

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

October

2013

Prepared by
The National Centre for Geophysical Research
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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	Opened Nov 2000
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	Scheduled 2003
BEYL	3352.30N	3529.59E	49	BEIRUT	Opened Jul 2006
NAQL	3307.02N	3508.46E	83	NAQOURA	Opened Jul 2008
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.

October 1 2013 Hour: 3:38 21.0 Agency: REL Distant
EMSC OT=03:38:21.0 53.17N 152.88E 570Km M=6.7 SEA OF OKHOTSK
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 HWQ BZ EP 349 17.22
 BHL BZ EP 349 19.51
 BEYL BZ EP 349 20.13
 DQRL SZ EP 349 21.36
 RCY SZ EP 349 21.71
 QRWL SZ EP 349 21.71

October 1 2013 Hour: 10:59 0.0 Agency: REL Regional
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 RCY SZ EP 1059 16.37
 HWQ SZ EP 1059 12.43

October 1 2013 Hour: 14:24 13.3 Lat: 33.81N Lon: 35.77E Depth: 15 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	15	315	EP		1424	16.78	-0.02	39						1.0
DQRL	SZ	22	237	EP		1424	17.57	-0.03							1.0
DQRL	SN	22	237	ES		1424	20.84	0.03							1.0
RCY	SZ	35	169	EP		1424	19.52	-0.00							1.0
RCY	SE	35	169	ES		1424	24.16	0.00							1.0
HWQ	SZ	55	18	EP		1424	22.30	0.02							1.0

October 1 2013 Hour: 14:27 2.3 Lat: 33.56N Lon: 35.72E Depth: 1 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	248	EP		1427	2.93	-0.07	25						1.0
QRWL	SN	3	248	ES		1427	3.53	0.03							1.0
RCY	SZ	13	122	EP		1427	4.51	0.00							1.0
DQRL	SZ	21	321	EP		1427	5.78	0.02							1.0
SHBL	BZ	24	173	EP		1427	6.15	0.00							1.0
SHBL	BN	24	173	ES		1427	8.98	0.01							1.0

October 1 2013 Hour: 14:47 4.2 Lat: 33.83N Lon: 35.75E Depth: 25 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	12	311	EP		1447	8.74	-0.01	36						1.0
BHL	BE	12	311	ES		1447	12.13	0.02							1.0
DQRL	SZ	22	230	EP		1447	9.56	-0.00							1.0
DQRL	SN	22	230	ES		1447	13.52	-0.01							1.0
RCY	SZ	38	168	EP		1447	11.47	0.04							1.0
RCY	SN	38	168	ES		1447	16.77	-0.02							1.0
HWQ	SZ	53	20	EP		1447	13.30	-0.01							1.0

October 1 2013 Hour: 17:4 5.4 Lat: 33.79N Lon: 35.77E Depth: 8 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	320	EP		17	4	8.45	-0.06	42					1.0
BHL	BE	17	320	ES		17	4	10.84	0.02						1.0
DQRL	SZ	21	244	EP		17	4	9.09	-0.00						1.0
DQRL	SN	21	244	ES		17	4	11.84	0.01						1.0
RCY	SZ	33	170	EP		17	4	11.00	0.05						1.0
RCY	SE	33	170	ES		17	4	15.03	-0.03						1.0
SHBL	BZ	49	183	EP		17	4	13.44	-0.01						1.0
HWQ	SZ	57	16	EP		17	4	14.88	0.22						0.2

October 1 2013 Hour: 20: 2 36.6 Lat: 33.96N Lon: 35.93E Depth: 10 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.0 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	26	257	EP		20	2	41.19-0.00	56						1.0
BHL	BN	26	257	ES		20	2	44.61-0.01							1.0
HWQ	BZ	36	2	EP		20	2	42.59-0.04							1.0
HWQ	BN	36	2	ES		20	2	47.15 0.03							1.0
DQRL	SZ	44	230	EP		20	2	43.85 0.03							1.0
QRWL	SZ	51	207	EP		20	2	44.91-0.06							1.0
RCY	SZ	52	190	EP		20	2	45.12-0.00							1.0
RCY	SN	52	190	ES		20	2	51.45-0.01							1.0
SHBL	BZ	70	195	EP		20	2	48.01 0.06							1.0

October 2 2013 Hour: 1: 6 36.0 Agency: REL Distant
EMSC OT=01:06:36.0 11.25N 57.54E 2Km M=5.7 OWEN FRACTURE ZONE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		112		47.02							
DQRL	SZ			EP		112		49.62							
BHL	BZ			EP		112		50.38							
HWQ	BZ			EP		112		51.13							

October 2 2013 Hour: 5: 1 51.1 Lat: 33.79N Lon: 35.79E Depth: 0 Agency: REL Local
Magnitudes: 2.5MC 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	18	313	EP		5	1	53.97 0.02	31						1.0
BHL	BN	18	313	ES		5	1	56.01-0.07							1.0
DQRL	SZ	23	245	EP		5	1	54.79 0.00							1.0
DQRL	SN	23	245	ES		5	1	57.58 0.05							1.0
RCY	SZ	33	173	EP		5	1	56.40-0.05							1.0
HWQ	SZ	55	15	EP		5	2	0.08 0.05							1.0

October 2 2013 Hour: 13:37 29.0 Lat: 33.49N Lon: 35.68E Depth: 0 Agency: REL Local
Magnitudes: 2.2MC REL Rms: 0.0 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	6	4	EP		1337		29.97-0.07	21						1.0
QRWL	SN	6	4	ES		1337		30.81 0.01							1.0
RCY	SZ	15	88	EP		1337		31.40-0.01							1.0
RCY	SN	15	88	ES		1337		33.19 0.02							1.0
DQRL	SZ	26	337	EP		1337		33.23 0.05							1.0

October 2 2013 Hour: 14:38 44.9 Lat: 33.85N Lon: 35.77E Depth: 30 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	12	301	EP		1438		50.15 0.05	41						1.0
BHL	BN	12	301	ES		1438		53.93 0.00							1.0
DQRL	SZ	24	229	EP		1438		51.00 0.00							1.0
DQRL	SN	24	229	ES		1438		55.45-0.03							1.0
RCY	SZ	39	171	EP		1438		52.71 0.01							1.0
HWQ	SZ	51	19	EP		1438		54.05-0.03							1.0

October 2 2013 Hour: 15: 8 16.5 Lat: 34.07N Lon: 35.81E Depth: 37 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

KESROUANE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	23	220	EP		15	8	23.28 0.06	41						1.0
BHL	BN	23	220	ES		15	8	28.21-0.01							1.0
HWQ	SZ	27	27	EP		15	8	23.50-0.01							1.0
DQRL	SZ	46	210	EP		15	8	25.43-0.00							1.0
DQRL	SN	46	210	ES		15	8	32.05-0.02							1.0

RCY	SZ	63	178	EP		15	8	27.50	-0.02									1.0
RCY	SN	63	178	ES		15	8	35.71	0.01									1.0

October 3 2013 Hour: 14:59 32.5 Lat: 33.87N Lon: 35.85E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC 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	18	283	EP		1459	35.36	-0.05	43						1.0
DQRL	SZ	31	235	EP		1459	37.53	0.02							1.0
DQRL	SN	31	235	ES		1459	41.27	0.02							1.0
RCY	SZ	41	181	EP		1459	39.15	0.04							1.0
RCY	SN	41	181	ES		1459	43.98	-0.05							1.0
HWQ	SZ	46	11	EP		1459	39.95	0.01							1.0

October 3 2013 Hour: 16:49 15.9 Lat: 33.82N Lon: 35.74E Depth: 23 Agency: REL Local
Magnitudes: 2.5MC 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	12	318	EP		1649	20.23	0.01	31						1.0
BHL	BE	12	318	ES		1649	23.40	-0.01							1.0
DQRL	SZ	21	231	EP		1649	20.92	0.01							1.0
RCY	SZ	37	167	EP		1649	22.84	-0.03							1.0
RCY	SE	37	167	ES		1649	28.05	0.02							1.0
HWQ	SZ	54	20	EP		1649	25.12	0.01							1.0

October 4 2013 Hour: 15:45 33.2 Lat: 34.00N Lon: 36.14E Depth: 28 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	36	330	EP		1545	40.31	-0.01	54						1.0
HWQ	SN	36	330	ES		1545	45.65	0.03							1.0
BHL	BZ	46	257	EP		1545	41.52	-0.06							1.0
BHL	BN	46	257	ES		1545	47.78	-0.02							1.0
DQRL	SZ	62	238	EP		1545	43.74	0.06							1.0
RCY	SZ	62	207	EP		1545	43.70	-0.09							1.0
RCY	SN	62	207	ES		1545	51.68	0.02							1.0
QRWL	SZ	66	220	EP		1545	44.26	0.08							1.0

October 5 2013 Hour: 16:49 15.3 Lat: 33.70N Lon: 35.89E Depth: 10 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.1 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	23	193	EP		1649	19.35	-0.12							1.0
RCY	SN	23	193	ES		1649	22.56	0.04							1.0
QRWL	SZ	25	229	EP		1649	19.89	0.08							1.0
DQRL	SZ	30	272	EP		1649	20.44	0.00							1.0
BHL	BZ	32	317	EP		1649	20.68	-0.07	70						1.0
BHL	BN	32	317	ES		1649	24.74	-0.00							1.0
HWQ	SZ	65	5	EP		1649	25.98	0.06							1.0

October 6 2013 Hour: 1:37 21.0 Agency: REL Distant
EMSC OT=01:37:21.0 45.64N 26.69E 134Km M=5.3 ROMANIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		140	27.05								
BHL	BZ			EP		140	28.73								

October 6 2013 Hour: 11:47 48.8 Lat: 33.79N Lon: 35.76E Depth: 9 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	323	EP		1147	51.81	-0.01	39						1.0
DQRL	SZ	20	242	EP		1147	52.36	-0.00							1.0
DQRL	SN	20	242	ES		1147	55.02	0.00							1.0
RCY	SZ	33	168	EP		1147	54.41	-0.00							1.0

RCY	SN	33	168	ES		1147	58.59	0.00									1.0
HWQ	SZ	57	18	EP		1147	58.09	0.01									1.0

October 6 2013 Hour: 13:44 24.4 Lat: 33.88N Lon: 35.78E Depth: 17 Agency: REL Local
Magnitudes: 2.8MC 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	12	282	EP		1344	27.94	-0.04	43						1.0
BHL	BN	12	282	ES		1344	30.61	-0.01							1.0
BEYL	BZ	27	268	EP		1344	29.48	-0.05							1.0
DQRL	SZ	28	226	EP		1344	29.74	0.02							1.0
DQRL	SE	28	226	ES		1344	33.71	0.07							1.0
RCY	SZ	43	174	EP		1344	31.77	-0.05							1.0
RCY	SN	43	174	ES		1344	37.31	0.01							1.0
HWQ	SZ	47	19	EP		1344	32.39	0.06							1.0

October 7 2013 Hour: 11:2 53.5 Lat: 33.78N Lon: 35.79E Depth: 0 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	19	316	EP		11	2	56.48	-0.02	33					1.0
BHL	BE	19	316	ES		11	2	58.70	-0.02						1.0
DQRL	SZ	22	247	EP		11	2	57.11	-0.00						1.0
DQRL	SN	22	247	ES		11	2	59.81	0.03						1.0
RCY	SZ	32	173	EP		11	2	58.72	0.04						1.0
RCY	SN	32	173	ES		11	3	2.47	-0.04						1.0
HWQ	SZ	57	14	EP		11	3	2.67	0.02						1.0

October 7 2013 Hour: 15:12 9.1 Lat: 33.80N Lon: 35.77E Depth: 18 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	16	318	EP		1512	12.91	-0.01	33						1.0
BHL	BE	16	318	ES		1512	15.80	0.01							1.0
DQRL	SZ	21	240	EP		1512	13.51	-0.00							1.0
RCY	SZ	34	169	EP		1512	15.30	0.03							1.0
RCY	SN	34	169	ES		1512	19.86	-0.02							1.0
HWQ	SZ	56	17	EP		1512	18.27	-0.00							1.0

October 7 2013 Hour: 20:4 15.0 Agency: REL Regional
EMSC OT=20:04:15.0 34.87N 33.96E 30Km M=2.4 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		20	4	42.42							
RCY	SZ			EP		20	4	46.07							

October 8 2013 Hour: 14:55 17.2 Lat: 33.79N Lon: 35.78E Depth: 4 Agency: REL Local
Magnitudes: 2.5MC 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		1455	20.07	-0.07	28						1.0
BHL	BN	17	318	ES		1455	22.31	0.02							1.0
DQRL	SZ	21	245	EP		1455	20.83	0.03							1.0
RCY	SZ	33	171	EP		1455	22.59	-0.03							1.0
RCY	SN	33	171	ES		1455	26.60	0.01							1.0
HWQ	SZ	56	16	EP		1455	26.42	0.03							1.0

October 8 2013 Hour: 15:48 35.9 Lat: 34.74N Lon: 36.06E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.0 secs

HOMS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	52	191	EP		1548	44.27	-0.01	66						1.0
HWQ	SN	52	191	ES		1548	50.52	0.01							1.0
BHL	BZ	100	202	EP		1548	51.92	-0.04							1.0
DQRL	SZ	123	201	EP		1548	55.78	0.06							1.0

DQRL SN 123 201 ES 1549 10.41-0.01 1.0

**October 9 2013 Hour: 14:52 45.2 Lat: 33.79N Lon: 35.78E Depth: 8 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	318	EP		1452	48.37	-0.01	38						1.0
BHL	BE	17	318	ES		1452	50.70	0.00							1.0
DQRL	SZ	21	244	EP		1452	49.02	-0.00							1.0
DQRL	SN	21	244	ES		1452	51.82	0.00							1.0
RCY	SZ	33	170	EP		1452	50.83	-0.00							1.0
RCY	SN	33	170	ES		1452	54.97	0.00							1.0
HWQ	SZ	56	16	EP		1452	54.45	0.01							1.0

**October 9 2013 Hour: 16:33 13.4 Lat: 33.47N Lon: 35.69E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs**

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	14	77	EP		1633	15.65	-0.02	63						1.0
SHBL	BZ	14	158	EP		1633	15.68	0.00							1.0
SHBL	BN	14	158	ES		1633	17.36	-0.02							1.0
DQRL	SZ	29	338	EP		1633	18.02	0.03							1.0
DQRL	SN	29	338	ES		1633	21.40	-0.00							1.0
BHL	BZ	49	356	EP		1633	21.17	-0.04							1.0
BHL	BN	49	356	ES		1633	26.94	-0.07							1.0
HWQ	SZ	93	15	EP		1633	28.50	0.11							1.0

**October 10 2013 Hour: 10:26 45.7 Lat: 33.38N Lon: 35.49E Depth: 5 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
SHBL	BZ	24	97	EP		1026	49.79	0.01							1.0
SHBL	BN	24	97	ES		1026	52.77	0.00							1.0
RCY	SZ	35	67	EP		1026	51.49	-0.02	47						1.0
DQRL	SZ	38	12	EP		1026	51.88	-0.00							1.0
DQRL	SN	38	12	ES		1026	56.43	0.01							1.0
HWQ	SZ	109	23	EP		1027	3.32	0.00							1.0

**October 10 2013 Hour: 12:56 33.7 Lat: 33.48N Lon: 35.65E Depth: 11 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs**

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	25	EP		1256	36.05	0.02	29						1.0
QRWL	SN	8	25	ES		1256	37.75	-0.01							1.0
SHBL	BZ	18	149	EP		1256	37.08	-0.10							1.0
SHBL	BN	18	149	ES		1256	39.81	0.06							1.0
RCY	SZ	18	85	EP		1256	37.28	0.08							1.0
RCY	SN	18	85	ES		1256	39.75	-0.05							1.0

**October 10 2013 Hour: 12:59 27.4 Lat: 33.88N Lon: 35.83E Depth: 11 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.2 secs**

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	279	EP		1259	30.49	-0.27	47						1.0
BHL	BN	16	279	ES		1259	33.23	0.01							1.0
DQRL	SZ	31	231	EP		1259	32.82	-0.00							1.0
DQRL	SN	31	231	ES		1259	36.99	0.19							1.0
RCY	SZ	43	179	EP		1259	34.49	-0.16							1.0
RCY	SN	43	179	ES		1259	40.04	0.06							1.0
HWQ	SZ	45	14	EP		1259	35.19	0.17							1.0

October 10 2013 Hour: 13:58 28.3 Lat: 33.55N Lon: 35.71E Depth: 0 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	3	272	EP		1358	28.68	-0.07							1.0
RCY	SZ	13	116	EP		1358	30.21	-0.16	37						1.0
RCY	SN	13	116	ES		1358	32.02	0.11							1.0
DQRL	SZ	22	323	EP		1358	31.90	0.07							1.0
DQRL	SN	22	323	ES		1358	34.54	0.08							1.0
SHBL	BZ	22	172	EP		1358	31.90	0.02							1.0
SHBL	BN	22	172	ES		1358	34.57	0.03							1.0
BHL	BZ	40	352	EP		1358	34.66	-0.08							1.0

October 10 2013 Hour: 22:58 6.9 Lat: 33.79N Lon: 35.80E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC 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	19	314	EP		2258	9.91	-0.05	47						1.0
DQRL	SZ	23	248	EP		2258	10.65	-0.01							1.0
DQRL	SN	23	248	ES		2258	13.49	0.03							1.0
RCY	SZ	32	175	EP		2258	12.08	-0.02							1.0
RCY	SN	32	175	ES		2258	15.95	-0.00							1.0
HWQ	BZ	56	14	EP		2258	16.00	0.05							1.0

October 11 2013 Hour: 14:13 15.2 Lat: 33.70N Lon: 35.80E Depth: 13 Agency: REL Local
Magnitudes: 2.7MC 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	20	213	EP		1413	19.09	-0.06							1.0
QRWL	SN	20	213	ES		1413	22.04	0.00							1.0
DQRL	SZ	21	273	EP		1413	19.40	0.05							1.0
DQRL	SN	21	273	ES		1413	22.40	-0.00							1.0
RCY	SZ	22	171	EP		1413	19.58	0.03	40						1.0
RCY	SN	22	171	ES		1413	22.74	-0.00							1.0
BHL	BZ	27	330	EP		1413	20.09	-0.02							1.0

October 11 2013 Hour: 15:14 48.8 Lat: 33.79N Lon: 35.78E Depth: 1 Agency: REL Local
Magnitudes: 2.8MC 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		1514	51.61	-0.01	45						1.0
DQRL	SZ	21	245	EP		1514	52.30	0.03							1.0
DQRL	SN	21	245	ES		1514	54.83	-0.01							1.0
RCY	SZ	33	171	EP		1514	54.07	-0.03							1.0
RCY	SN	33	171	ES		1514	58.04	0.02							1.0
HWQ	SZ	57	16	EP		1514	57.93	0.01							1.0

October 11 2013 Hour: 21:24 57.0 Agency: REL Distant
EMSC OT=21:24:57.0 30.79S 178.39W 132Km M=6.2 KERMADEC ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2144	28.32								
HWQ	BZ			EP		2144	27.73								

October 12 2013 Hour: 2:10 29.0 Agency: REL Distant
EMSC OT=02:10:29.0 10.86N 62.37W 75Km M=6.0 VENEZUELA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		223	23.63								
HWQ	BZ			EP		223	24.61								

October 12 2013 Hour: 12:30 40.4 Lat: 33.51N Lon: 35.65E Depth: 18 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	5	30	EP		1230	43.59	0.08	32						1.0
QRWL	SN	5	30	ES		1230	45.78	-0.05							1.0
RCY	SZ	17	94	EP		1230	44.52	0.05							1.0
RCY	SN	17	94	ES		1230	47.46	-0.03							1.0
DQRL	SZ	23	340	EP		1230	45.02	-0.13							1.0
DQRL	SN	23	340	ES		1230	48.76	0.08							1.0

October 12 2013 Hour: 12:45 21.4 Lat: 34.70N Lon: 36.19E Depth: 3 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.0 secs

HOMS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	52	206	EP		1245	29.77	0.03	70						1.0
HWQ	BN	52	206	ES		1245	35.95	0.01							1.0
BHL	BZ	101	210	EP		1245	37.61	-0.06							1.0
DQRL	SZ	124	208	EP		1245	41.32	0.01							1.0
DQRL	SN	124	208	ES		1245	56.08	0.01							1.0
RCY	SZ	137	194	EP		1245	43.29	0.02							1.0
RCY	SN	137	194	ES		1245	59.46	-0.02							1.0

October 12 2013 Hour: 13:11 54.0 Agency: REL Regional

EMSC OT=13:11:54.0 35.56N 23.31E 47Km M=6.4 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1314	13.12								
BHL	BZ			EP		1314	14.57								
QRWL	SZ			EP		1314	15.73								
HWQ	BZ			EP		1314	16.54								
SHBL	BZ			EP		1314	17.01								
RCY	SZ			EP		1314	17.76								

October 12 2013 Hour: 17:16 17.0 Agency: REL Regional

EMSC OT=17:16:17.0 36.20N 28.32E 40Km M=4.4 DODECANESE REG

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1717	47.57								
DQRL	SZ			EP		1717	48.05								
HWQ	SZ			EP		1717	49.91								
RCY	SZ			EP		1717	52.91								
SHBL	BZ			EP		1717	53.18								

October 12 2013 Hour: 21:24 20.1 Lat: 33.73N Lon: 35.91E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.1 secs

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	27	196	EP		2124	24.38	-0.04							1.0
RCY	SN	27	196	ES		2124	27.59	-0.05							1.0
QRWL	SZ	30	227	EP		2124	24.85	0.01							1.0
QRWL	SN	30	227	ES		2124	28.45	0.09							1.0
BHL	BZ	31	309	EP		2124	25.03	-0.02	64						1.0
BHL	BN	31	309	ES		2124	28.71	-0.02							1.0
DQRL	SZ	32	265	EP		2124	25.25	0.01							1.0
DQRL	SN	32	265	ES		2124	29.04	-0.01							1.0
BEYL	BZ	42	292	EP		2124	26.82	-0.03							1.0
HWQ	SZ	61	3	EP		2124	29.95	0.06							1.0

October 13 2013 Hour: 17:32 46.0 Agency: REL Distant
EMSC OT=17:32:46.0 04.04N 95.96E 49Km M=5.6 NORTHERN SUMATRA
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 SHBL BZ EP 1743 10.65
 HWQ BZ EP 1743 10.83
 BHL BZ EP 1743 11.84

October 13 2013 Hour: 18:43 31.0 Agency: REL Regional
EMSC OT=18:43:31.0 36.18N 35.85E 10Km M=3.0 CENTRAL TURKEY
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 HWQ SZ EP 1844 4.09
 BHL BZ EP 1844 8.72
 DQRL SZ EP 1844 10.88
 SHBL BZ EP 1844 17.01

October 15 2013 Hour: 0:12 33.0 Agency: REL Distant
EMSC OT=00:12:33.0 09.92N 124.10E 15Km M=7.1 BOHOL, PHILIPPINES
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 HWQ SZ EP 024 57.23
 RCY SZ EP 024 58.21
 BHL BZ EP 025 1.96
 DQRL SZ EP 025 1.96
 BEYL BZ EP 025 2.76

October 15 2013 Hour: 1:15 34.0 Lat: 34.66N Lon: 33.88E Depth: 0 Agency: REL Regional
Magnitudes: 3.7MC REL Rms: 0.1 secs
CYPRUS REGION
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ 183 117 EP 116 2.89 0.00 1.0
 DQRL SZ 188 124 EP 116 3.48-0.01 1.0
 DQRL SN 188 124 ES 116 25.23-0.06 1.0
 HWQ SZ 194 102 EP 116 4.10-0.16 126 1.0
 HWQ SN 194 102 ES 116 26.74 0.10 1.0
 RCY SZ 222 125 EP 116 7.86 0.17 1.0
 RCY SN 222 125 ES 116 32.58-0.03 1.0

October 15 2013 Hour: 8:42 51.0 Agency: REL Distant
EMSC OT=08:42:51.0 09.86N 123.79E 20Km M=5.7 PHILIPPINES
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 HWQ BZ EP 855 13.86
 RCY SZ EP 855 15.49
 BHL BZ EP 855 15.49
 SHBL BZ EP 855 15.49

October 16 2013 Hour: 7:10 27.0 Agency: REL Regional
EMSC OT=07:10:27.0 36.14N 31.96E 80Km M=3.5 WESTERN TURKEY
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 RCY SZ EP 711 27.77
 SHBL BZ EP 711 28.46

October 16 2013 Hour: 10:31 1.0 Agency: REL Distant
EMSC OT=10:31:01.0 06.45S 154.99E 50Km M=6.8 BOUGAINVILLE REG
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 SHBL BZ EP 1049 41.48
 BHL BZ EP 1049 41.68

October 17 2013 Hour: 4: 4 10.4 Lat: 33.60N Lon: 35.81E Depth: 16 Agency: REL Local
Magnitudes: 2.7MC 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 12 166 EP 4 4 13.81 0.03 37 1.0
 RCY SN 12 166 ES 4 4 16.31 0.01 1.0
 QRWL SZ 13 242 EP 4 4 13.78-0.01 1.0

QRWL	SN	13	242	ES		4	4	16.26	-0.05								1.0
DQRL	SZ	25	298	EP		4	4	15.19	0.03								1.0
DQRL	SN	25	298	ES		4	4	18.73	0.04								1.0
BHL	BZ	36	337	EP		4	4	16.71	-0.05								1.0

October 17 2013 Hour: 14:21 41.8 Lat: 34.03N Lon: 35.82E Depth: 17 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

KESROUANE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	21	227	EP		1421	46.26	0.00							1.0
BHL	BN	21	227	ES		1421	49.55	-0.00							1.0
HWQ	SZ	29	23	EP		1421	47.32	0.00	31						1.0
HWQ	SE	29	23	ES		1421	51.39	-0.00							1.0
DQRL	SZ	43	213	EP		1421	49.22	-0.00							1.0
RCY	SZ	60	179	EP		1421	51.62	0.00							1.0

October 17 2013 Hour: 18:17 53.9 Lat: 32.83N Lon: 35.58E Depth: 0 Agency: REL Regional
Magnitudes: 3.6MC REL Rms: 0.1 secs

NORTH GALILEE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	59	15	EP		1818	3.41	-0.07							1.0
SHBL	BN	59	15	ES		1818	10.60	0.07							1.0
RCY	SZ	77	18	EP		1818	6.52	0.10							1.0
RCY	SN	77	18	ES		1818	15.69	0.05							1.0
DQRL	SZ	97	360	EP		1818	9.37	-0.15							1.0
DQRL	SN	97	360	ES		1818	21.05	0.00							1.0
BEYL	BZ	115	356	EP		1818	12.54	0.01							1.0
BHL	BZ	119	4	EP		1818	13.08	-0.03	133						1.0
BHL	BN	119	4	ES		1818	27.20	-0.09							1.0
HWQ	SZ	164	12	EP		1818	19.93	0.03							1.0

October 17 2013 Hour: 19:30 55.0 Lat: 32.73N Lon: 35.64E Depth: 0 Agency: REL Regional
Magnitudes: 3.0MC REL Rms: 0.1 secs

NORTH GALILEE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	69	8	EP		1931	6.27	0.05							1.0
SHBL	BN	69	8	ES		1931	14.47	-0.04							1.0
RCY	SZ	87	12	EP		1931	9.07	-0.00	59						1.0
DQRL	SZ	109	356	EP		1931	12.52	-0.02							1.0
DQRL	SN	109	356	ES		1931	25.50	-0.01							1.0
BHL	BZ	130	0	EP		1931	16.13	0.07							1.0
HWQ	BZ	174	9	EP		1931	22.43	-0.09							1.0
HWQ	BN	174	9	ES		1931	42.92	0.05							1.0

October 18 2013 Hour: 1:26 48.0 Agency: REL Regional
EMSC OT=01:26:48.0 36.61N 27.33E 125Km M=4.4 DODECANESE REG

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		128	26.44								
DQRL	SZ			EP		128	27.27								
HWQ	BZ			EP		128	29.22								
QRWL	SZ			EP		128	30.29								
RCY	SZ			EP		128	32.31								

October 18 2013 Hour: 2:1 59.0 Lat: 32.93N Lon: 35.24E Depth: 3 Agency: REL Regional
Magnitudes: 3.0MC REL Rms: 0.1 secs

NORTH GALILEE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	84	41	EP		2	2	12.67	0.09	55					1.0
RCY	SN	84	41	ES		2	2	22.55	-0.05						1.0
DQRL	SZ	92	19	EP		2	2	13.83	0.03						1.0
DQRL	SN	92	19	ES		2	2	24.79	0.07						1.0
BHL	BZ	115	19	EP		2	2	17.41	-0.15						1.0
HWQ	SZ	163	23	EP		2	2	24.79	0.02						1.0
HWQ	SE	163	23	ES		2	2	43.80	-0.01						1.0

October 18 2013 Hour: 17:18 29.5 Lat: 34.37N Lon: 35.88E Depth: 10 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

NORTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	12	149	EP		1718	32.30	0.03	47						1.0
HWQ	BN	12	149	ES		1718	34.29	-0.00							1.0
BHL	BZ	56	202	EP		1718	38.70	-0.04							1.0
DQRL	SZ	79	201	EP		1718	42.43	0.04							1.0
DQRL	SN	79	201	ES		1718	51.93	0.02							1.0
RCY	SZ	97	182	EP		1718	45.02	-0.05							1.0

October 18 2013 Hour: 23:30 30.5 Lat: 32.79N Lon: 35.53E Depth: 0 Agency: REL Regional
Magnitudes: 3.1MC REL Rms: 0.1 secs

NORTH GALILEE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	83	20	EP		2330	43.83	-0.07	62						1.0
RCY	SN	83	20	ES		2330	53.76	-0.07							1.0
QRWL	SZ	85	9	EP		2330	44.11	-0.10							1.0
QRWL	SE	85	9	ES		2330	54.53	0.17							1.0
DQRL	SZ	102	2	EP		2330	46.92	0.05							1.0
DQRL	SE	102	2	ES		2330	58.91	-0.08							1.0
BHL	BZ	124	5	EP		2330	50.35	-0.14							1.0
HWQ	SZ	169	13	EP		2330	57.56	0.24							1.0

October 19 2013 Hour: 10:35 53.4 Lat: 33.89N Lon: 35.83E Depth: 13 Agency: REL Local
Magnitudes: 2.6MC 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	277	EP		1035	56.92	-0.02	36						1.0
BHL	BN	16	277	ES		1035	59.50	-0.02							1.0
DQRL	SZ	31	230	EP		1035	58.98	0.01							1.0
DQRL	SN	31	230	ES		1036	3.09	0.03							1.0
RCY	SZ	43	179	EP		1036	0.71	-0.12							1.0
RCY	SE	43	179	ES		1036	6.36	0.07							1.0
HWQ	SZ	45	14	EP		1036	1.12	0.05							1.0

October 20 2013 Hour: 5:19 40.3 Lat: 32.75N Lon: 35.62E Depth: 0 Agency: REL Regional
Magnitudes: 3.0MC REL Rms: 0.1 secs

NORTH GALILEE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	67	10	EP		519	51.16	-0.00							1.0
SHBL	BN	67	10	ES		519	59.15	-0.02							1.0
RCY	SZ	85	14	EP		519	54.06	0.01	54						1.0
RCY	SN	85	14	ES		520	4.22	0.03							1.0
QRWL	SZ	88	4	EP		519	54.47	-0.12							1.0
DQRL	SZ	106	358	EP		519	57.42	0.03							1.0
DQRL	SN	106	358	ES		520	10.01	-0.00							1.0
BHL	BZ	128	2	EP		520	1.02	0.08							1.0

October 20 2013 Hour: 5:39 9.3 Lat: 32.76N Lon: 35.60E Depth: 0 Agency: REL Regional
Magnitudes: 3.0MC REL Rms: 0.1 secs

NORTH GALILEE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	67	11	EP		539	19.98	-0.04							1.0
SHBL	BN	67	11	ES		539	27.96	-0.01							1.0
RCY	SZ	85	15	EP		539	22.83	-0.08	59						1.0
RCY	SN	85	15	ES		539	33.02	0.02							1.0
DQRL	SZ	105	358	EP		539	26.18	-0.03							1.0
BHL	BZ	127	2	EP		539	29.79	0.02							1.0
HWQ	SZ	171	11	EP		539	36.54	0.13							1.0

October 20 2013 Hour: 7:20 34.5 Lat: 33.79N Lon: 35.78E Depth: 10 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	317	EP		720	37.68	-0.06	47						1.0
DQRL	SZ	22	243	EP		720	38.41	0.00							1.0
DQRL	SN	22	243	ES		720	41.38	0.07							1.0
QRWL	SZ	29	198	EP		720	39.39	-0.07							1.0
QRWL	SE	29	198	ES		720	43.10	-0.04							1.0
RCY	SZ	33	171	EP		720	40.28	0.07							1.0
HWQ	SZ	56	16	EP		720	43.73	0.03							1.0

October 20 2013 Hour: 8:50 5.0 Lat: 32.85N Lon: 35.56E Depth: 4 Agency: REL Regional
 Magnitudes: 3.5MC REL Rms: 0.1 secs

NORTH GALILEE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	58	17	EP		850	14.35	-0.09							1.0
SHBL	BN	58	17	ES		850	21.39	-0.04							1.0
RCY	SZ	77	19	EP		850	17.24	-0.13							1.0
RCY	SN	77	19	ES		850	26.49	-0.04							1.0
QRWL	SZ	79	8	EP		850	17.69	-0.02							1.0
QRWL	SN	79	8	ES		850	27.23	0.10							1.0
DQRL	SZ	96	0	EP		850	20.43	0.02							1.0
DQRL	SN	96	0	ES		850	32.02	0.19							1.0
BEYL	BZ	114	357	EP		850	23.36	0.02							1.0
BHL	BZ	118	4	EP		850	23.83	-0.12	112						1.0
BHL	BN	118	4	ES		850	37.94	-0.03							1.0
HWQ	SZ	163	12	EP		850	30.61	0.03							1.0

October 20 2013 Hour: 12:41 8.4 Lat: 33.78N Lon: 35.78E Depth: 0 Agency: REL Local
 Magnitudes: 2.8MC 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	18	319	EP		1241	11.22	-0.07	47						1.0
DQRL	SZ	21	246	EP		1241	11.87	0.00							1.0
DQRL	SN	21	246	ES		1241	14.41	-0.00							1.0
BEYL	BZ	28	290	EP		1241	13.05	0.06							1.0
RCY	SZ	32	171	EP		1241	13.65	0.02							1.0
RCY	SE	32	171	ES		1241	17.47	-0.02							1.0
HWQ	SZ	57	16	EP		1241	17.63	0.02							1.0

October 20 2013 Hour: 12:54 7.1 Lat: 32.83N Lon: 35.55E Depth: 3 Agency: REL Regional
 Magnitudes: 3.5MC REL Rms: 0.1 secs

NORTH GALILEE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	60	17	EP		1254	16.74	-0.09							1.0
SHBL	BN	60	17	ES		1254	24.00	-0.05							1.0
RCY	SZ	79	19	EP		1254	19.65	-0.12							1.0
RCY	SE	79	19	ES		1254	29.27	0.10							1.0
QRWL	SZ	81	8	EP		1254	20.12	0.02							1.0
QRWL	SN	81	8	ES		1254	29.67	-0.07							1.0
DQRL	SZ	97	1	EP		1254	22.92	0.14							1.0
DQRL	SN	97	1	ES		1254	34.49	0.09							1.0
BEYL	BZ	116	357	EP		1254	25.74	-0.02							0.2
BHL	BZ	120	4	EP		1254	26.45	0.07	111						1.0
BHL	BN	120	4	ES		1254	40.61	-0.07							1.0
HWQ	SZ	165	13	EP		1254	33.14	0.10							0.2

October 20 2013 Hour: 13:37 29.9 Lat: 33.51N Lon: 35.68E Depth: 3 Agency: REL Local
Magnitudes: 2.7MC 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	4	5	EP		1337	30.90	-0.07	39						1.0
QRWL	SN	4	5	ES		1337	31.76	0.03							1.0
RCY	SZ	15	95	EP		1337	32.48	0.02							1.0
DQRL	SZ	24	335	EP		1337	33.95	0.05							1.0
DQRL	SN	24	335	ES		1337	36.83	0.00							1.0
BHL	BZ	44	357	EP		1337	37.05	-0.03							1.0
HWQ	SZ	89	16	EP		1337	44.25	-0.06							0.2

October 20 2013 Hour: 14:22 12.7 Lat: 33.79N Lon: 35.76E Depth: 14 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	16	322	EP		1422	16.20	-0.04	37						1.0
BHL	BN	16	322	ES		1422	18.83	-0.03							1.0
DQRL	SZ	20	241	EP		1422	16.79	0.04							1.0
DQRL	SN	20	241	ES		1422	19.85	0.10							1.0
BEYL	BZ	26	290	EP		1422	17.43	-0.08							1.0
QRWL	SZ	28	195	EP		1422	17.78	-0.05							1.0
QRWL	SN	28	195	ES		1422	21.60	-0.03							1.0
HWQ	SZ	57	18	EP		1422	22.10	0.08							1.0

October 20 2013 Hour: 16:27 56.4 Lat: 33.80N Lon: 35.77E Depth: 14 Agency: REL Local
Magnitudes: 2.5MC 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	317	EP		1627	59.93	0.01	30						1.0
DQRL	SZ	21	242	EP		1628	0.58	0.01							1.0
DQRL	SE	21	242	ES		1628	3.67	-0.01							1.0
RCY	SZ	34	170	EP		1628	2.43	0.06							1.0
RCY	SE	34	170	ES		1628	6.76	-0.04							1.0
HWQ	SZ	56	17	EP		1628	5.54	-0.02							1.0

October 21 2013 Hour: 19:14 15.0 Agency: REL Regional
EMSC OT=19:14:15.0 34.73N 32.27E 10Km M=3.7 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1915	0.57								
BHL	BZ			EP		1915	0.62								
HWQ	SZ			EP		1915	2.96								
SHBL	BZ			EP		1915	4.26								
RCY	SZ			EP		1915	4.21								

October 21 2013 Hour: 22: 8 49.1 Lat: 32.94N Lon: 35.43E Depth: 6 Agency: REL Regional
Magnitudes: 3.1MC REL Rms: 0.1 secs

NORTH GALILEE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	72	19	EP		22 9	0.72	0.02							1.0
RCY	SZ	73	32	EP		22 9	0.85	-0.02	67						1.0
RCY	SN	73	32	ES		22 9	9.60	0.01							1.0
DQRL	SZ	86	9	EP		22 9	2.95	-0.07							1.0
DQRL	SN	86	9	ES		22 9	13.36	0.03							1.0
BHL	BZ	109	11	EP		22 9	6.72	0.10							1.0
BHL	BN	109	11	ES		22 9	19.54	-0.04							1.0
HWQ	SZ	156	18	EP		22 9	13.51	-0.03							1.0

October 22 2013 Hour: 5:40 51.0 Lat: 32.81N Lon: 35.56E Depth: 0 Agency: REL Regional
Magnitudes: 3.3MC REL Rms: 0.1 secs

NORTH GALILEE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	63	16	EP		541	1.08	-0.02							1.0
SHBL	BN	63	16	ES		541	8.53	-0.04							1.0
RCY	SZ	81	18	EP		541	4.08	0.04							1.0
RCY	SN	81	18	ES		541	13.69	0.01							1.0
QRWL	SZ	83	8	EP		541	4.42	0.01							1.0
QRWL	SN	83	8	ES		541	14.36	0.05							1.0
DQRL	SZ	100	1	EP		541	7.07	-0.04							1.0
DQRL	SN	100	1	ES		541	19.09	0.08							1.0
BEYL	BZ	118	357	EP		541	10.14	0.04							1.0
BHL	BZ	122	4	EP		541	10.56	-0.15	76						1.0
BHL	BE	122	4	ES		541	25.24	-0.04							1.0
HWQ	SZ	167	12	EP		541	17.54	0.02							1.0

October 23 2013 Hour: 8:23 30.0 Agency: REL Distant
EMSC OT=08:23:30.0 23.12S 177.01W 158Km M=5.8 SOUTH OF FIJI ISL

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		842	54.56								
BHL	BZ			EP		842	55.81								
SHBL	BZ			EP		842	56.05								

October 23 2013 Hour: 12:24 23.2 Lat: 36.36N Lon: 34.10E Depth: 14 Agency: REL Regional
Magnitudes: 3.8MC REL Rms: 0.1 secs

TURKEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	286	143	EP		1225	3.38	-0.01							1.0
BEYL	BZ	304	155	EP		1225	5.57	0.03							1.0
BHL	BZ	307	152	EP		1225	6.01	-0.03	135						1.0
BHL	BN	307	152	ES		1225	37.80	0.05							1.0
DQRL	SZ	324	155	EP		1225	8.04	-0.05							1.0
QRWL	SZ	344	155	EP		1225	10.58	-0.01							1.0
RCY	SZ	355	153	EP		1225	12.00	-0.04							1.0
SHBL	BZ	367	155	EP		1225	13.56	0.11							1.0
SHBL	BN	367	155	ES		1225	50.58	-0.05							1.0

October 23 2013 Hour: 14:37 2.0 Lat: 33.54N Lon: 35.72E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC 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	278	EP		1437	2.49	-0.06	39						1.0
RCY	SZ	12	115	EP		1437	4.04	0.05							1.0
RCY	SN	12	115	ES		1437	5.40	-0.05							1.0
SHBL	BZ	22	173	EP		1437	5.57	0.04							1.0
DQRL	SZ	23	323	EP		1437	5.64	-0.00							1.0
DQRL	SN	23	323	ES		1437	8.36	0.02							1.0

October 23 2013 Hour: 23: 6 31.3 Lat: 35.15N Lon: 37.71E Depth: 0 Agency: REL Regional
Magnitudes: 3.5MC REL Rms: 0.1 secs

SYRIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	189	239	EP		23 7	0.84	0.00	95						1.0
HWQ	BE	189	239	ES		23 7	22.84	0.12							1.0
BHL	BZ	234	234	EP		23 7	6.50	0.01							1.0
BHL	BN	234	234	ES		23 7	32.39	-0.17							1.0
RCY	SZ	252	224	EP		23 7	8.77	0.02							1.0
RCY	SN	252	224	ES		23 7	36.55	0.05							1.0
DQRL	SZ	254	231	EP		23 7	8.91	-0.03							1.0

October 24 2013 Hour: 0:25 41.0 Agency: REL Distant
EMSC OT=00:25:41.0 31.04S 178.14W 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 045 33.74
 BHL BZ EP 045 34.44
 QRWL SZ EP 045 34.99

October 24 2013 Hour: 12:55 41.7 Lat: 33.55N Lon: 35.71E Depth: 1 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 3 264 EP 1255 42.23-0.00 49 1.0
 RCY SZ 13 117 EP 1255 43.80-0.06 1.0
 RCY SN 13 117 ES 1255 45.49 0.04 1.0
 DQRL SZ 22 323 EP 1255 45.24 0.03 1.0
 DQRL SN 22 323 ES 1255 47.79-0.01 1.0
 SHBL BZ 23 172 EP 1255 45.39 0.01 1.0
 BHL BZ 40 353 EP 1255 48.12 0.01 1.0

October 24 2013 Hour: 15:37 38.8 Lat: 33.48N Lon: 35.70E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.3 secs
CENTRAL BEKAA
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 QRWL SZ 8 349 EP 1537 40.04-0.02 1.0
 RCY SZ 13 82 EP 1537 40.96 0.01 1.0
 SHBL BZ 15 164 EP 1537 41.06-0.27 1.0
 SHBL BN 15 164 ES 1537 43.16-0.01 1.0
 DQRL SZ 28 335 EP 1537 43.31 0.02 46 1.0
 DQRL SN 28 335 ES 1537 46.49-0.09 1.0
 BHL BZ 47 355 EP 1537 46.49 0.05 1.0
 BHL BN 47 355 ES 1537 52.03-0.03 1.0
 HWQ SZ 91 15 EP 1537 54.57 1.00 0.2

October 24 2013 Hour: 20:32 40.0 Agency: REL Distant
EMSC OT=20:32:40.0 22.59S 176.39W 80Km M=5.8 SOUTH OF FIJI ISL
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 2052 20.70
 RCY SZ EP 2052 21.03
 QRWL SZ EP 2052 20.78
 DQRL SZ EP 2052 21.13

October 25 2013 Hour: 9:20 33.1 Lat: 33.95N Lon: 35.85E Depth: 7 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs
KESROUANE
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ 19 255 EP 920 36.42 0.02 48 1.0
 DQRL SZ 37 224 EP 920 39.39 0.13 1.0
 DQRL SN 37 224 ES 920 43.74-0.10 1.0
 HWQ SZ 38 13 EP 920 39.27-0.01 1.0
 RCY SZ 50 182 EP 920 41.17-0.11 1.0
 RCY SN 50 182 ES 920 47.43 0.07 1.0

October 25 2013 Hour: 14:40 29.2 Lat: 32.32N Lon: 35.76E Depth: 0 Agency: REL Regional
Magnitudes: 3.2MC REL Rms: 0.0 secs
DEAD SEA REGION
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 RCY SZ 130 3 EP 1440 50.25-0.01 65 1.0
 RCY SN 130 3 ES 1441 5.84 0.01 1.0
 DQRL SZ 155 353 EP 1440 53.83 0.00 1.0
 DQRL SN 155 353 ES 1441 12.04-0.00 1.0
 BHL BZ 176 357 EP 1440 56.96-0.00 1.0
 HWQ SZ 218 5 EP 1441 2.37 0.01 1.0

October 25 2013 Hour: 16:44.1 Lat: 33.79N Lon: 35.78E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC 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		16	4	47.82-0.07	48						1.0
BHL	BN	17	318	ES		16	4	49.94	0.00						1.0
DQRL	SZ	21	244	EP		16	4	48.60	0.05						1.0
RCY	SZ	33	170	EP		16	4	50.43	0.01						1.0
RCY	SE	33	170	ES		16	4	54.32-0.03							1.0
HWQ	SZ	57	16	EP		16	4	54.26	0.03						1.0

October 25 2013 Hour: 17:10 17.0 Agency: REL Distant

EMSC OT=17:10:17.0 37.22N 144.69E 10Km M=7.1 COAST OF HONSHU

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1722	41.76								
BHL	BZ			EP		1722	43.76								
BEYL	BZ			EP		1722	44.10								
DQRL	SZ			EP		1722	45.18								
RCY	SZ			EP		1722	45.18								
QRWL	SZ			EP		1722	45.10								
SHBL	BZ			EP		1722	45.77								

October 25 2013 Hour: 22:12 45.6 Lat: 33.80N Lon: 35.55E Depth: 10 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	BZ	9	325	EP		2212	47.91	0.05							1.0
BEYL	BN	9	325	ES		2212	49.56	0.02							1.0
DQRL	SZ	11	171	EP		2212	48.05-0.12		54						1.0
DQRL	SN	11	171	ES		2212	50.07-0.00								1.0
BHL	BZ	15	41	EP		2212	48.58-0.03								1.0
BHL	BN	15	41	ES		2212	50.84-0.00								1.0
QRWL	SZ	31	157	EP		2212	50.97	0.06							1.0
QRWL	SN	31	157	ES		2212	54.84-0.01								1.0
RCY	SZ	43	142	EP		2212	52.88	0.06							1.0
RCY	SN	43	142	ES		2212	58.17	0.01							1.0
HWQ	SZ	64	35	EP		2212	56.08-0.02								1.0

October 26 2013 Hour: 8:56 15.0 Lat: 33.80N Lon: 35.78E Depth: 15 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	315	EP		856	18.73-0.01		40						1.0
DQRL	SZ	22	243	EP		856	19.33-0.05								1.0
DQRL	SN	22	243	ES		856	22.65	0.04							1.0
RCY	SZ	34	172	EP		856	21.00	0.02							1.0
RCY	SN	34	172	ES		856	25.39-0.01								1.0
HWQ	SZ	56	16	EP		856	24.20	0.01							1.0

October 26 2013 Hour: 13:20 36.0 Lat: 33.87N Lon: 35.84E Depth: 8 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	284	EP		1320	39.21-0.05		37						1.0
DQRL	SZ	31	234	EP		1320	41.20-0.01								1.0
DQRL	SN	31	234	ES		1320	45.08	0.04							1.0
RCY	SZ	41	180	EP		1320	42.85-0.03								1.0
RCY	SN	41	180	ES		1320	47.94	0.01							1.0
HWQ	SZ	47	12	EP		1320	43.77	0.04							1.0

October 26 2013 Hour: 14:10 35.7 Lat: 33.81N Lon: 35.78E 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	16	313	EP		1410	39.69	-0.00	38						1.0
DQRL	SZ	22	241	EP		1410	40.40	0.01							1.0
DQRL	SN	22	241	ES		1410	43.84	-0.00							1.0
RCY	SZ	35	172	EP		1410	42.00	-0.01							1.0
RCY	SN	35	172	ES		1410	46.65	0.00							1.0
HWQ	SZ	55	16	EP		1410	44.86	0.03							0.2

October 26 2013 Hour: 14:57 26.8 Lat: 33.56N Lon: 35.72E 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
RCY	SZ	13	123	EP		1457	28.85	0.01	29						1.0
RCY	SN	13	123	ES		1457	30.35	-0.02							1.0
DQRL	SZ	21	319	EP		1457	30.20	-0.03							1.0
SHBL	BZ	24	175	EP		1457	30.56	-0.01							1.0
SHBL	BN	24	175	ES		1457	33.39	0.01							1.0
BHL	BZ	39	351	EP		1457	33.06	0.04							1.0

October 26 2013 Hour: 15:26 52.8 Lat: 33.87N Lon: 35.83E Depth: 3 Agency: REL Local
Magnitudes: 3.2MC 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	284	EP		1526	55.62	-0.02	83						1.0
BHL	BN	17	284	ES		1526	57.73	-0.01							1.0
DQRL	SZ	30	233	EP		1526	57.80	0.07	78						1.0
BEYL	BZ	31	271	EP		1526	57.87	-0.02							0.2
QRWL	SZ	38	201	EP		1526	58.93	-0.07							1.0
QRWL	SN	38	201	ES		1527	3.62	0.03							1.0
RCY	SZ	41	180	EP		1526	59.51	0.01							1.0
RCY	SN	41	180	ES		1527	4.46	0.01							1.0
HWQ	SZ	47	13	EP		1527	0.39	0.02							1.0
SHBL	BZ	58	188	EP		1527	2.18	-0.04							1.0

October 27 2013 Hour: 13:3 39.9 Lat: 33.80N Lon: 35.77E Depth: 16 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	16	317	EP		13 3	43.60	-0.01	32						1.0
DQRL	SZ	21	241	EP		13 3	44.24	0.00							1.0
DQRL	SN	21	241	ES		13 3	47.48	0.01							1.0
RCY	SZ	34	170	EP		13 3	45.95	-0.02							1.0
RCY	SE	34	170	ES		13 3	50.51	0.01							1.0
HWQ	SZ	56	17	EP		13 3	49.06	0.01							1.0

October 27 2013 Hour: 14:58 18.0 Lat: 33.87N Lon: 35.82E Depth: 8 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	286	EP		1458	20.96	-0.04	42						1.0
DQRL	SZ	29	233	EP		1458	22.98	0.03							1.0
DQRL	SN	29	233	ES		1458	26.61	0.01							1.0
RCY	SZ	41	178	EP		1458	24.73	-0.07							1.0
RCY	SN	41	178	ES		1458	29.85	0.05							1.0
HWQ	SZ	47	14	EP		1458	25.82	0.02							1.0
SHBL	BZ	58	187	EP		1458	27.49	0.02							1.0
SHBL	BN	58	187	ES		1458	34.42	-0.03							1.0

October 27 2013 Hour: 15:14 37.8 Lat: 33.79N Lon: 35.78E Depth: 0 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	316	EP		1514	40.54	-0.05	36						1.0
DQRL	SZ	22	244	EP		1514	41.39	0.02							1.0
DQRL	SN	22	244	ES		1514	44.01	0.01							1.0
RCY	SZ	33	172	EP		1514	43.18	0.01							1.0
RCY	SE	33	172	ES		1514	47.12	-0.02							1.0
HWQ	SZ	56	16	EP		1514	46.85	0.03							1.0

October 27 2013 Hour: 18:13 6.0 Agency: REL Distant
EMSC OT=18:13:06.0 37.21N 144.62E 20Km M=5.6 COAST OF HONSHU

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1825	31.43								
DQRL	SZ			EP		1825	32.70								
SHBL	BZ			EP		1825	33.21								

October 27 2013 Hour: 19: 8 44.8 Lat: 33.79N Lon: 35.78E Depth: 1 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	318	EP		19 8	47.60	-0.01	42						1.0
BHL	BE	17	318	ES		19 8	49.70	0.00							1.0
DQRL	SZ	22	245	EP		19 8	48.29	0.01							1.0
BEYL	BZ	28	289	EP		19 8	49.36	0.03							0.2
RCY	SZ	33	171	EP		19 8	50.09	-0.01							1.0
RCY	SE	33	171	ES		19 8	54.04	0.01							1.0
SHBL	BZ	49	184	EP		19 8	52.70	-0.00							1.0
HWQ	SZ	56	16	EP		19 8	54.05	0.14							0.2

October 28 2013 Hour: 14:28 53.9 Lat: 33.78N Lon: 35.77E Depth: 0 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		1428	56.61	-0.04							1.0
DQRL	SZ	21	245	EP		1428	57.21	0.00	41						1.0
DQRL	SN	21	245	ES		1428	59.69	0.02							1.0
RCY	SZ	33	170	EP		1428	59.10	-0.01							1.0
RCY	SE	33	170	ES		1429	2.99	-0.00							1.0
HWQ	SZ	57	16	EP		1429	3.10	0.03							1.0

October 29 2013 Hour: 11:51 6.7 Lat: 33.82N Lon: 35.74E Depth: 25 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	12	319	EP		1151	11.14	-0.03	33						1.0
DQRL	SZ	20	231	EP		1151	11.81	-0.02							1.0
DQRL	SN	20	231	ES		1151	15.65	0.03							1.0
RCY	SZ	37	166	EP		1151	13.78	0.01							1.0
RCY	SN	37	166	ES		1151	19.00	-0.01							1.0
HWQ	SZ	54	21	EP		1151	16.02	0.02							1.0

October 29 2013 Hour: 22:55 0.0 Agency: REL Local

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2256	33.73								
RCY	SZ			EP		2256	26.64								

October 30 2013 Hour: 14:22 53.1 Lat: 33.52N Lon: 35.70E Depth: 0 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
QRWL	SZ	3	332	EP		1422	53.56	-0.07	24						1.0
RCY	SZ	13	103	EP		1422	55.21	-0.02							1.0
RCY	SN	13	103	ES		1422	56.81	0.01							1.0
DQRL	SZ	24	330	EP		1422	56.98	0.08							1.0
DQRL	SN	24	330	ES		1422	59.71	-0.00							1.0

October 30 2013 Hour: 14:57 58.3 Lat: 33.49N Lon: 35.64E 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	8	32	EP		1457	59.53	-0.08	37						1.0
QRWL	SN	8	32	ES		1458	0.58	0.00							1.0
SHBL	BZ	18	147	EP		1458	1.21	-0.05							1.0
SHBL	BN	18	147	ES		1458	3.47	0.03							1.0
RCY	SZ	19	86	EP		1458	1.36	0.06							1.0
DQRL	SZ	25	346	EP		1458	2.38	0.01							1.0
DQRL	SN	25	346	ES		1458	5.40	0.03							1.0

October 30 2013 Hour: 17: 4 32.1 Lat: 33.80N Lon: 35.77E Depth: 12 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	16	318	EP		17 4	35.41	0.01	35						1.0
BHL	BE	16	318	ES		17 4	37.84	-0.00							1.0
DQRL	SZ	21	241	EP		17 4	36.11	0.02							1.0
DQRL	SN	21	241	ES		17 4	39.03	-0.01							1.0
RCY	SZ	34	169	EP		17 4	38.00	-0.01							1.0
RCY	SE	34	169	ES		17 4	42.39	0.01							1.0
HWQ	SZ	56	17	EP		17 4	41.33	-0.00							1.0

October 31 2013 Hour: 12: 2 8.0 Agency: REL Distant

EMSC OT=12:02:08.0 23.57N 121.47E 10Km M=6.3 TAIWAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1213	42.24								
BHL	BZ			EP		1213	43.93								
SHBL	BZ			EP		1213	44.04								

October 31 2013 Hour: 14:41 58.2 Lat: 33.54N Lon: 35.71E Depth: 0 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	3	290	EP		1441	58.64	-0.06	33						1.0
RCY	SZ	13	112	EP		1442	0.20	-0.06							1.0
RCY	SN	13	112	ES		1442	1.78	0.01							1.0
SHBL	BZ	21	172	EP		1442	1.72	0.04							1.0
SHBL	BN	21	172	ES		1442	4.24	0.00							1.0
DQRL	SZ	23	325	EP		1442	1.97	0.09							1.0
DQRL	SN	23	325	ES		1442	4.56	-0.02							1.0

October 31 2013 Hour: 17:56 53.5 Lat: 33.71N Lon: 35.17E Depth: 35 Agency: REL Local
Magnitudes: 2.7MC 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	37	91	EP		1757	1.50	0.06	37						1.0
DQRL	SE	37	91	ES		1757	7.26	-0.03							1.0
BHL	BZ	50	65	EP		1757	2.83	-0.03							1.0
QRWL	SZ	51	111	EP		1757	3.03	0.01							1.0
QRWL	SN	51	111	ES		1757	10.06	0.01							1.0
RCY	SZ	67	111	EP		1757	5.02	0.06							1.0

Epicentral Map of Lebanon

OCTOBER 2013

