*	10.72	171			
	S	04 02.0		1.1					
KAI	ES	06 04 27.3		0.7	11.85	217	5.8		
GPZ	EP	06 02 25		2.5	12.19	210	5.8		
	S	04 33.2		-1.1					
MJZ	EP	06 02 38.3		0.9	13.39	215			
	S	05 01.7		0.5					
MNW*	EP	06 03 21.9		12.1*	16.09	216			
	ES	06 15.2		14.5*					
MAR 11	H M S	14 59 55.5	33.92S	178.47W	281 KM	SE	1.9	AVG MAG	70/ 152
		+ 2.2	0.12	0.19	33				4.5
	H M S		DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	EP	15 01 08.8		2.0	4.48	212		4.7	4.5
GNZ	P	15 01 16.0		-2.9	5.50	210		4.4	4.4
	S	02 25.0		0.8					
ONE					6.18	251	4.6		
KRP	EP	15 01 27.1		-1.5	6.30	229			
	ES	02 40.5		-1.0					
CHZ	P	15 01 41.7		2.7	7.14	221			
CRZ	EP	15 01 42		0.3	7.36	264			
MNG	EP	15 01 52.0		-0.3	8.25	214			
	S	03 25.0		0.2					
WEL	ES	15 03 43.2		-0.9	9.10	214			
COB	ES	15 04 05.2		1.0	10.00	222			
MAR 12	H M S	12 45 26.8	38.75S	176.19E	99 KM	SE	1.5	AVG MAG	70/ 153
		+ 0.7	0.03	0.04	9				5.2
	H M S		DIR	RES	DIST	AZ	W-A	W P	W S
WNZ	IP	12 45 41.3	U	0.5	0.13	334			
CHZ	IP	12 45 45.5	D	1.5	0.67	227		4.7	4.4
TRZ	IP	12 45 48.0	U	1.2	0.95	148		5.8	5.7

LOCAL EARTHQUAKES

83

KRP	IS	46	03.0		1.1							
	IP	12 45	47.1	U	0.1	0.96	328		5.2	4.8		
	S		59.8		-2.4							
GNZ	IP	12 45	52.3	D	-0.5	1.45	86		5.3	5.3		
	IS		46 10.6		-1.9							
TNZ	IP	12 45	55.4	D	2.2	1.47	252		5.5	5.0		
MNG	IP	12 45	59.1	D	0.1	1.94	196		5.2			
ECZ	IP	12 46	01.1	D	-0.6	2.14	61		6.0	5.8		
	S		29.0		1.3							
WEL	IP	12 46	09.4	D	-0.8	2.76	203	5.8	5.8	5.7		
	ES		41.2		-1.5							
	I		59.0									
ONE	EP	12 46	19.0		1.4	3.30	333	4.7				
COB	IP	12 46	19.3	D	-1.5	3.53	227					
CRZ	EP	12 46	42.7		-0.1	5.14	326					
KAI*	EP	12 46	46.1		2.1*	5.23	222		4.0	4.5		
	S		47 41.3		-2.3*							
QPZ*	EP	12 46	44.9		-4.3*	5.61	207					
	S		47 44.0		-9.0*							
HJZ*	EP	12 47	02.0		-3.2*	6.77	218					
OMZ*	P	12 47	10.0		-4.3*	7.43	210					
	S		48 29.9		-7.7*							
CIZ*	P	12 47	14.1		-1.4*	7.54	136					
	S		48 31.6		-8.9*							

FELT CENTRAL NORTH ISLAND AND HAWKES BAY. MAX. INTENSITY MM IV

MAR 12	H	M	S								70/154
	20	17	18.1	40.71S	176.61E	12 KM	SE	1.2		AVG MAG	3.9
			* 0.6	0.03	0.03						
MNG	PN	20 17	35.9			DIR	RES	DIST	AZ	W-A	W P W S
	E		38.3				-0.2	0.87	276		4.1 4.1
	S*		46.0				0.2				
	I		58.3								
TRZ	IP*	20 17	39.3				0.1	1.17	8		4.2
	E		46.1								
WEL	PN	20 17	43.7				-0.9	1.51	247	3.2	3.9 4.0
	SN		18 03.8				-0.3				
CNZ	IP*	20 17	48.9	D			0.3	1.72	331		4.3 4.2
	E		52.0								
	SQ		18 17.3				1.4				
	E		26.6								
TNZ	EP*	20 17	58.1				-0.4	2.29	311		3.9
	S*		18 27.1				-1.6				
GNZ	EP*	20 18	00.9				1.8	2.33	28		3.7 3.7
	SN		22.7				-0.7				
KRP	EPN	20 18	03.8				0.3	2.90	343		3.5
	EPQ		15.2				-1.7				
COB	E	20 18	14.0					2.97	261		3.7
	ES*		50.4				1.5				
MAR 13	H	M	S								70/155
	20	16	17.9	41.92S	171.67E	12 KM	SE	1.0		AVG MAG	4.0
			* 0.5	0.04	0.04						
KAI	IP*	20 16	31.0			DIR	RES	DIST	AZ	W-A	W P W S
	IS*		41.3				-0.5	0.74	195		4.2
	S*		33.6				-0.4				
COB	IP*	20 16	33.6	U			-3.8*	1.08	48		
QPZ	PN	20 16	52.0				1.1	2.01	159	4.6	
	ISN		17 14.9				-0.4				
HJZ	EPN	20 16	55.3				-0.1	2.34	202		3.9 3.7
	P*		17 00.4				1.3				
WEL	EPN	20 16	59.6				-0.4	2.38	78	3.9	4.1 4.2
	SN		17 24.0				-0.4				
MNG	PN	20 17	05.0				-1.0	3.11	69		4.0 4.2
OMZ	EP*	20 17	17.2				1.5	3.30	189		
CNZ	E	20 17	19.2					3.94	50		4.4 4.7

LOCAL EARTHQUAKES

85

		H	M	S			DIR	RES	DIST	AZ	70/ 159		
		+	-	0.4	0.03	0.02	?				AVG	HAQ	4.0
CNZ	P	12	32	59.7			33	<M	SE	0.8			
	S		34	02.0									
	E			16.0									
MNG	EP	12	33	08.4					6.55	236			
	ES		34	22.9					-2.6				
MAR 15	H M S	16	38	52.3	39.55S	177.00E	33	<M	SE	0.8	AVG	HAQ	4.0
	H M S												
	IP*	16	38	59.2			U		1.0	0.14	270		
	IS*		39	03.2					0.7				
CNZ	IPN	16	39	12.8			D		1.0	1.18	287		4.7 4.4
	I			17.9									
	ISN			26.8					0.4				
GNZ	SN	16	39	26.4					-0.5	1.20	42		
MNG	PN	16	39	16.7					-0.6	1.58	227		3.7 3.8
	P*			20.5					-0.3				
	SN			36.0					-0.1				
TNZ	P*	16	39	28.0					-1.1	2.07	279		4.1 3.7
	S*			55.7					-0.7				
WEL	EP*	16	39	35.4					0.1	2.43	224		3.5 4.1 3.9
	S*			40.05					-2.4*				
FELT WAIHHARE (51) MM IV													

		H	M	S			DIR	RES	DIST	AZ	70/ 160		
		+	-	0.2	0.01	0.02	?				AVG	HAQ	4.3
MNG	IP*	23	27	17.8			U		0.7	0.95	113		
TNZ	P*	23	27	19.7			D		0.7	1.06	2		4.4 4.9
	S*			33.6					0.3				
	SG			36.1					0.3				
WEL	P*	23	27	19.9					0.5	1.09	162		4.2 4.6 5.1
	S*			34.2					0.1				
	SG			36.0					-0.5				
CNZ	IP*	23	27	23.5					-1.4	1.41	42		4.5 4.6
	EPG			29.6					1.3				
	SN			40.3					-3.1*				
GOB	IPN	23	27	26.0			U		0.3	1.47	235		
TRZ										2.04	71		4.3 4.4
KRP	PN	23	27	39.3					-0.4	2.50	22		4.6 4.4
	SN			28 08.8					-0.8				
	S*			15.2					-1.5				
KAI	EPN	23	27	49					0.5	3.16	223		4.4
	SN			28 28.0					2.8*				
GNZ	EPN	23	27	50.7					0.7	3.28	62		3.8 3.8
	SN			28 28.5					0.5				
MJZ	EPN	23	28	09.0					-0.4	4.71	216		3.7 3.8
	SN			29 01.9					-0.7				
MSZ	EPN	23	28	33.7					0.6	6.48	225		
	SN			29 45.0					0.0				
CIZ	EPN	23	28	48.9					-0.8	7.71	122		
FELT PARAPARAUMU BEACH (68) MM III													

		H	M	S			DIR	RES	DIST	AZ	70/ 161		
		+	-	0.4	0.02	0.01	?				AVG	HAQ	4.0
CNZ	IP*	04	55	02.2					1.2	0.70	241		4.4 4.1
	IS*			10.5					-0.0				
TRZ	IP*	04	55	02.5					-0.1	0.79	151		4.4 4.4
	S*			13.0					-0.3				
	SG			19.0					0.2				
GNZ	PN	04	55	12.0					-0.2	1.34	81		3.5 3.5
	SG			33.3					-0.1				
MNG	PN	04	55	20.1					1.0	1.87	200		3.7 3.6

	COB	SN	04 55 42.3		0 4															
		PN	04 55 41.1		-0.9	3.54	230					4.2	4.0							
		SN	56 21.4		-1.3															
	FELT HAUNGATANIHWA (52)																			
MAR 17	H	M	S																	70/ 162
	21	46	03.7	44.65S	168.16E	77	KM	SE	0.5			AVG	MAG	4.4						
			+ 0.4	0.01	0.02															
				H	M	S		DIR	RES	DIST	AZ									
	MSZ	IP		21	46	19.2		J	-0.3	0.17	263									
	ROX	IP		21	46	26.0			0.7	1.17	135									
		IS				41.7			0.3											
	MNW	IP		21	46	26.0			0.4	1.19	198									
		S				41.9			-0.1											
	MJZ	IP		21	46	33.1		DSW	-0.2	1.79	69			4.5	4.3					
		I				37.6														
		IS				55.0			-0.1											
	OHZ	IP		21	46	37.0		D	0.8	2.01	103			5.1	4.5					
		S				47 00.0			-0.2											
	WPZ	P		21	46	36.8			-0.3	2.07	167			4.3	4.2					
		S				47 01.0			-0.8											
	KAI	EP		21	46	53			0.3	3.18	49			4.1						
		S				47 29.0			-0.5											
MAR 18	H	M	S																	70/ 163
	07	29	45.0	41.61S	171.78E	12	KM	SE	0.7			AVG	MAG	3.9						
			+ 0.3	0.02	0.02															
				H	M	S		DIR	RES	DIST	AZ									
	KAI	P*		07	30	02.0			-0.4	0.95	197			4.0						
		IS*				14.3			-1.0											
	GPZ	EPN		07	30	20.4			0.1	2.18	163			3.4						
		P*				22.8			-0.5											
		SN				48.8			2.4*											
	WEL	EPN		07	30	21.0			-0.5	2.27	83			3.7	4.1	4.1				
		P*				25.2			0.3											
		SN				48.0			-0.6											
		S*				55.0			0.2											
	MJZ	EPN		07	30	26.0			0.3	2.56	202			3.7	3.5					
		SN				56.0			-0.3											
		S*				31 05.0			1.3											
	MNG	EPN		07	30	32.0			0.8	2.97	72			4.2	3.8					
		P*				37			0.2											
	CNZ	EPN		07	30	43.0			1.3	3.75	51			4.3	4.4					
		SG				31 51.6			0.2											
	MSZ	EPN		07	30	47.2			-0.0	4.16	222			3.6	3.8					
		SN				31 34.6			-0.0											
	KRP	EPN		07	30	54.0			0.3	4.68	39			3.7	3.7					
		ESN				31 46.0			-1.2											
	FELT MURCHISON (80) MM IV WESTPORT (79) MANGLES VALLEY (80) MM III																			
MAR 19	H	M	S																	70/ 164
	08	15	24.2	39.17S	177.65E	33	KM	SE	0.8			AVG	MAG	3.9						
			+ 0.4	0.02	0.03															
				H	M	S		DIR	RES	DIST	AZ									
	GHZ	IPN		08	15	35.3			-0.4	0.60	29			4.3	4.5					
		IS*				45.1			-0.0											
	TRZ	P*		08	15	39.0			0.2	0.74	239			4.2	4.4					
		E				41.0														
		SN				46.2			-1.3											
	CNZ	EP*		08	15	53.0			-0.5	1.63	268			4.1	4.0					
		E				56.0														
		SH				16 08.5			-0.6											
	KRP	EPN		08	15	56.0			0.2	2.07	306			3.7	3.3					
		EP*				16 01.6			0.8											
		ESN				20.1			0.4											
	MNG	PN		08	15	57.7			0.0	2.21	228			3.4	3.4					

		H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W S
WEL	IPG	23	13	13.8	U	1.1	0.50	132	4.1			
	ISQ			20.9		1.3						
MNG	IP*	23	13	19.9	U	-0.3	0.98	70		4.5	4.4	
	IS*			32.8		-0.6						
COB	IP*	23	13	24.1		0.6	1.17	263				
TNZ	P*	23	13	33.7		0.0	1.77	3		4.5	4.5	
	S*			58.1		1.0						
GNZ	PN	23	13	35.4		0.1	2.01	30		4.8	4.7	
	S*			14 03.0		-1.4						
TRZ	EPG	23	13	49.0		-2.0	2.40	55		4.1	4.4	
	SN			14 08.1		-1.2						
KAI	EPH	23	13	44.0		-0.3	2.66	233	4.0			
	SN			14 13.9		-2.0						
KRP	EPH	23	13	51.3		0.5	3.18	16		4.5	4.3	
	PG			14 09.0		1.3						
	SN			30.0		1.8						
HJZ*	EPN	23	14	02.2		-2.0*	4.14	222		3.9	3.8	
	SN			45.8		-3.8*						
MSZ*	EPN	23	14	28.4		-0.4*	5.97	229		3.8	4.0	
	SN			15 30.5		-4.8*						

FELT WELLINGTON AREA (68) M4 III

MAR 23	H	M	S									70/168
	10	38	21.2	38.62S	175.59E	202 KM	SE	1.7		AVG MAG		4.6
			+ 0.9	0.06	0.06	8						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
CNZ	IP	10	38	50.2	U	1.2	0.58	183		4.8	4.5	
	S			39 09.2		-1.3						
KRP	IP	10	38	50.6	U*	1.1	0.70	357		4.0	3.2	
	IS			39 10.0		-1.4						
TNZ	IP	10	38	54.3	U	2.3	1.09	238				
TRZ	P	10	38	56.1		2.2	1.34	134		4.6	5.2	
	S			39 19.9		0.6						
GNZ	IP	10	38	59.3	D	-0.0	1.91	91		4.8	4.5	
	S			39 26.3		-2.4						
MNG	IP	10	39	02.0	U	1.8	2.00	182		4.8	4.6	
	I			05.6								
	IS			30.0		-0.2						
ECZ	EP	10	39	05.3		-0.6	2.51	69		4.7	4.5	
	S			39.0		-1.4						
WEL	IP	10	39	09.8	U	1.4	2.73	193		5.2	4.6	
	S			45.0		0.1						
COB	IP	10	39	15.0		-0.0	3.30	221				
	S			57.8		1.2						
KAI	EP	10	39	38.2		1.5	5.03	218	4.6			
	ES			40 33.3		-2.0						
MSZ	EP	10	40	18.5		-1.1	8.33	221				
	ES			41 49.0		-3.1						

FELT MAUNGATANIWA (52)

MAR 25	H	M	S									70/169
	08	01	27.9	37.64S	179.08E	12 KM	SE	0.5		AVG MAG		4.3
			+ 0.5	0.03	0.02	3						
				H <th>M</th> <th>S</th> <th>DIR</th> <th>RES</th> <th>DIST</th> <th>AZ</th> <th>W-A</th> <th>W P W S</th>	M	S	DIR	RES	DIST	AZ	W-A	W P W S
ECZ	IPG	08	01	39.7	U	2.9*	0.42	262				
	S*			41.7		-0.8						
	SG			43.4		0.7						
	I			51.1								
GNZ	IPN	08	01	51.9	D	0.3	1.30	219		4.1	4.4	
	S*			02 08.8		0.1						
TUA	EPN	08	02	00.4		0.8	1.91	232		4.4	4.6	
	SN			22.3		-0.2						
TRZ	PN	08	02	09.0		-0.2	2.60	222				
	SN			39.9		-0.3						
KRP	PN	08	02	12.2		0.1	2.82	263		4.4	3.4	
	SN			45.2		-0.2						

LOCAL EARTHQUAKES

89

	TNZ	PN	08 02 16.4		-0.5	3.18	240		4.0	4.3				
	MNG*	PN	08 02 27.0	U	-2.1*	4.08	222		4.2	4.3				
		SN	03 17.0		1.4*									
	WEL*	EPN	08 02 38.3		-2.3*	4.94	221	4.8	3.9	4.8				
		ESN	03 32.0		-4.2*									
	COB*	EPN	08 02 53		-1.8*	6.00	233							
		ESN	03 58.9		-2.5*									
MAR 25	H	M	S						70/	170				
	13	30	37.5						AVG	MAG	4.0			
			+ 0.7											
			39.36S	177.75E	33	KM	SE	1.1						
			0.03	0.04										
			H	M	S	DIR	RES	DIST	AZ	H-A	W	P	W	S
	TUA	IPN	13 30 49.7		-1.0	0.72	319			4.7	4.9			
		P*	50.8		-0.9									
		SN	59.0		-1.3									
	GNZ	IP*	13 30 51.4		-0.6	0.74	16			4.2	4.2			
		S*	31 03.3		0.9									
	TRZ	IPN	13 30 51.2		0.1	0.75	254							
	CNZ	PN	13 31 09.3		1.1	1.72	274			4.5	4.1			
		P*	10.0		1.6									
		S*	32.0		0.6									
	MNG	EPN	13 31 10.5		0.3	2.16	233			3.3	3.4			
		SN	33.8		-1.4									
	KRP	EP*	13 31 18.0		0.6	2.25	309			3.7	3.2			
	WEL	SN	13 31 55.3		-0.0	2.99	229	3.8						
MAR 25	H	M	S						70/	171				
	21	37	22.0						AVG	MAG	4.3			
			+ 1.3											
			36.87S	177.66E	276	KM	SE	1.3						
			0.08	0.08										
			H	M	S	DIR	RES	DIST	AZ	H-A	W	P	W	S
	ECZ	P	21 38 00.3	D	-0.2	1.09	140			4.8	4.3			
		ES	30.7		0.3									
	GNZ	IP*	21 38 06.0		0.7	1.80	171			4.8	4.5			
		IS	37.4		-1.5									
	KRP	EP	21 38 08.1		1.3	1.99	237			3.4	3.1			
		ES	40.9		-0.8									
	TRZ	EP	21 38 14.9		0.7	2.76	194			4.7	4.8			
		S	56		1.2									
	MNG	P	21 38 29.1		0.3	4.12	204			4.1	4.2			
		S	39 20.9		-0.1									
	WEL	EP	21 38 36.1		-2.5	4.95	206	4.6		4.1	4.4			
		ES	39 39.1		0.5									
MAR 26	H	M	S						70/	172				
	06	07	39.9						AVG	MAG	4.2			
			+ 0.7											
			40.60S	174.57E	85	KM	SE	0.8						
			0.03	0.03										
			H	M	S	DIR	RES	DIST	AZ	H-A	W	P	W	S
	MNG	IP	06 07 56.8	D	0.5	0.70	92			4.2	4.4			
		IS	08 08.4		-0.2									
	WEL	IP	06 07 57.2		0.9	0.70	168	3.9		4.2	4.5			
		IS	08 08.0		-0.7									
	TNZ	EP	06 08 03.8		-1.2	1.42	354			4.1	4.1			
		S	24.0		0.2									
	COB	P	06 08 05.2		-0.5	1.47	250							
		S	25.6		0.6									
	CNZ	P	06 08 07.1		-0.0	1.59	29			4.4	4.4			
		IS	28.0		0.5									
	KRP	EP	06 08 23.2		-0.2	2.78	16			3.8	3.8			
		S	09 01.0		4.9*									
MAR 26	H	M	S						70/	173				
	09	06	04.4						AVG	MAG	4.2			
			+ 0.6											
			38.16S	175.44E	170	KM	SE	0.8						
			0.03	0.03										
			H	M	S	DIR	RES	DIST	AZ	H-A	W	P	W	S
	KRP	IP	09 06 30.1	DW	0.6	0.75	288			4.3	2.9			
		IS	48.5		-0.2									
	TUA	EP	09 06 30		-0.1	0.85	139			3.9	4.4			

LOCAL EARTHQUAKES

	S		42.9		2.9*				
KRP	EP	15 12	24.0		0.6	1.47	357	4.3	4.2
	S		43.0		-0.3				
GNZ	IP	15 12	30.6	D	0.7	2.00	69	4.5	4.6
	S		54.0		-0.5				
WEL	P	15 12	29.0		-1.0	2.00	199	4.4	4.8 5.0
	S		56.9		2.2				
COB	EP	15 12	40.2		-0.7	2.80	232	4.6	
	S		13 14.3		0.3				
ECZ	EP	15 12	41.3		-0.1	2.84	54		
	E		13 33.8						
KAI*	EP	15 13	10		6.2*	4.48	224	4.5	
	S		55		-0.1*				
MJZ*	EP	15 13	31.0		6.5*	6.01	219		
	S		14 26.4		-6.2*				
	E		32.0						
ISZ*	EP	15 13	50		0.8*	7.80	225		
	S		15 18.2		1.7*				

FELT MANGLES VALLEY (80) MM IV

MAR 27	H	M	S							70/177
	19	15	03.9	41.94S	174.16E	33 KM	SE	1.4	AVG MAG	3.7
			+ 2.0	0.17	0.09	R				
	H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
WEL	PN	19 15	18.8	U	0.8	0.79	35	3.5	4.0	3.9
	ISN		27.2		-1.2					
COB	PN	19 15	25.7		-0.1	1.37	308			
MNG	PN	19 15	29.3	D	-0.5	1.65	38		3.7	3.8
	SN		51.0		1.7					
GNZ	EPN	19 15	46.1		-1.3	2.93	22		3.6	3.8
TRZ	EPN	19 15	49.0		-1.0	3.12	41		3.9	
KRP	EPN	19 16	05.5		1.6	4.15	15		3.4	3.2

MAR 28	H	M	S							70/178
	11	16	21.1	37.15S	177.29E	12 KM	SE	0.9	AVG MAG	4.5
			+ 0.8	0.05	0.02	R				
	H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	EP*	11 16	41.8		0.1	1.14	119		4.9	4.7
	S*		57.2		0.2					
KRP	PN	11 16	47.6	USW	-1.0	1.59	240		4.4	4.3
	PQ		58.3		-0.1					
	SG		17 15.3		0.6					
GNZ	PN	11 16	47.6	U	-1.1	1.60	159		4.8	4.5
	P*		51.0		1.4					
	PQ		53.0		-0.6					
	SN		17 09.3		0.2					
TUA	EPN	11 16	48.9		-0.6	1.66	184		4.9	
	PG		55.1		0.4					
TRZ	EP*	11 17	03.1		-0.6	2.43	189		4.7	4.5
	PG		10.0		-0.2					
	E		38.1							
GNZ	PN	11 17	01.2		0.9	2.47	213		4.5	
	PG		09.3		-1.5					
TNZ	EPN	11 17	09.0		0.5	3.06	227		3.8	
WEL	EPN	11 17	30.2		1.3	4.57	205		4.4	

MAR 30	H	M	S							70/179
	13	00	23.1	39.14S	175.08E	12 KM	SE	0.9	AVG MAG	3.3
			+ 0.4	0.02	0.02	R				
	H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
GNZ	IP*	13 00	30.4	D	-0.1	0.37	100			
	S*		35.1		0.9					
	SG		37.0		0.9					
KRP	EP*	13 00	45.0		-0.7	1.26	17		3.0	3.3
	S*		01 03.0		0.4					
MNG	PN	13 00	48.3		-1.1	1.51	168		3.6	3.2
	P*		49.3		-0.6					

LOCAL EARTHQUAKES

93

	MNG	IP	09 44	29.7	U	0.9	1.83	189		4.5	4.3		
		S		57.3		-0.9							
		E		59.3									
	WEL	EP	09 44	38.4		1.1	2.61	198	3.9	3.9	4.0		
		ES		45 13.3		0.3							
	COB	ES	09 45	27.2		-0.1	3.30	225			3.6		
	GPZ	ES	09 46	15.0		-0.2	5.45	205	4.7				
APR 01	H	H	S							70/	182		
	08	19	51.5	44.54S	169.93E	12 KM	SE	0.6	AVG MAG		3.2		
			+ 0.2	0.01	0.01	3							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	MJZ	P*	08 20	03.8		-0.3	0.67	35			2.7	2.8	
		ES*		13.2		-0.2							
		E		17.2									
	OMZ	P*	08 20	08.2		0.6	0.88	127			4.0	3.2	
		PG		10.0		0.6							
		ESG		21.		-0.4							
	ROX	EP*	08 20	10		-0.2	1.03	204			3.1	3.3	
		PG		12		-0.4							
		ES		24		-0.1							
	MSZ	EP*	08 20	18.2		1.0	1.44	264			3.1	3.6	
		PG		20		-0.7							
		S*		36.3		0.1							
APR 03	H	H	S							70/	183		
	05	19	29.0	38.16S	178.45E	96 KM	SE	1.6	AVG MAG		4.6		
			+ 1.1	0.06	0.07	9							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	ECZ	IP	05 19	43.3	D	-1.1	0.47	10					
	GNZ	IP	05 19	46.2	D	0.8	0.59	214			4.8	4.8	
		IS		57.8		-0.0							
	TUA	IP	05 19	52.6	D	0.6	1.21	237			5.2	4.8	
		IS		20 09.7		-0.6							
		IP		09.8									
	TRZ	IP	05 20	01.9	U	1.5	1.88	222			5.2	4.7	
	KRP	P	05 20	06.0	D	-0.2	2.31	275			4.0	3.8	
		E		31.4									
		IS		32.1		-1.7							
	CNZ	IP	05 20	09.7	D	0.9	2.50	244			4.4	4.6	
		IS		40.0		2.5							
	TNZ	P	05 20	22.4		2.0	3.34	251			4.4		
		E		21 02.8									
	MNG	IP	05 20	19.9	D	-0.8	3.36	222			4.5	4.2	
		ES		59.6		-0.1							
	WEL	P	05 20	31.2		-1.2	4.22	221	4.7	4.5	4.5		
		S		21 18.4		-2.4							
	COB*	P	05 20	46.2		-0.9*	5.29	235			4.1	4.3	
		S		21 45.6		-1.7*							
	KAI*	S	05 22	23.3		-4.0*	6.92	229	5.2				
	QPZ*	ES	05 22	24.7		-6.0*	7.06	217	5.0				
	HJZ*	P	05 21	27.4		-1.9*	8.38	223					
		E		22 55.0									
		ES		56.6		-6.4*							
APR 03	H	H	S							70/	184		
	08	39	56.2	39.13S	174.81E	215 KM	SE	1.2	AVG MAG		4.8		
			+ 0.9	0.04	0.03	8							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	TNZ	P	08 40	26.2		1.5	0.34	260					
		E		50.3									
	CNZ	P	08 40	27.1	U	1.6	0.57	98			4.6	4.7	
		E		52.0									
	KRP	P	08 40	31.0	DSW	1.0	1.33	26			4.6	3.6	
		S		55.4		-0.9							
	MNG	IP	08 40	33.0	U	0.9	1.58	161			4.9	4.9	
		S		59.7		-0.2							

TRZ	P	08 40 32.3	0.4	1.61	106	4.8	5.3		
	S	41 02.0	1.5						
TUA	S	08 40 34.5	U	-0.1	1.85	81	5.1	4.6	
	S	41 02.5		-1.9					
WEL	IP	08 40 37.3	U	0.1	2.16	181	4.9	4.8	5.1
	S	41 09.2		-0.6					
COB	IP	08 40 41.7		-0.0	2.53	219			
	IS	41 13.4		-1.5					
GNZ	P	08 40 44.3	D	-0.7	2.55	80	5.0	4.7	
	ES	41 14.0		-3.4*					
ECZ	P	08 40 48.7	U	-1.3	3.26	65	5.4	4.6	
	S	41 32.3		0.5					
KAI*	EP	08 41 06.3		3.9*	4.27	216	5.1		
	ES	41 31.4		-2.4*					
GPZ*	P	08 41 09.6		-0.1*	4.85	199	5.4		
	S	42 03		-3.8*					
HJZ*	P	08 41 21.3		-1.2*	5.85	212	4.0	4.4	
	S	42 24.8		-4.8*					
OMZ*	P	08 41 31.7		-0.5*	6.61	205			
	S	42 42.9		-4.2*					
MSZ*	EP	08 41 41.3		-3.0*	7.56	221			
	S	43 05.2		-3.9*					
APR 03									
	H	H	S						70/185
	13	23	50.2	40.10S	176.69E	33 KM	SE	0.8	AVG MAG
			+ 0.3	0.02	0.02	3			4.5
						DIR	RES	DIST	AZ
TRZ	IPN	13 24 01.7		0.6	0.55	11	W-A	W P	W S
MNG	IPN	13 24 08.8		0.9	1.05	240		4.8	4.6
	ISN	21		-0.1					
CNZ	IPN	13 24 11.5	U	0.9	1.25	315		4.6	
TUA	PN	13 24 11.4		-0.4	1.34	16		4.4	5.0
	SN	27.0		-1.0					
WNZ	EP*	13 24 18		0.2	1.53	343		5.3	
GNZ	PN	13 24 18.0		0.0	1.79	36		4.1	4.7
	SN	39.0		0.1					
WEL	PN	13 24 18.2		-1.1	1.88	230	4.3	4.5	4.7
	SN	42.3		1.2					
TNZ	PN	13 24 22.4		1.5	1.99	296		4.4	4.3
	E	28.7							
	SN	43.4		-0.6					
KRP	IPN	13 24 25.1		-0.5	2.34	337		4.0	3.8
	P*	32.2		0.9					
	SN	51.9		-0.6					
ECZ	EPN	13 24 32.4		0.4	2.81	32		4.7	4.6
	SN	25 03.9		-0.3					
COB	PN	13 24 37.0		0.1	3.16	251		4.4	4.4
	E	48.0							
	SN	25 12.8		0.3					
KAI	SN	13 25 47.7		-0.9	4.65	237	4.7		
HJZ	PN	13 25 16.4		0.5	6.04	228			
	SN	26 20.8		-1.3					
MSZ	ESN	13 27 07		-0.3	7.93	232			
FELT IN HAWKES BAY									
APR 04									
	H	H	S						70/186
	08	39	43.2	39.31S	173.60E	12 KM	SE	0.8	AVG MAG
			+ 0.4	0.02	0.02	3			3.7
						DIR	RES	DIST	AZ
TNZ	P*	08 39 55.4		0.5	0.62	79	W-A	W P	W S
	mm	56.0						3.9	3.4
		59.3							
	S*	40 04.6		1.1					
CNZ	PN	08 40 09.6		-0.2	1.52	86		3.6	3.9
	S*	30.0		-0.5					
COB	EPN	08 40 15.2		0.5	1.89	200		3.7	3.7
	ESN	37.3		-0.6					

LOCAL EARTHQUAKES

95

MNG	P	08 40	18.4	-0.7	1.95	133		3.8	3.2
	S		43.2	-0.3					
KRP	PN	08 40	16.7	-0.1	2.06	48		3.4	3.5
	SN		40.6	-1.1					
HEL	P	08 40	22.2	0.8	2.17	15	3.7	4.0	4.1
	S		49.3	-0.7					

FELT WAREA (46) MY IV

APR 04	H	M	S							70/ 187			
	17	27	15.6	37.41S	177.55E	167 KM	SF	1.2	AVG MAG	4.2			
			0.9	0.05	0.04								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	EP	17 27	41.2					-0.3	0.84	110		4.4	4.2
	ES		59.4					-1.1					
GNZ	IP	17 27	45.8					1.1	1.29	163		4.4	4.4
	IS		28 06.4					-0.7					
TUA	P	17 27	46.8					0.7	1.44	193		4.5	4.4
	S		28 08.7					-0.8					
KRP	IP	17 27	49.0				DNE	0.5	1.68	251		4.2	3.1
	S		28 13.0					-1.0					
TRZ	EP	17 27	55.4					0.8	2.22	195		4.4	4.2
	ES		28 25.9					1.2					
GNZ	P	17 27	58.1					1.5	2.39	221		4.1	3.7
	S		28 30.4					2.2					
MNG	P	17 28	11.0					-0.8	3.59	206		4.6	3.9
	S		54.3					-0.5					
HEL	P	17 28	21.6					-1.1	4.44	208	4.7	4.5	4.2
	S		29 14.2					-0.3					
COB	P	17 28	32.4					-0.9	5.24	224		4.2	4.0
	S		29 32.2					-1.2					

APR 04	H	M	S								70/ 188		
	19	45	06.8	36.24S	177.82E	251 KM	SE	0.9	AVG MAG	4.3			
			1.1	0.07	0.11								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	S	19 46	16.0					-0.3	1.56	158			4.5
GNZ	P	19 45	53.9					-0.0	2.40	176		4.4	4.1
	E		46 28.0										
	S		31.0					1.2					
KRP	P	19 45	55.0					0.7	2.48	227			3.3
TUA	S	19 46	33.0					-0.8	2.62	191			4.8
TRZ	EP	19 46	04.0					-0.2	3.40	193		4.6	4.6
	S		49.0					0.1					
MNG	P	19 46	19					-1.0	4.74	202		4.3	4.1
	S		47 16.0					-1.1					
HEL	E		22.0										
	EP	19 46	31.0					0.8	5.57	204			4.2
	S		47 36.0					0.6					

APR 05	H	M	S								70/ 189		
	19	37	53.7	45.07S	168.11E	157 KM	SF	1.1	AVG MAG	4.4			
			1.2	0.08	0.09								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ROX	P	19 38	18.0					-0.8	0.94	116		4.6	
OHZ	IP	19 38	29.0				D	-0.4	1.99	91			
	S		56.9					-0.4					
MJZ	IP	19 38	29.3				D	-0.3	2.00	58		4.1	4.2
	S		58.0					0.7					
	I		39 22.0										
GPZ	EP	19 38	51.0					2.2	3.53	69	5.1		
	S		39 31.5					0.3					
COB	SP	19 39	11.0					-0.0	5.23	42		4.0	4.3
	S		40 10.5					-0.4					
	E		27.3										
	S		39										
MNG	S	19 40	52.5					-1.0	7.01	53			

H M S								70/ 190		
APR 06	00 10 10.6	38.35S	175.93E	170 KM	SE	0.7	AVG MAG	3.9		
	+ 0.7	0.03	0.02	5						
		H M S		DIR	RES	DIST	AZ	W-A	W P	W S
KRP	P	00 10 35.5			0.9	0.55	320		3.5	3.4
	S	52.5			-0.6					
TRZ	P	00 10 41.2			0.4	1.37	152		4.1	4.2
	S	11 05.0			1.0					
GNZ	EP	00 10 43.0			-0.3	1.63	101		3.4	3.7
	S	11 08.0			-0.5					
MNG	IP	00 10 50.3		U	-0.3	2.30	189		4.3	4.0
	S	11 21.4			-0.4					
WEL	P	00 11 00.3			0.1	3.08	197			
	S	38.5			-0.2					
COB	S	00 11 53.0			0.0	3.71	221			4.2
H M S								70/ 191		
APR 06	16 21 27.7	38.69S	178.69E	33 KM	SE	1.1	AVG MAG	4.0		
	+ 0.7	0.05	0.03	9						
		H M S		DIR	RES	DIST	AZ	W-A	W P	W S
GNZ	IPN	16 21 36.3		D	-1.5	0.52	275		4.4	4.6
	SN	44.3			-1.0					
ECZ	IPN	16 21 45.2		D	0.5	1.00	354		4.6	
TUA	PN	16 21 46.3			-0.9	1.20	264		4.2	4.4
	E	50.7								
	SN	22 03.0			0.8					
	S*	07.0			1.0					
CHZ	EPN	16 22 06.0			0.8	2.49	257		3.8	
	E	16.3								
	SN	35.2			1.6					
KRP	EPN	16 22 06.0			-0.5	2.59	286		3.5	
MNG	EPN	16 22 14.0			0.1	3.13	231		3.4	3.4
	SN	48.3			-0.6					
H M S								74/ 192		
APR 07	12 45 21.1	32.94S	179.33W	420 KM	SE	1.2	AVG MAG	4.8		
	+ 1.2	0.16	0.26	15						
		H M S		DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	P	12 46 45.3			0.2	5.05	199		4.9	4.7
	ES	47 50.5			-0.8					
GNZ	P	12 46 57.0			1.0	6.09	200			
	E	48 09.0								
	S	11.0			0.3					
KRP	EP	12 47 01.0			0.4	6.50	219			
TRZ	EP	12 47 10.0			0.5	7.30	204			
	S	48 37.0			2.1					
CHZ	P	12 47 11.0			-0.7	7.50	212			
	S	48 38.0			-0.9					
	I	54.0								
MNG	P	12 47 24.0			-1.5	8.72	207			
	S	49 02.0			-1.8					
WEL	P	12 47 35.0			-0.1	9.57	208			
	S	49 21.0			-0.3					
COB	E	12 47 47.0				10.31	216			
	S	49 38.0			1.4					
H M S								70/ 193		
APR 10	10 46 53.8	41.68S	171.69E	12 KM	SE	1.3	AVG MAG	3.8		
	+ 0.9	0.04	0.03	9						
		H M S		DIR	RES	DIST	AZ	W-A	W P	W S
KAI	P*	10 47 10.0			0.1	0.87	194		3.5	
	S*	21.0			-0.7					
COB	P*	10 47 13.0			1.3	0.98	53		4.0	4.0
	S*	26.2			1.2					
GPZ	EP*	10 47 32.0			0.5	2.14	161		4.2	

LOCAL EARTHQUAKES

97

	S*	48	00.0	0.3					
WEL	S*	10	48 07.0	1.1	2.34	81		3.7	3.6
MJZ	EPQ	10	47 42.0	-2.0	2.48	101		3.6	3.5
	S*	48	10.0	0.0					
	SG		19.0	1.6					
MNG	EP*	10	47 46.0	-1.1	3.05	71		3.7	3.4
	S*	48	25.0	-2.2					
	SG		36.3	-0.2					
FELT WESTPORT (79) MM II									

APR 10	H M S	41.00S	173.64E	103 KM	SE	1.0	AVG MAG	70/ 194	4.1
	+ -	0.5	0.05	0.04					
	H M S	4	M S	DIR	RES	DIST	AZ	W-A	W P W S
COB	P	21	02 14.0		-0.3	0.69	263		
WEL	P	21	02 17.4		1.1	0.90	109	4.0	3.8 4.5
MNG	IS P	21	02 30.3		-0.8				
	P	21	02 23.2		0.4	1.45	75		4.4 4.2
	E		27.1						
	S		43.0		0.3				
	I		50.0						
TNZ	P	21	02 29.0		0.7	1.90	18		4.1 4.2
	E		43.0						
KAI*	ES	21	03 04.3		4.1*	2.26	227	3.0	
CNZ	EP	21	02 34		0.1	2.32	40		4. 4.2
	E		50.5						
KRP	EP	21	03 10.0						
	E	21	02 48		-0.8	3.41	26		
	E		03 04.3						
	E		35.0						
GNZ	S	21	03 45		-0.8	4.12	57		4.3
MSZ	P	21	03 19.5		1.2	5.58	227		3.8 3.9
	S		04 20.6		-1.1				

APR 11	H M S	40.35S	174.35E	12 KM	SE	0.4	AVG MAG	70/ 195	4.0
	+ -	0.1	0.01	0.01					
	H M S	4	M S	DIR	RES	DIST	AZ	W-A	W P W S
MNG	IP*	13	34 43.0		-0.2	0.90	108		4.1 4.2
	IS*		55.0		-0.5				
WEL	IP*	13	34 43.0		0.3	0.99	161	3.8	4.2 4.4
	IS*		58.3		0.4				
COB	P*	13	34 52.3		0.2	1.43	238		
	S*		35 11.0		-0.5				
CNZ	PN	13	34 52.3		-0.1	1.47	39		3.7 4.1
	ISN		35 12.0		0.2				
TRZ	E	13	35 26.0			2.06	68		
KRP	PN	13	35 07.3		-0.3	2.59	21		3.7 3.9
	SN		39.0		0.4				

APR 11	H M S	39.10S	174.91E	233 KM	SE	1.2	AVG MAG	70/ 196	5.1
	+ -	1.0	0.05	0.05					
	H M S	4	M S	DIR	RES	DIST	AZ	W-A	W P W S
TNZ	IP	23	10 20.3		0.9	0.42	258		
CNZ	IP	23	10 20.4		0.5	0.51	101		4.9
KRP	IP	23	10 24.0	J	-0.1	1.27	23		5.0 4.3
	IS		50.1		-1.2				
TRZ	IP	23	10 26.3		0.3	1.55	108		5.0 5.5
	E		50.0						
	S		54.4		-0.7				
MNG	IP	23	10 27.0		0.5	1.58	164		4.9
TUA	EP	23	10 30.0		1.9	1.77	81		4.8 5.3
	E		59.0						
	S		11 00.0		1.6				
WEL	IP	23	10 31.9		-0.1	2.19	183	5.2	4.9 5.4
	E		56.0						

LOCAL EARTHQUAKES

		KRP	E	03 51	25.0		2.21	7		3.5	3.4			
			E		52.0									
		H	H	S							70/ 201			
APR 16	04 13	10.6			34.81S	179.40W	270 KM	SE	1.1	AVG MAG	5.0			
		+ 1.1			0.06	0.07	12							
			H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S		
	ECZ	P	04	14	08.1		-0.1	3.32	209		5.4	5.3		
		IS			52.0		-1.0							
					15	01.3								
	GNZ	IP	04	14	19.8	U	-0.1	4.35	208		4.9	4.8		
		S			15	14.3		0.1						
	GBZ	EP	04	14	20		-0.5	4.40	250					
	TUA	P	04	14	29.3		-0.3	4.85	214		5.5			
	KRP	IP	04	14	30.3	U	1.2	5.13	231		4.7	4.1		
		IS			15	32.0		1.5						
						59.0								
	TRZ	EP	04	14	34.3		-0.3	5.61	211		5.0			
	GNZ	P	04	14	41.0		1.8	5.96	221		5.1			
		E			15	09.8								
	CRZ	IP	04	14	46.4	U	-0.0	6.54	271					
		S			16	01.0		-0.6						
	MNG	P	04	14	54.3		1.2	7.07	213					
	WEL	ES	04	16	32.0		-0.7	7.93	214		5.6			
	COB	EP	04	15	13.0		-2.0	8.82	222					
APR 16	07 48	46.8			34.15S	179.90W	272 KM	SE	1.1	AVG MAG	5.2	70/ 202		
		+ 0.9			0.06	0.08	12							
			H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S		
	FCZ	IP	07	49	50.6	D	1.3	3.75	199		5.7	5.5		
		IS			50	38		0.1						
	GNZ	EP	07	50	01		-0.2	4.79	200		5.2	5.1		
		IS				57.4		-2.0						
	ONE	EP	07	50	03		-0.6	4.99	249		4.9			
	TUA	EP	07	50	07		0.6	5.22	206		5.3	5.2		
		ES			51	09.0		0.3						
	KRP	IP	07	50	08.9	D	1.8	5.28	223					
		S			51	11.0		1.0						
	TRZ	EP	07	50	16		0.1	6.00	205		5.1	5.1		
		ES			51	25.5		-0.2						
	CRZ	EP	07	50	16.3		-1.3	6.15	265					
	GNZ	EP	07	50	19		0.3	6.23	215					
	TNZ	EP	07	50	29		3.0	6.81	221					
	MNG	EP	07	50	32.3		-1.2	7.43	208					
	WEL	EP	07	50	43.3		-0.9	8.28	209					
		ES			52	14.0		-2.7						
	COB	EP	07	50	59		0.9	9.06	218					
		ES			52	34.3		0.3						
APR 17	03 21	32.9			37.71S	179.24E	33 KM	SE	0.5	AVG MAG	3.9	70/ 203		
		+ 0.8			0.03	0.04	3							
			H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S		
	ECZ	IPN	03	21	43.6	U	-0.1	0.55	272		4.7	4.6		
		SN			51.3		-0.1							
	GNZ	EPN	03	21	54		-0.5	1.34	226		3.6	3.8		
		SN			22	10.7		0.0						
	KRP	EPN	03	22	16.3		-0.0	2.94	265					
	GNZ	EPN	03	22	21.3		0.6	3.26	242		3.7			
	MNG	EPN	03	22	30		-2.6	4.12	224		3.5	3.5		
		ESN			23	14		-4.4						
APR 17	08 41	34.3			41.35S	171.80E	12 KM	SE	0.3	AVG MAG	4.3	70/ 204		
		+ 0.2			0.01	0.01	3							

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
COB	P*	08	41	49.4		-0.4	0.84	57			
KAI	EP*	08	41	53		0.3	1.01	197	4.1		
	S*		42	06.3		0.1					
	E			13							
GPZ	EPN	08	42	10		-0.3	2.23	164	3.7		
	SN			37		-0.0					
HEL	PN	08	42	10		-0.5	2.24	84	4.2	4.3	4.7
	SN			37.4		-0.0					
	E			58							
MJZ*	EPN	08	42	15		-0.9*	2.62	202		3.9	3.7
	SN			47		-0.1*					
MNG	PN	08	42	19.8		-0.3	2.93	73		4.5	4.3
	I			24							
	SN			55		0.5					
TNZ*	EPN	08	42	21		-0.9*	3.08	41		4.3	4.2
	ESN			58		0.4*					
OMZ	EPN	08	42	29		0.4	3.57	190		4.5	
CNZ	EPN	08	42	30		-0.3	3.70	52		4.5	4.8
	SN			43		0.2					
	I			34							
KRP	EPN	08	42	43		0.1	4.63	40			
	ESN			43 35.3		0.3					

FELT MANGLES VALLEY AND MURCHISON (80) MM IV

APR 17	H	M	S		DIR	RES	DIST	AZ	W-A	W P	W S	70/ 205
	09	36	03.7	36.37S		76		0.8				AVG MAG
			+ 0.6	0.03		9						4.0
GNZ	IP	09	36	16.8	DIR	RES	DIST	AZ	W-A	W P	W S	
	IS			26.0	U	0.1	0.41	132				
TUA	P	09	36	18.3		-0.5						
ECZ	IP	09	36	23.2		0.3	0.58	221		4.1		
TRZ	EP	09	36	27.5		0.4	0.99	47		4.6		
	ES			46		0.0	1.34	208		3.8	4.1	
	EP			32.3		0.8						
KRP	S	09	36	53.0		0.2	1.71	285				
	IP			34.4		-0.4						
CNZ	EP	09	36	46		0.6	1.83	243		3.9		
	EP			46		-1.4	2.79	216		3.7		

APR 17	H	M	S		DIR	RES	DIST	AZ	W-A	W P	W S	70/ 206
	09	45	33.0	41.51S		12		1.7				AVG MAG
			+ 1.4	0.07		3						3.6
COB	PN	09	45	47.8	DIR	RES	DIST	AZ	W-A	W P	W S	
	SN			59		-1.3	0.72	54		4.3	3.8	
KAI	EPG	09	45	56.3		-2.0						
QPZ	ESN	09	46	35		1.2	1.10	202		3.1		
MNG	EPN	09	46	17.5		-1.0	2.24	167		3.2		
	ESN			51		0.5	2.80	73			3.7	3.2
	SN			40		0.9						
CNZ	ESN	09	47	10		1.5	3.58	51		3.6		

APR 17	H	M	S		DIR	RES	DIST	AZ	W-A	W P	W S	70/ 207
	22	24	37.6	39.94S		12		0.6				AVG MAG
			+ 0.3	0.01		3						3.9
COB	EP*	22	24	58.0	DIR	RES	DIST	AZ	W-A	W P	W S	
	S*			25 14		-0.3	1.14	180		3.9		
				03.3		0.4						
TNZ	EPN	22	25	03.3		-0.1	1.47	60		3.7		
HEL	EPN	22	25	10.3		-0.6	2.04	132		3.6	3.9	4.2
	SN			35.3		-0.3						
	S*			40		-0.7						
MNG	EPN	22	25	13		-0.3	2.20	109		4.0	4.1	
	IP*			18.0		1.6*						
	SN			40		0.3						
	IS*			46.0		0.5						

LOCAL EARTHQUAKES

101

	ONZ	IPN	22 25	13.3	U	-0.5	2.29	72		4.5	3.5
		SN		43.1		1.2					
		ISG		55.0		0.0					
	KAI	ES	22 26	03		0.5	2.77	211			
	KRP	EP	22 25	30		0.5	2.97	48			
		S	26	08		-0.5					
APR 19	H	M	S							70/ 208	
	11	13	31.8	35.48S	179.87W	315 KM	SE	1.7	AVG MAG	4.5	
			+ 2.1	0.20	0.29	19					
	ECZ	EP	11 14	24	DIR	RES	DIST	AZ	W-A	W P	W S
		ES		15		-0.9	2.55	209		4.6	4.7
	GNZ	EP	11 14	34		-0.8	3.58	207		4.2	4.5
		S		13		0.9					
	KRP	EP	11 14	43		-0.9	4.42	235			
	TRZ	EP	11 14	51		-2.5	4.84	212		4.3	4.5
		S		13		-0.8					
	MNG	EP	11 15	06		0.3	6.30	214			
		ES		16		1.1					
		ES		41							
	HEL	ES	11 16	35		-2.9	7.16	214			
	COB	ES	11 16	59		1.3	8.07	224			
APR 19	H	M	S							70/ 209	
	14	23	01.0	40.69S	173.86E	94 KM	SE	1.0	AVG MAG	4.4	
			+ 0.6	0.03	0.05	12					
	HEL	IP	14 23	21.3	DIR	RES	DIST	AZ	W-A	W P	W S
		IS		34.1	U	-1.1	0.91	132		4.2	4.3
	COB	IP	14 23	20.9		0.3	0.95	244			
	MNG	IP	14 23	23.8		-0.4	1.23	87		4.4	4.2
	TNZ	IP	14 23	28.8	U	0.7	1.55	15		4.8	4.9
		S		48.4		0.1					
	GNZ	IP	14 23	34.6	U	1.2	1.97	42		4.6	4.7
	TRZ	EP	14 23	41		-0.2*	2.53	64		4.2	4.3
		S		24		-1.3*					
	KAI	EP	14 23	43		0.9	2.60	224		4.4	
		S		24		-0.5					
	KRP	IP	14 23	48.1	U	-0.2	3.05	26			
		IS		24		-1.7					
	GPZ	EP	14 23	49.3		-0.1*	3.14	196		4.8	
		S		24		-3.7*					
	TUA	EP	14 23	47.3		-2.2*	3.15	55		4.5	4.5
		S		24		-1.9*					
	GNZ	EP	14 23	55.3		-3.1*	3.80	59		4.4	4.4
		S		24		-4.5*					
	MJZ	EP	14 24	04		0.6	4.15	216		3.9	4.0
		S		49.8		-1.3					
APR 19	H	M	S							70/ 210	
	17	08	47.4	39.13S	175.81E	12 KM	SE	1.0	AVG MAG	3.9	
			+ 0.5	0.02	0.02	3					
	GNZ	IPG	17 08	53.6	DIR	RES	DIST	AZ	W-A	W P	W S
	TRZ	PG	17 09	04.3		1.4	0.22	251			
		SG		21.0		-1.0*	0.89	119		4.2	4.0
	TUA	EPN	17 09	08		3.4*					
		ESG		29		-0.3	1.09	73		4.1	4.1
		S		29		0.6					
	TNZ	EPG	17 09	10.3		0.5	1.11	267		3.8	
	KRP	IPN	17 09	09.1		-0.9	1.22	350			
		PG		11.2		-0.9					
		ISN		26.9		0.2					
		SG		29.1		0.4					
	MNG	IPG	17 09	17.7	D	-0.3	1.51	190		4.0	3.9
		SG		41		2.7*					
	GNZ	EPG	17 09	22.3		-1.2	1.79	75		3.7	3.8

LOCAL EARTHQUAKES

103

		ESN	35.5	-0.3						
		S*	39	1.0						
MNG		EPN	04 57 31.5	-0.7	2.94	200	3.4			
		E	43							
APR 21	H M S									70/ 214
	08 22 24.9		37.33S 176.29E	165 KM	SE	1.9	AVG MAG	4.3		
	+ 1.0		0.05 0.06	11						
		H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
KRP	EP	08 22 50		-3.1	0.84	225				
GNZ	EP	08 23 00.3		0.4	1.00	134		4.4	4.2	
	E	02.0								
	S	26		-1.3						
CHZ	EP	08 23 01.0		0.2	1.95	197		3.8		
TRZ	EP	08 23 09.3		1.2	2.26	169		4.2	4.4	
	ES	39.3		0.8						
MNG	IP	08 23 18.3		0.5	3.34	191		4.8	4.2	
	S	59		0.4						
WEL	EP	08 23 27.6		-0.3	4.12	196	4.6	4.4	4.5	
	ES	24 15.3		-0.9						
COB	EP	08 23 34		-0.8	4.65	215		4.0		
FELT ROTORUA (33) MM III										
APR 21	H M S									70/ 215
	08 49 13.1		39.99S 174.32E	88 KM	SE	0.4	AVG MAG	3.9		
	+ 0.3		0.01 0.01	4						
		H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
TNZ	P	08 49 31.0		0.2	0.80	3		3.4	3.6	
	ES	44.0		-0.2						
MNG	IP	08 49 34.4	D	0.3	1.09	126		3.9	4.0	
	IS	50.0		0.1						
GNZ	P	08 49 36.3		0.5	1.23	51		3.9	4.1	
	S	53.4		0.2						
	I	57.4								
WEL	EP	08 49 37.3		0.1	1.34	165	3.7	3.8	4.3	
	S	54.8		-0.7						
COB	EP	08 49 41.0		-0.0	1.63	227		3.9	4.0	
	ES	50 02.0		0.3						
KRP	IP	08 49 48.8	D	-0.7	2.27	25				
	IS	50 16.3		-0.1						
GNZ+	S	08 50 37.0		-1.9*	3.17	66			3.9	
FELT ROTORUA (33) MM III										
APR 21	H M S									70/ 216
	11 19 41.4		39.25S 177.09E	12 KM	SE	1.1	AVG MAG	3.7		
	+ 0.3		0.02 0.02	3						
		H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
TRZ	IP*	11 19 49.6		1.1	0.35	210				
	IS*	55.6		1.9						
TUA	IP*	11 19 49.7		-0.4	0.45	10				
	IS*	56.3		-0.2						
GNZ	EP*	11 19 59.0		-0.1	0.97	52		3.6	3.8	
	ES*	20 11.9		-0.3						
	ESQ	15.0		0.7						
	EPG	02.0		0.9						
GNZ	IPN	11 20 03.2	D	-0.1	1.17	272		4.1	4.2	
	SN	20.0		0.5						
	SQ	23		2.1						
KRP	PN	11 20 10.7		-0.4	1.77	318				
	S*	36.6		0.2						
	SQ	40.3		-0.3						
MNG	PN	11 20 10.7		-1.3	1.82	221		3.7	3.3	
	SN	33.3		-1.0						
	S*	35.7		-2.2						
TNZ	EP*	11 20 17.3		-0.3	2.07	271				

APR 21	H	M	S								70/ 217	
	12	06	40.3	43.53S	170.75E	12 KM	SE	1.0	AVG	MAG	3.8	
			+ 0.2	0.02	0.02							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
	MJZ	IP*		12	06	48.8	US	0.4	0.41	210		
		S*				55.6		1.3				
	KAI	S*		12	07	01.0		-1.0	1.21	24	3.4	
		S*				17		-1.2				
	GPZ	P*		12	07	05		0.0	1.38	93	3.4	
		S*				23.5		0.1				
		SG				28		1.1				
	OMZ	P*		12	07	05		-1.1	1.44	175		
	ROX	EPN		12	07	14.0		-0.7	2.11	208	4.1	3.9
		P*				18.0		0.5				
		PG				21.3		-1.5				
		S*				44.3		-0.9				
		SG				51		-0.5				
	HSZ	EPN		12	07	17.0		-0.1	2.29	242	3.7	4.0
		P*				22		1.4				
		S*				52		1.2				
	COB	EPN		12	07	25.8		-0.3	2.94	31	3.9	3.8
		SN				08		1.4				
	MNW	EPN		12	07	28.4		0.2	3.10	225	3.8	3.5
		E				38						
		PG				42.9		-0.1				
		SN				08		3.8*				

AFTERSHOCK AT 19H 23M

APR 22	H	M	S								70/ 218	
	00	19	27.9	40.29S	176.50E	12 KM	SE	0.6	AVG	MAG	3.8	
			+ 0.3	0.01	0.01							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
	TRZ	P*		00	19	42		-0.4	0.78	19	4.1	4.2
		S*				52.3		-0.8				
		SG				55		0.5				
	MNG	P*		00	19	43.4		0.0	0.84	247	3.5	3.9
		S*				54.5		-0.3				
		SG				58		1.6*				
	CNZ	IPN		00	19	51.3	U	-0.5	1.31	326	4.3	4.3
		PG				55.1		0.5				
		SN				20		-0.4				
		SG				12		-0.4				
	WEL	EPN		00	19	55.5		-0.6	1.64	232	3.2	3.5
		ESN				20		-0.6				
	TNZ	EPN		00	20	00		-0.4	1.97	303		3.2
		ESQ				34.5		0.1				
	GNZ	EPG		00	20	10.0		1.0	2.03	36	3.8	
	KRP	EP*		00	20	12.5		1.0	2.48	342		
	COB	ES*		00	20	58.5		-0.3	2.97	253		3.5

APR 22	H	M	S								70/ 219	
	08	07	49.0	41.84S	171.73E	12 KM	SE	0.7	AVG	MAG	3.5	
			+ 0.3	0.02	0.03							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
	KAI	EP*		08	08	02		-0.6	0.73	199	3.4	
		S*				11.8		-0.9				
		SG				13.7		-0.2				
	COB	EP*		08	08	08.5		0.2	1.06	46	3.5	3.9
		S*				23		0.4				
	MJZ	EPN		08	08	27		0.4	2.34	203	3.6	3.4
		EPG				37		0.6				
		ESN				55.5		1.0				
		SG				09		0.9				
	WEL	EPN		08	08	26		-0.6	2.35	77	3.4	3.7
		ESN				54		-0.5				
	MNG	EP*		08	08	43		0.2	3.08	68	3.5	3.1

LOCAL EARTHQUAKES

105

FELT WESTPORT (79)									
	H	M	S						70/ 220
CNZ	ES*	09	23.7	0.2					
	P*	09	08 57.2	-0.1	3.92	49		3.7	3.7
	S*	09	48.8	0.2					
MSZ	EPN	03	06 47.3	-1.2	3.97	223		3.2	3.3
	SN	09	31.4	-2.7*					
APR 22	10	43	42.6	39.91S	178.38E	12 KM	SE 0.4	AVG MAG	4.2
			+/- 0.2	0.01	0.01				
	H <td>M <td>S <td>DIR <td>RES <td>DIST <td>AZ <td>W-A <td>W P W S</td> </td></td></td></td></td></td></td>	M <td>S <td>DIR <td>RES <td>DIST <td>AZ <td>W-A <td>W P W S</td> </td></td></td></td></td></td>	S <td>DIR <td>RES <td>DIST <td>AZ <td>W-A <td>W P W S</td> </td></td></td></td></td>	DIR <td>RES <td>DIST <td>AZ <td>W-A <td>W P W S</td> </td></td></td></td>	RES <td>DIST <td>AZ <td>W-A <td>W P W S</td> </td></td></td>	DIST <td>AZ <td>W-A <td>W P W S</td> </td></td>	AZ <td>W-A <td>W P W S</td> </td>	W-A <td>W P W S</td>	W P W S
GNZ	IP*	10	44 04.3	U	0.1	1.20	347		4.1 4.2
	IS*		20.1		-0.1				
TRZ	PG	10	44 08		0.5	1.23	282		4.3 4.6
	SG		25		0.9*				
TUA	EPN	10	44 07.5		0.2	1.38	316		4.2 4.3
	SN		25		-0.6				
	SG		29.1		-0.2				
	S*		26.3		0.7				
ECZ	EPN	10	44 17		-0.1	2.12	4		4.3 4.3
	ESN		43		0.4				
CNZ	IP*	10	44 22.1	U	-0.5	2.27	285		4.5 4.3
	S*		52.4		-0.1				
MNG	PN	10	44 20.3		-0.1	2.36	249		4.1 3.9
	P*		23.6		-0.5				
	SN		48.3		-0.2				
KRP	PN	10	44 28		-0.0	2.91	309		
	SN		45 02		-0.2				
WEL	EPN	10	44 31		0.2	3.12	241	4.2	4.0 4.3
	SN		45 07.3		0.3				
TNZ	EPN	10	44 30.3		-0.7	3.15	280		
	ESN		45 08.2		0.4				
COB	EPN	10	44 49.3		0.2	4.49	252		3.7 4.0
	SN		45 40.3		0.4				

FELT WANGANUI (57) MM IV, WAIKANA E (65) MM III									
	H	M	S						70/ 221
APR 22	18	32	27.0	40.71S	174.93E	77 KM	SE 0.5	AVG MAG	4.5
			+/- 0.2	0.01	0.01				
	H <td>M <td>S <td>DIR <td>RES <td>DIST <td>AZ <td>W-A <td>W P W S</td> </td></td></td></td></td></td></td>	M <td>S <td>DIR <td>RES <td>DIST <td>AZ <td>W-A <td>W P W S</td> </td></td></td></td></td></td>	S <td>DIR <td>RES <td>DIST <td>AZ <td>W-A <td>W P W S</td> </td></td></td></td></td>	DIR <td>RES <td>DIST <td>AZ <td>W-A <td>W P W S</td> </td></td></td></td>	RES <td>DIST <td>AZ <td>W-A <td>W P W S</td> </td></td></td>	DIST <td>AZ <td>W-A <td>W P W S</td> </td></td>	AZ <td>W-A <td>W P W S</td> </td>	W-A <td>W P W S</td>	W P W S
MNG	IP	18	32 40.2	U	-0.1	0.43	78		
WEL	IP	18	32 42.1	U	0.4	0.59	192	4.3	5.0 4.9
	S		52.4		-0.5				
TNZ	IP	18	32 53.8	U	-0.0	1.58	344		4.9 5.0
	S		33 14.0		0.2				
CNZ	IP	18	32 53.9	U	0.0	1.58	18		4.6 4.6
	S		33 14.0		0.2				
COB	P	18	32 59.6		0.1	1.71	256		
TRZ	EP	18	32 58		0.6	1.85	52		4.4 4.6
	S		33 20.3		0.6				
KRP	P	18	33 10.3		-0.2	2.82	10		
	S		43.6		-0.6				
GNZ	EP	19	33 15		-0.6	3.15	50		4.2 4.2
	S		51.9		-0.7				
KAI	ES	18	33 54		0.6	3.20	234	4.3	
ECZ	EP	18	33 29.3		0.5	4.12	44		4.7 4.4
	S		34 16.3		0.3				
MJZ	EP	18	33 35.3		-0.9	4.65	224		4.0 3.8
	S		34 27.3		-2.1*				
OHZ	EP	19	33 45		0.3	5.26	213		4.3 4.4
	S		34 44.3		-0.2				
MSZ	E	18	34 02.3			6.51	230		
	E		35 15						

APR 23		H	M	S								74/ 222
	00	42	44.0	38.33S	176.18E	184 KM	SE	0.9	AVG	MAG		4.9
			+ 0.4	0.02	0.03	4						
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
KRP	IP	00	43	10.3	U	0.3	0.65	308				
	IS			28.9		-1.4						
TUA	IP	00	43	11.5	U	-0.0	0.90	123		5.5	5.0	
	IS			32		-0.9						
CNZ	IP	00	43	13.5	U	1.4	1.00	209		4.7	4.6	
TRZ	IP	00	43	16.3	U	1.6	1.32	158		5.6	5.2	
	S			39.3		0.6						
GNZ	IP	00	43	16.2	U	-0.1	1.48	103		5.0	5.0	
	IS			40.1		-1.3						
TNZ	IP	00	43	20.8	U	2.8*	1.65	238		4.7	4.3	
	S			49.1		0.8						
GBZ	P	00	43	23.2		-0.4	2.18	345		4.1		
MNG	IP	00	43	26.7		1.1	2.35	193		5.0	4.8	
	S			58		0.3						
ONE	P	00	43	33.2		0.5	2.93	330	4.7			
WEL	IP	00	43	35.9	U	0.7	3.15	200	5.2	5.1	5.1	
	S			44.5		0.3						
COB	P	00	43	44.4		0.7	3.83	223		4.4		
	S			44.30.2		0.3						
CRZ	P	00	43	55.9		-0.3	4.80	323		4.7		
KAI	S	00	45	08.3		-1.1	5.55	219	5.1			
GPZ	EP	00	44	11.5		-0.2	5.99	205	5.6			
	S			45.18.3		-1.4						
MJZ	EP	00	44	26.3		0.1	7.11	215				
	S			45.44.3		-1.7						
OHZ*	S	00	46	01.5		-1.1*	7.80	209				
ROX	ES	00	46	26		0.4	8.78	213				
MSZ	EP	00	44	49		-0.4	8.86	222				
	S			46.24.5		-2.9*						

APR 23		H	M	S								70/ 223
	10	03	26.5	36.37S	178.50E	163 KM	SE	0.7	AVG	MAG		4.2
			+ 0.7	0.04	0.04	3						
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
ECZ	EP	10	03	54		-0.2	1.12	178		4.7	4.4	
	S			04.15.2		-0.4						
GNZ	EP	10	04	04.3		0.2	2.10	190		4.2	4.1	
	S			33.7		0.3						
KRP	EP	10	04	11.3		-0.3	2.72	239				
	S			46.2		-0.4						
TRZ	EP	10	04	19		0.5	3.26	203		4.4		
	S			59		0.6						
CNZ	EP	10	04	22.3		0.8	3.51	221		3.8	3.9	
	S			05.04.9		0.7						
MNG	EP	10	04	36		-0.8	4.68	209		4.0	3.9	
	S			05.30.3		-0.6						
WEL	S	10	05	50.2		-1.0	5.53	211		4.4		
COB	ES	10	06	11.3		0.4	6.37	223				

APR 24		H	M	S								70/ 224
	09	42	58.2	39.25S	174.89E	12 KM	SE	0.8	AVG	MAG		3.8
			+ 0.2	0.01	0.01	R						
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
TNZ	IP*	09	43	06.6	U	0.5	0.40	279				
	C*			12.3		0.4						
CNZ	IP*	09	43	08.8	D	0.8	0.51	84		3.5	3.8	
	S*			16.2		1.0						
KRP	PN	09	43	22.9		-0.5	1.42	21				
	SN			40.6		-1.5						
	S*			43.1		0.6						
MNG	EPN	09	43	23.2		-0.5	1.44	162		4.0	3.8	
	P*			24.2		0.3						

LOCAL EARTHQUAKES

107

		PG		27.3		0.5												
		SN		41.3		-1.0												
		S*		43		-0.0												
	TRZ	SN	09 43	43.3		-1.0	1.52	102										3.3
	WEL	EPN	09 43	32		0.5	2.03	183		3.6	4.1							4.0
		SN		56.3		0.4												
	COB	EPN	09 43	37.3		-0.1	2.47	221										3.8
		ESN		44 06.2		-0.5												
	FELT WHANGAMOMONA (48)																	
APR 24	H M S																	70/ 225
	11 09	46.6	41.29S	173.79E	12 KM	SE	1.2			AVG MAG								3.7
		+ 0.4	0.03	0.02														
			H M S		DIR	RES	DIST	AZ		W-A	W P	W S						
	WEL	EPN	11 10	03.3		0.5	0.74	90		3.3	3.5	4.0						
		SN		14.8		-0.3												
	COB	PN	11 10	03.4		-0.6	0.82	284				3.5						
		SN		15.0		-1.8												
	MNG	IPN	11 10	12.2		0.0	1.45	63				4.2	3.8					
		P*		13.0		0.6												
		PG		15		-0.9												
		SN		30		-1.2												
		SG		34		-1.5												
	TNZ	EPN	11 10	22		0.5	2.15	12				3.6	3.6					
		SN		47		-0.3												
		S*		51.4		-1.4												
	KAI	SN	11 10	49		1.3	2.16	234		3.5								
	CNZ	EPN	11 10	27		1.0	2.48	33				3.7	3.8					
		SN		57		1.5												
		SG		11 12		1.7												
	KRP	ESN	11 11	24		0.9	3.62	22										
APR 24	H M S																	70/ 226
	11 26	28.2	37.09S	177.33E	94 KM	SE	0.7			AVG MAG								4.1
		+ 0.5	0.02	0.02														
			H M S		DIR	RES	DIST	AZ		W-A	W P	W S						
	ECZ	P	11 26	49.3		-0.3	1.10	123				4.7	4.6					
		S		27 03.0		-1.0												
	GNZ	P	11 26	57.1		0.7	1.63	162				4.4	4.3					
		S		27 18.1		0.9												
	KRP	IP	11 26	57.4	U	0.3	1.69	240										
		S		27 18.0		-0.4												
	TUA	ES	11 27	19		-0.2	1.72	186					4.6					
	QBZ	EP	11 26	58		0.0	1.76	299				3.9	4.2					
		ES		27 20.3		0.5												
	TRZ	EP	11 27	08.3		0.6	2.50	190				4.1	4.3					
		ES		39		1.4												
	CNZ	EP	11 27	08.3		-0.2	2.56	214				4.3	3.9					
		S		38.1		-0.9												
	ONE	ES	11 27	42.3		-1.7*	2.77	297		3.6		3.0						
	MNG	EP	11 27	26		-0.1	3.82	202				3.9	3.7					
		ES		28 09.3		-0.7												
	WEL	ES	11 28	31		-0.2	4.66	205					4.2					
	COB	EP	11 27	47.3		-0.0	5.39	221				3.8	3.6					
		ES		28 48		-0.8												
APR 24	H M S																	70/ 227
	19 42	20.1	37.59S	177.20E	12 KM	SE	0.2			AVG MAG								3.5
		+ 0.1	0.01	0.00														
			H M S		DIR	RES	DIST	AZ		W-A	W P	W S						
	ECZ	ESN	19 42	56		0.0	1.07	96				3.9						
	GNZ	EPN	19 42	42.8		-0.1	1.23	149				3.7	3.4					
		ESN		59.7		-0.1												
	KRP	EPN	19 42	44.6		0.1	1.36	255										
		ESN		43 02.3		-0.1												
	MNG	EPN	19 43	11		0.2	3.30	203				3.1						
	FELT OHOPE BEACH (28) MM III																	

APR 25	H	M	S	32.30S	176.22W	259 KM	SE	1.6	AVG MAG	70/ 228			
	+	-		0.19	0.23	23			6.4				
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	EP	S		11	44	53		-0.4	6.88	217			
								-1.9					
QNZ	EP	S		11	45	07.0		1.0	7.88	215			
								1.3					
TUA	EP	S		11	45	11.3		-1.6	8.44	218			
								0.4					
KRP	EP	S		11	45	18		0.7	8.78	228			
								1.0					
TRZ	EP	S		11	45	23		0.7	9.17	216			
								0.5					
CNZ	EP	S		11	45	28		0.4	9.60	222			
								-1.1					
MNG	EP	S		11	45	38		-2.9	10.65	216			
								-1.3					
WEL	EP	S		11	45	52		0.4	11.51	216	6.4		
								2.5					
COB	EP	S		11	46	05		1.6	12.46	222			
								-1.8					
	ES												

APR 25	H	M	S	37.62S	176.91E	68 KM	SE	0.6	AVG MAG	70/ 229			
	+	-		0.01	0.01	7			4.3				
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	IP	S		12	15	07.0	D	-0.3	1.13	254			
								-0.5					
TUA	EP	S		12	15	08.1		-0.1	1.20	171	4.8	4.4	
								0.2					
ECZ	EP	S		12	15	09.3		-0.1	1.30	94	5.2	5.0	
								0.1					
QNZ	IP	S		12	15	10.3	D	0.1	1.34	140	5.0	4.5	
								0.1					
QBZ	P	S		12	15	16.7		0.3	1.81	320	4.0	3.8	
								0.2					
CNZ	EP	S		12	15	18.3		0.9	1.90	214	4.3	4.0	
								0.9					
TRZ	EP	S		12	15	17		-0.9	1.93	182	4.7	4.2	
								-2.0*					
TNZ	EP	S		12	15	25		-1.5	2.53	231	4.1	4.1	
								0.2					
ONE	EP	S		12	15	30		0.2	2.76	311	4.1	3.8	3.8
								0.3					
MNG	EP	S		12	15	36		0.3	3.19	200	3.8	3.8	
								2.3*					
WEL	ES	S		12	16	33		-0.3	4.01	204			4.1
								0.2			3.9		
COB	EP	S		12	15	57.3			4.74	222			

APR 25	H	M	S	37.07S	177.09E	280 KM	SE	0.6	AVG MAG	70/ 230			
	+	-		0.03	0.03	4			4.7				
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	P	S		13	57	22.4		0.3	1.32	119	5.1	5.1	
								0.3					
KRP	P	S		13	57	23.3		0.2	1.50	235			
								0.2					
TUA	P	S		13	57	25.0		0.1	1.73	178	4.9	4.9	
								-0.8					
QNZ	IP	S		13	57	25.1	U	0.2	1.73	155	5.2	4.9	
								-0.6					
TRZ	P	S		13	57	32.6		1.3	2.48	185	4.5	5.0	
								2.0*					
ONE	EP	S		13	57	31		-1.0	2.55	300	4.2	3.9	3.8
								-0.5					
TNZ	EP	S		13	57	36		0.9	3.00	225			
								0.9					
MNG	ES	IP		13	57	44.9	U	0.3	3.76	199	4.9	4.7	

LOCAL EARTHQUAKES

111

		S											
MNG	IP	16 57	47.7 31.3	U	-1.3 -0.5	2.12	191					4.2	3.6
	S		59.7		-0.4								
ECZ	P	16 57	33.1		-0.2	2.18	68					4.8	4.5
	S		58 01.3		0.1								
WEL	S	16 58	17.3		-0.8	2.91	199	3.9				4.0	
COB*	EP	16 57	51		-0.7*	3.58	224					3.6	4.0
	S		58 32		-2.0*								

APR 29	H	M	S										70/ 238
	00	19	31.6	36.66S	177.53E	33 KM	SE	1.1	AVQ	MAG			3.8
			+ 0.6	0.03	0.03	2							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	EP	00 19	52					-0.8	1.31	142		4.5	4.2
	S		20 09.0					0.3					
QBZ	EP	00 19	58					-0.3	1.71	285		3.6	3.4
	S		20 20					1.6					
GNZ	IP	00 20	02.1			D		-0.4	2.02	169		4.1	4.1
	S		27.1					1.3					
KRP	EP	00 20	01.5					-1.1	2.02	231			
	S		24					-2.0					
ONE	EP	00 20	12					0.0	2.71	288	3.5		
CNZ	EP	00 20	16					0.3	2.98	211		3.7	3.8
	S		50.2					1.0					
MNG	EP	00 20	34					0.8	4.26	201		3.8	3.3
	S		21 20					-0.5					

APR 29	H	M	S										70/ 239
	20	48	11.8	40.47S	174.37E	36 KM	SE	0.7	AVQ	MAG			4.4
			+ 0.2	0.02	0.02	8							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
MNG	IP	20 48	27.0					-0.6	0.86	101		4.5	
WEL	IP	20 48	27.5			D		-0.3	0.87	160	4.6	4.7	5.0
	S		37.9					-1.6*					
TNZ	P	20 48	33.7					0.2	1.28	0		4.4	4.5
	S		49.8					0.0					
	E		53.4										
COB	P	20 48	35.9					0.8	1.39	243			
CNZ	P	20 48	37.4					-0.1	1.56	36		4.6	4.6
	S		57.5					0.7					
TRZ	ES	20 49	11					0.8	2.09	65			4.4
	E		24.5										
KRP	P	20 48	53.1					-0.7	2.69	20			
	S		49 24.8					-0.8					
	E		29.5										
TUA	ES	20 49	25.5					-0.5	2.71	53		4.4	4.5
KAI	EP	20 48	58.5					-0.1	3.03	226	4.2		
	S		49 35.0					0.9					
GNZ	ES	20 49	43					0.6	3.36	58		4.1	3.9
HJZ	EP	20 49	20					-0.3	4.56	218		3.9	3.7
	S		50 12.1					-0.7					
	E		20.5										

FELT KAPITI IS (65) MM IV AND WELLINGTON (68) MM III

APR 29	H	M	S										70/ 240
	21	58	58.9	45.21S	167.60E	125 KM	SE	1.0	AVQ	MAG			4.0
			+ 1.0	0.03	0.03	6							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
MNW	IP	21 59	18.1					-0.0	0.57	179			
	S		33.3					0.5					
MSZ	IP	21 59	17.9			U		-0.3	0.58	22		3.6	
	E		25										
	ES		33					-0.0					
ROX	IP	21 59	25.0			U		0.8	1.24	103		4.4	4.1
	ES		44					0.5					
WPZ	P	21 59	29.0					-0.3	1.69	149		4.2	4.5
	ES		52					-0.4					

LOCAL EARTHQUAKES

113

FELT WIDELY IN NORTHERN HALF OF SOUTH ISLAND										
		SN	27 03			-0.7				
		H	M	S						70/ 243
MAY 02	01 03	00.6	39.31S	174.94E	12 KM	SE	1.3	AVG MAG	3.9	
		+-. 0.4	0.02	0.03	3					
			4	4	S	DIR	RES	DIST	AZ	W-A W P W S
	TNZ	IP*	01 05	08.9		-0.5		0.45	285	
		PG		11		1.0				
		S*		15.8		-0.0				
	MNG	EPN	01 03	25.3		1.2		1.78	163	3.9 3.8
		SN		44.3		1.0				
	KRP	IPN	01 05	25.3		-0.8		1.46	19	
		PG		32.0		1.9				
		SN		44.0		-1.4				
		SG		49.3		-0.3				
	WEL	P*	01 05	37		1.4		1.98	184	
		S*		06 00		-1.8				
	COB	PN	01 05	39		-0.7		2.45	223	
	FELT WHANGAMOMONA (48)									
FELT WIDELY IN NORTHERN HALF OF SOUTH ISLAND										
		H	M	S						70/ 244
MAY 02	01 53	57.4	37.43S	177.79E	96 KM	SE	1.4	AVG MAG	4.4	
		+-. 1.6	0.08	0.06	12					
			4	M	S	DIR	RES	DIST	AZ	W-A W P W S
	ECZ	IP	01 54	12.9		-1.3		0.65	114	5.0 4.6
		S		27.9		0.9				
		I		31.9						
	TUA	IP	01 54	25.0		1.4		1.46	200	4.5 4.4
		S		42.0		-1.1				
	KRP	IP	01 54	29.0		0.6		1.86	254	
		S		51.0		-0.3				
	TRZ*	S	01 55	04		3.3*		2.25	200	
	MNG	P	01 54	52.0		-1.0		3.66	209	3.9 3.8
		S		55 36.0		0.8				
FELT WIDELY IN NORTHERN HALF OF SOUTH ISLAND										
		H	M	S						70/ 245
MAY 02	20 14	23.4	38.35S	175.98E	159 KM	SE	0.5	AVG MAG	4.3	
		+-. 0.5	0.02	0.02	4					
			4	4	S	DIR	RES	DIST	AZ	W-A W P W S
	KRP	P	20 14	46.4		0.2		0.55	321	
		S		15 03.3		-0.2				
	TUA	P	20 14	50		0.7		1.02	117	
	TRZ	S	20 15	19		0.0		1.37	152	
	QNZ	P	20 14	55.2		-0.1		1.63	101	4.3
		S		15 19.3		-0.3				
	MNG	IP	20 15	03		0.1		2.29	190	4.4 4.2
		IS		33		-0.3				
	WEL	P	20 15	12		-0.7		3.07	197	
		S		51		0.5				
FELT WIDELY IN NORTHERN HALF OF SOUTH ISLAND										
		H	M	S						70/ 246
MAY 03	14 16	00.3	33.64S	178.99W	263 KM	SE	1.7	AVG MAG	4.5	
		+-. 1.9	0.18	0.22	32					
			H	M	S	DIR	RES	DIST	AZ	W-A W P W S
	ECZ	P	14 17	12		0.7		4.52	206	
		S		18 09		2.3				
	QNZ	P	14 17	22.3		-1.3		5.55	205	4.6 4.5
		S		18 26.0		-3.1				
	TUA	P	14 17	29.3		-0.1		6.03	210	
		S		18 39		-0.6				
	KRP	P	14 17	32.0		0.6		6.17	225	
		S		18 42		-0.9				
	TRZ	S	14 18	58		1.2		6.80	208	
	MNG	P	14 17	57.3		0.0		8.25	211	
		S		19 30.3		1.1				
	WEL*	S	14 19	47		-1.7*		9.10	211	

COB		E	14 19 07			9.03 219			70/ 247			
MAY 04	H	H	S	37.84S	176.40E	183 KM	SE	1.4	AVG MAG	4.2		
	17	44	44.3	0.07	0.09	15						
			+ 1.7									
	KRP	P	H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	TUA	P	17	45	11.3		1.3	0.69	263			
		S	17	45	13.0		-0.5	1.13	149	4.3	4.1	
	GNZ	P	17	45	17.3		-0.6					
		S			42.7		0.7	1.51	123	4.2	4.3	
	CNZ	P	17	45	15		-1.9	1.51	206		3.7	
	TRZ	P	17	45	18		-1.2	1.74	169		4.6	
	MNG	IP	17	45	33.0		0.9	2.86	194	4.4	4.0	
		S	46	09.3			0.6					
MAY 06	H	H	S	36.09S	176.89E	12 KM	SE	1.7	AVG MAG	4.4		
	22	29	40.3	0.09	0.04	2						
			+ 1.6									
	AUC	SN	22	26	34		-0.4	1.87	245			
	ECZ	EP	22	26	17.6		0.6	2.08	141		4.9	
		PQ			23.8		1.4					
		S			44		-0.4					
		SG			51		0.6					
	KRP	I	22	26	18.8		0.9	2.13	210	4.2	4.2	
		EP			40.3		-0.1					
		SN			45.0		-1.0					
	GNZ	PN	22	26	21.0		-2.0	2.70	161	4.7	4.3	
		P			24		-3.7					
		I			43.4		-5.4*					
		SN			49.6		0.3	2.72	176			
	TUA	PN	22	26	23.3		0.3	2.72	176			
	CNZ	P	22	26	37.4		-0.2	3.29	199		4.3	
		PQ			49.0		2.2					
	MNG	EP	22	26	51		1.8	4.66	193			
	COB	PN	22	27	14.3		7.9*	5.96	212			
MAY 07	H	H	S	33.72S	177.80W	353 KM	SE	2.4	AVG MAG	4.9		
	10	34	02.3	0.32	0.34	45						
			+ 2.6									
	ECZ	P	10	35	20.1		-2.0	4.95	216		5.2	5.0
		ES			36.25		0.2					
	GNZ	P	10	35	35		1.6	5.96	213	4.7	4.5	
		S			36.42		-3.0					
	TUA	P	10	35	40		0.2	6.51	217			
		S			37.01		4.6					
	KRP	EP	10	35	42		-1.7	6.84	230			
		S			37.03		-0.4					
	CNZ	P	10	35	54		0.8	7.65	223			
		S			37.21		0.5					
	MNG	P	10	36	07		1.2	8.72	216			
		S			37.41		-2.3					
MAY 07	H	H	S	50.18S	164.29E	33 KM	SE	0.8	AVG MAG	4.5		
	10	46	16.8	0.15	0.33	3						
			+ 1.5									
	MNW	PN	10	47	28		0.2	4.94	28		4.9	4.1
		SN			48.23		0.7					
	ROX	PN	10	47	39		-0.3	5.80	38		4.5	
	MSZ	PN	10	47	42.7		0.1	6.04	25			
		I			50							
		SN			48		-0.7					
		E			57.0							

LOCAL EARTHQUAKES

115

MJZ		E	10 43 09		7.50	37							
H	M	S									70/ 251		
MAY 09	00	26	51.6	40.81S	173.29E	184 KM	SE	1.6	AVG MAG		4.4		
			+ 0.8	0.04	0.03								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
COB	IP			00	27	18.4		1.9	0.50	237			
						36		-0.5					
WEL	IP			00	27	24.3	U	2.8	1.21	113	4.2		
						46.0		1.3					
MNG	IP			00	27	28.0	U	2.1	1.68	84	4.4	4.6	
						52.0		-0.4					
TNZ	EP			00	27	28.5		1.1	1.83	28			4.4
						53.3		0.4					
KAI	S			00	28	01		-1.5	2.22	219	4.2		
CNZ	IP			00	27	34.0	D	0.6	2.37	48	4.0	4.6	
						28 04		-1.6					
GPZ	S			00	28	15.4		-2.1	2.92	189	4.8		
TRZ	S			00	28	18		-0.9	2.98	66			4.7
KRP	EP			00	27	45		-0.6	3.37	32			4.0
						28 22							
						25		-2.2					
MJZ	P			00	27	53.0		2.1	3.80	212			
						28 39.3		-1.2					
GNZ	ES			00	28	46		-0.9	4.24	61			4.4
MSZ	P			00	28	13		-0.1	5.52	224			
MNH*	P			00	28	26		0.6*	6.46	218			

H M S											70/ 252		
MAY 09	07	33	22.0	39.61S	176.43E	12 KM	SE	1.7	AVG MAG		4.0		
			+ 0.4	0.04	0.04								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
TRZ	IP*			07	33	26.3		-1.8	0.31	80			
CNZ	IP*			07	33	39.3		-1.1	0.80	300			
TUA	IP*			07	33	37.8		-1.9	0.97	35	4.0	4.3	
						50.1		-2.8					
						58.0		3.0					
MNG	IPN			07	33	44.0		-0.9	1.25	215	4.0	4.2	
						49.0		0.6					
						47.0		-0.3					
						50.0							
						52.5							
						55.0							
						34 02.0		0.1					
						09.9							
GNZ	EP*			07	33	51.0		1.2	1.57	53	4.0	4.1	
						54.3		0.8					
						34 12.0		1.3					
						21.9							
TNZ	PG			07	33	59.0		-0.3	1.64	284			
						34 26							
KRP	EPN			07	33	52.9		0.1	1.82	337		3.8	
						59.0		0.2					
WEL	EPN			07	33	54.9		-1.8	2.10	217	3.9		
						34 20		-1.6					
						29		2.1					
COB	EP*			07	34	20.9		2.9	3.19	241		4.0	
FELT TARADALE (60)													

H M S											70/ 253		
MAY 11	08	51	00.9	42.22S	172.10E	12 KM	SE	2.1	AVG MAG		4.7		
			+ 0.5	0.05	0.06								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KAI	PN			08	51	15.0		-0.6	0.59	239	4.3		
						24.5		-1.8					
COB	EPN			08	51	20.9		-2.6	1.23	23			
CHR	EPN			08	51	25		-0.5	1.37	164			

GPZ	PN	08 51 27.2	-0.4	1.53	165	4.2		
	SN	49.0	1.7					
HJZ	EPN	08 51 36.0	0.5	2.13	213	4.5	4.6	
	P*	39.0	0.6					
	SN	52 04.0	2.8					
	E	18						
WEL	PN	08 51 36.0	-0.5	2.21	66	4.5		
	P*	38.3	-1.2					
	SN	52 04.0	1.0					
OMZ	EPN	08 51 48.0	0.6	2.98	196	4.9	5.1	
	PG	59.9	-1.3					
	SG	52 43	1.7					
MNG	EIPN	08 51 46.0	-1.5	3.01	59	5.1	4.8	
	P*	49.3	-3.9					
	SN	52 22	-0.5					
	S*	30.0	-2.9					
	I	49.0						
TNZ	PN	08 51 56.0	2.0	3.49	31	4.8	4.6	
	SN	52 37.2	3.0					
ROX	EPN	08 52 00.0	1.5	3.83	211	4.4	4.7	
	S*	53.3	-4.2					
HSZ				3.91	230	4.6	5.0	
CNZ	EIPN	08 52 02.0	1.1	4.00	42	5.0		
	SN	50.0	3.5					
	S*	53 00.3	-2.1					
TRZ	EP*	08 52 21.0	2.7	4.46	55	4.8	4.6	
	SN	59	1.3					
KRP*	EPN	08 52 14.3	-0.4*	5.04	33	4.8	4.5	
	P*	23	-3.1*					
	E	36						
	SN	53 11.3	-0.0*					
	I	21						
	E	42						
GNZ*	EPG	08 52 52.3	-4.9*	5.76	54	4.4		
	E	53 16.0						
	SN	27.3	-1.4*					

FELT WESTPORT (79) AND MURCHISON (80) MM IV

		H	M	S				70/ 254		
MAY 11		09 19	12.8	36.24S	178.69E	271 KM	SE	1.6	AVG MAG	4.7
		+ 1.6		0.14	0.15	18				
		H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
ECZ	P	09 19	52.2			-1.0	1.46	184		5.3
GNZ	IP	09 20	02.3			1.0	2.46	192		5.3 4.9
	S		39.0			-0.4				
TUA	P	09 20	05.4			0.1	2.84	205		4.8 4.8
	S		44			-2.3				
KRP	P	09 20	06.0			-1.2	3.02	235		4.2
TRZ	P	09 20	13.7			-0.0	3.62	203		4.8 5.0
	S		21 03.2			2.0				
CNZ	P	09 20	17			0.5	3.86	219		4.4 4.3
	S		21 09			3.0				
MNG	P	09 20	30.3			0.3	5.04	209		4.2 4.4
	S		21 30.0			-0.8				
WEL	S	09 21	49.3			0.1	5.89	210		
COB	S	09 22	06.0			-1.5	6.71	222		
		H	M	S				70/ 255		
MAY 12		15 23	33.3	41.15S	172.70E	12 KM	SE	1.7	AVG MAG	4.0
		+ 0.6		0.05	0.04	9				
		H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
COB	IPG	15 23	33.7			-2.1	0.06	23		
WEL	IPN	15 24	00			-0.5	1.57	96	3.8	
	PG		06			1.0				
	SN		21			0.5				
KAI*	S*	15 24	28			2.4*	1.68	215	3.7	
MNG	EPN	15 24	09.3			1.0	2.17	77		4.0 4.4

MAY 19		H	M	S							70/ 267	
	20	18	18.3	32.01S	178.17W	364 KM	SE	2.4	AVG MAG			5.5
			+ 2.6	0.13	0.13	54						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
ONE	EP	20	20	05				0.3	7.25	237	5.1	
GNZ	EP	20	20	06				0.6	7.31	204		
				21	27			-2.6				
TUA	EP	20	21	42				-2.9	7.78	208		
KRP	EP	20	20	11				-0.6	7.84	219		
				21	52							
CRZ	EP	20	20	13				-0.9	8.04	250		
				21	47			2.0				
CNZ	EP	20	20	25				2.0	8.80	214		
				43								
				22	08							
MNG	EP	20	20	34				-3.1	9.99	209		
				22	24			-2.9				
WEL	EP	20	22	46				0.7	10.85	209	6.0	
				21	15				11.99	174		
CIZ	EP	20	21	15								
				23	12			2.2				

MAY 20		H	M	S							70/ 268	
	00	19	37.1	31.69S	179.34W	505 KM	SE	2.0	AVG MAG			6.1
			+ 1.9	0.14	0.21	29						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
ECZ	EP	00	21	21.0					6.24	196		
				22	35			-0.9				
CRZ	EP	00	21	24				-2.8	7.24	246		
GNZ	EP	00	21	27				-0.2	7.27	197		
				22	44							
				53				-1.5				
KRP	EP	00	21	31				1.3	7.51	213		
				22	03							
				23	02			2.9				
TUA	EP	00	21	32				0.8	7.66	201		
				22	59							
				23	04			2.2				
TRZ	EP	00	21	39				-0.4	8.45	201		
				23	19			-1.6				
CNZ	EP	00	21	42.0		D		1.3	8.58	208		
				23	18			-1.0				
TNZ	EP	00	21	48				2.1	9.07	213		
				23	32							
MNG	EP	00	21	51				-3.0	9.84	204		
				23	00							
				39								
WEL	EP	00	22	04.3				1.6	10.69	205	6.1	
				23	58.3			-0.9				
CIZ	EP	00	22	59					12.44	171		
				29	10							

MAY 21		H	M	S							70/ 269	
	05	43	27.9	38.76S	178.69E	12 KM	SE	0.7	AVG MAG			3.8
			+ 0.6	0.02	0.03	2						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
GNZ	IP	05	43	39.3		DSE		1.1	0.54	283		4.3 4.2
				45				-0.8				
ECZ	EP	05	43	47				-0.4	1.08	354		4.1 3.9
				44	04.3			0.2				
TUA	PG	05	43	53				0.6	1.21	267		4.0
CNZ	PG	05	44	18.0		U		-0.3	2.49	259		3.7
KRP	EP	05	44	21				0.1	2.62	288		3.3
MNG	EP	05	44	15				-0.7	3.09	232		3.3 3.5
				52				0.3				

LOCAL EARTHQUAKES

121

		H	M	S			46.97S	165.49E	12 KM	SE	0.6	AVG MAG		70/ 270	
MAY 21		13	11	03.0			0.04	0.03	R	RES	DIST.	AZ	W-A	W P W S	
				+ -			H	M	S	DIR	RES	DIST.	AZ	W-A	W P W S
MNW	.PN	13	11	34.7			4	11	34.7	U	0.2	1.90	52		4.3 4.1
	PQ			41.0							-0.4				
	ESN			57.5							-0.2				
MSZ	EPN	13	11	47							-0.8	2.86	37		3.9 4.1
	EP*			53							-0.0				
	ES*			12 31							0.4				
ROX	EPN	13	11	51							0.8	3.05	62		4.1 4.0
	ESN			12 29							-0.8				
OMZ	ES*	13	12	11								4.23	65		4.2 4.2
	ES*			13 12							0.1				
MJZ	ES*	13	12	17								4.60	51		
	ESN			13 04							0.8				
	ESG			38							-0.1				
GPZ	ESN	13	13	34							-3.1*	6.02	60		
	E			14 15											
		H	M	S			47.66S	166.20E	33 KM	SE	2.3	AVG MAG		70/ 271	
MAY 21		14	53	01.1			0.17	0.14	R	RES	DIST.	AZ	W-A	W P W S	
				+ -			H	M	S	DIR	RES	DIST.	AZ	W-A	W P W S
MNW	PN	14	53	33.9			4	53	33.9	D	0.5	2.12	28		4.5 4.3
	P*			38.9							0.2				
	ESN			56							-1.9				
ROX	EPN	14	53	50							3.5	3.07	46		4.0 4.1
	EPN			54 27											
MSZ	EPN	14	53	46.5							-2.1	3.22	22		4.0 4.1
	P*			57							-0.5				
	ESN			54 26							1.2				
OMZ	EPN	14	54	11							-2.7	4.17	53		4.2 4.2
	P*			55 07.3							-0.7				
MJZ	ES*	14	54	16								4.73	41		3.7 3.7
	ESN			55 04							2.5				
	ESG			37											
GPZ*	ES*	14	55	35								6.01	51		
	ES*			56 13							9.5*				
		H	M	S			37.73S	177.43E	12 KM	SE	1.5	AVG MAG		70/ 272	
MAY 21		15	50	59.1			0.04	0.03	R	RES	DIST.	AZ	W-A	W P W S	
				+ -			H	M	S	DIR	RES	DIST.	AZ	W-A	W P W S
ECZ	IP*	15	51	13.3			4	51	13.3	D	-2.0	0.88	88		4.6 3.9
	ESQ			31							1.9				
GNZ	P*	15	51	16.6							-1.1	1.02	153		3.5 3.6
	ES*			31							-0.5				
	ESQ			38							4.2*				
KRP	EPN	15	51	25.8							0.2	1.51	262		3.6 3.1
	ESN			44.3							-0.7				
TRZ	ESN	15	51	56							2.5	1.88	195		3.6
GBZ	EPN?	15	51	35							0.7	2.17	313		
HNG	EPN	15	51	48							-1.1	3.26	207		3.5 3.6
	ESN			52 27							0.2				
WEL	ESN	15	52	46							-1.3	4.11	209		3.8
COB	E	15	52	33								4.95	226		
	ESN			53 09							1.4				
		H	M	S			46.98S	165.67E	12 KM	SE	1.8	AVG MAG		70/ 273	
MAY 23		20	45	22.4			0.17	0.15	R	RES	DIST.	AZ	W-A	W P W S	
				+ -			H	M	S	DIR	RES	DIST.	AZ	W-A	W P W S
MNW	PN	20	45	47.9			4	45	47.9		-1.7	1.58	60		4.1 3.8
	EP*			50							-0.4				
	ESQ			46 15.3							-0.1				

LOCAL EARTHQUAKES

123

MAY 24		H	M	S							70/ 277		
	18	15	22.2	34.00S	179.20W	372 KM	SE	2.1	AVG MAG	4.6			
			+ 2.6	0.31	0.47	32							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S	
ECZ				19	16	36		1.9	4.11	206		4.9 4.8	
								-0.6					
GNZ				19	16	46		1.0	5.15	205		4.3 4.5	
								0.1					
KRP				18	16	51		-1.0	5.79	226			
MNG				18	17	14.3		-1.4	7.85	211			
								-3.1					
WEL				18	19	05		1.8	8.70	212			
COB				18	17	35		-0.6	9.54	220			
								1.9					

MAY 24		H	M	S							70/ 278		
	19	34	50.2	33.31S	178.64E	278 KM	SE	2.7	AVG MAG	4.7			
			+ 2.8	0.16	0.21	30							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S	
ECZ				19	35	59.8		-0.3	4.37	181		5.0 4.7	
								1.3					
KRP				19	36	15		4.6	5.25	208		4.5	
GNZ				19	36	09		-2.6	5.35	185		4.7 4.4	
TUA				19	36	19		0.1	5.62	192		4.7 4.7	
								-1.1					
CNZ				19	36	27		2.7	6.38	202			
MNG				19	36	37		-3.9	7.72	198			
								-1.7					
WEL				19	36	49.9		-1.6	8.54	200			
								2.0					
CIZ				19	39	29		1.6	11.27	162			

MAY 24		H	M	S							70/ 279		
	21	29	40.3	41.87S	171.93E	12 KM	SE	1.2	AVG MAG	3.7			
			+ 0.4	0.03	0.03	R							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S	
KAI				21	29	54		-0.5	0.76	210		3.8	
								0.1					
COB				21	29	56.6		-1.7	0.99	38			
GPZ				21	30	13		1.1	1.90	164		3.3	
								-0.5					
WEL				21	30	16		-0.0	2.21	76		3.5 4.2 4.0	
								0.6					
MJZ				21	30	19		0.7	2.37	206		3.3 3.2	
								0.4					
MNG				21	30	27		0.6	2.96	66		4.0 3.7	
								0.7					
								-2.0					
CNZ				21	30	49		1.9	3.83	47		4.1 4.0	
								4.5					
MSZ				21	30	41		-0.1	4.05	225		3.5 3.7	
								-1.3					

MAY 25		H	M	S							70/ 280		
	02	29	01.1	39.28S	176.01E	33 KM	SE	1.7	AVG MAG	4.0			
			+ 0.4	0.03	0.03	R							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S	
CNZ				02	29	10.6	U	1.0	0.36	282			
								2.8					
TRZ				02	29	16.3		2.5	0.69	114		4.2 4.4	
TUA				02	29	18.2	D	0.0	1.01	63		4.6 4.3	
								2.3					
TNZ				02	29	20.8	U	-0.9	1.27	274		3.8 3.5	

LOCAL EARTHQUAKES

125

MAY 26		H	M	S				SE	1.3	AVG MAG	70/ 284			
		04	15	08.9	41.02S	176.20E	12 KM			3.7				
				+ - 1.2	0.06	0.05								
					H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
MNG	IP*	04	15	21.0	U			-0.5	0.68	306		4.0	4.2	
	ES*			30				-0.8						
HEL	ESN	04	15	47				1.3	1.11	256	3.0		3.6	
CNZ	IPN	04	15	38.3	U			-1.9	1.88	344		4.0	4.0	
	EP*			42				-0.2						
	E			58										
GNZ	ESN	04	16	25				0.2	2.75	31			3.5	
KRP	EP*	04	16	04				0.5	3.13	350		3.5	3.4	
	ES*			46				1.4						
MAY 26		H	M	S				SE	1.9	AVG MAG	70/ 285			
		06	21	34.1	40.31S	175.34E	12 KM			3.6				
				+ - 0.6	0.03	0.03								
					H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
MNG	P*	06	21	41.9				1.2	0.32	160				
	E(SQ)			48				2.4						
HEL	EP*	06	21	52				-1.3	1.06	204	3.1	3.4	3.8	
	ES*			22 07				-0.7						
CNZ	IP*	06	21	53.9	U			-0.5	1.12	8		3.7	4.1	
	E			22 05										
	ES*			09				-0.5						
TNZ	EPN	06	21	57				-1.3	1.35	326		3.6	4.0	
	ESN			22 18				1.9						
TRZ	ESN	06	22	14				-2.9	1.37	57			3.4	
COB	EP*	06	22	10				-1.5	2.12	248		3.5	3.7	
	E			51										
KRP	EP*?	06	22	17				0.9	2.39	4		3.2	3.3	
	ESN			43				2.3						
MAY 26		H	M	S				SE	1.1	AVG MAG	70/ 286			
		07	22	10.2	37.79S	176.28E	309 KM			4.1				
				+ - 1.1	0.07	0.09								
					H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	EP	07	22	50				-0.3	0.61	257		3.5		
TUA	EP	07	22	52.5				-0.5	1.22	146		4.6	4.3	
	E			23 20										
	ES			26				-0.3						
CNZ	P	07	22	55.0				0.2	1.52	202		3.7		
GNZ	P	07	22	56.2				0.8	1.61	122		4.3	4.1	
	ES			23 29				-1.5						
TRZ	EP	07	22	58				1.3	1.81	167			4.2	
	ES			23 34.5				1.6						
MNG	IP	07	23	05.7	U			-0.3	2.89	192		4.3	3.8	
	ES			49				-0.6						
COB	EP	07	23	19.3				-1.0	4.29	219			3.8	
	ES			24 16				0.4						
MAY 26		H	M	S				SE	1.7	AVG MAG	70/ 287			
		07	23	34.1	38.51S	175.91E	207 KM			3.8				
				+ - 1.8	0.07	0.09								
					H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	EP	07	24	02				-0.7	0.65	333		3.3		
CNZ	EP	07	24	04				0.8	0.75	202		3.4	3.3	
	ES			26				0.2						
TRZ	P	07	24	08.0				1.4	1.26	146		4.1	4.2	
	ES			34				2.1						
GNZ	EP	07	24	10.5				0.4	1.66	95		3.5	3.8	
	E			28										
	ES			36				-1.9						
MNG	P	07	24	14.8	U			-0.1	2.14	189		4.3	4.2	
	ES			44				-2.3						
HEL	ES	07	25	02				0.0	2.91	197			4.2	

		ESN		29 26		-0 9					70/ 299		
MAY 29	H H S	38.44S	176.24E	117 KM	SE	1.5	AVG MAG				5.0		
	+ 0.6	0.03	0.03	6									
	H H S	DIR	RES	DIST	AZ	W-A	W P	W S					
WNZ	IP	22 21	10.6	1.1	0.22	209							
KRP	IP	22 21	13.0	NW	0.3	0.76	313				4.5		
	ES		27		-0.8								
TUA	IP	22 21	14.1	U	1.0	0.80	118				5.3 5.5		
	ES		30		1.5								
CNZ	IP	22 21	15.7	D	1.4	0.93	215						
	ES		29		-1.6								
TRZ	P	22 21	19.0		1.7	1.20	158				5.3 5.5		
	ES		38		2.3								
GNZ	IP	22 21	20.7	U	1.0	1.41	99				4.7 5.1		
	E		27										
	ES		37		-3.0								
TNZ	IP	22 21	24.0	D	1.7	1.63	242				5.0 4.3		
	E		49										
AUC	IP	22 21	26.4	D	0.2	1.96	323						
	ES		51		-0.2								
ECZ	IP	22 21	27.0	U	0.7	1.97	68				5.4 5.6		
	E		31.1										
	ES		49		-2.4								
	E		22 02										
MNG	IP	22 21	29.4	D	-0.7	2.25	195				5.0 4.9		
	ES		58		-0.1								
GBZ	IP	22 21	30.2	D	-0.5	2.30	345						
ONE	EP	22 21	38			3.05	330	4.0					
	E		41		0.2								
	ES		50										
	E		22 17.5		0.5								
WEL	IP	22 21	38.9	D	-2.0	3.06	201	5.0			4.9 5.2		
	E		53										
	ES		22 14.5		-2.7								
CRZ	P	22 22	05.8		-0.2	4.92	323				4.2		
	ES		24 03		0.8								
	EP	22 22	45		0.8	7.73	138						
	ES		24 03		-7.7*								
FELT MAUNGATANIWA (52)													
		ESN		29 26		-0 9					70/ 300		
MAY 30	H H S	38.75S	175.83E	147 KM	SE	0.9	AVG MAG				4.5		
	+ 0.5	0.03	0.03	5									
	H H S	DIR	RES	DIST	AZ	W-A	W P	W S					
CNZ	IP	13 25	31.3	U	1.0	0.51	207				4.4 4.4		
	ES		47		0.3								
KRP	IP	13 25	32.8	DSE	0.2	0.86	343				4.0		
	ES		50		-0.7								
TUA	IP	13 25	34.6	U	0.6	1.02	94				5.1 5.1		
	E		41.0										
	ES		48.8										
	ES		53		-0.1								
TRZ	I	13 25	36.7	U		1.11	137						
	E		57										
TNZ	IP	13 25	37.6	U	1.6	1.22	248				4.2 3.7		
	ES		26 00		3.5*								
GNZ	IP	13 25	41.2	USE	0.2	1.71	87				4.7 4.8		
	E		57										
	ES		26 05		-0.5								
MNG	IP	13 25	44.0	U	0.9	1.89	188				4.9 4.7		
	E		59										
	ES		26 09		-0.2								
ECZ	EP	13 25	50		1.0	2.37	65				4.3 4.4		
	ES		26 19		-0.6								
GBZ	P	13 25	49.8		-1.5	2.54	353						
WEL	IP	13 25	52.7	U	-0.2	2.67	198	4.3			4.8 4.6		

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
MNG	IPN	12	42	33.4	D	0.2	0.79	103			
WEL	IPN	12	42	37.0	D	0.6	0.87	165			
	SN			50.0		0.3					
TNZ	IPN	12	42	41.3	D	3.0	1.26	357		4.7	4.7
	P*			43.3		2.6					
	PG			46.3		2.6					
	SN			56		-2.5					
	S*			58		0.2					
COB	PN	12	42	43.3		-0.7	1.47	243			
CNZ	PN	12	42	45		0.4	1.50	34			
TRZ	SN	12	43	17		1.2	2.01	65		3.9	4.7
TUA							2.64	53			4.7
KRP	IPN	12	42	59.1	UNW	-1.2	2.65	19		4.3	4.1
	SN			43 30.6		-1.1					
KAI							3.10	227	4.5		
GNZ	IPN	12	43	06.2	U	-2.5	3.28	58		4.4	4.6
FELT WELLINGTON (68) MM IV, WANGANUI (57) MM III											
JUN 05	H	M	S							70/	318
	17	06	30.0	37.42S	177.45E	167 KM	SE	1.2	AVG MAG	5.1	
			+ 1.0	0.05	0.05	10					
	H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
ECZ	IP	17	06	55.3	U	-0.4	0.91	108		5.8	5.6
GNZ	IP	17	07	00.0	UNE	0.7	1.30	160			
TUA	P	17	07	00.7		0.5	1.40	190		5.3	5.8
KRP	IP	17	07	02.6	DSW	0.4	1.60	251		4.8	4.8
	S			25.6		-1.3					
WNZ							1.61	221		5.5	
GBZ	IP	17	07	05.2	D	-1.2	1.98	307		4.0	
TRZ	P	17	07	09.3		0.6	2.18	193		5.2	5.4
AUC	P	17	07	10.0		1.0	2.21	284			
CNZ	IP	17	07	11.3	D	1.2	2.32	220			
ONE	EP	17	07	19		0.5	2.98	303	4.4		
TNZ	P	17	07	20.2		1.6	2.99	233		5.1	
MNG	P	17	07	24.7		-0.9	3.54	205		5.1	5.1
WEL	P	17	07	35		-1.5	4.38	207			
	S			08 24		-3.7*					
COB	P	17	07	45.3		-1.3	5.17	224			
FELT DANNEVIRKE (63), GISBORNE (45), WAIPAWA (60) MM IV											
JUN 06	H	M	S							70/	319
	22	02	54.1	39.66S	174.79E	107 KM	SE	1.2	AVG MAG	4.0	
			+ 0.8	0.03	0.04	7					
	H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
TNZ	P	22	03	11.3		0.2	0.56	326		4.4	4.2
	S			25.3		0.9					
CNZ	P	22	03	14.0		1.1	0.75	53		3.9	4.1
	S			25		-2.1					
MNG	P	22	03	17.3		0.8	1.10	151		4.1	4.1
	S			33.3		-0.2					
WEL	P	22	03	23.0		0.2	1.63	180		3.6	4.3
	S			44.3		0.2					
KRP	P	22	03	25.0		-0.2	1.83	19		3.5	
COB	P	22	03	28.0		-1.0	2.12	227		4.1	
GNZ	P	22	03	36		-1.2	2.72	69		3.8	4.1
	S			04 11.0		1.4					
JUN 07	H	M	S							70/	320
	02	08	20.5	47.15S	165.19E	33 KM	SE ND		AVG MAG	4.3	
			R	R	R	3					
	H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
MNW						2.19	52		4.5	4.2	
HSZ	EPN	02	09	08.0		1.1*	3.14	39		4.3	4.3
ROX	EPN	02	09	10.3		0.9*	3.34	61		4.6	4.4
OMZ	EPN	02	09	24.3		-0.8*	4.52	65		4.1	
EPICENTRE IS APPROXIMATE, BASED ON S-P INTERVAL AT MNW.											

LOCAL EARTHQUAKES

135

JUN 08	H M S									70/ 321
	12 05 53.6	38.87S	175.89E	1.79 KM	SE	0.5	AVG MAG			4.1
	+L 0.7	0.02	0.03	6						
		H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
CNZ	P	12 06 09.9		-0.6	0.42	218				
KRP	EP	12 06 15		0.2	0.98	344			3.6	
	S	31		0.1						
TRZ	EP	12 06 15.9		0.5	1.00	134			3.7	4.5
	S	31.9		0.2						
GNZ	P	12 06 23.0		-0.1	1.69	83			4.8	3.9
	S	45		-0.3						
MNG					1.78	190			4.5	3.9
JUN 08	H M S									70/ 322
	19 15 51.6	39.22S	174.84E	33 KM	SE	2.1	AVG MAG			4.5
	+L 0.8	0.05	0.09	9						
		H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
TNZ	IP	19 15 57.7	U	-2.3	0.36	276				
CNZ	IP	19 16 00.9	D	-2.3	0.55	88				
KRP	PN	19 16 13.6		-0.5	1.41	23			4.7	
	SN	33.1		2.0						
MNG					1.48	161			4.7	4.7
TRZ					1.57	103				4.3
WEL	EPN	19 16 23		-0.1	2.06	181			4.6	4.9
	ESN	49		2.1						
GBZ	EPN	19 16 36.9		-0.2	3.04	10			3.5	
CRZ	EPN	19 17 06		1.9	5.09	339				
	FELT PURANGI (48) MM IV AND GENERALLY IN WESTERN TARANAKI									
JUN 10	H M S									70/ 323
	06 58 40.2	40.26S	176.68E	12 KM	SE	0.5	AVG MAG			4.0
	+L 0.8	0.05	0.08	9						
		H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
TRZ	IPN	06 58 56.6	U	0.3	0.71	9			4.1	4.1
	SN	59 07.8		-0.3						
MNG					0.98	248			3.8	3.7
CNZ	IPN	06 59 09.0	U	0.2	1.37	320			4.3	4.1
WEL	ESN	06 59 32		-0.1	1.78	234				4.0
JUN 10	H M S									70/ 324
	11 00 22.4	41.71S	171.69E	33 KM	SE	1.4	AVG MAG			4.1
	+L 0.7	0.06	0.07	9						
		H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
KAI	EPN	11 00 36		-1.2	0.84	192			4.4	
	SN	47.0		-1.1						
GPZ					2.12	160			3.8	
WEL	EPN	11 00 57		-1.4	2.38	81			4.2	4.5
	ESN	01 27		1.4						
MJZ	EPN	11 01 01		1.9	2.44	200			3.9	3.7
MNG					3.09	71			4.5	
TNZ	EPN	11 01 10		-0.5	3.27	41			4.4	
CNZ	PN	11 01 19.9		0.5	3.89	51				
MSZ	EPN	11 01 22		1.1	4.03	221			3.6	4.0
KRP	EPN	11 01 31		-0.7	4.82	40			3.8	
	FELT WESTPORT (79) MM III									
JUN 11	H M S									70/ 325
	00 40	NEAR CHATHAM IS					MAG APPROX			4.0
		H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
CIZ	IP	00 40 12.0	US							
JUN 11	H M S									70/ 326
	07 21 55.8	34.20S	179.29W	277 KM	SE	0.7	AVG MAG			4.9
	+L 1.2	0.08	0.11	21						

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	EP	07	23	00		-0.3	3.91	206		5.2	5.2
GNZ	EP	07	23	12		-0.2	4.94	205		4.7	4.7
	ES		24	12		-0.1					
TUA	EP	07	23	19		1.0	5.42	211		5.1	4.9
KRP	EP	07	23	20.5		0.2	5.61	227		4.6	
TRZ							6.19	209			
CNZ							6.49	218			
CRZ	EP	07	23	33		-0.1	6.66	266			
MNG	EP	07	23	45		-0.5	7.64	211			
CIZ							9.97	169			
JUN 12	H M S	14 50	50.0							70/ 327	
			+ 0.8								5.3
		45.06S	167.84E		121 KM		SE	1.0		AVG MAG	
		0.04	0.04								
		H M S			DIR	RES	DIST	AZ	W-A	W P	W S
HSZ	IP	14 51	07.9		U	0.1	0.39	8			
MNH	IP	14 51	09.6			-0.5	0.74	192			
ROX	IP	14 51	15.3		D	1.4	1.13	112		5.2	5.4
	ES		33			1.0					
MPZ	IP	14 51	20.5		D	-0.5	1.75	157			
	S		43.2			-1.2					
MJZ	IP	14 51	26.2		D	0.1	2.16	61		4.7	5.3
	ES		53			-0.4					
ONZ	P	14 51	27.5			1.1	2.18	91		5.1	5.5
KAI	EP	14 51	46			0.5	3.62	47		5.5	
	S		52 27			-0.8					
GPZ	EP	14 51	47			0.3	3.70	70		5.2	
	S		52 29			-1.0					
COB*	P	14 52	06			-2.8*	5.35	44			
WEL*	EP	14 52	20			-1.9*	6.31	56			
MNG*	EP	14 52	30			-3.4*	7.16	54			
CNZ*	EP	14 52	44			-3.3*	8.19	47			
KRP*	EP	14 52	57.5			-2.9*	9.17	42			
FELT THROUGHOUT FIORDLAND, SOUTHLAND, OTAGO, MAXIMUM INTENSITY MM IV											
JUN 13	H M S	20 38	04.4							70/ 328	
			+ 1.4								4.3
		41.55S	174.73E		33 KM		SE	1.3		AVG MAG	
		0.08	0.11								
		H M S			DIR	RES	DIST	AZ	W-A	W P	W S
WEL	IP*	20 38	11.2		DNW	-0.4	0.27	7			
	S*		16.0			-0.8					
MNG							1.09	32		4.3	4.3
COB	IPN	20 38	29.4			0.2	1.57	287			
CNZ	EPN	20 38	40.5			-0.5	2.43	15		4.6	4.5
KAI							2.66	247		4.1	
KRP	EPN	20 38	59.5			1.4	3.68	10		4.3	4.3
FELT WELLINGTON (68) MM IV AND BOTH SIDES OF COOK STRAIT											
JUN 14	H M S	02 35	03.3							70/ 329	
			+ 1.0								4.3
		38.64S	177.95E		42 KM		SE	0.9		AVG MAG	
		0.10	0.05		10						
		H M S			DIR	RES	DIST	AZ	W-A	W P	W S
GNZ	IP	02 35	10.0		JNE	-0.3	0.06	97			
TUA	IP	02 35	19.0		U	-0.4	0.65	254		4.9	5.0
	S		26.3			0.4					
ECZ	EP	02 35	22.5			0.5	1.05	27		4.5	
TRZ							1.27	223		4.5	
CNZ	IP	02 35	35.2			0.5	1.96	253		4.2	4.0
KRP	EP	02 35	35			-0.7	2.03	290		3.8	
MNG							2.75	223		3.7	3.6
JUN 14	H M S	20 40	21.6							70/ 330	
			+ 0.4								3.5
		44.93S	169.62E		12 KM		SE	1.4		AVG MAG	
		0.03	0.02		R						

LOCAL EARTHQUAKES

137

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ROX	EP*	20	40	35.9		1.2	0.68	198			3.2
	S*			43.3		-0.3					
OMZ	EPN	20	40	38.9		-2.0	0.95	105		3.5	4.0
	P*			39.9		0.7					
	S*			52.3		0.3					
HJZ	EPN	20	40	39.0		-2.7	1.04	36		3.8	2.9
	P*			40		-0.4					
	S*			59		0.6					
	SG			58		1.3					
MSZ	EPN	20	40	44.3		0.1	1.23	277		3.4	3.6
	P*			45.2		1.6					
	S*			59		-1.1					
MNW	EP*	20	40	52.9		0.7	1.70	235			
<p>JUN 15 H M S 09 47 52.4 39.199 174.80E 12 KM SE 1.4 AVG MAG 70/ 331 4.6</p> <p>+/- 0.5 0.04 0.05</p>											
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
TNZ.	IP*	09	48	00.8	U	1.9	0.32	270			
	E			07.3							
CNZ	IP*	09	48	04.0	D	0.6	0.98	91			
KRP	PN	09	48	16.6		-0.6	1.39	25		4.5	4.7
	SN			34.6		-1.0					
MNG	PN	09	48	18.0		-0.9	1.52	160		4.7	4.6
TRZ	EPN	09	48	22		1.9	1.61	104		4.0	4.4
WEL	EPN	09	48	26.9		0.0	2.09	181		4.8	5.0
	E			32.9							
	SN			51.9		-0.2					
COB	PN	09	48	30		-1.6	2.47	219			
<p>FELT PURANGI (48) MM IV</p>											
<p>JUN 15 H M S 16 29 08.2 41.059 172.58E 12 KM SE 0.9 AVG MAG 70/ 332 3.9</p> <p>+/- 1.1 0.08 0.05</p>											
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
COB	IP*	16	29	11		-0.9	0.12	108			
WEL	EP*	16	29	39		1.2	1.67	99		3.9	4.4
	ES*			30 00		-0.1					
KAI	EP*	16	29	39		0.4	1.71	210		3.6	
	ES*			30 01		-0.3					
MNG	EP*	16	29	47		-0.7	2.25	80		4.0	3.8
<p>FELT COBB DAM (75) MM III</p>											
<p>JUN 15 H M S 21 20 03.8 38.488 175.93E 157 KM SE 1.6 AVG MAG 70/ 333 4.3</p> <p>+/- 1.7 0.09 0.09</p>											
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	IP	21	20	27.0	D	0.2	0.63	331		3.8	3.2
CNZ	IP	21	20	27.9	U	-0.3	0.78	202		4.1	4.1
TUA	E	21	20	30.9			1.01	109		4.3	5.0
	S			48.9		-0.8					
TRZ	IP	21	20	32.3	D	0.5	1.28	147		5.0	4.4
	S			59.7		2.0					
QNZ	E	21	20	36			1.65	96		4.0	4.6
	ES			59		-1.4					
MNG	IP	21	20	40.2	U	-1.9	2.17	189		4.4	4.3
ECZ	P	21	20	43.9		1.3	2.21	70		5.0	
WEL							2.94	197			4.3
<p>JUN 15 H M S 22 33 57.7 38.888 176.06E 116 KM SE 1.2 AVG MAG 70/ 334 4.4</p> <p>+/- 0.9 0.06 0.05</p>											
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
CNZ	P	22	34	19.3		-0.1	0.51	231		3.3	2.9
TUA	IP	22	34	19.9	D	0.3	0.86	85		5.0	4.5
TRZ	P	22	34	20.0		1.4	0.89	139		4.5	4.9

LOCAL EARTHQUAKES

139

JUN 17		H	M	S			12 KM	SE	1.3	AVG MAG	70/ 337					
		06	59	01.7	40.19S	174.82E					4.1					
				+ 0.4	0.02	0.03	3									
					H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S
	MNG		IP		06	59	13.0	U	-1.1	0.66	131					
	TNZ		EP		06	59	21.0		0.2	1.06	341		4.2	4.1		
			PN				22		-0.1							
			ES				35		-0.1							
			SN				36		-1.2							
			E				39									
	WEL		EP		06	59	21		-0.5	1.10	182		3.7	3.9	4.4	
			PN				22.9		-0.1							
			S				36		-0.3							
	TRZ		EPN		06	59	29		-1.1	1.66	68		4.2	4.2		
			ES				55		1.7							
	COB		PH		06	59	34.8		2.6	1.83	240					
	FELT KAIPAORE (57), WAITARE (65)															
JUN 17		H	M	S			12 KM	SE	0.4	AVG MAG	70/ 338					
		07	34	22.4	40.20S	174.90E					3.8					
				+ 0.2	0.01	0.02	3									
					H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S
	MNG		IP		07	34	34.0		0.1	0.61	134		4.0	3.9		
			ES				42.9		0.0							
	TNZ		EP		07	34	41.9		-0.5	1.08	338		3.7	3.8		
			ES				57		0.4							
	WEL		EP		07	34	42		-0.1	1.09	185		3.2	3.6	4.1	
			ES				57		0.1							
	FELT WAITARE (65)															
JUN 17		H	M	S			80 KM	SE	0.9	AVG MAG	70/ 339					
		14	13	17.8	44.93S	167.70E					3.9					
				+ 1.0	0.04	0.04	12									
					H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S
	MSZ		IP		14	13	31.0	U	0.4	0.30	31					
	MNW		IP		14	13	35.9		0.3	0.85	184		3.8			
			ES				48		-0.9							
	ROX		EP		14	13	42.0		1.2	1.27	116		3.8	4.0		
			ES				58.3		0.3							
	MJZ		EP		14	13	52		-1.0	2.19	65			3.6		
			ES				14		-0.1							
	OMZ		EP		14	13	54.6		0.3	2.29	95		4.1	4.3		
			E				14									
			ES				21		-0.4							
JUN 17		H	M	S			33 KM	SE	1.9	AVG MAG	70/ 340					
		20	26	49.4	39.08S	174.69E					3.8					
				+ 0.7	0.05	0.07	3									
					H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S
	TNZ		IP		20	26	56.9	D	0.3	0.27	247					
			E				59.0									
			ES				27		-0.9							
	CNZ		IPN		20	26	59.9	D	-2.0	0.67	100					
	KRP		IPN		20	27	11.4	U	0.5	1.33	30		3.9	4.2		
			ISN				28.6		1.9							
	MNG		EPN		20	27	13		-2.3	1.65	159		3.7	3.5		
	WEL		EPN		20	27	24		1.1	2.20	179					
			ESN				51		2.5							
	COB		EPN		20	27	26		-1.0	2.50	216					
JUN 18		H	M	S			12 KM	SE	0.9	AVG MAG	70/ 341					
		06	06	16.8	39.20S	178.14E					4.1					
				+ 1.0	0.04	0.04	3									
					H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S
	GNZ		IP		06	06	27.0	D	-0.4	0.56	351		4.2	4.2		
			PG				29.0		0.9							

LOCAL EARTHQUAKES

141

		MNG	PN	00 18 32.0	-3.9	3.42	213				
JUN 25	H M S	11 08 53.0	40.97S	175.34E	12 KM	SE	1.9	AVG MAG	70/ 346		
		+ 1.9	0.06	0.13					3.7		
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
MNG	IP	11 09 03.6	D	0.3	0.36	18		3.4	3.6	4.0	
WEL	S	11 09 11.0		0.2	0.53	233					
TNZ	EPG	11 09 29		-3.0	1.92	337					
	ESG	59		1.1							
KRP	EP	11 09 47		0.8	3.04	3					
	ESG	10 36		0.4							
MNG NO TIMING, S-P 6.0 SEC											
FELT PARAPARAUMU BEACH (65), PONATAHI (70) HM IV											
JUN 27	H M S	17 37 02.1	38.50S	175.75E	154 KM	SE	1.2	AVG MAG	70/ 347		
		+ 2.0	0.05	0.07					4.1		
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
KRP	EP	17 37 24		U	-0.6	0.59	343				
	S	42.0			0.0						
CNZ	P	17 37 26.7		U	-1.3	0.72	193		3.7		
TUA	ES	17 37 48			-1.2	1.14	106		4.3		
TRZ	ES	17 37 54			1.3	1.35	142				
	E	57									
MNG	IP	17 37 39.6		U	0.2	2.13	186		4.4	4.0	
	E	38 03			-0.1						
	ES	08			-0.8	2.89	195				
WEL	ES	17 38 24									3.9
JUN 28	H M S	16 28 09.9	40.04S	175.26E	12 KM	SE	1.4	AVG MAG	70/ 348		
		+ 0.4	0.02	0.04					4.0		
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
MNG	IP	16 28 22.1		U	0.8	0.61	164		4.2	4.0	
	ES	30			0.2						
CNZ	IP	16 28 26.1		U	0.4	0.86	15				
	ES	36			-1.5						
TNZ	EP	16 28 30.2			0.7	1.08	321		4.3	4.0	
	ES	45			0.9						
TRZ	EPN	16 28 35.5			2.0	1.30	69		3.8	3.9	
WEL	EPN	16 28 32.7			-0.9	1.30	196		3.6	3.9	4.2
	ESN	49			-2.1						
KRP	EP	16 28 47.4			0.2	2.12	6		3.7	3.9	
	S	29 13.0			-2.2						
	ESG	22.0			0.7						
COB	EPN	16 28 46			0.7	2.19	240				
FELT KAIPAORE, MANGANUI (57)											
JUN 28	H M S	17 53 02.1	40.24S	174.80E	51 KM	SE	0.7	AVG MAG	70/ 349		
		+ 0.4	0.01	0.03					4.0		
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S	
MNG	IP	17 53 15.1		U	-0.6	0.65	126		4.1	4.3	
	S	25.4			-0.4						
WEL	IP	17 53 22.0		D	1.0	1.05	181		3.4	3.9	4.0
	ES	35			-0.1						
TNZ	IP	17 53 22.2		U	0.5	1.10	343		4.4	4.2	
	S	36			-0.2						
CNZ	IP	17 53 23.4		U	0.5	1.19	29				
	ES	39			0.6						
COB	EP	17 53 31.8			0.6	1.79	241				
	ES	52			-0.8						
KRP	EP	17 53 39.0			-0.5	2.38	14		3.8	3.5	
	ES	54 07			-0.6						

LOCAL EARTHQUAKES

145

MNG	EP	10 08 34	-1.5	8.57	209							
	ES	10 10 10	-1.6									
HEL	S	10 10 30	-0.0	9.43	210	5.7						
CIZ	ES	10 11 03	2.4	10.84	171							
MSZ*	EP	10 10 12	18.9*	15.26	218							
MNW*	EP	10 10 23	20.1*	16.19	216							
JUL 01	H M S	33.42S	178.30W	281 KM	SE	3.3	AVG MAG	70/ 360				
		0.16	0.23	63				5.1				
	H M S	H M S	DIR	RES	DIST	AZ	W-A	W P	W S			
EGZ	EP	12 01 59		-1.9	4.98	210		5.2	4.9			
GNZ	EP	12 02 11		-2.3	6.00	209						
	S	03 25		1.6								
ONE	EP	12 02 22.5		3.2	6.49	247	4.8					
TUA	EP	12 02 20		0.4	6.51	213						
KRP	EP	12 02 20		-2.3	6.73	226						
TRZ	EP	12 02 27		-2.0	7.27	211						
	ES	03 53		1.6								
CRZ	EP	12 02 33		0.4	7.56	260						
CNZ	EP	12 02 39		3.8	7.61	219						
MNG	EP	12 02 44		-3.2	8.73	213						
	ES	04 19		-5.1								
HEL	S	12 04 45		1.7	9.59	213	5.6					
CIZ	ES	12 05 08		1.9	10.60	173						
JUL 01	H M S	37.38S	178.03E	12 KM	SE	1.0	AVG MAG	70/ 361				
		0.06	0.03	3				4.0				
	H M S	H M S	DIR	RES	DIST	AZ	W-A	W P	W S			
ECZ	EP*	21 41 48		-1.1	0.51	127		4.7	4.6			
	IPQ	49.5		-0.4								
	ISQ	58		1.1								
GNZ	EP*	21 42 01		-0.9	1.26	180	3.9	3.9				
	ES*	19		0.2								
TRZ	ESN	21 42 45		-0.4	2.37	203			3.6			
CNZ	E(P*)	21 42 27		1.0	2.67	226			3.6			
MNG	EPN	21 42 37.7		1.1	3.79	211			3.8	3.5		
HEL	SN	21 43 40		-0.6	4.65	212			4.3			
JUL 02	H M S	32.96S	178.61W	282 KM	SE	1.1	AVG MAG	70/ 362				
		0.05	0.07	11				5.1				
	H M S	H M S	DIR	RES	DIST	AZ	W-A	W P	W S			
ECZ	P	01 01 21		0.3	5.27	205		5.3	5.3			
	ES	02 25		1.2								
GBZ	EP	01 01 27		-0.8	5.86	235						
GNZ	P	01 01 33		-0.2	6.30	205	3.3					
	S	02 49		-1.2								
ONE	EP	01 01 39		-0.2	6.46	242	5.0					
TUA	EP	01 01 38		-1.1	6.78	209						
	ES	02 56		-0.8								
KRP	ES	01 03 01		1.9	6.88	222						
CRZ	P	01 01 49		2.0	7.41	256						
TRZ	EP	01 01 49		0.3	7.55	208						
	ES	03 14		0.1								
CNZ	EP	01 01 51		-1.1	7.82	216						
	ES	03 20		0.0								
MNG	EP	01 02 05.8		-0.9	8.99	210						
	ES	03 46		-0.2								
HEL	ES	01 04 04		-1.4	9.85	211	6.0					
CIZ	E	01 02 37			11.10	172						
	ES	04 39		1.6								
KAI*	ES	01 05 03		0.9*	12.39	217	5.3					
GPZ	ES	01 05 09		-0.6	12.72	210	5.6					
HJZ	ES	01 05 37		0.9	13.93	215						
MSZ*	EP	01 03 30		1.7*	15.69	218						

		ES		06 19		4.3*				
JUL 02	H M S	08 10 08.3	40.92S	172.75E	12 KM	SE	0.5	AVG MAG	70/ 363	3.5
		*- 0.4	0.02	0.02	?					
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S
	COB	IP*	08 10 12.8		0.7	0.16	184			
	WEL	EPG	08 10 40.2		0.1	1.57	104	3.2	3.7	3.6
		ESQ	11 01		-0.2					
	KAI	ESN	08 11 02		-0.8	1.89	212	3.0		
	HNG	EPG	08 10 50.7		-0.1	2.10	83		3.8	3.2
	CNZ	EPG	08 11 04		0.0	2.75	52		3.6	3.5
	MJZ	ESN	08 11 42		0.2	3.50	208			
	FELT COBB DAM(75)									
JUL 02	H M S	22 22 49.2	37.03S	178.41E	12 KM	SE	1.0	AVG MAG	70/ 364	4.2
		*- 1.7	0.08	0.05	?					
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S
	ECZ	P*	22 23 02.0		0.3	0.67	171		5.0	4.8
		PG	03.0		0.1					
		S*	11.0		0.1					
	TUA	ESN	22 23 46		-1.2	2.03	209			4.2
	CNZ	EPN	22 23 37		-0.5	3.13	225		3.7	3.5
		ESN	24 15		1.2					
JUL 03	H M S	01 40 15.2	37.45S	178.01E	12 KM	SE	1.0	AVG MAG	70/ 365	3.7
		*- 0.8	0.05	0.02	?					
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S
	ECZ	P*	01 40 23.5		-1.2	0.49	120			
		PG	25		-0.4					
		SG	33.8		1.6					
	GNZ	P*	01 40 36		-0.7	1.19	179		4.1	3.9
		S*	52.5		-0.2					
	KRP	EPG	01 40 57		1.0	2.01	256			
	CNZ	EP*	01 41 01		0.1	2.61	227		3.8	3.4
	HNG	EPN	01 41 11		-0.5	3.72	211		3.7	
	WEL	ESN	01 42 15		0.2	4.58	212		3.7	3.5
JUL 03	H M S	03 01 11.6	39.27S	174.77E	12 KM	SE	1.2	AVG MAG	70/ 366	4.4
		*- 0.3	0.02	0.02	?					
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S
	TNZ	IP*	03 01 20.3	U	2.3	0.31	285			
	CNZ	IP*	03 01 23.5		0.4	0.61	84			
	HNG	IPN	03 01 37.8	U	0.5	1.46	158		4.7	4.5
	KRP	EIPN	03 01 36.3	UN	-1.2	1.47	24			
		SN	55.0		-1.7					
	TRZ	EPG	03 01 44		-0.4	1.62	101		4.5	4.3
	WEL	EPN	03 01 45		0.3	2.02	180	4.4	4.8	5.0
		P*	47		-0.2					
		PG	52.0		-0.4					
		ESN	02 10		0.9					
		S*	14		0.2					
	COB	PN	03 01 51		1.2	2.39	220			
	GNZ	EPG	03 02 05		0.5	2.61	77		3.9	3.7
	ONE	EPN	03 02 06		1.1	3.50	355	4.2		
		E(SN)	45		-0.2					
	KAI	ESN	03 02 59		-1.5	4.13	217		4.6	
	GPZ	ESN	03 03 10		-4.3*	4.70	199		4.6	
	CRZ	EPN	03 02 28		1.4	5.11	340		4.3	4.4
		SN	03 23		-1.0					
	MJZ	EPN	03 02 35		0.4	5.71	213		4.0	4.0
		ESN	03 38		-0.5					
	MSZ	PN	03 02 58		0.4	7.43	221			
		ESN	04 17		-2.4					
	FELT PURANGI (48) HM V AND WHANGAMOHNA (48)									

LOCAL EARTHQUAKES

147

JUL 03		H	M	S									70/ 367
		05	11	34.6	41.10S	172.82E	12 KM	SE	1.3	AVG	MAG	3.8	
				+0.6	0.04	0.04							
					H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
WEL	PN	05	12	00.7					0.2	1.48	98	3.4	4.0 3.9
	PQ			04.0					-0.7				
	SN			20.5					0.5				
KAI	SQ	05	12	34					-0.4	1.77	216	3.1	
MNG	PN	05	12	09.8					1.2	2.08	78		4.2 4.0
	P			11.0					-0.3				
	SN			35.0					1.4				
TNZ	EPN	05	12	12					1.0	2.26	33		3.6 3.9
	ESN			40					2.0				
CNZ	EPN	05	12	18					-0.9	2.83	49		4.0 4.2
	P			24					-0.0				
	PQ			29.8					-2.0				
	S			59.2					-2.0				
JUL 03		H	M	S									70/ 368
		05	41	27.8	36.42S	175.73E	177 KM	SE	2.1	AVG	MAG	4.1	
				+2.2	0.07	0.08							
					H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
KRP	IP	05	41	52.2					-0.2	0.52	343		
	S			42 10					-1.4				
CNZ	IP	05	41	55.0			U		1.1	0.79	190		3.9
TUA	EP	05	41	58					1.2	1.18	110		4.4 4.3
	ES			42 18					-1.2				
TNZ	P	05	42	00					2.1	1.31	234		3.8
TRZ	P	05	42	00.7			D		1.8	1.41	143		4.3 4.2
	ES			25					2.1				
GNZ	ES	05	42	27					-3.0	1.81	98		3.7
MNG	IP	05	42	08.8			U		1.5	2.20	185		4.4 3.9
	S			37.0					-0.7				
WEL	S	05	42	54					0.1	2.96	194	4.0	4.1
HJZ	ES	05	44	20					-3.5	6.83	214		
JUL 03		H	M	S									70/ 369
		10	21	44.6	33.24S	178.98W	33 KM	SE	2.5	AVG	MAG	5.7	
				+0.8	0.05	0.09							
					H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
RAO	PN	10	22	43					-0.8	4.08	13		
	SN			23 28					-1.1				
ECZ	EPN	10	22	56					1.3	4.88	204		5.9 5.7
	ESN			23 55					8.4				
	T			27 00									
GBZ	EPN	10	23	04					1.8	5.44	235		
GNZ	EPN	10	23	07					-1.6	5.91	203		5.3 5.4
	E			10									
	E			41									
	SN			24 17					3.5				
	ET			28 00									
ONE	PN	10	23	13					2.5	6.05	243	5.5	
	ESN			24 17					0.3				
AUC	PN	10	23	18					4.7	6.26	233		
TUA	EPN	10	23	14					-0.9	6.38	208		
	ESN			24 25					0.4				
KRP	PN	10	23	17.2					1.1	6.46	222		
	E			44									
CRZ	PN	10	23	26.0					2.2	7.04	258		
	EP			43					-3.3				
TRZ	EPN	10	23	24					-1.3	7.15	207		
	P			51.5					3.2				
	ESN			24 42					-1.0				
CNZ	PN	10	23	28.5					-0.3	7.41	215		
	E			24 03									
TNZ	EPN	10	23	38					1.4	8.00	220		

LOCAL EARTHQUAKES

GPZ	ESN	14 47 41	0.8	2.74	181	3.5			
	ESG	58	1.0						
CNZ	EPN	14 47 08.9	-0.1	2.79	52		4.6	4.6	
	P*	13	-0.6						
TRZ				3.44	67		4.2	4.1	
KRP	EPN	14 47 20.3	-0.7	3.73	37				
	P*	32	2.3						
	PQ	41	0.7						
	SN	48 01	-3.0						
	S*	14	-4.5*						
GNZ	P*	14 47 47	0.9	4.69	62		4.0	4.0	
	ESN	48 27	-0.2						
MSZ*	ESN	14 48 41	3.6*	5.12	222		3.9	3.8	
FELT	COBB DAM (75)								
JUL 03	H M S	14 51 09.4	33.44S	178.88W	274 KM	SE 1.7	AVG MAG	70/ 372	
		+L 1.5	0.08	0.12	30			5.0	
			H M S	DIR	RES	DIST	AZ	W-A	W P W S
ECZ	EP	14 52 23			-0.3	4.74	206		5.4 5.0
GNZ	EP	14 52 34			-1.8	5.77	205		4.7 4.6
	S	53 42			-1.4				
ONE	P	14 52 39			-0.1	6.04	245		4.9
TUA	EP	14 52 42			0.4	6.25	210		
	ES	53 53			-1.0				
KRP	P	14 52 43.7			0.4	6.38	224		
	ES	53 59			2.1				
TRZ	EP	14 52 51			-0.2	7.01	208		
	ES	54 14			3.0				
CRZ	P	14 53 01			8.9*	7.08	260		
CNZ	EP	14 52 56.9			1.8	7.30	216		
MNG	EP	14 53 08.9			-0.8	8.46	211		
	ES	54 42			-1.5				
HEL	ES	14 53 01			-1.7	9.32	211		5.5
CIZ	S	14 53 34			1.2	10.65	171		
JUL 03	H M S	17 18 06.1	37.78S	179.23E	33 KM	SE 2.1	AVG MAG	70/ 373	
		+L 2.3	0.10	0.12	R			4.1	
			H M S	DIR	RES	DIST	AZ	W-A	W P W S
ECZ	PN	17 18 16.0			-0.8	0.55	279		4.8 4.8
	S*	26.0			0.4				
GNZ	PN	17 18 27.8			0.9	1.28	228		4.1 4.0
	P*	32			2.5				
	SN	43			2.5				
TRZ	EPN	17 18 45			0.2	2.58	226		4.1 4.0
KRP	EPN	17 18 49			-0.5	2.93	266		
CNZ	EPN	17 18 53			-0.5	3.22	243		3.7 3.5
MNG	PN?	17 19 04			-1.0	4.06	225		3.9
HEL	ESN	17 20 07			-3.8	4.91	223		4.3
CIZ*	ESN	17 21 10			10.6*	6.94	154		3.9
JUL 03	H M S	17 22 43.1	37.27S	179.48E	12 KM	SE 1.1	AVG MAG	70/ 374	
		+L 0.7	0.04	0.04	R			4.3	
			H M S	DIR	RES	DIST	AZ	W-A	W P W S
ECZ	EPN	17 23 00.8			-0.1	0.85	240		4.5 4.6
GNZ	PN	17 23 13.9			0.7	1.79	220		4.2 4.1
	SN	37			1.7				
	S*	40			1.5				
TUA	PN	17 23 22			0.7	2.39	229		4.5 4.5
	S*	55			-1.6				
TRZ	EPN	17 23 29.3			-1.3	3.09	222		4.2 4.4
KRP	EPN	17 23 32			-0.3	3.19	257		
CNZ	EPN	17 23 38			-0.3	3.64	237		4.1 3.9
	P*	45			-1.5				
ONE	EPN	17 23 49			0.7	4.38	288		4.2

	TNZ	EPN	17 23 50		0.8	4.44	243		4.0		
	MNG	EPN	17 23 48		-2.8*	4.57	222		3.9	3.9	
		ESN	24 42		-0.4						
	WEL	ESN	17 25 03		-0.1	5.42	221		4.9		4.3
	CIZ	ESN	17 25 48		-0.3	7.32	157				
	MJZ	ESN	17 26 42		0.1	9.58	223				
JUL 03											70/ 375
		H M S	33.21S	178.40W	33 KM	SE	3.0		AVG MAG		5.0
		+- 2.7	0.13	0.18	9						
					DIR	RES	DIST	AZ	W-A	W P	W S
	ECZ	EPN	22 42 43		4.1	5.12	208			5.1	4.8
	GNZ	EPN	22 42 51		-1.7	6.15	207				
		P _o	43 13		0.9						
		ESN	44 03		2.9						
	ONE	EPN	22 43 01		3.5	6.50	245		4.5		
	TUA	EPN	22 42 56		-3.5	6.65	212				
		ESN	44 16		4.0						
	KRP	EPN	22 43 01		-0.8	6.82	225				
	CRZ	EPN	22 43 09.9		-1.7	7.52	258				
	CHZ	EPN	22 43 17		3.1	7.72	218				
	MNG	EPN	22 43 26		-3.2	8.87	212				
		ESN	45 03		-2.0						
	WEL	ESN	22 45 24		-1.4	9.73	212		5.6		
	COB	ESN	22 45 45		-0.3	10.57	219				
	CIZ	ESN	22 45 51		-0.3	10.83	173				
	MJZ	ESN	22 46 57		-3.8	13.83	216				
JUL 04											70/ 376
		H M S	39.69S	174.28E	207 KM	SE	1.6		AVG MAG		4.5
		+- 1.0	0.06	0.06	5						
					DIR	RES	DIST	AZ	W-A	W P	W S
	TNZ	IP	02 02 19.2		-0.1	0.50	9			4.5	4.0
		S	37		0.0						
	GNZ	IP	02 02 20.0		D	1.4	1.09	64		4.6	4.5
		S	42.9		-0.3						
	MNG	IP	02 02 22.1		U	1.9	1.31	136			
		I	38.9								
		S	49.9		-0.2						
	WEL	P	02 02 24.3		1.2	1.64	167		4.5	4.1	4.7
		S	50.7		-0.1						
	COB	EP	02 02 27		2.0	1.83	220				
	KRP	P	02 02 25.7		-1.1	2.01	30				
	TUA	IP	02 02 30.9		U	0.1	2.39	69		4.9	4.8
		S	03 05		0.6						
	GNZ	P	02 02 39.8		1.0	3.09	71			4.9	4.7
		S	03 16.0		-2.7						
	KAI	S	02 03 26		-3.0	3.57	217		4.1		
	ECZ	P	02 02 48		-0.5	3.88	61			5.0	
	MJZ*	EP	02 03 03		-1.5*	5.16	212			3.8	3.8
		S	04 01		-3.5*						
JUL 04											70/ 377
		H M S	38.19S	176.17E	167 KM	SE	0.7		AVG MAG		4.1
		+- 0.6	0.03	0.02	4						
					DIR	RES	DIST	AZ	W-A	W P	W S
	KRP	IP	03 35 53.9		U	0.2	0.57	298			
		S	36 11.5		-0.1						
	TUA	EP	03 35 55.5		-0.5	0.99	129			4.3	4.3
		ES	36 16		-0.4						
	CHZ	P	03 35 58.2		1.1	1.12	206			3.4	3.1
	GNZ	EP	03 36 02		1.0	1.52	108			3.9	4.2
		S	25		-0.2						
	ECZ	P	03 36 05		-0.5	1.95	76			4.8	
	MNG	IP	03 36 12.1		U	0.3	2.48	192		4.7	3.8
		S	44.3		0.3						
	WEL	P	03 36 21		-0.7	3.27	199		4.4	4.3	4.1

LOCAL EARTHQUAKES

151

		S	37 02	0.2								
COB		S	03 37 16	-0.6	3.92	221						
JUL 05	H M S		38.57S	175.70E	213 KM	SE	0.7	AVG MAG	70/ 378			
		+ 0.6	0.03	0.02	5							
	H M S		H M S	DIR	RES	DIST	AZ	W-A	W P	W S		
	CNZ	IP	00 04 03.2	U	0.7	0.64	191		4.4			
	KRP	IP	00 04 02.0	U	-0.5	0.65	349					
		S	25		-0.3							
	TUA	IP	00 04 05.9	U	0.4	1.16	102		4.7	4.6		
		S	30.8		0.1							
	TNZ	P	00 04 06.8		0.9	1.20	239					
	TRZ	P	00 04 08.0	D	1.3	1.32	139		4.5	4.6		
	GNZ	IP	00 04 11.0	D	-0.2	1.82	93		4.2	4.3		
		S	40		-0.6							
	MNG	IP	00 04 14.1	U	0.5	2.06	185		4.7	4.5		
		S	38									
		S	45		0.3							
	ECZ	P	00 04 16.9		-0.3	2.41	70		4.8	4.2		
		ES	51		-0.3							
	WEL	P	00 04 21		-0.8	2.81	195		4.8	4.1	4.8	
		S	59		-0.5							
	COB	ES	00 05 11		-0.7	3.40	221			4.2		
	GPZ	S	00 05 57.5		-3.7*	5.62	203		4.8			
JUL 05	H M S		45.07S	167.71E	124 KM	SE	0.9	AVG MAG	70/ 379			
		+ 0.8	0.04	0.04	9							
	H M S		H M S	DIR	RES	DIST	AZ	W-A	W P	W S		
	MSZ	IP	16 38 58.3	U	0.1	0.43	20					
	MNH	IP	16 38 59.7		-0.4	0.71	185					
	ROX	IP	16 39 05.9	D	1.0	1.21	110		4.6	4.6		
		IS	24.0		0.2							
	HPZ	P	16 39 11.0	D	-0.3	1.78	154		4.9	4.8		
		S	34.3		-0.8							
	MJZ					2.25	62		3.9	4.3		
	OMZ	P	16 39 18.3	D	0.7	2.27	91		4.4	4.9		
		S	46		-0.0							
	KAI*	ES	16 40 18		-1.7*	3.69	48		4.4			
	GPZ*	ES	16 40 20		-2.1*	3.79	70		4.4			
	COB	ES	16 40 00.5		0.8	5.42	44		3.9	4.1		
		ES	41 00		-1.4							
JUL 07	H M S		40.23S	173.54E	178 KM	SE	0.8	AVG MAG	70/ 380			
		+ 1.1	0.05	0.04	9							
	H M S		H M S	DIR	RES	DIST	AZ	W-A	W P	W S		
	COB	IP	01 59 17.0	U	0.1	1.06	215		4.4	4.0		
		S	38.8		0.2							
	WEL	P	01 59 20.0		0.0	1.41	139		4.0	4.2	4.4	
		S	43		-1.1							
	MNG	IP	01 59 21.8	D	0.6	1.53	105		4.5	4.2		
		S	47		0.9							
	CNZ	IP	01 59 23.8	U	-0.7	1.86	57		3.9	3.9		
		S	52		-0.0							
	GPZ*	ES	02 00 22		-3.5*	3.53	191		3.9			
	GNZ*	S	02 00 30		-3.9*	3.81	67			3.8		
	MJZ*	ES	02 00 42		-5.3*	4.40	210					
JUL 07	H M S		38.77S	176.32E	12 KM	SE	0.1	AVG MAG	70/ 381			
		+ 0.1	0.00	0.01	R							
	H M S		H M S	DIR	RES	DIST	AZ	W-A	W P	W S		
	WNZ	IP*	19 31 18.3		-0.0	0.22	310					
	KRP	PQ	19 31 34.9		0.0	1.05	324		3.3			
		ESQ	49		0.0							

MNG		EPG	19 31 53	0.0	1.95	199	2.8				
FELT		WAIRAKEI	(41) MM IV								
JUL 10	H	S						70/	382		
	09 23	19.6	38.75S	174.04E	12 KM	SE	0.9	AVQ	MAG	4.4	
	*-	0.3	0.01	0.03							
	H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W
	TNZ	IP*	09 23	29.3	U	-0.2	0.51	149	4.5	4.3	
		SG		38		0.7					
	CNZ	P*	09 23	41.7		-0.6	1.26	111		4.4	
	KRP	IPN	09 23	44.6	DSW	-0.5	1.44	56	4.7	4.8	
		PG		49		0.2					
		SN		24 03		-1.0					
	WNZ*	ES*	09 24	11		1.0*	1.62	86		5.0	
	MNG						2.18	150	4.9	4.7	
	TRZ*	EPG	09 24	08		1.6*	2.31	111	4.2	4.3	
	COB	PN	09 23	59.9		-0.2	2.54	203	4.6	4.4	
		P*		24 05.0		0.8					
		SN		29		-1.4					
		S*		37		-0.7					
	WEL	EPN	09 24	02		1.2	2.60	168	4.2	4.5	4.6
		S*		40		0.7					
	ONE	SN	09 24	42		1.0	2.98	5	3.9		
	GNZ*	EPN	09 24	10		2.2*	3.12	89	4.0	3.8	
	KAI*	ESN	09 25	11		-0.8*	4.27	207	4.7		
	CRZ*	EPN	09 24	31		5.3*	4.44	345	3.9	3.9	
		ESN		25 17		0.9*					
	GPZ*	ESN	09 25	28		-2.7*	5.05	192	4.5		
	MJZ*	EPN	09 24	48.0		3.1*	5.88	206	4.1	3.9	
		ESN		25 46		-4.6*					
	FELT		URUTI (38) MM III								
JUL 10	H	S						70/	383		
	16 06	11.6	44.84S	167.72E	81 KM	SE	0.9	AVQ	MAG	4.0	
	*-	1.0	0.05	0.04							
	H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W
	MSZ	IP	16 06	24	U	-0.1	0.22	40			
	MNH	IP*	16 06	29.8		-0.6	0.94	184			
	ROX	P	16 06	36.0		0.9	1.30	120	4.2	4.1	
		S		53.0		0.4					
	MJZ	P	16 06	46		-0.2	2.15	67	3.5	3.5	
		S		07 12		0.2					
	QMZ	P	16 06	48.7	D	0.6	2.28	97	4.5	4.3	
		S		07 14		-1.1					
	COB*	ES	16 08	27		-2.2*	5.26	46			3.6
JUL 10	H	S						70/	384		
	16 42	40.9	32.59S	179.51W	423 KM	SE	1.7	AVQ	MAG	5.2	
	*-	4.0	0.14	0.37							
	H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W
	ONE	EP?	16 44	19		0.0	5.99	236	4.7		
	GNZ	EP	16 44	19		-0.0	6.37	198			
		S		45 35		-1.4					
	TRZ	ES	16 46	02		2.0	7.56	202			
	WEL	ES	16 46	46		-0.1	9.81	206	5.8		
	COB	ES	16 47	00		-0.5	10.51	214			
JUL 11	H	S						70/	385		
	03 56	42.3	34.81S	178.68W	12 KM	SE	2.1	AVQ	MAG	4.5	
	*-	2.6	0.16	0.19							
	H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W
	EGZ	EPN?	03 57	39		2.7	3.55	215	5.0	4.7	
	GNZ	EPN	03 57	49		-1.0	4.57	212	4.3	4.1	
		ESN		58 39		-2.7					
	KRP	EPN	03 58	02		-0.1	5.48	234			
		ESN		59 05		1.5					
	ONE	EPN?	03 58	02		-1.9	5.61	258	4.3		

LOCAL EARTHQUAKES

153

		TRZ	EPN	03 58 08	0.9	5.85	215	4.3	4.5
		TNZ*	EPN	03 58 28	5.1*	6.94	229		
		COB	ESN	04 00 31	0.8	9.12	224		
JUL 11	H M S 04 40 18.3 + 0.9			38.82S	175.16E	227 KM	SE 1.2	AVG MAG	70/ 386 5.0
				0.04	0.04	9			
				H M S	DIR	RES	DIST	AZ	W-A W P W S
		CNZ	IP	04 40 49.7	U	1.1	0.49	141	
		TNZ	P	04 40 50.4		0.9	0.71	239	4.6 4.0
		KRP	IP	04 40 51.0	U	0.3	0.94	19	
			S	41 15.0		-0.9			
		TRZ	P	04 40 56.0	U	1.4	1.49	120	5.1 5.3
			S	41 24.0		1.3			
		TUA	P	04 40 56		0.8	1.56	90	4.9 5.3
			S	41 24		0.3			
		MNG					1.81	172	5.0 5.0
		GNZ	IP	04 41 01.9	D	0.2	2.25	86	4.8 5.1
			S	33.0		-2.2			
		WEL	P	04 41 04.7	U	0.6	2.48	187	4.9 5.0 5.0
			S	39		-0.5			
		ECZ	EP	04 41 07		-1.7	2.90	68	5.6 5.0
		COB	IP	04 41 08.8	U	-0.3	2.93	219	5.0 4.9
			S	47		-1.5			
		ONE	EP	04 41 11.1		0.1	3.10	348	
		KAI*	EP	04 41 30		0.1*	4.67	216	5.0
			S	42 22		-3.6*			
		CRZ*	P	04 41 30		-1.7*	4.81	335	4.4
		GPZ*	P	04 41 36		-0.8*	5.23	200	5.3
			S	42 34		-4.0*			
		MJZ*	P	04 41 46		-1.8*	6.25	213	
			S	42 56		-5.3*			
		OMZ*	EP	04 41 57		-2.4*	7.00	205	
		ROX*	ES	04 43 33		-7.1*	7.94	211	
		MNH*	EP	04 42 23		-1.1*	8.92	216	
			S	44 03		0.9*			
JUL 11	H M S 08 43 59.9 + 1.2			47.14S	165.00E	12 KM	SE 1.1	AVG MAG	70/ 387 4.0
				0.05	0.07	9			
				H M S	DIR	RES	DIST	AZ	W-A W P W S
		MNH	EPN	08 44 37		0.6	2.27	54	4.3 4.2
			P*	39.6		-0.2			
			ESN	45 03		-0.6			
		WPZ	E(P*)	08 44 48		1.0	2.68	81	3.7 3.8
			EPG	53		-1.3			
			E(SN)	45 13		-1.2			
		MSZ	EPN	08 44 49		-0.2	3.20	41	4.0 4.1
			EP*	55		-0.8			
			ESN	45 26		-0.3			
			ES*	37		-0.8			
		ROX	E(P*)	08 45 01		1.3	3.43	63	4.0 4.1
			ESN	31		-0.9			
		OMZ	E(P*)	08 45 21		1.1	4.61	65	4.0 4.2
		MJZ	EP*	08 45 26		-0.1	4.97	53	3.9 3.8
			E(S*)	46 33		2.1			
JUL 11	H M S 15 16 51.9 + 2.1			34.37S	178.35W	33 KM	SE 2.2	AVG MAG	70/ 388 4.8
				0.11	0.09	9			
				H M S	DIR	RES	DIST	AZ	W-A W P W S
		ECZ	EPN?	15 17 51		-1.2	4.16	216	4.8 4.6
		GNZ	EPN	15 18 03		-0.9	5.17	213	4.3 4.2
			SN	19 05		2.2			
		TUA*	ESN	15 19 20		4.0*	5.72	218	4.9
		KRP	EPN	15 18 19		0.8	6.09	233	
			ESN	19 28		3.2			

ONE	EP*	15 18 37	-1.2	6.14	255															
TRZ	SN	15 19 37	3.3	6.46	215															
CNZ	EPN	15 18 29	0.2	6.87	224															
	ESN	19 44	0.4																	
WEL	ESN	15 20 27	-2.5	8.79	216	5.7														
CIZ	EPN	15 19 08	1.9	9.67	172															
	ESN	20 50	-0.4																	
COB	ESN	15 20 52	0.1	9.73	224															
GPZ	ESN	15 21 34	-2.6	11.64	214	5.2														
HJZ	ESN	15 22 03	-3.5	12.93	219															
										70/ 389										
JUL 11	H M S	18 09 24.4	33.96S	179.41W	229 KM	SE	0.7	AVG MAG	5.0											
		+ 0.7	0.03	0.04	3															
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S										
	ECZ	P	18 10 29.0		0.3	4.08	203				5.4	4.9								
	GNZ	P	18 10 41		-0.5	5.12	203				4.7	4.5								
		ES	11 41		-0.6															
	ONE	P	18 10 46.0		0.3	5.43	249	4.8												
	TUA	P	18 10 48		0.6	5.58	209				5.0	4.9								
		ES	11 56		3.9*															
	KRP	P	18 10 49.7		0.8	5.70	225				4.2									
	TRZ	EP	18 10 56		-1.2	6.35	207													
		S	12 10		0.3															
	CRZ	P	18 10 59.3		-0.5	6.57	264													
	CNZ*	EP?	18 11 01		0.4*	6.62	216													
	WEL	ES	18 13 03		0.5	8.65	211	5.6												
	COB*	ES	18 13 24		2.9*	9.46	219													
	CIZ	ES	18 13 39		0.3	10.23	168													
	GPZ	ES	18 14 08		-0.5	11.52	210	5.9												
	HJZ	ES	18 14 36		0.1	12.73	215													
										70/ 390										
JUL 13	H M S	00 48 11.5	39.78S	174.13E	132 KM	SE	0.5	AVG MAG	4.1											
		+ 0.6	0.02	0.02	6															
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S										
	TNZ	P	00 48 32		0.1	0.63	18				3.6	3.6								
	CNZ	P	00 48 37.0		-0.4	1.24	62				3.8	3.9								
		S	57		-0.1															
	MNG	IP	00 48 39.1	U	0.8	1.33	129				4.3	4.3								
		S	59		0.2															
	WEL	P	00 48 41		-0.1	1.58	162	3.8			4.0	4.2								
		ES	49 03		-0.6															
	COB	P	00 48 42.0	D	-0.3	1.69	219				4.5	4.2								
		S	49 06		0.3															
	TRZ					2.09	85					4.2								
	GNZ*	S	00 49 39		-1.6*	3.23	71					4.1								
	KAI*	ES	00 49 43		-2.3*	3.43	216	4.0												
	GPZ*	S	00 49 53.3		-7.0*	4.07	195	4.4												
	HJZ*	ES	00 50 17		-6.2*	5.01	212													
	FELT MANARQA (78)																			
										70/ 391										
JUL 13	H M S	15 27 28.8	39.19S	174.88E	33 KM	SE	0.9	AVG MAG	4.0											
		+ 0.3	0.02	0.02	2															
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S										
	TNZ	IP*	15 27 36.3	U	-1.1	0.39	270													
	CNZ	IPN	15 27 38.3	D	-0.6	0.52	92													
		S*	46.8		-0.7															
	KRP	EPN	15 27 51		0.3	1.36	23													
		P*	55		1.3															
		E	59																	
		SN	28 10		2.8*															
	MNG	PN	15 27 52		-0.6	1.50	162				4.1	4.1								
		SN	28 10		-0.6															
	TRZ*					1.55	104				3.7	3.7								
	WEL	EPH	15 28 02		1.2	2.10	182	3.8			4.3	4.4								

	COB	PN	10 37 12.9	0.7	1.30	298		4.2	4.1				
		SN	30	0.3									
	MNG				1.44	41		4.2	4.2				
	KAI				2.26	248	3.9						
	GPZ	ESG	10 38 06	-0.2	2.30	210	3.1						
	TNZ	EP*	10 37 32	-0.8	2.53	2		3.7	3.8				
		ES*	38 06	-0.2									
	CNZ	EPN?	10 37 31	-0.1	2.70	22		4.1	4.4				
		EP*	39	-0.8									
		PQ	43	-0.2									
		E(S*)	38 11	-0.4									
	MJZ	ESN	10 38 24	-0.2	3.59	230		3.5	3.2				
	KRP	EP*	10 37 57	0.4	3.92	15							
		ES*	38 48	0.2									
JUL 18	H	M	S					70/	396				
	02	41	05.0	41.93S	172.69E	12 KM	SE 1.0	AVG MAG	4.2				
			+ 0.2	0.02	0.03	3							
				1	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	COB	IP*	02 41 22.3			2.0		0.84	3				
	KAI							1.11	237	4.0			
	WEL	PN	02 41 34.0			0.1		1.70	68	4.0	4.5	4.4	
		P*	36.0			0.9							
		SN	55			-0.2							
		SG	42 02			-0.3							
	GPZ	EP*	02 41 36			-0.3	1.76	181	3.6				
		SN	57			0.3							
		SG	42 04			-0.6							
	MNG						2.49	59		5.0	4.7		
	MJZ	EPN	02 41 46			-0.5	2.62	218		3.9	3.8		
		P*	50			-0.9							
		SN	42 17			-0.6							
	TNZ	PN	02 41 52			-0.0	3.03	26		4.2	4.2		
	OHZ	EPN	02 41 58			1.2	3.39	202			4.4		
		P*	42 05			0.9							
		SN	37			1.1							
	CNZ	EPN	02 41 58			-0.3	3.50	40		4.3	4.6		
		P*	42 07			1.0							
	MSZ	PN	02 42 11.0	U		0.2	4.42	230		4.2	4.1		
		SN	43 00			-0.9							
	KRP	EPN	02 42 12			-0.7	4.57	30					
		P*	21.3			-2.5							
		S*	43 20			-3.9*							
	GNZ	SN	02 43 17			-3.7*	5.24	53			4.2		
	CIZ*	ESN	02 44 23			-6.9*	8.15	108					
JUL 18	H	M	S					70/	397				
	15	50	31.9	41.20S	175.89E	33 KM	SE 0.4	AVG MAG	3.8				
			+ 0.4	0.02	0.02	3							
				1	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	WEL	PN	15 50 47.1			0.3		0.85	264	3.7	4.2	4.2	
		SN	58			0.2							
	CNZ	PN	15 51 02			-0.8	2.02	352		3.7	3.7		
	TNZ	EP*?	15 51 13			0.0	2.32	330			3.7		
		E(SN)	39			1.4*							
	COB	PN	15 51 08			0.1	2.39	272		3.9	4.0		
		P*	13.9			-0.2							
		ESN	35			-0.2							
	GNZ	ESN	15 51 51			0.0	3.03	33			3.4		
	KRP	EP*	15 51 30			0.6	3.28	355					
		ES*	52 12.3			0.0							
JUL 18	H	M	S					70/	398				
	16	49	44.5	38.97S	175.07E	223 KM	SE 1.2	AVG MAG	4.7				
			+ 0.9	0.04	0.04	3							

LOCAL EARTHQUAKES

157

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
CNZ	IP	16	50	16.4	U	1.5	0.44	122			
TNZ	P	16	50	16.1		0.8	0.58	248		4.4	3.7
KRP	IP	16	50	18.7	DSW	0.6	1.11	20		4.8	3.9
TRZ	S	16	50	44.0		-0.2					
	P	16	50	22.0	U	1.1	1.48	114		4.7	5.2
	S			50.3		1.5					
TUA	EP	16	50	23		0.8	1.63	85		4.5	4.8
	S			50		-1.3					
MNG							1.68	169		4.7	
WEL	P	16	50	29.0		0.2	2.32	186	4.7	4.4	4.8
	S			51.03		0.0					
GNZ	IP	16	50	29.0	D	0.2	2.33	83		4.5	4.5
	ES			51.01		-2.1					
GBZ	P	16	50	32.9		-0.7	2.77	7			
COB	IP	16	50	33.1	U	-0.5	2.77	220		4.7	4.7
	S			51.10		-1.7					
BOZ	P	16	50	36		-0.3	3.02	66		5.1	4.7
KAI							4.51	217	4.9		
GPZ*	EP	16	51	00.5		-0.5*	5.06	200	3.5		
	S			57		-3.6*					
MJZ*	EP	16	51	13		-1.0*	6.09	213			
	S			52.18		-3.8*					
OMZ*	EP	16	51	23.0		-0.5*	6.83	206			
ROX*	ES	16	52	57		-5.5*	7.77	211			
MSZ*	EP	16	51	34.0		-2.0*	7.80	221			
	S			52.59		-4.3*					
JUL 19	H M S	11	35	13.5	46.77S	166.89E	12 KM	SE	1.0	AVG MAG	70/399
					0.04	0.06					4.1
	H M S	11	35	33.9	DIR	RES	DIST	AZ	W-A	W P	W S
MNW	P	11	35	33.9		0.4	1.11	27			
	S			48		-0.4					
WPZ	EP	11	35	38.5		0.7	1.35	86		4.1	4.2
	ES			59		-0.8					
	ES			36.00		0.9					
ROX	EP	11	35	48.8		0.8	2.13	53		4.1	4.2
	ES			55		-0.5					
	ES			36.14.5		0.8					
	E			22			2.22	19		4.4	3.8
MSZ							3.28	60		3.9	4.1
OMZ	EP	11	36	04		0.2					
	P			11		0.3					
	ES			18		-1.8					
	ES			40		-1.7					
	ES			37.04		-0.0					
MJZ	EP	11	37	21		1.1	3.75	43			
	ES			11.38.06		0.9*	5.09	55	3.9		
GPZ*	ES	11	38	06		0.9*	5.09	55			
COB*	ES	11	38	12		-0.7*	7.07	39			
JUL 19	H M S	17	04	26.2	38.91S	179.18E	219 KM	SE	1.4	AVG MAG	70/400
					0.04	0.04					5.3
	H M S	17	04	56.9	DIR	RES	DIST	AZ	W-A	W P	W S
CNZ	IP	17	04	56.9	U	1.5	0.41	135			
TNZ	P	17	04	58.0	U	1.6	0.68	246		5.2	4.4
WUZ							0.77	69			5.4
KRP	IP	17	04	58.2	DNE	-0.1	1.02	16			
	IS			05.22.0		-1.2					
TRZ	P	17	05	03.0		1.7	1.43	117		5.2	5.7
	S			29		0.5					
TUA	IP	17	05	03.0	D	0.7	1.54	87		5.4	5.7
	E			23							
	S			28		-2.2					
MNG	IP	17	05	05.1	U	1.2	1.72	172		5.3	5.0
GNZ	IP	17	05	09.3	DNW	0.4	2.24	84		5.2	5.2

LOCAL EARTHQUAKES

159

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	P	00	09	56.0	D	-0.7	0.61	341			
	S			10 13		-0.6					
CNZ	IP	00	09	58.6	D	1.3	0.72	196		3.9	
TUA	P	00	10	01.2		0.7	1.10	106		4.5	4.3
	S			20.5		0.3					
TNZ	P	00	10	04.0		1.6	1.30	238		3.8	
TRZ	P	00	10	04.0		1.4	1.32	143		4.3	4.7
GNZ	IP	00	10	07.0	U	-0.2	1.75	95		4.5	3.9
	S			30.8		-1.4					
WEL	P	00	10	20		-1.3	2.89	196	4.1	4.3	4.0
	ES			57		0.0					
COB	P	00	10	28.9		-0.2	3.49	221		4.3	4.1
	S			11 10		-0.9					
GPZ*	ES	00	11	58		-3.2*	5.71	204	4.4		
MJZ*	ES	00	12	22		-7.3*	6.79	215			
JUL 21		H	M	S						70/	404
		04	28	13.0						AVG MAG	4.1
				+ 1.4							
		H	M	S	DIR <th>RES</th> <th>DIST</th> <th>AZ</th> <th>W-A</th> <th>W P</th> <th>W S</th>	RES	DIST	AZ	W-A	W P	W S
ECZ	P	04	28	37		0.2	1.03	109		4.2	4.3
GNZ	P	04	28	39.3		-1.4	1.40	157		3.8	4.1
	S			29 01		-0.8					
TUA	EP	04	28	42.8		1.5	1.45	185		4.3	4.3
KRP	IP	04	28	41.2	DE	-0.8	1.52	248			
	ES			29 04		-0.1					
TRZ	ES	04	29	20		1.1	2.23	190			
CNZ	P	04	28	53		1.9	2.31	217		3.9	3.9
WEL	ES	04	30	09		-0.8	4.39	206	4.3		
COB	ES	04	30	27.9		-0.5	5.15	222			4.2
JUL 22		H	M	S						70/	405
		17	12	10.7						AVG MAG	4.2
				+ 1.3							
		H	M	S	DIR <th>RES</th> <th>DIST</th> <th>AZ</th> <th>W-A</th> <th>W P</th> <th>W S</th>	RES	DIST	AZ	W-A	W P	W S
KRP	EP	17	12	47.2		0.2	1.20	232			
GNZ	EP	17	12	51.6		0.3	1.77	145		4.0	4.3
	S			13 21.2		-1.4					
TRZ	EP	17	12	57		0.4	2.35	178		4.0	4.3
	S			13 34		1.7					
MNG	IP	17	13	09.1	D	-0.6	3.55	196		4.5	4.0
	S			59		-0.5					
WEL	ES	17	14	13		0.5	4.36	200			4.2
COB	EP	17	13	27		0.3	4.97	217			
	ES			14 25		-0.9					
GPZ*	ES	17	15	15		-0.9*	7.20	204	4.4		
JUL 23		H	M	S						70/	406
		00	07	16.2						AVG MAG	4.4
				+ 0.3							
		H	M	S	DIR <th>RES</th> <th>DIST</th> <th>AZ</th> <th>W-A</th> <th>W P</th> <th>W S</th>	RES	DIST	AZ	W-A	W P	W S
COB	IP*	00	07	27.7	U	-1.2	0.68	57			
KAI	P*	00	07	36.9		-0.1	1.15	202			
	S*			54		-1.4					
WEL	PN	00	07	51		0.5	2.10	86	4.3	4.8	5.0
	P*			54		0.7					
	SN			08 17		1.1					
	S*			19.8		-1.3					
CHR*	P*	00	07	55		1.3*	2.13	167			
	SG			08 27		-1.0*					
GPZ	EPG	00	08	03		0.4	2.29	168	4.1		
	SN			20		-0.4					
	SQ			34		0.5					
MJZ	PN	00	07	59		-0.7	2.76	203		4.3	4.2
	P*			08 05		0.4					
	SN			31.5		-0.9					

MNG	PN	00 07 59.3	-0.3	2.78	74	5.0	4.7
	P*	08 05	0.2				
	S*	40.3	-0.8				
TNZ	EPN?	00 08 01	-0.8	2.92	40	4.5	4.4
	EPG	15	-0.2				
OMZ	EPN	00 08 13	0.9	3.69	192	4.6	4.4
	PG	32.3	1.6				
TRZ	EPG	00 08 40	-0.2	4.15	64	4.6	4.3
MSZ	PN	00 08 20.7	-0.7	4.38	221	4.3	4.3
	SN	09 10	-1.1				
RDX*	ESN	00 09 13	-0.0*	4.46	205	3.9	4.1
KRP	E(PN)	00 08 25	2.4*	4.47	39		
	SN	09 15	1.8				
MNW	EPN	00 08 35	0.5	5.36	215	4.3	4.1
	ESN	09 36	1.4				
CRZ*	PN	00 09 01	4.0*	7.04	5		
	ESN	10 18	3.3*				

FELT MURCHISON DISTRICT, MAXIMUM INTENSITY MM IV

		H	M	S				70/ 407		
JUL 23		03 25	11.9	39.31S	173,54E	12 KM	SE	1.0	AVG MAG	4.4
			* - 0.4	0.02	0.03	R				
		H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
TNZ	IP*	03 25	23.6		U	-0.5	0.65	79		4.3 4.4
	PG		25.2			-0.1				
	S*		32.3			-0.7				
COB	PN	03 25	42.5			-0.7	1.88	199		4.4 4.5
	P*		44.8			-0.4				
	S*		26 09			-1.1				
	P*		25.44.8			-0.4				
MNG	PN	03 25	43.9			-0.5	1.97	132		4.8 4.7
	SN		26 09			0.6				
KRP	PN	03 25	45.6			-0.3	2.08	49		
	(P*)		49.2			0.6				
	SN		26 10			-1.0				
	S*		15			-1.1				
WEL	PN	03 25	48			0.8	2.18	155	4.4	4.7 5.0
	EP*		52.5			2.2				
	ESN		26 14			0.6				
GNZ	ESN	03 26	47			0.4	3.54	81		
ONE	ESN	03 26	50			2.4*	3.59	11	4.2	
	ES*		27' 03			1.6				
KAI							3.60	206	4.3	
GPZ*	ESN	03 27	07.5			-0.6*	4.43	189	4.3	
CRZ*	EPN	03 26	27			2.6*	4.92	352		4.2
HJZ*	EPN	03 26	31			2.7*	5.21	205		3.9 3.7
	ESN		27 28			1.2*				

FELT OPUNAKE AND RAHOTU (46)

		H	M	S				70/ 408		
JUL 23		03 27	17.1	39.32S	173,54E	12 KM	SE	1.1	AVG MAG	3.8
			* - 0.6	0.03	0.03	R				
		H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
TNZ	EP*	03 27	29			-0.6	0.66	79		3.4 3.3
	ES*		37			-1.8				
	ESG		39			-0.8				
COB	EPN	03 27	48			-0.3	1.87	199		3.9 3.7
	EPG		54			-1.0				
	ES*		28 14			-1.0				
MNG	EPN	03 27	49			-0.7	1.98	132		4.1 4.1
	PG		57.8			0.6				
	SN		28 14.3			0.6				
KRP	EP*?	03 27	55			1.0	2.09	49		
	E(SN)		28 17			0.5				
	ES*		22			0.3				
	ESG		28			0.2				
WEL	EPN?	03 27	54			1.6	2.18	155	3.6	4.1 4.1

LOCAL EARTHQUAKES

		ESN	28 20	1.4					70/ 409
JUL 23	H M S 08 16 44.2 + 0.3	37.80S	176.62E	12 KM	SE	0.5	AVG MAG	4.0	
		0.02	0.01	R					
	H M S	H M S	DIR	RES	DIST	AZ	W-A	W P W S	
KRP	P*	08 16 59.8		-0.3	0.87	261		3.7 3.6	
	PG	17 02.2		0.4					
	S*	12		0.1					
TUA	P*	08 17 03.5		-0.4	1.09	158	4.4	3.9	
	PG	07		0.7					
	S*	19		0.4					
GNZ	EP*	08 17 09.5		0.5	1.39	128	4.1	3.7	
	ESN	25		-2.4*					
ECZ	EPG?	08 17 15		-0.2	1.53	87		4.2	
TRZ	EP*?	08 17 15		-0.4	1.76	175		4.2	
	PG	19		-0.8					
FELT MAKETU (26) MM IV									
JUL 23	H M S 18 06 55.6 + 0.9	36.67S	177.87E	233 KM	SE	0.7	AVG MAG	70/ 410 4.3	
		0.05	0.06	R					
	H M S	H M S	DIR	RES	DIST	AZ	W-A	W P W S	
GNZ	P	18 07 37.0	U	0.3	1.97	177	4.5	4.6	
	S	08 08		-0.5					
KRP	EP	18 07 39.5		0.2	2.24	235			
TRZ	EP?	18 07 48.3		0.9	2.99	196	4.0	4.6	
MNG	P	18 08 03.8		0.2	4.36	205	4.3	4.0	
	S	56.5		0.1					
HEL	EP	18 08 13		-1.0	5.20	207	4.7	3.8 4.2	
	S	09 15		-0.1					
COB	ES	18 09 32		-0.1	5.96	221		4.0	
QPZ*	ES	18 10 18		-2.6*	8.07	208	4.9		
JUL 24	H M S 10 19 28.3 + 1.6	37.43S	176.59E	298 KM	SE	1.1	AVG MAG	70/ 411 4.1	
		0.09	0.10	R					
	H M S	H M S	DIR	RES	DIST	AZ	W-A	W P W S	
KRP	P	10 20 08.2		0.3	0.84	233			
GNZ	P	10 20 13.8		0.4	1.77	134	4.3	3.9	
	S	47.3		-1.2					
TRZ	EP	10 20 17		0.6	2.15	171	4.0	4.0	
	ES	59		1.1					
MNG	P	10 20 26.0		-1.0	3.27	192	4.4	4.2	
	S	21.12		-0.8					
HEL	ES	10 21 29		1.0	4.06	198		4.3	
COB	ES	10 21 39		-0.6	4.63	217		3.8	
JUL 24	H M S 12 29 27.8 + 2.0	40.62S	173.51E	176 KM	SE	1.5	AVG MAG	70/ 412 3.9	
		0.09	0.07	R					
	H M S	H M S	DIR	RES	DIST	AZ	W-A	W P W S	
COB	IP	12 29 54		0.5	0.75	231	4.2	3.7	
	ES	30 13		-0.4					
HEL	P?	12 29 58		1.4	1.17	125	3.8	3.5 4.1	
	S	30 20		1.2					
MNG	IP	12 29 59.1		-0.6	1.50	91	4.0	4.0	
	S	30 23		-1.3					
QPZ	S	12 30 57		-0.7	3.14	191	3.7		
FELT MAUNGATANIWA (52)									
JUL 25	H M S 07 54 14.7 + 0.3	39.31S	173.63E	12 KM	SE	0.6	AVG MAG	70/ 413 4.1	
		0.01	0.02	R					
	H M S	H M S	DIR	RES	DIST	AZ	W-A	W P W S	
TNZ	IP*	07 54 26.0	U	0.1	0.59	79	4.0	4.0	
	S*	34		-0.2					

CNZ	PN	07 54	39.4	-1.5*	1.49	86			
	PG		44	-0.9					
COB	PN	07 54	45.3	-1.0	1.91	201	4.3	4.2	
	P*		48.2	-0.2					
	E		55 11.5						
MNG	PN	07 54	46.9	0.2	1.93	133	4.6	4.6	
	SN		55 11	1.7					
KRP	PN	07 54	48	-0.0	2.03	48			
	P*		51	0.4					
	SN		55 13	0.4					
	S*		18	0.5					
	SG		23	-0.3					
WEL	PN	07 54	50.5	0.8	2.16	157	4.1	4.4	4.8
	ESN		55 16	0.3					
TRZ	EP*	07 54	58	-0.3	2.48	97	4.2	3.9	
	ESG		55 38	-0.4					
ONE*	ESN	07 55	54	3.9*	3.57	10	3.9		
KAI*	ESG	07 56	14	-3.0*	3.63	207	4.0		
GPZ*	ESN	07 56	10	-1.2*	4.45	189	4.0		
MJZ*	EPN	07 55	33	1.6*	5.24	206	3.7	3.5	
	ESN		56 30	-0.3*					

FELT OPUNAKE(46)

H M S		39.29S 173.55E		12 KM	SE 0.8	AVG MAG	70/ 414			
07 59 31.7		0.02 0.03		R			3.9			
+ 0.5				DIR	RES	DIST	AZ	W-A	W P	W S
TNZ	EP*	07 59	44	0.1	0.65	81			3.5	3.3
	ESG		54	0.1						
CNZ	PN	07 59	58.5	-0.2	1.55	87			3.6	4.2
	SN	08 00	17	-1.6						
COB	EPN	08 00	03	-0.3	1.90	199			3.9	3.8
	ES*		30	-0.6						
MNG	PN	08 00	04.8	0.3	1.99	132			4.1	4.3
	PG		11.8	-0.2						
	SN		28	-0.6						
KRP	EPN?	08 00	05	-0.5	2.07	49				
	ESN		31	0.5						
	ESG		42	0.5						
WEL	EPN	08 00	08.5	1.2	2.20	155	4.0	3.9	4.1	
	ESN		35	1.3						

FELT OPUNAKE (46)

H M S		35.70S 178.91W		232 KM	SE 0.5	AVG MAG	70/ 415			
15 59 04.1		0.03 0.06		6			5.1			
+ 0.7				DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	EP	15 59	54	-0.3	2.85	225			5.0	5.0
GNZ	P	16 00	04.7	-0.9	3.83	219			4.8	5.0
	S		53.5	0.2						
TJA	EP	16 00	13	0.3	4.42	224			5.0	5.2
	S		01 06	-0.1						
GBZ*	EP	16 00	13	-1.7*	4.58	262				
KRP	P	16 00	19.7	0.1	4.98	242				
	S		01 15.5	-3.0*						
TRZ	EP	16 00	21.7	0.2	5.13	220			4.8	5.2
	S		01 22	0.2						
ONE	EP	16 00	26	0.2	5.47	267				
CNZ	EP	16 00	29	1.2	5.62	230			4.7	4.5
TNZ*	EP	15 00	40	2.7*	6.37	235				
CRZ	P	16 00	45	-0.4	7.01	278				
WEL	EP	16 00	51	-0.2	7.46	220	5.8			
	S		02 14.5	-0.5						
CIZ*	EP	16 01	09.3	5.0*	8.44	168				
	ES		02 38	0.5*						
COB*	EP	16 01	05	0.7*	8.48	228				
	ES		02 39	0.6*						

LOCAL EARTHQUAKES

KAI*	ES	16 03 17			0.4*	10.15	225		5.5			
GPZ	S	16 03 20			-0.0	10.30	217		5.6			
MJZ*	P	16 01 49			4.8*	11.62	221					
	S	03 51			0.7*							
OMZ*	EP	16 01 56			5.1*	12.15	216					
	ES	04 07			4.6*							
JUL 25	H M S	19 16 39.4	37.56S	176.39E	331 KM	SE	0.6	AVG MAG	70/ 416			
		+ - 0.5	0.03	0.03	4				4.4			
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S		
KRP	P	19 17 22.2			-0.2	0.77	241					
	ES	56			-0.2							
TUA	P	19 17 25.7			0.4	1.39	154		4.7	4.6		
	S	18 01.5			0.3							
GNZ	P	19 17 27			-0.1	1.69	131		4.6	4.4		
	S	18 04			-0.4							
ECZ	P	19 17 26.9			-0.5	1.72	95		4.5	4.7		
	ES	18 05			0.2							
CNZ	P	19 17 28			0.3	1.77	202		4.1			
TRZ	EP	19 17 30			0.6	2.02	170		4.0	4.4		
MNG	P	19 17 39.0			-0.0	3.14	193		4.4	4.2		
	S	18 25			-0.8							
WEL	ES	19 18 41			-1.0	3.93	198		4.6		4.3	
GPZ	ES	19 19 37			-0.6	6.76	204		4.7			
JUL 25	H M S	21 55 04.7	41.35S	174.54E	33 KM	SE	1.1	AVG MAG	70/ 417			
		+ - 0.3	0.03	0.03	R				4.5			
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S		
WEL	IP*	21 55 11.7		U	0.8	0.18	69		4.4			
	IS*	17.3			1.9							
MNG	IPN	21 55 21.1		D	-0.9	1.02	44					
COB	IPN	21 55 27.0			0.0	1.39	280		5.0	4.8		
	SN	44			0.2							
TNZ	PN	21 55 38			0.3	2.17	397		4.8	4.8		
	ESN	56 04			1.4							
CNZ	PN	21 55 38.3			-1.0	2.28	20		5.0	4.8		
	P*	46			0.9							
TRZ	EP*	21 55 48			-0.8	2.50	45		4.6	4.4		
	ESN	21 56 16			-0.4	2.62	242		4.3			
GPZ	EP*	21 56 01			-0.3	2.73	210		3.9			
TUA	EPN	21 56 56			-0.1	3.51	13					
KRP	P*	56 05			-1.0							
	ESN	37			1.7							
	S*	50			-2.0							
GNZ	ESN	21 56 42			-0.5	3.80	46				4.0	
MJZ	ESN	21 56 47			-0.2	4.00	227				3.8	
ONE						5.57	358		4.7			
CIZ*	ESN	21 57 56			-4.8*	7.05	115					
FELT SOUTH WEST PARTS OF WELLINGTON PROVINCE, MAXIMUM INTENSITY MM IV												
JUL 26	H M S	00 18 23.6	41.34S	174.56E	33 KM	SE	0.7	AVG MAG	70/ 418			
		+ - 0.4	0.03	0.02	R				4.1			
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S		
WEL	IP*	00 18 29.9		U	0.2	0.17	71					
	S*	35			0.9							
MNG	IPN	00 18 39.9		D	-0.8	1.00	44		4.5	4.2		
	SN	53.2			-0.1							
COB	PN	00 18 49.9			-0.2	1.40	280		4.3	4.3		
	ESN	19 03			0.1							
TNZ	ESN	00 19 22			0.7	2.15	356		3.6	3.7		
CNZ	EPN	00 18 58			0.0	2.27	20		4.0	4.1		
	P*	19 03			-0.8							

JUL 26		H	M	S							70/ 419		
		02	24	30.1	37.72S	176.41E	195 KM	SE	0.9	AVG MAG		4.2	
				+ 1.0	0.04	0.04	7						
					H	M	S	DIR	RES	DIST	AZ	W-A W P W S	
KRP	EP?				02	24	58		0.2	0.72	253		
	S						19		-0.2				
GNZ	P				02	25	05.3		1.2	1.57	126	4.3 4.1	
	S						30		-0.7				
MNG	P				02	25	19.0		-0.9	2.98	194	4.5 3.9	
	S						59		-0.7				
WEL	ES				02	26	15		-0.5	3.78	199	4.6 4.1	
COB	E(P)				02	25	37		-0.4	4.40	219	3.8 4.0	
	ES						30		0.4				

JUL 26		H	M	S							70/ 420		
		08	59	06.6	42.07S	173.03E	33 KM	SE	0.8	AVG MAG		3.8	
				+ 0.2	0.02	0.02	R						
					H	M	S	DIR	RES	DIST	AZ	W-A W P W S	
COB	PN				08	59	23.1		-0.6	1.01	346	4.2 4.2	
	SN						36.0		-0.4				
KAI	SN				08	59	43		-0.5	1.30	249	3.7	
	S*						49		1.1				
WEL	EPN				08	59	31		0.3	1.51	59	4.1 3.9	
	EP*						33		-0.8				
	ESN						49		0.5				
	ES*						59		1.0				
GPZ	ESN				08	59	51		-1.0	1.65	190	3.1	
MNG	PN				08	59	41.8		-0.1	2.33	52	3.9 3.8	
	ESN				09	00	08		-0.6				
HJZ	EPN				08	59	47		0.2	2.70	224	3.6 3.5	
	SN				09	00	18		0.6				
CNZ										3.44	34	4.0 4.1	

JUL 26		H	M	S							70/ 421		
		12	02	42.5	37.67S	178.21E	33 KM	SE	0.9	AVG MAG		4.6	
				+ 0.4	0.02	0.03	R						
					H	M	S	DIR	RES	DIST	AZ	W-A W P W S	
ECZ	IPN				12	02	49.8	U	-0.3	0.27	95		
GNZ	IPN				12	02	59.7	D	0.5	0.98	188	4.8 4.7	
TUA	PN				12	03	06		1.0	1.41	216	4.5 5.1	
	SN						22		0.0				
	S*						26		-0.9				
KRP	EPN				12	03	14.3		-0.4	2.13	262		
	SN						39		-0.5				
TRZ	PN				12	03	15.6		0.1	2.17	210	4.7 4.9	
	ES*						50		0.3				
CNZ	PN				12	03	21.5		0.3	2.59	233		
GBZ	PN				12	03	20.0		-1.7	2.62	303		
	ESN						52		0.5				
AUC	PN				12	03	24.3		-0.4	2.85	285		
TNZ	EPN				12	03	32.3		0.6	3.36	242		
ONE	EPN				12	03	36		0.6	3.62	300	4.4 4.6 4.1	
	ESN						04		0.1				
MNG	PN				12	03	34.0		-1.4	3.63	215	4.2 4.3	
	SN						04		1.5				
	S*						34		0.7				
WEL	EPN				12	03	44		-3.2*	4.48	215	5.1 4.5 4.7	
	SN						04		-1.8				
COB*	EPN				12	03	57		-3.1*	5.44	229	4.4 4.6	
	ESN						05		1.1*				
CRZ	EPN				12	04	02		0.8	5.52	304	4.7	
GPZ*	ESN				12	05	41		-4.7*	7.35	213	5.1	
GIZ*	EPN				12	04	30		3.2*	7.42	149		
	SN						05		-5.4*				
HJZ*	PN				12	04	40		-2.7*	8.61	220		
	SN						06		-3.8*				

FELT CAPE RUNAWAY (29) MM IV AND TE KAHAKA (28)

LOCAL EARTHQUAKES

165

JUL 26		H	M	S			36.93S	177.04E	33 KM	SE	1.0	AVG MAG	70/ 422		
		21	59	14.3			0.05	0.02	?				4.0		
		+		0.8					DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	EPN	21	59	37						0.0	1.42	123		4.5	4.0
	ES			59						-0.1					
KRP	EPN	21	59	40.3						1.5	1.56	230			
	S			02.5						-0.5					
TUA	EPN	21	59	44						0.7	1.88	177		4.4	4.2
	ES			13						0.3					
GNZ	EPN	21	59	44						0.7	1.88	156		4.2	4.0
	P			47						-0.5					
	SN			05						-0.2					
GNZ	EPN?	21	59	51						-1.5	2.55	207		3.6	3.4
											2.62	184		3.8	3.6

JUL 27		H	M	S			35.91S	179.62E	33 KM	SE	1.1	AVG MAG	70/ 423		
		00	33	24.5			0.03	0.05	?				4.9		
		+		0.8					DIR	RES	DIST	AZ	W-A	W P	W S
ECZ	PN	00	33	56						-0.2	2.07	204			
GNZ	PN	00	34	10						-0.4	3.11	204		4.8	4.8
	SN			47						1.7					
GBZ	EPN	00	34	14						-0.1	3.38	262			
TUA	PN	00	34	17						0.1	3.59	213		5.0	5.1
	ESN			58						1.0					
KRP	PN	00	34	22.0						0.9	3.90	236			
	P			30.9						-1.5					
	SN			35 03						-1.5					
ONE	EPN	00	34	27						0.7	4.27	269			
TRZ	EPN	00	34	26						-1.3	4.35	210		4.9	4.9
	P			41						0.9					
	ESH			35 16						0.4					
GNZ	PH	00	34	31						-0.9	4.69	222		4.8	4.9
	IS			35 48						0.9					
TNZ	EPN	00	34	44						3.0	5.36	229		4.7	4.5
MNG	EPN	00	34	43						-4.0	5.80	213		4.6	4.6
	P			35 04						-1.1					
	S			36 20						-0.7					
CRZ	PN	00	34	49.0						1.4	5.85	282		5.0	
KEL	ESN	00	35	07						-4.2	6.66	213		5.6	
COB	EPN	00	35	09						-1.5	7.55	224			
	ESN			36 29						-3.4					
CIZ	EPN	00	35	26						0.8	8.65	161			
	ESN			36 54						-4.8					
GPZ	ESN	00	37	12						-7.8	9.53	212		5.4	
HJZ	EPN	00	35	51						-2.3	10.77	218			
	ESN			37 42						-5.9					

JUL 27		H	M	S			41.19S	174.37E	12 KM	SE	1.8	AVG MAG	70/ 424		
		05	09	53.5			0.04	0.03	?				3.8		
		+		0.6					DIR	RES	DIST	AZ	W-A	W P	W S
WEL	IP	05	10	00.9						U	0.9	0.32	109		3.2
	ES			06.9							1.8				
MNG	IP	05	10	10.1						U	-1.9	1.02	56		4.4
	S			23.0							-2.7				
COB	IP	05	10	15.3						U	-0.5	1.24	274		4.0
	ES			34							1.5				
TNZ	EPG	05	10	34							0.1	2.00	0		3.4
	E			11 04											
GNZ	EPN	05	10	29							0.2	2.18	25		3.6
	ESN			57							2.0				
KA1	ES	05	11	11							-1.9	2.58	238		3.7
KRP	EPG	05	11	02							0.2	3.38	16		3.4
	E			42											

FELT HOKIO BEACH (65)

JUL 27	H M S			37.87S	177.03E	152 KM	SE 1.3	AVG MAG	70/ 425			
	07 42 55.9	+ - 1.4							0.07	0.05	10	W-A
	KRP	EP	S	07 43 22.4		DIR	RES	DIST	AZ			
				44			-0.9	1.24	253			
	TUA	EP	S	07 43 25			1.7	1.24	176		4.4	4.3
				45			0.7					
	GNZ	P	S	07 43 23.3			-0.7	1.33	144		4.0	4.3
				45			-0.8					
	TRZ	EP	P	07 43 32			0.7	1.99	185		4.1	4.4
	CNZ	EP	P	07 43 33.2			1.7	2.00	215		3.9	3.7
	MNG	EP	P	07 43 46			-1.6	3.28	201		3.9	4.0
				44 26			-1.2					
	WEL	ES	P	07 44.47			0.3	4.11	205	4.5		4.0
	COB	ES	P	07 45 04			0.1	4.84	222			3.8

JUL 27	H M S			35.93S	178.63E	335 KM	SE 0.6	AVG MAG	70/ 426			
	10 38 26.4	+ - 0.6							0.05	0.07	9	W-A
	GNZ	P	S	10 39 22.9		DIR	RES	DIST	AZ		4.4	4.4
				40 04			0.0	2.75	190			
							-3.1*					
	TUA	EP	P	10 39 26			-0.1	3.11	202		4.8	
	KRP	EP	P	10 39 26.0			-0.8	3.18	230			
	TRZ	EP	P	10 39 33.8			-0.1	3.89	201		4.2	4.6
				40 27			0.2					
	CNZ	EP	P	10 39 36			0.1	4.08	216		4.2	
	TNZ	EP	P	10 39 43.8			1.4	4.69	225		4.1	
	MNG	EP	P	10 39 49			-0.2	5.30	207		4.7	4.0
				40 54			-0.3					
	WEL	ES	P	10 39 59			-0.1	6.14	208	4.9		
				41 12			0.2					
	COB	ES	P	10 40 08			-0.3	6.92	220			
				41 28			-0.2					

JUL 27	H M S			37.86S	177.60E	130 KM	SE 1.6	AVG MAG	70/ 427			
	12 31 18.6	+ - 1.2							0.04	0.09	11	W-A
	GNZ	IP	S	12 31 39.3		DIR	RES	DIST	AZ			
				40 04			-0.9	0.85	157			
	TUA	IP	S	12 31 42.2		D	0.4	1.01	201		6.0	5.9
				59			-0.6					
	KRP	IP	S	12 31 49.8		DNE	1.1	1.64	267			
	TRZ	IP	S	12 31 51.8		D	1.3	1.80	200			
	CNZ	IP	S	12 31 56.2			2.0	2.09	230		6.1	5.9
	GBZ	IP	S	12 31 56.9		U	-0.8	2.36	313			
	AUC	IP	S	12 32 00.3			1.3	2.46	293			
	TNZ	IP	S	12 32 07.0		D	2.7	2.85	241		5.8	5.4
	MNG	IP	S	12 32 08.1		D	-0.7	3.21	210			
	ONE	EP	S	12 32 11.0			0.5	3.33	308	5.1		
				47			-3.0					
	WEL	IP	S	12 32 18.7		D	-1.5	4.06	212	6.5	5.8	5.8
				33 06.3			-0.9					
	COB	EP	S	12 32 31			-1.2	4.96	228		5.6	5.8
				33 29			0.1					
	CRZ	P	S	12 32 37.7		U	1.6	5.25	309		5.1	
	KAI*	EP	S	12 32 57			2.0*	6.65	224	6.3		
				34 07			-2.8*					
	GPZ*	EP	S	12 32 56			-2.9*	6.94	211	6.0		
				34 11			-3.3*					
	CIZ*	EP	S	12 33 07			0.2*	7.52	146			
				10.3								
				34 27			-3.9*					
	MJZ	P	S	12 33 14.0			-1.4	8.16	219			
				34 41			-3.4*					

LOCAL EARTHQUAKES

167

OHZ* EP 12 33 22 -1.5* 8.78 213
 S 34 57 -4.2*
 ROX* EP 12 33 35.3 -1.5* 9.81 217
 S 35 20 -3.8*

FELT THROUGHOUT NORTH ISLAND, MAXIMUM INTENSITY MM IV
 PREFERRED SOLUTION FROM SPECIAL STUDY IS -
 12H 31M 20.1S 37.56S 177.70E 80 KM

JUL 27 H M S 70/ 428
 14 56 05.7 43.40S 170.97E 33 KM SE 0.8 AVG MAG 4.3
 +/- 0.3 0.02 0.03 3

H M S DIR RES DIST AZ W-A W P W S
 MJZ IPN 14 56 18.0 USW -0.4 0.69 212 4.4 4.0
 SN 27.3 -0.2
 KAI PN 14 56 21.8 0.0 0.93 20 3.8
 S* 35 -1.3
 GPZ PN 14 56 25.8 -0.3 1.25 104
 SN 41.3 0.1
 OHZ PN 14 56 32.3 1.0 1.67 181 4.6 4.5
 S* 57 -0.9
 ROX PN 14 56 42 0.3 2.39 209 4.1 4.0
 P* 48 0.1
 COB PN 14 56 46.6 1.2 2.66 30 4.6 4.2
 P* 53 0.5

FELT RATA PEAKS (107)

JUL 27 H M S 70/ 429
 18 37 25.0 40.01S 176.61E 12 KM SE 1.6 AVG MAG 3.9
 +/- 0.6 0.03 0.03 2

H M S DIR RES DIST AZ W-A W P W S
 TRZ IP* 18 37 34.9 D 0.5 0.48 20
 PG 37.0 2.0
 S* 41.3 0.1
 ESQ 44 2.3
 MNG IP* 18 37 43.3 U -0.6 1.05 234 3.6 3.8
 E 49
 E 52.3
 CNZ IP* 18 37 44.7 U -1.1 1.15 314 4.6 4.4
 ESQ 38 03 1.0
 TUA EPG 18 37 51 0.2 1.27 19 4.1
 E 38 01
 GNZ PN 18 37 51.3 -3.0 1.75 39 3.7 3.7
 PG 59.2 -1.2
 E 38 07
 ESN 12 -4.3*
 WEL EPN 18 37 58 1.6 1.89 227 3.3 3.9 3.9
 EPG 38 04 0.7
 ESN 21 1.4
 TNZ EP* 18 37 59 0.3 1.91 295 4.1 3.7
 EPG 38 03 -0.6
 ES* 23 -1.0
 KRP EPN 18 37 58 -3.2 2.24 338 3.7 3.6
 EP* 38 05 0.6
 E 38

FELT WAIPAWA AND WAIPUKURAU (60) MM IV

JUL 27 H M S 70/ 430
 23 44 27.2 37.76S 176.39E 296 KM SE 0.8 AVG MAG 4.1
 +/- 1.3 0.05 0.07 12

H M S DIR RES DIST AZ W-A W P W S
 KRP EP? 23 45 06 0.0 0.69 256
 TUA P? 23 45 08.4 -0.0 1.20 150 4.7
 GNZ P 23 45 10.3 -0.4 1.56 125 4.3 3.9
 S 44 -0.3
 CNZ P? 23 45 12 1.2 1.58 204 3.9
 MNG P 23 45 22.3 U -0.1 2.94 194 4.3 4.0
 S 46 06 0.5

COB		ES	23 46 32	-0.8	4.36	219				3.9	
JUL 28	H	H	S							70/ 431	
	14	09	35.2	38.22S	177.69E	12 KM	SE	1.1	AVG MAG	4.1	
			+ 0.4	0.03	0.02						
		H	H	S	DIR	RES	DIST	AZ	W-A	W P W S	
		GNZ	IP		14 10 09.3	0.8	0.49	148			
		TUA	P		14 10 08.5	-0.1	0.72	216	4.1	4.3	
			SG		20.3	0.7					
		ECZ	PN		14 10 11.9	-1.2	0.86	52	4.8	4.2	
			ESG		25	0.5					
		TRZ	EPN?		14 10 21	-0.4	1.49	207	4.2	3.9	
			PG		27	1.5					
		KRP	EP		14 10 25.8	-0.1	1.73	279			
			EPG		29.3	-0.9					
		MNG	ES		30	1.2					
			EPN		14 10 42	0.9	2.94	215	3.6	3.4	
		EPG		53	-1.7						
		ES		11 24	-1.2						
FELT WHATATUTU (36)											
JUL 28	H	H	S							70/ 432	
	16	09	23.3	34.92S	179.85E	447 KM	SE	1.3	AVG MAG	4.4	
			+ 1.9	0.44	0.50	32					
		H	H	S	DIR	RES	DIST	AZ	W-A	W P W S	
		GNZ	EP		16 10 38.3	-0.3	4.00	201	4.1	4.2	
			ES		11:39	0.5					
		TRZ	EP		16 10 31	0.6	5.22	207	4.4	4.2	
			ES		11:59	-0.1					
		MNG	EP		16 11:05	-0.3	6.66	210			
			ES		12:24	-2.0					
		HEL	ES		16 12:44	1.4	7.51	211	5.2		
		COB	ES		16 12:59	0.2	8.33	220			
	JUL 29	H	H	S							70/ 433
		04	18	37.5	38.62S	175.85E	158 KM	SE	1.4	AVG MAG	4.1
				+ 1.6	0.05	0.05	13				
		H	H	S	DIR	RES	DIST	AZ	W-A	W P W S	
		GNZ	P		04 19 01.8	1.2	0.63	202	3.6		
		KRP	P		04 19 01.0	-0.3	0.73	340			
			S		19	-0.6					
		TUA	EP		04 19 03	-0.3	1.03	101	4.0	4.3	
			S		24	0.5					
		TRZ	P		04 19 06.5	1.4	1.20	141	4.3	4.1	
			S		28	1.8					
		TNZ	EP		04 19 07	1.2	1.28	243	3.5		
		GNZ	ES		04 19 33	-2.2	1.78	92		3.6	
		MNG	IP		04 19 14.0	0.3	2.02	188	4.7	4.1	
			S		40	-1.5					
	HEL	ES		04 19 58	-0.3	2.79	197	4.0	4.0		
	COB	ES		04 20 12	-1.0	3.44	223		4.7		
JUL 29	H	H	S							70/ 434	
	04	50	00.9	37.65S	176.48E	220 KM	SE	1.3	AVG MAG	4.7	
			+ 0.9	0.05	0.05	8					
		H	H	S	DIR	RES	DIST	AZ	W-A	W P W S	
		KRP	P		04 50 32.3	0.8	0.79	250	4.6	5.0	
			S		55.5	-0.1					
		TUA	P		04 50 34	-0.8	1.27	156	4.8	4.8	
			S		51 01	-0.1					
		GNZ	IP		04 50 37.7	0.5	1.57	130			
			S		51 04	-1.3					
		ECZ	P		04 50 37.3	-0.1	1.64	92			
		GBZ	P		04 50 36.0	-1.9	1.64	331			
		CNZ	P		04 50 39.9	1.4	1.71	205	4.3	4.4	
		TRZ	P		04 50 41.3	1.0	1.91	172	4.8	5.1	
			ES		51 13	2.1					

LOCAL EARTHQUAKES

169

	TNZ	EP	04 50 46		2.2	2.25	226		4.1	3.8
	MNG	IP	04 50 52.4	D	-0.4	3.06	194			
		S	51 32.2		-0.7					
	VEL	EP	04 31 01.3		-0.8	3.86	200	5.0	4.4	5.0
		ES	48		-1.9					
	COB	EP	04 31 11		0.9	4.49	219		4.3	4.7
		ES	52 03		-0.9					
	KAI*	ES	04 32 39.3		-3.6*	6.23	217		4.7	
	GPZ*	ES	04 32 50		-4.1*	6.70	205		5.4	
	H	M	S						70/	435
JUL 29	23 14	30.9	38.23S	176.00E	193 KM	SE	1.4	AVG MAG	4.6	
		+ 1.0	0.05	0.04						
	KRP	P	23 14 57	DIR	RES	DIST	AZ	W-A	W P	W S
		S	15 17		-0.9	0.48	310			
	GNZ	IP	23 15 01.3	U	1.4	1.03	200		4.7	4.1
	TUA	P	23 15 01.0		0.2	1.07	123		4.7	4.7
		S	24		0.1					
	TRZ	IP	23 15 03.5	U	1.5	1.47	154		5.0	4.8
		S	32		2.3					
	TNZ	P	23 15 07		1.8	1.58	233		4.3	3.8
	GNZ	IP	23 15 05.9	D	0.1	1.64	105		4.4	4.7
		S	31		-1.6					
	ECZ	P	23 15 09.6		-0.7	2.09	76			
		S	40.3		-0.3					
	MNG	IP	23 15 14.0		0.1	2.41	189			
	ONE*	E(S)	23 15 53		-1.9*	2.78	331	3.8		
	WEL	P	23 15 22.3		-0.6	3.19	197	5.0	4.3	5.1
		ES	16 01		-2.4					
	COB	P	23 15 31		0.3	3.80	220		4.1	4.6
		S	16 16		-0.8					
	KAI*	ES	23 16 52		-4.4*	5.54	218	4.8		
	GPZ*	S	23 17 02.8		-4.8*	6.02	204	5.2		
	MSZ*	EP	23 16 34		-1.9*	8.84	221			
		ES	18 07		-6.6*					
	H	M	S						70/	436
JUL 30	06 05	06.5	38.89S	177.73E	33 KM	SE	0.6	AVG MAG	3.9	
		+ 1.0	0.02	0.02						
	GNZ	IPN	06 05 15	DIR	RES	DIST	AZ	W-A	W P	W S
	TUA	PN	06 05 16.0	D	0.3	0.33	41			
		SN	23.3		-0.3	0.47	280			
		S*	24.2		-0.1					
	TRZ	PN	06 05 24.0		0.8	0.98	227		4.1	3.9
		S*	39		0.5					
	GNZ	PN	06 05 33.8		0.1	1.74	259		3.8	3.5
		ESN	54		-0.1					
	MNG	PN	06 05 42.2		-1.2	2.45	225			
		SN	06 12		0.5					
	WEL	ESN	05 36 32		-0.3	3.31	223	4.4		4.1
	COB	PN	06 06 08		-2.5*	4.43	239	3.9		3.7
		ESN	59		-0.6					
	H	M	S						70/	437
JUL 30	19 45	33.2	37.48S	177.55E	12 KM	SE	1.5	AVG MAG	4.5	
		+ 0.6	0.03	0.04						
	ECZ	IP*	19 45 48.3	DIR	RES	DIST	AZ	W-A	W P	W S
	GNZ	IP*	19 45 54.7	DN	-0.2	0.82	105			
		S*	46 13		-0.4	1.22	162		4.7	4.7
	TUA	PN	19 45 59		1.3	1.36	193		4.5	4.6
		SN	46 19		-0.2					
	KRP	PN	19 46 01.9		0.4	1.66	254			
		SN	23		0.5					
	GBZ	PN	19 46 05.0		-2.2	2.09	307			

TRZ	EPN	19 46 08	-0.0	2.15	195	4.5	4.7
	(Pg)	15	-1.5				
	ES*	40	3.6				
	ESG	45	-0.6				
AUC	IPN	19 46 11	0.9	2.30	285		
CNZ	PN	19 46 12.7	2.2	2.33	222	4.5	4.4
	PG	20	-0.4				
	SG	51	-0.8				
TNZ	PN	19 46 23.0	3.0	3.02	235	4.6	
MNG	PN	19 46 24	-2.8	3.52	207		
WEL	ESN	19 47 27	-0.8	4.37	209	4.9	4.7
	ES*	45	-1.2				
CRZ	PN	19 46 46.2	-0.3	4.99	306	4.2	
COB	EPN	19 46 48	-1.2	5.19	225	4.3	4.3
	ESN	47 50	2.4				
KAI*	ESN	19 48 29	0.6*	6.90	221	4.6	
GPZ*	ESN	19 48 32	-4.6*	7.25	209	4.7	
CIZ*	EPN	19 47 24	-0.9*	7.86	147		
	SN	48 45	-5.1*				
MJZ*	SN	19 49 02	-2.9*	8.44	217		

FELT TE KAHAKA AND RAUKOKORE (28) MM IV

H M S								70/ 438	
JUL 31	00 15 40.8	44.17S	168.01E	12 KM	SE 0.5	AVG MAG	4.4		
	+ 0.3	0.01	0.01						
		H M S	DIR	RES	DIST	AZ	W-A	W P	W S
MSZ	IP*	00 15 50.3		-0.1	0.50	188			
ROX	PN	00 16 08.6		0.2	1.60	145	4.8	4.8	
	PG	14		0.8					
	SN	28.3		-0.3					
MJZ	EPN	00 16 11		0.3	1.78	85	4.1	4.2	
	S*	36		0.1					
OHZ	EPN	00 16 17		-0.2	2.26	114	4.6	4.7	
	P*	20		-0.5					
	SN	45		0.8					
	SG	56.9		-0.9					
HPZ	EPN	00 16 21		-0.4	2.56	167		4.0	4.4
KAI	SG	00 17 21		-0.1	2.98	58	4.5		
GPZ	EPG	00 16 49		-0.2	3.38	84	4.2		
COB	EPN	00 16 49		-0.6	4.65	50	4.3	4.3	
	ESN	17 42		-0.2					
MNG	EPN	00 17 16		0.6	6.57	60			
	P*	34.8		0.5					

FELT JACKSON BAY (113) MM IV

H M S								70/ 439	
JUL 31	00 36 33.5	44.27S	167.78E	12 KM	SE 0.7	AVG MAG	4.1		
	+ 0.6	0.03	0.03						
		H M S	DIR	RES	DIST	AZ	W-A	W P	W S
MSZ	IP*	00 36 41.9		-0.2	0.42	166			
ROX	PN	00 37 02		0.5	1.63	138	4.3	4.1	
	SN	22		-0.2					
MJZ	EPN	00 37 09		-0.7	1.96	83	3.8	3.8	
	EP*	08		-0.0					
	EPG	12		-1.1					
	SN	30		0.4					
OHZ	EPN	00 37 12		0.5	2.38	111	4.3	4.4	
	P*	16		0.8					
	S*	46		-0.6					
KAI	SG	00 38 24		3.8*	3.17	58	4.1		
GPZ	ESG	00 38 34		0.6	3.56	82	3.8		
COB*	EPN	00 37 44		-0.8*	4.84	51			
	ESN	38 36		-3.4*					
	ES*	59		-1.6*					
	ESG	39 19		2.4*					

LOCAL EARTHQUAKES

171

JUL 31		H	M	S			12 KM	SF	1.2	AVG MAG	70/ 440
		+	-		0.03	0.04					3.9
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
WPZ	EPN	03	37	23.3		-0.4	1.44	104		3.7	4.1
	EP*			26		-1.9					
	SN			41.3		-0.2					
	ES*			44		-					
MSZ	EPN	03	37	28		-1.2	1.84	25		4.	4.1
	P*			32		1.0					
	S*			55.3		0.1					
ROX	EP*	03	37	32.3		-0.4	1.05	64		4.1	4.0
	EPG			36		-1.9					
	ESN			55		0.7					
	S*			59		0.4					
OHZ	ESG	03	38	43		-1.2	3.14	68		3.7	4.1
HJZ	EPG	03	38	09		-0.1	3.49	49		3.7	3.5
	ES*			47		2.0					
	ESG			59		2.9*					
GPZ	ESG	03	39	43		-0.7	4.90	59	3.0		

JUL 31		H	M	S			187 KM	SE	1.0	AVG MAG	70/ 441
		+	-		0.02	0.03					4.9
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
CNZ	IP	20	45	12.0	U	1.2	0.48	178			
KRP	IP	20	45	12.7	D	0.3	0.79	1			
	S			32		-1.4					
TNZ	IP	20	45	16	J	2.2	1.01	242		5.2	4.0
TUA	P	20	45	16		0.1	1.27	94		4.6	5.2
	S			39		-0.3					
TRZ	P	20	45	18.0		1.3	1.31	130		4.7	5.3
	S			41		0.7					
HNG	IP	20	45	22.2	U	0.2	1.90	181			
	S			49		-1.3					
AUC	IP	20	45	23		0.5	1.95	342			
GNZ	IP	20	45	22.7		0.1	1.96	89		4.8	4.9
	S			48.3		-3.1*					
GBZ	P	20	45	28.2		-0.5	2.50	359			
ECZ	P	20	45	29		-0.9	2.59	68			
WEL	IP	20	45	31.0	US	0.7	2.63	193	5.4	5.3	5.1
	S			46 04		-1.1					
ONE	EP	20	45	35		-0.7	3.08	342	3.9		
	ES			46 15		0.3					
COB	IP	20	45	36.9	U	-0.2	3.19	221		4.9	4.9
	S			46 17		-0.1					
CRZ	P	20	45	59.0		-0.1	4.85	331		4.2	
KAI*	EP	20	46	00		1.0*	4.92	216	4.8		
	S			55		-1.2*					
CHR*	EP	20	46	04		0.3*	5.28	204			
	ES			47 07		2.5*					
GPZ*	P	20	46	04.0		-1.5*	5.42	203	5.3		
	S			47 04.0		-3.9*					
HJZ*	EP	20	46	18.5		-1.0*	6.49	214			
	ES			47 29		-3.9*					
OHZ	P	20	46	26		-1.0	7.22	207			
ROX*	EP	20	46	40		-1.5*	8.17	212			
MSZ*	EP	20	46	40		-2.3*	8.23	221			
	ES			48 10		-3.7*					
HNW*	EP	20	46	54		-0.6*	9.17	217			

AUG 02		H	M	S			183 KM	SE	1.5	AVG MAG	70/ 442
		+	-		0.11	0.11					3.7
						23					

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	P	10	37	01.4		-0.7	1.06	246		3.3	
GNZ	P	10	37	06.3		0.2	1.52	139		3.8	4.1
	E			31.0							
	S			32.4		-0.2					
CNZ	P	10	37	12.1		-1.7	1.95	209		3.5	
MNG	P	10	37	23.0		-0.9	3.27	197		4.2	3.6
	S		38	06.7		-0.1					
AUG 03	H M S	14	19	46.1							70/ 443
	+			1.6	36.82S	177.62E	269 KM	SE	1.5	AVG MAG	4.3
					0.12	0.16	16				
ECZ	EP	14	20	24.0	DIR	RES	DIST	AZ	W-A	W P	W S
	S			54.2		-0.1	1.14	140		4.9	4.4
GNZ	P	14	20	27.4		0.6					
	S		21	03.9		-1.7	1.85	170		4.1	4.1
				06.9		1.5					
KRP	P	14	20	29.7		-0.5	1.99	236		3.8	
TUA	EP	14	20	30.0		-0.5	2.02	190			4.4
	E			52.6							
	ES			21 03.3		-1.7					
TRZ	EP	14	20	38.2		0.8	2.80	193			
	E			21 15.7							
	IS			18.9		-0.1					
CNZ	P	14	20	41.6		2.6	2.88	214		4.4	4.3
	I			21 28.3							
MNG	EP	14	20	52.7		-0.2	4.14	203			
	I			54.7							
	S		21	42.8		-0.8					
				44.1							
AUG 04	H M S	07	25	25.9							70/ 444
	+			1.7	37.96S	177.55E	97 KM	SE	1.3	AVG MAG	3.9
					0.07	0.05	16				
GNZ	IP	07	25	44.6	DIR	RES	DIST	AZ	W-A	W P	W S
	IS			59.1	UN	0.5	0.78	152		4.1	3.6
				43.7		1.2					
ECZ	EP	07	25	43.7		-0.9	0.83	72			4.2
	IS			58.7		-0.0					
TUA	ES	07	25	58.6		-1.3	0.91	200			3.8
KRP	IP	07	25	53.9	D	0.1	1.59	271		3.8	
	S		26	13.0		0.5					
AUG 04	H M S	14	01	18.4							70/ 445
	+			0.5	41.56S	173.75E	33 KM	SE	1.5	AVG MAG	4.2
					0.05	0.03	9				
HEL	IPN	14	01	32.3	DIR	RES	DIST	AZ	W-A	W P	W S
	IS			45.4	D	-0.5	0.81	71		4.2	4.6
				32.6		0.1					
COB	IPN	14	01	32.6	D	-1.4	0.90	301			
	ESN			45.3		-0.2					
MNG	IPN	14	01	42.2	D	-1.5	1.61	55		4.5	
KAI	EP	14	01	53.7		-0.3	2.00	240		3.9	
	ESN			02 11.0		-1.2					
CNZ	PN	14	01	58.6	D	-0.4	2.72	31			
TRZ	P	14	02	14.0		1.7	3.08	50		4.2	
MJZ	EPN	14	02	09.6		0.9	3.43	224			3.7
	E			11.9							
	ISN			49.0		1.8					
KRP	EPN	14	02	14.9		0.1	3.88	21		3.9	
	ESN			03 01.0		2.9					
GNZ	SN	14	03	08.2		-2.0	4.38	50			

LOCAL EARTHQUAKES

173

AUG 04		H	M	S				SE	1.1	AVG MAG	70/ 446
		16	26	40.7	38.47S	175.81E	165 KM				3.8
				+ - 1.3	0.05	0.03	10				
KRP	IP	16	27	04.0	DIR	RES	DIST	AZ	W-A	W P	W S
				22.3	U	-0.3	0.58	338		3.7	
CNZ	P	16	27	06.3	D	1.0	0.76	196		3.6	3.1
TUA	EP	16	27	05.2		0.3	1.10	108		3.7	3.8
	E			23.9							
TRZ	EP	16	27	11.3		1.1	1.34	144			4.3
	ES			34.0		1.2					
GNZ	P	16	27	14.1	D	-0.1	1.74	97		4.1	3.5
	S			39.9		-1.2					
MNG	IP	16	27	18.6	D	-0.4	2.17	187		4.4	3.6
	S			47.2		-1.3					
AUG 04		H	M	S				SE	ND	AVG MAG	70/ 447
		20	33	46.1	38.00S	176.20E	12 KM				2.9
				R	R	R	R				
KRP	EPG	20	33	56.8	DIR	RES	DIST	AZ	W-A	W P	W S
	(SQ)			34 04.6		-0.2*	0.53	278			2.9
FELT ROTORUA (33) MH IV											
AUG 05		H	M	S				SE	1.2	AVG MAG	70/ 448
		18	02	13.8	38.91S	175.69E	115 KM				4.5
				+ - 0.8	0.03	0.04	9				
CNZ	P	18	02	31.1	DIR	RES	DIST	AZ	W-A	W P	W S
					U	0.7	0.31	199			
WVZ	IP	18	02	32.0	U	1.0	0.43	50			
KRP	EP	18	02	35.3		-0.0	0.99	354		3.6	3.6
	I			35.9							
	S			51.2		-0.8					
TRZ	EP	18	02	37.4		0.7	1.10	126		4.6	5.3
	S			53.8		-0.7					
TUA	P	18	02	37.4	D	-0.0	1.15	85		4.5	4.2
MNG							1.72	185		4.7	4.5
GNZ	IP	18	02	45.4	D	-0.2	1.85	83		4.8	4.4
	S			03 07.7		-1.8					
WEL	P	18	02	52.7	U	-1.1	2.48	196		4.5	4.6
	S			03 25.1		1.2					
ECZ	IP	18	02	55.8	U	0.7	2.56	63		4.9	4.5
	IS			03 28.0		1.8					
COB	P	18	03	01.2		-1.5	3.14	225			4.5
AUG 06		H	M	S				SE	1.5	AVG MAG	70/ 449
		18	12	45.2	36.90S	178.02E	119 KM				3.9
				+ - 1.9	0.14	0.07	14				
ECZ	P	18	13	05.3	DIR	RES	DIST	AZ	W-A	W P	W S
	(S)			23.3	D	-0.9	0.90	152		4.5	4.3
GNZ	P	18	13	15.7	D	-0.2	1.74	180		3.9	3.8
	IS			38.3		-0.3					
KRP	P	18	13	21.3	U	-0.5	2.23	242		3.6	
	(S)			49.3		-0.3					
TRZ	EP	18	13	29.0		-1.0	2.82	199			
CNZ	EP	18	13	34.9		2.3	3.02	220			3.6
	E			14 21.6							
AUG 07		H	M	S				SE	1.7	AVG MAG	70/ 450
		00	23	30.1	34.36S	179.37E	367 KM				4.8
				+ - 1.0	0.10	0.17	14				
ECZ	P	00	24	35.3	DIR	RES	DIST	AZ	W-A	W P	W S
						5.5	3.40	191		4.9	4.9
	ES			25 23.0		-0.5					
GNZ	IP	00	24	34.6		-0.2	4.41	194		4.7	4.7

LOCAL EARTHQUAKES

175

		H	M	S	DIR	RES	DIST	AZ	W-A	M	P	W	S
TNZ	P	03	58	03.4	D	0.1	0.61	5				4.0	4.0
	E			15.3									
GNZ	P	03	58	09.1		0.7							
	S			18.1									
MNG	EP	03	58	10.7		0.6	1.13	59				4.4	4.2
	E	03	58	12.3		1.1	1.22	133					
WEL	P	03	58	13.3	U	0.3	1.53	167	3.7		4.4	4.4	
	S			33.0		-1.2							
COB	IP	03	58	16.0	U	0.1	1.76	222			4.5		
	S			38.7		-0.3							
KRP	EP	03	58	20.0		-0.1	2.10	28				3.5	
	ES			45.0		-1.3							
AUG 12	H	M	S									70/	455
	06	16	46.9	36.94S	175.64E	12 KM	SE	1.6	AVG MAG			3.7	
			+ 0.6	0.02	0.05								
AUC	P*	06	16	59.5	D	-0.4	0.70	276					
	SG			17 11.0		0.4							
GBZ	EP*	06	17	00.3		0.0	0.73	350			3.5	3.7	
	PG			01.2		-0.7							
KRP	S*			12.0		1.4							
	P*	06	17	03.0	U	-1.8	0.99	185			3.9	4.4	
ONE	IS*			13.6		-2.6							
	ESG	06	17	39.1		-0.3	1.55	318	3.2				
CNZ	P*	06	17	26.9		0.3	2.26	182			3.8	3.8	
	PG			31.2		-1.4							
GNZ	S*			58.9		2.6							
	SG			18 05.1		2.1							
MNG	E	06	17	41.3			2.54	133					
	EP*	06	17	51.1		0.3	3.67	182			3.3		
	E			34									
FELT MERCURY BAY (18)													
AUG 12	H	M	S									70/	456
	08	16	13.0	37.56S	176.23E	33 KM	SE	1.2	AVG MAG			4.1	
			+ 0.9	0.06	0.05								
ECZ	IP*	08	16	20.4	U	-0.1	0.29	119					
	IP*	08	16	31.8	D	-1.5	1.10	186				4.1	
GNZ	I			37.2									
	E			40.4									
TUA	S			45.3		0.3							
	E			48.2									
KRP	PN	08	16	38.5		1.5	1.51	214			4.3	4.2	
	PN	08	16	45.7		-0.3	2.16	259			4.0		
CNZ	I			47.2									
	ESN	08	16	17 10.4		-0.5							
	PN	08	16	53.4		0.5	2.67	231			3.8	3.9	
AUG 12	H	M	S									70/	457
	11	03	20.0	38.34S	176.07E	168 KM	SE	0.9	AVG MAG			3.8	
			+ 1.3	0.05	0.05	13							
KRP	P	11	03	43.4	D	-0.6	0.59	315					
	EP	11	03	47.5		1.3	0.95	205			3.7	3.3	
GNZ	E			04 09.0									
	EP	11	03	52.2		0.3	1.56	102			3.4	3.9	
ECZ	S			04 16.4		0.0							
	P	11	03	56.9	D	-0.4	2.06	72			4.5		
MNG	P	11	04	00.3		-0.0	2.32	191			3.7	4.2	
	S			30.7		-0.6							

AUG 12		H	M	S			12 KM	SE	1.0	AVG MAG	70/ 458					
		15	33	30.8	41.07S	172.57E					3.7					
				+ 1.0	0.08	0.03	R									
					H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S
COB	IPG.	15	33	32.9					-1.3	0.13	99					
HEL	EPN	15	34	00.2					0.8	1.68	98	3.6	3.9	4.2		
	P*			00.6					0.1							
	SN			20.7					0.5							
	S*			23.1					0.3							
KAI	EPG	15	34	04.3					-0.8	1.70	210	3.4				
	ES*			23.7					0.3							
MNG	EPN	15	34	08.4					1.3	2.26	79		4.0	3.7		
	ES*			39.1					-1.1							
GPZ										2.63	179	3.3				
FELT	COBB DAM (75) MM IV															
AUG 12		H	M	S			12 KM	SE	0.3	AVG MAG	70/ 459					
		16	05	37.7	37.00S	175.83E					3.4					
				+ 0.2	0.01	0.01	R									
					H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S
GBZ	P*	16	05	53.2					0.2	0.83	340		3.1	3.5		
	ES*			06 04.3					-0.1							
AUC	EP*	16	05	53					-0.4	0.86	279					
	SG			06 07					0.2							
KRP	EP*	16	05	55.1			U		0.1	0.95	194		3.3	3.6		
	IS*			06 07.9					0.0							
AUG 12		H	M	S			12 KM	SE	0.3	AVG MAG	70/ 460					
		18	57	39.5	37.00S	175.72E					3.6					
				+ 0.2	0.01	0.01	R									
					H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S
AUC	P*	18	57	54					0.4	0.76	280					
	SG			58 05.3					-0.2							
GBZ	P*	18	57	54.4					0.1	0.80	346		3.2	3.6		
	ES*			58 05					-0.2							
KRP	P*	18	57	56.4					-0.1	0.94	189		3.5	4.0		
	S*			58 09.2					-0.0							
AUG 12		H	M	S			231 KM	SE	1.4	AVG MAG	70/ 461					
		21	35	16.0	36.83S	177.23E					4.2					
				+ 1.8	0.10	0.09	R									
					H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S
GBZ	EP?	21	35	52.0					-1.0	1.53	293		3.7			
KRP	P	21	35	55.0					0.3	1.74	230					
	ES			36 26					1.3							
GNZ	P	21	35	57.2			D		0.8	1.92	161		4.2	4.4		
	IS			36 27.2					-0.4							
CNZ	EP	21	36	05.0					0.4	2.72	209		4.0	3.8		
	ES			41					-1.3							
MNG	E	21	36	17.0			U			4.02	199		4.9	4.5		
AUG 13		H	M	S			12 KM	SE	1.4	AVG MAG	70/ 462					
		00	03	05.0	37.02S	175.69E					4.3					
				+ 0.5	0.03	0.04	R									
					H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S
AUC	IP*	00	03	17.9					-0.4	0.72	283					
GBZ	P*	00	03	19.0			U		-1.0	0.81	350					
KRP	IP*	00	03	21.0			D		-0.9	0.90	186		4.5	4.8		
	PG			23.1					-0.3							
	ES*			34					0.2							
ONE	EP*	00	03	33.9					-0.3	1.62	320	4.0				
CNZ	P*	00	03	42.2					-1.1	2.18	182		4.8	4.6		
	E			46.0												
	PG			48.0					-1.0							
	E			04 04												
TNZ	EPN	00	03	43.4					0.4	2.38	204		4.1	4.2		

LOCAL EARTHQUAKES

179

GNZ	EPN	00 50	15.1	-0.4	2.93	63	4.1	4.6
	E		19.2					
	E		43.7					
	E		29.1					
	ESN		47.3	-1.0				
KAI	EPN	00 50	25.3	2.2	3.51	224	4.8	
	SN		51 03.0	0.1				
GPZ	EPN	00 50	28	-1.8	3.97	212		
	ESN		51 10	-4.0*				
HJZ	EPN	00 50	45.7	0.6	5.05	217	4.	4.0
	P*		58.8	-1.1				
	SN		51 38.0	-2.3				

AUG 15	H M S						70/ 469
	05 47 19.2	37.00S	175.72E	12 KM	SF	0.2	AVG MAG 3.5
	+ 0.1	0.00	0.01	R			
	H M S	DIR	RES	DIST	AZ	W-A	W P W S
AUC	EP*	05 47 33.3	0.0	0.77	280		
	ESG		45.4	-0.0			
GBZ	EP*	05 47 34.1	-0.0	0.81	346	3.5	
	S*		49.2	0.0			
KRP	P*	05 47 36.0	-0.2	0.93	189	3.2	3.8
	S*		49.0	0.2			
FELT COROMANDEL (18)							

AUG 15	H M S						70/ 470
	10 46 54.5	36.97S	175.67E	12 KM	SE	0.7	AVG MAG 3.5
	+ 0.4	0.01	0.03	R			
	H M S	DIR	RES	DIST	AZ	W-A	W P W S
AUC	EP*	10 47 08.0	0.1	0.72	279		
	ESG		19.0	-0.0			
GBZ	EP*	10 47 08.3	-0.4	0.77	349	3.7	
	ES*		19.2	0.0			
KRP	P*	10 47 12.2	0.2	0.96	186	3.4	3.5
	IPG		14.9	0.9			
	IS*		24.0	-0.9			
FELT COROMANDEL (18), MH IV							

AUG 15	H M S						70/ 471
	18 10 51.7	37.02S	175.69E	12 KM	SE	1.1	AVG MAG 3.9
	+ 0.5	0.02	0.04	R			
	H M S	DIR	RES	DIST	AZ	W-A	W P W S
AUC	P*	18 11 05.7	0.6	0.72	283		
	SQ		17.0	0.8			
GBZ	P*	18 11 05.6	-0.1	0.81	350		
	S*		13.6	0.8			
KRP	P*	18 11 08.7	0.6	0.91	186	3.9	4.3
	PQ		11.0	0.8			
	ES*		21.0	0.3			
ONE	EPG	18 11 24.2	-0.3	1.62	320	3.3	
	E		29.3				
	ESG		44.6	-1.8			
CNZ	EP*	18 11 31.3	1.4	2.18	182		
	PG		34.3	-1.5			
	ESN		52.3	-0.7			
	ES*		57.9	-1.0			
FELT COROMANDEL PENINSULA (18), MH III - IV							

AUG 15	H M S						70/ 472
	18 11 40.0	37.00S	175.60E	12 KM	SF ND		AVG MAG 3.9
	R	R	R	R			
	H M S	DIR	RES	DIST	AZ	W-A	W P W S
GBZ	EP*	18 11 04.3	-0.0*	0.79	353		
	ES*		12 05.3	0.2*			
KRP	EP*	18 11 56.2	-0.7*	0.92	183	3.9	3.8
	ES*		12 09.6	0.2*			
CNZ	EPG	18 12 27.0	2.5*	2.20	181		

AUG 16		H	M	S	37.975	177.13E	12 KM	SE	1.4	AVG MAG	70/ 473
		+	-	0.4	0.02	0.02	?				4.5
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
TUA	P*	15	46	25.9	U	1.0	0.84	180		4.5	4.8
	IS*			36.3		0.1					
GNZ	IP*	15	46	27.0	D	0.1	0.96	135			
	S*			39.3		-0.4					
ECZ	IP*	15	46	31.1	D	1.2	1.14	76		5.2	4.9
	EPQ			32.4		-0.1					
	ES*			44.3		-0.7					
	E			52.0							
KRP	IP*	15	46	35.1	D	2.8	1.28	271			4.0
	ES*			46.8		-2.7					
TRZ	PN	15	46	36.0		-1.0	1.60	189			4.8
	PG			40.2		-1.7					
CNZ	P*	15	46	40.2	D	-0.4	1.76	225			4.5
	E			58							
AUC	IP*	15	46	48.2		0.2	2.19	300			
GBZ	IP*	15	46	48.1	D	-0.0	2.20	322			
	E			57.0							
TNZ	EPN	15	46	51.6		2.5	2.49	240		4.4	3.8
	P*			54.7		1.6					
	S*			47 26.0		0.1					
	E			29.8							
MNG	EPN	15	46	53.2		-2.1	2.95	206		4.3	4.4
	E			47 04.0							
	ES*			41.0		1.4					
ONE	EP*	15	47	02.3		-1.5	3.13	314			
	E			06.1							
WEL	EPN	15	47	06.3		-0.1	3.79	208	4.7	4.3	4.7
	EP*			15.3		0.1					
	E			46.0							
	ES*			54.3							
	E			48 04.3		-0.3					

FELT BAY OF PLENTY, MM III - IV

AUG 16		H	M	S	37.005	175.64E	12 KM	SE	1.2	AVG MAG	70/ 474
		+	-	0.6	0.02	0.06	R				3.8
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
AUC	P*	16	04	47.3		0.7	0.70	281			
GBZ	EP*	16	04	48.3		0.2	0.79	351			
	S*			05 00.0		1.2					
KRP	IP*	16	04	51.0	D	0.6	0.93	185		4.0	
	PG			53.0		0.6					
	S*			05 03.4		0.4					
ONE	EPQ	16	05	04.9		-0.9	1.60	319	3.4		
	SQ			26.3		-1.1					
CNZ	EP*	16	05	12.0		-0.2	2.20	182		4.1	4.1
	E			14.0							
	EPQ			16.9		-1.1					
	ESQ			46.1		-1.6					
TNZ	EPN	16	05	12.4		0.6	2.40	204		3.7	3.8
	P*			15.0		-0.6					
	PG			20.0		-2.1					
	SN			42.3		1.9					
	S*			48.8		1.5					
GNZ*	EP*	16	05	18.1		0.7*	2.50	132			
	E			27.4							

FELT COROMANDEL PENINSULA (18)

AUG 16		H	M	S	36.945	175.67E	12 KM	SE	1.3	AVG MAG	70/ 475
		+	-	0.7	0.02	0.05	?				4.4

LOCAL EARTHQUAKES

		H	M	S	DIR	RES	DIST	AZ			
AUC	IP*	23	07	42.0	U	2.5	0.72	276			
GBZ	EP*	23	07	41.0		0.2	0.74	348			
	EPQ			43.0		0.8					
KRP	IP*	23	07	45.2	DN	0.1	0.99	180			
	PG			47.2		-0.0					
	S*			58.0		-0.5					
ONE	P*	23	07	55.3		0.8	1.57	317	4.1		
	PG			58.3		0.2					
	ES*	08	14.8			-1.1					
	ESQ			19.3		-1.8					
GNZ	EP*	23	08	07		0.2	2.26	182	4.9	4.7	
	PG			10.6		-2.2					
TNZ	EPN	23	08	07		0.7	2.46	204	4.3	4.1	
	EP*			09.3		-1.0					
	ISN			36.9		1.4					
GNZ*	PG	23	08	20.0		1.8*	2.53	133	4.5		
	EP*			12.2		1.5*					

FELT COROMANDEL PENINSULA (18), MM IV

AUG 17	H	M	S		DIR	RES	DIST	AZ	W-A	P	S
	00	56	46.1	36.93S	178.11E	226 KM	SE	1.6	AVI	147	70/ 476
			+ 2.2	0.15	0.15	20					3.7
GNZ	IP	00	57	24.6	U	0.8	1.66	182	4.2	4.1	
	IS			52.4		-0.5					
KRP	EP	00	57	28.0		-1.4	2.26	245	3.2		
GNZ	P	00	57	38.1		0.6	3.00	222	3.5	3.3	
	ES			53.17		1.5					
MNG	EP	00	57	51.8		0.3	4.17	209	3.6	3.8	
	ES			58 41		-1.3					

AUG 17	H	M	S		DIR	RES	DIST	AZ	W-A	P	S
	04	56	29.9	39.21S	174.93E	221 KM	SE	1.4	AVI	141	70/ 477
			+ 1.4	0.07	0.05	11					4.6
TNZ	EP	04	57	00		0.6	0.43	273			
	ES			22		-0.1					
GNZ	IP	04	56	59.9	D	0.4	0.48	89			
KRP	IP	04	57	03.7	D	-1.0	1.37	20	4.3		
MNG	IP	04	57	06.1	U	0.6	1.47	163	4.6		
	E			25.6							
TRZ	IP	04	57	08.0	U	2.3	1.50	104	4.7	4.6	
	S			35.0		1.5					
TUA	EP	04	57	08.0		-0.2	1.77	78	4.6		
HEL	EP	04	57	10.3		-0.3	2.08	183	4.6	4.2	4.9
	ES			41.3		-1.6					
GNZ	IP	04	57	15.0	D	-0.2	2.47	78	4.7	4.5	
	E			43.3							
	IS			48.3		-2.0					

AUG 17	H	M	S		DIR	RES	DIST	AZ	W-A	P	S
	13	37	37.0	36.37S	175.57E	12 KM	SE	1.6	AVI	143	70/ 478
			+ 0.7	0.02	0.09	3					4.1
GBZ	EP*	13	37	50.7		-0.2	0.75	355			
	S*			38 02.4		1.1					
KRP	IP*	13	37	52.7	DN	-1.7	0.96	181	4.3	4.5	
	PG			54.3		-1.7					
	S*			38 05.0		-2.4					
ONE	EP*	13	38	06		1.7	1.53	320	3.4		
	EPQ			06.3		-1.2					
	ESQ			25.3		-1.9					
GNZ	EP*	13	38	15.0		-3.2	2.23	180	4.4		
TNZ	EPN	13	38	16.3		0.9	2.41	203			3.8
	ESN			45.0		2.0					
	S*			52.2		1.2					

	ES		49.3		0.8				
	E		56.0						
GNZ	IP		13 45 35.5	ONE	-0.1	1.55	169		
	P		58.0		-1.6				
TUA	SP		13 45 37.1	U	-0.4	1.74	193	5.0	5.3
	S		46 03.3		0.2				
KRP	IP		13 45 39.4	D	0.4	1.87	244	4.5	4.0
	S		46 06.1		0.3				
GBZ	EP		13 45 38.4		-1.7	1.97	296	3.6	
AUC	P		13 45 44.9		0.5	2.32	275		
TRZ	EP		13 45 46.7		-0.1	2.52	195	4.9	5.4
	ES		46 19.6		0.2				
CNZ	P		13 45 48.7	D	0.1	2.67	218	4.7	4.7
	S		46 27.5		4.9*				
TNZ	EP		13 45 57.4		0.6	3.31	230	4.2	
MNG*	EP		13 46 01.3		-2.9*	3.89	205	5.1	5.0
	M		38.3						
	S		42.0		-8.4*				
HEL*	EP		13 46 12.9		-2.3*	4.73	207	5.5	4.7 5.2
	ES		47 06.5		-3.5*				

AUG 19 H M S 37.01S 175.52E 12 KM SE 1.5 AVG MAG 70/ 486
 +. 0.7 0.03 0.07 R 4.2

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
AUC	IP*	15	28	36.0		0.8	0.61	284			
GBZ	EP*	15	28	37.0		-1.2	0.79	358			
KRP	IP*	15	28	39.2	D	-1.2	0.92	179			
	PG			41.0		-1.3					
	S*			52.0		-0.8					
ONE	EP*	15	28	52.8		1.7	1.54	322	3.9		
	SG		29	15.0		-0.8					
CNZ	EP*	15	29	00.5		-1.6	2.19	179	4.6	4.6	
TNZ	EPN	15	29	00.8		-0.5	2.36	202	4.4	4.5	
	PG			09.0		-2.3					
	SN			31.2		-1.8					
	M			37.2							
ECZ*	EPN	15	29	09.0		1.5*	2.51	107			4.4
	M			21.0							
	M			27.0							
GNZ*	EPN	15	29	05.1		0.7*	2.57	130	4.3	4.0	
	PG			16.2		0.6*					
	ESN			36		1.0*					
	ISG			52.4		2.2*					
TRZ	EP*	15	29	13.7		2.1	2.74	158	4.3		
MNG	EPN	15	29	19.3		1.0	3.61	180	4.1	3.7	
	P*			28.0		1.6					
	SG		30	25.7		0.5					

FELT COROMANDEL PENINSULA (18)

AUG 21 H M S 38.26S 176.00E 183 KM SE 1.2 AVG MAG 70/ 487
 +. 1.5 0.07 0.05 10 4.0

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	IP	06	49	13.5	D	0.4	0.50	313			
	S			33.0		0.2					
CNZ	EP	06	49	15.2		-0.7	1.00	201	3.4	3.6	
	S			37.1		-0.8					
TUA	IP	06	49	17.0		0.6	1.05	121	4.3	4.2	
TRZ	EP	06	49	19.1		-0.6	1.44	154	4.3	4.5	
	S			46.2		1.7					
GNZ	EP	06	49	22.0		0.4	1.63	104	3.5	4.0	
	S			46.5		-1.3					

LOCAL EARTHQUAKES

185

AUG 21 09 41 05.3 37.02S 175.85E 12 KM SE 0.6 AVG MAG 70/ 488 3.4
 +/- 0.5 0.02 0.03
 H M S DIR RES DIST AZ W-A M P W S
 GBZ EP* 09 41 21 0.0 0.85 339
 AUC ESG 09 41 35 -0.1 0.88 280
 KRP EP* 09 41 23.0 0.5 0.94 195 3.4 3.5
 S* 35.4 0.2
 CHZ EPQ 09 41 49 -0.7 2.18 186 3.5 3.2
 FELT COROMANDEL (15), MM IV

AUG 21 17 35 44.3 37.00S 175.66E 12 KM SE 0.1 AVG MAG 70/ 489 3.5
 +/- 0.1 0.00 0.00
 H M S DIR RES DIST AZ W-A M P W S
 AUC ESG 17 36 09 0.0 0.72 281
 GBZ EP* 17 35 59 -0.0 0.80 349
 KRP EP* 17 36 01.3 0.1 0.93 186 3.3 3.8
 S* 13.7 -0.1
 FELT COROMANDEL (18), MM IV

AUG 21 20 45 21.0 37.00S 175.60E 12 KM SE ND AVG MAG 70/ 490 2.9
 R R
 H M S DIR RES DIST AZ W-A M P W S
 GBZ EP* 20 45 35.2 -0.3* 0.79 353 2.9 3.1
 PG 36.8 -0.2*
 S* 46.0 -0.3*
 KRP EPQ 20 45 40.4 0.6* 0.92 183 2.7 3.1
 S* 50.2 -0.2*
 FELT WAIOHU (21), MM IV

AUG 22 02 13 45.0 37.00S 175.60E 12 KM SE ND AVG MAG 70/ 491 3.4
 R R
 H M S DIR RES DIST AZ W-A M P W S
 GBZ P* 02 13 59.3 -0.0* 0.79 353 3.4 3.7
 EPG 14 00.9 -0.1*
 S* 10.0 -0.3*
 KRP EP* 02 14 02.4 0.3* 0.92 183 3.0 3.4
 S* 14.9 0.5*
 FELT WAIOHU (21), MM IV

AUG 22 12 28 39.8 42.00S 171.95E 12 KM SE 0.7 AVG MAG 70/ 492 3.5
 +/- 0.3 0.02 0.03
 H M S DIR RES DIST AZ W-A M P W S
 KAI EP* 02 28 52.7 0.5 0.67 218 3.7
 S* 29 00.9 -0.6
 COB P* 02 28 59.4 0.1 1.08 33 4.2 4.6
 S* 29 13.6 -0.3
 GPZ EPQ 02 29 15.0 -0.6 1.77 164 2.8
 ES* 35.0 0.4
 WEL 2.22 72 3.0
 MJZ EP* 02 29 20.4 0.7 2.27 208 3.2 3.1
 S* 50.4 0.8
 SQ 55.4 -0.9

AUG 22 08 22 30.8 33.47S 178.57W 45.9 KM SE 1.8 AVG MAG 70/ 493 5.4
 +/- 2.2 0.31 0.44
 H M S DIR RES DIST AZ W-A M P W S
 GNZ EP 08 24 04.4 -0.4 5.85 237 5.1 5.1
 S 23 17.3 -1.5
 KRP EP 08 24 10.2 -1.5 6.52 225
 TRZ EP 08 24 17.9 -0.0 7.11 210

LOCAL EARTHQUAKES

187

AUG 23		H	M	S	38.73S	173.93E	12 KM	SF	1.4	AVG	MA3	70/ 499
		+	-	0.5	0.03	0.03	3					4.4
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
TNZ	IP*	04	07	26.1	U	0.1	0.55	146		4.3	4.3	
	E			29.9								
CNZ	P*	04	07	38.9		-0.0	1.31	112		4.4		
	E			46.1								
	S*			54.2		-2.0						
KRP	P*	04	07	40.7		-0.9	1.46	57				
	S*			59.3		-1.3						
TRZ	PN	04	07	55.3		2.1	2.35	111		4.3	4.4	
	ES*			08 29.9		2.0						
	E			44.3								
COB	EPN	04	07	55.9		-0.1	2.54	202		4.4	4.6	
	ESN			08 24.4		-1.9						
	S*			34.0		0.4						
	SG			41.0		-0.3						
WEL	P*	04	08	02.0		0.5	2.62	167	4.1	4.4	4.7	
	SN			34.0		3.8*						
GBZ	EPN	04	08	00.0		0.9	2.78	26				
	ESN			32.5		0.6						
AUG 23		H	M	S	37.00S	175.60E	12 KM	SE	ND	AVG	MA3	70/ 500
		R			R	R	3					3.0
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
GBZ	EP*	11	08	29.3		-0.2*	0.79	353		2.9	2.7	
	ES*			40.2		-0.1*						
KRP	EP*	11	08	31.3	U	-0.1*	0.92	183		3.2	3.1	
	S*			44.3		-0.1*						
FELT WAIOHOU (21), MM IV												
AUG 24		H	M	S	38.69S	177.79E	33 KM	SE	1.4	AVG	MA3	70/ 501
		+	-	0.7	0.07	0.06	3					4.5
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
GNZ	IP*	06	05	47.7	J	-0.3	0.19	76				
TUA	P*	06	05	51.1	U	-1.3	0.51	256		5.1	5.3	
	S*			59.2		-0.9						
TRZ	P*	06	06	01.3		-1.2	1.14	221		5.1	5.0	
CNZ	EPN	06	06	11.2		1.3	1.82	253		4.9	4.8	
	P*			14.3		0.2						
KRP	EPN	06	06	18.9		-0.5	1.93	293		4.5	4.0	
	I			15.8								
	I			17.2								
MNG	PN	06	06	19.4		-1.3	2.62	222		4.3	4.2	
	E			30.1								
	SN			52.2		1.5						
TNZ	PN	06	06	24.4		2.4	2.70	258		4.2	4.0	
GBZ	EPN	06	06	27.2		0.1	3.07	323		3.2		
FELT GISBORNE (45), MM III												
AUG 24		H	M	S	36.24S	175.67E	12 KM	SF	1.7	AVG	MA3	70/ 502
		+	-	0.8	0.03	0.05	3					3.4
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
AUC	EP*	07	42	17.3		0.5	0.72	276				
	SG			28.9		0.0						
GBZ	EP*	07	42	18.0		0.0	0.73	348		3.5		
	S*			28.1		0.0						
KRP	EP*	07	42	20.3		-0.7	0.99	186		3.4	3.8	
	PQ			23.0		-0.6						
	S*			33.0		-1.0						
ONE	ES*	07	42	51.1		0.0	1.57	317	2.0			
	SG			55.3		-1.1						

	CNZ	EPG	07 42 47.8	-1.4	2.26	182		3.5	3.5
		ESG	43 23.0	3.3					
	FELT COROMANDEL PENINSULA (18), MM IV								
	H	M	S					70/	503
AUG 24	14	07	04.3	36.98S	175.60E	12 KM	SE 0.6	AVG MAG	3.3
			+ 0.3	0.01	0.03	3			
	AUC	EPG	4 M S	DIR	RES	DIST	AZ	W-A	W P W S
	GBZ	EP*	14 07 18.0		0.1	0.67	280		
		EPG	14 07 18.7		0.2	0.77	353		3.2
		S*	20.0		0.1				
		S*	29.7		-0.3				
	KRP	EP*	14 07 21.0		-0.5	0.94	183		3.2 3.9
		S*	34.0		-0.3				
	ONE					1.56	320		2.7
	CNZ	EPG	14 07 50.0		0.8	2.22	181		3.4 3.5
		SG	08 23.5		4.4*				
	FELT COROMANDEL PENINSULA (18), MAXIMUM INTENSITY MM V AT WAIOMU (21)								
	H	M	S					70/	504
AUG 25	16	07	12.7	36.94S	175.82E	12 KM	SE 1.1	AVG MAG	3.5
			+ 1.0	0.04	0.05	3			
	AUC	P*	4 M S	DIR	RES	DIST	AZ	W-A	W P W S
		SG	16 07 29.0		0.8	0.84	275		
	KRP	P*	16 07 31.8	D	0.8	1.01	193		3.6 3.9
		PG	34.1		0.9				
		S*	44.4		-0.3				
	ONE	EPG	16 07 45.7		-0.5	1.66	314		3.0
	CNZ	EPG	16 07 57.1		-1.5	2.27	185		3.5 3.5
		E	08 26.8						
	FELT COROMANDEL (18), WAIOMU (21)								
	H	M	S					70/	505
AUG 26	07	18	20.5	34.17S	179.24W	525 KM	SE 2.0	AVG MAG	4.8
			+ 2.4	0.34	0.56	28			
	ECZ	EP	4 M S	DIR	RES	DIST	AZ	W-A	W P W S
		ES	07 19 42		1.2	3.95	206		5.2 4.8
	GNZ	EP	20 46		1.4				
		ES	07 19 48.0		-1.4	4.98	206		4.9 4.6
		ES	20 58.0		-1.9				
	KRP	EP	07 19 53		-2.5	5.65	227		4.6
	TRZ	EP	07 20 01		0.0	6.23	209		
		ES	21 22		1.3				
	CNZ	EP	07 20 03		-0.9	6.54	218		
	TNZ	EP	07 20 13		2.9	7.17	224		
	MNG	EP	07 20 16.0		0.7	7.69	212		
		ES	21 46		-0.6				
	H	M	S					70/	506
AUG 26	15	28	42.0	37.00S	175.60E	12 KM	SE ND	AVG MAG	2.8
		R		R	R	R			
	GBZ	EP*	4 M S	DIR	RES	DIST	AZ	W-A	W P W S
		ES*	15 28 56.5		0.1*	0.79	353		
		EP*	29 08.0		0.7*				
	KRP	P*	15 28 58.7		-0.2*	0.92	183		2.8 2.8
		S*	29 11.0		-0.4*				
	FELT WAIOMU (21), MM III								
	H	M	S					70/	507
AUG 26	17	45	20.5	36.98S	175.69E	12 KM	SE 1.4	AVG MAG	4.6
			+ 0.3	0.02	0.02	3			
	AUC	IP*	4 M S	DIR	RES	DIST	AZ	W-A	W P W S
	GBZ	EP*	17 45 34.1		-0.1	0.74	279		
		IP*	17 45 35.0		0.1	0.78	347		
	KRP	IP*	17 45 37.0	D	-0.8	0.95	187		

LOCAL EARTHQUAKES

191

		H	M	S	DIR	RES	DIST	AZ	W-A	M P	W S
FCZ	P	22	48	25.3		0.1	2.26	226		5.6	5.6
	ES			26.3		0.5					
GNZ	EP	22	48	36.2		-1.1	3.23	219		5.1	
	S		49	16.2		-0.9					
GBZ	EP	22	48	48		-1.0	4.14	268			
KRP	EP	22	48	52.6		0.0	4.42	245		4.7	4.4
	S		49	44.3		-0.4					
TRZ	EP	22	48	59.9		1.9	4.53	220		4.9	5.4
	ES		49	40.3							
	S			48.4		1.5					
GNZ	P	22	49	01.4		0.8	5.03	231		4.9	5.0
MNG	P	22	49	11.9		-1.5	6.01	220			
	E		50	01							
	S			21		-0.6					
CRZ	P	22	49	23.3		0.9	6.70	282			
AUG 28											
	H M S	23	25	45.6	37.00S	175.69E	12 KM	SE	1.8	AVG MAG	7.0 / 5.15
				+ 1.4	0.05	0.12	3				3.8
	H M S										
AUC	P*	23	26	00.5		1.2	0.74	280			
GBZ	EP*	23	26	01.0		0.7	0.79	346			
KRP	IP*	23	26	03.3		0.9	0.93	187		4.0	4.2
	S*			16.1		0.7					
ONE	SQ	23	26	39.3		-1.1	1.62	318	3.4		
GNZ	PG	23	26	27.3		-2.3	2.20	183		3.8	3.7
FELT TAIRUA (18)											
AUG 29											
	H M S	00	31	43.2	33.58S	179.25W	254 KM	SE	1.6	AVG MAG	7.0 / 5.16
				+ 1.7	0.09	0.11	28				5.1
	H M S										
ECZ	EP	00	32	52.3		-1.1	4.48	203		5.4	5.2
	S		33	47.9		-0.3					
GBZ	EP	00	33	01.0		0.5	5.07	237			
GNZ	EP	00	33	03.4		-2.6	5.52	203		5.1	4.9
	S		34	11.4		0.6					
ONE	P	00	33	09.6		1.3	5.70	246	5.2		
KRP	EP	00	33	14.2		1.4	6.06	223			
TRZ	EP	00	33	22.0		0.5	6.75	207			
	ES		34	40.3		1.9					
CRZ	P	00	33	23.0		1.5	6.76	261			
	ES		34	36.6		-1.9					
GNZ	EP	00	33	25.6		0.9	7.00	215			
MNG	EP	00	33	36.0		-1.7	8.19	209			
	ES		35	10		-1.0					
AUG 29											
	H M S	19	10	08.8	44.02S	166.89E	12 KM	SE	1.3	AVG MAG	7.0 / 5.17
				+ 1.0	0.06	0.06	3				4.3
	H M S										
ROX	P*	19	10	50.6		2.1	2.26	131			4.5
	SN		11	09.0		-3.3*					
HJZ	PN	19	10	49.0		-0.7	2.58	90		3.9	4.0
	EP*			54.1		0.1					
	E			56.7							
	PG		11	00.0		-1.0					
	SN			20.5		0.1					
	S*			29.2		1.2					
HPZ	EPN	19	10	54.4		-3.8	2.98	153			4.1
OMZ	PH	19	10	55.4		-0.8	3.86	111		4.6	4.5
	P*		11	03.7		1.5					
	SN			32.0		0.2					
	S*			40.6		-1.0					
GPZ							4.17	88	4.1		
COB	EPN	19	11	24.9		-0.3	5.22	58			

AUG 30		H	M	S					70/ 516			
	01 07	55.1			39.59S	174.78E	111 KM	SE	0.5	AVG MAG	3.8	
		+ 0.5			0.02	0.02	4					
			H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
TNZ	EP		01 08	12.3			0.2	0.51	322			3.3
	ES			25.3			-0.2					
CNZ	IP		01 08	14.0	D		0.1	0.71	57		4.3	3.5
MNG	EP		01 08	19			0.5	1.16	153		3.8	4.2
	S			35.7			-0.3					
WEL	EP		01 08	24.5			-0.3	1.69	180	3.2		4.0
	EP			09 11.0								
COB	EP		01 08	30.3			-0.5	2.17	226		3.8	3.9
	ES			58.0			0.4					
AUG 30		H	M	S					70/ 519			
	19 59	16.4			40.30S	175.14E	33 KM	SE	1.4	AVG MAG	3.8	
		+ 0.5			0.03	0.04	2					
			H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
MNG	P*		19 59	25.0			-0.4	0.40	142			
	S*			32.3			0.4					
WEL	PN		19 59	33.4	D		-0.4	1.03	197	3.3	3.9	4.1
	ESN			47.2			0.6					
CNZ	PN		19 59	33.4	D		-2.0	1.14	15		4.2	4.1
	SN			47.9			-1.6					
COB	EPN		19 59	47.9			0.6	2.00	246			3.8
	ESN		20 00	09.7			-0.7					
KRP	EPN		19 59	53.8			1.3	2.39	7		3.5	3.7
	E			56.7								
	ESN		20 00	22.1			2.2					
	E			24.5								
	E			28.7								
AUG 31		H	M	S					70/ 520			
	22 11	57.1			45.28S	167.94E	12 KM	SE	0.7	AVG MAG	3.9	
		+ 0.6			0.02	0.03	2					
			H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ROX	P*		22 12	15.3			0.4	0.98	102		3.8	3.8
	S*			28.0			-0.2					
WPZ	EPN		22 12	23.1			-0.4	1.51	156		3.7	4.1
	ESN			43.3			0.2					
OMZ	PN		22 12	31.3	D		0.1	2.10	85		4.3	4.0
HJZ	PN		22 12	32.0			-0.8	2.21	55		3.8	3.4
	P*			37.0			1.0					
	ES*			13 04.9			-0.3					
	E			05.8								
GPZ	E		22 13	53				3.71	66	3.8		
FELT SOUTHLAND (130.140)												
SEP 01		H	M	S					70/ 521			
	00 41	44.0			42.08S	172.11E	12 KM	SE	1.1	AVG MAG	4.1	
		+ 0.3			0.02	0.04	2					
			H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KAI	P*		00 41	57.9			1.1	0.69	229			
COB	P*		00 42	02.8			-1.0	1.10	26		4.6	4.8
	S*			19.0			0.4					
CHR	EPN		00 42	10.3			-0.1	1.50	165			
GPZ	EPN		00 42	10.3			-2.2	1.67	166	3.7		
	E			12.0								
	SN			33.7			0.4					
WEL	PN		00 42	18.3	D		-0.6	2.14	69	3.8	4.3	4.4
	P*			21			-0.8					
	SN			46.4			1.7					
HJZ	EPN		00 42	20.2			-0.2	2.26	212		3.5	3.6
	PQ			28.3			-1.4					
	SN			49.0			1.5					
	S*			53.1			-0.4					

LOCAL EARTHQUAKES

193

	GNZ	EPN	00 42 29.4	-2.7*	3.11	196	4.1	4.0			
		P*	39	0.6							
		SN	43 07.3	-0.4							
	THZ	EPN	00 42 36.3	1.0	3.37	32	3.9				
		PG	50.7	-1.4							
	GNZ	EPN	00 42 44.3	2.2	3.89	43	4.5	4.6			
		SG	43 55	-0.1							
	KRP	EPN	00 42 57.0	0.6	4.91	34	4.1				
		SN	43 51.5	-0.2							
		S*	44 12.4	-0.9							
	GNZ	SN	00 44 10.1	0.1	5.67	55		4.0			
	H	H	S						70/ 522		
SEP 01	11 42	37.6	37.00S	175.60E	12 KM	SE 0.3	AVG MAG		3.4		
		+ 0.2	0.01	0.01							
			H	S	DIR	RES	DIST	AZ	W-A	W P	W S
	AUC	EP*	11 42 51.3	0.0		0.74	281				
		(S*)	43 01.0	-0.4							
		SG	03.0	0.3							
	GBZ	EP*	11 42 52.3	0.1	0.80	348					
	KRP	P*	11 42 54.5	D -0.1	0.93	187			3.6	3.6	
		PG	57.0	0.5							
		S*	43 07.0	-0.2							
	ONE	ES*	11 43 28.0	0.1	1.62	318	3.0				
	CNZ	EPN	11 43 12.7	-0.5	2.20	183			3.5	3.3	
		EPG	20.3	-1.8*							
		ESQ	52.0	0.2							
	FELT COROMANDEL PENINSULA (18) MM IV										
	H	H	S							70/ 523	
SEP 02	03 52	23.6	36.98S	175.89E	12 KM	SE 1.7	AVG MAG			3.6	
		+ 1.6	0.04	0.13							
			H	S	DIR	RES	DIST	AZ	W-A	W P	W S
	GBZ	EP*	03 52 39.8	1.0		0.83	336				
	AUC	P*	03 52 39.9	-0.5		0.90	277				
	KRP	P*	03 52 42.3	D 0.0		0.99	197			3.5	3.8
		PG	43.1	-0.6							
		ES*	55.0	0.1							
	CNZ	EPG	03 53 06.0	-2.5		2.24	187			3.6	3.5
		ESN	26.6	0.1							
		SG	40.9	1.9							
	FELT WAIONU (21) MM IV										
	H	H	S							70/ 524	
SEP 02	06 21	52.0	32.87S	179.39E	470 KM	SE 1.5	AVG MAG			5.5	
		+ 2.0	0.14	0.23							
			H	S	DIR	RES	DIST	AZ	W-A	W P	W S
	GBZ	EP	06 23 14.9	0.1		4.64	223				
	ECZ	P	06 23 18.4	U 1.7		4.86	188			6.1	5.4
		ES	24 22.4	-1.5							
	CRZ	P	06 23 25.7	-0.4		5.81	253			4.7	
	GNZ	P	06 23 26.7	J -0.0		5.87	191			6.1	5.5
		S	24 42.3	0.8							
	KRP	P	06 23 28.7	I 1.2		5.94	211			5.4	
		I	29.4								
	TUA	EP	06 23 30.6	0.5		6.20	196				
	TRZ	EP	06 23 36.0	-2.2		6.98	197				
		S	25 02.8	0.6							
	CNZ	EP	06 23 36.7	-2.1		7.14	205				
		I	37.9								
	THZ	EP	06 23 44.9	1.3		7.49	211				
	MHG*	EP	06 23 49.4	-3.4*		8.34	211				
	WEL*	EP	06 23 59.5	-2.3*		9.17	202			5.8	
	COB*	EP	06 24 05.5	-2.7*		9.77	211				
	MJZ*	EP	05 24 43.0	-0.9*		13.11	211				
	MSZ*	EP	05 25 00.0	-1.1*		14.77	214				

LOCAL EARTHQUAKES

195

SEP 02	H	M	S								70/ 528	
	17	26	49.0	39.23S	174.80E	215 KM	SE	1.7	AVG	MAG	4.0	
			+ 1.9	0.09	0.11	15						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
TNZ	EP			17	27	18.0		0.4	0.33	277		
GNZ	P			17	27	19.1		0.7	0.58	88	3.6	3.4
	ES					42		0.9				
MNG	IP			17	27	25.3	U	1.6	1.49	160	4.3	4.2
	S					52.0		0.5				
WEL	EP			17	27	30.9		1.2	2.06	181	4.0	3.9
	ES					00.2		-0.7				
OOB	IP			17	27	33.9	U	0.2	2.44	220	4.3	3.8
	S					28 06.3		-1.3				
GNZ	S			17	29	08.0		-2.9	2.58	78		3.9

SEP 02	H	M	S								76/ 529	
	20	00	02.6	36.99S	175.62E	12 KM	SE	1.0	AVG	MAG	3.4	
			+ 0.7	0.02	0.07	3						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
AUC	EP*			20	00	16.1		0.7	0.69	281		
GBZ	P*			20	00	17.7		0.7	0.78	352		
KRP	P*			20	00	20.0	D	0.4	0.93	184	3.5	3.8
	PG					22.0		0.4				
	S*					31.3		-0.8				
ONE	EPG			20	00	33.2		-1.4	1.58	320	3.0	
	ES*					52.0		0.3				
GNZ	PG			20	00	46.0		-1.2	2.20	181	3.6	3.3
	SG					01 17.9		0.9				
FELT COROMANDEL (18) MH IV												

SEP 02	H	M	S								70/ 530	
	22	59	30.2	36.60S	179.20E	194 KM	SE	1.3	AVG	MAG	4.5	
			+ 2.0	0.13	0.20	17						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
ECZ	P			23	00	01		-0.1	1.21	205	5.0	
GNZ	P			23	00	11.0	D	-0.3	2.25	204	4.7	4.4
	ES					42.6		-0.3				
TJA	P			23	00	18.7		1.6	2.74	216	4.7	
KRP	P			23	00	21.8		-0.8	3.21	245	4.2	
GNZ	P			23	00	32.0		1.0	3.88	227	4.3	
MNG	P			23	00	43.3		-1.3	4.96	215	4.3	4.1
	IS					01 42.3		0.2				

SEP 02	H	M	S								70/ 531	
	23	01	33.1	36.95S	175.72E	12 KM	SE	1.2	AVG	MAG	3.9	
			+ 1.0	0.04	0.06	3						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
AUC	EP*			23	01	47.0		-0.1	0.76	277		
	SG					59.2		0.3				
KRP	IP*			23	01	51.0	D	0.0	0.98	188	4.1	4.3
	PG					53.2		0.1				
	S*					02 03.0		-1.2				
ONE	PG			23	02	04.0		-1.6	1.60	317	3.2	
	S*					23.7		0.8				
GNZ	P*			23	02	14.3		1.7	2.25	183	4.0	3.8
FELT WAIOHU (21) MH IV												

SEP 03	H	M	S								70/ 532	
	16	20	25.5	40.45S	174.91E	33 KM	SE	1.0	AVG	MAG	4.0	
			+ 0.3	0.02	0.02	3						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
MNG	IPN			16	20	35.6	D	0.4	0.47	112		
	SN					43.3		1.1				
WEL	IPN			16	20	39.3	U	-1.1	0.85	187	3.5	4.4
	ESN					51		-0.3				
GNZ	IPN			16	20	47.3	U	0.9	1.32	342	4.4	4.4

LOCAL EARTHQUAKES

197

SEP 04		H	M	S								70/ 535
	01	45	25.5	39.83S	173.05E	33 KM	SF	0.9			AVG MAG	4.2
			+-. 0.7	0.03	0.04							
TNZ	PN	01	45	45.4		DIR	RES	DIST	AZ	W-A	W P	W S
	I			50.3			0.1	1.21	58		3.9	4.3
	SN			46	00.4							
	E				01.8							
COB	IPN	01	45	46.2		U	-0.1	1.28	191		4.3	4.2
	SN			46	02.7							
WEL	PN	01	45	56.1			0.5	1.96	139	3.9	4.1	4.5
	ESN			46	17.8		-0.5					
MNG	PN	01	45	54.7			-1.6	2.02	114		4.0	4.3
	SN			46	20.0		0.2					
CNZ	PN	01	45	55.8			-0.8	2.03	73		4.1	4.2
	SN			46	21.3		1.2					

SEP 05		H	M	S								70/ 536
	05	36	16.4	45.25S	167.62E	33 KM	SF	1.6			AVG MAG	4.9
			+-. 1.0	0.03	0.06							
MSZ	IP*	05	36	30.4		U	1.5	0.62	20			
ROX	IP*	05	36	38.7		D	-0.1	1.22	101		5.4	5.3
	S*			56.3			1.0					
WPZ	IPN	05	36	44.0		D	1.7	1.65	149		5.1	
	P*			45.0			-1.1					
	S*			37	06.4		-1.7					
OHZ	IPN	05	36	53.0		DN	1.3	2.34	87		5.3	5.3
	ISN			37	20.2		1.7					
MJZ	IPN	05	36	51.8		D	-0.7	2.39	59		4.5	4.6
	E			37	02.6							
	ESN				19.0		-0.8					
KAI	E	05	37	35.0				3.86	46		4.6	
	ESN			56.0			0.3					
GPZ	PN	05	37	16.1			2.7	3.92	68		4.9	
	E			43.0								
	SN			55.8			-1.2					
COB	EPN	05	37	34.8			-1.3	5.59	44		4.6	4.6
	E			38.4								
	ESN			38	35.8		-1.7					
WEL								6.55	55		4.8	
MNG	EPN	05	37	58.9			-1.5	7.39	54			

FELT CENTRAL SOUTHLAND

SEP 05		H	M	S								70/ 537
	06	50	37.7	41.72S	174.42E	12 KM	SE	1.3			AVG MAG	3.8
			+-. 1.2	0.07	0.04							
WEL	IP*	06	50	48.1		DW	0.6	0.51	31		3.7	4.0
	S*			55.3			0.6					
MNG	IP*	06	51	00.0		D	-2.1	1.36	36		4.4	3.9
COB	EP*	06	51	03.0			-0.1	1.42	296		3.9	3.9
	ES*			22.0			-0.1					
TNZ	EP*	06	51	22.6			0.4	2.53	359		3.4	3.6
	EPG			28.0			-1.0					
CNZ	EPN	06	51	19.4			-0.4	2.66	19		3.9	3.9
	EP*			24.7			0.5					
	S*			58.0			-1.4					
	E			52	02.7							
	SG				07.9		0.4					
KRP	EP*	06	51	49			2.6	3.89	13		3.3	3.4

SEP 05		H	M	S								70/ 538
	08	40	21.2	38.66S	175.51E	171 KM	SE	1.3			AVG MAG	4.0
			+-. 1.3	0.05	0.05							
							11					

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
CNZ	P	08	40	47.0		1.7	0.54	177		3.4	3.8
KRP	IP	08	40	45.3	U	-0.6	0.73	2		3.7	2.7
	S		41	05.0		-0.9					
TNZ	P	08	40	49.8		1.4	1.03	239		3.9	
TRZ	EP	08	40	52.3		1.2	1.35	132		4.2	4.2
	ES		41	16.0		1.5					
MNG	IP	08	40	58.1	D	0.6	1.96	181		4.1	4.6
	IS		41	25.0		-0.5					
GNZ	P	08	40	57.2		-0.4	1.97	90		4.4	3.9
	IS		41	24.1		-1.6					
WEL	ES	08	41	39.2		-1.6	2.68	192	4.1		4.3
COB	EP	08	41	13.0		-0.0	3.23	221		3.9	4.1
	ES			52.0		-0.8					
SEP 05	H M S	15	33	07.2						70/	539
				+ 0.8						AVG MAG	3.4
	H M S	36.98S	175.63E		12 KM		SE	1.6			
		0.03	0.03								
AUC	P*	15	33	19.8	DIR	RES	DIST	AZ	W-A	W P	W S
	S*			29.3		-0.2	0.69	280			
	SG			31.2		0.5					
GBZ	P*	15	33	21.0		-0.4	0.77	351			
	ES*			31.7		-0.2					
KRP	P*	15	33	22.7		-1.8	0.95	184		3.5	3.4
	S*			35.4		-1.9					
CNZ	EP*	15	33	48.6		2.4	2.22	182		3.5	3.2
	PQ			53.9		1.8					
FELT COROMANDEL PENINSULA (18) MM IV											
SEP 05	H M S	18	12	37.4						70/	540
				+ 0.8						AVG MAG	4.8
	H M S	33.14S	179.73E		682 KM		SE	0.6			
		0.14	0.24								
ECZ	EP	18	14	13.0	DIR	RES	DIST	AZ	W-A	W P	W S
GNZ	EP	18	14	19.8		-0.6	4.64	192		5.1	4.7
	S			42.9		0.4	5.66	194		4.8	4.4
KRP	P	18	14	22.0		0.0	5.88	215		4.1	
TRZ	EP	18	14	30.0		0.4	6.82	199			
MNG	P	18	14	41.8		0.4	8.20	203			
WEL	S		16	20.0		-0.4	9.04	205		5.7	
SEP 05	H M S	18	30	18.8						70/	541
				+ 0.3						AVG MAG	3.8
	H M S	38.62S	177.84E		33 KM		SE	0.7			
		0.04	0.03								
GNZ	IP*	18	30	24.4	DIR	RES	DIST	AZ	W-A	W P	W S
TUA	IPN	18	30	29.0	UNE	-0.3	0.14	99			
	SN			37.6	D	-0.9	0.57	251			
ECZ	EPN	18	30	37.0		0.1	1.08	31		4.2	4.0
TRZ	EPN	18	30	39.0		0.2	1.22	220		4.2	3.9
	EP*			42.0		0.8					
	I			47.1							
	E			31 04.9							
	E			11.0							
CNZ	E	18	30	57.8			1.88	251			3.8
	E			31 26.4							
KRP	EP*	18	30	54.0		0.5	1.94	290		3.2	3.2
WEL							3.56	221	4.2		
SEP 05	H M S	19	25	50.8						70/	542
				+ 1.0						AVG MAG	3.3
	H M S	36.96S	176.00E		12 KM		SE	1.2			
		0.03	0.03								
GBZ	EP*	19	26	07.2	DIR	RES	DIST	AZ	W-A	W P	W S
	ES*			17.8		-0.3	0.85	330		3.5	3.4

LOCAL EARTHQUAKES

199

AUC EP* 19 26 07.2 -1.4 0.99 275
 ESG 25.0 0.7
 KRP EP* 19 26 10.2 -0.6 1.03 201
 ES* 23.3 -0.2

FELT COROMANDEL (18) MM III

H M S 70/ 543
 SEP 05 20 27 48.5 36.99S 175.77E 12 KM SE 1.5 AVG MAG 3.2
 + 0.3 0.01 0.02
 1 4 S DIR RES DIST AZ W-A W P W S
 GBZ P* 20 28 04.0 0.5 0.81 342 W-A 4 P W S
 S* 14.3 -0.1
 AUC EP* 20 28 03.0 -0.6 0.82 279
 ESG 16.7 0.3
 KRP EP* 20 28 05.6 -0.3 0.95 192 3.1 3.3
 S* 19.0 0.3

FELT COROMANDEL (18) MM IV

H M S 70/ 544
 SEP 06 02 48 28.5 41.50S 173.73E 33 KM SE 1.1 AVG MAG 4.2
 + 0.4 0.03 0.02
 1 M S DIR RES DIST AZ W-A W P W S
 WEL PN 02 48 42.9 U 0.6 0.77 75 3.8 3.9 4.5
 ESN 52.8 0.3
 IS* 54.1 -0.3
 MOB P* 02 48 45.0 -0.5 0.89 297 4.2 4.3
 S* 57.3 -0.4
 MNG PN 02 48 51.7 D -1.4 1.56 56 4.7 4.5
 P* 54.6 -1.9
 TNZ PN 02 49 04.7 0.7 2.35 11
 IS* 41.5 0.5
 GPZ E 02 49 16.0 2.35 200 3.5
 SN 32.0 1.0
 CNZ E 02 49 44.2 2.66 31 4.3
 S* 51.8 1.4

H M S 70/ 545
 SEP 06 03 52 42.7 45.33S 167.64E 142 KM SE 0.3 AVG MAG 3.9
 + 0.6 0.04 0.02
 1 M S DIR RES DIST AZ W-A W P W S
 MSZ P 03 53 04.3 U -0.2 0.69 17 W-A 4.1 4.2
 S 21.4 0.1
 OMZ EP 03 53 22.1 0.2 2.33 85 3.6 4.1
 ES 51.7 -0.1
 MJZ S 03 53 53.9 -0.0 2.43 57 3.6
 GPZ 3.94 67 3.6

H M S 70/ 546
 SEP 07 00 46 39.2 36.91S 175.70E 2 KM SE 1.2 AVG MAG 3.6
 + 2.1 0.06 0.16
 1 4 S DIR RES DIST AZ W-A W P W S
 AUC EP* 00 46 54.2 1.2 0.74 274 W-A 4 P W S
 KRP P* 00 46 57.9 D 0.1 1.02 187 3.8 4.1
 S* 47 10.8 -0.7
 ONE EP* 00 47 11.2 0.2 1.57 316 2.9
 ESG 51.3 -0.9

FELT COROMANDEL PENINSULA (18)

H M S 70/ 547
 SEP 07 00 47 35.2 37.00S 175.60E 12 KM SE ND AVG MAG 3.0
 R R
 1 4 S DIR RES DIST AZ W-A W P W S
 AUC P*? 00 47 48 0.2* 0.67 282
 KRP EP*? 00 47 53 0.3* 0.92 183 2.9 3.1
 S* 49 03.3 -1.1*

FELT PUHOI (18) MM III

SEP 07	H	M	S	40.14S	176.93E	33	KM	SE	1.3	AVG MAG	70/ 548	3.9
			0.9	0.06	0.07							
	TRZ	PN	03 24	51.2		DIR	RES	DIST	AZ	W-A	W P	W S
		P*		54.0		D	-1.2	0.60	348		4.3	4.3
		SN		00.3			0.1					
	MNG	IP*	03 25	01.9			-1.9	1.24	247			
	TUA	EP*	03 25	06			0.8	1.34	6		4.1	
	CNZ	PN	03 25	02.7			-1.4	1.45	310		4.2	4.0
		E		10.2								
		E		52.1								
	GNZ	EP*	03 25	10.2			-1.2	1.70	29		3.5	3.4
		E		22.1								
		SN		27.1			-0.3					
		S*		39.9			1.5					
	HEL	ESN	03 25	37.4			1.8	2.04	235	3.5		3.9
	COB	PN	03 25	30.5			0.1	3.37	252		3.9	3.9
		SN		26 08.8			0.6					
SEP 07	H	M	S	37.00S	175.60E	12	KM	SE	ND	AVG MAG	70/ 549	2.9
			40.0									
	KRP	EP*	05 49	56.7		DIR	RES	DIST	AZ	W-A	W P	W S
		ES*	50	09.7			-0.2*	0.92	183		2.7	3.1
							0.3*					
	FELT PUHOI (18) MM IV											
SEP 07	H	M	S	38.51S	176.40E	12	KM	SE	0.7	AVG MAG	70/ 550	4.4
			49.2	0.02	0.01							
			0.2									
	WNZ	P*	13 29	54.6		DIR	RES	DIST	AZ	W-A	W P	W S
		IP*		59.9		D	-0.1	0.26	243			
		P*	13 30	01.3		U	-0.3	0.66	117		5.0	4.8
		S*		10.4			-0.3					
	KRP	P*	13 30	09.4		U	-0.2	0.90	311		4.3	4.0
		I		09.9								
		IS*		19.0			-0.6					
	CNZ	IP*	13 30	06.0		D	-0.6	0.95	224		4.4	4.3
	TRZ	P*	13 30	10.2		U	-1.1	1.09	162		4.6	4.4
		S*		29.9			-0.2					
	GNZ	P*	13 30	13.2			1.0	1.28	96		4.3	4.4
		IP*		15.2			-0.0					
		S*		32.7			0.1					
		E		36.0								
	TNZ	EPN	13 30	18.6			0.3	1.71	246		3.8	
	MNG	EPN	13 30	26			1.0	2.22	198		4.5	
	FELT BROADLANDS (41) MM IV, WAIRAPUKAO (42)											
SEP 07	H	M	S	37.00S	175.00E	12	KM	SE	ND	AVG MAG	70/ 551	3.2
			46.2									
			R									
	KRP	EP*	17 13	04.7		DIR	RES	DIST	AZ	W-A	W P	W S
							0.0*	1.02	155		3.2	
	FELT PUHOI (18) MM IV											
SEP 07	H	M	S	37.00S	175.61E	12	KM	SE	1.5	AVG MAG	70/ 552	3.4
			22.1	0.02	0.05							
			0.7									
	AUC	EP*?	22 25	34.0		DIR	RES	DIST	AZ	W-A	W P	W S
		(SQ)		46.5			-0.7	0.68	282			
	GBZ	EP*	22 25	37.4			1.3	0.79	353			
		ES*		48.0			0.7					
	KRP	P*	22 25	40.3			1.4	0.92	183		3.4	3.8

	KRP	P*	10 51	44.4	-0.4	0.94	186		3.2	3.3
		S*		58.1	0.4					
	FELT PUHOI (18) MM IV									
SEP 08	H M S								70/ 558	
	13 34	43.9	36.97S	175.63E	12 KM	SE	0.3	AVG MAG	3.1	
		+ 0.2	0.01	0.02	?					
			H M S		DIR	RES	DIST	AZ	W-A	W P W S
	AUC	P*	13 34	58.0		-0.0	0.69	279		
	QBZ	P*	13 34	58.1		0.1	0.76	351		3.2
	KRP	P*	13 35	01.0		-0.2	0.95	184		3.1 3.1
		S*		14.3		0.2				
	FELT PUHOI (18), MM IV									
SEP 08	H M S								70/ 559	
	15 43	08.0	37.00S	175.60E	12 KM	SE	ND	AVG MAG	2.6	
		R	R	R	R					
			H M S		DIR	RES	DIST	AZ	W-A	W P W S
	QBZ	EP*	15 43	22.3		-0.2*	0.79	353		2.6 2.9
		S*		32.6		-0.7*				
	KRP	P*	15 43	24.3		-0.1*	0.92	183		2.5 2.6
		S*		38		0.6*				
	FELT PUHOI (18)									
SEP 08	H M S								70/ 560	
	16 01	05.0	37.00S	175.60E	12 KM	SE	ND	AVG MAG	2.6	
		R	R	R	R					
			H M S		DIR	RES	DIST	AZ	W-A	W P W S
	QBZ	P*	16 01	19.9		0.4*	0.79	353		2.5 3.0
		S*		29.7		-0.6*				
	KRP	P*	16 01	22.0		0.1*	0.92	183		2.2 2.6
		S*		35.2		0.8*				
	FELT PUHOI (18)									
SEP 08	H M S								70/ 561	
	18 02	33.4	37.02S	175.69E	12 KM	SE	1.4	AVG MAG	3.6	
		+ 0.8	0.03	0.05	R					
			H M S		DIR	RES	DIST	AZ	W-A	W P W S
	AUC	P*	18 02	47.2		0.5	0.71	283		
		ESQ		57.0		-0.8				
	QBZ	P*	18 02	48.1		-0.3	0.81	350		
	KRP	P*	18 02	51.0	D	0.9	0.91	185		3.9 3.9
		S*		03 03.9		1.5				
	ONE	EP*	18 03	06.3		0.1	1.62	320		3.1
		S*		24.3		0.6				
	CNZ	PQ	18 03	14.9		-2.7	2.18	182		3.6 3.5
		SQ		47.0		0.0				
				52.2						
	FELT COROMANDEL PENINSULA, MM IV									
SEP 08	H M S								70/ 562	
	18 56	49.5	37.00S	175.60E	12 KM	SE	ND	AVG MAG	2.6	
		R	R	R	R					
			H M S		DIR	RES	DIST	AZ	W-A	W P W S
	QBZ	EP*	18 57	05.1		1.1*	0.79	353		2.5 2.7
		S*		14.3		-0.5*				
	KRP	P*	18 57	05.9		-0.5*	0.92	183		2.5 2.6
		S*		18.7		-0.2*				
	FELT PUHOI (18)									
SEP 08	H M S								70/ 563	
	19 00	20.0	37.00S	175.60E	12 KM	SE	ND	AVG MAG	2.7	
		R	R	R	R					
			H M S		DIR	RES	DIST	AZ	W-A	W P W S
	QBZ	EP*	19 00	35.3		0.8*	0.79	353		2.9 2.7
		ES*		44.7		-0.6*				
	KRP	P*	19 00	49.0		-0.4*	0.92	183		2.7
		S*								
	FELT PUHOI (18)									

LOCAL EARTHQUAKES

203

SEP 08	H M S	36.96S	175.72E	12 KM	SE	0.6	AVG MAG	70/ 564
	19 41 03.1	0.01	0.02	3				3.5
	+ 0.3							
AUC	P ₊	19 41 17.2		DIR	RES	DIST	AZ	W-A W P W S
	(SG)				-0.0	0.76	277	
GBZ	P ₊	19 41 17.3			-0.1			
	S ₊	28.1			-0.0	0.77	345	
KRP	P ₊	19 41 20.2		D	0.3			
	S ₊	33.3			-0.6	0.97	189	3.4 3.8
	SG	37.2			-0.5			
CHZ	E	19 41 50.0			1.1			
	SG	42 18.3			-0.1	2.24	183	3.6 3.3
	FELT PUHOI (18), MM IV							
SEP 09	H M S	36.97S	175.93E	12 KM	SE	0.5	AVG MAG	70/ 565
	10 18 42.1	0.01	0.10	3				3.0
	+ 1.0							
GBZ	P ₊	10 18 57.9		DIR	RES	DIST	AZ	W-A W P W S
	S ₊	19 08.9			0.3	0.84	333	2.8 3.3
KRP	P ₊	10 19 00.1			-0.2			
	S ₊	14.2			-0.3	1.01	199	2.7 3.2
	SG				0.2			
	FELT PUHOI (16) MM V							
SEP 09	H M S	37.00S	175.60E	12 KM	SE	ND	AVG MAG	70/ 566
	15 46 47.6	R	R	3				2.9
GBZ	P ₊	15 47 02.3		DIR	RES	DIST	AZ	W-A W P W S
	S ₊	12.4			0.2	0.79	353	2.9 3.0
KRP	P ₊	15 47 04.2			-0.5			
	S ₊	17.7			-0.3	0.92	183	2.7 2.9
	SG				0.7			
	FELT PUHOI (18)							
SEP 10	H M S	39.87S	176.60E	12 KM	SE	0.1	AVG MAG	70/ 567
	06 19 04.6	0.00	0.00	3				3.7
	+ 0.1							
TRZ	EP ₊	06 19 11.9		DIR	RES	DIST	AZ	W-A W P W S
	S ₊	17.0			0.1	0.36	29	
CHZ	PN	06 19 25.0		U	0.1	1.05	309	3.9 4.1
	SN	39.9			-0.0			
MNG	EPN	06 19 26			-0.1	1.13	228	3.2
SEP 10	H M S	35.33S	177.73E	33 KM	SE	3.0	AVG MAG	70/ 568
	08 54 45.5	0.18	0.23	3				4.4
	+ 3.5							
KRP	EP ₊	08 55 39		DIR	RES	DIST	AZ	W-A W P W S
	GNZ	08 55 35.3			-1.4	3.13	214	3.9
	SN	56 11.1			1.1	3.32	176	4.3 4.3
TUA	EPN	08 55 38			-0.3			
	SN	56 18.4			1.2	3.50	187	4.3 4.6
CHZ	PN	08 55 49.1			2.4			
	SN	56 38.6			2.3	4.24	204	3.9 3.9
TRZ	PN	08 55 46.6			4.8			
	SN	56 33			-0.7	4.28	189	4.4 4.9
MNG	PN	08 56 01.9			-1.8			
	SN	57 01.3			-2.9	5.57	198	4.9 4.7
					-4.7			
SEP 10	H M S	37.92S	178.03E	33 KM	SE	1.2	AVG MAG	70/ 569
	17 32 22.3	0.02	0.04	3				4.8
	+ 0.5							

		H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W S
ECZ	IPN	17	32	31.7	U	0.1	0.43	73				
GNZ	IPN	17	32	37.4	DSH	0.5	0.82	180				
TUA	PN	17	32	43.0		0.9	1.20	215		5.0		5.3
	P*			46.8		2.4						
	S*			33.00		-0.7						
HNZ	EPN	17	32	49.5		0.4	1.72	241		5.2		5.1
TRZ	PN	17	32	52.0		-0.6	1.97	208		5.0		5.0
KRP	IPN	17	32	52.3	UW	-0.3	1.97	266				
	P*			58.3		0.9						
	SN			33.15		-0.5						
CNZ	PN	17	32	58.8		0.6	2.38	234		5.2		4.8
GBZ	PN	17	33	00.1		-1.0	2.59	307				
	SN			29.9		-0.6						
AUC	PN	17	33	03.4		-0.0	2.76	289				
TNZ	EPN	17	33	10.4		1.3	3.17	243		4.8		4.3
MNG	PN	17	33	10.2		-2.3	3.42	214		4.3		4.3
	P*			24		1.8						
	SN			47		-3.9*						
ONE	PN	17	33	15.0		0.4	3.58	304		4.5		
	ESN			55		0.3						
WEL	PN	17	33	23.5		-0.7	4.28	215		5.0	4.6	4.9
	P*			35		-1.8						
	SN			34.09.8		-1.9						
	S*			33.8		1.0						
COB*	EPN	17	33	37		-0.2*	5.24	230		4.6		
CRZ*	PN	17	33	42.0		1.4*	5.49	306		4.7		4.3
	ESN			34.45.2		4.2*						
GPZ*	SN	17	35	14.5		-6.2*	7.15	213		5.3		
OIZ*	PN	17	34	06		0.1*	7.37	148				
	SN			35.21.1		-4.9*						
HJZ*	SN	17	35	42.9		-7.9*	8.41	221				
FELT EAST CAPE (29) MM IV												
SEP 10	H	H	S									70/ 570
	18	26	03.6	38.568	177.47E	91 KM	SE	1.3	AVG	MAG		4.1
			+ 0.7	0.04	0.05	S						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
TUA	P	18	26	17.8		0.1	0.35	225				
	S			26.8		-1.6						
GNZ	P	18	26	18.2		-0.0	0.44	101				
TRZ	P	18	26	26		0.9	1.11	207		4.8		4.5
	S			43		1.8						
ECZ	P	18	26	26.9		0.5	1.21	45		4.8		
	S			42.8		-0.6						
CNZ	IP	18	26	33	D	1.4	1.63	246		3.6		3.3
KRP	P	18	26	32.9		1.1	1.65	292		3.6		3.6
	S			53		0.2						
MNG	P	18	26	43		-1.2	2.57	216		4.6		
WEL							3.42	217				
COB	P	18	27	08.9		-1.0	4.43	234		4.4		4.5
	S			59.1		-1.6						
SEP 11	H	M	S									70/ 571
	11	56	39.0	45.11S	167.50E	95 KM	SE	1.0	AVG	MAG		4.3
			+ 1.1	0.04	0.06	7						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
MSZ	P	11	56	55.0		0.3	0.53	34		4.5		4.5
	S			57.06.6		-0.1						
ROX	IP	11	57	04.9	U	1.3	1.33	106		4.6		4.1
	S			22.9		0.9						
WPZ	P	11	57	09.2		-0.2	1.81	149		4.4		4.6
	S			30.8		-1.1						
HJZ	P	11	57	16.9		-0.5	2.40	63		3.5		3.9
	ES			45.0		-0.9						
OHZ	IP	11	57	17.9	D	0.3	2.42	90		4.7		

LOCAL EARTHQUAKES

205

SEP 11	H	M	S									70/ 572	
	15	48	50.9	40.39S	175,47E	12 KM	SE	2.0	AVG	MAG		3.8	
			+ 0.6	0.04	0.05								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
MNG		IPN		15	49	01.7	U	-0.5	0.23	179			
		ESN				07.3		-2.9					
WEL		EPN		15	49	12		0.8	1.05	211	3.3	3.6	4.0
		ESN				27.3		1.4					
GNZ		IPN		15	49	11.8	U	-1.3	1.19	3		4.1	4.3
		SN				26.3		-3.2					
TRZ		PN		15	49	16		1.0	1.33	52		3.8	3.7
		ESG				38		2.1					
TNZ		IPN		15	49	15.9	D	-0.9	1.47	325		4.3	4.1
		ESN				35.3		-0.4					
COB		EPN?		15	49	26		-0.5	2.20	251		3.8	3.7
		EP*				30		0.4					
KRP		ES*				50 00.3		1.9					
		EPN		15	49	28.3		-1.6	2.46	1		3.5	3.4
		ESN				50 03		3.7					

SEP 12	H	M	S									70/ 573	
	15	56	51.7	37.10S	175,60E	12 KM	SE	ND	AVG	MAG		3.3	
				R	R								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
GBZ		P*		15	57	05		-1.2*	0.79	353		3.2	3.4
		S*				15.9		-1.1*					
KRP		EP*		15	57	11		2.4*	0.92	183			
FELT PUHOI (18)													

SEP 12	H	M	S									70/ 574	
	18	25	36.7	41.45S	171,97E	12 KM	SE	1.2	AVG	MAG		4.7	
			+ 0.5	0.04	0.03								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
COB		IP*		18	25	48.0	U	-1.4	0.68	59			
KAI		P*		18	25	56.8		-0.8	1.16	201			
		S*				26 12		-1.1					
WEL		PN		18	26	10.0		-1.1	2.11	87	4.6	4.9	5.2
		SN				36.8		0.2					
QPZ		EPN		18	26	14		0.3	2.30	168	4.1		
		P*				19		1.9					
		(SN)				45		3.7*					
HJZ		EPN		18	26	21		0.7	2.77	203		4.3	4.2
		SN				55		2.0					
		S*				27 00.3		-1.3					
MNG		PN		18	26	19.4		-1.0	2.78	74	5.0	5.0	
		SN				54.2		0.9					
TNZ		PN		18	26	22.2		-0.0	2.91	40		4.7	4.9
		E				27 10.8							
GNZ		PN		18	26	31		0.5	3.54	52		5.2	
OHZ*		EP*		18	26	43		1.8*	3.70	192		4.9	
KRP		PN		18	26	42.9		-0.2	4.47	39		4.6	4.6
		SN				27 35.1		1.4					
GNZ		SN		18	27	55.9		-0.8	5.42	61			4.1
FELT WESTPORT (79), MURCHISON (80), MANGLES VALLEY (80) MM IV													

SEP 12	H	M	S									70/ 575	
	18	49	54.0	37.00S	175,60E	12 KM	SE	ND	AVG	MAG		3.3	
				R	R								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
GBZ		P*		18	50	08.0		-0.5*	0.79	353		3.6	3.5
		S*				19.0		-0.3*					
KRP		EP*		18	50	09.3		-1.1*	0.92	183		2.9	3.0
		S*				24.1		0.7*					
FELT PUHOI (18)													

	GNZ	IP	04 37 02.2	J	0.7	1.67	114		5.4	5.4
		S	30		-1.7					
	TRZ	IP	04 37 03.0	J	1.4	1.68	160		5.7	5.6
		S	33.9		1.6					
	TNZ	P	04 37 05.0		2.4	1.80	227		5.3	4.3
		ES	35		1.3					
	ECZ					1.97	83		5.6	5.6
	ONE	EP	04 37 10		-0.3	2.59	327	4.3		
		ES	43		-4.5*					
	MNG	IP	04 37 11.9	U	0.6	2.69	190		5.2	5.2
		S	48		-1.4					
	WEL	P	04 37 20		0.0	3.46	197	5.6	5.0	5.7
		S	38 03		-1.7					
	COB	EP	04 37 26.0		-0.9	4.05	219		4.8	5.2
		S	38 16.7		-0.3					
	CRZ	P	04 37 31.0		-1.0	4.48	321		4.3	
	KAI*	ES	04 38 52		-3.3*	5.79	217		5.2	
	QPZ*	EP	04 37 54		-0.5*	6.29	203		5.6	
		ES	39 03		-3.6*					
	HJZ*	ES	04 39 26		-5.0*	7.36	213			
	OHZ*	EP	04 38 19		1.5*	8.08	207			
		ES	39 47		-0.5*					
	CIZ*	ES	04 39 53		3.6*	8.16	139			
	MSZ*	EP	04 38 33		2.9*	9.08	220			
		ES	40 06		-4.3*					
SEP 15	H	M	S						70/	584
	19	27	36.9	44.18S	169.23E	33 KM	SE	1.4	AVG MAG	4.4
			+ 0.6	0.03	0.04	2				
	HJZ	IPN	19 27 52.7	DIR	RES	DIST	AZ	W-A	W P	W S
		SN	28 04.2	DBH	0.5	0.88	78		4.4	4.7
	MSZ	EPN	19 27 55.0	U	-0.1	1.09	243			
	ROX	IPN	19 27 58.2	D	0.3	1.29	179		4.1	5.0
		SN	28 13		-0.7					
	OHZ	IPN	19 28 01.1	D	0.8	1.47	128			
		(SN)	19		1.1					
	MNW	(PN)	19 28 08		0.6	1.98	216			
	KAI	SN	19 28 39		1.6	2.27	44	4.0		
		S*	49		1.8					
	QPZ	EPN	19 28 13		-1.2	2.48	80	4.4		
		SN	40		-2.5					
	COB	PN	19 28 34		-1.1	4.01	41		4.2	4.6
		SN	29 18		-1.7					
	FELT HAAST (103), WANAKA (123) MM IV, MT ASPIRING (113) MM III									
SEP 16	H	M	S						70/	585
	14	39	49.5	39.05S	174.96E	209 KM	SE	1.5	AVG MAG	4.5
			+ 1.2	0.05	0.07	11				
	KRP	IP	14 40 22.7	U	0.8	1.21	22			
		S	46		-1.0					
	TRZ	P	14 40 26.0		1.4	1.53	110		4.5	4.6
		S	52		0.3					
	MNG	P	14 40 27.0		1.6	1.62	166		4.6	4.7
		S	54		0.9					
	TUA	P	14 40 27		0.5	1.73	83		4.5	4.5
		S	54		-0.8					
	WEL	EP	14 40 33		1.5	2.24	184	4.5	4.2	4.6
		S	41 04		0.0					
	GNZ	P	14 40 34.0		0.4	2.43	81		4.2	4.3
		S	41 05		-2.5					
	QPZ	ES	14 42 00.8		-1.6	4.96	200	4.6		
	HJZ	ES	14 42 24		-1.6	5.98	213			

LOCAL EARTHQUAKES

209

SEP 16		H	M	S			45.05S	167.64E	33 KM	SF	1.3	70/ 586		
		14	57	37.1			0.03	0.03	?			AVG	MAG	4.9
		+		0.9										
		H	M	S	DIR	RES	DIST	AZ	W-A		W	P	W	S
MSZ	IPN	14	57	48.0	U	1.6	0.43	28						
ROX	IPN	14	57	58.0	D	1.4	1.26	110			4.8		5.0	
	ISN		58	14.3		1.5								
WPZ	PN	14	58	04.6		-0.4	1.82	153			4.7		4.7	
	SN			26		-0.4								
HJZ	IPN	14	58	12.0	DS	0.3	2.29	63			4.6		4.8	
	SN			40		2.1								
KAI*	SN	14	59	17.3		4.6*	3.72	49	5.0					
GPZ	EPN	14	58	32		-0.9	3.84	71	4.8					
	(SN)		59	13.8		-2.0								
	S*			35		0.7								
COB	IPN	14	58	59.0	U	0.3	5.45	45			5.2		5.0	
	SN		59	55		0.4								
WEL	ESN	15	00	17		-1.3	6.43	57	5.0					
MNG	PN	14	59	18.8		-0.6	7.27	55						
	ESN		15	00	37		-1.4							
TNZ*	EPN	14	59	23		-2.2*	7.71	43						
	ESN		15	00	50		1.1*							
TRZ*	ESN	15	01	18		4.4*	8.75	54						
KRP*	EPN	14	59	46		0.1*	9.26	42						
	SN		15	01	27		1.0*							
GNZ*	ESN	15	01	45		0.5*	10.05	54						

SEP 16		H	M	S			34.03S	179.42W	33 KM	SF	3.3	70/ 587		
		17	25	48.4			0.20	0.22	?			AVG	MAG	4.7
		+		3.8										
		H	M	S	DIR	RES	DIST	AZ	W-A		W	P	W	S
GNZ	EPN	17	27	03		2.3	5.05	203			4.6		4.4	
	SN		28	00		3.7								
TUA	EPN	17	27	08.3		1.5	5.51	209			4.3		4.6	
	ESN		28	10		2.4								
KRP	EPN	17	27	08		-0.7	5.64	225						
TRZ	EPN	17	27	17		-0.4	6.28	208						
	ESN		28	29		2.9								
MNG	EPN	17	27	35		-1.8	7.73	210						
	ESN		28	54		-6.5								
WEL	ESN	17	29	19		-2.0	8.58	211	5.5					
COB*	ESN	17	29	41		0.3*	9.40	219						
CIZ	ESN	17	29	57		-1.4	10.16	168						
GPZ*	ESN	17	30	27		-1.8*	11.46	210	4.9					
MJZ*	ESN	17	30	54		-2.9*	12.67	215						

SEP 16		H	M	S			32.61S	179.09E	342 KM	SF	3.5	70/ 588		
		21	54	06.9			0.17	0.22	35			AVG	MAG	5.5
		+		3.4										
		H	M	S	DIR	RES	DIST	AZ	W-A		W	P	W	S
ONE	EP?	21	55	32		3.0	5.13	230						
CRZ	P	21	55	37.3		3.4	5.66	249			4.7			
KRP	EP	21	55	38.9		0.2	6.05	208						
GNZ	EP	21	55	36		-3.0	6.09	188						
	S		56	51		-0.4								
TUA	EP	21	55	40.1		-1.8	6.39	194						
	ES		55	58		0.3								
TRZ	ES	21	57	16		1.7	7.17	194						
MNG	P	21	56	02.3		-3.2	8.51	199						
	ES		57	40		-2.9								
WEL	P?	21	56	14		-3.5	9.33	201	5.9					
	ES		58	01		0.2								
COB	ES	21	58	13		0.2	9.88	209						
CIZ	E(S)	21	59	01		3.9	11.83	165						
GPZ	ES	21	59	00		-2.5	12.17	203	5.9					
MJZ	ES	21	59	28		2.5	13.22	208						

SEP 17	H	M	S	32.69S	178.55W	33 KM	SE 3.2	AVG MAG	70/ 589
	11	26	52.8	0.15	0.27	?			5.6
	+	-	2.9						
	H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
ECZ									
GBZ*						4.3*	5.53 205		
GNZ						1.2	6.05 233		
						0.1	6.56 204		
ONE						-0.1			
TUA						-5.4	6.62 240	5.1	
						1.1	7.03 209		
						1.6			
						2.5			
KRP						2.0	7.11 221		
						4.7			
CRZ						3.4	7.52 254		
TRZ						-0.2	7.80 207		
						3.2			
GNZ						2.3	8.06 215		
MNG						-1.5	9.25 209		
						-2.3			
WEL						-0.9	10.10 210	6.1	
						-4.5			
COB						-3.2	10.90 217		
						-4.2			
CIZ*						7.8*	11.36 173		
						5.1*			
HJZ*						-0.2*	14.18 214		
						-6.0*			

SEP 17	H	M	S	37.45S	177.14E	166 KM	SE 1.2	AVG MAG	70/ 590
	13	26	47.8	0.06	0.06	8			4.3
	+	-	1.1						
	H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
ECZ						1.3	1.16 102		
KRP						1.33	1.33 249	5.0	4.7
						-0.9			
TUA						0.6	1.35 179	4.5	4.6
						0.8			
GNZ						-1.6	1.39 149	4.3	4.4
						-3.8*			
TRZ						1.5	2.11 186		
						0.9			
GNZ						-1.9	2.13 215	4.2	4.2
TNZ*						4.6*	2.76 230		
MNG						0.2	3.41 201	4.2	4.0
						-0.9			
WEL						-0.3	4.24 205		
						-1.0			
COB						0.1	4.97 222	4.0	4.2
						1.3			
GPZ*						1.2*	7.10 207	4.4	
HJZ*						-3.0*	8.25 216		

SEP 18	H	M	S	34.79S	179.57W	33 KM	SE 1.3	AVG MAG	70/ 591
	02	36	09.9	0.09	0.09	?			4.5
	+	-	1.5						
	H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
ECZ									
GBZ						-0.8	3.28 207		
GNZ						1.8	4.28 249		
KRP						-0.4	4.31 206	4.4	4.3
						0.3	5.04 230		
ONE						0.6	5.06 257	4.4	
						-0.2			
GNZ*						3.5*	5.89 220	4.4	4.1
CRZ						0.5	6.40 271		

LOCAL EARTHQUAKES

211

MNG	EPN	02 37 47	-1.3	7.32	212				
COB*	EPN	02 38 16	4.1*	8.74	222				
	ESN	39 42	-4.4*						
CIZ*	EPN	02 38 28	5.8*	9.45	167				
	ESN	39 59	-4.1*						
SEP 18	H H S	13 35 56.1	41.79S	177.64E	33 KM	SE	1.7	AVG MAG	70/ 592 4.2
		+ 1.4	0.07	0.07	?				
MNG	PN	13 36 28	DIR	RES	DIST	AZ		W-A	W P W S
	SN	50		-0.2	1.0	305			3.7 3.9
WEL	ESN	13 36 55		-0.3	2.22	282			
TRZ	PN	13 36 32		0.7	2.32	344		4.4	4.2
	P*	37		-0.2					
	ESN	56		-1.9					
TUA	EPN	13 36 40.5		-0.2	3.01	353			4.1 4.5
GNZ	PN	13 36 43.5		2.3	3.04	328			4.8 4.2
GNZ	EPN	13 36 42		-0.7	3.16	5			3.9 4.2
	SN	37 16		-2.3					
THZ	EPN	13 36 52		3.2	3.60	315			4.5 4.2
COB	PN	13 36 51.6		0.7	3.76	279			4.2 4.2
	P*	37 02.5		0.9					
	SN	33		0.1					
GPZ	ESN	13 37 39		-3.2	4.14	241	3.9		
KRP	PN	13 36 57.0		0.2	4.19	337			
CIZ	ESN	13 37 46		-1.4*	4.77	119			4.8
SEP 18	H H S	21 27 03.6	37.56S	177.21E	167 KM	SE	0.8	AVG MAG	70/ 593 4.4
		+ 0.7	0.03	0.04	?				
TUA	ES	21 27 53	DIR	RES	DIST	AZ		W-A	W P W S
GNZ	P	21 27 32.6		-0.0	1.15	182			4.3
	S	53		0.9	1.17	147		4.3	4.5
KRP	P	21 27 34.6		-0.4					
	S	56.1		1.2	1.35	258			
GBZ	EP	21 27 39		-0.3					
AUC	EP?	21 27 42		-1.1	2.00	315			
MNG	P	21 27 55.0		0.7	2.10	292			
	S	28 35		-0.5	3.25	204		4.3	4.2
WEL	S	21 28 55		-0.4					
COB	P	21 28 16		0.4	4.09	207	4.4		4.5
	S	29 13		-0.5	4.88	224		4.4	4.3
GPZ*	ES	21 29 58		0.1					
				-4.3*	6.96	208	4.4		
SEP 19	H H S	18 23 24.4	37.01S	175.59E	12 KM	SE	0.7	AVG MAG	70/ 594 2.7
		+ 0.4	0.01	0.03	?				
AUC	EP*	18 23 37	DIR	RES	DIST	AZ		W-A	W P W S
	PN	39		0.3	0.66	283			
	S*	46		-0.9					
GBZ	EPG?	18 23 40		0.2					
	S*	50.7		-0.5	0.79	354		2.6	3.0
KRP	EP*	18 23 41		0.9					
	S*	54		-0.1	0.91	182		2.5	2.7
				0.4					
	FELT PUHOI (18) MM IV								
SEP 19	H H S	19 23 04.0	37.01S	175.59E	12 KM	SE	0.6	AVG MAG	70/ 595 3.4
		+ 0.3	0.01	0.03	?				
AUC	PG	19 23 18	DIR	RES	DIST	AZ		W-A	W P W S
GBZ	EP*	19 23 19		0.3	0.67	283			
	ESG	31		0.3	0.79	353		3.3	3.3
KRP	P*	19 23 20.9		-0.0					
				0.2	0.92	183		3.6	3.6

LOCAL EARTHQUAKES

213

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
TNZ	PN	14	19	35		0.4	2.11	300		3.9	3.7
	ESN	26	00			1.1					
KRP	PN	14	19	38.3		-1.1	2.52	338		3.4	3.4
	E	20	01								
COB	E	14	20	02		0.9	3.14	254			3.7
	ESN		25								
SEP 21	H M S	08 08 25.3	40.53S	173.58E	199 KM	SF	1.7		AVG MAG	70/ 599	4.7
		+ 1.2	0.08	0.03	14						
	H M S				DIR	RES	DIST	AZ	W-A	W P	W S
COB	P	08 08 55				0.9	0.85	229		4.8	5.0
WEL	P	08 08 59.0			D	2.5	1.18	131	5.0	4.7	5.3
	S	09 21				0.4					
MNG	IP	08 09 01.0			D	2.3	1.45	94		5.1	5.0
	E	22									
TNZ	IP	08 08 58.9			D	-0.1	1.47	25		5.0	4.7
	E	09 22									
CNZ	IP	08 09 04.1			D	-0.1	2.01	49		4.9	5.1
KAI	S	08 09 44				-1.5	2.58	218	4.5		
TRZ	EP?	08 09 13.3				1.6	2.67	70		4.6	5.1
	S	47				-0.5					
KRP	EP	08 09 14.4				-1.1	3.01	31		4.4	4.2
	E	48									
GPZ	EP	08 09 19.7				1.3	3.24	192	4.3		
	S	56.4				-3.0					
TUA	P	08 09 18.9				0.4	3.25	59		4.7	4.9
	S	58				-1.4					
GNZ	P	08 09 27				0.4	3.91	63		4.7	5.0
	S	10 12				-2.0					
HJZ*	EP	08 09 30.7				1.0*	4.16	213		3.8	4.0
	E	10 10									
	ES	17				-2.5*					
OHZ*	EP	08 09 41				1.3*	4.95	202		4.	3.8
	ES	10 34				-3.4*					
MSZ*	P	08 09 51.6				-0.2*	5.88	223		4.3	4.5
	S	10 54				-5.0*					
CIZ*	EP	08 10 24.8				4.9*	8.07	118			
	ES	11 53				2.8*					

FELT WAITERERE (69) AND WELLINGTON (68)

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
SEP 21	H M S	08 38 33.5	37.01S	175.70E	12 KM	SF	0.6		AVG MAG	70/ 600	3.4
		+ 0.4	0.01	0.03	3						
	H M S				DIR	RES	DIST	AZ	W-A	W P	W S
AUC	EPQ?	08 38 48				-0.9	0.76	281			
GBZ	P*	08 38 48.3				-0.0	0.81	347		3.5	3.5
	S*	59.0				-0.4					
KRP	EP*	08 38 50.7				0.3	0.93	188		3.2	3.3
	S*	39 03				0.0					
ONE	E(S*)	08 39 25				0.7	1.64	318	3.3		
	ESG	29				0.3					

FELT COROMANDEL (18) IIM IV

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
SEP 21	H M S	11 03 25.0	37.02S	175.67E	12 KM	SF	0.3		AVG MAG	70/ 601	3.2
		+ 0.2	0.01	0.01	3						
	H M S				DIR	RES	DIST	AZ	W-A	W P	W S
AUC	PN?	11 03 41				-0.4	0.74	282			
	SG	50				-0.1					
GBZ	P*	11 03 40.0				-0.0	0.81	349		3.4	3.4
	S*	51				-0.1					
KPP	P*	11 03 42				0.3	0.91	187		3.2	3.2
	S*	54				-0.1					
ONE	E(S*)	11 04 16				0.3	1.63	319	2.9		

SEP 21		H	M	S									70/ 602
	11	03	41.5	37.00S	175.62E	12 KM	SE	0.7	AVG MAG				3.4
			+ 0.4	0.01	0.04								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
AUC		PN		11	03	57.3		-0.0	0.69	282			
		SN				04 08		-0.9					
GBZ		P*		11	03	56		-0.1	0.79	352		3.5	3.5
		(SQ)				04 08		-0.4					
KRP		EP*		11	03	58.3		0.2	0.92	184		3.4	3.6
		S*				04 11		J-1					
ONE		E(S*)		11	04	32		1.1	1.59	320		3.2	
FELT		PUHOI (18)		MM	IV								

SEP 21		H	M	S									70/ 603
	11	07	11.5	37.00S	175.60E	12 KM	SE	ND	AVG MAG				2.5
				R	R	R							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
GBZ		EP*		11	07	25.6		-0.4*	0.79	353		2.5	3.0
		ES*				36.3		-0.5*					
KRP		E(PQ)		11	07	31		0.7*	0.92	183		2.2	2.4
		ES*				41		0.1*					
FELT		PUHOI (18)		MM	III								

SEP 21		H	M	S									70/ 604
	11	50	35.9	38.81S	178.36E	33 KM	SE	1.0	AVG MAG				4.6
			+ 0.7	0.02	0.04								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
GNZ		IPN		11	50	43.4	UNW	-0.5	0.31	302			
TUA		IPN		11	50	52.1	U	0.0	0.94	270		4.9	5.2
		SN				51 04		-0.0					
TRZ		PN		11	51	00.0		1.6	1.41	238		4.5	4.7
		S*				20		-0.3					
GNZ		PN		11	51	10.9		1.3	2.22	259			
KRP		PN		11	51	11.9		0.1	2.38	291			
		SN				38		-1.1					
HNG		EPN		11	51	18		-0.4	2.86	230		4.1	4.5
		P*				27		0.8					
		SN				52		1.3					
TNZ		EPN		11	51	23		1.0	3.12	262		4.5	4.2
		P*				29		-1.6					
AUC		PN		11	51	27		0.7	3.44	303			
GBZ		EPN		11	51	26		-0.5	3.45	318			
WEL		EPN		11	51	29.4		-0.5	3.70	227		4.7	4.3
		P*				39		-1.5					
		SN				52 11		-0.3					
ONE		ESN		11	52	29		1.0	4.39	312		4.4	
COB		PN		11	51	45		-1.0	4.88	240		4.5	4.6
		SN				52 40		0.1					
CIZ*		PN		11	52	09		2.5*	6.40	145			
		SN				53 17		0.6*					
KAI*		ESN		11	53	15.3		-2.2*	6.46	233		5.1	
QPZ*		SN		11	53	16.3		-2.6*	6.51	220		4.8	
HJZ*		EPN		11	52	25.6		-0.6*	7.87	226			
		SN				53 49		-2.5*					
MSZ*		EPN		11	52	55		3.8*	9.75	230			
		ESN				54 33		-3.4*					
FELT		GISBORNE (45)		MM	III								

SEP 21		H	M	S									70/ 605
	13	09	56.1	41.38S	173.84E	33 KM	SE	1.2	AVG MAG				4.0
			+ 0.3	0.03	0.02								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
WEL		PN		13	10	09.0		-0.0	0.71	83		3.6	4.4
		SN				20		1.5					
COB		IPN		13	10	11		-0.5	0.88	289			
		SN				23		0.2					

LOCAL EARTHQUAKES

215

MNG	PN?	13 10 10.0	-1.3	1.46	59		4.4	4.3
	SN	35.7	-1.1					
	S*	42	-0.0					
KAI	SN	13 10 53.8	0.4	2.14	237	3.7		
TNZ	EPN	13 10 32	2.1	2.23	11		4.1	4.1
GPZ	EP*	13 10 41	1.2	2.48	200	3.0		
	SN	57	-4.6*					
GNZ	E(PN)	13 10 35	0.3	2.54	32		4.3	4.4
	S*	11 13	-1.4					
JZ	EPN	13 10 49	0.3	3.60	223		3.5	3.9
	ESN	11 29	-0.0					
KRP	EPN	13 10 51	1.0	3.69	21			
	EP*	59	-1.5					
	ESN	11 33	1.3					
GNZ	ESN	13 11 43	-1.0	4.22	51			3.7
MSZ	EPN	13 11 13	-0.8	5.45	231		3.5	3.9
	ESN	12 12	-1.6					

FELT FABIANS VALLEY (77) MM IV

SEP 22 08 32 35.5 32.84S 179.79W 539 KM SE 3.1 AVG MAG 70/ 606
 +- 4.3 0.55 1.14 74

		H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S
GNZ	P	08	34	15		0.1	6.06	197					
	S		35	34		0.2							
KRP	EP?	08	34	18		0.3	6.35	216					
TRZ	EP?	08	34	27		0.8	7.23	201					
	ES		35	55		0.7							
MNG	EP	08	34	39		-1.3	8.64	205					
	ES		36	15		-4.6							
WEL	ES	08	36	39		3.7	9.48	206	5.8				

SEP 22 15 33 02.5 40.96S 174.54E 12 KM SE 1.6 AVG MAG 70/ 607
 +- 0.5 0.03 0.03 3

		H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S
WEL	IP*	15	33	10.1	UNW	0.3	0.36	152	3.1				
	ES*			16.9		1.4							
MNG	IP*	15	33	15.2	U	-1.9	0.79	64		4.3		4.3	
	S*			25.2		-2.8							
COB	EPN	15	33	26		-1.1	1.37	264		4.1		4.2	
	ESN			45		-0.3							
TNZ	ESN	15	33	55		0.5	1.78	356		3.8			
GNZ	P*	15	33	38.3		1.8	1.92	24		4.2		3.9	
	PG			40.0		-1.4							
	E			53									
	ESG		34	09		1.6							
TRZ	EP*	15	33	43		1.1	2.24	52					
	ESG		34	19		0.9							
KAI	E	15	34	26			2.82	235	3.6				
KRP	EP*	15	33	57		-0.1	3.13	15		3.5		3.3	
	E		34	31									

SEP 24 05 20 29.8 44.70S 168.23E 57 KM SE 2.4 AVG MAG 70/ 608
 +- 2.8 0.13 0.13 31

		H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S
MSZ	IP	05	20	40	U	0.3	0.24	277					
	S			46.4		-0.7							
MNW	P	05	20	50.2		-0.3	1.17	202		3.9		3.7	
	S		21	06.1		0.2							
MJZ	P	05	20	58.2		-0.1	1.74	67		3.4		3.5	
	S		21	22.9		3.4							
GNZ	IP	05	21	02.0	U	1.2	1.93	102		4.4		4.3	
	S			23.3		-3.0							
GPZ	S	05	21	55		-3.9	3.31	74	3.7				

LOCAL EARTHQUAKES

217

SEP 25		H	M	S			38.38S	177.01E	33 KM	SE	1.3	AVG MAG	70/ 612
		14	43	53.2			0.04	0.04	?				3.8
		+		0.6					?				
TUA	PN	14	44	01.9	DIR	RES	DIST	AZ	W-A	W P	W S		
GNZ	IPN	14	44	06.6	D	-1.4	0.84	109		4.3	4.0		
TRZ	PN	14	44	12.1		-0.6	1.18	187		3.6	3.9		
KRP	PN	14	44	14.7		1.1	1.24	291		3.1			
		+		32.9					?				
		-		0.3					?				
SEP 26		H	M	S			33.42S	179.63W	33 KM	SE	4.4	AVG MAG	70/ 613
		12	53	27.2			0.37	0.86	?				4.5
		+		5.5					?				
ECZ	PN	12	54	28.1	DIR	-4.0	4.50	198	W-A	4.9	4.8		
GNZ	PN	12	54	44.4		-1.7	5.53	199		4.3	4.2		
KRP	PN	12	54	53.8		-0.2	5.94	220					
TRZ	PN	12	55	09.1		2.2	6.73	204					
HNG	PN	12	55	18		5.8	8.16	207					
		+		56 49					?				
		-		1.9					?				
		-		3.3					?				
		-		4.7					?				
SEP 26		H	M	S			41.29S	172.70E	12 KM	SE	1.1	AVG MAG	70/ 614
		21	58	18.5			0.03	0.03	?				4.0
		+		0.3					?				
COB	IP	21	58	21.1	DIR	-1.9	0.20	6	W-A	3.8	4.3	4.5	
WEL	PG	21	58	49		-1.0	1.55	91					
		+		59 10					?				
KAI	EPG	21	58	50		-0.3	1.57	218		3.9			
		+		59 11.4					?				
HNG	EP	21	58	57		-0.3	2.21	73		4.5	3.9		
		+		59 28					?				
TNZ	ES	21	59	34		-0.1	2.46	32		4.2	4.0		
CHZ	PG	21	59	19		-0.5	3.81	47		4.2	4.3		
		+		52					?				
		-		1.3					?				
KRP	EPN	21	59	19.3		-0.1	4.01	34					
MSZ	EPN	21	59	32		0.9	4.87	225		3.3	3.7		
		+		22 00 00					?				
		-		0.9					?				
		-		1.7					?				
		-		0.2					?				
SEP 27		H	M	S			40.91S	174.29E	12 KM	SE	0.9	AVG MAG	70/ 615
		02	09	08.0			0.02	0.01	?				4.4
		+		0.3					?				
WEL	IP	02	09	18.2	DIR	0.2	0.53	136	W-A	4.2	4.4	4.7	
		+		26					?				
		-		0.6					?				
HNG	IP	02	09	23.9	D	-1.4	0.95	73		4.6			
		+		37					?				
		-		1.2					?				
COB	IP	02	09	29.1	D	-0.3	1.19	261		4.4	4.5		
		+		45					?				
		-		0.4					?				
TNZ	EP	02	09	39		0.5	1.72	2		4.4	4.4		
		+		10 01.3					?				
		-		0.2					?				
CHZ	IPN	02	09	39.4	U	-0.9	1.96	30		4.7	4.8		
		+		10 04					?				
		-		0.1					?				
TRZ	EP	02	09	51		1.5	2.36	56		4.3	4.2		
		+		10 21.3					?				
		-		0.8					?				
KAI	ESN	02	10	23		0.5	2.70	232		3.9			
KRP	IPN	02	09	56.0	D	-0.3	3.13	18		4.2	4.0		
		+		10 33					?				
		-		0.4					?				

GNZ E FELT HIGHBURY (68) MM III		02 10 39	3.66	53	4.0				
SEP 27	H H S 11 17 17.0 + - 1.9	46.21S 165.87E 0.14 0.11	12 KM	SE 1.9	AVG MAG	70/ 616 4.3			
MSZ	PN P _o SN	11 17 52.0 55.9 18 15	DIR RES	2 0.7 1.8	DIST AZ	2.11 44	W-A	W P	W S 4.3
ROX	IPN SN	11 17 58.0 18 25.0		0.9 -2.2	2.52	74		4.7	4.7
OMZ	P _o S _o	11 18 21.0 19 11.4		-0.6 1.1	3.72	74		4.3	4.6
HJZ	P _o S _o	11 18 26.1 19 16.0		0.6* -1.0*	3.94	57		4.0	3.7
FELT PUYSEGUR POINT									
SEP 28	H H S 08 01 50.1 + - 1.4	40.28S 173.81E 0.06 0.05	166 KM	SE 1.6	AVG MAG	70/ 617 4.2			
COB	P S	08 02 16.8 38.6	DIR RES	11 -1.1 -0.8	DIST AZ	1.15 225	W-A	W P	W S 3.8
TNZ	EP S	08 02 19.1 39.1		1.0 -0.6	1.17	22			
WEL	EP S	08 02 20.1 42		1.3 1.1	1.24	144			
HNG	P S	08 02 21.1 40		1.6 -2.2	1.32	106		4.3	4.5
GNZ	P S	08 02 24 51.1		0.5 1.8	1.72	52		4.3	4.0
GNZ	P S	08 02 46 03 29.3		-1.0 -1.5	3.65	65			
SEP 28	H H S 19 01 24.1 + - 0.5	44.64S 173.62E 0.03 0.03	33 KM	SE 1.3	AVG MAG	70/ 618 5.1			
GPZ	PN	19 01 42.7 49.3	DIR RES	2 -0.8	DIST AZ	1.17 323	W-A	W P	W S
CHR	E(P _o) SN (S _o)	19 01 51 58.5 02 09		2.9* -2.9* 3.2*	1.32	327			
OMZ	IPN (SN)	19 01 54.1 02 13.0	D	-0.3 -4.2*	1.97	256			
HJZ	IPN mm	19 02 00.0 10 43	DNE	0.4	2.35	285		5.1	5.0
KAI	EPN SN S _o	19 02 04.8 33.8 47.3		1.1 -0.1 1.3	2.65	322			
ROX	IPN P _o SN	19 02 12.1 20 44.5	U	1.4 0.5 -1.7	3.16	253		4.9	5.1
WEL	E PN SN	19 02 14.0 51.0		-0.9 -2.5	3.46	15	4.9	5.4	4.7
COB	PN E SN	19 02 17.0 23.2 58.0	U	0.2 0.8	3.61	349		5.3	5.6
WPZ	PN SN	19 02 22.9 03 03		2.0 -1.5	3.91	237		4.6	5.0
MSZ	IPN ES _o	19 02 24.0 03 26	D	0.9 -2.2	4.07	268		4.9	4.9
MNG	EIPN SN	19 02 24.3 03 12		-1.1 -0.7	4.25	20		5.3	5.0

LOCAL EARTHQUAKES

219

MNW	PN	19 02 28.9	1.3	4.39	253	4.9	
	E	35.5					
	SN	03 16	-0.2				
TNZ	PN	19 02 43.3	1.6	5.48	6	5.2	4.6
	E	03 47.0					
TRZ	EIPN	19 02 43.1	D	-0.9	5.61	26	5.4 5.2
	SN	03 46		0.3			
CNZ	IPN	19 02 45.3	U	1.3	5.62	16	5.7 5.3
	SN	03 46.3		0.6			
TUA	PN	19 02 53.5		-1.2	6.40	26	
	E	03 04					
GNZ*	PN	19 02 59.0		-1.6*	6.84	30	
	E	03 09.7					
	SN	04 13		-2.0*			
KRP*	EIPN	19 03 00.9	U	-0.0*	6.86	13	
	E	09.3					
	SN	04 16		0.4*			

FELT AKAROA HEAD (111) MM IV, ALLANDEALE (110) MM III

SEP 29	H M S						70/ 619
	09 58 19.6	37.90S	176.55E	182 KM	SE 1.7	AVG MAG	3.9
	+ 2.4	0.09	0.07	15			
KRP	P	09 58 47.1		DIR RES	DIST AZ	W-A	W P W S
	S	59 07.1		0.8	0.80 268	4.2	3.2
GNZ	P	09 58 51		0.1			
	S	59 14		-1.0	1.38 123	3.9	4.3
MNG	EP	09 59 08		0.9	2.84 197		
	ES	45		1.3			
COB	S	10 00 15		-2.1	4.34 222		4.0

SEP 29	H M S						70/ 620
	13 52 31.2	40.96S	176.60E	12 KM	SE 1.4	AVG MAG	3.8
	+ 0.9	0.04	0.05	2			
MNG	IP*	13 52 46.2		DIR RES	DIST AZ	W-A	W P W S
	PN	13 52 56.8		-1.7	0.91 292		
TRZ	ESG	53 19		0.4	1.41 7	3.9	3.9
	SN	53 19		-0.0			
HEL	IPN	13 52 57.2	D	0.7	1.42 256	3.3	3.9 4.0
	SN	53 13		-2.2			
CNZ	IPN	13 53 02.6	U	-0.6	1.93 335	4.1	4.1
	SN	27		0.2			
TNZ	PN	13 53 10.4		0.1	2.46 315	4.1	3.8
	EP*	14.9		0.2			
	ES*	47		0.3			
GNZ	ESN	13 53 42		-0.4	2.56 26		3.3
COB	EPN	13 53 20		3.1	2.93 266	3.8	3.7
	SN	57		5.7*			
KRP	EP*	13 53 26		-0.0	3.14 344		3.5
	E	54 11.3					

SEP 30	H M S						70/ 621
	03 17 14.5	45.03S	167.68E	33 KM	SE 1.3	AVG MAG	3.9
	+ 1.3	0.06	0.06	3			
HSZ	IPN	03 17 24.7		DIR RES	DIST AZ	W-A	W P W S
	SN	03 17 50		U	1.3 0.40 25		
ROX	PN	03 17 47.8		0.0	1.24 111		
MJZ	SN	18 16.1		-0.8	2.25 63	3.5	3.8
	S*	22.7		-1.4			
OHZ	PN	03 17 49		-0.2	2.29 92	4.1	4.2
	SN	18 16.1		0.6			
COB	EPN	03 18 30		-1.7	5.41 45	3.8	4.1
	SN	19 31.9		0.6			

LOCAL EARTHQUAKES

221

		H	M	S	DIR	RES	DIST	AZ	M-A	W	P	W	S
FCZ	E	02	04	28			1.12	109					4.1
	ES			47		2.5							4.1
KRP	IP	02	04	22.7	DSE	-0.6	1.44	246		4.3			
GNZ	IP	02	04	21.9	U	-1.4	1.45	154		4.2			4.3
	E			40									
	ES			47		-2.2							
TUA	ES	02	04	48		-1.4	1.46	182					4.2
TRZ	EP	02	04	31		-0.1	2.23	188		4.1			4.6
	ES		05	05		2.1							
CNZ	EP	02	04	32		0.5	2.27	215		3.8			
WEL	ES	02	05	49		0.2	4.37	205	4.6				4.1
COB	ES	02	06	06		0.5	5.10	221					3.9
OCT 03	H M S	21	13	52.1									70/ 627
				+ 0.9									4.1
		45.06S	167.64E		136 KM		SE	0.6		AVG MAG			4.1
		0.03	0.03		5								
MSZ	P	21	14	12.1	DIR	0.4	0.44	26					
	ES			26.3		-0.3							
ROX	ES	21	14	39		0.6	1.25	110					3.8
WPZ	P	21	14	24.3		-0.1	1.80	153					4.3
	ES			49		-0.2							
OMZ	ES	21	15	00		-0.3	2.32	91					
OCT 05	H M S	05	37	48.0									70/ 628
	R												
		-38.75S	176.00E		12 KM		SE	ND					
					3								
WNZ	EP*	05	37	53	DIR	4*	77.00	180					
	ES*			57		4*							
		FELT TAUPŌ (41) MM IV											
OCT 05	H M S	08	32	30.0									70/ 629
	R												
		38.00S	176.00E		12 KM		SE	ND					
					3								
KRP	EP*	08	32	50	DIR	12.6*	0.37	281					
		FELT ROTORUA (33) MM IV											
OCT 05	H M S	23	20	01.9									70/ 630
				+ 0.5									3.7
		38.91S	175.71E		12 KM		SE	1.5		AVG MAG			3.7
		0.04	0.03		3								
GNZ	IP*	23	20	03.9	DIR	-2.4	0.31	203					
KRP	PN	23	20	20.1		-1.4	0.99	352		3.6			3.1
	ESN			37		1.1							
TNZ	EP*	23	20	21.3		0.2	1.07	255		3.8			3.4
	ES*			37		1.3							
TRZ	EPN	23	20	21		-1.6	1.08	127		3.9			3.5
	ESG			40		1.6							
	E			57									
TUA	EPG	23	20	25		0.1	1.13	85		4.0			3.9
	ESN			39		-0.1							
HNG	PN	23	20	32.1		1.1	1.71	186					3.7
GNZ	EPG	23	20	39		0.1	1.83	82					3.7
		FELT TAUREWA FOREST (50)											
OCT 05	H M S	23	50	50.9									70/ 631
				+ 0.2									3.7
		39.00S	175.62E		12 KM		SE	0.5		AVG MAG			3.7
		0.01	0.01		3								
GNZ	IP*	23	50	55.9	DIR	0.3	0.21	196					
TNZ	EPG	23	51	11	J	0.2	0.98	259		3.6			3.4
	E			28									
KRP	EP*	23	51	10.1		-0.3	1.08	357		3.7			3.4
	ES*			25		0.1							

	TRZ	EP*	23 51 11		0.5	1.08	121		3.9	3.5
		E	17							
		E	46							
	TUA	EP*	23 51 13		0.3	1.21	81		4.0	3.8
		ES*	29		0.1					
	MNG	PG	23 51 23.1		-0.7	1.62	184		3.6	
	GNZ	EP*	23 51 29		-0.6	1.91	80		3.8	
	FELT	TOKAANU (40) MM IV								
		H M S							70/ 632	
OCT 06	00 51	45.4	38.93S	175.69E	12 KM	SE	1.3	AVG MAG	3.8	
		+ 0.4	0.03	0.02	3					
		H M S			DIR	RES	DIST	AZ	W-A	W P W S
	CNZ	IP*	00 51 49.9			-2.1	0.32	198		
	KRP	PG	00 52 05.0			-0.3	0.97	353		3.9 3.5
		ESQ	19			0.5				
	TNZ	EP*	00 52 09			-1.8	1.05	253		3.8 3.4
		ESQ	22			0.9				
	TRZ	EP*	00 52 08			0.1	1.11	127		3.8
		E	11.3							
	TUA	PG	00 52 09.2			0.3	1.15	86		3.9 3.9
		ESQ	24			-0.5				
	MNG	P*	00 52 17.1			1.0	1.73	185		3.6
	GNZ	EP*	00 52 23			0.1	1.85	83		3.8
	WEL	P*	00 52 30.8			1.7	2.49	196		4.1
	FELT	TOKAANU (40) MM IV								
		H M S							70/ 633	
OCT 06	00 55	33.9	39.00S	175.73E	12 KM	SE	1.4	AVG MAG	3.6	
		+ 0.5	0.03	0.03	3					
		H M S			DIR	RES	DIST	AZ	W-A	W P W S
	CNZ	P*	00 55 37.1			-2.0	0.25	215		
		E	46.8							
	TRZ	EP*	00 55 54			1.7	1.01	123		3.9
		E	58.3							
	TNZ	EP*	00 55 53			-0.2	1.06	259		3.6 3.3
		ES*	56 09			1.5				
	KRP	P*	00 55 52.9			-0.5	1.08	352		3.8 3.3
		ES*	56 08			-0.0				
	TUA	EP*	00 55 55			0.8	1.13	81		3.7
	MNG	EP*	00 56 02.3			-0.3	1.63	187		3.3
	GNZ	EP*	00 56 10			-0.9	1.83	80		3.8
	FELT	TOKAANU (40) MM IV								
		H M S							70/ 634	
OCT 06	02 42	27.1	38.93S	175.71E	12 KM	SE	1.5	AVG MAG	3.9	
		+ 0.4	0.03	0.03	3					
		H M S			DIR	RES	DIST	AZ	W-A	W P W S
	CNZ	IP*	02 42 30.7		D	-2.5	0.29	205		
	WNZ	EP*	02 42 38			2.4	0.43	46		
		ESQ	43			0.9				
	KRP	IP*	02 42 49.0		D	-0.5	1.01	352		4.0 3.8
		PG	46.0			-1.7				
		ES*	59			-0.3				
	TNZ	EP*	02 42 46.3			0.1	1.06	256		4.4 3.7
		ES*	43 03			2.3				
	TRZ	EP*	02 42 47			0.6	1.07	126		4.0 3.7
		E	56							
	TUA	P*	02 42 47.2			-0.4	1.13	84		3.9 4.2
		EP*	49			-1.2				
		ES*	43 04			1.1				
	MNG	EP*	02 42 56			-1.2	1.69	186		3.9 3.1
		ESN	43 18.3			1.3				
	GNZ	PG	02 43 03.3			-0.9	1.83	82		4.0
	FELT	TOKAANU (40) TAURENA FOREST (50) MM IV AND HINEMAIKIA DAM (41)								

OCT 06		H	M	S	38.61S	176.90E	33 KM	SE	1.2	AVG MAG	70/ 630
		+	-	0.4	0.03	0.02	2				4.7
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
TUA	IPN	04	43	50.2	U	0.1	0.27	135			
	ES*			57		2.0					
WNZ	ESN	04	43	59		-3.9*	0.63	268	4.8	4.8	
	E			05.8							
	E			18							
GNZ	IPN	04	43	57.0	USE	-0.7	0.88	92		5.1	
	ESN			44 09		-0.0					
TRZ	P*	04	43	59.4	D	-1.0	0.94	184		5.1	
	ESN			44 09		-1.6					
ONZ	IP*	04	44	03.3	D	-1.3	1.21	241			
KRP	IPN	04	44	02.7	U	-0.5	1.28	302	4.0	4.3	
	E			12							
	ESN			19		0.3					
TNZ	PN	04	44	16.1		2.3	2.05	253	4.8	4.4	
	ES*			46		-0.0					
MNG	PN	04	44	16.1		-0.9	2.28	208	4.5	4.7	
	E			18.3							
	E			23.2		0.3					
	E			27							
WEL	EPN	04	44	28		-0.7	3.13	211	4.9	5.0	5.1
	EP*			37.3		0.1					
	ESN			45 04		0.1					
	ES*			20		1.5					
CIZ*	EPN	04	45	21		-3.5*	7.26	139			
	E			23							
	E			46 34							

FELT KOTEMAOORI (53) MM IV

OCT 06		H	M	S	38.95S	175.76E	12 KM	SE	0.7	AVG MAG	70/ 640
		+	-	0.5	0.02	0.01	2				3.6
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
CNZ	IP*	09	11	05.4	D	-1.2	0.30	214			
TRZ	EPG	09	11	21		-0.1	1.02	126	3.8	3.4	
	E			26.5							
	E			58							
KRP	PG	09	11	21.0		-0.6	1.04	350		3.8	
	ESG			36		0.3					
TUA	EPG	09	11	22		-0.7	1.09	83	3.8	3.6	
	ESG			38		0.5					
TNZ	P*	09	11	21.0		0.6	1.10	257	3.8	3.5	
	ESG			38		0.2					
MNG	EP*	09	11	31		0.8	1.68	187		3.5	
GNZ	EPG	09	11	37		0.2	1.79	81	3.7	3.2	
	E			42							
	E			12 13							

FELT TOKAANU (40) MM III

OCT 06		H	M	S	38.99S	175.65E	12 KM	SE	1.2	AVG MAG	70/ 641
		+	-	0.3	0.02	0.02	2				4.3
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
CNZ	P*	15	35	30.7		-0.7	0.22	201			
WNZ	EPG	15	35	37		0.1	0.50	45	4.6	4.5	
	E			57							
TNZ	PG	15	35	46.0		-1.0	1.01	258	4.3	4.0	
	ESG			36 02		1.4					
KRP	P*	15	35	45.2		-0.6	1.07	355	4.8	4.3	
	ES*			36 00		-0.2					
TRZ	P*	15	35	46.2		0.4	1.07	122	4.5	4.2	
	E			52.0							
	E			36 23							

LOCAL EARTHQUAKES

TUA	P*	15 35	47.7	-0.1	1.19	82	4.4	4.3
	PG		48.4	-2.1				
	ES*		36 04.3	0.7				
MNG	EP*	15 35	36	0.5	1.63	184	4.4	3.6
	E		36 47					
GNZ	P*	15 36	01.7	1.9	1.89	80	4.4	4.0
	E		36					
HEL	P*	15 36	09.3	0.8	2.39	196	3.7	4.3 4.1
	ESQ		46	-1.1				

FELT TOKAANU (40) MM IV

OCT 06 15 56 53.3 38.95S 175.72E 12 KM SE 1.2 AVG MAG 70/ 642 4.1
 +/- 0.3 0.02 0.02

GNZ	P*	15 56	57.0	-2.3				
WNZ	EPG	15 57	03.7	1.4	0.43	43		
	E		16.9					
KRP	EP*	15 57	11.2	-0.8	1.03	352	4.3	4.0
	ESQ		29	0.9				
TRZ	P*	15 57	12.1	0.0	1.05	126	4.4	4.0
	PG		17.4	2.8*				
	E		42					
TNZ	P*	15 57	12.3	-0.2	1.07	257	4.2	4.2
	ESQ		30	0.4				
	E		37					
TUA	P*	15 57	13.4	-0.2	1.12	83	4.3	4.3
	PG		15.1	-1.0				
	ESQ		70	-1.3				
MNG	P*	15 57	22.7	-0.4	1.68	186	4.2	
	E		23.8					
GNZ	P*	15 57	27.0	1.4	1.82	81	4.3	3.7
	PG		29.0	-1.2				
	E		33.8					
	E		32					
HEL	P*	15 57	35.9	-0.4	2.45	197	3.6	4.2 3.8
	ESQ		58 17	1.1				

FELT TOKAANU (40) MM IV

OCT 06 16 01 18.5 39.04S 175.75E 12 KM SE 1.3 AVG MAG 70/ 643 3.8
 +/- 0.3 0.02 0.02

GNZ	IP*	16 01	23.7	U	0.2	0.23	226	
WNZ	ES*	16 01	34		-0.8	0.49	33	
TRZ	PG	16 01	39.3	U	1.1	0.97	122	3.8
TNZ	EP*	16 01	39		0.9	1.09	262	3.9 3.6
	ESQ		55.3		0.2			
TUA	PG	16 01	40.3		-0.7	1.11	78	
	ESQ		57		1.0			
KRP	IP*	16 01	38.2	DN	-0.6	1.13	351	4.2 3.9
	ES*		54		-0.0			
MNG	EPG	16 01	49.8		-1.2	1.59	188	4. 3.1
	ESQ		02 12.3		0.3			
GNZ	EPG	16 01	35		-0.1	1.81	78	3.9
HEL	E(P*)	16 02	02		1.9	2.37	198	4.0 3.7
	ESQ		36		-2.4			
COB	EP*	16 02	11		-1.5	3.10	228	3.8 3.6
	ES*		55		1.3			

OCT 06 16 26 10.8 39.06S 175.75E 12 KM SE 0.9 AVG MAG 70/ 644 3.9
 +/- 0.3 0.02 0.02

GNZ	IP*	16 26	15.3	D	-0.2	0.21	228	
	E		25					
WNZ	EPG	16 26	21.5		0.2	0.51	33	4.1

OCT 07	H	M	S	38.315	176.27E	330 KM	SE	1.8	AVG MAG	70/ 651	
	01	35	46.3	0.20	0.23	27				4.3	
		+	-								
TRZ	ES			01 37 08		DIR	RES	DIST	AZ	W-A	W P W S
GNZ	ES			01 37 07				1.0	1.31	161	4.2
TNZ	EP			01 36 36.3				-1.1	1.42	104	3.9
FCZ	ES			01 37 13				2.5	1.71	239	4.2
MNG	P			01 36 40.0				-3.7	1.90	72	4.3
				37 17.0				1.0	2.38	195	4.4
				20.3							4.5
				0.1							
WEL	ES			01 37 34				0.7	3.19	201	4.5
COB	P			01 36 51.3				-1.5	3.89	223	4.4
	ES			37 44				-1.9			4.0
OCT 07	H	M	S	39.33S	175.79E	85 KM	SE	1.1	AVG MAG	70/ 652	
	09	54	35.2	0.03	0.02	7				3.8	
		+	-								
CNZ	P			09 54 48.0		DIR	RES	DIST	AZ	W-A	W P W S
				57				-0.1	0.23	305	
TRZ	EP			09 54 55				-0.9			
	ES			55 11				2.0	0.83	106	3.8
TNZ	EP			09 54 57.5				4.5*			3.7
	ES			55 14				1.1	1.11	277	3.8
TUA	S			09 55 13.4				1.9			4.0
MNG	IP			09 54 59.0		U		-0.5	1.18	64	4.0
				55 03				0.0	1.31	190	4.2
				09							3.7
				17				0.3			
KRP	ES			09 55 18				-1.2	1.42	352	3.6
GNZ	IP			09 55 05.7		US		-0.4	1.87	69	4.1
				26							4.1
				29				0.2			
WEL	EP			09 55 08.3				-1.0	2.10	202	3.5
	ES			21.5							3.8
				34				-0.4			
COB	EP			09 55 21				0.2	2.93	232	3.7
	ES			30							3.9
				54				-1.1			
OCT 07	H	M	S	38.96S	175.72E	12 KM	SE	1.5	AVG MAG	70/ 653	
	16	03	17.8	0.02	0.02	R				3.9	
		+	-								
CNZ	IP			16 03 23.3		U		-0.3	0.28	209	
	ESQ			30				2.2			
TRZ	EPG			16 03 39				0.1	1.04	125	4.2
	ESQ			53				-0.0			3.8
KRP	EPG			16 03 37.3				-1.4	1.04	352	3.9
	ESQ			54				0.9			3.7
TNZ	EPG			16 03 39.0				-0.5	1.07	257	4.1
	ESQ			55				1.1			3.6
TUA	EPG			16 03 40.5				-0.1	1.13	83	4.1
	ESQ			57				1.1			3.9
MNG	IPG			16 03 49.1		U		-1.1	1.67	186	4.2
	ESQ			04 14				-0.1			3.3
GNZ	EPG			16 03 55.3				0.9	1.83	81	4.0
COB	EP*			16 04 09.3				-2.9	3.13	226	3.8
	ES*			55				1.6			3.6
OCT 08	H	M	S	39.13S	178.40E	12 KM	SE	1.2	AVG MAG	70/ 654	
	06	34	30.4	0.03	0.03	3				4.4	
		+	-								

LOCAL EARTHQUAKES

229

		H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W S
GNZ	IP*	05	34	42.2	USW	1.1	0.56	329		4.4		4.3
	ES*			48		-1.0						
TUA	EP*	05	34	50		1.1	1.02	288		4.5		4.2
	ES*			35		-1.2						
TRZ	IPN	06	34	54.2	U	0.3	1.29	250		4.4		4.4
	ESN			35		-0.3						
CNZ	IPN	06	35	07.3		1.1	2.22	267		4.7		
	EP*			39		0.4						
KRP	EP*	06	35	14.3		-0.5	2.54	297		3.7		
	E			36								
MNG	PN	06	35	12.2		-0.5	2.69	236		4.9		4.1
	ESN			46		1.3						
TNZ	EPN	06	35	20.3		2.0	3.12	268		4.4		
WEL	PN	06	35	22.0		-1.9	3.52	231	4.6	4.4		4.7
	EP*			30		-1.6						
	ESN			36		0.2						
COB	PN	06	35	39.8		-0.9	4.76	244		4.3		4.2
	ESN			36		0.5						
OCT 08		H	M	S								70/ 655
		10	00	23.2		39.03S	175.69E	12 KM	SE	1.2	AVG MAG	3.8
				+ 0.3		0.02	0.02	3				
		H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W S
CNZ	P*	10	00	27.3		-0.3	0.21	213				
	ES*			30.3		-0.6						
TRZ	EPQ	10	00	44		-0.0	1.02	121		4.1		3.7
	E			48.3								
	ESQ			58.3		0.6						
TNZ	EPQ	10	00	43		-1.2	1.03	261		3.9		3.5
	ESQ			01		1.8						
KRP	P*	10	00	42.7		-0.5	1.11	354		3.9		3.7
	ES*			58		-0.1						
TUA	EP*	10	00	44.3		0.4	1.16	80		4.0		4.0
	ES*			01		1.3						
MNG	PQ	10	00	53.8		-1.8	1.60	186		3.8		
GNZ	PQ	10	01	00.3		-0.6	1.86	79		4.0		
COB	EP*	10	01	16		-0.8	3.06	227		3.8		3.6
	ES*			59		2.0						
OCT 08		H	M	S								70/ 656
		19	54	40.7		40.44S	174.59E	33 KM	SE	1.4	AVG MAG	4.8
				+ 0.4		0.02	0.03	3				
		H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W S
MNG	IPN.	19	54	55.0		1.4	0.70	105				
WEL	IPN	19	54	56.2	U	0.5	0.86	171	4.5	4.8		4.9
	ESN			59		0.2						
TNZ	P*	19	55	04.0		0.3	1.26	353		4.8		5.2
	ES*			19		-1.9						
CNZ	PN	19	55	01.2		-2.5	1.44	31				
COB	EPN	19	55	05.3		0.3	1.55	245				
	ESN			23.3		-0.2						
TRZ	PN	19	55	10		-0.4	1.93	63		4.8		4.9
	EP*			15.3		0.4						
	ES*			41		0.3						
TUA	E	19	55	23.3			2.56	51		5.1		4.8
	ES*			56		0.4						
KRP	IPN	19	55	21.2	DS	1.4	2.62	17		4.8		4.8
	ESN			52		2.3						
KAI	E	19	55	29			3.17	228	4.7			
	ESN			56		-1.0						
GNZ	IPN	19	55	26.3		-1.0	3.20	57		4.7		4.5
	E			43.3								
	ESN			56		-0.9						
GPZ*	EPN	19	55	30		-2.8*	3.56	203	4.8			
	ESN			56		-5.7*						
ECZ	EP*	19	55	51		-1.5	4.12	50		4.9		

LOCAL EARTHQUAKES

231

		H	M	S	DIR	RES	DIST	AZ	W-A	M	P	W	S
ECZ	IP	02	44	37.7	D	-1.4	0.56	137					
	ES			56		-0.6							
GNZ	IP	02	44	46.7	U	1.2	1.36	181			4.4	4.8	
	ES			45 08		0.2							
TUA	EP	02	44	49		0.2	1.68	215			4.3	4.7	
	E			59									
KRP	IP	02	44	53.8	DNE	1.2					4.2	3.7	
	ES			45 21		-1.3							
GBZ	E	02	45	01			2.33	296					
TRZ	EP	02	44	58		-0.1	2.47	213			4.3	4.8	
	ES			45 31		1.0							
GNZ	EP	02	45	03		1.3	2.75	225			4.2	4.1	
	ES			37		0.6							
TNZ	EP	02	45	12.3		1.7	3.47	236			4.1		
MNG	P	02	45	15.1		-1.2	3.89	210			4.3	4.4	
	E			55									
	ES			46 01.3		-0.8							
WEL	ES	02	46	20		-2.3	4.74	212	5.0			4.5	
OCT 10	H M S	13	51	03.9									70/ 661
				+ 1.3									
	H M S	40.46S	173.69E		171 KM		SE	1.8		AVG	MAG		4.2
		0.06	0.06		11								
	H M S	13	51	32.2	DIR	RES	DIST	AZ	W-A	M	P	W	S
COB	IP	13	51	32.2	U	1.9	0.94	227			4.5	4.4	
	ES			50		-0.7							
WEL	IP	13	51	34.8	U	2.4	1.19	135	3.8		4.1	4.2	
	ES			59		0.6							
TNZ	EP	13	51	35		0.7	1.39	24			3.8	3.9	
	ES			57		-0.7							
MNG	IP	13	51	37.0	U	2.9	1.41	97			4.3	4.3	
	ES			58		-0.0							
CNZ	IP	13	51	40.4	U	3.3	1.93	50			4.1	4.5	
	E			52 03									
	E			11									
TRZ	ES	13	52	21		-0.7	2.60	71				4.1	
KAI	ES	13	52	21		-2.0	2.66	218	4.1				
TUA	ES	13	52	33		-1.0	3.17	60				4.1	
QPZ	EP	13	51	58		1.2	3.32	193	4.7				
	ES			52 35		-2.4							
GNZ	ES	13	52	47		-2.2	3.84	63				3.0	
OCT 11	H M S	00	55	34.3									70/ 662
				+ 1.1									
	H M S	35.59S	178.58E		257 KM		SE	1.4		AVG	MAG		5.6
		0.05	0.07		10								
	H M S	00	56	19	DIR	RES	DIST	AZ	W-A	M	P	W	S
ECZ	EP	00	56	19		0.5	2.10	181			6.2	6.1	
	I			20.1									
	ES			50.3		-2.3							
GBZ	P	00	56	21.9		-1.5	2.59	255					
	E			29									
	E			41									
GNZ	IP	00	56	29.1	U	0.6	3.08	186			5.7		
	ES			57 10		-0.6							
AUC	P	00	56	32.9	U	1.6	3.33	247					
KRP	IP	00	56	34.0	USM	2.2	3.38	226			5.7	4.7	
	ES			57 18		1.5							
TUA	IP	00	56	33.2	U	1.1	3.41	199			5.6	6.0	
	E			57 15									
	E			19		1.9							
ONE	P	00	56	32.1	E	-0.4	3.44	266	5.4				
	ES			57 18		0.2							
TRZ	P	00	56	42.0		0.8	4.19	199			5.8	6.2	
	ES			57 33		-0.3							
MNZ	IP	00	56	44.2	U	1.3	4.34	213			5.7		
MNZ	IP	00	56	53.3	D	3.6	4.01	222			5.5	4.7	

	CRZ	E IP	00 58 00 56 50.0 57 06		DNE	-0.6	4.98	282		5.3	4.4
	MNG	E EP	00 56 56.5 57 52			-1.2 -1.5	5.58	205		5.6	5.4
	WEL	E P	00 58 03 57 07.7 07.9 15.3			-0.4 -0.7	6.42	207	6.4		
	MSZ*	E EP ES	00 58 20 58 19 01 00 33			-2.2 -2.0 0.3*	12.19	219			
OCT 11		H M S 05 19 50.0 + 0.4	38.88S 0.03	175.68E 0.02	12 KM		SE	1.4	AVG MAG	70/ 663 3.8	
	CNZ	IP*	05 19 55.2		DIR	RES	DIST	AZ	W-A	W P	W S
	KRP	PG ESG E	05 20 09.7 23 26		D	-1.6 0.2 0.5	0.34	198		3.8	3.3
	TNZ	PG ESG	05 20 11.7 27			0.2 1.2	1.06	253		4.0	3.5
	TRZ	EPG ESG	05 20 12 30			-0.6 2.3	1.11	128		3.9	3.7
	TUA	PG SG	05 20 13.0 28.0			-0.3 -0.9	1.15	87		3.9	3.9
	MNG	P*	05 20 21.1			0.2	1.75	185		4.1	
	GNZ	E	05 20 31				1.85	83			3.5
	WEL	P*	05 20 35.0			1.1	2.51	196		4.1	
	COB	EP*	05 20 43			-2.2	3.16	225		3.8	
OCT 11		H M S 07 39 08.6 + 2.8	36.47S 0.16	177.24E 0.21	252 KM		SE	2.1	AVG MAG	70/ 664 4.2	
	ECZ	EP? ES	07 39 48 40 17		DIR	RES	DIST	AZ	W-A	W P	W S
	KRP	P	07 39 52.8			-0.3 -1.9	1.61	140		4.3	4.4
	GNZ	IP E ES EP	07 39 54.7 40 27 31 51		U	1.4 0.7	1.99	222		3.5	
	TRZ	EP EP	07 40 04 51			1.8 1.3	3.10	186			4.5
	MNG	P	07 40 15.2			-2.1	4.37	198		4.4	4.1
	WEL	ES ES	07 41 09 31			-1.9 2.4	5.18	201			4.3
	COB	ES	07 41 41			-1.3	5.80	216			4.0
OCT 11		H M S 09 48 29.4 + 0.3	40.90S 0.03	173.77E 0.02	33 KM		SE	1.3	AVG MAG	70/ 665 4.3	
	COB	IPN. ESN	09 48 45.0 55.3		DIR	RES	DIST	AZ	W-A	W P	W S
	WEL	IPN ESN	09 48 44.8 57		U	1.2 1.7	0.81	256			
	MNG	IPN EP*	09 48 50.4 55		U	0.5 1.4	0.85	118	4.2	4.2	4.6
		E ESN	49 00 07			0.0 0.0	1.33	79		4.3	4.5
	TNZ	PN ESN	09 48 57.3 49 18			0.5 0.3	1.77	15		4.4	4.7
	GNZ	IPN E E	09 49 02.0 13 23		D	-0.5	2.17	39		4.2	4.4

OCT 12		H	M	S									70/ 668
	18 04	05.9	40.60S	176.48E	12 KM	SE	1.7	AVG MAG	4.2				
		0.8	0.04	0.04									
			H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
HNG			18 04	23.7		D	2.8	0.76	269				
TRZ			18 04	27.2		D	0.8	1.08	14		4.7	4.8	
				34.0									
				45			1.5						
WEL			18 04	33.3		U	0.6	1.46	242	3.9	4.5	4.6	
				39.8									
				50			-1.8						
TUA			18 04	36.4				1.87	16		4.4	4.5	
				58			-2.9						
TNZ			18 04	51.5			1.2	2.15	311		4.3	4.2	
				05 12			-1.1						
GNZ			18 04	44.7			1.0	2.29	32		3.5	4.2	
				05 03									
				11			-0.1						
KRP			18 05	05			2.0	2.77	344		3.7	3.7	
				39			-1.4						
COB			18 04	53			1.1	2.88	259		4.2	4.3	
				05 03			-2.2						
				27			1.1						
GPZ			18 05	53			-4.5	4.20	221	4.1			
KAI			18 05	58			-0.9	4.26	242	4.3			
FELT ARAHONA (64), PA VALLEY (66) MM II													

OCT 13		H	M	S									70/ 669
	08 12	01.0	32.68S	177.02W	353 KM	SE	1.9	AVG MAG	5.5				
		1.8	0.10	0.14	37								
			H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
ECZ			08 13	46			1.8	6.18	215				
				50									
GNZ			08 13	47			0.6	7.19	213				
				08			-1.3						
TUA			08 13	53			0.1	7.73	216				
				29			-0.9						
ONE			08 13	53			-0.4	7.78	244	5.5			
				50									
KRP			08 13	53			-3.3	8.02	227				
				30									
				25			-2.1						
TRZ			08 14	02			0.4	8.48	214				
				39			2.3						
CRZ			08 14	04.5			-0.7	8.78	256				
				45			1.8						
MNG			08 14	22			2.8	9.95	215				
				07.5			-1.1						
WEL			08 16	27			-0.1	10.81	215				

OCT 14		H	M	S									70/ 670
	00 13	51.9	35.11S	179.56W	214 KM	SE	1.5	AVG MAG	4.4				
		1.9	0.08	0.15	27								
			H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
GNZ			00 14	55			-0.0	4.02	208		4.2	4.2	
				43			-0.9						
TUA			00 15	00.2			-1.2	4.53	215		4.8	4.7	
				56			0.7						
KRP			00 15	05.3			0.0	4.84	233		4.0		
				01			-1.2						
TRZ			00 15	08				5.28	212			4.5	
				15			2.7						
CRZ			00 15	26.3			0.8	6.42	274				
MNG			00 16	46			-0.0	6.75	214				
WEL			00 17	05			-0.9	7.61	214				

LOCAL EARTHQUAKES

235

OCT 14		H	M	S	33.94S	178.54W	237 KM	SE	2.4	AVG MAG	70/ 671
		03	10	59.6	0.14		51			4.4	
				+ 2.8		0.23					
GNZ	P	03	12	21.0			DIR	RES	DIST	AZ	H-A P W S
	ES			13 26					5.54	209	4.4 4.5
TUA	EP	03	12	27					6.05	214	
	ES			13 42							
ONE	E	03	12	39					6.15	250	
KRP	EP	03	12	32				0.1	6.30	228	
	ES			13 43				-1.1			
TRZ	ES	03	13	55				-0.7	6.81	212	
CRZ	EP	03	12	45				0.3	7.30	263	
MNG	EP	03	13	00				2.9	8.27	213	
	ES			14 31				1.8			
WEL	ES	03	14	46				-2.8	9.13	214	

OCT 14		H	M	S	39.42S	174.85E	149 KM	SE	1.4	AVG MAG	70/ 672
		08	32	49.5	0.04		7			4.9	
				+ 0.8		0.04					
TNZ	P	08	33	12.0			DIR	RES	DIST	AZ	H-A W P W S
	S			27.0				1.4	0.44	302	
	E			29.4				0.2			
GNZ	IP	08	33	12.1			D	0.3	0.58	68	4.9 4.7
	ES			28.3				0.4			
MNG	IP	08	33	18.1			U	1.0	1.29	158	
	E			34							
TRZ	P	08	33	19.7				0.1	1.53	96	4.7 5.2
	E			38							
	ES			45				2.3			
KRP	IP	08	33	19.8			DSE	-0.5	1.59	20	5.0 4.1
	ES			42				-1.8			
WEL	IP	08	33	24.0			USE	0.7	1.86	182	4.8 5.2 5.1
	ES			48				-1.3			
TUA	P	08	33	23.0				-0.6	1.89	72	5.2 5.0
	ES			48				-1.8			
COB	IP	08	33	28.7			U	-0.2	2.32	224	4.8 5.0
	ES			58				-1.1			
GNZ	IP	08	33	30.8			D	-1.5	2.59	74	5.0 4.8
	E			34 00							
ONE	EP	08	33	48				1.9	3.66	354	4.0
	E			34 26							
KAI	EP	08	33	57					4.05	219	5.1
	S			34 35.3				-3.5*			

FELT WELLINGTON CITY (68)

OCT 14		H	M	S	33.06S	177.33W	286 KM	SE	1.1	AVG MAG	70/ 673
		09	05	57.0	0.07		25			6.0	
				+ 1.3		0.12					
GBZ	E?	09	07	40			DIR	RES	DIST	AZ	H-A W P W S
GNZ	EP	09	07	35					6.71	240	
	E			50					6.73	213	
	ES			53				0.3			
TUA	P	09	07	42.7				0.5	7.27	216	
	ES			09 06				1.2			
ONE	EP	09	07	43				-0.7	7.38	246	5.3
KRP	EP	09	07	45				-0.9	7.57	226	
	ES			09 10				-1.4			
TRZ	EP	09	07	51				-0.4	8.02	214	
	ES			09 22				0.9			
CRZ	EP	09	07	58				1.5	8.43	258	
	E			08 52							
TNZ	EP	09	08	09				4.5*	9.07	225	
MNG	E?	09	08	15					9.49	215	

LOCAL EARTHQUAKES

237

	COB	ESN PN	07 21 05 07 21 00.0	1.2 -0.8	1.34	260			4.2	4.4	
	CNZ	SN EPN	07 21 17.3 07 21 08.9	0.3 0.7	1.85	27			4.2	4.4	
	TRZ	ES*	07 21 36 07 21 28	-0.9	2.22	55			4.0	3.9	
	KAI	E E	07 21 59 07 21 33		2.84	233		3.9			
	KRP	PN ES*	07 21 22.9 22 10	0.6 0.4	3.05	16			3.7	3.7	
	GPZ	ESN	07 21 56	-4.9*	3.14	205					
	GNZ	ESN	07 22 09	-1.0	3.52	52				3.7	
	FELT WELLINGTON (68) M IV										
OCT 16	H M S									70/ 678	
	18 07	46.5	41.63S	171.61E	12 KM	SE	1.5	AVG MAG		3.9	
		+ 0.7	0.05	0.05							
	KAI	P*	18 08 04.2	DIR	RES	DIST	AZ	W-A	W P	W S	
		ES*	15.3		1.1	0.91	190	4.0			
	COB	IP*	18 08 04.2	U	-0.5	1.00	58		4.2	4.2	
	GPZ	ES*	18 08 38		-2.3	2.20	160	3.4			
		EP*	29		-0.3						
	WEL	E EPN	18 08 42 24		-0.8	2.40	83	3.6	4.1	4.1	
		ESN	54		0.7						
	MNG	EPN	18 08 34		-0.3	3.09	72		4.1	3.8	
		E	37.0								
	TNZ	ES*	09 22		0.9						
		EPG	18 08 53		1.2	3.23	42		4.0	4.1	
		E	09 47								
	MSZ	EPN	18 08 49.2		1.7	4.07	220		3.5	3.6	
		ESN	09 35		1.1						
		ESG	10 01		-2.7						
	FELT WESTPORT (79) M IV										
OCT 17	H M S									70/ 679	
	21 38	41.5	32.31S	179.60W	327 KM	SE	1.8	AVG MAG		5.5	
		+ 2.1	0.11	0.22							
	ECZ	EP	21 40 08	DIR	RES	DIST	AZ	W-A	W P	W S	
		E	41 12		0.6	5.59	195		5.4	5.5	
	GNZ	E EP	21 40 21 20		0.5	6.61	196				
		ES	41 34		-2.4						
	CRZ	P	21 40 21.0		-0.7	6.80	250				
	KRP	EP	21 40 24		1.4	6.88	214				
	TUA	EP	21 40 25.3		1.3	7.01	201				
		ES	41 46		1.2						
	TRZ	E?	21 40 40			7.79	201				
		E	42 06								
	MNG	EP	21 40 49		-1.5	7.19	204				
		ES	42 31		-1.3						
	WEL	EP	21 40 59.3		-1.3	10.03	205	5.6			
		ES	42 33		2.2						
OCT 18	H M S									70/ 680	
	02 54	53.3	45.02S	170.61E	12 KM	SE	1.3	AVG MAG		3.4	
		+ 0.8	0.05	0.04							
	OHZ			DIR	RES	DIST	AZ	W-A	W P	W S	
	POX	S*	02 55 27		1.3	0.22	102				
	HJZ	P*	02 55 12	DS	-0.2	1.02	243			3.7	
		S*	27		0.7	1.04	354		3.4	3.5	
	MSZ	PN	02 55 24		-1.3	1.95	280		3.3	3.7	
		S*	53		-0.5						

GPZ	PN	02 55 25	-0.5	-1.97	48	3.1			
	S*	55	0.7						
OCT 18	H M S	34.69S	179.35E	293 KM	SE	1.8	AVG MAG	70/ 681	
	04 56 22.5							5.0	
	+ 1.5	0.08	0.13	17	DIR	RES	DIST	AZ	W-A W P W S
ECZ	EP	04 57 20		0.8			3.07	192	5.2 5.5
	EP	58 03		-0.4					
GNZ	EP	04 57 29		-1.0			4.09	195	4.8 5.4
	EP	31							
	EP	58 15							
ONE	EP	04 57 30		-1.9					
KRP	P	04 57 35.9		1.6			4.23	254	4.7
	EP	58 33		2.5			4.46	223	4.4
TUA	EP	04 57 36.5		2.1			4.47	203	4.9 5.3
	EP	58 29		-1.7					
TRZ	EP	04 57 44		0.3			5.26	202	4.7 5.3
	EP	58 47		0.1					
CNZ	P	04 57 46.9	U	1.3			5.44	213	5.0 4.5
	EP	58 52		1.3					
CRZ	EP	04 57 44		-2.5			5.52	271	4.4
TNZ	EP	04 57 55		2.7			6.00	220	
MNG	EP	04 57 59		-1.4			6.67	206	
	EP	59 12							
	EP	17		-0.3					
WEL	EP	04 58 10.3		-0.5			7.51	207	6.0
	EP	59 34		-1.8					
OCT 18	H M S	35.63S	179.42W	245 KM	SE	2.3	AVG MAG	70/ 682	
	09 04 17.0							4.5	
	+ 1.6	0.09	0.10	19	DIR	RES	DIST	AZ	W-A W P W S
ECZ	EP	09 05 03		-2.7			2.63	218	4.7 4.6
	EP	46		2.5					
GNZ	EP	09 05 15		-1.9			3.64	213	4.4 4.3
	EP	06 01		-2.4					
TUA	P	09 05 23.3		-0.1			4.19	220	4.6 4.6
	EP	06 16.5		1.5					
KRP	EP	09 05 28		-0.9			4.65	239	4.1
	EP	06 24		-0.9					
TRZ	EP	09 05 30		-2.3			4.92	216	4.4
	EP	06 34		3.0					
ONE	EP	09 05 37		3.1			5.06	267	4.3
MNG	EP	09 05 47.5		-3.2			6.40	217	
	EP	07 04		0.1					
CRZ	EP	09 05 54.5		1.4			6.59	278	
WEL	EP	09 07 23		-0.4			7.26	217	5.2
CIZ	EP	09 06 21		2.3			8.60	166	
	EP	07 59		0.9					
OCT 18	H M S	35.58S	178.90W	33 KM	SE	1.6	AVG MAG	70/ 683	
	13 29 14.3							4.5	
	+ 1.3	0.06	0.07	3	DIR	RES	DIST	AZ	W-A W P W S
ECZ	EPN	13 30 00.5		2.6			2.94	224	4.8 4.6
	EP	42							
GNZ	EPN	13 30 12		0.7			3.92	218	4.4 4.3
	EPN	56		1.0					
TUA	EPN	13 30 20		0.7			4.51	223	4.6 4.5
	EPN	31 11.5		2.3					
KRP	EP*	13 30 40		-1.9			5.04	241	4.3 4.1
	EPN	31 21		-1.1					
TRZ	EPN	13 30 29		0.0			5.22	219	4.5
	E	31 32							

LOCAL EARTHQUAKES

239

	ONE	E	EPN	13 30 33	44	0 4	5.49	266	4.6			
	GNZ	E	EPN	13 30 41	41		5.71	229		4.5	4.1	
		E	ESN		59							
	MNG	E	EPN	13 30 50	31 38	-0.2	6.70	220				
		E	ESN	13 30 52	32 01	-0.9						
	CRZ	E	EPN	13 30 52		-1.0	7.01	277				
	HEL	E	ESN	13 32 20		-2.4	7.56	219	5.4			
	CIZ	E	ESN	13 31 19.5			8.55	169				
		E	ESN	32 45		-1.2						
OCT 18	H	H	S	37.17S	177.67E	284 KM	SF	1.5	AVG MAG	70/ 684	4.4	
				0.19	0.22	18						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
	ECZ	E	EPN	15 24 15				1.2	0.87	127		4.5
	GNZ	E	EPN	15 23 47.5				-0.2	1.50	169		4.1 4.3
		E	ESN	24 18				-1.9				
	TUA	E	EPN	15 23 48				-0.9	1.69	194		4.4
		E	ESN	24 20.5				-1.8				
	TRZ	E	EPN	15 23 55.5				0.0	2.47	195		4.6
		E	ESN	24 37				2.7				
	MNG	E	EPN	15 24 09.4		D		-0.4	3.84	206		4.6 4.5
		E	ESN	25 00				0.2				
		E	ESN	25 03								
	HEL	E	EPN	15 24 19				-0.4	4.69	208		4.7 4.1 4.5
		E	ESN	25 18.5				1.4				
	COB	E	EPN	15 24 29				0.2	5.48	223		4.3
		E	ESN	25 33				-1.0				
OCT 18	H	H	S	35.53S	179.21W	213 KM	SF	1.3	AVG MAG	70/ 685	4.3	
				0.06	0.08	15						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
	ECZ	E	EPN	15 41 55				-1.8	2.82	219		4.6 4.4
		E	ESN	42 36				1.5				
	GNZ	E	EPN	15 42 08				-0.6	3.82	215		3.9 4.0
		E	ESN	54				-1.5				
	TUA	E	EPN	15 42 16				0.4	4.38	221		4.3
		E	ESN	43 08				0.1				
	TRZ	E	EPN	15 42 24				-0.8	5.11	217		4.5
		E	ESN	43 26				1.6				
	ONE	E	EPN	15 42 37					5.24	265		4.5
	MNG	E	EPN	15 42 45				1.3	6.58	218		
		E	ESN	43 58				-0.3				
	CRZ	E	EPN	15 42 46.5				0.7	6.75	277		
	HEL	E	EPN	15 44 17				-1.3	7.44	218		
	CIZ	E	EPN	15 43 16					8.66	167		
		E	ESN	44 47				0.6				
OCT 18	H	H	S	35.74S	179.65W	199 KM	SE	1.4	AVG MAG	70/ 686	4.5	
				0.06	0.07	17						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
	ECZ	E	EPN	15 44 36.5				-0.4	2.42	216		4.9 4.5
		E	ESN	45 43								
	GNZ	E	EPN	15 44 47				-1.9	3.44	212		4.3 4.4
		E	ESN	45 32.5				0.8				
	TUA	E	EPN	15 44 55				-0.6	3.98	219		4.6 4.4
		E	ESN	45 45				1.4				
	KRP	E	EPN	15 45 00				-1.2	4.42	239		4.2
	TRZ	E	EPN	15 45 05				0.0	4.72	215		4.4 4.4
		E	ESN	46 06								
	ONE	E	EPN	15 45 07				0.2	4.86	268		4.5
	GNZ	E	EPN	15 45 12				1.5	5.14	226		4.4

	TNZ	E	15 45 31				5.85	232		4.5
	MNG	EP	15 45 24			0.0	6.19	217		
		ES	46 33			-1.4				
	CRZ	P	15 45 26.8			-0.1	6.41	280		
	WEL	ES	15 46 59			0.5	7.05	217		
		EP	47 43							
	CIZ	EP	15 45 57			2.4	8.54	165		
		ES	47 28			-1.3				
OCT 18		H M S	18 28 45.4	33.65S	179.62W	33 KM	SE	2.0	AVG MAG	70/ 687
			+ 1.6	0.09	0.10	2				5.1
	ECZ	PN	18 29 48.7			DIR	RES	DIST	AZ	W-A
		EP*	30 01				1.1	4.30	200	H P W S
		EP	17				0.7			5.7 5.4
		ESN	39				3.6			
	QBZ	EPN	18 29 56				2.0	4.77	236	
	GNZ	EPN	18 30 00				-1.6	5.34	200	5.2 5.1
		EP	34							
		ESN	59				-1.4			
	ONE	EPN	18 30 11					5.39	245	5.0
		EP	54							
	TUA	EPN	18 30 06.5				-1.0	5.77	206	5.2 5.2
		EP	31 18							
	KRP	EPN	18 30 08.5				0.6	5.80	221	4.7 4.6
		EP*	25				-1.0			
		EP	50							
	CRZ	PN	18 30 17.2				0.7	6.44	261	
		EP	31 16							
	TRZ	EPN	18 30 15				-3.0	6.55	205	
		ESN	31 32				2.5			
	CNZ	PN	18 30 22.4				1.4	6.77	214	
	TNZ	EPN	18 30 30				1.4	7.34	219	
		EP	31 10							
	MNG	EPN	18 30 34.5				-2.6	7.98	208	
		ESN	32 03				-0.6			
	WEL	EPN	18 30 47				-1.5	8.83	209	
		EP	31 40.5							
		ESN	32 21				-3.0			
	CIZ	EPN	18 31 13				1.6	10.57	168	
		ESN	33 05				0.0			
	HSZ*	EPN	18 32 00				-3.5*	14.63	218	
		ESN	34 37				-1.8*			
OCT 18		H M S	20 47 01.2	36.25S	178.54E	293 KM	SE	1.4	AVG MAG	70/ 688
			+ 1.8	0.14	0.17	17				4.5
	GNZ	IP	20 47 51.3			DIR	RES	DIST	AZ	W-A
		ES	48 25			D	-0.2	2.42	190	H P W S
		EP	29				-1.7			4.6 4.6
	TUA	EP	20 47 54.9				-0.4	2.78	203	4.5 4.6
		EP	48 38				1.2			
	KRP	IP	20 47 55.9			DSW	-0.4	2.93	234	4.3
	TRZ	EP	20 48 04				1.1	3.56	202	4.7 4.7
		ES	53				1.9			
	MNG	EP	20 48 19				2.2	4.98	208	4.1 4.2
		ES	49 18				-1.6			
	WEL	ES	20 49 37.5				-0.1	5.83	209	4.5
OCT 19		H M S	04 56 43.6	38.48S	175.69E	188 KM	SE	2.0	AVG MAG	70/ 689
			+ 2.2	0.07	0.06	13				4.1
	KRP	IP	04 57 09.1			DIR	RES	DIST	AZ	W-A
		ES	28			D	-0.7	0.57	348	H P W S
							-2.0			3.9

LOCAL EARTHQUAKES

241

	TUA	EP	04 57	15	1.2	1.19	126		3.9	4.2	
		ES		36	-1.2						
	TNZ	EP	04 57	15	0.9	1.24	235		3.9		
		ES		41	3.1						
	TRZ	EP	04 57	16.5	1.0	1.39	141		4.3	4.2	
		ES		43	2.8						
	GNZ	ES	04 57	47	-0.9	1.84	96			3.8	
	MNG	P	04 57	23.8	0.7	2.14	184		4.1	4.5	
		E		25.5							
		ES		51	-2.6						
	WEL	ES	04 58	08.5	-0.8	2.89	194	4.3		4.4	
	COB	ES	04 58	20	-1.5	3.46	220			4.2	
OCT 21	H M S								70/ 690		
	07 52 39.5		37.70S	177.13E	175 KM	SE	1.1	AVG MAG		5.1	
	+ 0.6		0.02	0.03	5						
		H M S	DIR	RES	DIST	AZ	W-A	W-P	W-S		
	TUA	IP	07 53	08.7	U	1.1	1.10	179		5.3	
		E		24							
		ES		29	-0.4						
	ECZ	IP	07 53	08.0	U	0.2	1.12	90		6.1	
		ES		28	-1.7					5.8	
	GNZ	IP	07 53	09.2	UNE	1.0	1.17	144		5.3	
		ES		30	-0.5					5.5	
	KRP	IP	07 53	10.1	0.9	1.28	260		5.1	4.9	
		ES		32	-0.2						
	TRZ	IP	07 53	16.3	U	1.3	1.86	187		5.2	
		E		39							
		ES		44	1.6						
	GNZ	IP	07 53	19.1	D	3.2	1.94	219		5.1	
		E		50						4.9	
	GBZ	P	07 53	15.3		-1.1	1.99	318		4.1	
	AUC	P	07 53	18.0	D	0.8	2.06	293			
	TNZ	EP	07 53	26		2.1	2.62	235		4.4	
		E		30						4.3	
		E		54							
	ONE	P	07 53	27.2		-0.6	2.94	310	4.8		
	MNG	P	07 53	30.7	U	-0.0	3.18	203		5.1	
		ES		54	0.9	-0.7				5.2	
	WEL	IP	07 53	40.9	U	-0.5	4.02	206	5.5	5.1	
		E		53						5.4	
		ES		54	2.8	-1.1					
	COB	EP	07 53	50		-1.5	4.80	224		4.4	
		ES		54	4.5	-0.7				4.9	
	CRZ	P	07 53	52.0		-0.3	4.86	311		4.6	
		ES		54	4.9	0.3					
	FELT MAINGARARA STN (35)										
OCT 21	H M S								70/ 691		
	19 00 25.9		40.13S	174.77E	12 KM	SE	1.4	AVG MAG		4.3	
	+ 0.3		0.02	0.02	3						
		H M S	DIR	RES	DIST	AZ	W-A	W-P	W-S		
	MNG	IP	19 01	10.0	U	0.5	0.73	132		4.3	
		ES		19	-0.6					4.2	
	TNZ	IP	19 01	14.7	D	0.9	0.99	342		4.3	
		ES		29.5	2.3					4.6	
	GNZ	P	19 01	14.4	D	-1.5	1.10	33		4.5	
		ES		28.5	-2.2					4.5	
	WEL	P	19 01	17.4		0.6	1.16	180	4.2	4.5	
		ES		32	-0.4					4.8	
	TRZ	EP	19 01	25		0.5	1.68	71		4.1	
		EPG		31	1.1					4.3	
		ESG		54	1.4						
	COB	PN	19 01	26.4		-0.0	1.82	238		4.4	
		P		27.0	-1.2					4.6	
		ESN		50	1.1						
	TUA	EP	19 01	36	0.3	2.26	55		4.4	4.2	

LOCAL EARTHQUAKES

243

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ							1.07	117		4.6	4.2
GNZ	EP	03	02	30		0.6	1.53	160		3.8	4.1
	E			44							
	ES			51.5		-1.4					
TUA	ES	03	02	56		1.7	1.60	185			4.3
KRP	ES	03	02	54		-0.4	1.60	243			
TRZ	ES	03	03	10		-0.1	2.37	190			4.1
MNG	EP	03	02	56		-0.1	3.70	203		3.8	3.7
	ES			03 40		-0.1					
COB	ES	03	04	17		-0.1	5.28	221			3.8
OCT 26	H M S	02	30	29.2							70/ 696
	+ -			0.6							4.5
	H M S	41.15S		179.77E		12 KM	SE	1.1	AVG MAG		
		0.03		0.03							
	H M S	1			DIR	RES	DIST	AZ	W-A	W P	W S
MNG	IP*	02	30	39.0	D	-1.0	0.57	337			
HEL	IP*	02	30	44.2	U	0.8	0.77	259	4.4	4.6	5.0
	ES*			54		0.0					
TRZ	P*	02	31	00.1	D	-0.7	1.78	27		4.4	4.5
	EPQ			07		1.7					
	E			11							
	ESN			21.5		0.2					
	ESQ			28		-1.3					
CNZ	IPN	02	31	01.0	D	-0.4	1.05	355		4.7	4.9
	EPQ			08		-0.7					
	ESN			25		-0.2					
TNZ	EPN	02	31	05.5		0.3	2.23	331		4.5	4.8
	ESN			33		1.1					
COB	EPN	02	31	09		-1.1	2.30	270		4.5	4.7
	P*			08.2		-1.4					
	ESN			32		-1.6					
	ES*			36		-3.9*					
TUA	E?	02	31	07			2.56	25			4.3
	ESN			41		0.5					
GNZ	EP*	02	31	23		0.7	3.04	35			3.9
	E			39							
	ESN			51		-0.6					
KRP	EP*	02	31	26		0.6	3.22	357		4.3	4.6
	E			32 03							
	ES*			09		1.3					
KAI	E	02	31	48			3.54	246	4.1		
	ES*			32 19		1.9					
FELT IN SOUTH OF NORTH ISLAND											
OCT 26	H M S	04	23	35.9							70/ 697
	+ -			1.0							3.8
	H M S	38.33S		176.25E		154 KM	SE	1.0	AVG MAG		
		0.04		0.03							
	H M S	4			DIR	RES	DIST	AZ	W-A	W P	W S
KRP	EP	04	23	58		-0.9	0.69	305		3.2	
	ES			24 16.8		-0.1					
TUA	EP	04	24	00		0.0	0.85	125		4.0	3.8
	ES			19		0.4					
TRZ	IP	04	24	05.5	D	1.5	1.30	160			4.0
GNZ	EP	04	24	03		-0.3	1.43	103		3.6	3.5
	ES			27		-0.8					
TNZ	EP	04	24	10		1.9	1.70	239			
MNG	IP	04	24	16.3	I	0.3	2.37	194		4.8	3.7
	ES			46.5		-0.3					
HEL	P	04	24	25.3		-0.9	3.17	201		4.2	3.6
	ES			25 05		0.2					
COB	ES	04	25	20		-1.0	3.87	223			
OCT 26	H M S	05	06	22.4							70/ 698
	+ -			0.8							4.1
	H M S	37.91S		176.19E		187 KM	SE	0.9	AVG MAG		
		0.04		0.03							

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	EP	05	06	48		-0.3	0.52	268		3.3	3.2
	ES		07	08		-0.2					
TUA	EP	05	06	51		-1.4	1.17	140		4.3	4.5
	ES		07	16.5		0.9					
GNZ	IP	05	06	55.8	D	-0.6	1.62	118		4.2	4.4
	E		07	01							
	S			19.3		-3.3*					
TRZ	EP	05	06	58		0.6	1.72	164		4.0	4.5
	ES		07	25		0.6					
ECZ	EP	05	07	00		1.0	1.88	84		4.4	
	ES			27		-0.2					
MNG	IP	05	07	09.0	D	-0.2	2.77	191		4.5	4.0
	ES			44		-1.4					
WEL	EP	05	07	19		0.2	3.55	198	4.3	3.9	3.9
	ES		08	02		-0.3					
COB	ES	05	08	17		1.2	4.15	219			3.8
OCT 27											
	H M S	06	11	10.6							70/ 699
	+ -			1.8							AVG MAG 3.7
	H M S	38.49S	179.87E		166 KM		SE	1.5			
		0.05		0.05	13						
KRP	P	06	11	34.9	DIR	0.4	0.62	335	W-A	3.1	2.9
	ES			53		-0.0					
TUA	EP	06	11	38		0.5	1.05	108			3.9
	ES			39.5							
	ES			52.5							
	ES			57.5		-0.7					
TRZ	EP	06	11	41		1.3	1.30	146		4.0	4.1
	ES		12	04.5		2.4					
GNZ	ES	06	12	07		-2.2	1.69	96			3.6
MNG	IP	06	11	49.4	U	0.6	2.15	188		4.4	3.8
	ES		12	17		-1.2					
WEL	ES	06	12	35		0.0	2.92	197			3.6
COB	ES	06	12	48		-1.1	3.55	222			3.9
OCT 27											
	H M S	14	22	17.0							70/ 700
	+ -			1.5							AVG MAG 3.7
	H M S	37.07S	179.20E		153 KM		SE	1.3			
		0.08		0.09	12						
GNZ	EP	14	22	50	DIR	-0.6	1.83	210	W-A	3.8	3.7
	ES		23	15		-1.5					
TUA	EP	14	22	58		0.8	2.37	222		4.1	4.0
	ES		23	29		1.0					
KRP	EP	14	23	06		0.4	3.03	253		3.4	3.3
	ES			42		-0.7					
TRZ	EP	14	23	07		0.5	3.11	216			4.0
	ES			46		1.6					
MNG	EP	14	23	25		-0.7	4.58	218		3.5	3.6
	ES		24	20		1.2					
WEL	ES	14	24	37		-2.1	5.44	218			3.9
COB	ES	14	25	03		0.0	6.43	229			
OCT 27											
	H M S	15	19	53.0							70/ 701
	+ -			2.0							AVG MAG 5.7
	H M S	33.06S	178.29W		280 KM		SE	1.7			
		0.12		0.11	30						
GNZ	E	15	21	22	DIR		6.33	207	W-A		
	ES		22	39		-0.7					
TUA	ES	15	21	29.5			6.83	212			
	ES		22	52		1.3					
KRP	EP	15	21	35		0.3	7.00	224			
	ES			57							
TRZ	EP	15	21	41		-1.1	7.59	210			
	ES		23	08		0.3					
CRZ	EP	15	21	54			7.65	257			
MNG	EP	15	21	58		-2.2	9.05	212			

LOCAL EARTHQUAKES

247

NOV 03	H	M	S	38.71S	175.74E	170 KM	SE	2.2	AVG	HAQ	70/708
	08	39	44.5	0.07	0.06	10					4.2
			+ 1.4								
CHZ	IP	08 40	09.0	DIR	RES	DIST	AZ	W-A	W P	W S	
	S		26	U	0.7	0.51	197		4.4	4.1	
	E		29		-0.7						
KRP	E	08 40	11			0.80	349				
	S		26		-3.6						
TUA	E	08 40	14			1.11	95		4.4	4.3	
	S		33.5		-0.2						
TNZ	E	08 40	14.3	U	1.6	1.16	246		3.7	3.2	
	P		37								
	E		18		2.5						
	S		37								
TRZ	E	08 40	14.9		1.5	1.19	135		4.0	4.7	
	P		15.5								
	E		32.5								
	S		35.6		0.7						
GNZ	E	08 40	21.3	DNW	2.4	1.79	88		4.4	4.2	
	IP		44								
	S		45		-0.4						
MNG	IP	08 40	22.9	U	2.7	1.91	186		4.7	4.5	
	S		46		-1.8						
ECZ	E	08 40	29			2.44	66		4.4	3.9	
	S		56		-2.5						
WEL	E	08 40	31		1.7	2.67	196	3.9	4.1	4.3	
	P		36								
	S		41		0.2						
	E		14								
COB	E	08 40	38.9		1.3	3.31	223		4.0	4.5	
	P		41		1.2						
	S		19		-1.5						
KAI	E	08 41	56		5.03	219	3.9				
	S		59.9								
GPZ	E	08 42	06		-2.4	5.50	204	4.7			
	S		31		-3.4	6.59	215				
MJZ	E	08 41	30			7.30	208				
	S		10.5		-3.5	8.34	222				

NOV 03	H	M	S	42.01S	172.00E	12 KM	SE	1.8	AVG	HAQ	70/709
	10	10	53.0	0.02	0.03	2					3.8
			+ 0.4								
KAI	IP	10 10	06.7	DIR	RES	DIST	AZ	W-A	W P	W S	
	SG		19.5		-0.2	0.68	220	3.8			
	S		15.7		-0.6						
COB	IP	10 11	11.7	U	-3.3	1.07	31		4.6	4.7	
	S		25.5		-1.5						
GPZ	E	10 11	25			1.75	164	3.4			
	P		27.5		3.4						
	PQ		31		2.5						
	S		48.5		1.2						
	SG		50.5		-1.7						
WEL	E	10 11	31.5		-0.2	2.20	72	3.3	3.7	3.9	
	P		35.5		-2.0						
	S		00.5		-0.3						
	SG		04		-3.2						
MJZ	PN	10 11	30		0.4	2.27	209		3.6	3.4	
	P		34		1.0						
	PQ		38		-1.0						
	S		12		1.0						
	SG		07		-2.7						
MNG	EP	10 11	40		0.7	2.97	63		4.2	3.9	
	EP		44		-0.9						

LOCAL EARTHQUAKES

249

TUA	PN	19 24 47	0.6	2.59	196	4.3	4.3		
	PG	59	1.2						
	SN	25 19	1.7						
	SQ	35	2.3						
AUC	PQ	19 24 57.0	-2.7	2.69	257				
ONE	PQ	19 25 04	-2.7	3.03	279	3.2			
	ESQ	47.8	-0.1						
TRZ	EPN	19 24 59.5	2.5	3.38	196	4.2	4.3		
	E	25 12.5							
	ESN	39	3.0						
CNZ	(P*)	19 25 03	-3.7	3.50	214	4.0	4.1		
	S*	55	2.9						
TNZ	P*	19 25 14.5	-1.8	4.08	224	4.0	3.8		
	PG	23	-4.9						
	S*	26 07.5	-2.2						
MNG	EPN	19 25 15.5	0.0	4.75	204	4.1	4.1		
	P*	28	0.3						
	SN	26 09	-0.1						
	S*	28	-1.6						
CRZ	P*	19 25 29.0	0.9	4.77	292		3.7		
WEL	E(PN)	19 25 26	-0.7	5.59	206	4.5	4.0	4.4	
	SN	26 27	-2.2						
	E	32							
	S*	49	-3.9*						
COB	EPN	19 25 38.5	1.9	6.32	219				
	PQ	26 11	-2.2						
	SN	49	2.2						
KAI	ESN	19 27 30	2.0	8.05	218	4.5			
	E	40							
QPZ	SN	19 27 33	-4.6	8.46	208	4.6			
	E	37							
CIZ				8.67	153				
MJZ	E	19 26 22.5		9.61	215				
	SN	28 03	-1.8						
MSZ	EPN?	19 26 40	-3.0	11.36	220				
	P*	27 11.5	-9.3*						
	E	23							
	F	58							
	ESN	28 46	0.4						
NOV 04	H M S	19 22 21.3	35.17S	177.41E	33 KM	SE	3.2	AVG MAG	70/ 71.2
		+ 5.5	0.27	0.18	?				4.0
ECZ	E	19 23 04.5			DIR	RES	DIST	AZ	W-A
	S	29					2.68	160	W P
	S	33							W S
	E	36							3.9
GNZ	EP	19 23 13.4					0.8	3.50	172
	F	44							4.2
	S	51							4.1
	E	52							
CNZ	E	19 24 17					4.29	200	
TRZ	S	19 24 15.5					1.8	4.40	186
TNZ	E	19 23 45						4.68	210
MNG	P	19 23 40					-1.8	5.65	195
	E	41							4.1
	S	24 41							3.6
WEL	S	19 24 58.5					-2.8	6.45	198
QPZ	S	19 26 15					-4.5	9.28	202
MJZ	S	19 26 36.5					1.7	10.30	219
NOV 04	H M S	20 35 34.7	45.38S	156.93E	33 KM	SE	2.0	AVG MAG	70/ 71.2
		+ 1.3	0.04	0.03	?				4.4

		H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S
MNW	IPN	20	35	47.0	D	0.9	0.61	132					
	P*			49.5		2.6						4.6	
	E			51									
	S*			57.5		1.8							
MSZ	IPN	20	35	52.2	U	0.9	0.97	44					
ROX	PN	20	36	00.3	D	-0.3	1.65	94			4.7	4.8	
	E			00.7									
	I			14									
	E			19		-1.2							
	SN			40									
WPZ	PN	20	36	01.5	U	-1.6	1.83	135			4.1	4.6	
	SN			23.5		-1.0							
OHZ	PN	20	36	14.9	D	-1.5	2.80	85			4.5	4.6	
	E			38									
	E			45		-3.1							
	E			49									
	E			37									
MJZ	PN	20	36	15.6	DS	-1.5	2.85	62			4.1	4.1	
	P*			25		0.2							
	SN			46		-3.3							
	E			49									
KAI	SN	20	36	58			4.29	50			4.2		
	E			37		1.8							
	E			55									
GPZ	EPN	20	36	40		1.9	4.39	69			4.3		
	E			48									
	E			37		-0.7							
	ESN			52		3.6							
COB	EPN	20	36	57.5		-2.4	6.00	46					
	E			37									
	E			38		-0.7							
	SN			05									
MNG	EPN	20	37	24		-0.6	7.84	56					
	E			35									
	E			38									
	E			47									
	ESN			54		4.4*							
NOV 05	H	M	S										70/ 714
	00	02	30.6	40.11S	174.87E	12 KM	SE	1.5	AVG MAG				4.0
			* 0.3	0.01	0.02								
	H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S	
MNG	IPG	00	02	45.7		0.9	0.69	137					
	E			55.5									
TNZ	IPG	00	02	49.9	D	-1.0	1.00	338			4.2	4.6	
	SG			03		0.6							
CNZ	PQ	00	02	49.5		-2.5	1.05	30			4.5		
	SG			03		-2.3							
WEL	P*	00	02	52		0.2	1.18	184			3.7	4.1	4.3
	S*			03		-0.1							
	SG			09		-1.4							
TRZ	E(P*)	00	03	01.5		2.3	1.61	70			4.3	4.4	
	EPG			04		0.8							
	E			09									
	SG			29		4.2*							
	E			33.5									
COB	PN	00	03	01.8		-0.3	1.89	238			4.5	4.2	
	E			02.5									
	P*			04		-0.1							
	ESN			26		0.7							
	S*			29		-0.2							
TUA	P*	00	03	11		1.7	2.20	54			4.2	4.1	
	ES*			36		-2.3							
	E			54									
KRP	PN	00	03	06		-0.9	2.25	14					
	P*			12.5		2.4							
	SN			33		-0.8							
	IS*			39		-0.8							

LOCAL EARTHQUAKES

251

GNZ	EPN	00	03	15	-0.3	2.85	60	3.9	3.8
	PG			28	-0.3				
	E			36					
	SN			51	2.1				
	E		04	23					
AUC	SG	00	04	22.9	2.4	3.25	359		
KAI	EPG	00	03	43	0.6	3.55	226	3.9	
	SN		04	06	0.6				
	E			25					
	E			40					
ECZ	PN	00	03	27	-0.3	3.75	51	4.0	
GPZ	ESN	00	04	13	-2.0	3.95	204		
ONE	EP*	00	03	45	-1.1	4.35	355	4.0	
	ESN		04	26	1.3				
	S*			40	-2.9				
	SG			52	-5.2*				
MJZ	EPN	00	03	46	0.9	5.07	219	3.3	3.3
	E			50					
	SN		04	40	-2.2				
	E			48					
CRZ	EPN	00	03	57.5	0.9	5.93	342	3.8	
	P*		04	18	4.8*				
	ESN		05	04	1.2				
MSZ	EPN	00	04	10.5	1.3	6.87	226		
	ESN		05	26	0.9				
	E			43					

FELT OKOIA (57) MM V

NOV 06	H	M	S			DIR	RES	DIST	AZ	W-A	W P	W S
	00	33	05.3	38.44S	178.54E	114	KM	SE	1.6	AVG MAG	70/ 715	4.8
			+ 1.2	0.05	0.09	11						
GNZ	P	00	33	20.1			-2.4	0.45	243			
	E			28.6								
	E			30								
ECZ	IP	00	33	18.0			-6.6*	0.74	0		5.9	
	I			22.9								
TUA	P	00	33	29.0			0.2	1.15	251		4.9	
TRZ	P	00	33	37.7			2.0	1.74	230		5.2	
KRP	P	00	33	44.2			-0.3	2.42	281		4.2	
	I			34								
	ES			13			-1.0					
GNZ	P	00	33	47.0			-2.0	2.46	251		4.9	
GBZ	EP	00	33	54.9			-1.8	3.29	311		3.7	
TNZ	P	00	33	59.4			2.6	3.33	256		4.6	
AUC	P	00	33	57.5			0.1	3.37	297			
WEL	P	00	34	06.2			-0.5	4.06	224	5.1	4.6	4.9
	S			54.8			1.2					
ONE	EP	00	34	10			0.6	4.26	307			
COB	P	00	34	22.0			0.0	5.20	238		4.4	4.6
	ES			35			1.6					
CRZ	EP	00	34	35.8			0.4	6.19	308			
								6.63	148			
KAI	ES	00	35	59			-1.3	6.80	231	5.1		
GPZ								6.89	218	5.4		
MJZ	EP	00	35	03			-0.2	8.23	225			
	S			36			-2.1					
MSZ	ES	00	37	19			-1.2	10.10	229			

FELT DRATONUI (37)

NOV 06	H	M	S			DIR	RES	DIST	AZ	W-A	W P	W S
	05	12	34.9	43.94S	167.89E	33	KM	SE	1.2	AVG MAG	70/ 716	4.1
			+ 0.8	0.03	0.05	3						
MSZ	PN	05	12	47.0			-1.2	0.73	178			
	EP*			49.3			0.0					
ROX	EPN	05	13	05			1.5	1.84	147		4.1	4.5

LOCAL EARTHQUAKES

253

TRZ	ES	11 14 50			-0.8	1.84	90				4.4
COB	P	11 14 22.0			-0.1	1.99	220			4.2	4.3
	S	56.2			2.9						
GNZ	E	11 14 42.0				2.94	73			3.4	4.0
	E	15 17									
KAI	ES	11 15 26			-1.9	3.73	217			4.4	
GPZ						4.32	198			4.8	
HJZ	ES	11 16 01			-2.0	5.31	213			3.7	
NOV 09	H H S	09 24 33.2	40.67S	175.02E	12 KM	SE	1.5			AVG MAG	70/ 719
		+ 0.4	0.03	0.03							3.9
MNG	IPG	09 24 40.8			DIR RES	DIST	AZ	W-A	W P	W S	
	E	45.0				0.1	0.35	81			
WEL	PG	09 24 46.8				0.4	0.64	197		3.9	4.2 4.5
	SQ	56				0.9					
CNZ	PG	09 25 02.8				-1.4	1.53	15			4.2 4.3
	SQ	27				2.2					
TNZ	EPG	09 25 07				2.0	1.57	341			3.7 4.0
	E	33.9									
TRZ	EPG	09 25 08				-1.2	1.78	52			3.8 3.6
	SQ	34				0.8					
	E	42									
COB	EP*	09 25 06				1.2	1.78	256			3.8
	EPG	09.9				0.1					
	ESQ	33				-0.5					
	E	37									
KRP	PG	09 25 27				-2.4	2.77	8			3.5 3.9
	SQ	26 06				-0.8					
	E	11									
GNZ	ESN	09 25 50				-5.6*	3.08	50			3.4
KAI							3.28	235		3.8	
HJZ	ESN	09 26 35				-1.5	4.73	224			
NOV 10	H H S	08 41 47.8	38.56S	175.92E	164 KM	SE	1.4			AVG MAG	70/ 720
		+ 1.0	0.04	0.04							4.3
CNZ	P	08 42 13.9			DIR RES	DIST	AZ	W-A	W P	W S	
	S	32				1.5	0.70	204			4.2 3.8
KRP	P	08 42 12.0				1.3					
	S	29				-0.0	0.70	335			4.3 3.6
TUA	P	08 42 14.0				-1.7					
	S	34				-0.0	0.99	105			4.6 4.2
TRZ	P	08 42 17.2				-0.3					
	ES	38.9				1.2	1.21	145			4.9 4.4
TNZ	P	08 42 19				0.8	1.35	242			4. .
	E	43									
GNZ	P	08 42 20.7				0.4	1.65	93			4.1 4.0
	S	43.9				-1.8					
MNG	P	08 42 26.4				1.3	2.08	189			4.7 4.4
	S	53				-0.6					
WEL	P	08 42 35.0				0.3	2.86	198			4.3 4.4 4.3
	S	43 09				-1.5					
COB	EP	08 42 41				-2.0	3.52	223			3.8 4.2
	S	43 25				-0.4					
KAI	ES	08 44 02				-3.5*	5.24	220			4.6
NOV 10	H H S	13 47 33.8	32.37S	177.64W	292 KM	SE	1.4			AVG MAG	70/ 721
		+ 1.7	0.08	0.13							6.0
ECZ	EP	13 49 08			DIR RES	DIST	AZ	W-A	W P	W S	
	S	50 41				2.5	6.16	209			
GNZ	EP	13 49 18				-0.1	7.19	208			
	S	50 41				1.1					
ONE	EP	13 49 22				0.6	7.46	241			

TUA	EP	13 49 23	-1.3	7.70	212				
	ES	50 51	-0.1						
CRZ	EP	13 49 32	-0.5	8.35	253				
TRZ	EP	13 49 33	-0.7	8.46	211				
	ES	51 07.5	-0.5						
CNZ	EP	13 49 42	4.3*	8.78	217				
MNG	EP	13 49 51	-0.8	9.92	212				
	ES	51 39	-1.5						
WEL	ES	13 51 59	-0.7	10.77	212	6.0			
HJZ	E	13 51 07		14.86	215				
	ES	53 32	1.9						
NOV 12	H M S	45.30S 167.36E	12 KM	SE	1.0	AVG MAG	70/ 722		
		0.02 0.03	R				4.5		
		H M S	DIR	RES	DIST	AZ	W-A	W P	W S
MNH	Pe	00 19 06.2		-0.4	0.51	159		4.5	
	Se	15		1.2					
MSZ	Pe	00 19 09.2		-1.4	0.75	32			
ROX	Pe	00 19 21.0		-0.7	1.39	98		4.4	5.0
	Se	40.8		0.5					
WPZ	Pe	00 19 27.0		-0.2	1.71	143		4.4	4.8
	Se	49		-0.9					
OMZ	PN	00 19 37.0		-0.0	2.53	86		4.7	4.8
	Se	20 14		-0.4					
HJZ	EPN	00 19 37.2		-0.5	2.58	60		4.4	4.2
	IPe	43.3		1.3					
	Se	20 16		0.0					
GPZ					4.11	69	4.5		
COB	EPN	00 20 22		1.6	5.76	45		4.6	4.2
	E	21 29							
NOV 12	H M S	36.97S 179.90E	33 KM	SE	1.3	AVG MAG	70/ 723		
		0.04 0.11	R				4.9		
		H M S	DIR	RES	DIST	AZ	W-A	W P	W S
ECZ		07 31 38.0		2.4	1.30	236		5.8	
GNZ	PN	42.0			2.24	221		5.0	
	ES	32 18		-0.9					
TUA	EPN	07 31 44.7		0.7	2.84	229		5.4	
	EP	53		1.3					
TRZ	EPN	07 31 53.3		-0.2	3.54	222		5.4	
	E	59							
	EP	32 02		-1.6					
	ESN	40		6.9*					
KRP	EPN	07 31 59.0		0.7	3.60	253		5.0	
	E	32 08							
	EP	03		-1.6					
QBZ	EPN	07 31 59		0.2	3.63	281		3.7	
CNZ	EPN	07 32 01.4		0.4	4.09	236		4.3	
	E	08							
AUC	PN	07 32 01		-0.2	4.11	270			
ONE	EPN	07 32 09.2		0.9	4.62	283			
MNG	EPN	07 32 11.0		-2.7	5.02	222		4.4	4.6
	I	18.5							
	ISN	33 10		1.1					
WEL	E	07 32 29			5.87	221	5.4		
	SN	33 31		1.5					
CRZ	EPN	07 32 32		-0.3	6.40	291			
COB	EPN	07 32 38		-1.4	6.93	231			
	E	48							
	EP	33 02		0.4					
HJZ	EPN	07 33 21		0.2	10.03	223			
	S	35 08		-0.8					
USCGS	ORIGIN	07 31 01.7	36.9S	179.3E	MAG	5.0			

LOCAL EARTHQUAKES

255

NOV 12	H	M	S									70/ 724
	09	04	20.6	38.29S	175.90E	195 KM	SE	1.6		AVG MAG		4.9
			+ 1.0	0.04	0.06	9						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
KRP	P			09	04	48.0	D	0.9	0.46	322		
	S					05 07		-0.5				
TUA	P			09	04	51		0.2	1.11	118		4.4 5.1
	E					05 07						
	S					12		-2.2				
TRZ	P			09	04	55.6	U	2.2	1.46	151		5. 5.3
	S					05 18.5		-0.8				
TNZ	P			09	04	57.2		3.2	1.49	232		4.9
	E					05 26						
GNZ	P			09	04	59.8		-0.3	1.70	103		4.9 5.0
	S					05 21.5		-1.9				
MNG	P			09	05	04.2	U	1.3	2.35	18		4.9 4.7
	S					37		1.5				
ONE	EP			09	05	09.0		0.8	2.79	333	4.0	
	S					43		-1.8				
HEL	P			09	05	13.0		1.0	3.12	196	4.9	
	S					52		0.4				
COB	EP			09	05	20		0.7	3.71	220		4.4 5.0
	S					06 06		1.4				
CRZ	EP			09	05	31		-0.0	4.64	325		
KAI	S			09	06	42		-2.1	5.45	218	5.0	
GPZ									5.94	203	5.6	
MJZ	EP			09	06	02		0.2	7.02	214		
	ES					07 18		-2.3				
MSZ	ES			09	07	59		-2.3	8.75	221		

NOV 12	H	M	S									70/ 725
	10	18	31.6	37.97S	178.69W	33 KM	SE	1.9		AVG MAG		4.2
			+ 2.5	0.35	0.24	9						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
GNZ	P			10	19	12		0.5	2.67	254		4.3 4.1
	ES					41		-0.8				
TRZ	EP			10	19	28.5		0.9	3.85	244		4.4 4.4
	ES					20 13		2.5				
GNZ	EP			10	19	37		-1.9	4.68	253		4.4
MNG	EP			10	19	46		-0.5	5.23	238		4.0 3.8
TNZ	EP			10	19	52		1.2	5.56	255		4.3
COB	ES			10	21	32		-2.1	7.32	242		

NOV 12	H	M	S									70/ 726
	12	21	36.6	36.85S	179.64W	33 KM	SE	1.4		AVG MAG		4.0
			+ 1.9	0.10	0.17	9						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
GNZ	EP			12	22	37		1.8	2.58	225		4.0 3.9
	ES					23 05		0.5				
TUA	EP			12	22	44		0.1	3.20	231		4.3 3.9
TRZ	EP			12	22	53		-0.1	3.88	225		4.1 4.2
	ES					23 37		0.7				
GNZ	EP			12	23	00		-1.1	4.46	237		4.3
ONE	EP			12	23	08		0.2	4.96	281		
MNG	EP			12	23	11		-2.1	5.36	224		3.6 3.5

NOV 12	H	M	S									70/ 727
	14	34	35.5	36.90S	179.42W	33 KM	SE	1.8		AVG MAG		4.1
			+ 2.7	0.13	0.24	9						
				H	M	S	DIR	RES	DIST	AZ	W-A	W P W S
GNZ	P			14	35	16.4		1.0	2.67	229		4.2 4.0
	ES					46		0.3				
TUA	P			14	35	24		-0.2	3.31	234		4.3 3.9
TRZ	EP			14	35	33		-0.2	3.97	227		4.2 4.2
	ES					36 17		-0.4				
GNZ	EP			14	35	41		-0.5	4.59	236		4.2

LOCAL EARTHQUAKES

257

CIZ		ES	09 41 37	0.9	7.62	160				
NOV 13	H M S		36.85S 179.43E	147 KM	SF	1.8	AVG MAG	70/ 731		
	06 26 58.4		0.08 0.10	18				4.4		
		+ 1.5								
	GNZ	P	H M S	DIR	RES	DIST	AZ	W-A	W P	W S
			06 27 33.9		-1.6	2.11	211		4.2	4.4
			28 04		0.8					
	TUA	EP	06 27 41.5		-0.5	2.66	222		4.6	4.5
			28 16		0.5					
	KRP	P	06 27 50		-0.0	3.28	250		4.1	
	TRZ	P	06 27 50.3		-1.0	3.39	216		4.6	4.5
			28 36							
	ONE	EP	06 28 05		2.5	4.23	283			
			11							
	TNZ	EP	06 28 09			4.62	238			
	MNG	P	06 28 08.0		-2.9	4.87	218		4.0	3.9
			29 07		0.2					
	WEL	S	06 29 28		0.6	5.72	218	4.9		4.3
	CRZ	E	06 28 27			6.00	292			
	CIZ	ES	06 30 17		1.5	7.73	158			
NOV 13	H M S		41.26S 175.88E	33 KM	SE	1.2	AVG MAG	70/ 732		
	14 13 43.8		0.06 0.05	9				4.3		
		+ 0.8								
	MNG	P	H M S	DIR	RES	DIST	AZ	W-A	W P	W S
			14 13 54.7	U	-2.0	0.71	335			
	WEL	P	14 13 59.3		1.0	0.84	268	4.3	4.7	4.8
			14 09.0		-0.4					
	TRZ	EP	14 14 12		-0.4	1.85	23		3.8	
	GNZ	P	14 14 16		0.5	2.07	353		4.9	
	TNZ	EP	14 14 20		0.5	2.36	330		4.4	4.4
			26							
			47		0.5					
	COB	P	14 14 20		0.3	2.38	273			
	TUA	EP	14 14 21		-2.2	2.63	22		3.9	
			52							
	GNZ	EP	14 14 31		1.6	3.09	33		3.6	
			15 04.7		0.5					
	GPZ					3.41	223		4.0	
	KAI	ES	14 15 16		0.1	3.57	248		4.2	
	FELT MASTERTON (66) MM III									
NOV 14	H M S		36.87S 179.60E	157 KM	SE	1.3	AVG MAG	70/ 733		
	14 29 36.6		0.05 0.09	12				4.3		
		+ 0.8								
	ECZ		H M S	DIR	RES	DIST	AZ	W-A	W P	W S
			14 30 13.0		-1.5	1.18	225		5.1	
	GNZ	P	14 30 44		0.3	2.17	215		4.3	
			21.9		-0.2	2.74	224		4.6	4.3
	TUA	P	14 30 57		0.8					
			29		-0.9	3.38	280		3.3	
	QBZ	EP	14 30 30		-0.1	3.40	251		4.1	
	KRP	P	14 30 30		-0.9	3.46	218		4.3	4.2
	TRZ	EP	14 30 30.0							
			21							
	GNZ	EP	14 30 38		0.7	3.96	233		3.7	4.2
			46							
			45		2.3	4.37	283			
	ONE	EP	14 30 53			4.73	239		4.2	
	TNZ		14 30 48		-2.2	4.94	219		4.1	3.8
	MNG	P	14 30 48							
			31 48		1.0					
	WEL	ES	14 32 07		-0.4	5.80	219	4.7		4.1
	CRZ	E	14 31 07			6.14	291			
	COB	EP	14 31 14		-1.1	6.81	230			
			32 32		0.4					
	CIZ	EP	14 31 28		1.6	7.66	159			

QPZ		ES	32 52	0.1	8.64	216	5.0			
NOV 15	H M S		45.78S	167.22E	76 KM	SE	1.3	AVG MAG	70/ 734	
	00 47	14.1	0.04	0.07	9				4.0	
		+ 1.3								
	MNW	P	H M S	DIR	RES	DIST	AZ	W-A	W P	W S
		S	00 47		-0.3	0.28	90			
	MSZ	P	00 47		-0.4					
		S	35.9		-0.3	1.22	24	4.1		3.9
	WPZ	P	00 47		-0.2					
		S	39.0		-0.1	1.43	128	4.4		4.4
	ROX	P	00 47		-0.1					
		S	57.3		1.7	1.51	79	4.1		4.0
	OMZ	P	00 47		2.2					
		S	01.3		-0.6	2.70	76	4.3		3.9
	MJZ	P	00 47		-1.3					
		S	55.8		-1.6	2.93	53	3.2		3.5
		EP	48 27		-0.9					
	QPZ	S	00 47			4.39	64	4.0		
	KAI	ES	00 49	13	1.7	4.44	44	4.2		
NOV 15	H M S		39.45S	175.68E	111 KM	SE	1.4	AVG MAG	70/ 735	
	11 17	27.1	0.04	0.04	11				4.7	
		+ 0.8								
	CNZ	P	H M S	DIR	RES	DIST	AZ	W-A	W P	W S
		E	11 17		-0.7	0.27	337			
	TRZ	P	11 17		0.3	0.89	97			5.0
		E	18 03							
		E	04.5							
	TNZ	P	11 17		1.7	1.04	284	5.1		4.2
		E	18 09.0							
		E	12.2							
	MNG	P	11 17		1.4	1.18	187			
		S	11 17		-0.1	1.31	61	5.2		5.0
	TUA	P	18 10		-1.3					
		S	11 17		0.4	1.52	356	4.5		4.5
	KRP	P	18 14		-1.7					
		S	11 18		1.4	1.97	200	4.3		4.6
	HEL	P	11 18		-0.2					
		S	01.6		-0.0	1.99	67	5.1		4.8
	GNZ	P	11 18		0.5					
		S	24.7		0.5					
	AUC	P	11 18		0.9	2.68	344			
		S	11 18		0.6	2.79	233	4.5		4.7
	COB	EP	13.7							
		S	11 18		0.3					
		E	49							
	KAI	ES	11 18	43		4.46	225	4.7		
		S	19 25		-0.2					
	QPZ	S				4.82	207	5.3		
	MJZ	E	11 18	55		5.98	219	3.6		4.2
		S	19 59		-3.3					
	CIZ	E	11 19	16		7.34	130			
		S	20 29		-6.5*					
	FELT WANGANUI DISTRICT, MM IV									
NOV 15	H M S		49.36S	163.42E	33 KM	SE	2.5	AVG MAG	70/ 736	
	22 58	05.7	0.17	0.15	7				5.1	
		+ 2.4								
	WPZ	P	H M S	DIR	RES	DIST	AZ	W-A	W P	W S
		ES	22 59		-1.6	4.53	56	4.9		5.3
		S	58		-3.3					
	MNW	P	22 59		0.4	4.57	40	5.4		5.0
		S	23 00		3.8					
	ROX	P	22 59		-0.7	5.58	48	4.9		4.8
		S	23 00		2.5					
	MSZ	P	22 59		1.4	5.61	35	4.9		

LOCAL EARTHQUAKES

259

	GNZ	EP	22 59 39	-0.9	6.67	53						
	HJZ	EP	22 59 45	-2.5	7.23	45						
		E	23 01 56									
		ES	23 01 03	-3.1								
	GPZ				8.51	52		5.2				
	KAI				8.81	42		5.3				
	COB	EP	23 00 32	0.3	10.55	42						
	WEL				11.35	49						
	CIZ	P	23 01 28	2.4	14.75	76						
		ES	04 03	1.0								
NOV 16	H	M	S					70 / 737				
	15	06	18.1	45.04S	167.55E	135 KM	SF	1.9	AVG MAG	4.1		
			+ 1.8	0.06	0.09	12						
		H	M	S	DIR	RES	DIST	AZ	N-A	P	W	S
	MSZ	P	15 06 39	U	1.2	0.45	35					
		S	53		0.1							
	MNW	P	15 06 40.0		0.4	0.74	176		4.5	4.6		
		S	53.8		-2.4							
	ROX	S	15 07 09		3.3	1.32	110				3.9	
	WPZ	P	15 06 51.5		0.4	1.85	151		4.7	4.1		
		ES	07 15		-1.2							
	HJZ	EP	15 06 57.8		0.7	2.33	64		3.2	3.7		
		S	07 26.8		0.1							
	OHZ	EP	15 06 59		1.3	2.38	92				4.3	
		S	07 26		-1.3							
	GPZ					3.89	72		3.9			
	COB	ES	15 08 39		-2.1	5.48	46				3.8	
NOV 17	H	M	S						70 / 738			
	07	09	39.1	34.13S	179.99W	229 KM	SF	1.9	AVG MAG	4.8		
			+ 1.9	0.11	0.13	22						
		H	M	S	DIR	RES	DIST	AZ	N-A	P	W	S
	ECZ	P	07 10 40.0	U	0.5	3.75	198			5.1	5.2	
		S	11 25		-1.3							
	GNZ	P	07 10 51		-1.1	4.78	199		4.4	4.7		
		ES	11 48		-0.9							
	TUA	P	07 10 58		0.6	5.20	205		4.7	4.9		
		S	12 00		1.8							
	KRP	EP	07 11 01		3.2	5.24	222			3.7		
	TRZ	EP	07 11 05		-2.3	5.98	204		4.5	5.2		
		ES	12 18		2.0							
	CRZ	E	07 11 22			6.07	265					
	MNG	P	07 11 24		-1.5	7.41	208					
		S	12 48		-0.7							
	WEL	S	07 13 07		-1.2	8.26	209		5.4			
	CIZ	E	07 12 07			10.16	160					
		S	13 53		1.0							
NOV 17	H	M	S						70 / 730			
	16	34	24.8	38.93S	177.35E	33 KM	SF	1.5	AVG MAG	4.3		
			+ 0.4	0.03	0.03	3						
		H	M	S	DIR	RES	DIST	AZ	N-A	P	W	S
	TUA	P*	16 34 30.3	U	-0.7	0.20	309					
		ES*	35.2		-0.6							
	GNZ	P*	16 34 36.0		-1.0	0.60	62		4.4	4.6		
		S*	46.0		0.2							
	TRZ	P*	16 34 40.2	D	0.9	0.74	213		4.9	4.8		
		S*	55.3		3.7*							
	ECZ	EP*	16 34 55		2.2	1.56	38		4.5			
		E	59.1									
		I	35 02.0									
	KRP	EPN	16 34 51.8		-0.1	1.74	305		4.1			
		EP*	55.9		-0.2							
	MNG	PN	16 34 58.0		-0.4	2.21	220		3.9	3.8		
		E	33 16									
	TNZ	E	16 35 04			2.32	263		3.7			

	WEL	EPN	16 35 08		-2.2	3.07	219	3.8	4.1				
		E	35										
		ESN	47		2.2								
	GPZ					5.93	215		4.4				
	CIZ	EPN	16 36 02		1.3	6.79	140						
		SN	37 13		-1.6								
NOV 19	H	M	S							70/ 740			
	08	07	10.9	37.158	177.08E	289	KH	SE	0.9	AVG MAG		4.2	
			+ 1.1	0.06	0.05	7							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	ECZ	EP	08 07 52					0.0	1.28	115		4.5	4.3
		E	08 19										
	KRP	P	08 07 52.0					-1.1	1.45	237		3.5	
		E	08 26					0.5					
	GNZ	P	08 07 54.8					0.4	1.66	154		4.3	4.2
		S	08 28.0					-0.1					
	CNZ	P	08 08 01					0.8	2.38	210		3.6	
	TRZ	S	08 08 44					4.8*	2.41	185			4.2
	MNG	P	08 08 13.3					-0.2	3.68	199		4.4	3.9
		E	09 01					-1.3					
	WEL	ES	08 09 20					1.1	4.50	203		4.5	
	COB	ES	08 09 33					-0.2	5.18	219			4.0
	GPZ								7.36	206		4.8	
NOV 20	H	M	S								70/ 741		
	10	56	35.5	38.819	178.70E	33	KH	SE	1.4	AVG MAG		4.4	
			+ 1.3	0.06	0.08	2							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	GNZ	IPN	18 56 46.8				U	0.5	0.55	287		4.6	4.7
		E	51										
	TUA	IPN	18 56 59.4				U	0.1	1.21	269		5.4	5.2
		ESN	57 09					-1.2					
	TRZ	EPN	18 57 01					-0.2	1.64	242		4.4	4.7
		E	10										
		SN	22.8					2.2					
	KRP	PN	18 57 14.3					-0.6	2.64	289		4.1	
	MNG	PN	18 57 19.8					-1.1	3.07	233		4.0	4.3
		E	48										
		SN	59.7					0.2					
	TNZ	EPN	18 57 26					0.8	3.39	262		4.0	3.9
		ESN	58 04					0.8					
	WEL	PN	18 57 34.8					2.6	3.90	229		4.5	4.0
		E	49.9										
		ESN	58 14.5					-1.3					
	COB	PN	18 57 47					-1.8	5.12	242		4.1	4.3
		E	58 18										
		ESN	44					-1.2					
NOV 21	H	M	S								70/ 742		
	07	40	30.6	38.469	178.56E	86	KH	SE	1.2	AVG MAG		3.7	
			+ 1.5	0.05	0.08	9							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	GNZ	P	07 40 43.8				U	-1.1	0.46	246			
		E	51										
		E	53										
		E	56					0.2					
	TRZ	EP	07 41 01					1.2	1.74	230		3.8	4.1
		EP	26.5					3.1*					
	KRP	EP	07 41 09					-0.3	2.44	282		3.3	3.1
		ES	38					-0.2					
	CNZ	EP	07 41 11.5					1.8	2.47	252		3.8	3.7
		E	30										
		E	50										
	MNG	P	07 41 19.0					-1.1	3.21	227		3.8	3.7
		E	50										
		ES	58					0.6					

LOCAL EARTHQUAKES

261

WEL	ES	07 42 18	-0.4	4.06	225	4.2	3.8
COB	ES	07 42 46	-0.7	5.20	238		3.9

NOV 22 H M S 70/ 743
 05 37
 FELT ROTORUA (33), MM IV. MAG ABOUT 2.5

NOV 22	H	M	S	40.30S	173.48E	177 KM	SF	1.7	AVG MAG	70/ 744			
				0.07	0.07	12				3.8			
				4	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
COB	IP	ES	EP	06 43 07.4			J	0.7	0.82	224		4.4	3.6
				26.6				-0.3					
WEL	ES	EP	ES	05 43 13				2.8	1.26	129	3.5	3.5	4.1
				33				-0.1					
TNZ	P			05 43 10.7				-1.5	1.48	28		3.8	
MNG	IP			06 43 14.2		D		1.4	1.53	95		4.1	4.4
				29.9									
				35.1									
				36.8				-0.9					
CNZ	S	P		05 43 18.1		U		-0.2	2.05	52		3.5	3.2
				44									
				52.6									
KAI	ES			05 43 59				1.2	2.55	217	3.7		
GPZ	ES			05 44 11				-2.0	3.26	191	3.9		
GNZ	EP			06 43 41				-0.9	3.97	64		3.8	3.5
				44	04								

NOV 22	H	M	S	36.92S	179.68E	12 KM	SF	1.4	AVG MAG	70/ 745			
				0.05	0.03	3				4.6			
				4	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
GNZ	PN			06 49 05.9		J		-0.9	2.17	217		4.8	
KRP	PN			06 49 22.0				-1.3	3.45	252		4.7	4.4
				50	02			-1.5					
GBZ	EPN			06 49 23				0.9	3.45	280		3.6	
AUC	EPN			06 49 30				-0.3	3.93	269			
CNZ	PN			06 49 30.5				-0.5	3.98	234		4.8	4.9
				35									
				53				1.3					
ONE	EPN			06 49 38				0.8	4.44	283	5.0		
TNZ	EPN			06 49 42				0.5	4.76	240		5.0	4.3
				50	56			0.2					
MNG	EPN			06 49 39				-5.0	4.94	220		4.4	4.2
				30	38.5			-1.1					
WEL	EPN			06 49 55				-0.4	5.80	220	4.9	4.5	4.7
				51	02.7			2.5					
				37									
CRZ	EPN			06 50 03				2.1	6.21	291			

NOV 22	H	M	S	36.92S	179.84E	2 KM	SF	1.4	AVG MAG	70/ 746			
				0.05	0.03	3				4.4			
				4	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
GNZ	IPN			06 54 19.2		D		1.3	2.19	220		4.7	
KRP	PN			06 54 36.6				0.2	3.55	253		4.6	4.3
				33	16			-1.2					
GBZ	EPN			06 54 36				-0.9	3.59	281		3.5	3.3
				55	16.5			-1.7					
CNZ	EPN			06 54 43				-0.0	4.14	236		4.7	4.7
				49									
				35	06.5			2.3					
AUC	PN			06 54 43.5				0.3	4.06	270			
ONE	EPN			06 54 52				1.7	4.56	284	4.7		
TNZ	EPN			06 54 53.5				-0.2	4.84	241		5.0	4.3
				55	50			1.8					
				56									
MNG	PN			05 54 53.9				-1.7	4.97	222		4.4	4.3

	WEL	SN	06 55 51.3	0.2															
		EPN	06 55 05	-1.9	5.83	221	5.0	4.4	4.7										
		ESN	56 11	-1.1															
	CRZ	EPN	06 55 15	0.9	6.36	292													
NOV 22	H	H	S																70/ 747
	07	33	52.0	37.13S	179.79E	33 KM	SE	2.8		AVG	MAQ								4.0
			+ 3.2	0.15	0.21														
				H	H	S	DIR	RES	DIST	AZ	W-A	W P	W S						
	GNZ	EPN	07 34 22					-1.4	2.05	222				4.0	4.0				
		EPN	38																
	KRP	EPN	07 34 39.3					-3.3	3.47	256				4.2	3.6				
		EPN	49																
		ESN	35 20					-1.6											
	CNZ	EPN	07 34 49					-0.0	3.92	237				4.3					
	AUC	EPN	07 34 53					2.7	4.01	272									
	TNZ	EPN	07 35 02					2.0	4.73	243				5.0					
	MNG	EPN	07 34 58					-3.4	4.83	223				3.5	3.1				
		ESN	35 57					2.2											
	WEL	ESN	07 36 15					-0.4	5.69	222				4.3					4.1
	COB	EPN	07 35 30.5					3.1	6.75	232									
		E	36 50																
NOV 23	H	H	S																70/ 748
	13	37	16.2	44.50S	171.19E	12 KM	SE	1.3		AVG	MAQ								3.8
			+ 0.4	0.02	0.02														
	OMZ	P	13 37 26.7					-0.8	0.60	199				4.6	4.4				
		PG	28.3					-0.2											
		S	34.2					-1.6											
		EPN	39.0																
	MJZ	IP	13 37 28.3					-1.5	0.73	315				4.5	4.4				
		EPG	30					-1.1											
		S	39					-0.8											
		ESG	41					-0.1											
	GPZ	EPN	13 37 41					0.8	1.33	53				3.1					
		ESN	58.3					0.5											
	ROX	E(P)	13 37 47					1.6	1.64	233				3.6	3.9				
		S	38 06					-1.2											
	KAI	ESN	13 38 13.5					0.5	1.98	5				3.1					
	MSZ	PN	13 37 52.8					-0.9	2.34	265				4.0	4.0				
		P	59.0					1.7											
		S	38 23.3					1.7											
		S	27.7					-0.5											
	MNH	EPN?	13 37 59					-1.5	2.83	242				3.4	3.2				
		EP	38 07					1.3											
		S	45					2.2											
	COB	SN	13 38 52					-0.2	3.60	19									3.1
	FELT	HUNTER: (124) HM IV AND TIMARU (118)																	
NOV 23	H	H	S																70/ 749
	13	52	28.1	44.51S	171.14E	12 KM	SE	1.1		AVG	MAQ								4.2
			+ 0.3	0.02	0.02														
				H	H	S	DIR	RES	DIST	AZ	W-A	W P	W S						
	OMZ	EP	13 52 39.1					-0.1	0.58	196				4.2	4.6				
		EPG	41					0.9											
	MJZ	P	13 52 40.6					-0.7	0.71	317				3.6					
	GPZ	EP	13 52 52					-0.3	1.35	54				4.0					
		PG	53.8					-1.7											
		ES	53 10.3					0.1											
	ROX	EPN	13 52 57					1.1	1.61	233				4.3	4.9				
		ESN	53 17					0.6											
	KAI	EPN	13 53 01					0.2	1.99	6				3.7					
		EPG	08					-0.4											
		ESN	26					1.0											
	MSZ	PN	13 53 04.7					-0.5	2.31	265				5.0	4.9				

LOCAL EARTHQUAKES

263

	P*	10.0	1.3					
	ESN	32	-1.5					
	E	36						
WPZ	EP*	13 53 16	0.9	2.69	216		4.1	4.2
	ES*	49	-1.3					
MNW	PN	13 53 11.1	-0.9	2.80	242		4.5	4.2
	E	19.4						
	E	57						
COB	EPN	13 53 22	-0.7	3.61	19		3.9	3.8
	E	37						
	ESN	54 05	0.6					
WEL	PG	13 53 53	0.4	4.18	41	4.2	3.9	3.8
	ESN	54 16	-2.1					
MHG	EPN	13 53 43	0.9	5.04	41		3.6	3.5
	ESN	54 41	2.2					
	E							

FELT OAMARU (136) HM III AND TIMARU (118)

NOV 23	H M S	39.26S	176.69E	12 KM	SE	1.4	AVG MAG	70/ 750
	22 30 03.7	0.02	0.02					4.2
	+	0.3						
	H M S	DIR	RES	DIST	AZ	W-A	W P	W S
TRZ	IP*	22 30 09.3	J	-0.9	0.31	161		
	ES*	15		0.2				
TJA	IP*	22 30 14.8	D	0.1	0.58	39		4.6 4.7
	ISG	24.6		1.1				
CNZ	IP*	22 30 19.4	J	-0.6	0.89	273		4.5 4.3
	E	28.5						
GNZ	EPG	22 30 28		-0.3	1.21	60		4.3 4.1
	E	35.5						
	ESG	44.5		-0.1				
KRP	PN	22 30 30.0		-1.4	1.61	326		4.1 3.6
	P*	31.9		-0.4				
	ES*	53		-0.7				
	E	31 03						
MNG	EPN	22 30 30		-1.9	1.65	214		4.4 4.1
	EP*	32.9		-0.5				
	SQ	58.9		-0.5				
TNZ	EPN	22 30 36		2.1	1.79	271		4.1
WEL	EP*	22 30 47		-0.5	2.50	215	3.9	4.4 4.2
	ES*	31 22		1.4				
COB	PN	22 31 00.7	D	3.2	3.54	238		4.3 4.1
	ESN	43		4.8*				
	E	32 01						

FELT AT PATOKA (52)

NOV 24	H M S	46.46S	166.60E	12 KM	SE	1.7	AVG MAG	70/ 751
	05 04 48.2	0.07	0.10					3.6
	+	1.8						
	H M S	DIR	RES	DIST	AZ	W-A	W P	W S
MNW	IP*	05 05 03.9	J	-2.1	0.98	47		3.7 4.0
	ES*	17		-2.3				
WPZ	EPN	05 05 13		-0.3	1.57	98		3.5
	ESN	35		-0.4				
MSZ	EPN	05 05 21		-0.2	2.01	28		3.4 3.4
	ESN	47		1.4				
ROX	EPN	05 05 24		1.1	2.14	64		3.6 3.9
	ESN	51		2.3				
HJZ	EP*?	05 05 52		-0.3	3.68	49		3.3 3.1
	E	55.9						
	ESN	06 27		0.9				

NOV 24	H M S	34.04S	178.03W	281 KM	SE	1.1	AVG MAG	70/ 752
	05 35 17.9	0.05	0.07					4.8
	+	1.0						
	H M S	DIR	RES	DIST	AZ	W-A	P	W S
ECZ	E	05 36 35.9			4.59	216		4.9 4.7
	ES	37 28		1.1				

	COB	EPN	21 42 34		-1.2	1.90	239		3.8	3.7
		E	35.0							
		ESN	58		0.7					
	KRP	EPN?	21 42 42		2.0	2.25	13		3.3	3.3
		EP*	45		-0.8					
		ESN	43 07		1.1					
		ES*	15.5		-0.0					
NOV 26	H M S								70/ 758	
	04 01 06.7		38.40S 177.09E	33 KM		SE	1.8	AVG MAG	4.1	
	+ 0.5		0.04 0.03							
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S
	TUA	IPN	04 01 15.3	U	-0.3	0.42	172			
		P*	17.8		1.9					
		SN	23.0		0.6					
	GNZ	IPN	04 01 19.8	DS	-0.8	0.78	109		4.8	4.5
		ESN	32		1.1					
	TRZ	PN	04 01 26.2		0.2	1.17	190		4.4	4.6
		E	35.7							
		E	51.5							
	KRP	IPN	04 01 27.6	DE	-0.2	1.30	291		3.5	
		ES*	48		-0.1					
	ECZ	EPN	04 01 29.5		1.0	1.35	59		4.7	
		EP*	32		0.7					
		E	36.5							
	TNZ	PN	04 01 43.2		2.4	2.25	249		3.9	3.6
		S*	02 18.1		1.7					
	GBZ	EPN	04 01 43		-1.5	2.52	329		3.3	
	MNG	PN	04 01 43.1		-1.7	2.54	209		3.9	3.7
		EP*	47.5		-4.0					
		E	55							
		E	02 14		0.3					
	WEL	EP*	04 02 06		-0.0	3.39	211		4.3	4.3
		ESN	31.7		-2.8					
		S*	53		2.5					
	CIZ	PN	04 02 49		-0.8	7.33	141			
		ESN	04 04		-3.5					
NOV 26	H M S								70/ 759	
	09 07 24.7		41.38S 171.98E	33 KM		SE	1.5	AVG MAG	3.4	
	+ 0.6		0.05 0.03							
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S
	COB	IPN	09 07 36.7	U	-1.5	0.75	49		3.8	4.1
		P*	38.0		-1.3					
		SN	47.0		-1.1					
	KAI	EPN	09 07 41.5		-0.7	1.04	204		3.4	
		ESN	54		-1.2					
	WEL	P*	09 08 01.9		-0.3	2.12	83		3.2	3.4 3.5
		E	27							
	GPZ	EP*	09 08 02		-1.2	2.17	167		3.2	
		E	19							
		E	22		-0.7					
	HJZ	EPN	09 08 04		-0.3	2.65	204		3.1	3.0
		ESN	36		1.5					
	MNG	PN	09 08 10.2		3.6*	2.81	71		3.5	3.3
		P*	12.3		-1.8					
		ESN	41		2.6					
	HSZ	PN	09 08 27.8		1.1	4.29	223		3.2	3.3
		SN	09 15.7		1.4					
	FELT MURCHISON (80) MM IV									
NOV 26	H M S								70/ 760	
	21 53 03.1		44.73S 168.36E	33 KM		SE	1.1	AVG MAG	4.3	
	+ 0.4		0.02 0.03							
			H M S	DIR	RES	DIST	AZ	W-A	W P	W S
	HSZ	PN	21 53 12.8		1.6	0.32	281			
	ROX	IP*	21 53 22.8	D	0.9	1.01	138		4.1	4.5

LOCAL EARTHQUAKES

267

		S	37.1	1.4					
MNW		PN	21 53 22.7	0.3	1.17	206		4.4	4.5
		P	23.2	-1.5					
		SN	37.5	1.6					
		ES	40	-0.5					
MJZ		PN	21 53 28.7	0	1.68	54		4.2	4.0
		EP	33	-0.3					
		ESN	48	-1.3					
OHZ		PN	21 53 32.7	1.0	1.84	101		3.	4.6
		ESN	54	0.3					
WPZ		EPN	21 53 32	-1.2	1.96	170		4.1	4.4
		ESN	55	-0.9					
KAI		EPN	21 53 50	0.4	3.12	46		4.0	
		ESN	54 25	0.5					
GPZ		E	21 53 57		3.25	73		3.8	
		ESN	54 26	-1.4					
NOV 27	H M S		39.21S 174.80E	224 KM	SE	1.2		AVG MAG	70/ 761
			0.04 0.05	5					4.2
			4 M S	DIR	RES	DIST	AZ	W-A	W P W S
TNZ		P	23 32 06.3		0.6	0.32	274		
		ES	30		1.4				
KRP		P	23 32 11.1		-0.4	1.41	25		3.7 3.1
		E	22.5						
		ES	38		-1.0				
MNG		IP	23 32 13.5	U	1.2	1.50	160		4.9 4.8
		E	16.8						
		E	21.7						
		E	33.0						
		E	37.0						
		ES	39.5		-0.4				
TRZ		E	23 32 39			1.61	113		4.6
		ES	43		1.1				
MEL		P	23 32 19.1		0.5	2.07	181		4.6 4.4 4.5
		ES	49		-0.3				
COB		IP	23 32 20.9	U	-0.5	2.45	219		4.7 4.2
		S	55.7		-0.5				
GNZ		EP	23 32 24		1.2	2.58	78		3.8 3.6
		ES	57		-2.0				
NOV 27	H M S		38.22S 177.23E	33 KM	SE	2.3		AVG MAG	70/ 762
			0.07 0.05	3					3.6
			4 M S	DIR	RES	DIST	AZ	W-A	W P W S
TUA		IPN	23 53 46.0	U	-1.4	0.59	186		3.8 4.0
		ESN	54		-2.4				
GNZ		IPN	23 53 50.5	D	0.0	0.75	124		4.2 3.9
		E	56.0						
		ESN	54 03		2.6				
KRP		PN	23 53 58.7		-0.1	1.37	282		3.2 3.0
		ESN	54 12.5		-2.9				
TRZ		EP	23 54 00		-1.7	1.37	193		3.8 3.9
		ES	19		-1.2				
TNZ		EPN	23 54 15		1.6	2.43	246		3.7 3.4
		ES	55		3.3				
MNG		EPN	23 54 16		-1.2	2.75	219		3.4 3.4
		ES	59 03		1.5				
COB		EPN	23 54 44.5		2.7	4.50	229		
		ESN	55 39.5		8.0				
NOV 28	H M S		36.16S 179.56W	33 KM	SE	2.1		AVG MAG	70/ 763
			0.07 0.07	3					4.8
			4 M S	DIR	RES	DIST	AZ	W-A	W P W S
GNZ		PH	01 30 03.5		-0.7	3.14	217		4.7 5.1
		E	32						

LOCAL EARTHQUAKES

269

	EPG		12.5		-1.5				
	E		26						
	ES*		44		0.5				
	ESG		55		2.0				
OMZ	P*	06 26	20.3		-1.2	3.73	194	4.4	4.3
KRP	E	27	19						
	E	06 26	27			4.37	37	4.2	4.3
	E		38						
MSZ	ESN	27	13		1.2				
	EPN	06 26	24		0.2	4.49	223	4.1	4.2
	ESN	27	13.5		-1.2				
QNZ	E	06 26	56			5.28	60	3.9	
HNW	EPN	06 26	40		3.4	5.45	216	3.9	3.9
	ESN	27	38.5		0.7				
WHE	E	06 26	49			5.92	17	4.6	
	E		27						
	E		59						
GRZ	E	06 27	03			7.03	3		
	ESN	28	16		0.5				

FELT AT MURCHISON (80) MM IV

NOV 28	H M S									70/ 766
	09 26	22.7	39.17S	174.98E	170 KM	SE	1.5	AVG MAG		3.7
		+ 1.2	0.05	0.05	10					
			H M S		DIR	RES	DIST	AZ	W-A	W P W S
TNZ	ES	09 27	05.5			0.9	0.46	267		
KRP	P	09 26	53.0			0.6	1.32	20	3.2	2.8
	ES	27	14			-1.2				
TRZ	E	09 26	58				1.48	106	3.4	3.9
	E		27							
	ES		20			2.0				
HNG	IP	09 26	55.4	U		1.2	1.50	165	4.6	3.8
	E	27	17			-1.4				
TUA	EP	09 26	57.5			1.0	1.73	79	4.1	4.1
	ES	27	23			0.4				
HEL	ES	09 27	30			-0.3	2.12	184	3.3	3.6
QNZ	P	09 27	05.4			0.8	2.43	79	3.6	3.8
	ES		34			-2.7				
COB	P	09 27	05.9			-0.5	2.58	221	3.5	3.6
	ES		39			-3.9				
NOV 28	H M S									70/ 767
	15 04	18.2	45.11S	167.65E	82 KM	SE	1.9	AVG MAG		3.9
		+ 2.6	0.08	0.12	25					
			H M S		DIR	RES	DIST	AZ	W-A	W P W S
MSZ	IP	15 04	33.6	U		1.3	0.48	23		
HNW	IP	15 04	33.8	D		-0.4	0.67	182	4.1	4.3
	ES		45			-1.3				
WPZ	EP	15 04	47.5			-0.1	1.76	152	3.9	4.1
	ES	05	10			0.7				
OMZ	IP	15 04	56.1	D		1.0	2.31	90	4.2	3.6
	ES	05	24			1.5				
GPZ	ES	15 05	58			-2.7	3.85	70	3.6	
NOV 29	H M S									70/ 768
	08 23	09.9	41.73S	174.58E	12 KM	SE	1.0	AVG MAG		3.6
		+ 0.5	0.03	0.03	3					
			H M S		DIR	RES	DIST	AZ	W-A	W P W S
HEL	P*	08 23	18.4	U		-0.5	0.46	18	3.3	
	S*		24.4	U		-1.1				
HNG	IPN	08 23	33	D		-0.5	1.30	32	4.1	3.9
	ESN		51			-2.0				
COB	PN	08 23	35.3			-1.3	1.53	294	4.1	3.9
	ESN		57			0.7				
GPZ	SN	08 24	17.5			0.0	2.43	215	2.9	
FAI	E(PQ)	08 24	00			-0.3	2.49	250	3.4	
	ESG		34			3.1				

	TNZ	E(P*)	08 23 56	1.5	2.54	356		3.7	3.6				
		E	24 08										
	TRZ	EPG	08 24 07	1.3	2.76	39		3.6	3.7				
		E	25 55										
	KRP	EPN	08 24 05	-3.2*	3.87	11		3.7	3.4				
		E	25 12										
NOV 30	H	M	S					70/ 769					
	03	10	52.0	34.16S	179.44W	289 KM	SF 2.2	AVG MAG	4.2				
		+	-	0.33	0.60	58							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	GNZ	P	03 12 10.0					1.3	4.92	204		4.3	4.4
		ES	13 08					-0.7					
	KRP	EP	03 12 16					0.0	5.54	226		3.7	
		E	13 35										
	MNG	P	03 12 40.0					-1.4	7.61	211			
		ES	14 08					0.7					
NOV 30	H	M	S					70/ 770					
	11	32	15.7	40.21S	174.83E	12 KM	SE 1.5	AVG MAG	3.9				
		+	-	0.02	0.03	3							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	MNG	IP*	11 32 27.8				U	-0.1	0.65	130		4.2	4.0
		ES*	34					-2.8					
	TNZ	P*	11 32 35.6					0.4	1.07	341		3.5	4.1
		ES*	49.5					-0.2					
	MEL	P*	11 32 36.4				D	1.1	1.08	182	3.7	4.1	4.3
		E	44.2										
		ES*	51					1.2					
	TRZ	EPN	11 32 45					0.8	1.67	68		3.8	3.9
		ES*	33 10					2.5					
	KRP	EPN?	11 32 52					-1.3	2.34	14		3.9	3.8
		EP*	55					-1.9					
		ESN	33 22					0.7					
	GNZ	EPN	11 33 01					-0.4	2.93	59		3.6	
		E	12										
	KAI	ESN	11 33 48					-0.4	3.46	227	3.9		
		ESG	34 18					3.6*					
	GPZ	ESN	11 33 58					0.3	3.85	204	3.5		
NOV 30	H	M	S					70/ 771					
	12	51	40.5	38.81S	175.80E	158 KM	SE 1.6	AVG MAG	4.4				
		+	-	0.07	0.07	16							
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	KRP	IP	12 52 04.2				UNW	-1.2	0.90	347		4.5	3.4
		E	21.8										
	TUA	IP	12 52 06.9				U	0.3	1.05	91		4.7	4.9
		E	20										
		ES	27					0.2					
	TRZ	EP	12 52 08.5					1.5	1.09	134		4.6	5.0
		ES	28					0.7					
		E	29.7										
	TNZ	P	12 52 09.2					1.4	1.17	251		4.2	3.5
		E	34										
	GNZ	IP	12 52 13.0				DNW	-0.5	1.74	85		4.7	4.3
		ES	37					-2.0					
	MNG	P	12 52 16.1					1.6	1.83	188		4.8	4.9
		ES	39					-1.7					
	MEL	P	12 52 24.7					0.9	2.60	197	4.1	4.2	4.5
		ES	58					1.0					
	KAI	ES	12 53 50					-2.3	5.00	221	4.4		
	GPZ	ES	12 53 58.5					-4.2*	5.43	205	4.7		
DEC 02	H	M	S					70/ 772					
	01	38	52.8	38.43S	175.88E	182 KM	SE 1.2	AVG MAG	3.9				
		+	-	0.04	0.05	10							

LOCAL EARTHQUAKES

271

		H	M	S	DIR	RES	DIST	AZ	M-A	M P	M S
KRP	IP	01	39	19.0	D	0.0	6.57	332	4.4	3.8	2.6
	ES			38		0.0					
TUA	S	01	39	42.5		-1.0	1.06	111			3.9
TRZ	P	01	39	24.8	D	1.0	1.74	147	4.4		4.1
	S			49.4		1.8					
GNZ	S	01	39	52.3		-1.3	1.69	98			3.5
MNG	IP	01	39	33.1	U	0.4	2.21	168	4.8		3.9
	ES			40		-0.4					
WEL	IP	01	39	41.9	D	-0.1	2.98	196	4.4		3.9
	ES			4		0.2					
COB	ES	01	40	32		-1.3	3.59	221			3.6
DEC 02	H M S	22	32	39.0							70/ 773
	+ -			2.7							4.6
	H M S	34	00	170.63	W	311	KM	SE	1.9	AVG MAG	4.6
		0.27		0.50		33					
ECZ	EP	22	33	47	DIR	1.1	3.97	201	W-A	5.0	4.6
	ES			34		-0.3					
GNZ	EP	22	33	58		0.5	5.00	202		4.1	4.4
	ES			34		-2.1					
KRP	P	22	34	03.5		-0.2	5.54	224		4.1	
TRZ	EP	22	34	09			6.23	206			
	ES			35		3.1					
MNG	EP	22	34	29		-1.3	7.66	209			
	ES			35		-1.0					
WEL	ES	22	36	15		0.2	8.52	210	5.3		
DEC 03	H M S	03	44	21.8							70/ 774
	+ -			1.2							4.0
	H M S	37	98	176.26	E	196	KM	SE	1.3	AVG MAG	4.0
		0.06		0.03		9					
KRP	IP	03	44	48.8	U	-0.0	0.57	276	W-A	3.6	3.0
	ES			45		-0.7					
TUA	I	03	45	08.0	D		1.08	140			
GNZ	IP	03	44	56.9	D	1.2	1.54	116	4.0		4.2
	ES			45		-1.0					
TRZ	EP	03	44	58		1.4	1.63	164	4.0		4.3
	ES			45		0.5					
ECZ	EP	03	44	58		-0.6	1.84	82			4.3
TNZ	EP	03	45	01		1.7	1.90	230			4.0
MNG	IP	03	45	07.8	U	-0.5	2.70	193	4.8		3.9
	ES			22		0.8					
WEL	P	03	45	15.9		-1.9	3.49	199	3.9	4.5	3.9
	ES			46		-1.0					
DEC 03	H M S	04	50	01.3							70/ 775
	+ -			1.0							3.8
	H M S	45	09	167.45	E	71	KM	SE	0.7	AVG MAG	3.8
		0.03		0.04		7					
HSZ	IP	04	50	15.2	U	0.3	0.53	38	W-A	3.8	4.2
	ES			25		-0.2					
MNW	IP	04	50	16.8	D	0.1	0.70	171	4.1		3.7
	ES			28		-0.3					
ROX	ES	04	50	44		0.9	1.37	107			3.8
	E			51		0.4					
OHZ	EP	04	50	40		-0.1	2.45	91	3.6		3.6
	ES			51		-0.7					
DEC 03	H M S	10	08	25.9							70/ 776
	+ -			1.2							5.0
	H M S	44	99	167.64	E	97	KM	SE	1.8	AVG MAG	5.0
		0.06		0.05		13					
HSZ	IP	10	08	41.8		1.0	0.37	30	W-A	5.0	
MNW	IP	10	08	43.8	D	-0.4	0.79	182			

LOCAL EARTHQUAKES

275

QPZ	SG		53	07.5	-0.5				
	Pe	07	53	06	-0.2	1.62	110	3.6	
	PG			11	0.7				
	S*			27.5	-0.2				
OHZ	SG			35	2.9				
	Pe	07	53	10	-1.3	1.92	172	4.3	4.3
	PG			19.5	3.2				
	S*			36	-0.7				
MSZ	Pe	07	53	21.5	1.6	2.42	231	3.9	4.2
	PG			29	2.6				
	S*			53	1.7				
	SG			58	-1.0				
ROX	PG	07	53	24	-3.4	2.46	200	3.9	3.9
	S*			52	-1.2				
	SG			59	-1.6				
	PN	07	53	19.5	0.2	2.65	39	4.3	4.4
MNW	E			21.5					
	SN			50.5	-0.3				
	S*			54	0.1				
	Pe	07	53	33	2.4	3.34	218	3.8	3.6
WEL	E			41					
	ES*			54	2.0				
	Pe	07	53	31	-2.0	3.66	60	3.8	4.0
	PN			38.5	-2.7				
MNG	ESN			54	1.8				
	ES*			26	-3.1				
	PN	07	53	43.9	-0.6	4.48	57	4.5	
	E			50					
TNZ	IP*			52	-3.3				
	E			54	4.0				
	EPN	07	53	52	2.0	4.92	37	3.8	3.8
	Pe			54	0.1				
KRP	ESN			46	-1.5				
	E			55	0.5				
	PN	07	54	13	2.2	6.48	38		
	SN			55	2.4				
	E			40					

DEC 07	H	M	S							70/ 783
	13	09	42.4	37.28S	176.61E	293 KM	SE	0.7	AVG MAG	4.0
			+ 0.6	0.03	0.03	4				
				H	M	S	DIR	RES	DIST	AZ
KRP	EP			13	10	23.5		0.9	1.06	233
	S					54		0.0		
GBZ	IP			13	10	24.3	D	-0.4	1.40	319
TUA	P			13	10	26.3	D	0.4	1.58	164
	E					59				
ECZ	P			13	10	26		0.0	1.60	105
	S					59		-0.6		
	E					11				
GNZ	IP			13	10	27.3	U	0.2	1.76	141
	E					59				
	S					11		-0.7		
TRZ	PS			13	10	32		0.3	2.27	176
	S					11		0.8		
MNG	IP			13	10	42.9	U	0.2	3.44	194
	E					48				
	E					11				
	E					28.5				
	S					29.5		-0.3		
WEL	EP?			13	10	50.5		-1.0	4.24	199
	S					11		0.0		
COB	E			13	11	01			4.84	217
	S					57.5		-0.4		
QPZ	S			13	12	47		0.9	7.08	204
HJZ	S			13	13	09		-1.0	8.16	213

DEC 07	H	H	S	45.04S	167.53E	33 KM	SE	1.7	AVG MAG	70/ 784			
	17	44	22.8	0.03	0.05					5.1			
			0.8										
				4	4	S	DIR	RES	DIST	AZ	W-A	W P	W S
MNW		IPN		17	44	36	D	-0.2	0.74	178			
RQX		IPN		17	44	44.9	D	1.0	1.30	110		5.4	5.2
		SN			45	02		2.3					
WPZ		PN		17	44	50.4	D	-1.0	1.85	152		5.1	5.1
		P*				55		-0.3					
		E			45	16							
HJZ		IPN		17	44	56.8	DS	-1.0	2.31	64		4.7	4.9
		P*			45	01.5		-2.2					
		E				09							
		E				13							
		SN				24		-0.3					
OMZ		IPN		17	44	58.2	D	-0.2	2.36	92		5.5	5.4
		E			45	22.5							
		SN				28		2.6					
KAI		EPN		17	45	18		0.7	3.74	49		4.9	
		EP*				32		3.9*					
		E				45							
		SN				59		-0.0					
GPZ		PN		17	45	20		0.9	3.87	71		4.9	
		E				34							
		E				47							
		E				57							
		SN			46	00.5		-1.7					
CHR		SN		17	46	00		-3.5	3.92	69			
		E				40							
COB		PN		17	45	39.5		-1.2	5.46	45		5.0	5.0
		I				51.5							
		SN				46		0.3					
		ES*				47		1.3					
HEL		SN		17	46	06			6.45	57		4.8	
		E				03		-1.5					
		E				16							
MNG		PN		17	46	04		-1.4	7.29	55			
		I				11.5							
		E				19							
		SN				47		-1.6					
TNZ		SN		17	46	16			7.72	43			
		E				25							
		E				47							
CNZ		EPN		17	46	18		-0.9	8.31	48			
		E				21							
		E				36							
		P*				49		2.8					
		E				47							
KRP		PN		17	46	32		0.2	9.28	43			
		E				48							
		E				47							
		SN				48		0.0					
		E				33							
GNZ		SN		17	46	55			10.07	54			
		E				47							
		E				48							
		SN				34		3.3					
ONE		EPN		17	46	51		1.8	10.59	31		5.3	
		E				48		2.5					
		SN				45.5							
		E				59							
GBZ		PN		17	46	51.5		1.5	10.65	37			
		E				47							
		P*				25		-1.4					
		SN				48		-2.5					
CRZ		PN		17	46	59		0.6	11.29	22			
		E				48							

LOCAL EARTHQUAKES

277

SH 59 -0.4
E 49 02
FELT CENTRAL OTAGO AND SOUTHLAND, MAXIMUM INTENSITY MM IV AT
LOHSDEN (140) AND MANAPOURI (138)

DEC 08	H	M	S	45.89S	166.43E	12 KM	SE 2.8	AVG MAG	70/ 785
	+	-		0.09	0.10				4.2
	MMW	P*		4	M S	DIR RES	DIST AZ	W-A	W P W S
		S*		09 03	52.2		0.5 0.84 83		4.5
	HSZ	P*		04 04			0.9		
		IPG		09 04	06		1.2 1.61 41		4.2 4.2
		I		09			0.3		
		SG			10.5				
	WPZ	E(P*)		09 04	07		3.5 -1.9 1.85 116		4.3 4.6
		S*			35.9		2.0		
	ROX	E(P*)		09 04	13		0.3 2.07 80		4.4 4.3
		E			21				
		S*			39		-1.0		
	OHZ	E(PN)		09 04	28		1.3 3.26 77		4.2 4.4
		EP*			36		2.9		
		S*		05 19			3.2		
		ESG			26		-0.1		
	MJZ	EP*		09 04	34.5		-1.5 3.44 58		3.8 3.6
		EPG			41		-4.8		
		S*		05 18.5			-2.7		
	GPZ	EPG		09 05	13		-3.0 4.94 66		4.2
		SG			06 19		-3.6		
	COB	E		09 05	22			6.64 46	
		E			06 33				
		S*			45		-12.2*		

FELT RIVERTON (149) MM IV

DEC 08	H	M	S	31.74S	179.25W	441 KM	SF 1.8	AVG MAG	70/ 786
	+	-		0.11	0.23				5.6
	ECZ	EP		4	M S	DIR RES	DIST AZ	W-A	W P W S
		S		22 13	01		2.7 6.21 196		
		E		14 12.3			-2.4		
		QBZ		22 12	58		-0.7 6.26 223		
		ONE		22 13	02		-1.2 6.67 231		
		GNZ		22 13	09		-0.4 7.24 197		
		E			25				
		S		14 34			-0.9		
	KRP	P		22 13	14		1.7 7.51 213		
		S		14 41			0.8		
	TUA	ES		22 14	44		1.2 7.64 202		
	TRZ	E		22 13	33			8.43 201	
		S		14 59.5			1.0		
	ONZ	E(P)		22 13	25		0.9 8.57 206		
		E			14 56				
		ES		15 04			2.7		
		E			07				
	MNG	P		22 13	35		-3.1 9.83 254		
		E			15 17				
		S			25		-1.3		
	WEL	E		22 15	40			10.67 205	5.6
		S			44		0.1		
	COB	EP		22 13	55		0.1 11.34 212		
		E			15 52				
		S			55		-2.5		
	OPZ	E		22 16	38			13.54 206	5.6
		S			42		0.7		
	MJZ	S		22 17	04		1.1 14.67 211		

DEC 11		H	M	S				70/ 787
	03	03	13.8	44.29S	167.91E	33 KM	SE 2.3	AVG MAG 4.2
			+ 1.1	0.05	0.05			
MSZ	IP	03	03	21.0	DIR	RES	DIST	AZ
MNH	Pe	03	03	40.9	U	-1.6	0.38	179
	E			42.9		-0.5	1.50	188
	Pe	04	03.9			2.3		
ROX	Pe	03	03	40.5		-1.4	1.55	140
	E			44		-2.7		
	Se	04	00					
HJZ	E	03	03	43.5			1.87	82
	Pe			46		-1.2		
	E			55				
	Se	04	09			-3.0		
OHZ	E(PN)	03	03	50		1.6	2.28	111
	E			52				
	Pe			58		0.7		
	ESN	04	17			2.4		
	Se			23.5		-0.9		
KAI	Pe	03	04	10.5		2.3	3.10	57
	Se			51		2.0		
	E			54.5				
QPZ	Pe	03	04	17.5		3.0	3.47	82
	SN			48		4.4		
	Se			59		-1.0		
	E			05.16				
COB	PN	03	04	22		-0.6	4.79	50
	E			32				
	SN			05.14		-1.5		
	E			29				
	E			52				
MNG	PN	03	04	47		-1.4	6.70	59
	E			52.5				
TNZ	E	03	05	00			7.03	46
	E			06.37				
KRP	Pe	08	05	39		-2.9	8.58	45
	E			07.43				
DEC 11		H	M	S				70/ 788
	06	00	41.6	35.36S	178.63E	274 KM	SE 1.8	AVG MAG 4.6
			+ 1.2	0.06	0.07			
ECZ	EP	06	01	28.5	DIR	RES	DIST	AZ
	E			02 04		-0.8	2.33	182
	S			07		0.5		
QBZ	P	06	01	31.6	D	-1.6	2.72	251
	E			38				
GNZ	P	06	01	37.5	D	-1.9	3.32	189
	E			02 06				
	E			19.5				
	S			22.5		-1.9		
AUC	(P)	06	01	43		1.9	3.48	243
ONE	P	06	01	41		-0.6	3.52	262
	S			02 30		1.6		
	E			42				
KRP	IP	06	01	43.7	D	1.4	3.58	223
	E			02 04				
	S			33.5		3.9		
	E			51				
TUA	E	06	01	44			3.65	199
	S			02 30		-0.9		
TRZ	P	06	01	50		-2.0	4.43	199
	E			02 12				
	S			49		2.0		
CNZ	EP	06	01	54		0.5	4.56	212

Station	Time	Mag	Dir	Res	Dist	Az	W-A	H	P	W	S
	02 24										
	03 00										
	09										
CRZ	06 01 58.5	DNE	0.0	4.99	279						
	02 04										
TNZ	06 02 04			5.12	220			3.9	3.5		
	24										
	59										
MNG	05 02 06.8			-2.5	5.82	205		4.6	4.6		
	03 15			-1.8							
	16.5			-1.7							
WEL	06 02 19			-0.9	6.66	206		5.1			
	03 32.5										
	34										
	35.9			0.2							
COB	06 02 29			1.1	7.38	217					
	33										
	51.9			0.2							
	54										
	59										
KAI	06 04 38			7.8*	9.11	216		5.0			
CIZ	06 04 39			3.6	9.34	158					
	48										
GPZ	06 04 39			-0.6	9.53	207		4.8			
MJZ	06 03 10			0.9	10.67	214					
	24										
	47										
	05 05			-0.5							
OMZ	06 03 27				11.36	209					
	05 26										
MSZ	06 03 34				12.41	218					
	43										
	05 52										
DEC 11	H 11 46	M 08.5	S 34.48S	179.75E	293 KM	SE 1.3	AVG MAG	70/ 789			
	+ 1.3		0.05	0.10	9			4.1			
			H 11 47	M 08	S DIR RES	DIST AZ	W-A	H P	W S		
ECZ	EP?		11 47	08		0.2 3.35 197		4.4	4.3		
				10							
				52							
				55							
				01							
GNZ	P		11 47	19.5		0.4 4.38 198		3.8	4.3		
				23							
				05							
				12							
				14							
ONE	EP		11 47	20		-0.3 4.60 252					
TJA	S		11 48	23		0.1 4.80 205				4.2	
KRP	P		11 47	26.5		2.2 4.84 224					
				28							
				26							
TRZ	E(P)		11 47	34		0.9 5.58 204		4.0	4.1		
	S			41		1.6 5.79 214		3.5	3.5		
CNZ			11 47	43							
				51		7.0*					
				02							
CRZ	P		11 47	35.5		-0.8 5.84 268		3.8			
				30							
MNG	P		11 47	50		-0.4 7.00 208					
				04							
				09							
WEL	S		11 49	28		-1.4 7.85 209		4.9			
COB	S		11 49	46		-0.3 8.62 218					
GPZ	S		11 50	34		0.7 10.73 209		4.9			
MJZ	ES		11 50	59		-0.5 11.91 214					

LOCAL EARTHQUAKES

281

	MJZ	E	20 48 28			14.73	209						
		S	50 52			-4.9							
	OMZ	ES	20 51 10			-3.1	15.46	206					
	MSZ	E	20 48 42				16.40	213					
		E	51 29										
		S	37			3.3							
	MNW	ES	20 52 01			5.7	17.39	211					
DEC 12	H	H	S									70/ 792	
	20	47	24.0	36.30S	179.24E	215 KM	SE	1.3	AVG	MAG	4.4		
			+ 0.7	0.04	0.04	3							
		H	S	DIR	RES	DIST	AZ	W-A	W P	W S			
	TUA	P	20 48 15			-0.0	3.00	213		5.4	4.8		
		E	21										
		S	53.5			-1.0							
	GBZ	P	20 48 13.8	D		-1.7	3.04	270		4.1	3.8		
		I	21										
		S	49.8			-3.3							
	KRP	IP	20 48 20.0	DNE		0.6	3.38	240					
		E	27										
		E	58										
		S	49 02			-0.3							
	TRZ	P	20 48 24.8	D		0.6	3.77	210		4.8	4.6		
		E	35										
		S	49 12			1.3							
	ONE	(P)	20 48 28			1.1	3.99	276		4.0			
		ES	49 14			-1.5							
	CNZ	IP	20 48 29.0	D		0.6	4.12	224		4.5	4.0		
		S	49 20			1.7							
		S	49 02			1.9							
	TNZ	EP	20 48 39			1.9	4.81	232		4.3			
	MNG	P	20 48 41.0			-1.3	5.22	213		4.3	4.2		
		E	43.5										
		E	49 36			-0.2							
		I	43			-0.1	5.68	287					
	CRZ	P	20 48 48			-0.3	6.08	214		4.8	3.8		
	WEL	P	20 48 53										
		I	54.3			-1.3							
		S	50 01.5			-0.9							
	COB	P	20 49 04			0.9	6.98	225					
		E	24			0.7							
		ES	50 24.5										
	CIZ	EP?	20 49 22.5				8.29	159					
		E	25.5			-0.9							
		S	50 53										
		E	56			3.1	8.68	222		4.7			
	KAI	RS	20 51 06			-2.2	8.95	212		5.0			
	GPZ	S	20 51 07			0.1	10.20	218					
	MJZ	EP	20 49 46.5										
		E	49			-0.9							
		S	51 37			0.9	10.80	213					
	OMZ	EP	20 49 55										
		E	56.5			-0.8							
		RS	51 51										
DEC 13	H	H	S									70/ 793	
	04	04	27.7	38.36S	176.19E	12 KM	SE	1.6	AVG	MAG	3.7		
			+ 0.5	0.02	0.03	2							
		H	S	DIR	RES	DIST	AZ	W-A	W P	W S			
	HNZ	PQ	04 04 35.0			1.1	0.28	194					
		SG	41			3.0							
	KRP	IPG	04 04 41.9	UNW		0.4	0.67	310					
		SG	53			2.3							
	TUA	PQ	04 04 45.3			-0.3	0.88	121		4.3	4.1		
		SG	57.5			0.0							
		E	05 01										
	CNZ	IPG	04 04 48.0	U		0.3	0.98	211		3.8	3.5		
		SG	05 02.5			1.4							

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
WEL	IPG	09	12	08.1	U	3.3	0.33	268	3.7		
	SG			12.3		-0.2					
MNG	IP*	09	12	09.0	L	-4.5*	0.69	17			
COB	EPN	09	12	31.4		-0.5	1.88	275		4.3	4.4
	EP*			34.0		0.1					
	PG			39.0		0.3					
	SN			55.6		0.6					
GNZ	IPN	09	12	31.9	D	-2.9	2.09	7		4.4	4.6
	ESN			37.4		-2.6					
TRZ	EPN	09	12	35.6		0.5	2.11	36		4.3	
	EP*			40.0		2.0					
	E			53.9							
TNZ	EPN	09	12	35.1		-0.9	2.18	343		4.2	4.2
	ESN			13 03.1		0.9					
KRP	EPN	09	12	52.1		0.1	3.36	4		3.9	4.0
	E			55.3							
	E			13 30.4							
	SN			33.2		2.4					

FELT SOUTHERN PARTS OF NORTH ISLAND

		H	M	S						70/ 800	
DEC 15		11	06	15.8	38.49S	178.91E	33 KM	SE	1.0	AVG MAG	3.9
				+ 1.4	0.08	0.08					
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
GNZ	IPN	11	06	26.0	U	-0.8	0.71	297		4.2	4.3
	SN			39.6		1.3					
TUA	I	11	06	39.0	D		1.41	257		4.7	4.1
	IP*			40.2		-1.2					
	ESN			55.4		-0.0					
TRZ							1.94	236		4.0	
KRP	EPN	11	06	56.5		0.2	2.71	281		3.3	
GNZ	E	11	06	59.0			2.72	294		3.6	3.4
	EP*			07 03.4		-0.2					
	I			13.0							
	ESN			27.0		-0.1					
MNG	EPN	11	07	07.1		1.5	3.39	230			3.3
	ESN			43.0		-0.7					
DEC 15		18	33	45.2	37.45S	176.91E	183 KM	SE	1.2	AVG MAG	3.7
				+ 1.3	0.05	0.06	10				
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
KRP	IP	18	34	16.1	U	1.0	1.19	246		3.7	
	ES			38.0		-0.2					
GNZ	EP	18	34	18.7		1.1	1.48	144		4.3	3.9
	ES			41.6		-1.1					
GBZ	IP	18	34	19.1	U	-0.6	1.68	317		3.6	
GNZ							2.05	211			3.2
TRZ	ES	18	34	59.0		1.0	2.10	182			4.2
MNG	EP	18	34	38.3		-0.7	3.35	199		3.7	3.7
	ES			35 19.9		-0.6					
DEC 15		23	15	01.5	45.01S	167.61E	195 KM	SE	0.8	AVG MAG	4.1
				+ 0.9	0.03	0.04	6				
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
MSZ	IP	23	15	18.6	U	1.1	0.41	33			
	ES			29.2		-0.5					
MNW	IP	23	15	20.7	U	0.4	0.77	180		4.4	4.4
	S			34.3		-0.3					
ROX	ES	23	15	45.8		1.1	1.29	112			3.8
WPZ	EP	23	15	33.0		0.0	1.86	153		4.3	4.1
	ES			55.7		-0.8					
MJZ	EP	23	15	38.0		-0.6	2.29	64			3.6
	ES			16 05.9		-0.5					
OHZ	ES	23	16	08.0		0.2	2.34	93			3.9

LOCAL EARTHQUAKES

285

DEC 16		H	M	S									70/ 803
	02	57	06.2	40.58S	176.73E	33	KM	SE	0.7	AVG	HAG		3.9
			0.6	0.03	0.03								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
MNG	IPN			02	57	21.9	U	-0.6	0.95	267		3.8	3.7
	SN					34.0		-0.5					
	S*					37.4		0.1					
TRZ	IPN			02	57	23.5	U	-0.1	1.03	4		3.9	4.2
	P*					25.9		0.4					
	I					30.8							
	SN					36.5		0.1					
GNZ	EPN			02	57	38.3		-0.1	1.65	326		4.0	4.0
	I					40.5							
	ESN					52.3		1.2					
	ES*					57.5		-0.4					
KRP	EP*			02	57	54.6		-1.0	2.81	340		3.4	
COB	EP*			02	58	01.1		1.0	3.07	259			

DEC 16		H	M	S									70/ 804
	11	11	53.6	42.03S	174.53E	33	KM	SE	1.2	AVG	HAG		4.6
			0.3	0.02	0.03								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
WEL	IPN			11	12	06.8	U	-0.5	0.76	14		5.1	
	ISN					16.3		-1.1					
MNG	IPN			11	12	18.2	D	-0.3	1.58	27			
COB	IPN			11	12	18.2	D	-1.1	1.64	304			
GPZ	EPN			11	12	26.0		-0.9	2.17	219		4.4	
	E					35.5							
	SN					50.0		-1.5					
KAI	EP*			11	12	37.5		2.1	2.37	257			
	E					48.5							
TNZ	EPN			11	12	38.0		2.2	2.84	358		5.3	4.9
	P*					44.4		0.9					
	E					11.7							
GNZ	IPN			11	12	37.7	U	0.7	2.93	16			
	EP*					45.0		-0.0					
TRZ	EPN			11	12	40.4		2.1	3.02	36			5.0
	ESN					13 10.3		-2.1					
MJZ	EPN			11	12	49.4		-0.3	3.56	235		3.9	4.2
	E					48.5							
	E					58.7							
	E					02.3							
	ESN					25.3		-0.3					
TUA	E			11	12	53.7			3.79	33			4.6
	E					17.6							
	ESN					32.3		1.2					
OMZ	EPN			11	12	51.7		-0.2	4.02	220		4.8	4.8
	E					59.9							
	E					32.6							
	SN					37.0		0.4					
KRP	EPN			11	12	54.0		0.0	4.17	11		4.8	4.8
	E					03.0							
	E					12.5							
	E					58.5		-2.3					
	E					07.3							
GHZ	EPN			11	12	55.0		-0.9	4.31	39			4.5
	SN					43.5		-0.1					
MSZ	EPN			11	13	12.0		0.1	5.50	239		4.1	4.1
	E					48.0							
GBZ	EPN			11	13	18.3		1.6	5.85	8			4.1
MNH	EPN			11	13	23.0		1.0	6.24	231			
	ESN					14 29.0		-1.2					
CIZ	E			11	13	32.9			6.81	109			
	E					41.3							
	ESN					44.0		0.2					

FELT BOTH SIDES OF COOK STRAIT, MAXIMUM INTENSITY MM IV

LOCAL EARTHQUAKES

287

GPZ				4.11	85	4.1			
DEC 18	H M S	48.95S	163.92E	33 KM	SE	1.7	AVG MAG	70/ 809	
	00 36 11.4	0.10	0.12	?				4.8	
	+ - 1.9			DIR	RES	DIST	AZ	W-A	W P W S
HPZ	EP	00 37 08.0			-1.9	4.04	57		4.7 5.1
	S	49			-5.9*				
MNW	SP	00 37 10.0			-0.1	4.05	40		4.9 4.9
	S	55			-0.1				
ROX	EP	00 37 24			0.1	5.06	49		4.5 4.8
	E	31							
	S	38 19			-0.7				
MSZ	EP	00 37 25			0.8	5.08	34		4.6 4.6
	S	38 22			1.8				
OMZ	EP	00 37 38			-0.7	6.16	54		
	S	38 35							
MJZ	EP	00 37 44			-2.2	6.71	45		
	E	38 53							
GPZ						8.00	52		5.0
KAI						8.29	42		5.4
CIZ	P	00 39 29			3.2	14.34	77		
	ES	41 58			-0.3				
DEC 18	H M S	40.31S	175.47E	33 KM	SE	1.8	AVG MAG	70/ 810	
	04 38 29.7	0.03	0.04	?				5.1	
	+ - 0.4			DIR	RES	DIST	AZ	W-A	W P W S
MNG	P*	04 38 38.9			1.4	0.31	179		
CNZ	P*	04 38 48.1			-2.0	1.11	3		
WEL	PN	04 38 49.9			1.6	1.12	208		5.3
	I	50.7							
	SN	19 05.6			3.5				
TRZ	EP*	04 38 51.9			-1.6	1.28	55		5.3
	E	54.2							
	E	19 14							
TNZ	P*	04 38 52.7			-2.4	1.40	323		5.6
	E	19 13							
TUA	EPN	04 38 59.0			-1.1	1.98	41		5.0
	E	19 05							
	I	36							
COB	PN	04 39 04.5			1.0	2.23	249		
	IP*	08.2			-0.9				
KRP	EPN	04 39 05.0			-0.6	2.38	1		5.3
	I	06.2							
	ESN	35			2.2				
GNZ	EPN	04 39 08.0			-0.3	2.58	51		4.9
	E	20							
	E	26							
AUC	PN	04 39 22			1.3	3.48	351		
KAI	EPN	04 39 26			1.3	3.78	233		5.7
	E	42							
	S*	20 22			-3.1				
GPZ	EPN	04 39 28			0.3	3.99	211		5.5
	EP*	41			1.7				
	E	35							
	SN	20 10			-2.1				
GBZ	EPN	04 39 29.0			0.1	4.08	0		4.3
	EP*	41			0.2				
MJZ	EPN	04 39 45			0.5	5.23	224		4.5
	E	55							
	SN	20 43			0.8				
CRZ	EPN	04 20 01			2.5	6.27	338		
	SN	21 07			-0.1				
CIZ	PN	04 20 09.0			1.3	6.95	124		
	SN	21 21			-2.3				
MSZ	EPN	04 20 08.3			-0.7	7.09	230		

		E		16															
		ESN		21	24	-2.6													
		E		38															
FELT WIDELY THROUGHOUT TARANAKI AND WELLINGTON PROVINCES																			
MAXIMUM INTENSITY MM IV																			
DEC 18	H	M	S	40.31S		175.44E		33	KM	SE	1.6	AVG	MAG	70/	811				
				0.02		0.03													
				H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S				
MNG	P			05	35	16.5		1.4	0.31	175									
WEL	P			05	35	27.4	U	-0.3	1.10	207	5.1	5.3							
	S					43.0		0.2											
CNZ	P			05	35	25.8		-2.0	1.11	4									
TRZ	EPN			05	35	28.2		-0.2	1.30	55		5.1	5.3						
	I					32													
	S					48		-0.5											
	E					53													
TNZ	P			05	35	31.0		-1.5	1.39	323		5.2							
	S					50		-1.1											
TUA	EPN			05	35	37.0		-0.9	2.00	42									
	E					42													
	IS					36	10	0.7											
	I					16													
COB	PN			05	35	41.4		0.7	2.20	248		5.0							
	EP					48		1.7											
KRP	PN			05	35	42.5		-0.7	2.38	2		5.0							
	I					44.1													
	ESN					36	13	2.6											
GNZ	EPN			05	35	44		-2.2	2.60	51		4.9							
	EP					55		2.0											
	E					36	01												
	SN					15		-0.7											
AUC	P			05	36	06		-2.2	3.48	351									
KAI	E			05	36	06			3.76	233	4.9								
	ESN					46		2.0											
GPZ	SN			05	36	47		-2.3	3.98	211	5.1								
QBZ	EPN			05	36	06		-0.5	4.08	0		4.1							
	E					22													
HJZ	PN			05	36	22.5		0.6	5.22	224		4.1							
	E					32													
	SN					37	19.5	0.2											
CRZ	EPN			05	36	39		3.0	6.26	339									
	SN					37	46	1.5											
CIZ	PN			05	36	46.5		1.0	6.97	124									
	SN					37	57	-4.3											
MSZ	EPN			05	36	46		-0.9	7.07	229									
	E					52.5													
	SN					38	02	-1.7											
FELT WIDELY THROUGHOUT TARANAKI AND WELLINGTON PROVINCES																			
MAXIMUM INTENSITY MM IV																			
DEC 18	H	M	S	40.24S		175.44E		33	KM	SE	1.2	AVG	MAG	70/	812				
				0.02		0.03													
				H	M	S	DIR	RES	DIST	AZ	W-A	W	P	W	S				
MNG	P			06	26	37.0		-0.0	0.38	175									
	S					44.1		0.8											
CNZ	P			06	26	45.9		-1.7	1.04	5		3.8	3.8						
	S					02.5		0.7											
WEL	EPN			06	26	48		0.5	1.16	206	3.1	3.5	3.7						
	S					27	06	0.5											
TRZ	EPN			06	26	48		-0.9	1.27	58		3.4							
	E					27	08												
TNZ	P			06	26	51.6		-0.9	1.33	322		3.7	3.8						
	S					11.5		1.1											
COB	EP			06	27	06		-1.7	2.22	247		3.5	3.4						

LOCAL EARTHQUAKES

289

	KRP	ES*		06 27	37 05		-0.1	2.31	2		3.2		
		EPN			36		1.8						
		E											
	FELT TABLE FLAT (38) MM III												
DEC 18	H	M	S								70/ 813		
	10	13	43.0	38.15S	176.27E	12 KM	SE ND			AVG MAG	2.6		
			R	R	R	R							
	KRP	SG		10 14	04.0	DIR	RES	DIST	AZ	W-A	W P	W S	
		FELT	ROTORUA	MM	IV		-0.2*	0.62	291			2.6	
DEC 18	H	M	S								70/ 814		
	22	09	19.8	40.25S	175.41E	33 KM	SE	1.2		AVG MAG	4.3		
			+ 0.3	0.02	0.02								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	MNG	P*		22 09	29.0	U	0.5	0.37	172				
		S*			35.6		1.1						
	WEL	P*		22 09	39.8		-1.1	1.14	205		4.4	4.6	
		S*			57		0.6						
	TRZ	EPN		22 09	39.5		-1.3	1.29	58		4.2	4.3	
		IP*			44.5		1.1						
		ES*		10 00			-0.9						
		E			04								
	TNZ	P*		22 09	43.4	U	-0.7	1.33	323		4.7	4.7	
		S*			10 02		0.0						
	TUA	EP*		22 09	54		-1.0	1.97	43				
		E			10 21								
	COB	PN		22 09	54.5		1.2	2.20	247		4.2	4.3	
		EP*			58		-0.9						
		ES*			10 27		-1.0						
	KRP	PN		22 09	55.5		0.5	2.33	2		4.1	4.1	
		ESN			10 24		2.3						
		E			35								
	GNZ	E		22 10	05			2.58	52				
		E			12								
		E			27		-0.9						
	KAI							3.77	232		4.3		
	GPZ	ESN		22 11	00		-2.7*	4.01	210		4.1		
	FELT MOAWHANGO (58) MM IV												
DEC 19	H	M	S								70/ 815		
	10	49	42.9	49.39S	164.11E	33 KM	SE	4.1		AVG MAG	4.3		
			+ 5.5	0.28	0.44								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	WPZ	EP		10 50	39		-4.6	4.19	51		4.3	4.4	
		P			51 28		-2.1						
	MNW	EP		10 50	44		-1.4	4.32	35		4.5	4.2	
		P			51 33		-0.3						
	MSZ	EP		10 50	59.5		-0.3	5.39	30		4.4	4.1	
		ES			52 03		3.9						
	CIZ	EP		10 53	02		4.8	14.32	75				
DEC 19	H	M	S								70/ 816		
	13	02	39.5	38.40S	176.00E	173 KM	SE	1.0		AVG MAG	4.2		
			+ 0.8	0.03	0.04								
				H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
	KRP	P		13 03	04.5		0.4	0.60	323		3.7	3.4	
		I			06.0								
		S			22.5		-0.5						
	TUA	P		13 03	07.0		0.5	0.99	114		4.7		
		E			21.5								
		E			27								
	TRZ	P		13 03	10.3		1.5	1.32	151		4.6	4.7	
		S			32.5		0.1						
	TNZ	P		13 03	13.0		2.0	1.49	238		4.1		
	GNZ	P		13 03	12.3		0.1	1.61	99		3.9	4.0	

		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S
GBZ	P	15	39	37.0		-1.5	5.79	222		4.7	
AUC	EP	15	39	48		1.3	6.64	222			
GNZ	P	15	39	48.0		-0.8	6.86	195			
	S		41	13		-0.7					
KRP	P	15	39	52		1.2	7.07	212			
TUA	EP	15	39	53		0.5	7.24	200			
TRZ	EP	15	40	01		0.6	8.03	200			
	S		41	36		1.3					
CNZ	P	15	40	02		0.5	8.14	207			
	ES		41	36		-0.7					
MNG	P	15	40	14.0		-0.6	9.42	203			
	ES		41	56		-4.3*					
HEL	P	15	40	23		-0.2	10.25	204	5.5		
	S		42	16		-0.1					
COB	EP	15	40	29		-0.8	10.90	212			
DEC 27	H M S	23	39	22.5	38.09S	176.20E	171 KM	SE	1.1	AVG MAG	70/ 823
					0.05	0.05	7			4.4	
	+-										
KRP	P	23	39	46.9		-0.1	0.54	286		3.8	3.4
	S		40	05		-0.1					
TUA	EP	23	39	49.9		-0.3	1.05	134		4.3	4.7
	S		40	09.9		-1.3					
CNZ	P	23	39	53.0		1.6	1.23	204		4.3	
GNZ							1.54	112		4.7	4.3
TRZ	P	23	39	55.7		1.2	1.55	162		4.3	4.9
	S		40	20.9		1.4					
MNG	IP	23	40	06.9	U	0.1	2.60	192		4.8	4.0
	S		39			-1.2					
HEL	P	23	40	19.9		-0.4	3.39	199	4.3	5.1	4.2
	S			57		-0.6					
COB	EP	23	40	23.9		-0.9	4.02	221		4.1	4.2
	S		41	12.9		0.4					
GPZ	ES	23	41	59		-4.7*	6.22	204	4.7		
FELT WHARITE (62)											
DEC 28	H M S	06	29	46.7	48.24S	167.26E	12 KM	SE	1.0	AVG MAG	70/ 824
					0.02	0.04	9			3.9	
	+-										
MNW	P*	06	29	57.1		-0.8	0.60	155		3.9	
	ES*		30	05		-1.2					
HSZ	P*	06	29	59.7		-0.6	0.73	39			
	S*		30	09.9		-0.9					
ROX	P*	06	30	14.2		1.3	1.47	100		3.9	4.1
	S*			32.9		0.0					
WPZ	EPN	06	30	17		0.1	1.80	143		4.0	4.2
	SN			40		0.8					
OHZ	EPN	06	30	28		0.3	2.59	88		3.9	
HJZ	EPN	06	30	28		0.0	2.61	62		3.7	3.4
	EP*			34		1.6					
	ES*			06		-0.7					
COB	EPN	06	31	14		3.7*	5.76	46		4.2	
DEC 28	H M S	16	22	28.1	39.78S	174.94E	130 KM	SE	1.9	AVG MAG	70/ 825
					0.06	0.07	14			4.7	
	+-										
CNZ	P	16	22	47.9		-1.6	0.75	39		5.0	
	E			58							
MNG	P	16	22	50.0		-0.6	0.93	154			
	I			51.0							
TRZ	EP	16	22	57.9		1.1	1.47	82		4.6	5.0
	ES		23	19.9		1.7					
HEL	EP	16	22	57.0		0.2	1.51	185	4.7	5.2	5.3

DEC 30		H	M	S	40.50S	171.86E	33 KM	SE	2.0	AVG MAG	70/ 828
		03	22	36.5	0.06	0.05	3				4.3
				+ 1.1			DIR	RES	DIST	AZ	W-A W P W S
COB	P	03	22	51.7				-1.8	0.89	132	
KAI	EP	03	23	09.5				1.6	2.05	189	4.5
	EP			12				-0.9			
	EP			27							
	ISN			33				1.4			
WEL	P	03	23	16.9				-1.4	2.34	111	4.2 4.7 4.7
	I			22							
	S			48.5				-0.3			
TNZ	EP	03	23	22.7					2.34	57	4.3
	EP			24							
	EP			06							
MNG	P	03	23	23.9				-1.6	2.76	94	4.6 4.6
	EP			24				3.6			
GNZ	P	03	23	31.0				-0.2	3.12	67	4.2 4.7
	EP			24							
	EP			24							
QPZ	P	03	23	29					3.25	170	3.9
	EP			36				2.7			
	EP			58				-2.7			
MJZ	PN	03	23	31.0				1.4	3.63	196	4.0 3.9
	SN			24				-1.4			
KRP	P	03	23	42.9				-1.1	3.84	49	3.8 3.8
	EP			24							
MSZ	EP	03	23	49.8				0.9	5.08	214	4.0

DEC 30		H	M	S	49.15S	164.07E	33 KM	SE	2.7	AVG MAG	70/ 829
		10	40	06.0	0.25	0.29	9				4.2
				+ 3.5			DIR	RES	DIST	AZ	W-A W P W S
WPZ	EP	10	41	03				-1.9	4.07	54	4.3 4.3
	EP			48				-2.2			
MNW	EP	10	41	09				-1.0	4.14	37	4.4 3.9
	S			55				3.0			
ROX	EP	10	42	24					5.12	46	4.1
MSZ	EP	10	41	20.0				-0.3	5.20	32	4.2
OMZ	EP	10	41	33				-0.8	6.20	51	
OIZ	EP	10	43	23				3.2	14.29	76	

DEC 31		H	M	S	39.15S	175.04E	157 KM	SE	1.6	AVG MAG	70/ 830
		16	02	01.6	0.05	0.05	9				3.9
				+ 1.1			DIR	RES	DIST	AZ	W-A W P W S
GNZ	P	16	02	24.7				1.2	0.40	97	
TNZ	EP	16	02	24				-0.0	0.52	266	3.4
	EP			37							
	EP			42				0.8			
KRP	P	16	02	30.0				0.1	1.29	18	3.2 3.2
	S			50.2				-1.4			
TRZ	EP	16	02	32.8				1.4	1.44	107	3.9 4.2
	S			57				2.6			
MNG	P	16	02	33.0			U	0.9	1.50	167	4.5 4.3
	EP			48							
	S			53.5				-1.9			
TUA	EP	16	02	34.2				0.3	1.68	79	3.8 4.0
	EP			49							
	S			56				-2.8			
WEL	P	16	02	40.0				0.8	2.14	186	4.1 4.3 4.6
	S			03				-1.1			
GNZ	EP	16	02	45				-0.1	2.38	79	4.1
COB	EP			03				0.5	2.62	222	3.7 3.8
QPZ	EP	16	03	13				-1.5	4.88	201	4.2
	EP			04				-5.7			

		H	M	S			97 KM	SE	1.3	AVG MAG	70/ 831	
DEC 31		16	58	29.7	41.25S	174.40E						4.0
		+ 0.6			0.03	0.04	7					
		H	M	S	DIR	RES	DIST	AZ	W-A	W P	W S	
WEL	IP	16	58	44.2	U	0.1	0.28	98	4.3			
	S			56.7		1.6						
MNG	IP	16	58	50.8		0.2	1.03	53		4.2		
	S			59 04.8		-1.3						
COB	P	16	58	54.3	D	0.3	1.27	277		4.6	4.8	
	S			59 10.3		-0.9						
TNZ	P	16	59	04.8		1.4	2.06	360		4.2	4.1	
	S			28.9		0.1						
CNZ	P	16	59	06.8		1.1	2.23	24		3.6	4.5	
	S			32		-0.5						
TRZ	ES	15	59	39		-0.4	2.51	48				4.0
KAI	E	16	59	18			2.57	239	3.9			
	ES			42		1.0						
GPZ	S	16	59	44		-1.9	2.77	207	4.0			
KRP	EP	16	59	23.5		1.2	3.43	15		3.6	3.6	
	S			17 00 00.0		-2.2						
MJZ	EP	16	59	31		1.0	3.99	225		3.2	3.5	
	S			17 00 15.0		-0.9						

FELT FIGHTING BAY (78)

FELT EARTHQUAKES

THE FELT REPORTING SYSTEM

In addition to its instrumental network, the Observatory has organised a network of about 400 voluntary observers covering the country, who describe the effects of any earthquakes they feel on a standard form. The Observatory also receives many unsolicited reports from meteorological observers, radio and newspaper reporters, postmasters and members of the general public. In the case of large earthquakes, or ones that present features of special interest, questionnaires are issued or the district visited.

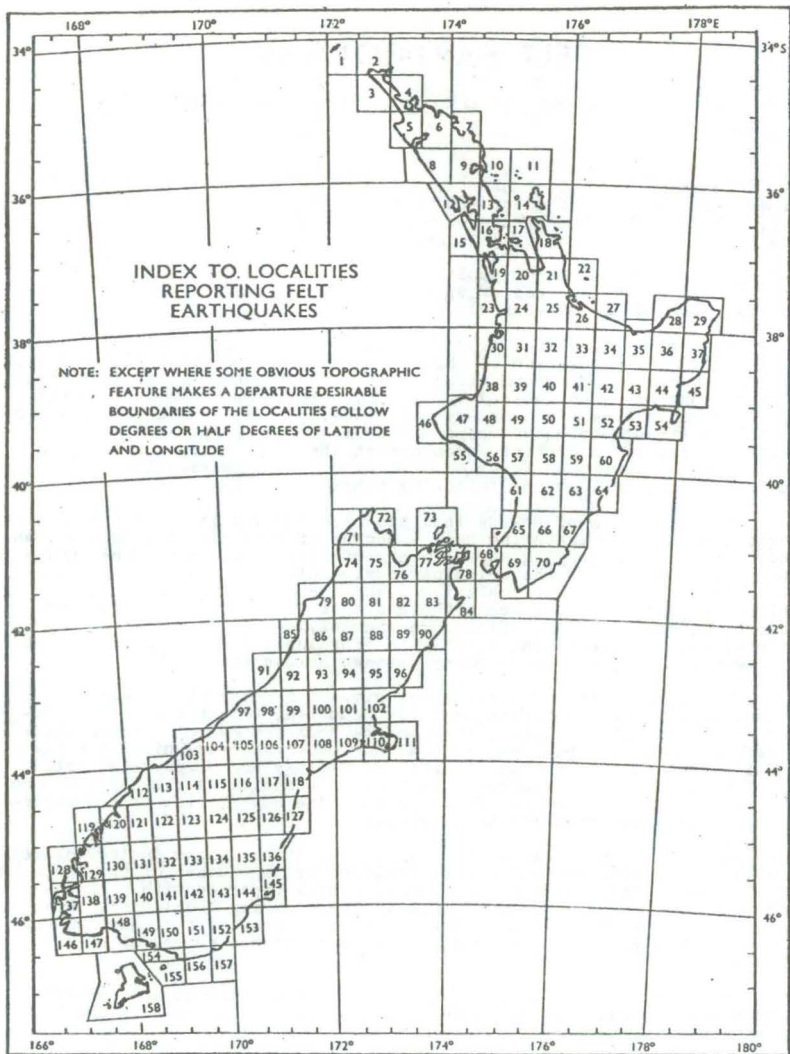
Several difficulties arise in assessing the distribution of felt intensity. The population of the country is very unevenly distributed, and the observer's personal circumstances may prevent him from feeling a shock that has been noticed by others. Similar shortcomings affect lists of earthquakes felt at any one place. It may reasonably be assumed that a strong earthquake reported from one township was felt in another a few miles distant, even though the Observatory has received no report. However, an index of this kind must summarise the data and not the deductions, so the following scheme is used:

The land area of New Zealand has been divided into numbered rectangles, with sides measuring half a degree of latitude or longitude, as shown on the accompanying map. Each rectangle is given a number and a name, usually that of the principal centre of population within it. These areas are termed 'localities', and the names are listed on the following page. In most areas there are at least two well-separated reporters, but there are still some sparsely populated parts of the country without observers, notably in Fiordland, the mountainous parts of Southland, and on the boundary between Nelson and Marlborough.

The first section of the index gives the names of the actual places from which each earthquake was reported, together with the number of the locality. Intensities on the Modified Mercalli scale (N.Z. version, 1965) have been assigned at the Observatory. This intensity scale is set out in the N.Z. Journal of Geology and Geophysics, Vol. 9, pp. 122-9, 1966. A ? indicates that no information is available beyond the fact that the shock was felt, or that the description is too imprecise to allow an intensity to be assigned.

In the second section, localities reporting shocks during the year are listed in alphabetical order, followed by the number of the shock in the list of origins and the maximum intensity reported within that locality. By comparing the reports in neighbouring localities, it is possible to form a truer estimate of the incidence of felt earthquakes than would be possible from a simple list of places reporting each shock.

Finally, reported shocks that cannot be confirmed, and reports from places in the south-west Pacific not collected elsewhere are listed.



STANDARD REPORTING LOCALITIES

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

PLACES REPORTING FELT EARTHQUAKES

70/021	Jan	08d MM5 MM4	17h 12m Cape Runaway, Te Araroa (29); Opotiki (35); Thornton, Whakatane (27); Raukokore (28); East Cape (29); Galatea (34); Waimana (35); Tokomaru Bay, Tolaga Bay (37); Tiniroto (44); Gisborne (45); Waiwhare (51); Napier, Patoka (52); Kotemaori (53); Portland I. (54); Ohakune, Wanganui (57); Table Flat, Taoroa (58); Tikokino (59); Hastings, Havelock North, Mt Vernon, Taradale, Waipawa (60); Dannevirke, Tataramoia (63); Aramoana (64); Mangahao, Paraparaumu Beach (65); Eketahuna (66); Ovingdean (67); Karori, Tawa, York Bay (68); Ponatahi (70); Collingwood (72); Manaroa, Ocean Bay (78); Gebbies Pass, Okuti Valley (110);
		MM3	Raoul Is.; Ohakune (49); Moawhango (58); Lower Hutt (68); Mangles Valley (80);
		MM2 ?	Picton (78); Te Puke (26); Kawerau (34); Waingarara (35); Okaihau, Tuamoe (36); Ngapuketuru (42); Waerenga-a-Hika (44); Maungataniwha (52); Waihua Valley (53); Portland I. (54); Woodville (62); Glebelands, Porangahau (64); Motua Estate (65); Hillwood (66); Purunui (66); Westport (79).
70/022	Jan	09d ?	06h 44m Okaihau (36).
70/051	Jan	20d MM5 MM3 ?	07h 19m Raoul I.; Wainuiomata (68); Maungataniwha, Napier (52); Wellington (68); Christchurch (110).
70/054	Jan	21d MM3	00h 49m Kelburn, Wellington (68).
70/055	Jan	22d MM4	19h 25m Rotorua (33).
70/061	Jan	25d MM4	08h 03m Maketu (26).
70/070	Jan	29d MM3	16h 55m Gisborne (45).
70/078	Feb	01d MM4	14h 36m Hanmer Springs (95).
70/082	Feb	03d MM4 ?	09h 24m Westport (79); Reefton (86).
70/087	Feb	05d MM4	06h 42m Murchison (80).
70/100	Feb	10d MM3	12h 14m Tadmor (75); Murchison (80).

70/103	Feb	11d MM4	07h 33m Opiki (61).
70/107	Feb	13d MM3	10h 32m Westport (79).
70/108	Feb	14d 'sharp'	04h 06m Paenga (80).
70/110	Feb	14d MM4	09h 20m Omoana, Purangi (48); Waitotara, Waitahinga (56); Okoia (57); Opiki (61); Mangahao, Palmerston North (62); Paraparaumu Beach (65); Masterton (66); Highbury, Karori, Lower Hutt, Tawa, Wellington (68); Ponatahi (70);
		MM3	Ohakune (49); Ngamatapouri (56); Ohakune, Wanganui (57); Johnsonville, Kelburn, York Bay (68);
		?	Kaipaoere (57); Ohakea (61); Otaki, Waikanae (65); Purunui (66), Kelburn, Porirua (68).
70/124	Feb	20d MM4 ?	04h 24m Westport (79); Mangles Valley (80); Hokitika (91).
70/127	Feb	21d MM3	08h 18m Waikawa Beach (65); Ponatahi (70).
70/130	Feb	22d MM4	14h 24m Rotorua (33).
70/131	Feb	22d MM4	20h 49m Murchison (80).
70/137	Feb	28d MM4	13h 51m Opotiki (35).
70/145	Mar	03d MM4 MM3	16h 35m Ohope Beach (28); Opotiki (35).
70/146	Mar	05d MM4	16h 55m Allandale (110).
70/147	Mar	06d MM3	15h 11m Te Teko (34).
70/148	Mar	06d MM3	15h 36m Te Teko (34).
70/153	Mar	12d MM4	12h 45m Waiwhare (51); Patoka (52); Kotemaori (53); Wanganui (57); Dannevirke (63);
		'severe'	Maungataniwha (52).
70/155	Mar	13d MM3 ?	20h 16m Westport (79); Kaniere (92).
70/156	Mar	14d ?	05h 02m Bainham (72).
70/157	Mar	14d MM4	14h 17m Maungataniwha (52).

70/179	Mar	30d MM3	13h 00m Ohakune (49).
70/180	Mar	30d MM4 MM3 ?	20h 40m Awarua (154); Nugget Point (152); Quarry Hills (156); Dunedin (144).
70/185	Apr	03d MM4 ?	13h 23m Waipawa (60); Maungataniwha (52).
70/186	Apr	04d MM4	08h 39m Warea (46).
70/193	Apr	10d MM2	10h 46m Westport (79).
70/204	Apr	17d MM4	08h 41m Mangles Valley, Murchison (80).
70/206	Apr	17d MM4	09h 45m Murchison (80).
70/210	Apr	19d MM4	17h 08m Tokaanu (40).
70/212	Apr	21d MM3	04h 44m Rotorua (33).
70/214	Apr	21d MM3	08h 22m Rotorua (33).
70/215	Apr	21d MM3	08h 49m Rotorua (33).
70/219	Apr	22d MM4	08h 07m Westport (79).
70/221	Apr	22d MM4 MM3	18h 32m Wanganui (57); Waikanae (65).
70/224	Apr	24d ?	09h 42m Whangamomona (48).
70/227	Apr	24d MM3	19h 42m Ohope Beach (28).
70/231	Apr	25d MM4	16h 50m Wanganui (57).
70/239	Apr	29d MM4 MM3	20h 48m Kapiti I. (65); Wellington (68).
70/242	May	01d MM4 MM3 ?	15h 24m Mangles Valley (80); Charwell Forks (89); Cheviot (96); Allandale (110); Okuti Valley (110); Hokitika (91); Mason's Flat (95); Middlehurst (82); Kaikoura (90).

70/243	May	02d 'sharp'	01h 05m Whangamomona (48).
70/252	May	09d MM3	07h 33m Taradale (60).
70/253	May	11d MM4 MM3 ?	08h 31m Westport (79); Mangles Valley, Murchison (80); Westport (79); Grey Robinson River (87).
70/274	May	23d MM3	21h 08m Alexandra (133).
70/291	May	28d 'slight'	06h 01m Maungataniwha (52).
70/294	May	29d MM4 ?	01h 34m Kotemaori (53); Maungataniwha (52).
70/299	May	29d ?	22h 20m Maungataniwha (52).
70/304	Jun	01d MM3	09h 48m Cobb Dam (75).
70/306	Jun	01d MM4	23h 52m 10s Wairakei (41).
70/307	Jun	01d MM4	23h 52m 40s Wairakei (41).
70/308	Jun	01d MM4	23h 52m 50s Wairakei (41).
70/309	Jun	01d MM4	23h 54m Wairakei (41).
70/310	Jun	02d MM4	22h 44m Patoka (52).
70/312	Jun	04d MM4	09h 54m Murchison (80).
70/313	Jun	04d MM4	10h 02m Murchison (80).
70/314	Jun	04d MM4 MM3	13h 05m Cobb River (75); Harakeke (76); Nelson (76).
70/316	Jun	05d ?	09h 29m Manapouri (139).
70/317	Jun	05d MM4 MM3 ?	12h 42m Wellington (68); Wanganui (57); Kelburn, York Bay (68); Tawa (68).
70/318	Jun	05d MM4	17h 06m Opotiki (35); Gisborne (45); Waipawa (60); Dannevirke (63);

		MM3	Gisborne (45);
		'severe'	Maungataniwha (52);
		'slight'	Gisborne (45).
70/322	Jun	08d	19h 15m
		MM4	Purangi (48);
		'slight'	Waiouru (50);
		?	Mt Egmont, New Plymouth, Waitara (47).
70/324	Jun	10d	11h 00m
		MM3	Westport (79).
70/327	Jun	12d	14h 50m
		MM4	Arthur's Point (122); Manapouri (139);
			Quarry Hills (156);
		MM3-4	Queenstown (132);
		MM3	Haast (103); Jackson's Bay (113); Te Anau
			Downs (130);
		'sharp'	Wairakei Blackmount (139);
		'slight'	Queenstown (132); Manapouri (139);
			Invercargill (149);
		?	Monowai (139); Dunedin (144, 145).
70/328	Jun	13d	20h 38m
		MM4	Highbury, Lyall Bay (68); Manaroa, Ocean
			Bay, The Brothers (78);
		MM3	Lower Hutt, York Bay (68).
70/331	Jun	15d	05h 47m
		MM4	Purangi (48).
70/332	Jun	15d	16h 29m
		MM3	Cobb Dam (75).
70/336	Jun	17d	03h 40m
		MM5	Hastings (60);
		MM4	Napier, Patoka (52); Kotemaori (53);
			Tikokino (59); Waipawa (60);
		?	Hinemaiaia Dam (41).
70/337	Jun	17d	06h 59m
		?	Kaipare (57); Waitarere (65).
70/338	Jun	17d	07h 34m
		?	Waitarere (65).
70/342	Jun	19d	01h 17m
		'light'	Westport (79).
70/346	Jun	25d	11h 08m
		MM4	Paraparaumu Beach (65); Ponatahi (70).
70/348	Jun	28d	16h 28m
		?	Kaipare, Wanganui (57).
70/356	Jun	30d	20h 47m
		MM3	Patoka (52).
70/358	Jul	01d	09h 25m
		MM3	Patoka (52).
70/363	Jul	02d	08h 10m
		?	Cobb Dam (75).

70/366	Jul	03d MM5 'sharp'	03h 01m Purangi (48); Whangamomona (48).
70/371	Jul	03d ?	14h 46m Cobb Dam (75).
70/381	Jul	07d MM4	19h 31m Wairakei (41).
70/382	Jul	10d MM3	09h 23m Uruti (38).
70/390	Jul	13d MM3	00h 48m Manaoa (78).
70/391	Jul	13d 'sharp'	15h 27m Whangamomona (48).
70/400	Jul	19d MM4 ?	17h 04m York Bay (68); Maungataniwha (52).
70/406	Jul	23d MM4 MM3 ?	00h 07m Murchison (80); Mangles Valley (80); Westport (79).
70/407	Jul	23d ?	03h 25m Opunake, Rahotu (46).
70/409	Jul	23d MM3	08h 16m Maketu (26).
70/412	Jul	24d ?	12h 29m Maungataniwha (52).
70/413	Jul	25d ?	07h 54m Opunake (46).
70/414	Jul	25d ?	07h 59m Opunake (46).
70/417	Jul	25d MM4 MM3 'sharp' 'slight'	21h 55m Kapiti I., Paraparaumu Beach (65); Wellington (68); Manaroa (78); Lower Hutt, Lyall Bay, Tawa (68); Karori West (68); Kelburn (68).
70/421	Jul	26d MM4	12h 02m Te Kaha (28); Cape Runaway (29).
70/424	Jul	27d MM3	05h 09m Hokio Beach (65).
70/427	Jul	27d MM4	12h 31m Whakatane (27); Ohope Beach, Omaio (28); Cape Runaway, Te Araroa (29); Galatea (34); Opotiki, Waimana (35); Motu, Otoko, Whatatutu (36); Tokomaru Bay, Waipiro Bay (37); Te Whaiti (42); Ardkeen (43); Gisborne (45); Wairoa (53); Paraparaumu Beach (65);

MM3 Raukokore (28); Kaingaroa Forest, Kawerau (34); Tolaga Bay (37); Ormond (44); Gisborne (45).
 ? Edgecumbe (27); Oporoia, Waingarara (35); Tututu (36); Minginui Forest (42).

Reports that the shock was not felt were received from places in the following localities: 41, 51, 52, 54, 58, 59, and 60.

70/428	Jul	27d	14h 56m	
		?	Rata Peaks (107).	
70/429	Jul	27d	18h 37m	
		MM4	Waipawa, Waipukurau (60).	
70/431	Jul	28d	14h 09m	
		?	Whatatutu (36).	
70/437	Jul	30d	19h 45m	
		MM3	Raukokore (28);	
		?	Te Kaha (28).	
70/438	Jul	31d	00h 15m	
		MM4	Jackson's Bay (113).	
70/447	Aug	04d	20h 34m	
		MM4	Rotorua (33).	
70/455	Aug	12d	06h 16m	
		?	Mercury Bay (18).	
70/458	Aug	12d	15h 33m	
		MM4	Cobb Dam (75).	
70/462	Aug	13d	00h 03m	
		MM7	Thames (21);	
		MM4	Coromandel (18);	
		MM3	Tairua (18);	
		?	Mercury Bay (18).	
70/464	Aug	13d	22h 48m	
		MM4	Ross (91); Arthur's Pass (93); Lake Coleridge (100);	
		'sharp'	Hokitika (91);	
		?	Westport (79); Greymouth (85);	
			Christchurch (110).	
70/469	Aug	15d	05h 47m	
		?	Coromandel (18).	
70/470	Aug	15d	10h 46m	
		MM4	Coromandel (18);	
		?	Mercury Bay (18).	
70/471	Aug	15d	18h 10m	
		MM4	Coromandel (18);	
		MM3	Onewhero (19);	
		?	Mercury Bay (18).	
70/473	Aug	16d	15h 46m	
		MM4	Whakatane (27); Opotiki (35);	
		MM3	Omaio (28);	
		?	Waingarara (35).	

70/474	Aug	16d MM4 ?	16h 04m Coromandel (18); Mercury Bay (18).
70/475	Aug	16d MM4	23h 07m Coromandel, Cuvier I. (18); Moumoukai (20).
70/478	Aug	17d MM4 ?	13h 37m Coromandel (18); Mercury Bay (18).
70/486	Aug	19d MM4 MM3 ?	15h 28m Matingaraki (17); Coromandel (18); Tairua (18); Mercury Bay (18); Thames (21).
70/488	Aug	21d MM4	09h 41m Coromandel (18).
70/489	Aug	21d MM4	17h 35m Coromandel (18).
70/490	Aug	21d MM4	20h 45m Waiomu (21).
70/491	Aug	22d MM4	02h 15m Waiomu (21).
70/494	Aug	22d MM3	14h 04m Cobb Dam (75).
70/495	Aug	22d MM2	15h 30m Cobb Dam (75).
70/496	Aug	22d MM4	18h 08m Waiomu (21).
70/497	Aug	22d MM4	18h 22m Waiomu (21).
70/498	Aug	22d 'moderate'	22h 14m Berlins (79)
70/500	Aug	23d MM4	11h 08m Waiomu (21).
70/501	Aug	24d MM3 ?	06h 05m Gisborne (45); Wairenga-a-hika (44).
70/502	Aug	24d MM4	07h 42m Coromandel (18); Waiomu (21).
70/503	Aug	24d MM5 MM4	14h 07m Waiomu (21); Coromandel (18).
70/504	Aug	25d MM4	16h 07m Waiomu (21).
70/506	Aug	26d MM3	15h 28m Waiomu (21).

70/507	Aug	26d MM5 MM4 ?	17h 45m Waiomu (21); Coromandel, Cuvier I., Tairua (18); Onewhero (19); Hoe-o-tainui (20); Grey Lynn, North Shore, Remuera (16); Mercury Bay (18); Te Ranga (26); Oratia (16).
	Not Felt:		
70/508	Aug	26d MM4 'heard'	17h 48m Onewhero (19); Waiomu (21); Cuvier I. (19).
70/509	Aug	26d ?	20h 04m Hokio Beach (65).
70/511	Aug	27d MM7 MM5 MM4 'slight' ?	16h 04m Puru, Thames (21); Cuvier I., Waiomu (21); Matingarahi (17); Coromandel, Tairua (18); Hoe-o-tainui (20); Walton (25); Auckland (16); Mercury Bay (18); Tauranga, Te Ranga (26).
70/515	Aug	28d 'not heavy'	23h 25m Tairua (18).
70/520	Aug	31d MM4 ?	22h 11m Lumsden (140); Te Anau Downs (130).
70/522	Sep	01d MM4	11h 50m Coromandel (18); Waiomu (21).
70/523	Sep	02d MM4	03h 52m Waiomu (21).
70/527	Sep	02d MM3	17h 15m Lower Hutt (68).
70/529	Sep	02d MM4	20h 00m Coromandel (18).
70/531	Sep	02d MM4	23h 01m Waiomui (21).
70/533	Sep	03d MM4	17h 08m Lake Coleridge (100).
70/536	Sep	05d MM4 'very sharp jolt' ?	05h 36m Lumsden (140); Riverton (149); Te Anau Downs (130).
70/539	Sep	05d MM4	15h 33m Coromandel (18); Waihi Beach, Waiomu (21).
70/542	Sep	05d MM3	19h 25m Coromandel (18).
70/543	Sep	05d MM4	20h 27m Waiomu (21).

70/546	Sep	07d MM5 MM4	00h 46m Puhoi (18); Coromandel (18).
70/547	Sep	07d MM3	00h 47m Puhoi (18).
70/549	Sep	07d MM4	05h 49m Puhoi (18).
70/550	Sep	07d MM4	13h 29m Broadlands (41).
70/551	Sep	07d MM4	17h 12m Puhoi (18).
70/552	Sep	07d MM5	22h 25m Puhoi (18).
70/554	Sep	08d MM4	09h 32m Puhoi (18).
70/555	Sep	08d MM5 MM4	09h 41m Puhoi (18); Coromandel (18).
70/556	Sep	08d MM4	09h 43m Puhoi (18).
70/557	Sep	08d MM4	10h 41m Puhoi (18).
70/558	Sep	08d MM4	13h 34m Puhoi (18).
70/559	Sep	08d 'small'	15h 43m Puhoi (18).
70/560	Sep	08d 'small'	16h 01m Puhoi (18).
70/561	Sep	08d MM4	18h 02m Coromandel, Puhoi (18).
70/562	Sep	08d 'small'	18h 56m Puhoi (18).
70/563	Sep	08d 'small'	19h 00m Puhoi (18).
70/564	Sep	08d MM4	19h 41m Puhoi (18).
70/565	Sep	09d MM5	10h 18m Puhoi (18).
70/566	Sep	09d 'small'	15h 46m Puhoi (18).
70/569	Sep	10d MM4	17h 32m East Cape (29).
70/574	Sep	12d MM4	18h 25m Westport (79); Mangles Valley, Murchison (80); 'double jolt' Paturau (80).

70/575	Sep	12d ?	18h 49m Puhoi (18).
70/582	Sep	15d MM4	03h 41m Puhoi (18).
70/584	Sep	15d MM4 MM3	19h 27m Haast (103); Wanaka (123); Mt Aspiring (113).
70/594	Sep	19d MM4	18h 23m Puhoi (18).
70/595	Sep	19d MM5	19h 23m Puhoi (18).
70/599	Sep	21d MM2 ?	08h 08m Highbury (68); Waitarere (65); Wellington (68).
70/600	Sep	21d MM4	08h 38m Coromandel (18).
70/602	Sep	21d MM4	11h 03m Puhoi (18).
70/603	Sep	21d MM3	11h 07m Puhoi (18).
70/604	Sep	21d MM3	11h 50m Gisborne (45).
70/605	Sep	21d MM4	13h 09m Fabian's Valley (77).
70/609	Sep	24d 'strong'	23h 25m Wairakei (41).
70/611	Sep	25d MM4 MM3 MM2 ?	02h 11m Napier, Patoka (52); Waipawa (60); Lower Hutt (68); Moawhango (58); Kotemaori (53); Onga Onga (59); Hastings (60).
70/615	Sep	27d MM3	02h 09m Highbury (68).
70/616	Sep	27d 'sharp'	11h 17m Puysegur Point (146).
70/618	Sep	28d MM4 MM3	19h 01m Akaroa Head (111); Allandale (111).
<p>Three abnormally large waves observed at the mouth of the Waiho River (97) at 22h 30m appear too late to have been connected with this earthquake. Seas were high at the time.</p>			
70/624	Oct	02d MM3	10h 00m Gisborne (45).

70/628	Oct	05d MM4	05h 37m Taupo (41).
70/629	Oct	05d MM4	08h 32m Rotorua (33).
70/630	Oct	05d MM4	23h 20m Taurewa Forest (50).
70/631	Oct	05d MM4	23h 50m Tokaanu (40).
70/632	Oct	06d MM4	00h 51m Tokaanu (40).
70/633	Oct	06d MM4	00h 55m Tokaanu (40).
70/634	Oct	06d MM4 ?	02h 42m Tokaanu (40); Taurewa Forest (50); Hinemaiaia Dam (41).
70/636	Oct	06d MM4	03h 06m Taurewa Forest (50).
70/637	Oct	06d MM3	03h 37m Tokaanu (40).
70/638	Oct	06d MM4 ?	03h 38m Tokaanu (40); Hinemaiaia Dam (41).
70/639	Oct	06d MM4	04h 43m Kotemaori (53).
70/640	Oct	06d MM3	09h 11m Tokaanu (40).
70/641	Oct	06d MM4	15h 35m Tokaanu (40).
70/642	Oct	06d MM4	15h 56m Tokaanu (40).
70/646	Oct	06d MM4	23h 40m Tokaanu (40).
70/647	Oct	07d MM4	00h 12m Tokaanu (40).
70/648	Oct	07d MM4	00h 58m Tokaanu (40).
70/649	Oct	07d MM4	01h 06m Tokaanu (40).
70/650	Oct	07d MM4	01h 08m Tokaanu (40).
70/656	Oct	08d MM3 ?	19h 54m Wanganui (57); Kapiti Island (65); Hokio Beach (65).

70/665	Oct	11d MM4 MM3	09h 48m Wellington (68); Rai Valley (77); Manaroa (78).
70/668	Oct	12d MM4 MM3	18h 04m Aramoana (64); Pa Valley (66).
70/672	Oct	14d ?	08h 32m Wellington (68).
70/677	Oct	16d MM4 ?	07h 20m Wadestown (68); Waitarere (65).
70/678	Oct	16d MM4	18h 07m Westport (79).
70/690	Oct	21d 'slight'	07h 52m Waingarara (35).
70/691	Oct	21d MM4 ?	19h 00m Wanganui (57); Kapiti Island (65); Kaipaore (57); Waitarere (65).
70/696	Oct	26d ?	02h 30m Waitarere (65); Masterton (66); Karori (68).
70/706	Nov	02 MM4	02h 58m Wairakei (41).
70/707	Nov	02d MM4	22h 19m Wairakei (41).
70/709	Nov	03d MM4	10h 10m Westport (79).
70/714	Nov	06d MM5 ?	00h 02m Okoiā (57); Wanganui (57).
70/715	Nov	06d 'sharp'	00h 33m Oratonui (37).
70/732	Nov	13d MM3	14h 13m Masterton (66).
70/735	Nov	15d MM4 MM3	11h 17m Wanganui (57); Kai Iwi (56).
70/743	Nov	22 MM4	05h 37m Rotorua (33).
70/748	Nov	23 MM4 ?	13h 37m Hunter (127); Timaru (118).
70/749	Nov	23 MM3 ?	13h 52m Oamaru (136); Timaru (118).
70/750	Nov	23d MM4	22h 30m Patoka (52).

70/754	Nov	24d MM4	19h 01m Murchison (80).
70/759	Nov	26d MM4	09h 07m Murchison (80).
70/764	Nov	28d MM4 MM3	03h 44m Kilbirnie, Manor Park (68); Paraparaumu Beach (65).
70/765	Nov	28d MM4	06h 25m Murchison (80).
70/776	Dec	03d MM4	10h 08m Glenorchy (121); Wanaka (123); Queenstown (132); Lumsden (140); 'slight' ? Manapouri (139); Arthur's Point (122); Allerton (123); Te Anau Downs (139).
70/778	Dec	05d MM4	00h 54m Taupo (41).
70/780	Dec	05d MM3 'slight' ?	06h 02m Paraparaumu Beach (65); Lower Hutt (68); Wanganui (57); Masterton (66); Wellington (68).
70/781	Dec	05d MM3	07h 18m Lower Hutt (68).
70/784	Dec	07d MM4 MM3 ?	17h 44m Lake Manapouri (138); Lumsden (140); Riverton (149); Kingston (132); Miller's Flat (136); Manapouri (139).
70/785	Dec	08d MM4	09h 03m Riverton (149).
70/796	Dec	13d 'mild and short' ?	23h 54m Fighting Bay (78); Eastbourne, Lower Hutt (68).
70/799	Dec	15d MM1 'slight' ?	09h 12m Lower Hutt (68) Kelburn (68); Karori, Naenae, Paremata, Silverstream, Tawa (68); Upper Hutt (69); Wairarapa (70).
70/804	Dec	16d MM4 MM3 'slight' ?	11h 11m Brooklyn (68); Havelock (77); Ocean Bay (78); Blenheim (83). Lower Hutt, Lyall Bay (68); Grovetown (77); Karori, Lower Hutt, Stokes Valley (68).
70/810	Dec	18d MM4	04h 18m Dawson's Falls (47); Ohakune (49); Wanganui (57); Hunterville, Table Flat, Taihape (58); Dannevirke (63); Kapiti Island, Paraparaumu Beach (65); Island Bay, Kelburn, Tinakori, Wellington (68); Waiorongomai (69); Ocean Bay (78);

		MM3	Hawera (55); Tikokino (59); Taradale (60); Petone, Wellington (68); Mataroa (58); 'sharp' 'slight' ?	Waiouru (50); Ohakea (61); Ohakune (49); Kaipore (57); Taihape (58); Ohakea (61); Feilding, Palmerston North, Wharite (62); Dannevirke (63); Moutua (65); Hillwood (66); Karori, Kelburn, Khandallah, Stokes Valley (68); Grovetown (77).
70/811	Dec	18d MM4 MM3	05h 35m Ohakune (49); Marton (61); Dannevirke (63); Hawera (55); Hunterville (58); Paraparaumu Beach (65); ?	New Plymouth (47); Dannevirke, Waitahora (63); Hillwood (66); Kelburn (68).
70/812	Dec	18d MM3	06h 26m Table Flat (58).	
70/813	Dec	18 MM4	10h 13m Rotorua (33).	
70/814	Dec	18 MM4	22h 09m Moawhango (58).	
70/817	Dec	20 MM4	02h 37m Edgecumbe (27).	
70/823	Dec	27 ?	23h 39m Wharite (62).	
70/825	Dec	28d MM4	16h 22m Ohakune (49); Wanganui East (57); Moawhango (58); Dannevirke (63).	
70/831	Dec	31d 'moderate'	16h 58m Fighting Bay (78).	

EARTHQUAKES FELT IN STANDARD LOCALITIES

Localities within which earthquakes were felt in 1970 are listed below in alphabetical order. Each name is preceded by its number on the reference map and followed by the reference numbers of the shocks felt and (in brackets), the maximum intensities reported within the district covered by the locality name.

The instrumental magnitude may be found from the list of origins, and the places that actually reported the shock from the table of "Places Reporting Felt Earthquakes".

111	Akaroa	618 (4).
133	Alexandra	274 (3).
122	Arrowtown	327 (4), 776 (?).
93	Arthur's Pass	464 (4).

16	Auckland	507 (?)	511 (?)		
83	Awatere	804 (4)			
152	Balclutha	180 (3)			
77	Blenheim	605 (4)	665 (4)	804 (4)	810 (?)
154	Bluff	180 (4)			
61	Bulls	103 (4)	110 (4)	810 (?)	811 (4)
46	Cape Egmont	186 (4)	407 (?)	413 (?)	414 (?)
67	Castlepoint	21 (4)			
50	Chateau	322 (?), 810 (?)	630 (4)	634 (4)	636 (4)
96	Cheviot	242 (4)			
110	Christchurch	21 (4), 464 (?)	51 (?)	146 (4)	242 (4)
89	Clarence	242 (4)			
18	Coromandel	455 (?), 471 (4), 478 (4), 503 (4), 529 (4), 547 (3), 554 (4), 558 (4), 562 (?), 566 (?), 595 (5)	462 (4), 474 (4), 488 (4), 507 (4), 539 (4), 549 (4), 555 (5), 559 (?), 563 (?), 575 (?), 500 (4)	469 (?), 475 (4), 489 (4), 511 (4), 542 (3), 551 (4), 556 (4), 560 (?), 564 (4), 582 (4), 602 (4)	470 (4), 486 (4), 502 (4), 515 (?), 546 (5), 552 (5), 557 (4), 561 (4), 565 (5), 594 (4), 603 (3)
95	Culverden	78 (4)	242 (3)		
63	Dannevirke	21 (4), 811 (4)	153 (4), 825 (4)	318 (4)	810 (4)
145	Dunedin	318 (?)			
29	East Cape	180 21 (5)	421 (4)	427 (4)	569 (4)
69	Featherston	799 (?)	810 (4)		
45	Gisborne	21 (4), 501 (3)	70 (3), 604 (3)	318 (4), 624 (3)	427 (4)
121	Glenorchy	776 (4)			
85	Greymouth	464 (?)			
103	Haast	327 (3)	584 (4)		
60	Hastings	21 (4), 336 (5)	185 (4), 429 (4)	252 (3), 611 (4)	318 (4), 810 (3)
55	Hawera	810 (3)	811 (3)		

91	Hokitika	124 (?),	242 (3),	464 (4).
149	Invercargill	318 (?),	536 (?),	784 (3), 785 (4).
113	Jackson's Bay	327 (3),	438 (4),	584 (3).
90	Kaikoura	242 (?).		
51	Kaweka	21 (4),	153 (4),	159 (4).
132	Kingston	318 (?),	327 (3-4),	776 (4), 784 (?).
92	Kumara	155 (?),	165 (?).	
100	Lake Coleridge	464 (4),	533 (4).	
54	Mahia	21 (4).		
70	Martinborough	21 (4),	110 (4),	127 (3), 346 (4),
87	Maruia	253 (?).		
66	Masterton	21 (4), 732 (3),	110 (4), 780 (?),	668 (3), 810 (?), 696 (?), 811 (?).
25	Matamata	511 (4).		
20	Mercer	475 (4),	507 (4),	511 (4).
38	Mokau	382 (3).		
139	Monowai	316 (?), 784 (?).	318 (?),	327 (4), 776 (?),
140	Mossburn	520 (4),	536 (4),	776 (4), 784 (4).
36	Motu	21 (?),	427 (4),	431 (?).
75	Motueka	100 (3), 363 (?), 495 (2).	304 (3), 371 (?),	314 (4), 458 (4), 332 (3), 494 (3).
107	Mount Somers	428 (?).		
80	Murchison	21 (3), 124 (4), 204 (4), 312 (4), 754 (4),	87 (4), 131 (4), 206 (4), 313 (4), 759 (4),	100 (3), 163 (4), 242 (4), 406 (4), 765 (4), 108 (?), 176 (4), 253 (4), 574 (4),
34	Murupara	21 (4),	147 (3),	148 (3), 427 (4).
52	Napier	21 (4), 161 (?), 294 (?), 336 (4), 412 (?),	51 (?), 168 (?), 299 (?), 356 (3), 611 (4),	153 (4), 185 (?), 310 (4), 358 (3), 750 (4), 157 (4), 291 (?), 318 (?), 400 (?),
76	Nelson	314 (4).		
47	New Plymouth	322 (?),	810 (4),	811 (?).
13	Jamaru	749 (3),	784 (?).	

49	Ohakune	21 (3), 811 (4),	110 (3), 825 (4).	179 (3),	810 (4),
35	Opotiki	21 (5), 318 (4),	22 (?), 427 (4),	137 (4), 473 (4),	145 (3), 690 (?).
65	Otaki	21 (4), 221 (3), 346 (4), 509 (?), 691 (4), 810 (4),	110 (4), 239 (4), 417 (4), 599 (?), 696 (?), 811 (3).	127 (3), 337 (?), 424 (3), 656 (3), 764 (3),	160 (3), 338 (?), 427 (4), 677 (?), 780 (3),
144	Outram	180 (?),	318 (?).		
62	Palmerston North	21 (?),	110 (4),	810 (?),	823 (?).
78	Picton	21 (4), 665 (3), 831 (?).	328 (4), 796 (?),	390 (3), 804 (4),	417 (4), 810 (4),
138	Pillans Pass	784 (4).			
64	Porangahau	21 (4),	668 (4).		
19	Pukekohe	471 (3),	507 (4),	508 (4).	
146	Puysegur Point	616 (?).			
86	Reefton	82 (?).			
33	Rotorua	55 (4), 215 (3), 813 (4).	130 (4), 447 (4),	212 (3), 629 (4),	214 (3), 743 (4),
59	Ruahine	21 (4),	336 (4),	611 (?),	810 (3).
156	Tahakora	180 (3),	327 (4).		
58	Taihape	21 (4), 812 (3),	611 (2), 814 (4),	810 (4), 825 (4).	811 (3),
72	Takaka	21 (4),	156 (?).		
41	Taupo	306 (4), 336 (?), 628 (4), 707 (4),	307 (4), 381 (4), 634 (?), 778 (4).	308 (4), 550 (4), 638 (?),	309 (4), 609 (?), 706 (4),
26	Tauranga	21 (?), 511 (?).	61 (4),	409 (3),	507 (?),
130	Te Anau	327 (3),	520 (?),	536 (?).	
28	Te Kaha	21 (4), 427 (4),	145 (4), 437 (3).	227 (3),	421 (4),
42	Te Whaiti	21 (?),	427 (4).		
21	Thames	462 (7), 496 (4), 503 (5), 508 (4), 539 (4),	486 (?), 497 (4), 504 (4), 511 (7), 543 (4).	490 (4), 500 (4), 506 (3), 523 (4),	491 (4), 502 (4), 507 (5), 531 (4),

118	Timaru	748 (?),	749 (?) .		
40	Tokaanu	210 (4), 634 (4), 641 (4), 648 (4),	631 (4), 637 (3), 642 (4), 649 (4),	632 (4), 638 (4), 646 (4), 650 (4) .	633 (4), 640 (3), 647 (4),
37	Tolaga Bay	21 (4),	427 (4),	715 (?) .	
43	Tuai	427 (4) .			
17	Waiheke	486 (4),	511 (4) .		
127	Waimate	748 (4) .			
82	Wairau	242 (?) .			
53	Wairoa	21 (4), 427 (4),	153 (4), 611 (?),	294 (4), 639 (4) .	336 (4),
123	Wanaka	584 (4),	776 (4) .		
57	Wanganui	21 (4), 231 (4), 656 (3), 780 (?),	110 (4), 317 (3), 691 (4), 810 (4),	153 (4), 337 (?), 714 (5), 825 (4) .	221 (4), 348 (?), 735 (4),
56	Waverley	110 (4),	735 (3) .		
68	Wellington	21 (4), 167 (3), 400 (4), 611 (3), 677 (4), 781 (3), 810 (4),	51 (3), 239 (3), 417 (4), 615 (3), 696 (?), 796 (?), 811 (?) .	54 (3), 317 (4), 527 (3), 665 (4), 764 (4), 799 (?),	110 (4), 328 (4), 599 (2), 672 (?), 780 (3), 804 (4),
79	Westport	21 (?), 155 (3), 219 (4), 406 (?), 678 (4),	82 (4), 163 (3), 253 (4), 464 (?), 709 (4) .	107 (3), 165 (5), 324 (3), 498 (?),	124 (4), 193 (2), 342 (?), 574 (4),
44	Whakapunaki	21 (4),	427 (3),	501 (?) .	
27	Whakatane	21 (4),	427 (4),	473 (4),	817 (4) .
48	Whangamomona	110 (4), 322 (4),	175 (4), 331 (4),	224 (?), 366 (5),	243 (?), 391 (?) .

UNCONFIRMED REPORTS

The following shocks reported to the Observatory as having been felt cannot be confirmed either by an instrumental record or by an independent report.

Jan	21d	16h 38m	Paraparaumu Beach (65)	MM3
	29d	06h 40m	Westport (79)	'light'
Feb	01d	21h 00m	Highbury (68)	MM3
	17d	09h 22m	Wellington (68)	MM3
	23d	09h 15m	Mangles Valley (80)	?
	24d	15h 00m	Bendigo (123)	?
	27d	03h 12m	Lower Hutt (68)	MM3
Mar	11d	22h 01m	Tarawera (52)	?
	13d	01h 25m	Kawerau (34)	?
	13d	01h 35m	Kawerau (34)	?
	14d	12h 05m	Murchison (80)	MM4
	16d	09h 33m	Haast (103)	MM3
	22d	22h 10m	Rai Valley (77)	MM4
	24d	23h 13m	Manaroa (78)	MM3
	29d	15h	Wanaka (123)	'sharp jolt'
	30d	10h 30m	Mangles Valley (80)	MM4
Apr	7 or 8d	19h 05m	Oratia (16)	MM1
	8 or 9d	20h [±] 5m	Oratia (16)	MM1
	17d	06h 56m	Rotorua (33)	MM3
	21d	08h 07m	Rotorua (33)	MM3
	25d	07h 52m	Westport (79)	'slight'
	30d	14h 35m	Lake Kaniere (92)	?
May	04d	13h 05m	Wainuiomata (68)	?
	29d	13h 30m	Maungaraki (68)	MM3
	31d	14h 00m	Waitarere (65)	?
Jun	17d	19h 57m	Westport (79)	MM4
	17d	21h 00m	Waitarere (65)	'moderate'
Jul	25d	08h 15m	Opunake (46)	?
	27d	15h 30m	Cape Runaway (29)	MM4
Aug	05d	10h 45m	Rotorua (33)	MM4
	21d	18h 18m	Waiomu (21)	MM4
	23d	14h 10m	Waiomu (21)	MM4
	25d	13h 10m	Mercury Bay (18)	?
	28d	14h 00m	Mercury Bay (18)	?
Sep	03d	00h 05m	Coromandel (18)	MM4
	03d	05h 40m	Coromandel (18)	MM4
	03d	16h 00m	Waitarere (68)	'very slight'
	06d	22h 28m	Puhi (18)	MM3
	06d	23h 40m	Puhi (18)	MM3
	07d	00h 52m	Puhi (18)	MM3
	07d	01h 07m	Puhi (18)	MM3
	08d	01h 32m	Puhi (18)	MM4
	08d	15h 45m	Puhi (18)	'small'
	08d	15h 46m	Puhi (18)	'small'
	08d	16h 33m	Puhi (18)	'small'
	08d	17h 08m	Puhi (18)	'small'
	09d	11h 23m	Puhi (18)	'small'
	09d	13h 18m	Puhi (18)	'small'
	09d	14h 55m	Puhi (18)	MM4
	09d	15h 00m	Puhi (18)	'small'
	09d	15h 01m	Puhi (18)	'small'
	09d	15h 05m	Puhi (18)	'small'

Sep	09d	15h 06m	Puhoi (18)	'small'
	09d	15h 09m	Puhoi (18)	'small'
	09d	15h 35m	Puhoi (18)	'small'
	09d	15h 47m	Puhoi (18)	'small'
	09d	15h 48m	Puhoi (18)	'small'
	09d	15h 50m	Puhoi (18)	'small'
	09d	15h 53m	Puhoi (18)	'small'
	09d	16h 12m	Puhoi (18)	'small'
	09d	16h 14m	Puhoi (18)	'small'
	09d	17h 45m	Puhoi (18)	'small'
	09d	17h 48m	Puhoi (18)	'small'
	09d	17h 49m	Puhoi (18)	'small'
	09d	17h 50m	Puhoi (18)	'small'
	09d	17h 51m	Puhoi (18)	'small'
	09d	19h 02m	Puhoi (18)	'small'
	10d	06h 15m	Puhoi (18)	'small'
	10d	13h 15m	Puhoi (18)	'small'
	10d	13h 20m	Puhoi (18)	'small'
	11d	09h 55m	Puhoi (18)	'small'
	11d	13h 14m	Puhoi (18)	'small'
	12d	16h 05m	Puhoi (18)	'small'
	12d	20h 17m	Puhoi (18)	MM4
	12d	20h 20m	Puhoi (18)	'small'
	12d	20h 31m	Puhoi (18)	'small'
	14d	07h 58m	Puhoi (18)	'small'
	14d	16h 10m	Puhoi (18)	MM4
	14d	17h 30m	Puhoi (18)	'small'
	14d	17h 33m	Puhoi (18)	'small'
	14d	18h 35m	Puhoi (18)	'small'
	15d	12h 14m	Puhoi (18)	MM4
	15d	12h 17m	Puhoi (18)	'small'
	15d	12h 25m	Puhoi (18)	MM5
	15d	12h 26m	Puhoi (18)	'small'
	15d	17h 45m	Puhoi (18)	'small'
	15d	21h 58m	Puhoi (18)	'small'
	16d	04h 40m	Puhoi (18)	'small'
	16d	18h 13m	Puhoi (18)	MM3
	16d	20h 23m	Puhoi (18)	MM4
	17d	04h 53m	Puhoi (18)	MM4
	17d	05h 05m	Puhoi (18)	'small'
	17d	11h 10m	Puhoi (18)	MM4
	17d	23h 15m	Puhoi (18)	MM4
	19d	08h 37m	Puhoi (18)	MM4
	19d	11h 04m	Puhoi (18)	MM5
	19d	19h 27m	Puhoi (18)	'small'
	19d	19h 31m	Puhoi (18)	'small'
	20d	03h 28m	Puhoi (18)	'small'
	21d	11h 45m	Puhoi (18)	MM3
	21d	22h 39m	Patoke (52)	MM3
	21d	22h 50m	Puhoi (18)	MM4
	22d	12h 10m	Puhoi (18)	'small'
	25d	11h 25m	Wairakei (41)	'strong'
	26d	14h 10m	Manaroa (78)	MM4
	27d	12h 35m	Puhoi (18)	MM5
	27d	12h 50m	Puhoi (18)	'small'
	27d	13h 10m	Puhoi (18)	'small'
	27d	13h 30m	Puhoi (18)	'small'
	27d	13h 40m	Puhoi (18)	MM2
Oct	01d	09h 10m	Puhoi (18)	'very small'
	01d	09h 15m	Puhoi (18)	'very small'
	01d	19h 28m	Puhoi (18)	MM5
	06d	02h 05m	Puhoi (18)	MM4
	06d	18h 30m	Tokaanu (40)	MM4

Oct 10d	02h 30m	Masterton (66)	MM4
10d	16h 24m	Waiwhare (51)	MM4
Nov 11d	09h 30m	Carterton (70)	MM4
Dec 09d	-	Feilding (62)	The report claims that 'stock fell from shelves'. Almost certainly a confusion of date.
15d	11h 27m	Table Flat (58)	MM4
24d	01h 40m	Fighting Bay (78)	'mild and short'
24d	17h 21m	Fighting Bay (78)	'mild and short'

REPORTS FROM OUTSIDE NEW ZEALAND

The Observatory sometimes receives reports of earthquakes felt on islands of the South-west Pacific and at other places beyond the limits of the systematic reporting network. The following reports were received in 1970:

Jan 02d	21h 10m	Raoul Island	MM3
08d	17h 15m	Raoul Island	MM3
20d	07h 22m	Raoul Island	MM5-6
	17h 08m	Raoul Island	MM2
Feb 15d	15h 20m	Raoul Island	MM3
19d	10h 47m	Raoul Island	MM3
Mar 13d	04h 55m	Raoul Island	MM2
Apr 08d	02h 56m	Raoul Island	MM3
10d	11h 13m	Raoul Island	MM2
	14h 09m	Raoul Island	MM4-5
15d	16h 50m	Raoul Island	MM4-5
Jun 10d	05h 57m	Raoul Island	MM3
Aug 07d	21h 57m	Raoul Island	MM2-3
	22h 39m	Raoul Island	MM2-3
Sep 09d	00h 37m	Raoul Island	MM4
15d	20h 45m	Raoul Island	MM3
16d	00h 35m	Raoul Island	MM2
Oct 08d	10h 38m	Raoul Island	MM3
	11h 07m	Raoul Island	MM3
	23h 52m	Raoul Island	MM3
Nov 02d	11h 10m	Niuafo'ou	'force 5 no damage'

N.B. The intensities quoted are those assigned by meteorological observers on the Island. They do not necessarily correspond with those of the Modified Mercalli Scale (N.Z. version) used as standard elsewhere in this Report.

PUBLICATIONS BY STAFF MEMBERS

During 1970 the following papers by members of the Seismological Observatory Staff were published:

- S-166 MOONEY, H.M.: "Upper Mantle Inhomogeneity beneath New Zealand: Seismic Evidence".

J. Geophys. Res. 75: 285-309.

Seismic wave forms recorded in New Zealand from nearby deep earthquakes show significant frequency differences, which can be correlated with ray paths in the upper mantle. Stations on the east side of the North Island (Gisborne, Wellington and Tuai) record frequencies that are dominantly 3 cps or greater from deep shocks that are both nearby and up to 10° north toward the Kermadec Islands. Stations on the west side of the North Island (Tarata and Karapiro) record frequencies that are dominantly 2 cps or lower from the same earthquakes. Closer examination of the pattern shows two exceptions. First, shocks southward from $39\frac{1}{2}^{\circ}$ S tend to show high frequencies, not low, at the western stations. Second, shocks on the easterly side of the seismic zone north of New Zealand tend to show low frequencies, not high, at the eastern stations. Evidence is presented to show that these observations can be explained only in terms of inhomogeneities within the upper mantle. Alternative explanations that can be rejected include: depth, distance, or magnitude effects; source mechanism; crustal effects; instrument or station peculiarities.

We interpret the results to indicate the existence of a low-Q region within the upper mantle under part of the North Island of New Zealand and the surrounding oceans. Where this region exists, seismic waves traversing it lose a significant fraction of their higher-frequency components. Where the region does not exist, high frequencies can be propagated to relatively large distances. The region appears to lie northward from $39\frac{1}{2}^{\circ}$ S and north-westward from a NE-SW line through the center of the North Island. In depth, we prefer an interpretation in terms of a horizontal layer lying between 75 and 125 km, although the data could be reconciled with a dipping layer lying above the zone of seismicity. The low-Q region appears to be absent along a continuous zone, which is possibly narrow, extending along the eastern side of the North Island and north to 32° S and probably beyond. Secondary evidence from travel-time residuals and iso-seismals adds support to this interpretation. Estimates for Q within the low-Q region yield values in the range $Q = 4-80$.

- S-167 RANDALL, M.J.: "Toroidal Free Oscillations by the Method of Factorisation".

J. Geophys. Res. 75: 1571-2.

The eigenvalue problem for the toroidal free oscillations of the earth may be reduced to a single first-order differential equation, which is readily integrated numerically even at large wave numbers, with arbitrary radial variation of the model parameters. The technique seems particularly suited to inclusive programs for earth-model inversion which incorporate data from body waves, surface waves, and free oscillations.

- S-168 EIBY, G.A.: "Seismic Regions of the South Island of New Zealand".

Trans. Roy. Soc. N.Z., Earth Sci. 8: 29-39.

The region of less frequent earthquakes that lies between the active Fiordland Region and the Main Seismic Region of New Zealand is separated from the Main Region at a north-west trending boundary that marks a sharp change in the amount and character of the activity. The boundary has no obvious geological expression, but continues the crest of the Lord Howe Rise. The southern boundary of this Central Seismic Region appears to continue the southern flank of the Rise. Maps of epicentres from 1940-64 and of earlier large earthquakes are given. Histograms are used to show the changes in frequency of earthquake occurrence with geographical position.

- S-169 SMITH, W.D.: "S to P Conversion as an Aid to Crustal Studies".

Geophys. J. Roy. Astron. Soc. 19: 513-9.

Studies of S to P conversion at the base of the crust of waves from a number of local deep earthquakes have indicated a crustal thickness of $24 \text{ km} \pm 3 \text{ km}$ and $31 \text{ km} \pm 4 \text{ km}$ beneath the New Zealand Seismograph Stations of Wellington (WEL) and Gisborne (GNZ) respectively. Considerable spread in the data indicates that results obtained from isolated earthquakes can be inconclusive, and that the concept of a Mohorovičić Discontinuity without small scale irregularities may well be inadequate.

- S-170 MOONEY, H.M.: "Theoretical and Observed Travel Times for New Zealand Deep Earthquakes".

N.Z. J. Geol. Geophys. 13: 703-17.

The hypothesis has been advanced elsewhere (Mooney, 1970), based upon observed frequencies in seismic arrivals, that a low-velocity low-Q region exists in the upper mantle beneath a portion of New Zealand, but is absent elsewhere in the country. The present paper examines theoretically whether this distinction should manifest itself in travel time anomalies. The predicted dependence of travel-time residuals upon focal depth (from 100 to 300 km) and upon epicentral distance (from 0° to 4°) is shown by graphs. The results are compared with observational data grouped into eight geographical regions. I conclude that (a) the general trend of the observed residuals vs distance is consistent with the theoretical predictions, both for stations which are underlain by the hypothesised low-velocity region and for those which are not, (b) the amplitude of the observed distance dependence is substantially greater than that predicted, showing that other factors such as lateral variations in velocity must be present also, and (c) the scatter of the observed data as evidenced by the standard deviations is too large to permit firm conclusions.

- S-171 KNOPOFF, L. and RANDALL, M.J.: "The Compensated Linear-Vector Dipole: A Possible Mechanism for Deep Earthquakes".

J. Geophys. Res. 75: 4957-63.

Models of earthquake sources that have no volume change, no net force, and no net torque as criteria for the radiation of first motions, have five degrees of freedom in their spatial orientation. The usual double-couple model has only three degrees of freedom. The most general source of high-frequency seismic motions must be a linear combination of a double couple and another source called the compensated linear-vector dipole. A

radiation pattern of amplitudes of first motions on the focal sphere cannot be uniquely decomposed into the radiation patterns due to the two sources.

- S-172 RANDALL, M.J. and KNOPOFF, L.: "The Mechanism at the Focus of Deep Earthquakes".

J. Geophys. Res. 75: 4965-76.

Amplitudes of long-period pulses are used in an analysis of several intermediate and deep-focus earthquakes to determine whether the mechanism is of the double-couple or compensated linear vector dipole type. For most of the shocks, the double-couple model dominates the linear dipole model, but not overwhelmingly so.

- S-173 EIBY, G.A.: "New Zealand Seismology and the International Seismological Summary".

Geophys. J. Roy. Astron. Soc. 20: 353-8.

The value of the I.S.S. to New Zealand seismological research in the past and to some current projects is appraised, and the contribution of New Zealand Stations to the Summary reviewed historically.

Before the establishment of a local recording network in the late 1930s, the published I.S.S. epicentres are often badly at variance with the felt intensity information, and large residuals are assigned to near stations with good timing. Deep-focus shocks are usually to the east of the true positions. Reinterpretation of the larger shocks using modern travel-time tables should yield sufficiently improved positions and depths to be of use in current seismicity studies.

During the 1940s, epicentres based on the records of the New Zealand network were included in the I.S.S., but not the individual station readings. These are on file at the Seismological Observatory, Wellington, and should be incorporated in any revision.

- S-174 RANDALL, M.J.: "SKS and Seismic Velocities in the Outer Core".

Geophys. J. Roy. Astron. Soc. 21: 441-5.

A statistical treatment of observations of SKS is combined with other information on SKS and on the AB branch of PKP, leading to a revised velocity distribution for the outer core. The seismic velocity at the top of the core appears to be 8.26 km s^{-1} , somewhat greater than Jeffrey's value of 8.10 km s^{-1} .

EIBY, G.A.: "Captain James Cook and the Universe".

Southern Stars 23: 140-152.

A presidential address to the Royal Astronomical Society of New Zealand delivered in Gisborne to commemorate the bicentenary of Cook's landing. Cook's observations of the transit of Venus are placed in their historical and scientific context.

EIBY, G.A.: "Earthquakes and the Earth's Interior".

Centre for the Development of Learning Materials, Ryde, N.S.W., Australia. 57 pp.

A text book intended for use in Australian secondary schools.

EXCHANGE AGREEMENTS

The Seismological Observatory issues the following series of publications:

1. E-bulletins. These consist of the annual "New Zealand Seismological Reports", containing a detailed summary of all standard measurements made at all stations of the N.Z. network, lists of epicentres, felt intensity data, and a brief account of the principal earthquakes of the year.
2. S-bulletins. These are mostly reprints of papers by members of the Observatory staff, but occasionally have included material not published elsewhere, such as the Eiby-Muir near earthquake tables, and a descriptive account of the Observatory and its work issued to conference delegates.
3. A-bulletins. These are cyclostyled sheets giving preliminary readings from Wellington and a small selection of well-distributed outstations. They are issued fortnightly to observatories and data centres needing rapid access to New Zealand readings, and are not intended to have a wide circulation.

The Observatory will be pleased to consider exchange agreements for any of this material. Stations requesting the A-series normally receive S and E-series as well, and those requesting the E-series also receive the S-series. This arrangement facilitates mailing procedures.

LIST OF MAPS

(in pocket inside back cover)

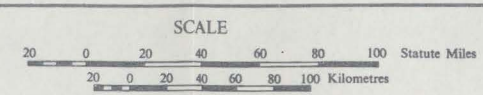
1. Epicentres of Normal Focus Earthquakes in 1970.
2. Epicentres of Deep Focus Earthquakes in 1970.
3. Isoseismals for the Earthquakes of 1970 June 12 (Origin 70/327) and 1970 July 27 (Origin 70/427).

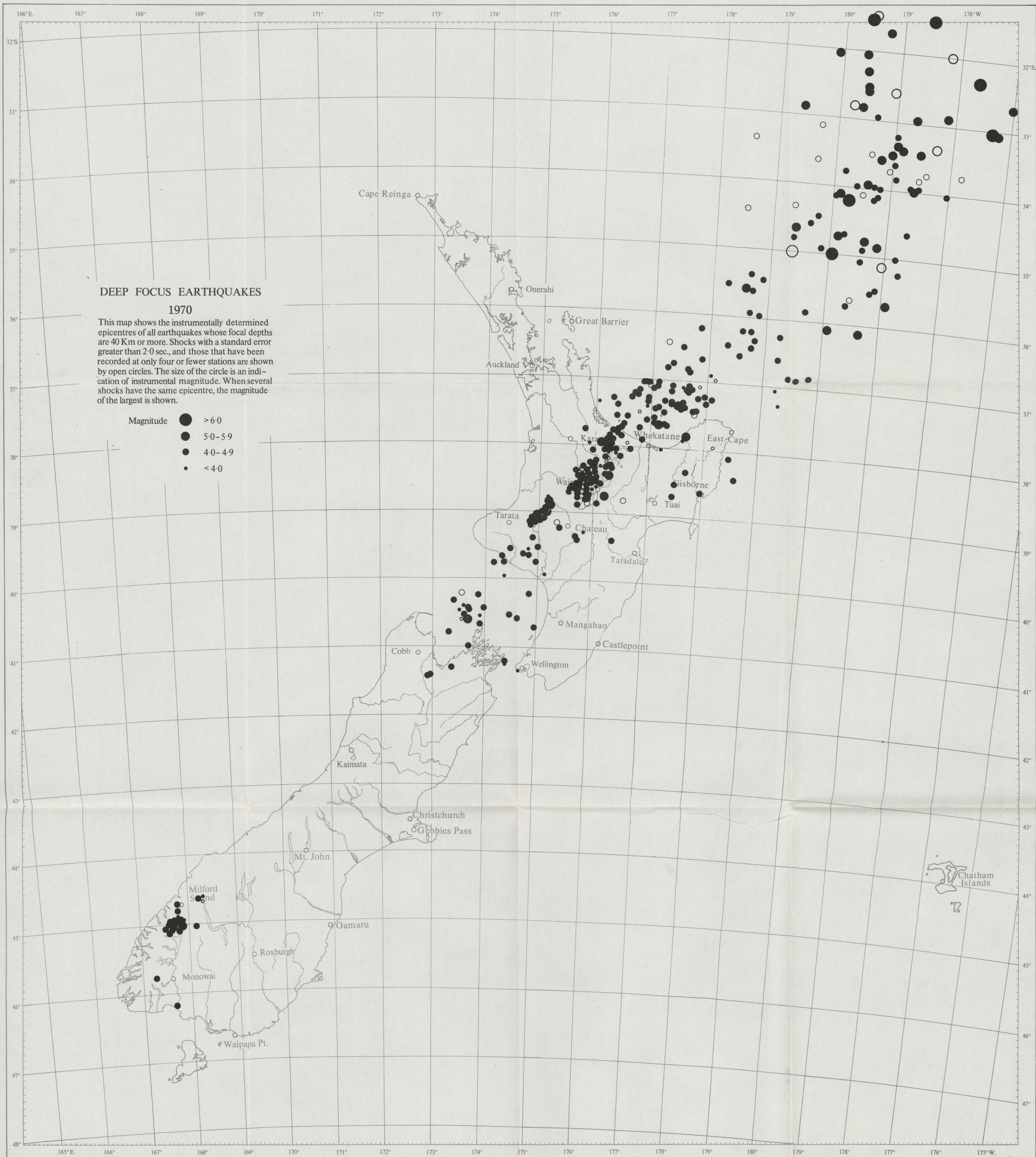


**NORMAL EARTHQUAKES
1970**

This map shows the instrumentally determined epicentres of all earthquakes whose focal depths are less than 40 Km. Shocks with a standard error greater than 2.0 sec., and those that have been recorded at only four or fewer stations are shown by open circles. The size of the circle is an indication of instrumental magnitude. When several shocks have the same epicentre the magnitude of the largest is shown.

- Magnitude
- > 6.0
 - 5.0-5.9
 - 4.0-4.9
 - < 4.0





DEEP FOCUS EARTHQUAKES

1970

This map shows the instrumentally determined epicentres of all earthquakes whose focal depths are 40 Km or more. Shocks with a standard error greater than 2.0 sec., and those that have been recorded at only four or fewer stations are shown by open circles. The size of the circle is an indication of instrumental magnitude. When several shocks have the same epicentre, the magnitude of the largest is shown.

- Magnitude
- > 6.0
 - 5.0 - 5.9
 - 4.0 - 4.9
 - < 4.0



**MODIFIED MERCALLI
ISOSEISMALS**

Epicentre 70/327
Magnitude 5.3 Focal Depth 120 km

Epicentre 70/427
Magnitude 5.8 Focal Depth 130 km

