

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

October

2014

Prepared by
The National Centre for Geophysical Research
Bhannes

P.o.b. : 165432
Ashrafyeh Beirut 1100-2040

Tel : +9614-981885
Fax : +9614-981886
Email : geophys@cnrs.edu.lb

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:

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

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 Vp/Vs 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
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*(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 2014 Hour: 7:16 28.9 Agency: REL Regional

EMSC OT=07:16:28.9 36.95N 29.37E 1Km M=4.3 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP			718	0.59							
RCY	SZ			EP			718	3.79							

October 1 2014 Hour: 7:54 25.0 Lat: 33.26N Lon: 35.43E Depth: 8 Agency: REL Local Magnitudes: 2.5MC REL

SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	40	35	EP			754	31.58-0.08							1.0
QRWL	SN	40	35	ES			754	36.53-0.02							1.0
RCY	SZ	46	54	EP			754	32.72 0.07	29						1.0
DQRL	SZ	52	14	EP			754	33.52 0.01							1.0
DQRL	SN	52	14	ES			754	39.81 0.03							1.0
HWQ	SZ	123	23	EP			754	44.45-0.07							0.2

October 1 2014 Hour: 15:45 52.4 Lat: 33.39N Lon: 35.64E Depth: 16 Agency: REL Local Magnitudes: 2.4MC REL

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	11	114	EP			1545	55.67 0.01							1.0
QRWL	SZ	18	13	EP			1545	56.28-0.06							1.0
QRWL	SN	18	13	ES			1545	59.27 0.01							1.0
RCY	SZ	22	57	EP			1545	56.84-0.00	24						1.0
RCY	SN	22	57	ES			1546	0.15 0.01							1.0
DQRL	SZ	36	350	EP			1545	58.71 0.03							1.0

October 1 2014 Hour: 15:51 6.4 Lat: 33.80N Lon: 35.76E Depth: 15 Agency: REL Local Magnitudes: 2.5MC REL

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	15	319	EP			1551	9.95-0.01	31						1.0
DQRL	SZ	21	239	EP			1551	10.60-0.03							1.0
DQRL	SN	21	239	ES			1551	13.77 0.02							1.0
RCY	SZ	35	168	EP			1551	12.57 0.01							1.0
RCY	SE	35	168	ES			1551	17.10-0.01							1.0
HWQ	SZ	55	18	EP			1551	15.57 0.01							1.0

October 1 2014 Hour: 21:41 58.5 Lat: 33.73N Lon: 35.94E Depth: 11 Agency: REL Local Magnitudes: 3.0MC REL

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	27	202	EP			2142	3.25-0.07	57						1.0
RCY	SN	27	202	ES			2142	6.94 0.04							1.0
QRWL	SZ	31	231	EP			2142	3.79-0.08							1.0
BHL	BZ	33	307	EP			2142	4.19 0.00							1.0
DQRL	SZ	35	266	EP			2142	4.46 0.07							1.0
DQRL	SN	35	266	ES			2142	8.76-0.02							1.0
SHBL	BZ	46	204	EP			2142	6.18 0.05							1.0
HWQ	SZ	61	0	EP			2142	8.55 0.00							1.0

October 2 2014 Hour: 10:8 22.4 Lat: 33.47N Lon: 35.68E Depth: 0 Agency: REL Local Magnitudes: 2.6MC REL

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	2	EP			10	8 23.75-0.02							1.0
QRWL	SN	8	2	ES			10	8 24.77 0.00							1.0
RCY	SZ	15	80	EP			10	8 24.83 0.01	35						1.0
SHBL	BZ	15	157	EP			10	8 24.87-0.03							1.0
SHBL	BN	15	157	ES			10	8 26.75 0.02							1.0
DQRL	SZ	28	338	EP			10	8 26.91 0.02							1.0

October 2 2014 Hour: 12:6 29.2 Agency: REL Regional

EMSC OT=12:06:29.2 36.01N 27.05E 10Km M=4.4 TURKEY BORDER

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		12	8	16.89							
RCY	SZ			EP		12	8	18.77							

October 2 2014 Hour: 12:57 6.8 Agency: REL Distant

EMSC OT=12:57:06.8 52.38N 158.05E 153Km M=5.7 COAST OF KAMCHATKA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		13	8	58.45							
BHL	BZ			EP		13	9	1.29							
DQRL	SZ			EP		13	9	2.88							
RCY	SZ			EP		13	9	2.99							
QRWL	SZ			EP		13	9	3.26							
SHBL	BZ			EP		13	9	3.75							

October 2 2014 Hour: 15:51 58.1 Agency: REL Regional

EMSC OT=15:51:58.1 36.01N 27.05E 8Km M=4.4 TURKEY BORDER

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1553		45.36							
HWQ	SZ			EP		1553		47.36							
RCY	SZ			EP		1553		47.92							

October 2 2014 Hour: 16:2 34.8 Lat: 33.83N Lon: 35.72E Depth: 37 Agency: REL Local

Magnitudes: 3.0MC REL

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	10	323	EP		16	2	40.60-0.08	56						1.0
DQRL	SZ	20	223	EP		16	2	41.27 0.05							1.0
DQRL	SN	20	223	ES		16	2	46.02 0.03							1.0
QRWL	SZ	32	186	EP		16	2	42.19-0.05							1.0
RCY	SZ	39	163	EP		16	2	43.01-0.01							1.0
RCY	SN	39	163	ES		16	2	49.15 0.02							1.0
HWQ	SZ	54	23	EP		16	2	44.67 0.04							1.0

October 2 2014 Hour: 15:56 32.4 Agency: REL Distant

EMSC OT=15:56:32.4 36.41N 97.86E 10Km M=5.1 QINGHAI, CHINA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		16	5	28.49							
SHBL	BZ			EP		16	5	29.95							

October 3 2014 Hour: 9:22 40.8 Lat: 33.49N Lon: 35.65E Depth: 13 Agency: REL Local

Magnitudes: 2.6MC REL

OUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	23	EP		922	43.37	0.02	34						1.0
QRWL	SN	8	23	ES		922	45.23	-0.01							1.0
RCY	SZ	17	86	EP		922	44.43	0.00							1.0
SHBL	BZ	18	150	EP		922	44.44	-0.02							1.0
SHBL	BN	18	150	ES		922	47.18	0.01							1.0
DQRL	SZ	26	343	EP		922	45.50	0.00							1.0

October 3 2014 Hour: 9:38 34.1 Lat: 33.83N Lon: 35.74E Depth: 31 Agency: REL Local

Magnitudes: 2.5MC REL

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	12	317	EP		938	39.50	0.03	28						1.0
DQRL	SZ	21	230	EP		938	40.10	0.04							1.0
DQRL	SN	21	230	ES		938	44.44	-0.03							1.0
QRWL	SZ	31	190	EP		938	41.00	-0.04							1.0
RCY	SZ	37	167	EP		938	41.78	0.00							1.0
RCY	SN	37	167	ES		938	47.48	0.01							1.0
HWQ	SZ	54	20	EP		938	43.73	-0.02							1.0

**October 3 2014 Hour: 15:23 2.9 Lat: 33.87N Lon: 35.81E Depth: 12 Agency: REL Local
Magnitudes: 2.6MC REL**

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	15	283	EP		1523	6.15	-0.03	33						1.0
DQRL	SZ	29	230	EP		1523	8.13	0.04							1.0
DQRL	SE	29	230	ES		1523	11.94	0.02							1.0
QRWL	SZ	38	198	EP		1523	9.33	-0.09							1.0
RCY	SZ	42	177	EP		1523	10.07	0.05							1.0
RCY	SN	42	177	ES		1523	15.29	-0.00							1.0
HWQ	SZ	47	15	EP		1523	10.75	0.01							1.0

**October 3 2014 Hour: 15:50 19.0 Lat: 33.42N Lon: 35.68E Depth: 2 Agency: REL Local
Magnitudes: 2.5MC REL**

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	10	141	EP		1550	20.69	-0.01							1.0
SHBL	BN	10	141	ES		1550	22.01	0.01							1.0
QRWL	SZ	14	2	EP		1550	21.27	-0.08	31						1.0
RCY	SZ	17	60	EP		1550	21.83	0.02							1.0
DQRL	SZ	33	343	EP		1550	24.39	0.02							1.0
DQRL	SN	33	343	ES		1550	28.41	0.03							1.0

**October 3 2014 Hour: 22:20 46.4 Agency: REL Regional
EMSC OT=22:20:46.4 34.38N 26.30E 20Km M=5.1 CRETE, GREECE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		2222	37.61								1.0
BHL	BZ			EP		2222	36.91								1.0
QRWL	SZ			EP		2222	38.25								1.0
SHBL	BZ			EP		2222	39.28								1.0
RCY	SZ			EP		2222	39.92								1.0
HWQ	SZ			EP		2222	40.46								1.0

**October 4 2014 Hour: 2:49 55.0 Lat: 33.57N Lon: 35.60E Depth: 4 Agency: REL Local
Magnitudes: 2.3MC REL**

SAIDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	110	EP		249	56.46	-0.01	23						1.0
QRWL	SN	8	110	ES		249	57.58	0.00							1.0
DQRL	SZ	15	348	EP		249	57.60	0.02							1.0
DQRL	SN	15	348	ES		249	59.51	-0.00							1.0
RCY	SZ	23	111	EP		249	58.80	0.00							1.0
RCY	SN	23	111	ES		250	1.63	0.00							1.0
BHL	BZ	37	7	EP		250	1.03	-0.01							1.0

**October 4 2014 Hour: 3:10 58.7 Lat: 34.41N Lon: 36.00E Depth: 1 Agency: REL Local
Magnitudes: 2.4MC REL**

NORTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	16	198	EP		311	1.21	-0.07	27						1.0
HWQ	BN	16	198	ES		311	3.21	0.04							1.0
BHL	BZ	65	210	EP		311	9.19	0.03							1.0
DQRL	SZ	88	207	EP		311	12.92	0.04							1.0
DQRL	SN	88	207	ES		311	23.31	-0.04							1.0
QRWL	SZ	100	197	EP		311	14.90	0.01							1.0

**October 4 2014 Hour: 6:40 35.4 Agency: REL Regional
EMSC OT=06:40:35.4 36.36N 29.20E 20Km M=3.9 WESTERN TURKEY**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		641	57.54								
HWQ	SZ			EP		641	59.91								
QRWL	SZ			EP		642	0.64								
SHBL	BZ			EP		642	2.67								

RCY SZ EP 642 2.46

October 5 2014 Hour: 5:039.5 Lat: 33.44N Lon: 35.47E Depth: 6 Agency: REL Local Magnitudes: 2.8MC REL
Rms: 0.1 secs

SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	23	58	EP		5	0	43.47	0.00						1.0
SHBL	BZ	27	111	EP		5	0	44.02	-0.11						1.0
SHBL	BN	27	111	ES		5	0	47.59	0.06						1.0
DQRL	SZ	31	17	EP		5	0	44.81	0.10	48					1.0
DQRL	SN	31	17	ES		5	0	48.48	-0.06						1.0
HWQ	SZ	103	25	EP		5	0	56.20	-0.00						1.0

October 6 2014 Hour: 3:57 24.7 Lat: 33.53N Lon: 35.33E Depth: 5 Agency: REL Local Magnitudes: 2.8MC 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	30	49	EP		357	29.59	-0.04	42						1.0
DQRL	SN	30	49	ES		357	33.29	0.03							1.0
QRWL	SZ	33	86	EP		357	30.18	0.06							1.0
QRWL	SN	33	86	ES		357	34.08	-0.04							1.0
BHL	BZ	51	36	EP		357	33.04	-0.04							1.0
HWQ	SZ	101	34	EP		357	41.04	0.02							1.0

October 6 2014 Hour: 18:8 0.3 Agency: REL Regional
EMSC OT=18:08:00.3 34.89N 26.59E 10Km M=4.6 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		18	9	48.58							
QRWL	SZ			EP		18	9	50.42							
SHBL	BZ			EP		18	9	51.40							
HWQ	SZ			EP		18	9	52.01							
RCY	SZ			EP		18	9	52.36							

October 7 2014 Hour: 10:10 38.9 Lat: 33.78N Lon: 35.78E Depth: 4 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	18	319	EP		1010	41.84	-0.04	35						1.0
BHL	BN	18	319	ES		1010	44.07	0.02							1.0
DQRL	SZ	21	245	EP		1010	42.47	0.01							1.0
RCY	SZ	33	171	EP		1010	44.27	0.01							1.0
RCY	SN	33	171	ES		1010	48.18	-0.01							1.0
HWQ	SZ	57	16	EP		1010	48.15	0.01							1.0

October 7 2014 Hour: 11:19 5.6 Lat: 33.49N Lon: 35.63E Depth: 15 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	8	38	EP		1119	8.48	-0.01							1.0
QRWL	SN	8	38	ES		1119	10.64	0.01							1.0
SHBL	BZ	19	145	EP		1119	9.67	0.02							1.0
SHBL	BN	19	145	ES		1119	12.64	-0.01							1.0
RCY	SZ	19	88	EP		1119	9.69	-0.00	35						1.0
DQRL	SZ	25	348	EP		1119	10.31	-0.00							1.0

October 7 2014 Hour: 13:49 41.7 Agency: REL Distant
EMSC OT=13:49:41.7 23.45N 100.69E 10Km M=6.1 YUNNAN, CHINA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1359	26.85								
SHBL	BZ			EP		1359	28.75								

**October 7 2014 Hour: 14:51 55.7 Lat: 33.45N Lon: 35.63E Depth: 4 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	12	21	EP		1451	57.67	-0.12	28						1.0
QRWL	SN	12	21	ES		1451	59.38	0.04							1.0
SHBL	BZ	15	137	EP		1451	58.28	0.02							1.0
RCY	SZ	19	74	EP		1451	58.95	-0.00							1.0
RCY	SN	19	74	ES		1452	1.38	0.01							1.0
DQRL	SZ	29	348	EP		1452	0.55	0.06							1.0

**October 7 2014 Hour: 16:27 42.6 Lat: 33.42N Lon: 35.67E Depth: 6 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	10	136	EP		1627	44.70	-0.04							1.0
SHBL	BN	10	136	ES		1627	46.33	0.03							1.0
QRWL	SZ	15	5	EP		1627	45.24	-0.04							1.0
RCY	SZ	18	60	EP		1627	45.85	0.04	24						1.0
RCY	SN	18	60	ES		1627	48.14	-0.02							1.0
DQRL	SZ	33	344	EP		1627	48.16	0.01							1.0
DQRL	SN	33	344	ES		1627	52.24	0.01							1.0

**October 7 2014 Hour: 16:37 48.4 Lat: 33.79N Lon: 35.77E Depth: 2 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		1637	51.15	-0.04	33						1.0
BHL	BN	17	321	ES		1637	53.26	0.01							1.0
DQRL	SZ	21	244	EP		1637	51.78	0.02							1.0
RCY	SZ	33	169	EP		1637	53.72	-0.01							1.0
RCY	SN	33	169	ES		1637	57.66	0.00							1.0
HWQ	SZ	57	17	EP		1637	57.64	0.02							1.0

**October 7 2014 Hour: 20:34 39.8 Lat: 34.22N Lon: 35.45E Depth: 13 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs**

OFFSHORE NORTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	40	152	EP		2034	46.58	-0.03	38						1.0
BHL	BN	40	152	ES		2034	51.68	0.01							1.0
HWQ	SZ	46	82	EP		2034	47.56	0.01							1.0
DQRL	SZ	58	169	EP		2034	49.41	0.02							1.0
QRWL	SZ	78	164	EP		2034	52.29	0.04							1.0
RCY	SZ	88	156	EP		2034	53.69	-0.09							1.0
RCY	SN	88	156	ES		2035	4.16	0.01							1.0
SHBL	BZ	101	164	EP		2034	55.67	0.03							1.0

October 9 2014 Hour: 2:14 32.0 Agency: REL Distant
EMSC OT=02:14:32.0 32.08S 110.83W 10Km M=7.1 PACIFIC RISE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP			234	16.36							
HWQ	BZ			EP			234	15.63							

October 9 2014 Hour: 2:32 7.1 Agency: REL Distant
EMSC OT=02:32:07.1 32.23S 111.03W 10Km M=6.5 PACIFIC RISE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ			EP			251	54.84							
DQRL	SZ			EP			251	55.92							
BHL	BZ			EP			251	57.62							

**October 9 2014 Hour: 16:41 49.0 Lat: 33.39N Lon: 35.65E Depth: 13 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	118	EP		1641	51.88	0.02							1.0
SHBL	BN	10	118	ES		1641	53.97	-0.00							1.0
QRWL	SZ	18	11	EP		1641	52.54	-0.07							1.0
RCY	SZ	21	56	EP		1641	53.07	-0.04	25						1.0
RCY	SN	21	56	ES		1641	56.18	0.03							1.0
DQRL	SZ	36	348	EP		1641	55.21	0.06							1.0

**October 10 2014 Hour: 4:19 28.3 Lat: 33.30N Lon: 35.33E Depth: 2 Agency: REL Local
Magnitudes: 3.0MC 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	39	82	EP		419	34.68	0.04							1.0
QRWL	SZ	43	50	EP		419	35.07	-0.17							1.0
QRWL	SE	43	50	ES		419	40.41	0.04							1.0
DQRL	SZ	50	26	EP		419	36.51	0.07	58						1.0
DQRL	SN	50	26	ES		419	42.42	-0.03							1.0
HWQ	SZ	123	28	EP		419	48.13	0.03							1.0

October 10 2014 Hour: 4:7 51.1 Agency: REL Distant
EMSC OT=04:07:51.1 32.21S 110.79W 10Km M=5.6 PACIFIC RISE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		427	39.19								
SHBL	BZ			EP		427	38.71								

**October 10 2014 Hour: 16:45 59.2 Lat: 33.79N Lon: 35.79E Depth: 10 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	316	EP		1646	2.55	-0.07	53						1.0
DQRL	SZ	22	246	EP		1646	3.24	0.01							1.0
DQRL	SN	22	246	ES		1646	6.32	0.08							1.0
QRWL	SZ	29	200	EP		1646	4.05	-0.09							1.0
QRWL	SN	29	200	ES		1646	7.75	-0.06							1.0
RCY	SZ	33	172	EP		1646	4.90	0.11							1.0
HWQ	SZ	56	15	EP		1646	8.45	0.02							1.0

October 11 2014 Hour: 2:35 45.9 Agency: REL Distant
EMSC OT=02:35:45.9 41.07N 143.16E 10Km M=6.0 HOKKAIDO, JAPAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		247	55.55								
DQRL	SZ			EP		247	56.47								

**October 11 2014 Hour: 12:51 58.3 Lat: 33.42N Lon: 35.66E Depth: 7 Agency: REL Local
Magnitudes: 2.4MC 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	11	133	EP		1252	0.46	-0.06							1.0
SHBL	BN	11	133	ES		1252	2.24	0.05							1.0
QRWL	SZ	15	9	EP		1252	0.94	-0.08	26						1.0
RCY	SZ	19	61	EP		1252	1.64	0.02							1.0
RCY	SN	19	61	ES		1252	4.10	0.00							1.0
DQRL	SZ	33	346	EP		1252	3.88	0.07							1.0

**October 11 2014 Hour: 14:39 30.6 Lat: 33.46N Lon: 35.67E Depth: 1 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	10	9	EP		1439	32.22	-0.07							1.0
SHBL	BZ	14	148	EP		1439	32.79	-0.09							1.0
SHBL	BN	14	148	ES		1439	34.64	0.06							1.0
RCY	SZ	17	74	EP		1439	33.31	0.03							1.0
DQRL	SZ	29	342	EP		1439	35.35	0.05	31						1.0
DQRL	SN	29	342	ES		1439	38.80	0.02							1.0

**October 11 2014 Hour: 19:14 33.9 Lat: 36.41N Lon: 35.64E Depth: 32 Agency: REL Regional
Magnitudes: 3.6MC 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	238	173	EP		1915	5.43	-0.09	107						1.0
HWQ	SE	238	173	ES		1915	29.85	0.03							1.0
BHL	BZ	278	180	EP		1915	10.39	-0.06							1.0
BHL	BE	278	180	ES		1915	38.37	-0.03							1.0
DQRL	SZ	300	181	EP		1915	13.14	-0.04							1.0
QRWL	SZ	317	179	EP		1915	15.41	0.06							1.0
SHBL	BZ	340	178	EP		1915	18.29	0.13							1.0

**October 12 2014 Hour: 4:9 31.5 Lat: 33.31N Lon: 35.16E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs**

OFFSHORE SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	55	85	EP		4	9	40.45	0.08						1.0
QRWL	SZ	56	62	EP		4	9	40.38	-0.09						1.0
QRWL	SN	56	62	ES		4	9	47.07	-0.03						1.0
DQRL	SZ	58	41	EP		4	9	40.84	-0.08	61					1.0
DQRL	SN	58	41	ES		4	9	47.93	0.05						1.0
BHL	BZ	80	35	EP		4	9	44.44	-0.05						1.0
HWQ	SZ	130	34	EP		4	9	52.58	0.12						1.0

**October 12 2014 Hour: 6:11 26.9 Lat: 33.60N Lon: 35.26E Depth: 0 Agency: REL Local
Magnitudes: 2.8MC 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	31	69	EP		611	31.90	0.06	44						1.0
DQRL	SN	31	69	ES		611	35.49	-0.03							1.0
QRWL	SZ	40	99	EP		611	33.18	-0.08							1.0
BHL	BZ	49	48	EP		611	34.83	0.01							1.0
RCY	SZ	55	102	EP		611	35.71	0.01							1.0
RCY	SN	55	102	ES		611	42.27	0.04							1.0

**October 12 2014 Hour: 10:39 17.1 Lat: 33.82N Lon: 35.76E Depth: 27 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	13	315	EP		1039	21.98	0.01	31						1.0
DQRL	SZ	21	234	EP		1039	22.62	0.01							1.0
DQRL	SN	21	234	ES		1039	26.68	-0.01							1.0
RCY	SZ	37	168	EP		1039	24.29	-0.01							1.0
RCY	SN	37	168	ES		1039	29.65	0.01							1.0
HWQ	SZ	54	19	EP		1039	26.43	-0.06							0.2

October 12 2014 Hour: 10:58 55.5 Lat: 33.53N Lon: 35.71E 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	3	304	EP		1058	56.01	-0.02							1.0
RCY	SZ	13	109	EP		1058	57.58	-0.01							1.0
RCY	SN	13	109	ES		1058	59.12	0.02							1.0
SHBL	BZ	21	171	EP		1058	58.91	0.00							1.0
DQRL	SZ	23	326	EP		1058	59.28	0.02	45						1.0
DQRL	SN	23	326	ES		1059	2.05	0.05							1.0
BHL	BZ	41	353	EP		1059	2.17	-0.06							1.0

October 12 2014 Hour: 13:46 9.1 Lat: 34.03N Lon: 35.73E Depth: 4 Agency: REL Local Magnitudes: 2.8MC REL Rms: 0.0 secs

KESROUANE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	205	EP		1346	11.68	-0.09	43						1.0
BHL	BE	16	205	ES		1346	13.81	0.04							1.0
HWQ	SZ	34	37	EP		1346	14.59	0.02							1.0
DQRL	SZ	39	202	EP		1346	15.51	0.05							1.0
RCY	SZ	61	170	EP		1346	18.87	-0.01							1.0
RCY	SE	61	170	ES		1346	26.15	0.00							1.0

October 12 2014 Hour: 15:26 51.1 Lat: 33.41N Lon: 35.67E Depth: 7 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	10	134	EP		1526	53.29	0.02							1.0
QRWL	SZ	16	4	EP		1526	53.92	-0.07							1.0
RCY	SZ	18	57	EP		1526	54.43	0.01	38						1.0
RCY	SN	18	57	ES		1526	56.85	0.00							1.0
DQRL	SZ	34	344	EP		1526	56.84	0.01							1.0
DQRL	SN	34	344	ES		1527	1.09	0.04							1.0

October 12 2014 Hour: 20:59 10.5 Agency: REL Regional
EMSC OT=20:59:10.5 35.46N 21.49E 10Km M=4.7 MEDITERRANEAN SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		21	1	54.21							
QRWL	SZ			EP		21	1	55.07							
HWQ	SZ			EP		21	1	55.90							
SHBL	BZ			EP		21	1	56.61							

October 13 2014 Hour: 5:21 44.4 Lat: 33.90N Lon: 35.67E Depth: 30 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	2	278	EP		521	49.15	-0.05	48						1.0
DQRL	SZ	24	204	EP		521	50.50	0.09							1.0
DQRL	SE	24	204	ES		521	54.87	-0.02							1.0
RCY	SZ	47	162	EP		521	53.02	-0.10							1.0
RCY	SN	47	162	ES		521	59.65	0.05							1.0
HWQ	SZ	49	31	EP		521	53.29	0.03							1.0

October 13 2014 Hour: 10:13 36.6 Lat: 33.81N Lon: 35.76E Depth: 22 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	318	EP		10	1	37.98	0.01	35					1.0
BHL	BN	15	318	ES		10	1	41.17	-0.01						1.0
DQRL	SZ	21	237	EP		10	1	38.54	-0.00						1.0
RCY	SZ	35	168	EP		10	1	40.27	0.00						1.0
RCY	SN	35	168	ES		10	1	45.17	-0.00						1.0
HWQ	SZ	55	18	EP		10	1	42.92	-0.04						0.2

October 13 2014 Hour: 15:35 39.8 Lat: 33.41N Lon: 35.67E Depth: 5 Agency: REL Local Magnitudes: 2.6MC REL

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	10	136	EP		1535	41.72	0.05							1.0
QRWL	SZ	15	3	EP		1535	42.31	-0.10							1.0
RCY	SZ	18	58	EP		1535	42.89	0.04	36						1.0
RCY	SN	18	58	ES		1535	45.11	-0.03							1.0
DQRL	SZ	34	344	EP		1535	45.20	-0.14							1.0
DQRL	SN	34	344	ES		1535	49.59	0.11							1.0
BHL	BZ	55	358	EP		1535	48.72	0.08							1.0
HWQ	SZ	99	15	EP		1535	55.88	0.05							0.2

October 13 2014 Hour: 21:7 49.7 Lat: 33.63N Lon: 35.77E Depth: 1 Agency: REL Local Magnitudes: 2.5MC REL

CENTRAL BEKAA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	12	223	EP		21	7	51.71	-0.01						1.0
QRWL	SN	12	223	ES		21	7	53.21	-0.01						1.0
RCY	SZ	16	158	EP		21	7	52.27	-0.01	30					1.0
RCY	SN	16	158	ES		21	7	54.19	0.00						1.0
DQRL	SZ	21	294	EP		21	7	53.06	0.01						1.0
SHBL	BZ	31	185	EP		21	7	54.76	0.01						1.0

October 15 2014 Hour: 23:53 1.3 Agency: REL Distant EMSC OT=23:53:01.3 31.81N 140.43E 50Km M=5.5 IZU ISLANDS, JAPAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		24	5	24.70							
RCY	SZ			EP		24	5	25.76							
DQRL	SZ			EP		24	5	26.06							
QRWL	SZ			EP		24	5	26.06							

October 16 2014 Hour: 6:48 29.2 Agency: REL Regional EMSC OT=06:48:29.2 35.65N 26.58E 65Km M=4.6 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		650	13.59								
DQRL	SZ			EP		650	14.76								
HWQ	BZ			EP		650	16.64								
RCY	SZ			EP		650	17.73								

October 16 2014 Hour: 15:10 45.9 Lat: 34.05N Lon: 36.07E Depth: 41 Agency: REL Local Magnitudes: 2.9MC REL

HERMEL BAALBEK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	28	335	EP		1510	53.51	0.12	53						1.0
HWQ	BN	28	335	ES		1510	58.81	-0.13							1.0
BHL	BZ	42	247	EP		1510	54.88	0.19							1.0
DQRL	SZ	60	231	EP		1510	56.90	0.20							1.0
RCY	SZ	65	200	EP		1510	57.03	-0.31							1.0
RCY	SN	65	200	ES		1511	6.22	0.41							1.0
QRWL	SZ	67	213	EP		1510	57.32	-0.11							1.0
QRWL	SN	67	213	ES		1511	5.60	-0.36							1.0

October 16 2014 Hour: 16:30 28.2 Lat: 33.82N Lon: 35.81E Depth: 30 Agency: REL Local Magnitudes: 2.7MC REL

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	302	EP		1630	33.77	0.00	39						1.0
DQRL	SZ	26	241	EP		1630	34.43	-0.07							1.0
DQRL	SE	26	241	ES		1630	39.21	0.04							1.0
QRWL	SZ	33	202	EP		1630	35.26	0.07							1.0
QRWL	SE	33	202	ES		1630	40.32	-0.04							1.0

**October 16 2014 Hour: 23: 0 57.5 Lat: 33.71N Lon: 35.72E Depth: 12 Agency: REL Local
Magnitudes: 2.9MC REL**

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	14	270	EP		23	1	0.59	0.00	52					1.0
DQRL	SN	14	270	ES		23	1	2.92	0.03						1.0
QRWL	SZ	18	192	EP		23	1	1.00	-0.06						1.0
BHL	BZ	23	344	EP		23	1	1.71	-0.03						1.0
RCY	SZ	26	155	EP		23	1	2.17	0.02						1.0
RCY	SN	26	155	ES		23	1	5.62	0.01						1.0
HWQ	SZ	67	18	EP		23	1	8.43	0.02						1.0

**October 17 2014 Hour: 9:25 36.3 Lat: 33.94N Lon: 35.88E Depth: 16 Agency: REL Local
Magnitudes: 2.8MC REL**

KESROUANE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	21	260	EP		925	40.76	-0.01	42						1.0
BHL	BN	21	260	ES		925	44.05	0.00							1.0
HWQ	SZ	38	9	EP		925	43.03	0.00							1.0
DQRL	SZ	39	228	EP		925	43.10	-0.00							1.0
RCY	SZ	49	185	EP		925	44.65	0.01							1.0
RCY	SN	49	185	ES		925	50.77	-0.01							1.0

**October 17 2014 Hour: 12:33 39.7 Lat: 33.79N Lon: 35.77E Depth: 9 Agency: REL Local
Magnitudes: 2.7MC REL**

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	319	EP		1233	42.91	-0.00	40						1.0
BHL	BE	17	319	ES		1233	45.26	0.00							1.0
DQRL	SZ	21	243	EP		1233	43.53	-0.00							1.0
RCY	SZ	33	170	EP		1233	45.41	0.01							1.0
RCY	SN	33	170	ES		1233	49.58	-0.00							1.0
HWQ	SZ	56	17	EP		1233	48.99	-0.00							1.0

**October 17 2014 Hour: 14:27 56.2 Lat: 33.79N Lon: 35.77E Depth: 0 Agency: REL Local
Magnitudes: 2.5MC REL**

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	320	EP		1427	58.79	-0.08	29						1.0
BHL	BE	17	320	ES		1428	0.85	0.01							1.0
DQRL	SZ	21	243	EP		1427	59.58	0.04							1.0
RCY	SZ	33	169	EP		1428	1.59	0.03							1.0
RCY	SE	33	169	ES		1428	5.50	-0.03							1.0
HWQ	SZ	57	17	EP		1428	5.35	0.03							1.0

October 18 2014 Hour: 13:41 36.1 Agency: REL Regional
EMSC OT=13:41:36.1 35.90N 30.94E 20Km M=4.1 MEDITERRANEAN SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		1342	47.09								
HWQ	SZ			EP		1342	42.94								

October 19 2014 Hour: 22: 4 10.2 Agency: REL Regional
EMSC OT=22:04:10.2 34.91N 33.93E 40Km M=2.8 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		22	4	36.69							
DQRL	SZ			EP		22	4	37.60							
HWQ	SZ			EP		22	4	38.69							
RCY	SZ			EP		22	4	42.68							

**October 20 2014 Hour: 5:43 15.1 Lat: 33.79N Lon: 35.75E Depth: 14 Agency: REL Local
Magnitudes: 2.4MC REL**

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	15	323	EP		543	18.54	0.01	25						1.0
BHL	BN	15	323	ES		543	21.08	0.00							1.0
DQRL	SZ	20	240	EP		543	19.06	-0.01							1.0
RCY	SZ	34	167	EP		543	21.14	0.04							1.0
RCY	SN	34	167	ES		543	25.52	-0.02							1.0
HWQ	SZ	57	18	EP		543	24.38	-0.02							1.0

**October 20 2014 Hour: 15:45 8.3 Agency: REL Regional
EMSC OT=15:45:08.3 38.17N 38.68E 8Km M=3.8 EASTERN TURKEY**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1546	17.31								
BHL	BZ			EP		1546	23.61								
DQRL	SZ			EP		1546	26.54								
QRWL	SZ			EP		1546	27.86								

**October 20 2014 Hour: 21:54 4.6 Agency: REL Regional
EMSC OT=21:54:04.6 35.88N 30.94E 40Km M=4.1 MEDITERRANEAN SEA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		2155	10.03								
QRWL	SZ			EP		2155	10.72								
HWQ	SZ			EP		2155	11.99								
RCY	SZ			EP		2155	12.77								

**October 21 2014 Hour: 10:4 12.8 Lat: 33.46N Lon: 35.65E Depth: 4 Agency: REL Local
Magnitudes: 2.6MC REL**

MOUNT HERMON REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	10	19	EP		10	4	14.44	-0.13						1.0
SHBL	BZ	16	145	EP		10	4	15.27	-0.16						1.0
SHBL	BN	16	145	ES		10	4	17.54	0.14						1.0
RCY	SZ	18	78	EP		10	4	15.81	0.02						1.0
DQRL	SZ	28	345	EP		10	4	17.35	-0.00						1.0
DQRL	SN	28	345	ES		10	4	20.79	0.06						1.0
BHL	BZ	49	1	EP		10	4	20.80	0.08	35					1.0

**October 21 2014 Hour: 11:38 26.7 Lat: 33.62N Lon: 35.69E Depth: 3 Agency: REL Local
Magnitudes: 2.4MC REL**

SAIDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	185	EP		1138	28.22	0.08	27						1.0
QRWL	SN	8	185	ES		1138	29.18	-0.04							1.0
DQRL	SZ	15	311	EP		1138	29.16	-0.00							1.0
RCY	SZ	19	135	EP		1138	29.80	-0.08							1.0
RCY	SN	19	135	ES		1138	32.29	0.04							1.0

**October 22 2014 Hour: 0:15 18.4 Agency: REL Distant
EMSC OT=00:15:18.4 27.49N 128.50E 48Km M=5.8 RYUKYU ISLANDS, JAPAN**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		027	5.91								
BHL	BZ			EP		027	8.26								
DQRL	SZ			EP		027	9.30								
QRWL	SZ			EP		027	9.37								

October 22 2014 Hour: 10:14 6.6 Lat: 33.38N Lon: 35.57E Depth: 6 Agency: REL Local Magnitudes: 3.0MC 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	16	101	EP		1014	9.53	0.02							1.0
SHBL	BN	16	101	ES		1014	11.72	0.08							1.0
QRWL	SZ	22	28	EP		1014	10.12	-0.17							1.0
QRWL	SN	22	28	ES		1014	13.13	0.12							1.0
RCY	SZ	28	61	EP		1014	11.06	-0.21	58						1.0
DQRL	SZ	37	359	EP		1014	12.77	0.13							1.0
DQRL	SN	37	359	ES		1014	17.02	-0.08							1.0
BHL	BZ	59	7	EP		1014	16.28	0.06							1.0
HWQ	SZ	106	19	EP		1014	23.75	0.06							1.0

October 23 2014 Hour: 14:19 0.4 Lat: 34.57N Lon: 36.33E Depth: 3 Agency: REL Local Magnitudes: 3.1MC REL Rms: 0.1 secs

AKKAR

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	48	227	EP		1419	8.07	-0.08	70						1.0
HWQ	SN	48	227	ES		1419	13.83	-0.09							1.0
BHL	BZ	97	220	EP		1419	15.94	-0.05							1.0
BHL	BN	97	220	ES		1419	27.74	0.17							1.0
DQRL	SZ	119	216	EP		1419	19.68	0.12							1.0
RCY	SZ	128	201	EP		1419	20.91	0.03							1.0
RCY	SN	128	201	ES		1419	35.97	-0.09							1.0

October 23 2014 Hour: 15:38 26.2 Lat: 33.41N Lon: 35.66E Depth: 9 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	129	EP		1538	28.58	0.01							1.0
QRWL	SZ	16	8	EP		1538	29.17	-0.03							1.0
RCY	SZ	19	59	EP		1538	29.75	0.01	30						1.0
RCY	SN	19	59	ES		1538	32.36	-0.00							1.0
DQRL	SZ	34	346	EP		1538	31.93	-0.00							1.0
DQRL	SN	34	346	ES		1538	36.19	0.02							1.0

October 24 2014 Hour: 7:12 2.6 Lat: 33.89N Lon: 35.84E 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	276	EP		712	6.03	-0.06	40						1.0
BHL	BN	18	276	ES		712	8.72	0.01							1.0
DQRL	SZ	32	231	EP		712	8.25	0.06							1.0
RCY	SZ	43	181	EP		712	9.83	-0.07							1.0
RCY	SN	43	181	ES		712	15.36	0.03							1.0
HWQ	SZ	44	12	EP		712	10.05	0.03							1.0

October 24 2014 Hour: 12:38 58.0 Agency: REL Distant EMSC OT=12:38:58.0 27.79N 57.38E 30Km M=5.2 SOUTHERN IRAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		1243	21.57								
HWQ	SZ			EP		1243	23.04								
BHL	BZ			EP		1243	22.66								
DQRL	SZ			EP		1243	25.07								

October 24 2014 Hour: 15:46 13.3 Lat: 33.80N Lon: 35.79E Depth: 16 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	313	EP		1546	17.11	-0.01	43						1.0
BHL	BN	17	313	ES		1546	19.96	0.00							1.0
DQRL	SZ	23	243	EP		1546	17.80	0.00							1.0

QRWL SZ	30	199	EP	1546	18.71	0.00	1.0
QRWL SN	30	199	ES	1546	22.72	-0.00	1.0
HWQ SZ	55	15	EP	1546	22.42	0.01	1.0

October 24 2014 Hour: 23:43 15.4

Agency: REL Regional

EMSC OT=23:43:15.4 38.92N 21.13E 1Km M=5.3 GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2346		14.46							
DQRL	SZ			EP		2346		15.53							
HWQ	BZ			EP		2346		16.89							
QRWL	SZ			EP		2346		17.60							
RCY	SZ			EP		2346		19.70							

October 25 2014 Hour: 10:43 36.9 Lat: 33.85N Lon: 37.21E Depth: 2 Agency: REL Local

Magnitudes: 3.6MC REL

DAMASCUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	126	293	EP		1043	57.25	0.05	120						1.0
HWQ	SE	126	293	ES		1044	12.20	-0.01							1.0
RCY	SZ	133	253	EP		1043	58.27	-0.03							1.0
BHL	BZ	144	273	EP		1043	59.74	-0.11							1.0
QRWL	SZ	145	257	EP		1044	0.13	0.07							1.0
SHBL	BZ	147	248	EP		1044	0.22	-0.09							1.0
DQRL	SZ	153	264	EP		1044	1.21	0.09							1.0
DQRL	SN	153	264	ES		1044	19.09	0.05							1.0
BEYL	SZ	159	271	EP		1044	2.14	0.17							0.2

October 25 2014 Hour: 14:2 54.5 Lat: 33.81N Lon: 35.75E Depth: 26 Agency: REL Local

Magnitudes: 2.6MC REL

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	13	318	EP		14	2	59.14	-0.00	32					1.0
DQRL	SZ	21	234	EP		14	2	59.71	-0.03						1.0
DQRL	SN	21	234	ES		14	3	3.67	0.04						1.0
QRWL	SZ	30	192	EP		14	3	0.73	-0.01						1.0
QRWL	SN	30	192	ES		14	3	5.32	-0.05						1.0
RCY	SZ	36	167	EP		14	3	1.55	0.06						1.0
HWQ	SZ	55	19	EP		14	3	3.86	-0.01						1.0

October 26 2014 Hour: 15:9 32.2 Lat: 33.83N Lon: 35.76E Depth: 27 Agency: REL Local

Magnitudes: 2.6MC REL

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	13	309	EP		15	9	37.10	0.07	36					1.0
BHL	BN	13	309	ES		15	9	40.47	-0.13						1.0
DQRL	SZ	23	233	EP		15	9	37.78	-0.03						1.0
DQRL	SN	23	233	ES		15	9	42.10	0.15						1.0
QRWL	SZ	32	194	EP		15	9	38.66	-0.16						1.0
RCY	SZ	38	170	EP		15	9	39.50	-0.01						1.0
RCY	SE	38	170	ES		15	9	44.96	0.05						1.0
HWQ	SZ	52	19	EP		15	9	41.48	0.07						1.0

October 26 2014 Hour: 15:26 10.2 Lat: 33.83N Lon: 35.76E Depth: 25 Agency: REL Local

Magnitudes: 2.4MC REL

BEIRUT REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	13	309	EP		1526	14.81	0.05	25						1.0
BHL	BE	13	309	ES		1526	18.09	-0.03							1.0
DQRL	SZ	23	232	EP		1526	15.64	0.06							1.0
QRWL	SZ	32	193	EP		1526	16.55	-0.10							1.0
RCY	SZ	38	169	EP		1526	17.39	0.01							1.0
RCY	SN	38	169	ES		1526	22.70	0.03							1.0
HWQ	SZ	53	19	EP		1526	19.30	-0.01							1.0

**October 26 2014 Hour: 16:46 45.0 Lat: 34.67N Lon: 36.40E Depth: 1 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs**

AKKAR

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	60	224	EP		1646	54.69	-0.02	58						1.0
HWQ	SE	60	224	ES		1647	1.90	0.04							1.0
BHL	BZ	109	219	EP		1647	2.56	-0.05							1.0
DQRL	SZ	131	216	EP		1647	6.32	0.14							1.0
DQRL	SN	131	216	ES		1647	21.72	-0.09							1.0
RCY	SZ	140	202	EP		1647	7.44	-0.04							1.0
SHBL	BZ	158	203	EP		1647	10.15	-0.04							1.0
SHBL	BN	158	203	ES		1647	28.86	0.06							1.0

**October 27 2014 Hour: 11:44 0.5 Lat: 34.32N Lon: 36.71E Depth: 8 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs**

NEBEK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	70	266	EP		1144	11.98	0.04	54						1.0
HWQ	SN	70	266	ES		1144	20.38	-0.03							1.0
BHL	BZ	108	245	EP		1144	17.61	-0.10							1.0
RCY	SZ	122	222	EP		1144	19.79	-0.05							1.0
DQRL	SZ	125	237	EP		1144	20.42	0.11							1.0
DQRL	SN	125	237	ES		1144	34.99	0.02							1.0

**October 27 2014 Hour: 14:34 52.1 Lat: 33.79N 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	317	EP		1434	55.63	-0.07	31						1.0
BHL	BN	17	317	ES		1434	58.41	0.03							1.0
DQRL	SZ	21	243	EP		1434	56.32	0.02							1.0
RCY	SZ	34	170	EP		1434	58.03	0.01							1.0
RCY	SN	34	170	ES		1435	2.42	-0.00							1.0
HWQ	SZ	56	16	EP		1435	1.33	0.02							1.0

**October 27 2014 Hour: 15:11 58.1 Lat: 33.96N Lon: 36.20E Depth: 12 Agency: REL Local
Magnitudes: 2.8MC 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	43	326	EP		1512	5.16	-0.12	46						1.0
HWQ	SN	43	326	ES		1512	10.70	0.08							1.0
BHL	BZ	51	264	EP		1512	6.67	0.10							1.0
BHL	BE	51	264	ES		1512	12.79	-0.07							1.0
RCY	SZ	61	214	EP		1512	8.21	0.01							1.0
DQRL	SZ	65	245	EP		1512	8.73	0.00							1.0

**October 28 2014 Hour: 1:29 23.2 Lat: 33.63N Lon: 35.58E Depth: 8 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
DQRL	SZ	8	357	EP		129	25.17	0.06	27						1.0
DQRL	SN	8	357	ES		129	26.52	-0.03							1.0
QRWL	SZ	14	134	EP		129	25.81	0.01							1.0
QRWL	SE	14	134	ES		129	27.76	-0.00							1.0
BHL	BZ	31	14	EP		129	28.33	0.02							1.0

**October 28 2014 Hour: 3:15 38.5 Agency: REL Distant
EMSC OT=03:15:38.5 15.27S 174.63W 2Km M=6.1 TONGA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		335	22.11								
QRWL	SZ			EP		335	22.73								
DQRL	SZ			EP		335	22.63								
BHL	BZ			EP		335	25.25								

HWQ BZ EP 335 23.77

October 28 2014 Hour: 16: 6 3.7 Lat: 33.79N Lon: 35.80E Depth: 7 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	19	313	EP		16	6	7.04	0.00	38					1.0
BHL	BN	19	313	ES		16	6	9.51	0.00						1.0
DQRL	SZ	24	246	EP		16	6	7.75	-0.01						1.0
QRWL	SZ	29	203	EP		16	6	8.63	0.01						1.0
QRWL	SN	29	203	ES		16	6	12.24	-0.01						1.0
HWQ	SZ	56	14	EP		16	6	12.80	-0.00						1.0

October 28 2014 Hour: 17: 7 0.8 Lat: 33.79N Lon: 35.77E Depth: 4 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	322	EP		17	7	3.55	-0.05	26					1.0
BHL	BN	17	322	ES		17	7	5.69	0.00						1.0
DQRL	SZ	20	244	EP		17	7	4.25	0.10						1.0
QRWL	SZ	28	196	EP		17	7	5.18	-0.13						1.0
RCY	SZ	33	169	EP		17	7	6.21	0.05						1.0
RCY	SN	33	169	ES		17	7	10.14	0.01						1.0
SHBL	BZ	49	182	EP		17	7	8.69	0.00						1.0
HWQ	SZ	57	17	EP		17	7	10.05	0.02						1.0

October 29 2014 Hour: 13:32 41.6 Lat: 33.46N Lon: 35.64E 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	11	20	EP		1332	43.28	-0.01							1.0
QRWL	SN	11	20	ES		1332	44.57	0.00							1.0
SHBL	BZ	15	142	EP		1332	44.05	-0.01							1.0
SHBL	BN	15	142	ES		1332	45.92	0.01							1.0
RCY	SZ	19	77	EP		1332	44.57	0.01	25						1.0
DQRL	SZ	28	346	EP		1332	46.15	0.01							1.0

October 30 2014 Hour: 12:11 36.1 EMSC OT=12:11:36.1 7.00S 117.56E 540Km M=5.8 BALI SEA Agency: REL Distant

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1223	24.86								
BHL	BZ			EP		1223	25.59								
SHBL	BZ			EP		1223	25.52								
QRWL	SZ			EP		1223	25.59								

October 30 2014 Hour: 17: 0 44.9 Lat: 33.80N Lon: 35.78E Depth: 15 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	315	EP		17	0	48.63	-0.03	36					1.0
BHL	BN	17	315	ES		17	0	51.47	0.01						1.0
DQRL	SZ	22	243	EP		17	0	49.33	0.02						1.0
QRWL	SZ	29	199	EP		17	0	50.21	-0.03						1.0
QRWL	SN	29	199	ES		17	0	54.23	0.02						1.0
HWQ	SZ	55	16	EP		17	0	54.07	0.02						1.0

Epicentral Map of Lebanon

OCTOBER 2014

