

Republic of Lebanon  
National Council for Scientific Research

# Provisional Seismological Bulletin

from the

## NATIONAL SEISMIC NETWORK

September

2015

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](mailto: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:

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

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
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
ZAHL	3351.48N	3553.12E	1211	ZAHLE	Opened Aug 2015

## 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.

September 1 2015 Hour: 16:10 6.1 Lat: 33.79N Lon: 35.76E Depth: 11 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	16	321	EP		1610	9.38	0.00	39						1.0
DQRL	SZ	20	242	EP		1610	9.94	0.01							1.0
DQRL	SN	20	242	ES		1610	12.78	-0.01							1.0
RCY	SZ	33	168	EP		1610	11.85	-0.01							1.0
RCY	SN	33	168	ES		1610	16.16	0.01							1.0
HWQ	SZ	57	17	EP		1610	15.42	-0.00							1.0

September 3 2015 Hour: 1:44 39.5

Agency: REL Regional

**EMSC OT=01:44:39.5 30.51N 28.44E 10Km M=4.5 EGYPT**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		146	19.09								
QRWL	SZ			EP		146	19.37								
RCY	SZ			EP		146	21.07								
BHL	BZ			EP		146	21.00								
HWQ	SZ			EP		146	25.75								

September 4 2015 Hour: 4:49 38.7

Agency: REL Distant

**EMSC OT=04:49:38.7 40.97N 47.43E 15Km M=5.4 AZERBAIJAN**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		452	27.09								
QRWL	SZ			EP		452	30.75								

September 4 2015 Hour: 11:7 25.8 Lat: 33.43N Lon: 35.63E Depth: 11 Agency: REL Local  
Magnitudes: 2.7MC REL Rms: 0.0 secs

**JEZZINE REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	14	23	EP		11 7	28.73	0.03	38						1.0
QRWL	SN	14	23	ES		11 7	30.87	-0.01							1.0
RCY	SZ	21	70	EP		11 7	29.66	-0.01							1.0
DQRL	SZ	31	350	EP		11 7	31.06	-0.02							1.0
DQRL	SN	31	350	ES		11 7	35.02	0.00							1.0
HWQ	SZ	98	18	EP		11 7	41.48	0.05							0.2

September 4 2015 Hour: 23:29 44.0 Lat: 33.45N Lon: 35.93E Depth: 11 Agency: REL Local  
Magnitudes: 2.5MC REL Rms: 0.1 secs

**RACHAYA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	10	301	EP		2329	46.70	0.09	32						1.0
RCY	SN	10	301	ES		2329	48.46	-0.09							1.0
QRWL	SZ	25	295	EP		2329	48.50	-0.03							1.0
QRWL	SN	25	295	ES		2329	51.89	-0.00							1.0
DQRL	SZ	44	311	EP		2329	51.30	-0.02							1.0
DQRL	SE	44	311	ES		2329	56.76	0.01							1.0
BHL	BZ	57	333	EP		2329	53.45	0.13							1.0
HWQ	SZ	92	1	EP		2329	58.59	-0.09							1.0

September 5 2015 Hour: 10:57 1.7 Lat: 33.80N Lon: 35.78E Depth: 8 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	315	EP		1057	4.78	0.03	37						1.0
BHL	BE	17	315	ES		1057	7.04	-0.01							1.0
DQRL	SZ	22	242	EP		1057	5.52	-0.03							1.0
DQRL	SN	22	242	ES		1057	8.45	0.01							1.0
RCY	SZ	34	171	EP		1057	7.42	0.04							1.0
RCY	SE	34	171	ES		1057	11.60	-0.02							1.0
HWQ	SZ	55	16	EP		1057	10.70	-0.01							1.0

September 5 2015 Hour: 13:16 11.2

Agency: REL Distant

EMSC OT=13:16:11.2 49.45N 155.60E 60Km M=5.8 KURIL ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1328	21.45								
RCY	SZ			EP		1328	22.97								
DQRL	SZ			EP		1328	23.09								

September 5 2015 Hour: 16: 6 49.7 Lat: 33.79N Lon: 35.79E Depth: 2

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	18	315	EP		16 6	52.66	-0.05	40						1.0
DQRL	SZ	23	246	EP		16 6	53.34	-0.06							1.0
DQRL	SN	23	246	ES		16 6	56.18	0.06							1.0
QRWL	SZ	29	201	EP		16 6	54.39	0.03							1.0
QRWL	SN	29	201	ES		16 6	57.77	-0.02							1.0
RCY	SZ	33	173	EP		16 6	54.99	-0.02							1.0
RCY	SN	33	173	ES		16 6	58.94	0.01							1.0
HWQ	SZ	56	15	EP		16 6	58.85	0.05							1.0

September 6 2015 Hour: 4:52 54.8

Agency: REL Distant

EMSC OT=04:52:54.8 25.11S 180.00W 495Km M=5.4 SOUTH OF FIJI ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		511	43.94								
RCY	SZ			EP		511	44.88								
BHL	BZ			EP		511	44.81								
QRWL	SZ			EP		511	45.32								
DQRL	SZ			EP		511	45.51								

September 7 2015 Hour: 8:46 9.6

Agency: REL Distant

EMSC OT=08:46:09.6 24.33S 179.12E 552Km M=5.8 SOUTH OF FIJI ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		9 4	50.35								
RCY	SZ			EP		9 4	51.16								
BHL	BZ			EP		9 4	51.30								
QRWL	SZ			EP		9 4	51.74								
DQRL	SZ			EP		9 4	51.88								

September 7 2015 Hour: 9:13 57.2

Agency: REL Distant

EMSC OT=09:13:57.2 32.95S 177.89W 25Km M=6.3 SOUTH OF KERMADEC ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		933	44.39								
HWQ	SZ			EP		933	47.85								
DQRL	SZ			EP		933	50.50								
QRWL	SZ			EP		933	48.11								

September 7 2015 Hour: 9:40 39.7 Lat: 33.46N Lon: 35.67E 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	9	6	EP		940	41.17	-0.05	34						1.0
QRWL	SE	9	6	ES		940	42.38	0.04							1.0
RCY	SZ	16	76	EP		940	42.22	-0.02							1.0
DQRL	SZ	28	341	EP		940	44.36	0.07							1.0
DQRL	SE	28	341	ES		940	47.63	-0.06							1.0
HWQ	SZ	94	16	EP		940	54.85	0.01							1.0

September 7 2015 Hour: 10:50 17.1 Lat: 33.49N Lon: 35.66E Depth: 0 Agency: REL Local  
Magnitudes: 2.2MC 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	7	17	EP		1050	18.20	-0.08	19						1.0
QRWL	SE	7	17	ES		1050	19.17	0.03							1.0
RCY	SZ	16	86	EP		1050	19.78	0.02							1.0
DQRL	SZ	26	341	EP		1050	21.30	0.04							1.0
DQRL	SN	26	341	ES		1050	24.34	-0.00							1.0

September 7 2015 Hour: 15:32 47.5 Lat: 34.01N Lon: 36.12E Depth: 36 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	34	332	EP		1532	55.28	0.03	50						1.0
HWQ	SN	34	332	ES		1533	0.90	-0.06							1.0
BHL	BZ	45	256	EP		1532	56.51	0.16							1.0
DQRL	SZ	61	237	EP		1532	58.13	-0.14							1.0
RCY	SZ	62	205	EP		1532	58.49	0.02							1.0
RCY	SN	62	205	ES		1533	6.55	-0.02							1.0

September 8 2015 Hour: 4:57 36.9 Lat: 33.83N Lon: 35.85E Depth: 20 Agency: REL Local  
Magnitudes: 2.4MC REL Rms: 0.1 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	20	294	EP		457	41.58	0.10	26						1.0
BHL	BN	20	294	ES		457	44.84	-0.02							1.0
DQRL	SZ	29	241	EP		457	42.54	-0.07							1.0
QRWL	SZ	35	206	EP		457	43.43	0.07							1.0
QRWL	SN	35	206	ES		457	48.10	-0.04							1.0
HWQ	SZ	50	10	EP		457	45.40	-0.04							1.0

September 8 2015 Hour: 6:48 32.7 Agency: REL Distant  
EMSC OT=06:48:32.7 33.16S 178.45W 10Km M=5.8 SOUTH OF KERMADEC ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		7 8	25.61								
RCY	SZ			EP		7 8	25.89								
QRWL	SZ			EP		7 8	26.64								
BHL	BZ			EP		7 8	26.27								
DQRL	SZ			EP		7 8	27.30								

September 8 2015 Hour: 8:19 52.7 Agency: REL Distant  
EMSC OT=08:19:52.7 33.15S 178.18W 10Km M=5.5 SOUTH OF KERMADEC ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		839	48.30								
BHL	BZ			EP		839	48.79								
DQRL	SZ			EP		839	49.06								

September 8 2015 Hour: 13:13 23.7 Lat: 33.88N Lon: 35.83E Depth: 11 Agency: REL Local  
Magnitudes: 3.0MC 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	16	281	EP		1313	27.02	-0.03	61						1.0
BHL	BN	16	281	ES		1313	29.53	0.02							1.0
DQRL	SZ	31	231	EP		1313	29.07	0.02							1.0
DQRL	SE	31	231	ES		1313	32.96	-0.02							1.0
QRWL	SZ	39	200	EP		1313	30.33	0.00							1.0
RCY	SZ	42	179	EP		1313	30.87	0.01							1.0
RCY	SE	42	179	ES		1313	36.12	-0.01							1.0
HWQ	SZ	46	14	EP		1313	31.39	-0.01							1.0

September 8 2015 Hour: 15:17 29.2 Lat: 33.78N Lon: 35.78E Depth: 0 Agency: REL Local  
Magnitudes: 2.8MC 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	320	EP		1517	32.10	-0.03	43						1.0
BHL	BN	18	320	ES		1517	34.29	0.01							1.0
DQRL	SZ	21	247	EP		1517	32.66	0.01							1.0
RCY	SZ	32	171	EP		1517	34.41	0.02							1.0
RCY	SN	32	171	ES		1517	38.19	-0.02							1.0
HWQ	SZ	57	16	EP		1517	38.47	0.01							1.0

September 8 2015 Hour: 15:42 16.4 Lat: 33.78N Lon: 35.78E Depth: 0 Agency: REL Local  
Magnitudes: 2.7MC 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	18	319	EP		1542	19.31	0.05							1.0
BHL	BN	18	319	ES		1542	21.29	-0.10							1.0
DQRL	SZ	21	246	EP		1542	19.92	0.08	38						1.0
RCY	SZ	32	171	EP		1542	21.60	0.02							1.0
RCY	SN	32	171	ES		1542	25.36	-0.07							1.0
HWQ	SZ	57	15	EP		1542	25.59	0.03							1.0

September 8 2015 Hour: 15:45 48.3 Lat: 33.78N Lon: 35.79E Depth: 8 Agency: REL Local  
Magnitudes: 2.9MC 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	317	EP		1545	51.51	-0.03	49						1.0
DQRL	SZ	22	246	EP		1545	52.15	0.05							1.0
DQRL	SN	22	246	ES		1545	54.93	0.00							1.0
QRWL	SZ	28	200	EP		1545	52.95	-0.08							1.0
RCY	SZ	32	172	EP		1545	53.75	0.03							1.0
RCY	SN	32	172	ES		1545	57.75	0.00							1.0
HWQ	SZ	57	15	EP		1545	57.55	0.01							1.0

September 8 2015 Hour: 15:48 0.0

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		1549	13.96								
HWQ	SZ			EP		1549	27.47								

September 8 2015 Hour: 23:56 17.9 Lat: 33.69N Lon: 35.90E Depth: 11 Agency: REL Local  
Magnitudes: 3.1MC REL Rms: 0.1 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	23	196	EP		2356	22.21	0.04							1.0
RCY	SN	23	196	ES		2356	25.30	-0.00							1.0
QRWL	SZ	26	232	EP		2356	22.60	-0.01							1.0
DQRL	SZ	31	273	EP		2356	23.38	0.05							1.0
BHL	BZ	33	316	EP		2356	23.40	-0.24	69						1.0
BHL	BN	33	316	ES		2356	27.95	0.10							1.0
HWQ	SZ	65	4	EP		2356	28.72	0.07							1.0

September 9 2015 Hour: 15:42 20.4 Lat: 33.79N Lon: 35.78E Depth: 0 Agency: REL Local  
Magnitudes: 2.4MC 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	318	EP		1542	23.10	-0.03	26						1.0
DQRL	SZ	21	244	EP		1542	23.78	-0.06							1.0
DQRL	SN	21	244	ES		1542	26.45	0.05							1.0
RCY	SZ	33	171	EP		1542	25.77	0.05							1.0
RCY	SN	33	171	ES		1542	29.64	-0.03							1.0
HWQ	SZ	56	16	EP		1542	29.80	0.35							0.2



September 10 2015 Hour: 14:55 10.7 Lat: 34.04N Lon: 35.69E Depth: 8 Agency: REL Local  
Magnitudes: 2.8MC 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	16	191	EP		1455	13.60	-0.06	45						1.0
BHL	BN	16	191	ES		1455	15.88	0.02							1.0
HWQ	SZ	35	43	EP		1455	16.61	0.01							1.0
DQRL	SZ	39	196	EP		1455	17.22	0.04							1.0
RCY	SZ	62	167	EP		1455	20.86	-0.02							1.0
RCY	SE	62	167	ES		1455	28.42	0.01							1.0

September 10 2015 Hour: 19:52 36.5 Lat: 34.54N Lon: 36.43E Depth: 10 Agency: REL Local  
Magnitudes: 2.8MC REL Rms: 0.0 secs

**SYRIA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	53	237	EP		1952	45.26	-0.02	46						1.0
HWQ	SN	53	237	ES		1952	51.79	0.01							1.0
BHL	BZ	100	225	EP		1952	52.43	-0.04							1.0
DQRL	SZ	122	221	EP		1952	55.68	0.05							1.0
RCY	SZ	128	205	EP		1952	56.59	0.01							1.0
RCY	SN	128	205	ES		1953	11.44	-0.01							1.0

September 12 2015 Hour: 13:12 45.5 Lat: 34.34N Lon: 36.67E Depth: 13 Agency: REL Local  
Magnitudes: 3.0MC REL Rms: 0.0 secs

**SYRIA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	67	264	EP		1312	56.46	0.05							1.0
HWQ	SN	67	264	ES		1313	4.44	-0.04							1.0
BHL	BZ	106	243	EP		1313	2.07	0.00							1.0
BHL	BN	106	243	ES		1313	14.36	0.04							1.0
RCY	SZ	122	220	EP		1313	4.42	-0.00	55						1.0
DQRL	SZ	124	236	EP		1313	4.69	-0.04							1.0

September 12 2015 Hour: 13:27 56.9 Lat: 33.08N Lon: 35.13E Depth: 16 Agency: REL Local  
Magnitudes: 2.6MC REL Rms: 0.1 secs

**SOUR REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	81	55	EP		1328	9.84	0.09	33						1.0
RCY	SN	81	55	ES		1328	19.21	-0.07							1.0
DQRL	SZ	81	31	EP		1328	9.91	0.17							1.0
DQRL	SN	81	31	ES		1328	19.33	0.07							1.0
BHL	BZ	104	28	EP		1328	12.86	-0.26							1.0
HWQ	SZ	153	30	EP		1328	20.43	0.04							0.2

September 12 2015 Hour: 13:50 22.0 Lat: 34.05N Lon: 35.66E Depth: 0 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	16	183	EP		1350	24.42	-0.17	42						1.0
BHL	BN	16	183	ES		1350	26.51	0.02							1.0
HWQ	SZ	37	45	EP		1350	27.98	0.04							1.0
DQRL	SZ	39	193	EP		1350	28.32	0.03							1.0
DQRL	SN	39	193	ES		1350	33.00	0.08							1.0

September 12 2015 Hour: 15:11 17.7 Lat: 33.42N Lon: 35.58E Depth: 0 Agency: REL Local  
Magnitudes: 2.5MC REL Rms: 0.0 secs

**JEZZINE REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	17	35	EP		1511	20.47	0.05	31						1.0
RCY	SZ	25	71	EP		1511	21.77	-0.01							1.0
RCY	SN	25	71	ES		1511	24.78	-0.02							1.0
DQRL	SZ	31	359	EP		1511	22.73	-0.02							1.0
DQRL	SN	31	359	ES		1511	26.49	-0.01							1.0

BHL BZ 54 7 EP 1511 26.35-0.03 1.0  
 HWQ SZ 101 20 EP 1511 33.98 0.03 1.0

**September 12 2015 Hour: 15:20 2.0 Lat: 33.79N Lon: 35.77E 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	321	EP		1520	4.69	0.00	37						1.0
DQRL	SZ	20	244	EP		1520	5.30	0.04							1.0
DQRL	SN	20	244	ES		1520	7.65	-0.03							1.0
RCY	SZ	33	169	EP		1520	7.23	-0.03							1.0
RCY	SN	33	169	ES		1520	11.18	0.01							1.0
HWQ	SZ	57	17	EP		1520	11.18	0.00							1.0

**September 12 2015 Hour: 20:32 24.2 Agency: REL Distant**  
**EMSC OT=20:32:24.2 32.71S 177.80W 10Km M=5.8 SOUTH OF KERMADEC ISLANDS**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2052	14.25								

**September 13 2015 Hour: 2:57 26.9 Agency: REL Regional**  
**EMSC OT=02:57:26.9 37.13N 28.89E 4Km M=4.4 WESTERN TURKEY**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		259	1.93								
DQRL	SZ			EP		259	2.20								
HWQ	SZ			EP		259	2.67								
QRWL	SZ			EP		259	4.60								
RCY	SZ			EP		259	6.54								

**September 13 2015 Hour: 9:18 46.7 Lat: 33.52N Lon: 35.70E 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	3	338	EP		918	47.24	-0.06	34						1.0
RCY	SZ	13	101	EP		918	48.81	-0.05							1.0
RCY	SN	13	101	ES		918	50.48	0.03							1.0
DQRL	SZ	24	331	EP		918	50.64	0.08							1.0
DQRL	SN	24	331	ES		918	53.38	-0.03							1.0
BHL	BZ	43	355	EP		918	53.72	0.07							1.0
HWQ	SZ	87	15	EP		919	0.77	-0.04							1.0

**September 14 2015 Hour: 1:8 51.5 Lat: 33.70N Lon: 35.75E Depth: 3 Agency: REL Local**  
**Magnitudes: 2.8MC REL Rms: 0.0 secs**

**WEST BEKAA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	17	271	EP		1 8	54.44	0.05	44						1.0
DQRL	SN	17	271	ES		1 8	56.50	0.00							1.0
QRWL	SZ	19	201	EP		1 8	54.62	-0.01							1.0
BHL	BZ	24	338	EP		1 8	55.42	-0.08							1.0
RCY	SZ	24	162	EP		1 8	55.49	-0.05							1.0
RCY	SN	24	162	ES		1 8	58.53	0.03							1.0
HWQ	SZ	66	16	EP		1 9	2.30	0.06							1.0

**September 14 2015 Hour: 6:0 33.8 Lat: 33.25N Lon: 35.57E Depth: 4 Agency: REL Local**  
**Magnitudes: 2.6MC REL Rms: 0.1 secs**

**MARJAAYOUN REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	35	18	EP		6 0	39.37	-0.13	36						1.0
RCY	SZ	37	42	EP		6 0	39.97	0.10							1.0
RCY	SN	37	42	ES		6 0	44.34	-0.03							1.0
DQRL	SZ	51	0	EP		6 0	42.05	0.02							1.0
DQRL	SN	51	0	ES		6 0	48.17	0.04							1.0
HWQ	SZ	120	17	EP		6 0	53.00	-0.00							1.0

September 15 2015 Hour: 11:39 31.5 Lat: 33.81N Lon: 35.77E Depth: 14 Agency: REL Local  
Magnitudes: 2.6MC 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	15	316	EP		1139	34.98	-0.03	33						1.0
DQRL	SZ	22	239	EP		1139	35.74	-0.04							1.0
DQRL	SN	22	239	ES		1139	38.99	0.04							1.0
RCY	SZ	35	170	EP		1139	37.63	-0.04							1.0
RCY	SN	35	170	ES		1139	42.26	0.02							1.0
HWQ	SZ	55	17	EP		1139	40.61	0.04							1.0

September 15 2015 Hour: 15:20 57.3 Lat: 33.78N Lon: 35.79E Depth: 2 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	317	EP		1521	0.29	-0.01	34						1.0
DQRL	SZ	22	247	EP		1521	0.93	0.03							1.0
DQRL	SN	22	247	ES		1521	3.55	0.00							1.0
QRWL	SZ	28	201	EP		1521	1.78	-0.07							1.0
RCY	SZ	32	172	EP		1521	2.60	0.07							1.0
RCY	SN	32	172	ES		1521	6.38	-0.02							1.0
HWQ	SZ	57	15	EP		1521	6.47	-0.01							1.0

September 16 2015 Hour: 3:23 23.6 Agency: REL Regional

EMSC OT=03:23:23.6 36.18N 30.75E 80Km M=3.9 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		324	29.64								
DQRL	SZ			EP		324	30.30								
HWQ	SZ			EP		324	32.18								
QRWL	SZ			EP		324	33.47								
RCY	SZ			EP		324	35.58								

September 16 2015 Hour: 4:26 36.5 Lat: 34.13N Lon: 35.15E Depth: 13 Agency: REL Local  
Magnitudes: 2.7MC 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	43	131	EP		426	43.60	-0.06							1.0
BHL	BZ	53	118	EP		426	45.29	-0.00	36						1.0
BHL	BE	53	118	ES		426	51.86	0.04							1.0
DQRL	SZ	61	140	EP		426	46.47	-0.00							1.0
DQRL	SE	61	140	ES		426	53.96	0.08							1.0
HWQ	SZ	76	77	EP		426	48.63	-0.00							1.0
QRWL	SZ	81	142	EP		426	49.53	0.10							1.0
RCY	SZ	95	137	EP		426	51.42	-0.03							1.0
RCY	SN	95	137	ES		427	2.42	-0.12							1.0

September 16 2015 Hour: 7:40 58.8 Agency: REL Distant

EMSC OT=07:40:58.8 1.91N 126.54E 40Km M=6.3 MOLUCCA SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		753	50.77								
QRWL	SZ			EP		753	51.83								
BHL	BZ			EP		753	52.36								
DQRL	SZ			EP		753	53.16								

September 16 2015 Hour: 8:31 25.8 Lat: 33.38N Lon: 35.65E Depth: 6 Agency: REL Local  
Magnitudes: 2.6MC REL Rms: 0.0 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	19	10	EP		831	29.02	-0.02	34						1.0
RCY	SZ	22	54	EP		831	29.56	0.05							1.0
RCY	SN	22	54	ES		831	32.27	-0.02							1.0
DQRL	SZ	37	349	EP		831	31.79	-0.03							1.0
DQRL	SN	37	349	ES		831	36.34	0.03							1.0

HWQ SZ 104 16 EP 831 42.49-0.00 1.0

September 16 2015 Hour: 15:28 45.1 Lat: 33.78N Lon: 35.76E Depth: 0 Agency: REL Local  
Magnitudes: 2.5MC 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	323	EP		1528	47.76	0.00	31						1.0
BHL	BE	17	323	ES		1528	49.74	-0.02							1.0
DQRL	SZ	20	244	EP		1528	48.29	0.03							1.0
RCY	SZ	33	168	EP		1528	50.28	-0.02							1.0
RCY	SN	33	168	ES		1528	54.19	-0.00							1.0
HWQ	SZ	57	17	EP		1528	54.33	0.02							1.0

September 16 2015 Hour: 15:38 17.7 Lat: 33.57N Lon: 35.40E Depth: 19 Agency: REL Local  
Magnitudes: 3.0MC 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	22	45	EP		1538	22.35	0.00	61						1.0
DQRL	SE	22	45	ES		1538	25.83	0.01							1.0
QRWL	SZ	26	95	EP		1538	22.84	0.00							1.0
QRWL	SN	26	95	ES		1538	26.70	0.02							1.0
BEYL	SZ	35	14	EP		1538	23.93	0.03							1.0
RCY	SZ	41	101	EP		1538	24.85	-0.00							1.0
RCY	SE	41	101	ES		1538	30.17	-0.01							1.0
BHL	BZ	44	32	EP		1538	25.12	-0.13							1.0
BHL	BN	44	32	ES		1538	30.86	-0.00							1.0
HWQ	SZ	93	32	EP		1538	32.50	0.08							1.0

September 16 2015 Hour: 19:52 14.1

Agency: REL Regional

EMSC OT=19:52:14.1 35.27N 27.75E 40Km M=4.9 DODECANESE ISLANDS, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	SZ			EP		1953	46.07								
DQRL	SZ			EP		1953	47.29								
BHL	BZ			EP		1953	47.17								
QRWL	SZ			EP		1953	49.62								
HWQ	SZ			EP		1953	49.74								
RCY	SZ			EP		1953	51.46								

September 18 2015 Hour: 4:54 19.2 Lat: 34.07N Lon: 35.64E Depth: 3 Agency: REL Local  
Magnitudes: 2.6MC REL Rms: 0.0 secs

JBEIL REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	19	176	EP		454	22.35	0.02	33						1.0
HWQ	SZ	36	51	EP		454	25.16	0.04							1.0
HWQ	SE	36	51	ES		454	29.45	-0.03							1.0
DQRL	SZ	41	189	EP		454	25.88	-0.03							1.0
RCY	SZ	66	164	EP		454	29.97	0.00							1.0
RCY	SN	66	164	ES		454	37.92	0.00							1.0

September 18 2015 Hour: 8:13 5.9 Lat: 33.87N Lon: 35.81E Depth: 13 Agency: REL Local  
Magnitudes: 2.8MC REL Rms: 0.1 secs

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	15	285	EP		813	9.25	-0.03	45						1.0
BHL	BE	15	285	ES		813	11.74	-0.01							1.0
DQRL	SZ	29	230	EP		813	11.19	0.08							1.0
BEYL	SZ	29	270	EP		813	10.83	-0.29							0.2
QRWL	SZ	38	198	EP		813	12.42	-0.01							1.0
RCY	SZ	42	176	EP		813	12.96	-0.09							1.0
RCY	SN	42	176	ES		813	18.36	0.04							1.0
HWQ	SZ	47	16	EP		813	13.92	0.03							1.0

September 18 2015 Hour: 12:48 58.4 Lat: 33.78N Lon: 35.77E Depth: 5 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	323	EP		1249	1.19	-0.11	46						1.0
BHL	BE	17	323	ES		1249	3.50	0.04							1.0
DQRL	SZ	20	245	EP		1249	1.74	-0.03							1.0
DQRL	SE	20	245	ES		1249	4.31	0.04							1.0
RCY	SZ	32	168	EP		1249	3.77	0.05							1.0
RCY	SE	32	168	ES		1249	7.63	-0.03							1.0
HWQ	SZ	57	17	EP		1249	7.75	0.04							1.0

September 18 2015 Hour: 13:45 31.5 Lat: 33.50N Lon: 35.60E Depth: 0 Agency: REL Local  
 Magnitudes: 2.4MC REL Rms: 0.1 secs

**JEZZINE REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	54	EP		1345	32.92	-0.08	27						1.0
QRWL	SN	9	54	ES		1345	34.16	0.09							1.0
RCY	SZ	22	91	EP		1345	34.97	-0.06							1.0
RCY	SN	22	91	ES		1345	37.58	-0.02							1.0
DQRL	SZ	23	352	EP		1345	35.35	0.10							1.0
DQRL	SN	23	352	ES		1345	37.84	-0.16							1.0
BHL	BZ	45	6	EP		1345	38.94	0.13							1.0

September 18 2015 Hour: 14:35 49.0 Lat: 33.59N Lon: 35.67E Depth: 0 Agency: REL Local  
 Magnitudes: 2.5MC 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	4	165	EP		1435	49.65	-0.04	30						1.0
DQRL	SZ	16	325	EP		1435	51.60	0.03							1.0
RCY	SZ	18	123	EP		1435	51.96	0.03							1.0
RCY	SN	18	123	ES		1435	54.15	0.02							1.0
BHL	BZ	35	358	EP		1435	54.69	0.03							1.0
BHL	BE	35	358	ES		1435	58.87	-0.00							1.0
HWQ	SZ	81	18	EP		1436	1.94	-0.07							1.0

September 18 2015 Hour: 15: 4 9.0 Lat: 33.78N Lon: 35.79E Depth: 3 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	18	318	EP		15 4	11.97	-0.06	45						1.0
DQRL	SZ	22	247	EP		15 4	12.62	0.06							1.0
DQRL	SE	22	247	ES		15 4	15.22	0.03							1.0
QRWL	SZ	28	200	EP		15 4	13.41	-0.10							1.0
RCY	SZ	32	172	EP		15 4	14.24	0.03							1.0
RCY	SE	32	172	ES		15 4	18.06	0.01							1.0
HWQ	SZ	57	15	EP		15 4	18.28	0.04							1.0

September 18 2015 Hour: 17:36 25.8 Lat: 33.74N Lon: 35.82E Depth: 15 Agency: REL Local  
 Magnitudes: 2.7MC REL Rms: 0.2 secs

**ZAHLE REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	24	261	EP		1736	30.44	0.03	39						1.0
DQRL	SN	24	261	ES		1736	33.76	-0.06							1.0
BHL	BZ	24	320	EP		1736	30.53	0.07							1.0
QRWL	SZ	25	211	EP		1736	30.58	0.01							1.0
RCY	SZ	27	177	EP		1736	30.92	0.02							1.0
RCY	SN	27	177	ES		1736	34.65	-0.02							1.0
HWQ	SZ	61	11	EP		1736	34.76	-0.99							0.2

September 18 2015 Hour: 17:55 27.3 Lat: 32.64N Lon: 35.55E Depth: 27 Agency: REL Regional  
Magnitudes: 2.7MC REL Rms: 0.1 secs

DEAD SEA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	98	15	EP		1755	42.90	-0.08	38						1.0
RCY	SN	98	15	ES		1755	54.61	0.05							1.0
DQRL	SZ	118	1	EP		1755	45.46	-0.12							1.0
DQRL	SN	118	1	ES		1755	59.05	-0.05							1.0
BHL	BZ	140	4	EP		1755	48.65	0.29							1.0
HWQ	SZ	185	11	EP		1755	53.86	-0.08							1.0

September 19 2015 Hour: 14: 7 12.2 Lat: 33.30N Lon: 35.64E Depth: 4 Agency: REL Local  
Magnitudes: 2.5MC REL Rms: 0.1 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	28	9	EP		14 7	16.46	-0.23	30						1.0
RCY	SZ	28	40	EP		14 7	17.07	0.24							1.0
RCY	SN	28	40	ES		14 7	20.21	-0.08							1.0
DQRL	SZ	45	352	EP		14 7	19.50	-0.00							1.0
DQRL	SN	45	352	ES		14 7	25.05	0.11							1.0
BHL	BZ	67	1	EP		14 7	22.95	-0.02							1.0
HWQ	SZ	112	15	EP		14 7	30.08	-0.16							0.2

September 19 2015 Hour: 15: 3 33.1 Lat: 33.83N Lon: 35.73E Depth: 29 Agency: REL Local  
Magnitudes: 2.6MC 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	319	EP		15 3	38.08	0.04	33						1.0
DQRL	SZ	20	226	EP		15 3	38.73	0.01							1.0
DQRL	SE	20	226	ES		15 3	42.85	-0.02							1.0
RCY	SZ	39	165	EP		15 3	40.69	-0.00							1.0
RCY	SE	39	165	ES		15 3	46.30	0.00							1.0
HWQ	SZ	53	22	EP		15 3	42.52	-0.02							1.0

September 19 2015 Hour: 15:48 48.7 Lat: 34.04N Lon: 36.01E Depth: 46 Agency: REL Local  
Magnitudes: 2.6MC 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	27	348	EP		1548	56.86	0.11	34						1.0
HWQ	SN	27	348	ES		1549	2.61	-0.06							1.0
BHL	BZ	36	246	EP		1548	57.37	-0.03							1.0
DQRL	SZ	55	228	EP		1548	59.25	0.03							1.0
RCY	SZ	62	195	EP		1548	59.95	-0.12							1.0
RCY	SN	62	195	ES		1549	8.52	0.07							1.0

September 20 2015 Hour: 9:47 54.6 Lat: 33.52N Lon: 35.69E Depth: 0 Agency: REL Local  
Magnitudes: 2.3MC 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	3	340	EP		947	55.19	-0.01	22						1.0
RCY	SZ	13	100	EP		947	56.73	-0.05							1.0
RCY	SN	13	100	ES		947	58.38	-0.00							1.0
DQRL	SZ	24	331	EP		947	58.52	0.06							1.0
DQRL	SN	24	331	ES		948	1.19	-0.11							1.0
BHL	BZ	43	355	EP		948	1.65	0.10							1.0

September 20 2015 Hour: 13:54 43.8 Lat: 33.78N Lon: 35.79E Depth: 8 Agency: REL Local  
Magnitudes: 2.5MC 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	19	317	EP		1354	47.10	-0.06	28						1.0
BHL	BE	19	317	ES		1354	49.66	0.03							1.0
DQRL	SZ	22	248	EP		1354	47.77	0.11							1.0

DQRL	SE	22	248	ES		1354	50.47	-0.04									1.0
BEYL	SZ	29	290	EP		1354	48.19	-0.53									0.2
RCY	SZ	32	172	EP		1354	49.15	-0.02									1.0
RCY	SE	32	172	ES		1354	53.14	0.00									1.0
HWQ	SZ	57	15	EP		1354	53.39	0.25									0.2

**September 21 2015 Hour: 5:40 50.9 Lat: 35.56N Lon: 35.81E Depth: 5 Agency: REL Regional**  
**Magnitudes: 3.4MC REL Rms: 0.1 secs**

**SYRIA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ	143	175	EP		541	13.68	0.24	86						1.0
HWQ	SN	143	175	ES		541	30.02	-0.14							1.0
BHL	BZ	185	185	EP		541	19.11	-0.21							1.0
BHL	BN	185	185	ES		541	40.52	0.14							1.0
DQRL	SZ	207	186	EP		541	22.09	-0.04							1.0
DQRL	SN	207	186	ES		541	45.27	0.00							1.0
RCY	SZ	229	179	EP		541	24.91	0.01							1.0
RCY	SN	229	179	ES		541	50.09	-0.01							1.0

**September 23 2015 Hour: 1:58 53.3 Lat: 33.67N Lon: 34.85E Depth: 27 Agency: REL Local**  
**Magnitudes: 2.6MC REL Rms: 0.0 secs**

**OFFSHORE CENTRAL LEBANON**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	66	87	EP		159	4.46	0.05	34						1.0
QRWL	SZ	78	100	EP		159	6.08	0.04							1.0
QRWL	SE	78	100	ES		159	15.51	0.04							1.0
BHL	BZ	78	71	EP		159	6.02	-0.07							1.0
BHL	BE	78	71	ES		159	15.58	0.02							1.0
RCY	SZ	93	102	EP		159	8.20	-0.03							1.0
RCY	SE	93	102	ES		159	19.23	-0.06							1.0
HWQ	SZ	121	56	EP		159	11.97	0.01							1.0

**September 23 2015 Hour: 4:43 45.4 Lat: 34.03N Lon: 35.70E Depth: 9 Agency: REL Local**  
**Magnitudes: 2.8MC 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	196	EP		443	48.30	-0.04	46						1.0
BHL	BN	15	196	ES		443	50.52	0.02							1.0
HWQ	SZ	36	40	EP		443	51.40	0.00							1.0
DQRL	SZ	38	198	EP		443	51.81	0.01							1.0
RCY	SZ	61	168	EP		443	55.39	0.01							1.0
RCY	SN	61	168	ES		444	2.74	-0.01							1.0

**September 23 2015 Hour: 15:57 46.6 Lat: 33.78N Lon: 35.78E Depth: 1 Agency: REL Local**  
**Magnitudes: 2.4MC 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	320	EP		1557	49.46	-0.03	25						1.0
DQRL	SZ	21	246	EP		1557	50.00	-0.04							1.0
DQRL	SN	21	246	ES		1557	52.61	0.04							1.0
RCY	SZ	32	170	EP		1557	51.88	0.01							1.0
RCY	SN	32	170	ES		1557	55.73	-0.01							1.0
HWQ	SZ	57	16	EP		1557	55.88	0.03							1.0

**September 24 2015 Hour: 11:29 43.8 Agency: REL Regional**  
**EMSC OT=11:29:43.8 36.05N 39.63E 20Km M=4.2 TURKEY-SYRIA BORDER REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1130	37.87								
ZAHL	SZ			EP		1130	42.58								
BHL	BZ			EP		1130	44.32								
RCY	SZ			EP		1130	45.93								
DQRL	SZ			EP		1130	47.07								

September 24 2015 Hour: 15:53 28.9

Agency: REL Distant

EMSC OT=15:53:28.9 0.57S 131.35E 25Km M=6.6 NEAR COAST OF PAPUA, INDONESIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		16	6	49.45							
ZAHL	SZ			EP		16	6	49.45							

September 24 2015 Hour: 19: 3 17.7 Lat: 33.66N Lon: 35.80E

Depth: 19 Agency: REL Local

Magnitudes: 2.9MC 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	16	222	EP		19	3	21.82							1.0
QRWL	SN	16	222	ES		19	3	24.71							1.0
RCY	SZ	18	169	EP		19	3	21.99							1.0
RCY	SN	18	169	ES		19	3	25.25							1.0
DQRL	SZ	22	285	EP		19	3	22.47							1.0
ZAHL	SZ	24	20	EP		19	3	22.69							1.0
BHL	BZ	31	334	EP		19	3	23.40			51				1.0
BHL	BN	31	334	ES		19	3	27.74							1.0

September 24 2015 Hour: 19: 5 42.6 Lat: 33.66N Lon: 35.80E

Depth: 18 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	16	222	EP		19	5	46.63							1.0
QRWL	SN	16	222	ES		19	5	49.63							1.0
RCY	SZ	18	169	EP		19	5	46.94							1.0
RCY	SN	18	169	ES		19	5	50.07							1.0
DQRL	SZ	22	284	EP		19	5	47.30							1.0
ZAHL	SZ	24	20	EP		19	5	47.50							1.0
BHL	BZ	31	334	EP		19	5	48.36			36				1.0
BHL	BN	31	334	ES		19	5	52.63							1.0

September 24 2015 Hour: 19:14 2.6 Lat: 33.65N Lon: 35.80E

Depth: 20 Agency: REL Local

Magnitudes: 2.4MC 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	16	222	EP		19	14	6.80							1.0
QRWL	SN	16	222	ES		19	14	9.80							1.0
RCY	SZ	18	169	EP		19	14	6.99							1.0
RCY	SN	18	169	ES		19	14	10.32							1.0
DQRL	SZ	22	285	EP		19	14	7.45							1.0
ZAHL	SZ	24	20	EP		19	14	7.67							1.0
BHL	BZ	31	334	EP		19	14	8.42			27				1.0
BHL	BN	31	334	ES		19	14	12.82							1.0

September 24 2015 Hour: 19:50 15.7 Lat: 33.65N Lon: 35.80E

Depth: 22 Agency: REL Local

Magnitudes: 2.2MC 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	15	225	EP		19	50	20.12							1.0
QRWL	SN	15	225	ES		19	50	23.17							1.0
RCY	SZ	17	168	EP		19	50	20.12							1.0
RCY	SN	17	168	ES		19	50	23.68							1.0
DQRL	SZ	22	288	EP		19	50	20.75							1.0
BHL	BZ	32	335	EP		19	50	21.81			19				1.0

September 27 2015 Hour: 11:56 41.6 Lat: 33.05N Lon: 35.61E

Depth: 11 Agency: REL Local

Magnitudes: 2.6MC REL

Rms: 0.0 secs

DEAD SEA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	54	23	EP		11	56	50.57			31				1.0
RCY	SN	54	23	ES		11	56	57.17							1.0
DQRL	SZ	73	357	EP		11	56	53.40							1.0



DQRL	SN	73	357	ES		1157	2.25	0.01										1.0
ZAHL	SZ	93	16	EP		1156	56.47	-0.02										1.0
BHL	BZ	95	3	EP		1156	56.79	0.08										1.0

**September 28 2015 Hour: 18:33 55.0**

**Agency: REL Regional**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1837	41.89								
DQRL	SZ			EP		1837	44.44								
RCY	SZ			EP		1837	45.77								
QRWL	SZ			EP		1837	45.99								

**September 28 2015 Hour: 18:38 2.2**

**Agency: REL Regional**

**EMSC OT=18:38:02.2 34.95N 28.08E 10Km M=3.7 EASTERN MEDITERRANEAN SEA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		1839	39.20								
DQRL	SZ			EP		1839	36.31								

**September 29 2015 Hour: 9:12 40.4**

**Agency: REL Regional**

**EMSC OT=09:12:40.4 34.67N 24.53E 40Km M=4.8 CRETE, GREECE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		914	51.13								
RCY	SZ			EP		914	50.71								

**September 30 2015 Hour: 15:12 48.1 Lat: 33.79N Lon: 35.78E Depth: 13 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
ZAHL	SZ	12	52	EP		1512	51.15	-0.01							1.0
BHL	BZ	17	316	EP		1512	51.73	-0.01	35						1.0
BHL	BN	17	316	ES		1512	54.43	-0.00							1.0
DQRL	SZ	22	244	EP		1512	52.39	0.05							1.0
QRWL	SZ	29	199	EP		1512	53.17	-0.10							1.0
RCY	SZ	33	172	EP		1512	54.01	0.06							1.0
RCY	SN	33	172	ES		1512	58.29	0.00							1.0



# Epicentral Map of Lebanon

## September 2015

