

Republic of Lebanon  
National Council for Scientific Research

# Provisional Seismological Bulletin

from the

## NATIONAL SEISMIC NETWORK

January

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.

January 1 2014 Hour: 13:30 45.0 Lat: 33.46N Lon: 34.65E Depth: 24 Agency: REL Local  
 Magnitudes: 3.2MC REL Rms: 0.1 secs

**OFFSHORE SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	89	72	EP		1330	59.41	0.19							1.0
DQRL	SN	89	72	ES		1331	9.76	0.00							1.0
BEYL	BZ	90	59	EP		1330	59.24	-0.05							1.0
BEYL	BN	90	59	ES		1331	9.89	0.01							1.0
QRWL	SZ	96	84	EP		1331	0.19	-0.00							1.0
QRWL	SN	96	84	ES		1331	11.43	-0.01							1.0
SHBL	BZ	102	97	EP		1331	0.88	-0.24							1.0
BHL	BZ	105	62	EP		1331	1.50	-0.01	70						1.0
RCY	SZ	110	88	EP		1331	2.12	-0.13							1.0
RCY	SN	110	88	ES		1331	15.04	0.02							1.0
HWQ	BZ	150	52	EP		1331	7.55	0.01							1.0

January 1 2014 Hour: 14:23 0.0 Agency: REL Distant  
 EMSC OT=14:23:00.0 35.43S 178.84W 30Km M=4.9 NORTH ISLAND,N.Z

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1442	52.44								
QRWL	SZ			EP		1442	52.50								
DQRL	SZ			EP		1442	52.82								

January 1 2014 Hour: 16: 3 31.0 Agency: REL Distant  
 EMSC OT=16:03:31.0 13.86S 167.26E 200Km M=6.6 VANUATU

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1622	20.24								
RCY	SZ			EP		1622	20.68								
BHL	BZ			EP		1622	20.89								
QRWL	SZ			EP		1622	21.11								
DQRL	SZ			EP		1622	21.44								
BEYL	BZ			EP		1622	21.11								
SHBL	BZ			EP		1622	21.66								

January 2 2014 Hour: 1:16 48.2 Lat: 33.45N Lon: 34.73E Depth: 26 Agency: REL Local  
 Magnitudes: 3.1MC 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	83	70	EP		117	1.75	0.11	61						1.0
DQRL	SN	83	70	ES		117	11.56	-0.00							1.0
QRWL	SZ	89	83	EP		117	2.49	-0.04							1.0
QRWL	SE	89	83	ES		117	13.06	-0.04							1.0
BHL	BZ	99	59	EP		117	3.94	-0.06							1.0
RCY	SZ	103	87	EP		117	4.55	-0.00							1.0
RCY	SN	103	87	ES		117	16.67	0.04							1.0

January 2 2014 Hour: 3:13 57.0 Agency: REL Distant  
 EMSC OT=03:13:57.0 27.27N 54.48E 10Km M=5.3 SOUTHERN IRAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		317	56.59								
HWQ	BZ			EP		317	58.18								
QRWL	SZ			EP		317	58.50								
BHL	BZ			EP		317	59.69								
DQRL	SZ			EP		318	0.92								

January 2 2014 Hour: 14:57 22.4 Lat: 33.84N Lon: 35.76E Depth: 30 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	12	307	EP		1457	27.70	0.10	39						1.0
BHL	BE	12	307	ES		1457	31.33	-0.11							1.0
DQRL	SZ	23	231	EP		1457	28.43	0.06							1.0
DQRL	SE	23	231	ES		1457	32.79	0.01							1.0

RCY SZ 38 170 EP 1457 30.04-0.02 1.0

**January 3 2014 Hour: 16:17 19.8 Lat: 33.75N Lon: 35.95E 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	30	201	EP		1617	24.62	-0.06							1.0
RCY	SN	30	201	ES		1617	28.33	0.03							1.0
BHL	BZ	32	302	EP		1617	25.07	0.05	28						1.0
QRWL	SZ	34	228	EP		1617	25.18	-0.06							1.0
QRWL	SE	34	228	ES		1617	29.29	0.03							1.0
DQRL	SZ	36	262	EP		1617	25.56	-0.01							1.0
DQRL	SN	36	262	ES		1617	29.81	-0.03							1.0

**January 3 2014 Hour: 23:46 25.7 Lat: 33.79N Lon: 35.71E Depth: 0 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	14	340	EP		2346	27.89	-0.02	38						1.0
DQRL	SZ	15	234	EP		2346	28.26	0.12							1.0
DQRL	SN	15	234	ES		2346	29.91	-0.07							1.0
QRWL	SZ	27	185	EP		2346	29.92	-0.03							1.0
QRWL	SN	27	185	ES		2346	33.09	-0.03							1.0
RCY	SZ	34	159	EP		2346	31.23	0.02							1.0
HWQ	SZ	59	22	EP		2346	35.17	0.00							1.0

**January 4 2014 Hour: 14: 0 16.9 Lat: 33.54N Lon: 35.71E Depth: 0 Agency: REL Local**  
**Magnitudes: 2.3MC REL Rms: 0.2 secs**

**CENTRAL BEKAA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	288	EP		14 0	17.30	-0.07	23						1.0
RCY	SZ	13	112	EP		14 0	18.88	-0.08							1.0
RCY	SN	13	112	ES		14 0	20.50	0.02							1.0
DQRL	SZ	23	325	EP		14 0	20.62	0.08							1.0
DQRL	SN	23	325	ES		14 0	23.23	0.00							1.0

**January 4 2014 Hour: 14:24 47.1 Lat: 33.48N Lon: 35.65E Depth: 4 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	19	EP		1424	48.69	0.01	37						1.0
QRWL	SN	8	19	ES		1424	49.82	-0.01							1.0
RCY	SZ	17	83	EP		1424	50.00	-0.01							1.0
RCY	SN	17	83	ES		1424	52.15	0.01							1.0
DQRL	SZ	27	343	EP		1424	51.48	-0.00							1.0
DQRL	SN	27	343	ES		1424	54.71	0.00							1.0

**January 5 2014 Hour: 15:35 20.0 Lat: 33.78N Lon: 35.78E Depth: 4 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
BHL	BZ	18	320	EP		1535	23.04	-0.09	51						1.0
BHL	BN	18	320	ES		1535	25.46	0.05							1.0
DQRL	SZ	21	248	EP		1535	23.60	0.02							1.0
QRWL	SZ	27	200	EP		1535	24.51	-0.01							1.0
QRWL	SN	27	200	ES		1535	27.81	-0.02							1.0
RCY	SZ	32	171	EP		1535	25.27	0.03							1.0
HWQ	SZ	58	15	EP		1535	29.37	0.01							1.0

January 6 2014 Hour: 12:16 57.0 Lat: 33.42N Lon: 35.67E Depth: 1 Agency: REL Local  
 Magnitudes: 2.8MC 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	10	140	EP		1216	58.68	-0.06							1.0
SHBL	BN	10	140	ES		1217	0.08	0.05							1.0
QRWL	SZ	14	3	EP		1216	59.27	-0.05							1.0
RCY	SZ	17	61	EP		1216	59.81	-0.03	44						1.0
RCY	SN	17	61	ES		1217	1.93	-0.00							1.0
DQRL	SZ	33	343	EP		1217	2.33	-0.02							1.0
DQRL	SN	33	343	ES		1217	6.33	0.02							1.0
BHL	BZ	54	358	EP		1217	5.68	0.00							1.0
HWQ	SZ	98	15	EP		1217	12.96	0.07							1.0

January 6 2014 Hour: 12:22 12.9 Lat: 33.48N Lon: 35.67E Depth: 14 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	12	EP		1222	15.52	-0.08							1.0
QRWL	SN	7	12	ES		1222	17.67	0.03							1.0
RCY	SZ	16	84	EP		1222	16.48	0.01	36						1.0
RCY	SN	16	84	ES		1222	19.15	0.00							1.0
SHBL	BZ	17	154	EP		1222	16.57	0.02							1.0
DQRL	SZ	26	340	EP		1222	17.79	0.03							1.0

January 6 2014 Hour: 14:3 57.5 Lat: 33.45N Lon: 35.61E Depth: 12 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	13	33	EP		14 4	0.40	-0.04							1.0
QRWL	SN	13	33	ES		14 4	2.65	0.01							1.0
SHBL	BZ	17	132	EP		14 4	1.02	0.00							1.0
SHBL	BN	17	132	ES		14 4	3.65	0.00							1.0
RCY	SZ	22	77	EP		14 4	1.64	0.01	29						1.0
DQRL	SZ	28	353	EP		14 4	2.55	0.02							1.0

January 6 2014 Hour: 16:0 41.3 Lat: 33.78N Lon: 35.80E Depth: 0 Agency: REL Local  
 Magnitudes: 2.4MC 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	315	EP		16 0	44.30	-0.04	25						1.0
DQRL	SZ	23	248	EP		16 0	45.03	0.03							1.0
DQRL	SN	23	248	ES		16 0	47.75	0.02							1.0
QRWL	SZ	28	202	EP		16 0	45.92	0.03							1.0
QRWL	SN	28	202	ES		16 0	49.23	-0.05							1.0
HWQ	SZ	56	14	EP		16 0	50.41	0.01							1.0

January 6 2014 Hour: 18:49 39.0 Agency: REL Distant  
 EMSC OT=18:49:39.0 25.51N 122.84E 226Km M=5.0 TAIWAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		19 0	51.16								
RCY	SZ			EP		19 0	51.78								
QRWL	SZ			EP		19 0	52.04								

January 7 2014 Hour: 10:13 22.3 Lat: 33.78N Lon: 35.77E Depth: 1 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	322	EP		1013	24.91	-0.11	42						1.0
DQRL	SZ	20	245	EP		1013	25.53	0.01							1.0
DQRL	SN	20	245	ES		1013	27.99	0.06							1.0
RCY	SZ	32	168	EP		1013	27.46	-0.05							1.0
RCY	SN	32	168	ES		1013	31.41	0.02							1.0

HWQ SZ 57 17 EP 1013 31.61 0.10 1.0

January 7 2014 Hour: 12:31 56.2 Lat: 33.47N Lon: 35.69E Depth: 5 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	357	EP		1231	57.91	-0.03							1.0
QRWL	SN	9	357	ES		1231	59.25	0.02							1.0
RCY	SZ	14	78	EP		1231	58.74	0.00	35						1.0
SHBL	BZ	15	159	EP		1231	58.82	0.03							1.0
SHBL	BN	15	159	ES		1232	0.70	-0.01							1.0
DQRL	SZ	28	337	EP		1232	0.89	0.00							1.0

January 7 2014 Hour: 16:52 28.0 Agency: REL Distant

EMSC OT=16:52:28.0 21.96S 176.53W 134Km M=5.1 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1712	1.70								
RCY	SZ			EP		1712	1.88								
QRWL	SZ			EP		1712	2.01								
SHBL	BZ			EP		1712	2.23								

January 9 2014 Hour: 5:25 36.0 Agency: REL Regional

EMSC OT=05:25:36.0 35.69N 31.93E 10Km M=3.8 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		526	34.01								
RCY	SZ			EP		526	38.60								

January 10 2014 Hour: 1:32 30.0 Agency: REL Distant

EMSC OT=01:32:30.0 20.59S 177.58W 400Km M=5.0 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		151	29.07								
QRWL	SZ			EP		151	30.19								

January 10 2014 Hour: 2:22 57.0 Agency: REL Distant

EMSC OT=02:22:57.0 31.27S 179.42W 223Km M=5.7 KERMADEC ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		242	22.51								
BHL	BZ			EP		242	22.81								
QRWL	SZ			EP		242	23.03								

January 10 2014 Hour: 13:20 47.0 Agency: REL Regional

EMSC OT=13:20:47.0 37.29N 36.20E 2Km M=4.0 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1321	37.86								
DQRL	SZ			EP		1321	46.58								

January 11 2014 Hour: 12:44 40.7 Lat: 33.47N Lon: 35.69E Depth: 1 Agency: REL Local  
Magnitudes: 2.5MC 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	355	EP		1244	42.04	-0.05	32						1.0
QRWL	SN	8	355	ES		1244	43.13	0.01							1.0
RCY	SZ	14	80	EP		1244	43.00	0.02							1.0
SHBL	BZ	15	160	EP		1244	43.06	-0.09							1.0
SHBL	BN	15	160	ES		1244	45.02	0.06							1.0
DQRL	SZ	28	337	EP		1244	45.29	0.05							1.0

January 11 2014 Hour: 14: 7 0.1 Lat: 33.45N Lon: 35.64E Depth: 2 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	12	21	EP		14 7	1.96	-0.06	34						1.0
QRWL	SN	12	21	ES		14 7	3.45	0.02							1.0
SHBL	BZ	15	139	EP		14 7	2.46	-0.13							1.0



SHBL	BN	15	139	ES	14	7	4.49	0.06									1.0
RCY	SZ	19	75	EP	14	7	3.28	0.05									1.0
DQRL	SZ	29	347	EP	14	7	4.83	0.02									1.0

**January 11 2014 Hour: 17:12 19.9 Lat: 33.42N Lon: 35.67E Depth: 1 Agency: REL Local**  
**Magnitudes: 2.5MC 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	11	139	EP		1712	21.68	-0.03							1.0
SHBL	BN	11	139	ES		1712	23.08	0.02							1.0
QRWL	SZ	14	6	EP		1712	22.15	-0.02							1.0
QRWL	SN	14	6	ES		1712	23.85	-0.00							1.0
RCY	SZ	18	62	EP		1712	22.78	0.01	30						1.0
DQRL	SZ	33	344	EP		1712	25.20	0.03							1.0

**January 13 2014 Hour: 13:14 45.8 Lat: 32.94N Lon: 35.63E Depth: 10 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	46	13	EP		13	1	53.41	-0.08						1.0
SHBL	BN	46	13	ES		13	1	59.23	0.03						1.0
RCY	SZ	65	17	EP		13	1	56.18	-0.17						1.0
RCY	SN	65	17	ES		13	2	4.15	-0.02						1.0
DQRL	SZ	85	356	EP		13	1	59.46	-0.07						1.0
DQRL	SN	85	356	ES		13	2	9.85	0.14						1.0
BEYL	BZ	104	353	EP		13	2	2.30	0.03						1.0
BHL	BZ	107	1	EP		13	2	2.72	-0.02	125					1.0
BHL	BN	107	1	ES		13	2	15.22	-0.08						1.0
HWQ	SZ	151	11	EP		13	2	9.30	0.04						1.0
HWQ	SN	151	11	ES		13	2	26.62	-0.02						1.0

**January 13 2014 Hour: 13:29 5.0 Lat: 33.41N Lon: 35.81E Depth: 19 Agency: REL Local**  
**Magnitudes: 2.6MC 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	222	EP		1329	8.65	0.06							1.0
SHBL	BN	9	222	ES		1329	11.21	-0.04							1.0
RCY	SZ	10	15	EP		1329	8.60	-0.06	33						1.0
RCY	SN	10	15	ES		1329	11.42	0.04							1.0
DQRL	SZ	40	326	EP		1329	12.01	0.00							1.0

**January 13 2014 Hour: 15:13 9.0 Lat: 33.79N Lon: 35.80E 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	18	313	EP		1513	12.68	-0.01	39						1.0
BHL	BN	18	313	ES		1513	15.37	-0.01							1.0
DQRL	SZ	23	245	EP		1513	13.36	-0.02							1.0
DQRL	SN	23	245	ES		1513	16.60	0.02							1.0
QRWL	SZ	29	201	EP		1513	14.25	-0.01							1.0
HWQ	SZ	55	14	EP		1513	18.28	0.01							1.0

**January 13 2014 Hour: 15:25 7.6 Lat: 33.41N Lon: 35.66E Depth: 7 Agency: REL Local**  
**Magnitudes: 2.3MC 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	11	132	EP		1525	9.80	0.00							1.0
SHBL	BN	11	132	ES		1525	11.42	0.00							1.0
QRWL	SZ	15	8	EP		1525	10.35	-0.01							1.0
QRWL	SN	15	8	ES		1525	12.40	0.00							1.0
RCY	SZ	19	60	EP		1525	10.94	0.00	24						1.0
DQRL	SZ	34	346	EP		1525	13.25	0.08							0.2

January 14 2014 Hour: 13:55 2.0 Agency: REL Distant  
**EMSC OT=13:55:02.0 40.33N 52.95E 48Km M=5.2 TURKMENISTAN**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 BHL BZ EP 1358 33.91  
 QRWL SZ EP 1358 36.21

January 14 2014 Hour: 15:11 6.5 Lat: 34.08N Lon: 35.62E Depth: 11 Agency: REL Local  
 Magnitudes: 2.7MC REL Rms: 0.1 secs  
**KESROUANE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	20	169	EP		15	1	20.26-0.05	41						1.0
BHL	BE	20	169	ES		15	1	23.11	0.01						1.0
BEYL	BZ	26	206	EP		15	1	20.85-0.22							0.2
HWQ	SZ	38	54	EP		15	1	23.01	0.04						1.0
HWQ	SE	38	54	ES		15	1	27.71-0.02							1.0
DQRL	SZ	42	186	EP		15	1	23.60	0.06						1.0
RCY	SZ	68	162	EP		15	1	27.55-0.10							1.0
RCY	SN	68	162	ES		15	1	35.90	0.03						1.0

January 15 2014 Hour: 14:24 7.7 Lat: 33.54N Lon: 35.71E 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	3	283	EP		1424		8.06-0.07	29						1.0
RCY	SZ	13	114	EP		1424		9.66-0.03							1.0
SHBL	BZ	22	172	EP		1424		11.18	0.02						1.0
SHBL	BN	22	172	ES		1424		13.77	0.02						1.0
DQRL	SZ	22	324	EP		1424		11.32	0.04						1.0
DQRL	SN	22	324	ES		1424		13.97	0.02						1.0

January 15 2014 Hour: 19:53 25.6 Lat: 33.75N Lon: 35.79E Depth: 0 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
DQRL	SZ	21	255	EP		1953		28.98	0.07						1.0
DQRL	SN	21	255	ES		1953		31.40	0.01						1.0
BHL	BZ	21	324	EP		1953		28.87-0.05	35						1.0
QRWL	SZ	25	203	EP		1953		29.44-0.11							1.0
RCY	SZ	29	171	EP		1953		30.25	0.04						1.0
RCY	SN	29	171	ES		1953		33.65	0.00						1.0
HWQ	SZ	60	14	EP		1953		35.61	0.36						0.2

January 16 2014 Hour: 13:21 40.0 Lat: 33.80N Lon: 35.77E Depth: 12 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	318	EP		1321		43.30-0.00	31						1.0
DQRL	SZ	21	241	EP		1321		43.95-0.02							1.0
DQRL	SN	21	241	ES		1321		46.96	0.01						1.0
RCY	SZ	34	169	EP		1321		45.90	0.02						1.0
RCY	SN	34	169	ES		1321		50.25-0.01							1.0
HWQ	SZ	56	17	EP		1321		49.21	0.00						1.0

January 17 2014 Hour: 10:57 0.0 Agency: REL Regional  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 RCY SZ EP 1057 21.71

January 17 2014 Hour: 14:44 17.4 Lat: 33.54N Lon: 35.71E 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	3	284	EP		1444	17.81	-0.08	37						1.0
RCY	SZ	13	113	EP		1444	19.44	-0.02							1.0
SHBL	BZ	22	172	EP		1444	20.95	0.03							1.0
SHBL	BN	22	172	ES		1444	23.54	0.03							1.0
DQRL	SZ	22	324	EP		1444	21.00	-0.03							1.0
DQRL	SN	22	324	ES		1444	23.78	0.07							1.0

January 18 2014 Hour: 11:5 13.7 Lat: 33.47N Lon: 35.54E Depth: 7 Agency: REL Local  
Magnitudes: 2.6MC 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	15	57	EP		11 5	16.49	-0.01							1.0
DQRL	SZ	26	5	EP		11 5	18.05	-0.05							1.0
DQRL	SN	26	5	ES		11 5	21.38	0.03							1.0
RCY	SZ	27	84	EP		11 5	18.37	0.06	35						1.0
RCY	SN	27	84	ES		11 5	21.68	-0.03							1.0
HWQ	SZ	97	22	EP		11 5	29.37	-0.00							1.0

January 18 2014 Hour: 11:47 23.8 Lat: 33.50N Lon: 35.63E Depth: 22 Agency: REL Local  
Magnitudes: 2.4MC 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	7	41	EP		1147	27.56	0.02	27						1.0
RCY	SZ	19	92	EP		1147	28.53	0.04							1.0
RCY	SN	19	92	ES		1147	31.93	-0.03							1.0
SHBL	BZ	20	149	EP		1147	28.58	-0.04							1.0
SHBL	BN	20	149	ES		1147	32.19	0.02							1.0
DQRL	SZ	23	345	EP		1147	28.91	-0.01							1.0

January 18 2014 Hour: 14:34 36.7 Lat: 33.80N Lon: 35.76E Depth: 21 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	15	320	EP		1434	40.81	-0.07	35						1.0
DQRL	SZ	20	238	EP		1434	41.44	0.02							1.0
DQRL	SN	20	238	ES		1434	44.91	0.02							1.0
RCY	SZ	35	168	EP		1434	43.13	-0.07							1.0
RCY	SN	35	168	ES		1434	48.02	0.03							1.0
HWQ	SZ	56	18	EP		1434	46.10	0.05							1.0

January 18 2014 Hour: 15:20 35.4 Lat: 33.78N Lon: 35.78E Depth: 1 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	18	320	EP		1520	38.30	-0.12	41						1.0
BHL	BN	18	320	ES		1520	40.66	0.03							1.0
DQRL	SZ	21	248	EP		1520	38.89	-0.00							1.0
DQRL	SE	21	248	ES		1520	41.48	0.03							1.0
RCY	SZ	32	171	EP		1520	40.58	0.01							1.0
RCY	SN	32	171	ES		1520	44.36	-0.01							1.0
HWQ	SZ	57	15	EP		1520	44.76	0.05							1.0

January 19 2014 Hour: 14:12 22.7 Lat: 33.40N Lon: 35.66E Depth: 12 Agency: REL Local  
Magnitudes: 2.4MC 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	10	127	EP		1412	25.43	0.00							1.0
QRWL	SZ	16	7	EP		1412	26.06	-0.03	25						1.0
QRWL	SN	16	7	ES		1412	28.58	0.01							1.0

RCY	SZ	19	57	EP		1412	26.56	0.02									1.0
RCY	SN	19	57	ES		1412	29.35	-0.01									1.0
DQRL	SZ	35	346	EP		1412	28.72	0.01									1.0

**January 19 2014 Hour: 15:58 33.8 Lat: 33.82N Lon: 35.76E Depth: 17 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	313	EP		1558	37.46	0.02	38						1.0
BHL	BN	14	313	ES		1558	40.18	0.02							1.0
DQRL	SZ	22	235	EP		1558	38.28	-0.02							1.0
DQRL	SN	22	235	ES		1558	41.63	-0.03							1.0
RCY	SZ	36	169	EP		1558	40.15	-0.08							1.0
RCY	SN	36	169	ES		1558	45.04	0.02							1.0
SHBL	BZ	52	182	EP		1558	42.59	0.09							1.0
HWQ	SZ	54	18	EP		1558	42.68	-0.02							1.0

**January 19 2014 Hour: 17:18 56.8 Lat: 33.52N Lon: 35.72E Depth: 21 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	5	306	EP		1719	0.37	-0.03	22						1.0
QRWL	SN	5	306	ES		1719	3.09	0.02							1.0
SHBL	BZ	20	174	EP		1719	1.55	0.03							1.0
SHBL	BN	20	174	ES		1719	5.02	-0.02							1.0
DQRL	SZ	25	325	EP		1719	2.02	0.00							1.0

**January 20 2014 Hour: 3:12 10.7 Agency: REL Distant**

**EMSC OT=02:52:45.0 40.63S 175.78E 28Km M=6.2 NEW ZEALAND**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		312	23.31								
HWQ	BZ			EP		312	23.41								
BHL	BZ			EP		312	23.60								
QRWL	SZ			EP		312	24.09								

**January 20 2014 Hour: 12:46 0.0 Agency: REL Regional**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1246	33.11								
RCY	SZ			EP		1246	31.07								

**January 20 2014 Hour: 13: 2 58.7 Lat: 33.48N Lon: 35.69E Depth: 0 Agency: REL Local**  
**Magnitudes: 2.6MC 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	8	353	EP		13	2	59.99	-0.06	37					1.0
QRWL	SN	8	353	ES		13	3	1.04	0.01						1.0
RCY	SZ	14	80	EP		13	3	0.95	0.01						1.0
SHBL	BZ	15	161	EP		13	3	1.09	-0.07						1.0
SHBL	BN	15	161	ES		13	3	3.00	0.05						1.0
DQRL	SZ	28	336	EP		13	3	3.30	0.06						1.0

**January 20 2014 Hour: 14:53 49.1 Lat: 33.45N Lon: 35.61E Depth: 4 Agency: REL Local**  
**Magnitudes: 2.6MC 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	13	30	EP		1453	51.31	-0.01	35						1.0
QRWL	SN	13	30	ES		1453	53.00	0.01							1.0
SHBL	BZ	16	132	EP		1453	51.88	-0.00							1.0
RCY	SZ	21	75	EP		1453	52.65	0.01							1.0
RCY	SN	21	75	ES		1453	55.28	-0.01							1.0
DQRL	SZ	29	352	EP		1453	53.82	-0.00							1.0

January 21 2014 Hour: 1:29 13.0

Agency: REL Distant

EMSC OT=01:29:13.0 15.46S 174.86W 11Km M=6.0 TONGA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		148	53.65								
HWQ	BZ			EP		148	51.24								

January 21 2014 Hour: 12:48 18.3

Lat: 33.79N Lon: 35.77E Depth: 8 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	321	EP		1248	21.45	-0.00	32						1.0
BHL	BN	17	321	ES		1248	23.79	0.01							1.0
DQRL	SZ	21	244	EP		1248	21.97	-0.00							1.0
DQRL	SN	21	244	ES		1248	24.67	-0.01							1.0
RCY	SZ	33	169	EP		1248	23.89	0.04							1.0
RCY	SN	33	169	ES		1248	27.92	-0.02							1.0
HWQ	SZ	57	17	EP		1248	27.62	-0.02							1.0

January 21 2014 Hour: 14:3 4.2

Lat: 33.49N Lon: 35.66E Depth: 14 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	7	18	EP		14	3	6.84	-0.00						1.0
QRWL	SN	7	18	ES		14	3	8.83	-0.00						1.0
RCY	SZ	17	86	EP		14	3	7.82	0.00	31					1.0
SHBL	BZ	17	153	EP		14	3	7.91	-0.01						1.0
SHBL	BN	17	153	ES		14	3	10.72	0.01						1.0
DQRL	SZ	26	341	EP		14	3	8.95	0.01						1.0

January 21 2014 Hour: 15:18 40.9

Lat: 33.32N Lon: 35.72E Depth: 20 Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.1 secs

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	4	27	EP		1518	44.30	-0.07							1.0
SHBL	BN	4	27	ES		1518	47.02	0.04							1.0
RCY	SZ	23	27	EP		1518	45.86	0.06	40						1.0
RCY	SN	23	27	ES		1518	49.42	-0.03							1.0
DQRL	SZ	46	342	EP		1518	48.66	-0.06							1.0
DQRL	SN	46	342	ES		1518	54.56	0.01							1.0
BHL	BZ	66	354	EP		1518	51.63	0.05							1.0
HWQ	SZ	109	11	EP		1518	57.77	-0.11							0.2

January 21 2014 Hour: 16:36 54.5

Lat: 33.42N Lon: 35.67E Depth: 4 Agency: REL Local

Magnitudes: 2.5MC 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	10	137	EP		1636	56.32	0.00							1.0
QRWL	SZ	15	4	EP		1636	56.98	-0.00	29						1.0
QRWL	SN	15	4	ES		1636	58.84	-0.01							1.0
RCY	SZ	18	59	EP		1636	57.47	0.00							1.0
RCY	SE	18	59	ES		1636	59.70	0.00							1.0
DQRL	SZ	34	344	EP		1636	59.96	0.02							1.0

January 22 2014 Hour: 13:25 1.3

Lat: 34.67N Lon: 36.15E Depth: 4 Agency: REL Local

Magnitudes: 3.0MC REL

Rms: 0.1 secs

NORTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	47	203	EP		1325	8.89	-0.06	56						1.0
HWQ	BN	47	203	ES		1325	14.58	-0.01							1.0
BHL	BZ	96	208	EP		1325	16.94	0.10							1.0
DQRL	SZ	119	207	EP		1325	20.38	-0.07							1.0
DQRL	SN	119	207	ES		1325	34.62	0.01							1.0
RCY	SZ	133	193	EP		1325	22.54	0.04							1.0

**January 22 2014 Hour: 14:27 5.8 Lat: 33.47N Lon: 35.69E Depth: 0 Agency: REL Local**  
**Magnitudes: 2.4MC 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	8	357	EP		1427	7.08	-0.04	27						1.0
RCY	SZ	14	80	EP		1427	8.06	0.01							1.0
SHBL	BZ	15	159	EP		1427	8.22	0.03							1.0
SHBL	BN	15	159	ES		1427	9.93	-0.04							1.0
DQRL	SZ	28	337	EP		1427	10.37	0.08							1.0
DQRL	SN	28	337	ES		1427	13.59	-0.04							1.0

**January 23 2014 Hour: 4:26 9.4 Lat: 33.47N Lon: 35.22E Depth: 0 Agency: REL Local**  
**Magnitudes: 2.9MC REL Rms: 0.3 secs**

**OFFSHORE SOUTH LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	42	51	EP		426	16.20	0.04	49						1.0
RCY	SZ	57	86	EP		426	18.58	-0.05							1.0
RCY	SN	57	86	ES		426	25.52	0.05							1.0
BHL	BZ	63	39	EP		426	18.84	-0.72							0.2
HWQ	SZ	112	37	EP		426	27.98	0.47							0.2

**January 23 2014 Hour: 9:44 21.1 Lat: 36.05N Lon: 40.35E Depth:277 Agency: REL Regional**  
**Magnitudes: 4.3MC REL Rms: 0.3 secs**

**SYRIA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	446	245	EP		945	25.55	0.20	200						1.0
HWQ	SE	446	245	ES		946	12.58	-0.29							1.0
BHL	BZ	490	242	EP		945	29.80	-0.04							1.0
DQRL	SZ	508	241	EP		945	31.36	-0.37							1.0
DQRL	SN	508	241	ES		946	24.24	0.27							1.0

**January 23 2014 Hour: 14:11 49.6 Lat: 33.45N Lon: 35.59E Depth: 13 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	13	38	EP		1411	52.75	-0.08	29						1.0
QRWL	SN	13	38	ES		1411	55.20	-0.00							1.0
SHBL	BZ	18	130	EP		1411	53.38	-0.05							1.0
SHBL	BN	18	130	ES		1411	56.30	0.05							1.0
RCY	SZ	23	78	EP		1411	54.09	0.03							1.0
DQRL	SZ	28	355	EP		1411	54.82	0.06							1.0

**January 23 2014 Hour: 14:47 45.7 Lat: 33.54N Lon: 35.71E 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	291	EP		1447	46.07	-0.03							1.0
RCY	SZ	13	112	EP		1447	47.71	-0.02	38						1.0
RCY	SN	13	112	ES		1447	49.25	-0.01							1.0
SHBL	BZ	21	171	EP		1447	49.16	0.03							1.0
SHBL	BN	21	171	ES		1447	51.69	-0.00							1.0
DQRL	SZ	22	325	EP		1447	49.31	0.03							1.0

**January 24 2014 Hour: 5:17 11.3 Lat: 33.78N Lon: 35.79E 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	317	EP		517	14.28	-0.06							1.0
DQRL	SZ	22	248	EP		517	14.96	0.03							1.0
DQRL	SN	22	248	ES		517	17.61	0.02							1.0
QRWL	SZ	28	201	EP		517	15.82	-0.02	44						1.0
RCY	SZ	32	173	EP		517	16.52	0.03							1.0
RCY	SN	32	173	ES		517	20.28	-0.03							1.0

HWQ SZ 57 14 EP 517 20.53 0.03 1.0

January 24 2014 Hour: 13:32 55.7 Lat: 33.48N Lon: 35.63E Depth: 17 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	8	33	EP		1332	58.98	0.08	29						1.0
QRWL	SN	8	33	ES		1333	1.26	0.01							1.0
SHBL	BZ	18	146	EP		1332	59.96	0.09							1.0
SHBL	BN	18	146	ES		1333	2.86	-0.08							1.0
RCY	SZ	19	86	EP		1332	59.90	-0.02							1.0
DQRL	SZ	25	346	EP		1333	0.58	-0.08							1.0

January 24 2014 Hour: 22:30 42.1 Lat: 33.29N Lon: 35.66E Depth: 0 Agency: REL Local  
Magnitudes: 2.3MC 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	29	36	EP		2230	46.66	-0.01	21						1.0
RCY	SN	29	36	ES		2230	50.09	0.01							1.0
QRWL	SZ	29	5	EP		2230	46.73	0.01							1.0
QRWL	SN	29	5	ES		2230	50.12	-0.05							1.0
DQRL	SZ	47	350	EP		2230	49.70	0.06							1.0

January 25 2014 Hour: 5:14 22.0 Agency: REL Distant

EMSC OT=05:14:22.0 08.04S 109.30E 95Km M=6.1 JAVA, INDONESIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		526	26.91								
HWQ	BZ			EP		526	27.12								
BHL	BZ			EP		526	27.91								

January 25 2014 Hour: 13:55 10.6 Lat: 33.48N Lon: 35.65E Depth: 9 Agency: REL Local  
Magnitudes: 2.5MC 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	20	EP		1355	12.82	0.08	29						1.0
QRWL	SN	8	20	ES		1355	14.31	-0.00							1.0
SHBL	BZ	17	150	EP		1355	13.86	0.01							1.0
SHBL	BN	17	150	ES		1355	16.28	0.04							1.0
RCY	SZ	17	83	EP		1355	13.78	-0.10							1.0
DQRL	SZ	26	343	EP		1355	15.12	-0.05							1.0
HWQ	SZ	93	17	EP		1355	25.59	0.05							1.0

January 26 2014 Hour: 13:55 43.0 Agency: REL Regional

EMSC OT=13:55:43.0 38.19N 20.41E 18Km M=6.1 GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1358	46.59								
HWQ	BZ			EP		1358	46.63								

January 28 2014 Hour: 14:30 31.0 Lat: 33.87N Lon: 35.83E Depth: 2 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	281	EP		1430	33.75	-0.02	31						1.0
DQRL	SZ	31	233	EP		1430	35.97	-0.00							1.0
DQRL	SN	31	233	ES		1430	39.68	0.02							1.0
RCY	SZ	42	180	EP		1430	37.74	-0.02							1.0
RCY	SN	42	180	ES		1430	42.79	0.01							1.0
HWQ	SZ	46	13	EP		1430	38.43	0.02							1.0

January 29 2014 Hour: 7:33 22.0 Agency: REL Regional

EMSC OT=07:33:22.0 35.75N 31.74E 20Km M=3.5 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		734	20.80								
RCY	SZ			EP		734	23.45								

January 29 2014 Hour: 13:50 3.9 Lat: 33.79N Lon: 35.79E Depth: 4 Agency: REL Local  
Magnitudes: 2.4MC 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	316	EP		1350	6.86-0.03		26						1.0
BHL	BN	18	316	ES		1350	9.13 0.00								1.0
DQRL	SZ	22	246	EP		1350	7.57 0.02								1.0
RCY	SZ	33	173	EP		1350	9.14-0.04								1.0
RCY	SN	33	173	ES		1350	13.13 0.02								1.0
HWQ	SZ	56	15	EP		1350	13.00 0.02								1.0

January 29 2014 Hour: 15:19 23.2 Lat: 33.80N Lon: 35.78E 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	17	315	EP		1519	26.87 0.02		29						1.0
BHL	BN	17	315	ES		1519	29.55-0.01								1.0
DQRL	SZ	22	242	EP		1519	27.53-0.00								1.0
RCY	SZ	34	171	EP		1519	29.21 0.01								1.0
RCY	SN	34	171	ES		1519	33.64-0.01								1.0
HWQ	SZ	55	16	EP		1519	32.34-0.00								1.0

January 30 2014 Hour: 10:29 25.0 Lat: 33.90N Lon: 35.82E Depth: 1 Agency: REL Local  
Magnitudes: 2.5MC 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	15	273	EP		1029	27.42-0.10		32						1.0
BHL	BN	15	273	ES		1029	29.39 0.04								1.0
DQRL	SZ	31	227	EP		1029	30.17 0.06								1.0
HWQ	SZ	44	16	EP		1029	32.16 0.03								1.0
RCY	SZ	45	178	EP		1029	32.19-0.05								1.0
RCY	SN	45	178	ES		1029	37.59 0.02								1.0

January 31 2014 Hour: 15:45 22.8 Lat: 33.42N Lon: 35.67E Depth: 0 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
SHBL	BZ	10	140	EP		1545	24.46-0.01								1.0
SHBL	BN	10	140	ES		1545	25.66-0.02								1.0
QRWL	SZ	14	3	EP		1545	25.10-0.05		32						1.0
QRWL	SN	14	3	ES		1545	26.81-0.06								1.0
RCY	SZ	17	60	EP		1545	25.60-0.03								1.0
RCY	SN	17	60	ES		1545	27.75 0.06								1.0
DQRL	SZ	33	343	EP		1545	28.32 0.11								1.0



# Epicentral Map of Lebanon

## JANUARY 2014

- Magnitudes**
- MI = 2
  - MI = 3
  - MI = 4
  - MI = 5
  - ★ Felt

