

Republic of Lebanon  
National Council for Scientific Research

# Provisional Seismological Bulletin

from the

## NATIONAL SEISMIC NETWORK

May

2015

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.

<b>P-wave velocity (km/sec)</b>	<b>depth to top of layer (km)</b>
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.

**May 1 2015 Hour: 10:16 6.2** Lat: 33.78N Lon: 35.77E Depth: 8 Agency: REL Local  
**Magnitudes: 2.8MC REL**

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	321	EP		1016	9.39	-0.05	43						1.0
DQRL	SZ	21	245	EP		1016	9.99	0.07							1.0
DQRL	SN	21	245	ES		1016	12.66	0.02							1.0
QRWL	SZ	28	198	EP		1016	10.83	-0.11							1.0
RCY	SZ	32	170	EP		1016	11.76	0.04							1.0
RCY	SN	32	170	ES		1016	15.77	0.01							1.0
HWQ	SZ	57	16	EP		1016	15.63	0.03							1.0

**May 1 2015 Hour: 11:8 23.6** Lat: 33.52N Lon: 35.70E Depth: 0 Agency: REL Local  
**Magnitudes: 2.3MC REL**

**WEST BEKAA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	4	329	EP		11	8	24.16	-0.04	24					1.0
RCY	SZ	13	102	EP		11	8	25.66	-0.03						1.0
RCY	SE	13	102	ES		11	8	27.23	0.02						1.0
DQRL	SZ	24	329	EP		11	8	27.55	0.07						1.0
DQRL	SN	24	329	ES		11	8	30.32	-0.01						1.0
BHL	BZ	43	354	EP		11	8	30.51	-0.01						1.0

**May 1 2015 Hour: 12:1 30.3** Lat: 33.80N Lon: 35.77E Depth: 14 Agency: REL Local  
**Magnitudes: 2.7MC REL**

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	317	EP		12	1	33.79	-0.02	40					1.0
DQRL	SZ	22	241	EP		12	1	34.50	0.00						1.0
DQRL	SN	22	241	ES		12	1	37.64	0.01						1.0
RCY	SZ	34	170	EP		12	1	36.26	-0.05						1.0
RCY	SE	34	170	ES		12	1	40.81	0.03						1.0
HWQ	SZ	55	17	EP		12	1	39.44	0.02						1.0

**May 1 2015 Hour: 15:8 59.0** Lat: 33.79N Lon: 35.78E Depth: 7 Agency: REL Local  
**Magnitudes: 2.6MC REL**

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	319	EP		15	9	2.11	-0.05	35					1.0
DQRL	SZ	21	245	EP		15	9	2.80	0.09						1.0
DQRL	SN	21	245	ES		15	9	5.47	-0.00						1.0
QRWL	SZ	28	199	EP		15	9	3.62	-0.09						1.0
RCY	SZ	33	171	EP		15	9	4.43	-0.01						1.0
RCY	SN	33	171	ES		15	9	8.50	0.03						1.0
HWQ	SZ	57	16	EP		15	9	8.29	0.03						1.0

**May 2 2015 Hour: 8:23 44.3** Agency: REL Regional  
**EMSC OT=08:23:44.3 34.22N 25.69E 13Km M=4.9 CRETE, GREECE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		825		41.11							1.0
BHL	BZ			EP		825		41.76							1.0
QRWL	SZ			EP		825		43.14							1.0
RCY	SZ			EP		825		44.97							1.0
HWQ	SZ			EP		825		45.54							1.0

**May 2 2015 Hour: 13:32 5.6** Lat: 33.78N Lon: 35.79E Depth: 5 Agency: REL Local  
**Magnitudes: 2.6MC REL**

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	317	EP		1332		8.66	-0.14	33					1.0
DQRL	SZ	22	247	EP		1332		9.27	-0.08						1.0
DQRL	SN	22	247	ES		1332		12.22	0.12						1.0
RCY	SZ	32	172	EP		1332		10.92	-0.02						1.0

RCY	SE	32	172	ES	1332	14.86-0.00	1.0
HWQ	SZ	57	15	EP	1332	15.00 0.12	1.0

**May 3 2015 Hour: 4:17 13.3 Lat: 34.00N Lon: 35.64E Depth: 9 Agency: REL Local Magnitudes: 2.7MC REL Rms: 0.1 secs**

**KESROUAN REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	11	175	EP		417	15.60	-0.12	40						1.0
BHL	BN	11	175	ES		417	17.56	0.05							1.0
DQRL	SZ	34	192	EP		417	19.05	0.07							1.0
DQRL	SE	34	192	ES		417	23.19	-0.00							1.0
HWQ	SZ	41	43	EP		417	20.18	0.02							1.0
QRWL	SZ	51	176	EP		417	21.62	-0.02							1.0

**May 3 2015 Hour: 10:16 27.4 Lat: 33.46N Lon: 35.64E Depth: 0 Agency: REL Local Magnitudes: 2.6MC REL Rms: 0.1 secs**

**WEST BEKAA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	11	21	EP		1016	29.13	-0.09							1.0
SHBL	BZ	15	141	EP		1016	29.88	-0.04							1.0
SHBL	BN	15	141	ES		1016	31.77	0.02							1.0
RCY	SZ	19	76	EP		1016	30.54	0.06	33						1.0
DQRL	SZ	29	347	EP		1016	32.09	0.04							1.0
DQRL	SN	29	347	ES		1016	35.50	0.04							1.0
BHL	BZ	50	2	EP		1016	35.45	-0.03							1.0

**May 3 2015 Hour: 11:28 14.0 Lat: 34.64N Lon: 36.30E Depth: 3 Agency: REL Local Magnitudes: 3.1MC REL Rms: 0.0 secs**

**AKKAR REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	52	219	EP		1128	22.32	-0.04	71						1.0
HWQ	SN	52	219	ES		1128	28.57	-0.01							1.0
BHL	BZ	101	216	EP		1128	30.37	0.07							1.0
BHL	BN	101	216	ES		1128	42.37	-0.03							1.0
DQRL	SZ	124	213	EP		1128	33.92	0.05							1.0
DQRL	SN	124	213	ES		1128	48.64	0.03							1.0
RCY	SZ	134	199	EP		1128	35.41	0.01							1.0
SHBL	BZ	152	200	EP		1128	38.11	0.01							1.0

**May 4 2015 Hour: 4: 7 32.5 Agency: REL Regional EMSC OT=04:07:32.5 34.19N 25.04E 10Km M=4.7 CRETE, GREECE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		4	9	38.64							
QRWL	SZ			EP		4	9	38.88							
RCY	SZ			EP		4	9	40.55							
HWQ	SZ			EP		4	9	42.28							

**May 4 2015 Hour: 6:57 35.6 Lat: 34.27N Lon: 36.38E Depth: 0 Agency: REL Local Magnitudes: 3.3MC REL Rms: 0.1 secs**

**BAALBECK REGION**

**Earthquake was felt**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	40	272	EP		657	42.10	0.01							1.0
HWQ	SE	40	272	ES		657	46.87	-0.02							1.0
BHL	BZ	78	239	EP		657	48.32	0.06	84						1.0
BHL	BN	78	239	ES		657	57.62	-0.00							1.0
DQRL	SZ	98	230	EP		657	51.44	0.08							1.0
DQRL	SN	98	230	ES		658	2.97	-0.04							1.0
RCY	SZ	99	211	EP		657	51.53	-0.12							1.0
RCY	SN	99	211	ES		658	3.58	0.06							1.0
QRWL	SZ	103	219	EP		657	52.17	-0.04							1.0
SHBL	BZ	118	210	EP		657	54.63	-0.01							1.0

**May 4 2015 Hour: 10:53 55.7** Lat: 33.53N Lon: 35.70E Depth: 0 Agency: REL Local  
**Magnitudes: 2.4MC REL**

**RACHAYA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	316	EP		1053	56.06	-0.07	28						1.0
RCY	SZ	13	107	EP		1053	57.69	-0.10							1.0
RCY	SN	13	107	ES		1053	59.45	0.09							1.0
SHBL	BZ	21	169	EP		1053	59.06	0.05							1.0
DQRL	SZ	23	328	EP		1053	59.35	-0.04							1.0
DQRL	SN	23	328	ES		1054	2.28	0.15							1.0
BHL	BZ	42	354	EP		1054	2.33	-0.08							1.0

**May 4 2015 Hour: 11:30 37.0** Agency: REL Distant  
**EMSC OT=11:30:37.0 26.34N 61.28E 10Km M=5.1 IRAN-PAKISTAN BORDER REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		1135	49.78								
HWQ	SZ			EP		1135	51.27								
BHL	BZ			EP		1135	51.97								
DQRL	SZ			EP		1135	52.87								

**May 4 2015 Hour: 12:29 8.0** Lat: 33.88N Lon: 35.80E Depth: 14 Agency: REL Local  
**Magnitudes: 3.0MC REL**

**BAABDA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	14	282	EP		1229	11.33	-0.04	57						1.0
DQRL	SZ	29	229	EP		1229	13.34	0.07							1.0
DQRL	SN	29	229	ES		1229	17.17	0.03							1.0
QRWL	SZ	38	197	EP		1229	14.53	-0.11							1.0
RCY	SZ	42	176	EP		1229	15.20	-0.08							1.0
RCY	SN	42	176	ES		1229	20.73	0.10							1.0
HWQ	SZ	46	17	EP		1229	15.92	0.05							1.0
SHBL	BZ	59	185	EP		1229	17.70	-0.02							1.0

**May 6 2015 Hour: 3:49 53.5** Agency: REL Regional  
**EMSC OT=03:49:53.5 34.52N 25.02E 45Km M=4.6 CRETE, GREECE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		351	55.55								
BHL	BZ			EP		351	55.21								
QRWL	SZ			EP		351	56.93								
RCY	SZ			EP		351	58.85								
HWQ	SZ			EP		351	59.19								

**May 6 2015 Hour: 7:37 38.8** Lat: 33.39N Lon: 35.63E Depth: 5 Agency: REL Local  
**Magnitudes: 2.6MC REL**

**HASBAYA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	12	115	EP		737	40.88	-0.09							1.0
SHBL	BE	12	115	ES		737	42.63	0.05							1.0
QRWL	SZ	18	15	EP		737	41.86	-0.00							1.0
RCY	SZ	22	58	EP		737	42.55	0.00	32						1.0
DQRL	SZ	35	351	EP		737	44.66	0.09							1.0
DQRL	SN	35	351	ES		737	48.81	-0.05							1.0

**May 6 2015 Hour: 14:53 32.6** Lat: 33.70N Lon: 35.81E Depth: 1 Agency: REL Local  
**Magnitudes: 2.6MC REL**

**WEST BEKAA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	21	217	EP		1453	35.89	-0.02							1.0
RCY	SZ	22	175	EP		1453	36.17	-0.02							1.0
RCY	SN	22	175	ES		1453	38.88	0.02							1.0
DQRL	SZ	23	273	EP		1453	36.33	0.07	32						1.0
DQRL	SE	23	273	ES		1453	38.95	-0.03							1.0
BHL	BZ	27	327	EP		1453	37.01	-0.01							1.0

BHL BN	27	327	ES	1453	40.30-0.00	1.0
HWQ SZ	66	11	EP	1453	43.11-0.06	0.2

**May 7 2015 Hour: 7:10 22.3** Agency: REL Distant  
**EMSC OT=07:10:22.3 7.23S 154.56E 20Km M=7.1 BOUGAINVILLE REGION, P.N.G.**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 SHBL BZ EP 729 7.67  
 BHL BZ EP 729 7.11

**May 7 2015 Hour: 12:159.8 Lat: 34.73N Lon: 36.59E Depth: 1 Agency: REL Regional Magnitudes: 3.5MC REL**  
**SYRIA REGION**

STAT CO DIST AZI PHASE P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ SZ 78 230 EP	12 2	12.43	0.07	113						1.0
HWQ SN 78 230 ES	12 2	21.64	-0.01							1.0
BHL BZ 126 224 EP	12 2	19.96	-0.17							1.0
BHL BN 126 224 ES	12 2	35.10	-0.07							1.0
BEYL SZ 139 227 EP	12 2	22.16	0.17							0.2
DQRL SZ 148 220 EP	12 2	23.36	0.04							1.0
DQRL SN 148 220 ES	12 2	40.92	0.20							1.0
RCY SZ 154 207 EP	12 2	24.21	-0.02							1.0
RCY SN 154 207 ES	12 2	42.23	-0.07							1.0
SHBL BZ 172 207 EP	12 2	26.94	-0.02							1.0

**May 7 2015 Hour: 13:11 26.7 Lat: 33.82N Lon: 35.71E Depth: 26 Agency: REL Local Magnitudes: 2.4MC REL**  
**BAABDA REGION**

STAT CO DIST AZI PHASE P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL BZ 11 332 EP	1311	31.21	-0.01	26						1.0
BHL BE 11 332 ES	1311	34.59	0.00							1.0
DQRL SZ 18 227 EP	1311	31.75	0.03							1.0
QRWL SZ 30 185 EP	1311	32.87	-0.05							1.0
QRWL SE 30 185 ES	1311	37.55	-0.00							1.0
RCY SZ 37 162 EP	1311	33.89	0.03							1.0

**May 8 2015 Hour: 2:23 27.4 Lat: 33.78N Lon: 35.76E Depth: 2 Agency: REL Local Magnitudes: 2.4MC REL**  
**ALEY REGION**

STAT CO DIST AZI PHASE P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL BZ 17 325 EP	223	30.20	0.01	26						1.0
DQRL SZ 19 245 EP	223	30.59	0.01							1.0
DQRL SN 19 245 ES	223	32.93	-0.01							1.0
QRWL SZ 27 196 EP	223	31.76	0.02							1.0
RCY SZ 32 167 EP	223	32.60	-0.02							1.0
RCY SN 32 167 ES	223	36.50	0.00							1.0
HWQ SZ 58 17 EP	223	36.71	-0.04							0.2

**May 8 2015 Hour: 10:48 50.6 Lat: 33.80N Lon: 35.79E Depth: 16 Agency: REL Local Magnitudes: 2.7MC REL**  
**ZAHLE REGION**

STAT CO DIST AZI PHASE P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL BZ 18 313 EP	1048	54.50	-0.03	40						1.0
DQRL SZ 23 244 EP	1048	55.19	-0.01							1.0
DQRL SN 23 244 ES	1048	58.65	0.05							1.0
QRWL SZ 30 201 EP	1048	56.01	-0.04							1.0
QRWL SN 30 201 ES	1049	0.04	-0.04							1.0
RCY SZ 34 173 EP	1048	56.71	0.06							1.0
HWQ SZ 55 15 EP	1048	59.76	0.01							1.0

**May 8 2015 Hour: 15:337.8 Lat: 34.03N Lon: 35.72E Depth: 0 Agency: REL Local  
Magnitudes: 2.7MC REL Rms: 0.0 secs**

**KESROUAN REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	15	202	EP		15	3	40.29	0.02	42					1.0
BHL	BN	15	202	ES		15	3	42.01	-0.06						1.0
HWQ	SZ	35	38	EP		15	3	43.46	0.03						1.0
HWQ	SE	35	38	ES		15	3	47.55	-0.04						1.0
DQRL	SZ	38	200	EP		15	3	44.06	0.03						1.0
RCY	SZ	60	169	EP		15	3	47.57	0.02						1.0

**May 8 2015 Hour: 16:54 43.7 Lat: 34.18N Lon: 35.71E Depth: 25 Agency: REL Local  
Magnitudes: 3.2MC REL Rms: 0.0 secs**

**JBEIL REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	24	62	EP		1654	49.31	-0.04							1.0
HWQ	SE	24	62	ES		1654	53.55	0.04							1.0
BHL	BZ	31	190	EP		1654	49.97	-0.06	73						1.0
BHL	BE	31	190	ES		1654	54.71	0.03							1.0
BEYL	SZ	39	211	EP		1654	50.99	-0.02							1.0
DQRL	SZ	54	194	EP		1654	53.05	0.04							1.0
DQRL	SE	54	194	ES		1654	59.90	0.03							1.0
QRWL	SZ	70	182	EP		1654	55.22	-0.00							1.0
QRWL	SN	70	182	ES		1655	3.69	-0.03							1.0
RCY	SZ	76	171	EP		1654	56.15	-0.03							1.0

**May 9 2015 Hour: 16:45 13.2 Lat: 33.55N Lon: 35.75E Depth: 7 Agency: REL Local  
Magnitudes: 2.3MC REL Rms: 0.0 secs**

**WEST BEKAA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	6	263	EP		1645	14.76	-0.02	24						1.0
RCY	SZ	11	127	EP		1645	15.39	0.05							1.0
RCY	SE	11	127	ES		1645	16.94	-0.02							1.0
DQRL	SZ	23	316	EP		1645	17.15	-0.02							1.0
DQRL	SE	23	316	ES		1645	20.16	0.03							1.0
BHL	BZ	40	348	EP		1645	19.69	-0.02							1.0

**May 10 2015 Hour: 21:32 48.2 Agency: REL Regional**

**EMSC OT=21:32:48.2 34.76N 25.26E 47Km M=4.5 CRETE, GREECE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		2134	47.26								
QRWL	SZ			EP		2134	48.36								
HWQ	SZ			EP		2134	51.86								

**May 10 2015 Hour: 21:25 48.6 Agency: REL Distant**

**EMSC OT=21:25:48.6 31.20N 142.17E 15Km M=5.9 IZU ISLANDS, JAPAN REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		2138	21.77								
BHL	BZ			EP		2138	23.09								
DQRL	SZ			EP		2138	24.94								
QRWL	SZ			EP		2138	25.03								

**May 11 2015 Hour: 3:30 14.9 Agency: REL Distant**

**EMSC OT=03:30:14.9 20.65S 178.68W 593Km M=5.1 FIJI REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		348	50.43								
RCY	SZ			EP		348	51.61								
BHL	BZ			EP		348	51.61								
DQRL	SZ			EP		348	52.30								

May 11 2015 Hour: 5:159.1 Agency: REL Regional

EMSC OT=05:01:59.1 34.92N 26.89E 10Km M=4.5 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP			5	3	49.06						
HWQ	SZ			EP			5	3	48.44						

May 11 2015 Hour: 10:57 54.4 Lat: 33.81N Lon: 36.08E Depth: 0 Agency: REL Local  
Magnitudes: 2.4MC REL

**ZAHLE REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	41	286	EP		1058	0.95	-0.03	26						1.0
RCY	SZ	41	214	EP		1058	1.02	0.02							1.0
RCY	SN	41	214	ES		1058	5.86	-0.04							1.0
DQRL	SZ	49	257	EP		1058	2.25	0.05							1.0
DQRL	SN	49	257	ES		1058	7.99	0.00							1.0
HWQ	SZ	54	347	EP		1058	3.06	-0.01							1.0

May 11 2015 Hour: 13:59 9.9 Lat: 33.79N Lon: 35.79E Depth: 2 Agency: REL Local  
Magnitudes: 2.6MC REL

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	316	EP		1359	12.87	-0.00	34						1.0
DQRL	SZ	22	246	EP		1359	13.53	-0.01							1.0
DQRL	SN	22	246	ES		1359	16.25	0.01							1.0
RCY	SZ	33	173	EP		1359	15.18	0.01							1.0
RCY	SE	33	173	ES		1359	19.08	-0.00							1.0
HWQ	SZ	56	15	EP		1359	19.06	0.06							0.2

May 11 2015 Hour: 15:34 0.4 Lat: 33.78N Lon: 35.77E Depth: 0 Agency: REL Local  
Magnitudes: 2.8MC REL

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	323	EP		1534	3.12	0.01	43						1.0
BHL	BE	17	323	ES		1534	5.13	-0.02							1.0
DQRL	SZ	20	245	EP		1534	3.61	0.02							1.0
QRWL	SZ	27	197	EP		1534	4.70	-0.03							1.0
RCY	SZ	32	168	EP		1534	5.58	0.01							1.0
RCY	SE	32	168	ES		1534	9.42	-0.01							1.0
HWQ	SZ	58	17	EP		1534	9.64	0.01							1.0

May 12 2015 Hour: 7:519.0

Agency: REL Distant

EMSC OT=07:05:19.0 27.89N 86.17E 10Km M=7.3 NEPAL

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		713	20.89								
RCY	SZ			EP		713	22.82								
BHL	BZ			EP		713	23.88								
QRWL	SZ			EP		713	24.10								
DQRL	SZ			EP		713	24.53								

May 12 2015 Hour: 7:36 53.7

Agency: REL Distant

EMSC OT=07:36:53.7 27.65N 86.31E 10Km M=6.2 NEPAL

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		744	56.32								
RCY	SZ			EP		744	56.97								
QRWL	SZ			EP		744	59.29								
DQRL	SZ			EP		744	59.63								

May 12 2015 Hour: 15:28 9.2 Agency: REL Regional

EMSC OT=15:28:09.2 35.87N 36.55E 20Km M=3.0 SYRIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1528	35.75								
BHL	BZ			EP		1528	42.60								
DQRL	SZ			EP		1528	46.12								

May 12 2015 Hour: 21:12 59.2

Agency: REL Distant

EMSC OT=21:12:59.2 38.95N 141.99E 40Km M=6.8 NEAR EAST COAST OF HONSHU, JAPAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		2125	4.85								
BHL	BZ			EP		2125	7.12								
DQRL	SZ			EP		2125	8.59								
RCY	SZ			EP		2125	8.59								
QRWL	SZ			EP		2125	8.81								

May 14 2015 Hour: 9:55 47.8 Lat: 33.87N Lon: 35.84E Depth: 0 Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.0 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	282	EP		955	50.55-0.03		41						1.0
DQRL	SZ	31	233	EP		955	52.76 0.01								1.0
DQRL	SN	31	233	ES		955	56.44 0.01								1.0
RCY	SZ	42	180	EP		955	54.53 0.03								1.0
RCY	SN	42	180	ES		955	59.43-0.03								1.0
HWQ	SZ	46	13	EP		955	55.25 0.00								1.0

May 14 2015 Hour: 9:56 49.2 Lat: 32.73N Lon: 36.59E Depth: 0 Agency: REL Regional

Magnitudes: 3.1MC REL

Rms: 0.3 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	110	320	EP		957	6.45-0.48		60						1.0
RCY	SN	110	320	ES		957	20.16 0.08								1.0
DQRL	SZ	144	319	EP		957	12.68 0.45								1.0
DQRL	SN	144	319	ES		957	29.26-0.04								1.0
BHL	BZ	156	326	EP		957	14.03-0.06								1.0
HWQ	SZ	181	341	EP		957	17.84 0.05								1.0

May 14 2015 Hour: 15:25 19.2 Lat: 33.79N Lon: 35.78E Depth: 0 Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	319	EP		1525	21.98 0.00		38						1.0
BHL	BE	17	319	ES		1525	24.01-0.04								1.0
DQRL	SZ	21	245	EP		1525	22.63 0.05								1.0
RCY	SZ	33	170	EP		1525	24.40-0.02								1.0
RCY	SE	33	170	ES		1525	28.28-0.02								1.0
HWQ	SZ	57	16	EP		1525	28.36 0.03								1.0

May 14 2015 Hour: 20:34 14.7 Lat: 32.56N Lon: 35.25E Depth: 0 Agency: REL Regional

Magnitudes: 2.9MC REL

Rms: 0.1 secs

DEAD SEA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	117	20	EP		2034	33.52 0.01								1.0
RCY	SZ	117	28	EP		2034	33.58-0.04		49						1.0
RCY	SN	117	28	ES		2034	47.62 0.00								1.0
DQRL	SZ	130	13	EP		2034	35.73-0.01								1.0
DQRL	SN	130	13	ES		2034	51.33 0.02								1.0
BHL	BZ	154	14	EP		2034	39.14-0.08								1.0
HWQ	SZ	201	19	EP		2034	45.94 0.10								1.0

**May 15 2015 Hour: 14:6 19.1 Lat: 33.78N Lon: 35.78E Depth: 0 Agency: REL Local Magnitudes: 2.6MC REL Rms: 0.0 secs**

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	319	EP		14	6	22.02-0.03	34						1.0
BHL	BN	18	319	ES		14	6	24.20 0.01							1.0
DQRL	SZ	21	246	EP		14	6	22.62 0.01							1.0
RCY	SZ	32	171	EP		14	6	24.33-0.01							1.0
RCY	SN	32	171	ES		14	6	28.19 0.01							1.0
HWQ	SZ	57	15	EP		14	6	28.55 0.21							0.2

**May 15 2015 Hour: 20:26 56.4 Agency: REL Distant  
EMSC OT=20:26:56.4 2.62S 102.19E 153Km M=5.9 SOUTHERN SUMATRA, INDONESIA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		2038		4.47							
HWQ	SZ			EP		2038		4.84							
BHL	BZ			EP		2038		5.07							
DQRL	SZ			EP		2038		6.18							

**May 16 2015 Hour: 8:35 6.5 Lat: 33.78N Lon: 35.76E Depth: 1 Agency: REL Local Magnitudes: 2.8MC REL Rms: 0.1 secs**

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	324	EP		835		9.22-0.05	48						1.0
BHL	BN	17	324	ES		835		11.31 0.01							1.0
DQRL	SZ	20	245	EP		835		9.77 0.06							1.0
BEYL	SZ	27	292	EP		835		10.97 0.13							0.2
QRWL	SZ	27	196	EP		835		10.79-0.11							1.0
RCY	SZ	32	167	EP		835		11.86 0.08							1.0
RCY	SN	32	167	ES		835		15.65-0.01							1.0
HWQ	SZ	58	17	EP		835		15.99 0.13							0.2

**May 16 2015 Hour: 10:14 4.8 Lat: 33.47N Lon: 35.69E Depth: 0 Agency: REL Local Magnitudes: 2.4MC REL Rms: 0.1 secs**

**WEST BEKAA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	357	EP		1014		6.06-0.17	28						1.0
RCY	SZ	14	78	EP		1014		7.16 0.03							1.0
RCY	SN	14	78	ES		1014		8.83 0.01							1.0
SHBL	BZ	15	159	EP		1014		7.23 0.02							1.0
DQRL	SZ	28	337	EP		1014		9.38-0.02							1.0
DQRL	SN	28	337	ES		1014		12.89 0.12							1.0

**May 16 2015 Hour: 16:12 2.9 Lat: 33.97N Lon: 36.15E Depth: 16 Agency: REL Local Magnitudes: 2.9MC REL Rms: 0.1 secs**

**BAALBECK REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	40	331	EP		1612		9.73-0.03	54						1.0
HWQ	SN	40	331	ES		1612		14.89 0.05							1.0
BHL	BZ	46	262	EP		1612		10.59-0.16							1.0
BHL	BN	46	262	ES		1612		16.56-0.00							1.0
RCY	SZ	60	209	EP		1612		12.62-0.09							1.0
RCY	SN	60	209	ES		1612		19.98 0.01							1.0
DQRL	SZ	61	242	EP		1612		12.97 0.09							1.0
QRWL	SZ	64	223	EP		1612		13.36 0.12							1.0

**May 17 2015 Hour: 8:49 6.5 Lat: 33.45N Lon: 35.62E Depth: 0 Agency: REL Local Magnitudes: 2.6MC REL Rms: 0.0 secs**

**WEST BEKAA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	12	28	EP		849		8.47-0.02							1.0
SHBL	BZ	16	134	EP		849		9.14 0.04							1.0
SHBL	BN	16	134	ES		849		11.00-0.03							1.0

RCY	SZ	21	75	EP	849	9.86	0.01	33		1.0
DQRL	SZ	29	351	EP	849	11.11	-0.04			1.0
BHL	BZ	51	4	EP	849	14.69	0.03			1.0
DQRL	SN			ES	849	14.60				

**May 17 2015 Hour: 10:56 52.6 Lat: 33.79N Lon: 35.78E Depth: 5 Agency: REL Local Magnitudes: 2.5MC REL**

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	319	EP		1056	55.53	0.00	29						1.0
DQRL	SZ	21	244	EP		1056	56.17	0.00							1.0
DQRL	SN	21	244	ES		1056	58.80	-0.00							1.0
RCY	SZ	33	170	EP		1056	58.04	-0.00							1.0
RCY	SE	33	170	ES		1057	2.06	-0.00							1.0
HWQ	SZ	56	16	EP		1057	1.78	0.00							1.0

**May 18 2015 Hour: 10:16 30.6 Lat: 33.89N Lon: 35.83E Depth: 0 Agency: REL Local Magnitudes: 2.7MC REL**

**METN REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	16	277	EP		1016	33.19	0.00	39						1.0
DQRL	SZ	31	230	EP		1016	35.57	-0.03							1.0
RCY	SZ	43	179	EP		1016	37.53	-0.04							1.0
RCY	SN	43	179	ES		1016	42.72	0.00							1.0
HWQ	SZ	45	14	EP		1016	37.91	0.06							0.2

**May 18 2015 Hour: 11:9 58.9 Lat: 34.74N Lon: 36.21E Depth: 0 Agency: REL Local Magnitudes: 3.1MC REL**

**SYRIA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	56	205	EP		1110	7.99	-0.02							1.0
BHL	BZ	106	209	EP		1110	16.05	0.11							1.0
BHL	BN	106	209	ES		1110	28.46	-0.09							1.0
DQRL	SZ	129	207	EP		1110	19.74	0.07							1.0
RCY	SZ	142	194	EP		1110	21.53	-0.15	59						1.0
RCY	SN	142	194	ES		1110	38.62	0.09							1.0

**May 18 2015 Hour: 15:11 55.6 Lat: 33.06N Lon: 35.79E Depth: 8 Agency: REL Local Magnitudes: 2.8MC REL**

**SYRIA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	32	352	EP		1512	1.13	0.02	46						1.0
RCY	SZ	49	5	EP		1512	3.69	0.03							1.0
RCY	SN	49	5	ES		1512	9.57	-0.01							1.0
QRWL	SZ	55	349	EP		1512	4.56	-0.11							1.0
DQRL	SZ	75	344	EP		1512	7.84	0.06							1.0
DQRL	SN	75	344	ES		1512	16.78	0.01							1.0
BHL	BZ	95	352	EP		1512	10.91	-0.01							1.0
HWQ	SZ	136	6	EP		1512	17.23	0.22							0.2

**May 19 2015 Hour: 15:25 25.7 Lat: 33.79N Lon: 35.79E Depth: 0 Agency: REL Local Magnitudes: 2.8MC REL**

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	315	EP		1525	28.67	-0.01	44						1.0
BHL	BE	18	315	ES		1525	30.87	-0.00							1.0
DQRL	SZ	23	246	EP		1525	29.42	0.02							1.0
QRWL	SZ	29	201	EP		1525	30.31	-0.04							1.0
QRWL	SE	29	201	ES		1525	33.79	0.02							1.0
HWQ	SZ	56	14	EP		1525	34.79	0.02							1.0

**May 19 2015 Hour: 16:47 35.9 Lat: 33.30N Lon: 35.63E Depth: 0 Agency: REL Local Magnitudes: 2.4MC REL**

**MARJAAYOU REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	28	11	EP		1647	40.43	-0.05							1.0
RCY	SZ	30	41	EP		1647	40.78	0.09	24						1.0
RCY	SN	30	41	ES		1647	44.19	-0.04							1.0
DQRL	SZ	46	354	EP		1647	43.23	-0.04							1.0
DQRL	SN	46	354	ES		1647	48.77	0.05							1.0

**May 19 2015 Hour: 23:21 19.6 Lat: 33.80N Lon: 35.79E Depth: 17 Agency: REL Local Magnitudes: 2.7MC REL**

**ZAHLE REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	312	EP		2321	23.62	-0.01	38						1.0
BHL	BN	17	312	ES		2321	26.59	0.00							1.0
DQRL	SZ	23	242	EP		2321	24.35	0.01							1.0
RCY	SZ	34	173	EP		2321	25.84	-0.00							1.0
RCY	SN	34	173	ES		2321	30.43	0.00							1.0
HWQ	SZ	55	15	EP		2321	28.73	0.00							1.0

**May 20 2015 Hour: 0:30 50.6**

**Agency: REL Distant**

**EMSC OT=00:30:50.6 19.30S 175.47W 173Km M=6.0 TONGA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		050	12.88								
RCY	SZ			EP		050	13.72								

**May 21 2015 Hour: 11:31 51.9 Lat: 33.47N Lon: 35.68E Depth: 1 Agency: REL Local Magnitudes: 2.6MC REL**

**Rms: 0.0 secs**

**WEST BEKAA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	8	4	EP		1131	53.36	-0.02							1.0
QRWL	SE	8	4	ES		1131	54.43	-0.00							1.0
SHBL	BZ	15	155	EP		1131	54.43	0.01							1.0
SHBL	BN	15	155	ES		1131	56.24	-0.01							1.0
RCY	SZ	15	79	EP		1131	54.43	0.00	34						1.0
DQRL	SZ	28	339	EP		1131	56.46	0.01							1.0

**May 21 2015 Hour: 21: 2 46.0**

**Agency: REL Regional**

**EMSC OT=21:02:46.0 36.54N 26.85E 142Km M=3.9 DODECANESE ISLANDS, GREECE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		21	4	34.85							
RCY	SZ			EP		21	4	38.22							

**May 22 2015 Hour: 8:44 57.3 Lat: 33.82N Lon: 35.76E Depth: 22 Agency: REL Local Magnitudes: 2.4MC REL**

**BAABDA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	14	314	EP		845	1.53	0.00	26						1.0
BHL	BN	14	314	ES		845	4.63	-0.01							1.0
DQRL	SZ	22	235	EP		845	2.30	0.03							1.0
QRWL	SZ	31	194	EP		845	3.30	-0.04							1.0
RCY	SZ	36	169	EP		845	4.11	0.01							1.0
RCY	SN	36	169	ES		845	9.11	0.01							1.0

**May 22 2015 Hour: 11:32 15.6 Lat: 33.83N Lon: 35.74E Depth: 25 Agency: REL Local Magnitudes: 2.7MC REL**

**Rms: 0.0 secs**

**BAABDA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	11	315	EP		1132	20.03	0.01	38						1.0
DQRL	SZ	21	228	EP		1132	20.80	-0.03							1.0
DQRL	SE	21	228	ES		1132	24.69	0.01							1.0
RCY	SZ	38	167	EP		1132	22.87	0.03							1.0

RCY	SN	38	167	ES	1132	28.17-0.02	1.0
HWQ	SZ	53	21	EP	1132	24.67-0.07	0.2

**May 23 2015 Hour: 15:57 14.9 Lat: 33.78N Lon: 35.86E Depth: 18 Agency: REL Local Magnitudes: 2.3MC REL**

**ZAHLE REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	24	307	EP		1557	19.67	0.00							1.0
DQRL	SZ	28	254	EP		1557	20.18	-0.01							1.0
DQRL	SN	28	254	ES		1557	24.15	0.01							1.0
RCY	SZ	31	184	EP		1557	20.65	0.01	21						1.0
RCY	SN	31	184	ES		1557	24.91	-0.01							1.0

**May 23 2015 Hour: 16:6 28.9 Lat: 33.54N Lon: 35.71E Depth: 0 Agency: REL Local Magnitudes: 2.8MC REL**

**RACHAYA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	293	EP		16	6	29.30	-0.15						1.0
RCY	SZ	12	111	EP		16	6	30.86	-0.02						1.0
RCY	SN	12	111	ES		16	6	32.31	-0.02						1.0
DQRL	SZ	23	325	EP		16	6	32.66	0.03	46					1.0
DQRL	SN	23	325	ES		16	6	35.41	0.03						1.0
BHL	BZ	41	352	EP		16	6	35.57	0.02						1.0
HWQ	SZ	85	15	EP		16	6	43.10	0.48						0.2

**May 24 2015 Hour: 4:53 23.6**

**Agency: REL Distant**

**EMSC OT=04:53:23.6 16.82S 14.20W 10Km M=6.4 SOUTHERN MID-ATLANTIC RIDGE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ			EP		5	4	29.19							
QRWL	SZ			EP		5	4	30.18							
BHL	BZ			EP		5	4	30.57							
DQRL	SZ			EP		5	4	30.91							

**May 24 2015 Hour: 7:14 49.7 Lat: 33.78N Lon: 35.76E Depth: 0 Agency: REL Local Magnitudes: 2.5MC REL**

**Rms: 0.2 secs**

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	325	EP		714	52.41	-0.07	31						1.0
DQRL	SZ	19	246	EP		714	52.90	0.07							1.0
DQRL	SN	19	246	ES		714	55.13	-0.01							1.0
RCY	SZ	32	167	EP		714	54.80	-0.06							1.0
RCY	SN	32	167	ES		714	58.69	0.02							1.0
HWQ	SZ	58	17	EP		714	59.85	0.77							0.2

**May 24 2015 Hour: 15:44 22.2 Lat: 33.96N Lon: 36.20E Depth: 18 Agency: REL Local Magnitudes: 2.8MC REL**

**Rms: 0.0 secs**

**BAALBECK REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	42	326	EP		1544	29.51	0.02	43						1.0
HWQ	SN	42	326	ES		1544	34.87	0.00							1.0
BHL	BZ	51	263	EP		1544	30.65	-0.08							1.0
DQRL	SZ	65	244	EP		1544	32.82	0.05							1.0
DQRL	SN	65	244	ES		1544	40.61	0.02							1.0
QRWL	SZ	66	226	EP		1544	33.00	-0.01							1.0

**May 25 2015 Hour: 14:12 12.3 Lat: 33.80N Lon: 35.73E Depth: 19 Agency: REL Local Magnitudes: 2.8MC REL**

**Rms: 0.0 secs**

**BAABDA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	14	327	EP		1412	16.18	-0.01	44						1.0
BHL	BN	14	327	ES		1412	19.05	-0.00							1.0
DQRL	SZ	19	235	EP		1412	16.73	0.06							1.0
QRWL	SZ	29	190	EP		1412	17.75	-0.10							1.0
RCY	SZ	35	164	EP		1412	18.81	0.06							1.0

RCY SN 35 164 ES	1412 23.50-0.00	1.0
HWQ SZ 56 20 EP	1412 21.70-0.00	1.0

**May 26 2015 Hour: 2:41 8.0 Lat: 33.49N Lon: 36.49E Depth: 0 Agency: REL Local Magnitudes: 2.8MC REL**

**SYRIA REGION**

STAT CO DIST AZI PHASE P	HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
RCY SZ 61 271 EP	241 17.73-0.01 46
RCY SE 61 271 ES	241 24.89-0.09
QRWL SZ 75 275 EP	241 20.13 0.05
DQRL SZ 88 286 EP	241 22.33 0.11
DQRL SN 88 286 ES	241 32.86 0.08
BHL BZ 90 301 EP	241 22.31-0.14

**May 26 2015 Hour: 15:29 28.4 Lat: 34.31N Lon: 36.55E Depth: 8 Agency: REL Local Magnitudes: 3.0MC REL**

**BAALBECK REGION**

STAT CO DIST AZI PHASE P	HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
HWQ SZ 56 267 EP	1529 37.50 0.01 55
HWQ SN 56 267 ES	1529 44.22-0.01
BHL BZ 94 242 EP	1529 43.44-0.09
RCY SZ 111 217 EP	1529 46.09-0.05
RCY SE 111 217 ES	1529 59.29 0.00
DQRL SZ 112 234 EP	1529 46.39 0.14

**May 27 2015 Hour: 12:8 36.1 Lat: 33.48N Lon: 35.67E Depth: 3 Agency: REL Local Magnitudes: 2.7MC REL**

**WEST BEKAA REGION**

STAT CO DIST AZI PHASE P	HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
QRWL SZ 8 8 EP	12 8 37.58-0.01
RCY SZ 16 82 EP	12 8 38.75 0.00 37
SHBL BZ 16 154 EP	12 8 38.77-0.01
SHBL BN 16 154 ES	12 8 40.76 0.01
DQRL SZ 27 340 EP	12 8 40.55 0.01
DQRL SN 27 340 ES	12 8 43.82-0.00

**May 27 2015 Hour: 16:42 44.3 Lat: 33.14N Lon: 36.20E Depth: 17 Agency: REL Local Magnitudes: 2.7MC REL**

**SYRIA REGION**

STAT CO DIST AZI PHASE P	HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
RCY SZ 52 320 EP	1642 52.95-0.02 40
RCY SE 52 320 ES	1642 59.42-0.01
QRWL SZ 66 314 EP	1642 55.09 0.12
DQRL SZ 86 317 EP	1642 57.74-0.14
DQRL SN 86 317 ES	1643 7.97 0.01
BHL BZ 99 329 EP	1642 59.83 0.04

**May 28 2015 Hour: 13:47 30.4 Lat: 33.81N Lon: 36.00E Depth: 28 Agency: REL Local Magnitudes: 2.8MC REL**

**ZAHLE REGION**

STAT CO DIST AZI PHASE P	HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
BHL BZ 34 289 EP	1347 37.20-0.03
RCY SZ 37 204 EP	1347 37.67-0.05 47
RCY SN 37 204 ES	1347 43.19 0.03
DQRL SZ 41 255 EP	1347 38.19 0.06
DQRL SN 41 255 ES	1347 43.86-0.02
HWQ SZ 53 355 EP	1347 39.66 0.01

**May 28 2015 Hour: 14:8 6.5 Lat: 33.53N Lon: 35.71E Depth: 0 Agency: REL Local Magnitudes: 2.5MC REL**

**RACHAYA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	299	EP		14	8	6.91-0.08							1.0
RCY	SZ	13	110	EP		14	8	8.49-0.05	29						1.0
SHBL	BZ	21	171	EP		14	8	9.97 0.07							1.0
SHBL	BN	21	171	ES		14	8	12.40-0.01							1.0
DQRL	SZ	23	326	EP		14	8	10.19-0.01							0.2
DQRL	SN	23	326	ES		14	8	12.95 0.02							1.0
BHL	BZ	41	353	EP		14	8	13.20 0.04							1.0

**May 28 2015 Hour: 23:13 56.1 Lat: 33.70N Lon: 35.92E Depth: 12 Agency: REL Local Magnitudes: 2.7MC REL**

**WEST BEKAA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	23	198	EP		2314		0.39-0.06	42						1.0
RCY	SN	23	198	ES		2314		3.72 0.05							1.0
QRWL	SZ	27	233	EP		2314		0.91-0.04							1.0
DQRL	SZ	32	272	EP		2314		1.71 0.05							1.0
DQRL	SN	32	272	ES		2314		5.80 0.02							1.0
BHL	BZ	33	314	EP		2314		1.77-0.09							1.0
HWQ	SZ	65	3	EP		2314		6.78 0.07							1.0

**May 29 2015 Hour: 7:0 8.0 Agency: REL Distant EMSC OT=07:00:08.0 56.74N 156.73W 60Km M=6.8 ALASKA PENINSULA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP			712	55.06							
BHL	BZ			EP			712	57.14							
QRWL	SZ			EP			712	59.04							
RCY	SZ			EP			712	59.16							
SHBL	BZ			EP			712	59.16							

**May 29 2015 Hour: 12:16 15.2 Lat: 33.85N Lon: 35.76E Depth: 25 Agency: REL Local Magnitudes: 2.6MC REL**

**BAABDA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	12	302	EP		1216		19.70 0.05	33						1.0
BHL	BN	12	302	ES		1216		22.91-0.03							1.0
DQRL	SZ	24	229	EP		1216		20.65-0.01							1.0
RCY	SZ	39	170	EP		1216		22.48-0.04							1.0
RCY	SN	39	170	ES		1216		27.97 0.02							1.0
HWQ	SZ	51	19	EP		1216		23.98-0.05							0.2

**May 29 2015 Hour: 14:10 3.0 Lat: 33.78N Lon: 35.77E Depth: 6 Agency: REL Local Magnitudes: 2.6MC REL**

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	321	EP		1410		6.03-0.02	34						1.0
BHL	BN	17	321	ES		1410		8.27 0.00							1.0
DQRL	SZ	20	245	EP		1410		6.55 0.01							1.0
RCY	SZ	32	169	EP		1410		8.39-0.02							1.0
RCY	SE	32	169	ES		1410		12.39 0.01							1.0
HWQ	SZ	57	16	EP		1410		12.37 0.01							1.0

**May 30 2015 Hour: 11:23 3.2 Agency: REL Distant EMSC OT=11:23:03.2 27.91N 140.46E 693Km M=7.8 BONIN ISLANDS, JAPAN REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1134		30.96							
BHL	BZ			EP		1134		33.02							
RCY	SZ			EP		1134		33.86							
DQRL	SZ			EP		1134		34.38							
SHBL	BZ			EP		1134		34.32							

May 30 2015 Hour: 14:24 16.9 Lat: 33.78N Lon: 35.76E Depth: 5 Agency: REL Local  
 Magnitudes: 2.6MC REL Rms: 0.0 secs

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	324	EP		1424	19.75	-0.08	35						1.0
BHL	BE	17	324	ES		1424	22.04	0.02							1.0
DQRL	SZ	20	246	EP		1424	20.25	0.06							1.0
QRWL	SZ	27	196	EP		1424	21.26	-0.04							1.0
RCY	SZ	32	168	EP		1424	22.15	-0.01							1.0
RCY	SN	32	168	ES		1424	26.08	0.01							1.0
HWQ	SZ	58	17	EP		1424	26.33	0.04							1.0

May 30 2015 Hour: 18:54 30.3 Lat: 33.83N Lon: 35.24E Depth: 21 Agency: REL Local  
 Magnitudes: 3.0MC REL Rms: 0.1 secs

**OFFSHORE CENTRAL LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	SZ	24	77	EP		1854	35.76	0.45							0.2
DQRL	SZ	33	113	EP		1854	36.54	-0.01	62						1.0
DQRL	SN	33	113	ES		1854	41.15	-0.01							1.0
BHL	BZ	39	77	EP		1854	37.34	-0.01							1.0
BHL	BN	39	77	ES		1854	42.55	0.01							1.0
QRWL	SZ	51	127	EP		1854	38.93	-0.06							1.0
RCY	SZ	66	123	EP		1854	41.16	-0.00							1.0
RCY	SN	66	123	ES		1854	49.21	0.03							1.0
HWQ	SZ	82	52	EP		1854	43.50	0.00							1.0

May 30 2015 Hour: 18:49 6.4 Agency: REL Distant  
**EMSC OT=18:49:06.4 30.77N 143.04E 2Km M=6.2 IZU ISLANDS, JAPAN REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		19	1	44.39							
RCY	SZ			EP		19	1	44.92							
BHL	BZ			EP		19	1	48.33							

# Epicentral Map of Lebanon

## May 2015

### Magnitudes

○  $M_I = 2$

○  $M_I = 3$

○  $M_I = 4$

○  $M_I = 5$

★ Felt

