

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

February

2014

Prepared by
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GENERAL BULLETIN INFORMATION

The National Centre for Geophysical Research is a governmental agency established 1975 in Lebanon by the National Council for Scientific Research (CNRS). The mission of the Centre, among other assignments, is the monitoring of seismic activity within the national territory. Currently, the national seismic network is under deployment; it has been officially registered as GRAL, an acronym for Geophysical Research Arrays of Lebanon. Station coordinates and status are given below.

Since 1993, the Centre has been participating in a regional initiative by the UNESCO and the USGS known as RELEMR, i.e. Reducing Earthquake Losses in the Eastern Mediterranean Region.

Within this framework, the Centre routinely contributes to the database set up for this purpose and maintained by the Euro-Mediterranean Seismological Centre (EMSC). For coherence, the Centre has adopted the recommended seismic analysis system SEISAN developed by Jens Havskov and Lars Ottemoller from the University of Bergen, Norway.

The localization program currently used for locating earthquakes is Hypocenter (Lienert et al., 1986). Plane parallel layers are assumed for local and regional events, while the IASPEI travel time tables are used for distant events.

The velocity model used for all local and regional events is the one currently adopted by the RELEMR initiative.

P-wave velocity (km/sec)	depth to top of layer (km)
6.2	0.0
6.8	14.0
8.05	34.0
8.25	50.0
8.5	80.0

Magnitudes are calculated from the coda duration. The coda wave magnitude is estimated via the formula:

$$M_c = 0.08 + 1.63 * \log_{10}(T) + 0.0009 * D.$$

where T is the coda duration (sec) and D is the epicentral distance (km). The coefficients above were adopted at the outset of our Centre in 1980 and thus are still in use for the sake of continuity.

All available coda values are used for magnitude calculations. No station corrections are used for either travel times or magnitudes calculations. The V_p/V_s velocity ratio used in both layered models above is 1.74.

As a general policy, neither depths, nor epicenters, are fixed unless stated otherwise since this might restrict later use of the data. Consequently, some event locations might be unrealistic such as zero depth earthquakes or teleseismic locations off by 1000 km. However, the locations are based on the available data and reflect the localization procedure and the models used.

STATIONS USED

The stations listed below are operated by the National Centre for Geophysical Research. They constitute the basic setup of the National Seismic Network of Lebanon.

However, readings from other cooperating agencies are also used in locating the events and thus more stations may appear in the event lists than in the station list; it is worth mentioning the systematic use of arrival times from the Cypriot seismic network CSS in order to constrain events corresponding to an active zone off the Lebanese shorelines.

STATION	LATITUDE	LONGITUDE	HEIGHT (m)	NAME	COMMENTS
BHL	3354.25N	3539.25E	1000	BHANNES	Opened May 1980
HWQ	3416.68N	3556.78E	1161	HAWQA	Opened Jan 2001
MATL	3329.32N	3519.78E	5	MATARIH	Nov2000-Sep2012
FKH	3414.69N	3624.61E	1152	FAKEHEH	Opened Dec 2004
RCY	3329.79N	3550.14E	1370	RACHAYA	Opened Jun 2006
DWR	3323.13N	3524.08E	420	DWEIR	
BEYL	3352.30N	3529.59E	49	BEIRUT	Opened Jul 2006
NAQL	3307.02N	3508.46E	83	NAQOURA	Jul2008-Jan2012
DQRL	3342.34N	3534.21E	963	DEIR QAMAR	Opened Mar 2010
QRWL	3332.86N	3540.93E	875	QARAOUN	Opened Oct 2011
SHBL	3320.90N	3544.63E	1422	CHEBAA	Opened Oct 2011

REGIONAL AND DISTANT EARTHQUAKES

Because regional events and teleseisms are not localized, but simply identified, EMSC determination data are given along with phase arrivals (in general first arrival) at the stations of our network.

MACROSEISMIC DATA

Macroseismic data, if available, are included in the bulletin.

MONTHLY EPICENTER MAPS

Maps will be found on the last page.

ELECTRONIC PUBLICATION

This provisional bulletin is available for download in pdf format on:
<http://www.cnrs.edu.lb/grdownload.html>

REFERENCES

- Havskov, J. and Ottemoller, L. (2001). SEISAN: The Earthquake Analysis Software. -version 7.2-
Institute of Solid Earth Physics, University of Bergen.
<http://www.ifjf.uib.no/seismo/software/seisan.html>
- Lienert, B.R., Berg, E. and Frazer, L.N. (1986). Hypocenter: An earthquake location method using centered, scaled, and adaptively least squares. Bull. Seism. Soc. Am., 76., pp 771-783.

Abbreviations:

TIME: Origin time in UTC (hr. min. and sec.) or data file onset time if event is not located.

LAT: Latitude of epicenter

LON: Longitude of epicenter

DEPTH: Focal depth in kilometer (trailing F indicates fixed depth)

AGENCY: REL throughout the bulletin, aka. REsearch Lebanon

MAGNITUDES: Up to 3 different magnitudes can be given followed by type and reporting agency, e.g. 3.1 MC REL - coda magnitude calculated according to above mentioned formula.

EMSC: Euro-Mediterranean Seismological Centre.

OT: Origin Time

RMS: Root mean square value of travel time residuals

STAT: Station code

CO: Component; S:short period, L:long period, B:broadband.

DIST: Epicenter distance (km)

AZI: Azimuth from source to station

PHAS: Phase; The first letter characterizes onset E(mergent) or I(mpulsive)

P: Polarity (C for compression, D for dilatation)

HR: Hour

MN: Minute

SECON: Seconds

TRES: Residual (seconds)

CODA: Signal duration in seconds

AMPL: Ground Amplitude ($0.5 * (\text{peak to peak})$), (nm) at period PERI

PERI: Period where amplitude is measured

BAZ: Back azimuth (station to event)

ARES: Back azimuth residual

VELO: Apparent phase velocity (km/sec)

WT: Weight of phase in the location

*: An asterisk before the phase arrival time implies a potential timing error. If an S phase is read, differential S-P times will be used in the hypocenter location.

February 1 2014 Hour: 10: 2 29.3 Lat: 33.38N Lon: 35.66E Depth: 4 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	9	116	EP		10	2	30.99	0.00						1.0
SHBL	BE	9	116	ES		10	2	32.22	-0.00						1.0
RCY	SZ	21	52	EP		10	2	32.76	-0.01	39					1.0
RCY	SN	21	52	ES		10	2	35.32	0.00						1.0
DQRL	SZ	37	347	EP		10	2	35.31	0.00						1.0

February 1 2014 Hour: 13: 6 38.0 Lat: 33.78N Lon: 35.76E Depth: 5 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	326	EP		13	6	40.75	-0.11	43					1.0
BHL	BN	17	326	ES		13	6	42.98	0.02						1.0
DQRL	SZ	19	244	EP		13	6	41.34	0.09						1.0
DQRL	SE	19	244	ES		13	6	43.63	-0.01						1.0
RCY	SZ	32	167	EP		13	6	43.37	0.02						1.0
RCY	SN	32	167	ES		13	6	47.29	-0.01						1.0
HWQ	SZ	58	18	EP		13	6	47.45	0.05						1.0

February 2 2014 Hour: 0:47 26.6 Lat: 33.73N Lon: 35.93E Depth: 7 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	28	199	EP		047	31.28	-0.03	24						1.0
RCY	SN	28	199	ES		047	34.80	0.01							1.0
BHL	BZ	32	307	EP		047	31.91	-0.02							1.0
DQRL	SZ	34	265	EP		047	32.26	0.07							1.0
DQRL	SE	34	265	ES		047	36.30	-0.03							1.0

February 2 2014 Hour: 2: 9 57.9 Lat: 33.12N Lon: 35.73E Depth: 8 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	43	13	EP		210	5.04	0.07	48						1.0
RCY	SN	43	13	ES		210	10.15	-0.06							1.0
QRWL	SZ	48	355	EP		210	5.69	-0.02							1.0
QRWL	SN	48	355	ES		210	11.52	0.03							1.0
DQRL	SZ	67	347	EP		210	8.73	-0.01							1.0
DQRL	SN	67	347	ES		210	16.77	0.01							1.0
BEYL	BZ	86	345	EP		210	11.86	0.00							1.0
BHL	BZ	87	355	EP		210	12.03	-0.01							1.0
HWQ	SZ	130	9	EP		210	18.40	-0.01							1.0

February 2 2014 Hour: 9:26 33.0 Agency: REL Distant
EMSC OT=09:26:33.0 32.93S 177.80W 10Km M=6.5 KERMADEC ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		946	22.13								
BHL	BZ			EP		946	22.66								
SHBL	BZ			EP		946	22.49								
BEYL	BZ			EP		946	22.40								

February 2 2014 Hour: 12:50 27.3 Lat: 34.57N Lon: 36.24E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.0 secs

NORTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	42	220	EP		1250	34.06	-0.00	65						1.0
HWQ	SN	42	220	ES		1250	39.02	-0.05							1.0
BHL	BZ	91	217	EP		1250	42.06	0.05							1.0
DQRL	SZ	114	213	EP		1250	45.63	-0.02							1.0
DQRL	SN	114	213	ES		1250	59.29	0.06							1.0

RCY	SZ	124	198	EP		1250	47.34	-0.03											1.0
RCY	SN	124	198	ES		1251	2.22	-0.01											1.0

February 2 2014 Hour: 14:26 47.0

Agency: REL Distant

EMSC OT=14:26:47.0 26.61N 57.83E 19Km M=5.3 SOUTHERN IRAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1431	24.71								
SHBL	BZ			EP		1431	21.90								

February 3 2014 Hour: 3: 8 45.0

Agency: REL Regional

EMSC OT=03:08:45.0 38.26N 20.32E 2Km M=6.0 GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		311	49.62								
BHL	BZ			EP		311	50.26								

February 3 2014 Hour: 17:42 26.8

Lat: 34.12N Lon: 35.18E Depth: 29 Agency: REL Local

Magnitudes: 3.2MC REL

Rms: 0.1 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	BZ	40	134	EP		1742	34.61	0.20							1.0
BHL	BZ	50	119	EP		1742	35.66	-0.11	75						1.0
BHL	BN	50	119	ES		1742	42.36	-0.06							1.0
DQRL	SZ	59	142	EP		1742	36.71	-0.20							1.0
HWQ	BZ	73	76	EP		1742	38.88	0.02							1.0
HWQ	BN	73	76	ES		1742	47.83	0.03							1.0
QRWL	SZ	79	144	EP		1742	39.77	0.05							1.0
QRWL	SN	79	144	ES		1742	49.35	0.06							1.0
RCY	SZ	92	139	EP		1742	41.66	0.01							1.0
RCY	SE	92	139	ES		1742	52.66	0.01							1.0

February 3 2014 Hour: 18:29 45.0

Agency: REL Regional

EMSC OT=18:29:45.0 34.88N 32.52E 20Km M=4.1 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1830	26.45								
DQRL	SZ			EP		1830	29.18								
HWQ	SZ			EP		1830	29.39								
QRWL	SZ			EP		1830	29.82								
RCY	SZ			EP		1830	32.06								

February 4 2014 Hour: 1:53 5.1

Lat: 33.75N Lon: 35.14E Depth: 14 Agency: REL Local

Magnitudes: 2.5MC REL

Rms: 0.0 secs

OFFSHORE SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	41	97	EP		153	12.02	-0.02	30						1.0
DQRL	SN	41	97	ES		153	17.16	-0.03							1.0
BHL	BZ	51	70	EP		153	13.57	0.01							1.0
BHL	BN	51	70	ES		153	19.83	0.01							1.0
RCY	SZ	71	113	EP		153	16.51	-0.01							1.0
RCY	SN	71	113	ES		153	25.01	0.03							1.0

February 5 2014 Hour: 11:35 19.2

Lat: 34.55N Lon: 36.29E Depth: 66 Agency: REL Local

Magnitudes: 3.2MC REL

Rms: 0.0 secs

NORTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	44	227	EP		1135	30.27	-0.04	76						1.0
HWQ	SE	44	227	ES		1135	38.58	0.03							1.0
BHL	BZ	92	220	EP		1135	34.80	-0.05							1.0
DQRL	SZ	115	216	EP		1135	37.37	0.08							1.0
DQRL	SN	115	216	ES		1135	50.66	-0.02							1.0
RCY	SZ	124	200	EP		1135	38.38	0.00							1.0
RCY	SE	124	200	ES		1135	52.58	-0.00							1.0

February 5 2014 Hour: 12:30 9.6 Lat: 33.48N Lon: 35.63E Depth: 15 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs

SAIDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	33	EP		1230	12.56	0.04	29						1.0
SHBL	BZ	18	145	EP		1230	13.64	0.09							1.0
SHBL	BN	18	145	ES		1230	16.39	-0.07							1.0
RCY	SZ	19	85	EP		1230	13.60	-0.05							1.0
RCY	SN	19	85	ES		1230	16.66	0.03							1.0
DQRL	SZ	25	347	EP		1230	14.40	-0.03							1.0

February 5 2014 Hour: 13:41 31.1 Lat: 33.32N Lon: 35.44E Depth: 4 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.1 secs

SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	28	85	EP		1341	35.86	0.09	35						1.0
SHBL	BN	28	85	ES		1341	39.20	-0.03							1.0
RCY	SZ	41	62	EP		1341	37.72	-0.13							1.0
RCY	SN	41	62	ES		1341	42.88	0.04							1.0
DQRL	SZ	44	16	EP		1341	38.26	0.02							1.0
HWQ	SZ	116	24	EP		1341	49.76	0.01							1.0

February 5 2014 Hour: 14:32 8.4 Lat: 33.42N Lon: 35.51E Depth: 12 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	23	109	EP		1432	12.77	0.03							1.0
SHBL	BN	23	109	ES		1432	15.98	-0.01							1.0
RCY	SZ	32	74	EP		1432	13.99	0.04	32						1.0
RCY	SN	32	74	ES		1432	18.06	-0.03							1.0
DQRL	SZ	33	10	EP		1432	14.08	0.03							1.0
DQRL	SN	33	10	ES		1432	18.23	-0.02							1.0
HWQ	SZ	104	23	EP		1432	24.69	-0.02							1.0

February 6 2014 Hour: 12:53 55.8 Lat: 33.49N Lon: 35.67E Depth: 11 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	7	13	EP		1253	58.12	0.03	37						1.0
QRWL	SN	7	13	ES		1253	59.76	-0.05							1.0
RCY	SZ	16	86	EP		1253	59.10	0.02							1.0
SHBL	BZ	17	154	EP		1253	59.18	-0.05							1.0
SHBL	BN	17	154	ES		1254	1.83	0.04							1.0
DQRL	SZ	26	340	EP		1254	0.36	-0.05							1.0
DQRL	SN	26	340	ES		1254	3.90	0.05							1.0

February 7 2014 Hour: 12:43 14.9 Lat: 33.47N Lon: 35.68E Depth: 4 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	360	EP		1243	16.45	0.02	26						1.0
RCY	SZ	14	80	EP		1243	17.38	-0.01							1.0
SHBL	BZ	15	158	EP		1243	17.49	0.01							1.0
SHBL	BN	15	158	ES		1243	19.39	-0.01							1.0
DQRL	SZ	28	338	EP		1243	19.45	0.01							1.0
DQRL	SN	28	338	ES		1243	22.78	-0.02							1.0

February 7 2014 Hour: 15:26 16.4 Lat: 33.68N Lon: 36.58E Depth: 4 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.0 secs

DAMASCUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	72	254	EP		1526	28.05	0.03	56						1.0
RCY	SN	72	254	ES		1526	36.69	0.04							1.0
QRWL	SZ	85	260	EP		1526	29.97	-0.06							1.0
QRWL	SN	85	260	ES		1526	40.16	0.00							1.0
SHBL	BZ	86	245	EP		1526	30.22	-0.04							1.0
HWQ	SZ	89	319	EP		1526	30.73	0.08							1.0
HWQ	SE	89	319	ES		1526	41.20	-0.03							1.0
BHL	BZ	89	286	EP		1526	30.74	-0.04							1.0
DQRL	SZ	94	272	EP		1526	31.51	0.02							1.0

February 8 2014 Hour: 10:54 18.3 Lat: 33.42N Lon: 35.48E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	24	52	EP		1054	22.10	-0.04							1.0
DQRL	SZ	33	15	EP		1054	23.65	-0.01							1.0
DQRL	SN	33	15	ES		1054	27.61	-0.01							1.0
RCY	SZ	34	75	EP		1054	23.83	-0.00	46						1.0
RCY	SN	34	75	ES		1054	27.93	0.01							1.0
BHL	BZ	57	17	EP		1054	27.38	-0.04							1.0
HWQ	SZ	105	24	EP		1054	35.31	0.09							1.0

February 8 2014 Hour: 11:36 55.3 Lat: 33.47N Lon: 35.69E Depth: 2 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	355	EP		1136	56.78	0.01							1.0
RCY	SZ	14	78	EP		1136	57.65	0.04	37						1.0
RCY	SN	14	78	ES		1136	59.31	-0.01							1.0
SHBL	BZ	14	159	EP		1136	57.75	0.05							1.0
SHBL	BN	14	159	ES		1136	59.42	-0.05							1.0
DQRL	SZ	28	337	EP		1136	59.90	0.00							1.0
HWQ	SZ	93	15	EP		1137	10.21	-0.05							1.0

February 8 2014 Hour: 15:22 9.9 Lat: 33.78N Lon: 35.78E Depth: 4 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	320	EP		1522	12.77	-0.04	50						1.0
BHL	BN	18	320	ES		1522	14.99	0.00							1.0
DQRL	SZ	21	246	EP		1522	13.49	0.14							1.0
QRWL	SZ	28	198	EP		1522	14.26	-0.13							1.0
BEYL	BZ	28	290	EP		1522	14.34	-0.08							1.0
RCY	SZ	32	170	EP		1522	15.05	-0.11							1.0
SHBL	BZ	48	184	EP		1522	17.78	0.06							1.0
SHBL	BN	48	184	ES		1522	23.62	0.08							1.0
HWQ	SZ	57	16	EP		1522	19.18	0.08							1.0

February 9 2014 Hour: 15:21 29.2 Lat: 33.79N Lon: 35.78E Depth: 5 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	318	EP		1521	32.19	0.00	39						1.0
BHL	BN	17	318	ES		1521	34.34	-0.04							1.0
DQRL	SZ	21	244	EP		1521	32.89	0.07							1.0
DQRL	SN	21	244	ES		1521	35.52	0.04							1.0
QRWL	SZ	28	198	EP		1521	33.71	-0.18							1.0
RCY	SZ	33	171	EP		1521	34.70	0.06							1.0
RCY	SN	33	171	ES		1521	38.68	0.02							1.0

HWQ SZ 56 16 EP 1521 38.42 0.03 1.0

February 9 2014 Hour: 15:23 21.6 Lat: 33.80N Lon: 35.75E Depth: 18 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	14	323	EP		1523	25.41	-0.04	42						1.0
DQRL	SZ	20	237	EP		1523	26.01	0.03							1.0
DQRL	SN	20	237	ES		1523	29.22	0.01							1.0
QRWL	SZ	29	192	EP		1523	26.99	-0.10							1.0
QRWL	SN	29	192	ES		1523	31.18	0.04							1.0
RCY	SZ	35	166	EP		1523	27.99	0.05							1.0
RCY	SN	35	166	ES		1523	32.59	-0.02							1.0
HWQ	SZ	56	19	EP		1523	30.95	0.03							1.0

February 10 2014 Hour: 0:16 15.2 Lat: 33.79N Lon: 35.80E Depth: 2 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	19	314	EP		016	18.23	-0.02	37						1.0
BHL	BN	19	314	ES		016	20.52	0.00							1.0
DQRL	SZ	23	247	EP		016	18.98	0.04							1.0
QRWL	SZ	29	202	EP		016	19.78	-0.05							1.0
BEYL	BZ	30	288	EP		016	19.92	-0.09							0.2
RCY	SZ	32	174	EP		016	20.43	-0.01							1.0
RCY	SN	32	174	ES		016	24.34	0.01							1.0
HWQ	SZ	56	14	EP		016	24.43	0.18							0.2

February 10 2014 Hour: 12: 6 48.0 Agency: REL Distant
EMSC OT=12:06:48.0 40.23N 48.63E 55Km M=5.4 AZERBAIJAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		12 9	34.47								
BHL	BZ			EP		12 9	40.23								
SHBL	BZ			EP		12 9	42.98								

February 10 2014 Hour: 13:13 43.9 Lat: 33.47N Lon: 35.69E Depth: 0 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	358	EP		1313	45.21	-0.08							1.0
QRWL	SN	9	358	ES		1313	46.34	-0.00							1.0
RCY	SZ	14	78	EP		1313	46.21	0.03	36						1.0
SHBL	BZ	14	158	EP		1313	46.23	0.02							1.0
SHBL	BN	14	158	ES		1313	47.92	-0.02							1.0
DQRL	SZ	28	338	EP		1313	48.51	0.06							1.0

February 10 2014 Hour: 14: 4 42.7 Lat: 33.79N Lon: 35.78E Depth: 3 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	318	EP		14 4	45.57	0.00	33						1.0
BHL	BN	17	318	ES		14 4	47.66	-0.01							1.0
DQRL	SZ	21	244	EP		14 4	46.24	0.01							1.0
RCY	SZ	33	170	EP		14 4	48.09	-0.01							1.0
RCY	SN	33	170	ES		14 4	52.07	-0.01							1.0
HWQ	SZ	56	16	EP		14 4	51.86	0.01							1.0

February 10 2014 Hour: 19:14 38.0 Agency: REL Distant
EMSC OT=19:14:38.0 34.15N 139.96E 80Km M=5.3 COAST OF HONSHU

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1926	49.62								
QRWL	SZ			EP		1926	51.07								

February 10 2014 Hour: 21:49 47.0

Agency: REL Distant

EMSC OT=21:49:47.0 29.28S 176.80W 24Km M=5.1 KERMADEC ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		22 9	40.52								
QRWL	SZ			EP		22 9	40.71								

February 11 2014 Hour: 1:15 26.0

Agency: REL Distant

EMSC OT=01:15:26.0 33.96N 89.39E 4Km M=5.3 WESTERN XIZANG

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		123	36.23								
QRWL	SZ			EP		123	36.67								

February 12 2014 Hour: 9:19 49.0

Agency: REL Distant

EMSC OT=09:19:49.0 36.01N 82.67E 10Km M=6.9 SOUTHERN XINJIANG

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		927	7.54								
BHL	BZ			EP		927	10.28								
SHBL	BZ			EP		927	10.80								

February 12 2014 Hour: 11:39 57.2 Lat: 33.48N Lon: 35.68E Depth: 8 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	1	EP		1139	59.16	-0.07	34						1.0
QRWL	SN	8	1	ES		1140	0.74	0.02							1.0
RCY	SZ	15	82	EP		1140	0.10	0.01							1.0
SHBL	BZ	16	158	EP		1140	0.23	-0.01							1.0
SHBL	BN	16	158	ES		1140	2.48	0.01							1.0
DQRL	SZ	27	338	EP		1140	1.92	0.03							1.0
HWQ	SZ	92	15	EP		1140	12.10	0.00							1.0

February 13 2014 Hour: 12:58 0.0

Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1259	19.28								
RCY	SZ			EP		1259	27.14								

February 13 2014 Hour: 15:41 36.3 Lat: 33.47N Lon: 35.68E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	359	EP		1541	37.68	-0.03							1.0
RCY	SZ	14	78	EP		1541	38.63	-0.03	43						1.0
SHBL	BZ	15	157	EP		1541	38.72	0.02							1.0
SHBL	BN	15	157	ES		1541	40.44	-0.01							1.0
DQRL	SZ	28	338	EP		1541	40.90	0.04							1.0
DQRL	SN	28	338	ES		1541	44.20	-0.02							1.0
BHL	BZ	48	357	EP		1541	44.04	-0.06							1.0
HWQ	SZ	93	15	EP		1541	51.40	0.10							1.0

February 14 2014 Hour: 0:33 44.1 Lat: 36.46N Lon: 35.52E Depth: 12 Agency: REL Regional
Magnitudes: 4.6MC REL Rms: 0.1 secs

TURKEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	245	171	EP		034	19.47	-0.01							1.0
HWQ	SE	245	171	ES		034	45.67	0.01							1.0
BHL	BZ	284	178	EP		034	24.18	-0.09	404						1.0
BHL	BN	284	178	ES		034	53.99	0.00							1.0
DQRL	SZ	306	179	EP		034	27.03	0.06							1.0
DQRL	SE	306	179	ES		034	58.67	-0.02							1.0
QRWL	SZ	324	177	EP		034	29.22	0.04							1.0
RCY	SZ	330	175	EP		034	30.04	-0.01							1.0

February 14 2014 Hour: 23:59 49.9 Lat: 33.69N Lon: 35.89E Depth: 15 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	22	193	EP		2359	54.35	-0.00	21						1.0
RCY	SN	22	193	ES		2359	57.66	0.02							1.0
QRWL	SZ	25	231	EP		2359	54.62	-0.04							1.0
QRWL	SN	25	231	ES		2359	58.15	-0.02							1.0
DQRL	SZ	29	274	EP		2359	55.40	0.07							1.0
BHL	BZ	32	318	EP		2359	55.69	-0.03							1.0

February 15 2014 Hour: 15:47 52.1 Lat: 33.86N Lon: 35.83E Depth: 0 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	289	EP		1547	54.81	-0.03	26						1.0
BHL	BN	17	289	ES		1547	56.85	0.00							1.0
DQRL	SZ	29	235	EP		1547	56.87	0.07							1.0
QRWL	SZ	37	201	EP		1547	57.96	-0.09							1.0
RCY	SZ	40	179	EP		1547	58.65	0.08							1.0
RCY	SN	40	179	ES		1548	3.30	-0.03							1.0
HWQ	SZ	48	13	EP		1547	59.91	-0.00							1.0

February 17 2014 Hour: 1: 6 1.0 Agency: REL Distant
EMSC OT=01:06:01.0 30.27S 177.66W 10Km M=5.7 KERMADEC ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		125	55.00								
RCY	SZ			EP		125	55.72								
BHL	BZ			EP		125	55.72								
BEYL	BZ			EP		125	55.77								

February 17 2014 Hour: 10:49 1.8 Lat: 33.47N Lon: 35.69E Depth: 1 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.1 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	352	EP		1049	3.03	-0.11							1.0
QRWL	SN	8	352	ES		1049	4.20	0.03							1.0
RCY	SZ	13	79	EP		1049	3.97	0.02	25						1.0
SHBL	BZ	15	162	EP		1049	4.06	-0.09							1.0
SHBL	BN	15	162	ES		1049	6.00	0.07							1.0
DQRL	SZ	28	336	EP		1049	6.41	0.09							1.0

February 17 2014 Hour: 11: 9 21.8 Lat: 34.51N Lon: 36.80E Depth: 22 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.0 secs

NEBEK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	83	252	EP		11 9	35.10	0.06	60						1.0
HWQ	SE	83	252	ES		11 9	44.85	-0.01							1.0
BHL	BZ	125	238	EP		11 9	41.19	-0.05							1.0
RCY	SZ	143	219	EP		11 9	43.72	0.03							1.0
RCY	SN	143	219	ES		11 9	59.92	0.01							1.0
DQRL	SZ	144	232	EP		11 9	43.72	-0.05							1.0

February 17 2014 Hour: 11:18 53.5 Lat: 33.91N Lon: 35.81E Depth: 10 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	14	269	EP		1118	56.31	-0.02	37						1.0
DQRL	SZ	31	224	EP		1118	58.79	0.00							1.0
DQRL	SN	31	224	ES		1119	2.74	0.01							1.0
HWQ	SZ	43	18	EP		1119	0.68	0.01							1.0
RCY	SZ	46	176	EP		1119	1.02	-0.02							1.0
RCY	SN	46	176	ES		1119	6.66	0.01							1.0

February 17 2014 Hour: 15:12 40.8 Lat: 33.79N Lon: 35.78E Depth: 13 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	317	EP		1512	44.42	0.00	40						1.0
DQRL	SZ	22	243	EP		1512	45.14	0.11							1.0
DQRL	SN	22	243	ES		1512	48.09	-0.07							1.0
QRWL	SZ	29	198	EP		1512	45.96	-0.07							1.0
QRWL	SN	29	198	ES		1512	49.93	0.04							1.0
RCY	SZ	34	171	EP		1512	46.74	-0.01							1.0
HWQ	SZ	56	16	EP		1512	50.03	-0.01							1.0

February 18 2014 Hour: 8:14 41.0 Agency: REL Distant

EMSC OT=08:14:41.0 34.97S 179.33W 20Km M=5.4 KERMADEC ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		834	32.93								
SHBL	BZ			EP		834	33.41								
BHL	BZ			EP		834	33.51								
QRWL	SZ			EP		834	33.75								

February 18 2014 Hour: 9:27 13.0 Agency: REL Distant

EMSC OT=09:27:13.0 14.71N 59.02W 15Km M=6.5 E OF MARTINIQUE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		939	52.14								
HWQ	BZ			EP		939	53.20								
SHBL	BZ			EP		939	53.76								

February 18 2014 Hour: 11:42 26.2 Lat: 34.33N Lon: 36.76E Depth: 0 Agency: REL Local
Magnitudes: 3.3MC REL Rms: 0.1 secs

NEBEK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	75	266	EP		1142	38.21	-0.08							1.0
HWQ	BN	75	266	ES		1142	47.23	-0.02							1.0
BHL	BZ	112	246	EP		1142	44.39	0.11							1.0
RCY	SZ	125	223	EP		1142	46.30	-0.14	78						1.0
RCY	SN	125	223	ES		1143	1.41	-0.01							1.0
DQRL	SZ	130	238	EP		1142	47.23	0.14							1.0

February 18 2014 Hour: 11:57 23.9 Lat: 33.48N Lon: 35.64E Depth: 13 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	29	EP		1157	26.70	0.08	28						1.0
QRWL	SN	8	29	ES		1157	28.57	-0.03							1.0
SHBL	BZ	18	147	EP		1157	27.66	-0.02							1.0
SHBL	BN	18	147	ES		1157	30.44	0.00							1.0
RCY	SZ	18	85	EP		1157	27.74	-0.01							1.0
DQRL	SZ	26	346	EP		1157	28.66	-0.03							1.0

February 18 2014 Hour: 17:44 1.2 Lat: 33.21N Lon: 35.30E Depth: 8 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	44	69	EP		1744	8.44	0.01	34						1.0
SHBL	BN	44	69	ES		1744	13.78	-0.01							1.0
QRWL	SZ	51	43	EP		1744	9.63	0.00							1.0
QRWL	SN	51	43	ES		1744	15.88	0.02							1.0
RCY	SZ	59	57	EP		1744	10.83	0.01							1.0
RCY	SN	59	57	ES		1744	17.92	-0.01							1.0
DQRL	SZ	60	24	EP		1744	11.03	-0.02							1.0

February 18 2014 Hour: 21:37 14.0

Agency: REL Regional

EMSC OT=21:37:14.0 37.35N 29.93E 30Km M=3.3 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2138	31.50								
HWQ	SZ			EP		2138	32.47								
DQRL	SZ			EP		2138	32.14								
QRWL	SZ			EP		2138	35.50								

February 18 2014 Hour: 21:51 36.0

Agency: REL Regional

EMSC OT=21:51:36.0 38.74N 43.59E 15Km M=4.4 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		2153	27.95								
BHL	BZ			EP		2153	38.72								
DQRL	SZ			EP		2153	37.65								
QRWL	SZ			EP		2153	38.09								

February 19 2014 Hour: 11:43 27.2 Lat: 33.47N Lon: 35.68E Depth: 1 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	2	EP		1143	28.68	0.02							1.0
QRWL	SN	9	2	ES		1143	29.73	-0.01							1.0
SHBL	BZ	15	155	EP		1143	29.61	0.02							1.0
SHBL	BN	15	155	ES		1143	31.35	-0.01							1.0
RCY	SZ	15	78	EP		1143	29.64	-0.00	30						1.0
DQRL	SZ	28	339	EP		1143	31.74	-0.02							1.0

February 19 2014 Hour: 13:29 26.0 Lat: 33.78N Lon: 35.77E Depth: 2 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	321	EP		1329	28.84	-0.03	37						1.0
DQRL	SZ	21	246	EP		1329	29.36	-0.02							1.0
DQRL	SN	21	246	ES		1329	31.89	0.03							1.0
QRWL	SZ	27	198	EP		1329	30.45	-0.01							1.0
RCY	SZ	32	169	EP		1329	31.26	0.00							1.0
RCY	SN	32	169	ES		1329	35.14	-0.00							1.0
HWQ	BZ	57	16	EP		1329	35.30	0.03							1.0

February 19 2014 Hour: 14: 7 35.0 Lat: 33.45N Lon: 35.61E Depth: 9 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

SAIDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	12	33	EP		14 7	37.47	-0.06	30						1.0
SHBL	BZ	17	133	EP		14 7	38.14	-0.05							1.0
SHBL	BN	17	133	ES		14 7	40.62	0.04							1.0
RCY	SZ	22	77	EP		14 7	38.83	0.02							1.0
DQRL	SZ	28	352	EP		14 7	39.83	0.04							1.0
DQRL	SN	28	352	ES		14 7	43.37	0.00							1.0

February 19 2014 Hour: 14: 9 37.1 Lat: 33.79N Lon: 35.75E Depth: 7 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.1 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	326	EP		14 9	39.98	0.04	21						1.0
BHL	BN	16	326	ES		14 9	42.08	0.02							1.0
DQRL	SZ	19	242	EP		14 9	40.48	0.07							1.0
DQRL	SN	19	242	ES		14 9	42.79	-0.08							1.0
QRWL	SZ	27	193	EP		14 9	41.70	0.02							1.0
HWQ	SZ	57	18	EP		14 9	46.37	-0.07							1.0

February 20 2014 Hour: 11:23 45.4 Lat: 33.47N Lon: 35.69E Depth: 2 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	354	EP		1123	46.80	-0.02	25						1.0
QRWL	SN	8	354	ES		1123	47.89	0.02							1.0
RCY	SZ	14	79	EP		1123	47.70	0.04							1.0
RCY	SN	14	79	ES		1123	49.31	-0.02							1.0
SHBL	BZ	15	161	EP		1123	47.82	-0.00							1.0
DQRL	SZ	28	336	EP		1123	49.96	-0.01							1.0

February 21 2014 Hour: 12:35 45.5 Lat: 33.47N Lon: 35.69E Depth: 0 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	358	EP		1235	46.87	-0.02	30						1.0
QRWL	SN	8	358	ES		1235	47.90	0.01							1.0
RCY	SZ	14	80	EP		1235	47.87	0.00							1.0
SHBL	BZ	15	158	EP		1235	47.96	-0.01							1.0
SHBL	BN	15	158	ES		1235	49.79	0.01							1.0
DQRL	SZ	28	338	EP		1235	50.05	0.01							1.0

February 22 2014 Hour: 13:3 48.7 Lat: 33.47N Lon: 35.68E Depth: 3 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	4	EP		13 3	50.23	0.00	34						1.0
QRWL	SN	8	4	ES		13 3	51.35	-0.00							1.0
SHBL	BZ	15	155	EP		13 3	51.28	0.00							1.0
SHBL	BN	15	155	ES		13 3	53.17	-0.00							1.0
RCY	SZ	15	80	EP		13 3	51.27	0.00							1.0
DQRL	SZ	28	339	EP		13 3	53.23	-0.00							1.0

February 22 2014 Hour: 14:50 4.7 Lat: 33.45N Lon: 35.64E Depth: 0 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	12	21	EP		1450	6.47	-0.07	29						1.0
SHBL	BZ	15	139	EP		1450	7.07	-0.04							1.0
SHBL	BN	15	139	ES		1450	8.93	0.02							1.0
RCY	SZ	19	74	EP		1450	7.80	0.03							1.0
RCY	SN	19	74	ES		1450	10.06	0.00							1.0
DQRL	SZ	29	348	EP		1450	9.40	0.05							1.0

February 22 2014 Hour: 14:54 56.8 Lat: 33.54N Lon: 35.71E Depth: 0 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	287	EP		1454	57.26	-0.03	27						1.0
RCY	SZ	13	113	EP		1454	58.85	0.02							1.0
RCY	SN	13	113	ES		1455	0.30	-0.02							1.0
SHBL	BZ	22	172	EP		1455	0.29	0.01							1.0
SHBL	BN	22	172	ES		1455	2.85	0.00							1.0
DQRL	SZ	23	324	EP		1455	0.48	0.03							1.0
BHL	BZ	41	352	EP		1455	3.37	-0.01							1.0

February 22 2014 Hour: 15:42 6.0 Agency: REL Regional
EMSC OT=15:42:06.0 37.42N 36.38E 6Km M=4.5 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1542	57.63								
BHL	BZ			EP		1543	3.02								
DQRL	SZ			EP		1543	5.99								
QRWL	SZ			EP		1543	8.26								

RCY	SZ		EP	1543	8.82
SHBL	BZ		EP	1543	10.54

February 23 2014 Hour: 4:54 17.0

Agency: REL Distant

EMSC OT=04:54:17.0 43.48N 147.86E 10Km M=5.4 KURIL ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		5 6	33.39								
RCY	SZ			EP		5 6	34.67								

February 23 2014 Hour: 11:35 35.9 Lat: 34.64N Lon: 35.95E Depth: 4 Agency: REL Local

Magnitudes: 3.4MC REL Rms: 0.6 secs

NORTH LEBANON

Earthquake was felt

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	40	181	EP		1135	41.98	-0.46							0.2
BHL	BZ	86	199	EP		1135	49.67	-0.16	97						1.0
BEYL	BZ	95	207	EP		1135	51.26	-0.02							1.0
DQRL	SZ	109	199	EP		1135	53.51	-0.08							1.0
DQRL	SN	109	199	ES		1136	6.88	0.23							1.0
QRWL	SZ	123	192	EP		1135	55.76	0.04							1.0
RCY	SZ	127	185	EP		1135	56.36	0.08							1.0
RCY	SN	127	185	ES		1136	11.13	-0.20							1.0

February 24 2014 Hour: 0:52 14.8 Lat: 33.25N Lon: 35.38E Depth: 2 Agency: REL Local

Magnitudes: 3.5MC REL Rms: 0.3 secs

SOUTH LEBANON

Earthquake was felt

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	44	40	EP		052	21.69	-0.14							1.0
QRWL	SN	44	40	ES		052	27.10	0.05							1.0
RCY	SZ	51	57	EP		052	22.89	-0.07							1.0
RCY	SN	51	57	ES		052	28.99	-0.03							1.0
DQRL	SZ	54	19	EP		052	23.49	0.01							1.0
DQRL	SN	54	19	ES		052	29.98	0.05							1.0
BEYL	BZ	70	9	EP		052	26.35	0.26							0.2
BHL	BZ	77	19	EP		052	27.33	0.08	115						1.0
BHL	BN	77	19	ES		052	36.49	0.02							1.0
HWQ	SZ	126	24	EP		052	35.08	0.03							1.0

February 24 2014 Hour: 4:46 16.5 Lat: 34.50N Lon: 33.88E Depth: 34 Agency: REL Regional

Magnitudes: 3.2MC REL Rms: 0.4 secs

CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	176	111	EP		446	41.44	-0.06	65						1.0
BHL	BN	176	111	ES		446	59.19	-0.84							1.0
DQRL	SZ	179	119	EP		446	41.95	0.12							1.0
HWQ	SZ	192	97	EP		446	44.26	0.83							1.0
QRWL	SZ	197	122	EP		446	44.13	0.07							1.0
QRWL	SN	197	122	ES		447	4.29	-0.19							1.0
RCY	SZ	212	121	EP		446	46.24	0.26							1.0
RCY	SN	212	121	ES		447	7.99	0.16							1.0

February 24 2014 Hour: 13:21 10.0 Lat: 33.40N Lon: 35.53E Depth: 7 Agency: REL Local

Magnitudes: 2.7MC REL Rms: 0.0 secs

SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	21	107	EP		1321	13.64	-0.01							1.0
SHBL	BN	21	107	ES		1321	16.34	-0.01							1.0
QRWL	SZ	21	41	EP		1321	13.65	-0.07	40						1.0
RCY	SZ	30	70	EP		1321	15.15	0.06							1.0
RCY	SN	30	70	ES		1321	18.86	0.00							1.0
DQRL	SZ	34	6	EP		1321	15.66	0.02							1.0
DQRL	SN	34	6	ES		1321	19.82	-0.00							1.0
BHL	BZ	57	12	EP		1321	19.30	0.02							1.0

HWQ SZ 105 21 EP 1321 26.76-0.02 1.0

February 27 2014 Hour: 21: 9 14.5 Lat: 33.19N Lon: 35.37E Depth: 3 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	49	36	EP		21	9	22.39-0.03							1.0
RCY	SZ	55	52	EP		21	9	23.42 0.03	41						1.0
RCY	SE	55	52	ES		21	9	29.99-0.00							1.0
DQRL	SZ	60	18	EP		21	9	24.21 0.04							1.0
DQRL	SE	60	18	ES		21	9	31.36 0.01							1.0
BHL	BZ	83	19	EP		21	9	27.90-0.03							1.0
HWQ	SZ	132	24	EP		21	9	35.59 0.00							1.0

February 28 2014 Hour: 3:53 0.0 Agency: REL Regional
EMSC OT=03:51:49.0 36.06N 25.12E 36Km M=4.2 DODECANESE ISLS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ			EP		353	56.98								
HWQ	SZ			EP		353	59.02								

February 28 2014 Hour: 14: 3 48.6 Lat: 33.80N Lon: 35.76E Depth: 12 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	320	EP		14	3	52.00-0.02	38						1.0
DQRL	SZ	21	241	EP		14	3	52.63-0.02							1.0
DQRL	SN	21	241	ES		14	3	55.63 0.02							1.0
RCY	SZ	34	169	EP		14	3	54.59 0.00							1.0
RCY	SN	34	169	ES		14	3	58.98-0.00							1.0
HWQ	SZ	56	17	EP		14	3	57.96 0.01							1.0

February 28 2014 Hour: 14:10 45.9 Lat: 33.47N Lon: 35.69E Depth: 1 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.1 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	358	EP		1410	47.11-0.11		33						1.0
RCY	SZ	14	80	EP		1410	48.13-0.06								1.0
RCY	SN	14	80	ES		1410	49.97 0.06								1.0
SHBL	BZ	15	159	EP		1410	48.22-0.10								1.0
SHBL	BN	15	159	ES		1410	50.22 0.08								1.0
DQRL	SZ	28	337	EP		1410	50.45 0.09								1.0
DQRL	SN	28	337	ES		1410	53.73 0.04								1.0

February 28 2014 Hour: 19:24 2.0 Lat: 32.24N Lon: 35.37E Depth: 0 Agency: REL Regional
Magnitudes: 3.5MC REL Rms: 0.1 secs

DEAD SEA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	147	17	EP		1924	25.10-0.38								1.0
RCY	SN	147	17	ES		1924	42.76-0.10								1.0
QRWL	SZ	148	11	EP		1924	25.89 0.16								1.0
QRWL	SN	148	11	ES		1924	43.38 0.09								1.0
DQRL	SZ	164	7	EP		1924	27.93-0.11								1.0
DQRL	SE	164	7	ES		1924	47.20-0.11								1.0
BEYL	BZ	182	4	EP		1924	30.66 0.08								1.0
BHL	BZ	187	8	EP		1924	31.34 0.00		103						1.0
BHL	BE	187	8	ES		1924	53.16 0.11								1.0
HWQ	SZ	233	13	EP		1924	37.09 0.03								1.0
HWQ	SE	233	13	ES		1925	3.15 0.15								1.0

Epicentral Map of Lebanon

FEBRUARY 2014

