

Republic of Lebanon  
National Council for Scientific Research

# Provisional Seismological Bulletin

from the

## NATIONAL SEISMIC NETWORK

February

2018

Prepared by  
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## GENERAL BULLETIN INFORMATION

The National Centre for Geophysical Research is a governmental agency established 1975 in Lebanon by the National Council for Scientific Research (CNRS). The mission of the Centre, among other assignments, is the monitoring of seismic activity within the national territory. Currently, the national seismic network is under deployment; it has been officially registered as GRAL, an acronym for Geophysical Research Arrays of Lebanon. Station coordinates and status are given below.

Since 1993, the Centre has been participating in a regional initiative by the UNESCO and the USGS known as RELEMR, i.e. Reducing Earthquake Losses in the Eastern Mediterranean Region.

Within this framework, the Centre routinely contributes to the database set up for this purpose and maintained by the Euro-Mediterranean Seismological Centre (EMSC). For coherence, the Centre has adopted the recommended seismic analysis system SEISAN developed by Jens Havskov and Lars Ottemoller from the University of Bergen, Norway.

The localization program currently used for locating earthquakes is Hypocenter (Lienert et al., 1986). Plane parallel layers are assumed for local and regional events, while the IASPEI travel time tables are used for distant events.

The velocity model used for all local and regional events is the one currently adopted by the RELEMR initiative.

P-wave velocity (km/sec)	depth to top of layer (km)
6.2	0.0
6.8	14.0
8.05	34.0
8.25	50.0
8.5	80.0

Magnitudes are calculated from the coda duration. The coda wave magnitude is estimated via the formula:

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

where T is the coda duration (sec) and D is the epicentral distance (km). The coefficients above were adopted at the outset of our Centre in 1980 and thus are still in use for the sake of continuity.

All available coda values are used for magnitude calculations. No station corrections are used for either travel times or magnitudes calculations. The  $V_p/V_s$  velocity ratio used in both layered models above is 1.74.

As a general policy, neither depths, nor epicenters, are fixed unless stated otherwise since this might restrict later use of the data. Consequently, some event locations might be unrealistic such as zero depth earthquakes or teleseismic locations off by 1000 km. However, the locations are based on the available data and reflect the localization procedure and the models used.

## STATIONS USED

The stations listed below are operated by the National Centre for Geophysical Research. They constitute the basic setup of the National Seismic Network of Lebanon.

However, readings from other cooperating agencies are also used in locating the events and thus more stations may appear in the event lists than in the station list; it is worth mentioning the systematic use of arrival times from the Cypriot seismic network CSS in order to constrain events corresponding to an active zone off the Lebanese shorelines.

STATION	LATITUDE	LONGITUDE	HEIGHT (m)	NAME	COMMENTS
BHL	3354.25N	3539.25E	1000	BHANNES	Opened May 1980
HWQ	3416.68N	3556.78E	1161	HAWQA	Opened Jan 2001
MATL	3329.32N	3519.78E	5	MATARIH	Nov2000-Sep2012
FKH	3414.69N	3624.61E	1152	FAKEHEH	Opened Dec 2004
RCY	3329.79N	3550.14E	1370	RACHAYA	Opened Jun 2006
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
Z AHL	3351.48N	3553.12E	1211	ZAHLE	Opened Aug 2015
BEIL	3432.50N	3611.08E	572	BEINO	Opened Jan 2017

## 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.

February 1 2018 Hour: 0:22 9.1 Lat: 33.78N 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
ZAHL	SZ	13	47	EP		022	11.18	-0.03							1.0
BHL	BZ	18	320	EP		022	12.02	-0.04	27						1.0
DQRL	SZ	21	248	EP		022	12.64	0.13							1.0
DQRL	SN	21	248	ES		022	14.96	-0.08							1.0
RCY	SZ	32	171	EP		022	14.09	-0.09							1.0
RCY	SN	32	171	ES		022	17.95	0.01							1.0
SHBL	SZ	48	184	EP		022	16.85	0.07							1.0
HWQ	BZ	58	15	EP		022	18.47	0.09							1.0
BEIL	SZ	93	24	EP		022	23.96	-0.06							1.0

February 1 2018 Hour: 13:10 20.8

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		1310	32.57								
HWQ	BZ			EP		1310	45.17								
BEIL	SZ			EP		1310	48.89								

February 1 2018 Hour: 14:39 53.4 Lat: 33.39N Lon: 35.65E Depth: 12 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
RCY	SZ	21	54	EP		1439	57.31	-0.06	33						1.0
RCY	SN	21	54	ES		1440	0.35	0.03							1.0
DQRL	SZ	36	347	EP		1439	59.60	0.02							1.0
DQRL	SN	36	347	ES		1440	4.14	-0.04							1.0
BHL	BZ	57	360	EP		1440	2.93	0.07							1.0
HWQ	BZ	102	15	EP		1440	9.53	-0.02							1.0

February 2 2018 Hour: 11: 6 28.0 Lat: 36.28N Lon: 35.99E Depth: 33 Agency: REL Regional  
Magnitudes: 3.4MC REL Rms: 0.2 secs

**TURKEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	194	175	EP		11 6	55.19	-0.03	80						1.0
BEIL	SN	194	175	ES		11 7	15.39	0.05							1.0
HWQ	BZ	222	181	EP		11 6	59.02	0.21							1.0
HWQ	BN	222	181	ES		11 7	21.12	-0.47							1.0
BHL	BZ	266	187	EP		11 7	4.07	-0.09							1.0
DQRL	SZ	288	188	EP		11 7	6.94	-0.04							1.0
RCY	SZ	309	183	EP		11 7	9.59	-0.04							1.0
RCY	SN	309	183	ES		11 7	40.84	0.42							1.0

February 2 2018 Hour: 13:35 42.4 Lat: 33.46N Lon: 35.69E Depth: 1 Agency: REL Local  
Magnitudes: 2.9MC REL Rms: 0.1 secs

**HASBAYA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	SZ	14	160	EP		1335	44.70	0.04							1.0
RCY	SZ	14	74	EP		1335	44.59	-0.08	54						1.0
RCY	SN	14	74	ES		1335	46.37	0.04							1.0
DQRL	SZ	29	337	EP		1335	47.09	-0.08							1.0
DQRL	SN	29	337	ES		1335	50.75	0.07							1.0
BHL	BZ	49	356	EP		1335	50.33	-0.02							1.0
HWQ	BZ	93	14	EP		1335	57.69	0.21							0.2
BEIL	SZ	128	21	EP		1336	3.36	0.36							0.2

February 3 2018 Hour: 12:33 25.9 Lat: 33.46N Lon: 35.68E Depth: 6 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
SHBL	SZ	14	155	EP		1233	28.55	0.07							1.0
RCY	SZ	15	74	EP		1233	28.52	-0.12	53						1.0
RCY	SN	15	74	ES		1233	30.67	0.02							1.0
DQRL	SZ	29	339	EP		1233	30.67	-0.10							1.0
DQRL	SN	29	339	ES		1233	34.33	-0.02							1.0
BHL	BZ	49	357	EP		1233	34.02	0.06							1.0
BHL	BN	49	357	ES		1233	39.98	0.07							1.0
HWQ	BZ	94	15	EP		1233	41.16	0.04							1.0
BEIL	SZ	129	21	EP		1233	46.28	-0.02							1.0

February 3 2018 Hour: 22:24 40.0 Lat: 34.17N Lon: 35.77E Depth: 32 Agency: REL Local  
Magnitudes: 3.2MC REL Rms: 0.1 secs

JBEIL REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	21	54	EP		2224	46.08	0.03	83						1.0
HWQ	BN	21	54	ES		2224	50.60	0.05							1.0
BHL	BZ	31	200	EP		2224	46.96	-0.03							1.0
BHL	BN	31	200	ES		2224	52.13	-0.06							1.0
ZAHL	SZ	36	162	EP		2224	47.54	-0.02							1.0
DQRL	SZ	54	200	EP		2224	49.86	0.10							1.0
BEIL	SZ	57	43	EP		2224	49.93	-0.08							1.0
RCY	SZ	75	175	EP		2224	52.54	0.02							1.0
RCY	SN	75	175	ES		2225	1.80	-0.01							1.0

February 4 2018 Hour: 3:58 15.6 Lat: 33.75N Lon: 35.39E Depth: 0 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
DQRL	SZ	18	105	EP		358	18.41	-0.01	40						1.0
BHL	BZ	30	55	EP		358	20.40	-0.08							1.0
BHL	BN	30	55	ES		358	24.15	0.04							1.0
ZAHL	SZ	48	75	EP		358	23.19	-0.11							1.0
RCY	SZ	50	123	EP		358	23.71	0.06							1.0
RCY	SN	50	123	ES		358	29.64	0.01							1.0
HWQ	BZ	79	41	EP		358	28.28	0.05							1.0
BEIL	SZ	115	40	EP		358	34.16	0.04							1.0

February 4 2018 Hour: 4:24 29.3 Lat: 33.74N Lon: 35.42E Depth: 0 Agency: REL Local  
Magnitudes: 2.6MC REL Rms: 0.1 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	14	107	EP		424	31.63	0.02	35						1.0
BHL	BZ	28	50	EP		424	33.66	-0.14							1.0
BHL	BN	28	50	ES		424	37.14	-0.01							1.0
ZAHL	SZ	45	73	EP		424	36.62	0.10							1.0
ZAHL	SN	45	73	ES		424	41.87	-0.00							1.0
RCY	SZ	47	125	EP		424	36.86	-0.04							1.0
HWQ	BZ	77	39	EP		424	41.64	-0.01							1.0
BEIL	SZ	113	38	EP		424	47.62	0.08							1.0

February 4 2018 Hour: 13:54 23.9 Lat: 33.70N Lon: 36.97E Depth: 56 Agency: REL Local  
Magnitudes: 3.3MC REL Rms: 0.1 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	102	280	EP		1354	40.32	0.06							1.0
ZAHL	SN	102	280	ES		1354	52.32	-0.02							1.0
RCY	SZ	108	258	EP		1354	40.88	-0.04							1.0
HWQ	BZ	115	305	EP		1354	41.83	0.14	76						1.0
BEIL	SZ	119	322	EP		1354	41.98	-0.11							1.0

BHL	BZ	124	281	EP		1354	42.78	-0.02									1.0
DQRL	SZ	130	271	EP		1354	43.48	-0.00									1.0
DQRL	SN	130	271	ES		1354	57.94	-0.01									1.0

**February 4 2018 Hour: 14:45 29.6 Lat: 34.26N Lon: 36.38E Depth: 11 Agency: REL Local**  
**Magnitudes: 2.8MC REL Rms: 0.1 secs**

**BAALBECK REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	37	330	EP		1445	35.78	0.02	46						1.0
BEIL	SN	37	330	ES		1445	40.35	0.01							1.0
HWQ	BZ	41	273	EP		1445	36.31	-0.09							1.0
ZAHL	SZ	64	226	EP		1445	40.14	0.06							1.0
ZAHL	SN	64	226	ES		1445	47.85	0.00							1.0
BHL	BZ	78	240	EP		1445	42.31	0.07							1.0
RCY	SZ	99	211	EP		1445	45.21	-0.07							1.0

**February 5 2018 Hour: 16:15 50.0 Lat: 34.04N Lon: 35.76E Depth: 6 Agency: REL Local**  
**Magnitudes: 3.1MC 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	18	211	EP		1615	52.89	-0.25							1.0
BHL	BN	18	211	ES		1615	55.61	0.16							1.0
ZAHL	SZ	24	149	EP		1615	54.02	-0.01							1.0
ZAHL	SN	24	149	ES		1615	56.98	-0.03							1.0
HWQ	BZ	32	34	EP		1615	55.28	0.05	66						1.0
HWQ	BN	32	34	ES		1615	59.06	-0.04							1.0
DQRL	SZ	41	205	EP		1615	56.72	-0.02							1.0
RCY	SZ	61	173	EP		1616	0.01	0.08							1.0
BEIL	SZ	68	35	EP		1616	1.10	0.06							1.0

**February 5 2018 Hour: 20:56 19.8 Agency: REL Distant**  
**EMSC OT=20:56:19.8 26.96N 140.26E 444Km M=5.3 BONIN ISLANDS, JAPAN REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		21 8	10.26								
HWQ	BZ			EP		21 8	11.08								
BHL	BZ			EP		21 8	13.07								
RCY	SZ			EP		21 8	14.04								
DQRL	SZ			EP		21 8	14.16								
SHBL	SZ			EP		21 8	14.60								

**February 6 2018 Hour: 0:14 5.2 Lat: 33.80N Lon: 35.79E Depth: 7 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
ZAHL	SZ	11	54	EP		014	7.35	-0.02							1.0
ZAHL	SN	11	54	ES		014	9.03	0.02							1.0
BHL	BZ	17	311	EP		014	8.34	0.08	37						1.0
BHL	BN	17	311	ES		014	10.51	-0.04							1.0
DQRL	SZ	23	243	EP		014	9.15	-0.01							1.0
RCY	SZ	34	173	EP		014	10.84	-0.00							1.0
HWQ	BZ	55	15	EP		014	14.06	-0.02							1.0

**February 7 2018 Hour: 4: 4 7.0 Lat: 32.39N Lon: 36.63E Depth: 0 Agency: REL Regional**  
**Magnitudes: 3.1MC REL Rms: 0.1 secs**

**SYRIA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	144	329	EP		4 4	29.87	-0.22	56						1.0
RCY	SN	144	329	ES		4 4	47.13	-0.07							1.0
DQRL	SZ	177	326	EP		4 4	34.86	-0.04							1.0
DQRL	SN	177	326	ES		4 4	55.63	0.07							1.0
ZAHL	SZ	178	337	EP		4 4	35.01	-0.01							1.0
BHL	BZ	192	332	EP		4 4	36.80	-0.10							1.0
HWQ	BZ	219	343	EP		4 4	40.50	0.13							1.0
BEIL	SZ	243	350	EP		4 4	43.35	0.14							1.0

February 7 2018 Hour: 15:47 36.2 Lat: 34.03N Lon: 35.72E Depth: 8 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	204	EP		1547	39.20	0.07	42						1.0
BHL	BN	16	204	ES		1547	41.29	-0.04							1.0
ZAHL	SZ	25	143	EP		1547	40.32	-0.10							1.0
HWQ	BZ	34	37	EP		1547	41.79	-0.08							1.0
HWQ	BN	34	37	ES		1547	46.18	0.09							1.0
DQRL	SZ	39	201	EP		1547	42.64	-0.00							1.0
RCY	SZ	60	170	EP		1547	46.07	0.03							1.0
RCY	SN	60	170	ES		1547	53.40	0.05							1.0
BEIL	SZ	71	37	EP		1547	47.62	-0.02							1.0

February 8 2018 Hour: 9:20 11.7 Lat: 33.61N Lon: 35.84E Depth: 5 Agency: REL Local  
Magnitudes: 2.4MC 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	13	183	EP		920	14.00	-0.05	27						1.0
RCY	SN	13	183	ES		920	15.83	0.05							1.0
DQRL	SZ	27	293	EP		920	16.18	-0.07							1.0
DQRL	SE	27	293	ES		920	19.61	0.00							1.0
ZAHL	SZ	28	8	EP		920	16.18	-0.12							1.0
BHL	BZ	37	332	EP		920	17.87	0.11							1.0
HWQ	BZ	75	7	EP		920	23.87	0.08							1.0

February 8 2018 Hour: 11:48 16.9 Lat: 34.73N Lon: 36.57E Depth: 46 Agency: REL Local  
Magnitudes: 2.9MC REL Rms: 0.1 secs

**SYRIA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	41	239	EP		1148	25.85	-0.17	51						1.0
BEIL	SN	41	239	ES		1148	32.86	0.12							1.0
HWQ	BZ	76	229	EP		1148	29.98	0.11							1.0
HWQ	BN	76	229	ES		1148	39.31	-0.11							1.0
DQRL	SZ	146	219	EP		1148	38.43	0.08							1.0
RCY	SZ	153	206	EP		1148	39.17	-0.02							1.0

February 8 2018 Hour: 13:44 34.3 Lat: 33.84N Lon: 36.07E Depth: 9 Agency: REL Local  
Magnitudes: 2.8MC REL Rms: 0.1 secs

**ZAHLE REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	18	278	EP		1344	37.75	0.10							1.0
ZAHL	SN	18	278	ES		1344	40.07	-0.05							1.0
BHL	BZ	40	281	EP		1344	40.83	-0.09	45						1.0
BHL	BN	40	281	ES		1344	45.85	0.04							1.0
RCY	SZ	44	210	EP		1344	41.53	-0.05							1.0
QRWL	SZ	48	229	EP		1344	42.39	0.08							1.0
DQRL	SZ	49	253	EP		1344	42.35	-0.03							1.0
HWQ	BZ	50	346	EP		1344	42.64	0.02							1.0
BEIL	SZ	79	7	EP		1344	47.12	-0.02							1.0

February 8 2018 Hour: 14:24 28.3 Lat: 33.88N Lon: 35.85E Depth: 0 Agency: REL Local  
Magnitudes: 2.7MC REL Rms: 0.1 secs

**ZAHLE REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	4	122	EP		1424	28.92	-0.09	42						1.0
BHL	BZ	18	279	EP		1424	31.28	0.02							1.0
BHL	BN	18	279	ES		1424	33.39	-0.05							1.0
DQRL	SZ	32	234	EP		1424	33.52	0.03							1.0
QRWL	SZ	40	203	EP		1424	34.65	-0.07							1.0
RCY	SZ	42	182	EP		1424	35.21	0.07							1.0
RCY	SN	42	182	ES		1424	40.14	-0.05							1.0
HWQ	BZ	45	11	EP		1424	35.59	-0.05							1.0



SHBL SZ 59 189 EP 1424 38.04 0.12 1.0  
 BEIL SZ 80 23 EP 1424 41.30 0.08 1.0

**February 8 2018 Hour: 17:53 7.2 Lat: 33.78N Lon: 35.77E Depth: 4 Agency: REL Local**  
**Magnitudes: 3.0MC REL Rms: 0.1 secs**

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	51	EP		1753	9.52	-0.01							1.0
ZAHL	SN	14	51	ES		1753	11.29	0.02							1.0
BHL	BZ	17	321	EP		1753	9.97	-0.14	58						1.0
DQRL	SZ	21	246	EP		1753	10.59	-0.00							1.0
DQRL	SN	21	246	ES		1753	13.18	0.07							1.0
QRWL	SZ	27	198	EP		1753	11.67	0.01							1.0
RCY	SZ	32	169	EP		1753	12.46	-0.00							1.0
RCY	SN	32	169	ES		1753	16.32	-0.04							1.0
HWQ	BZ	57	16	EP		1753	16.56	0.08							1.0
BEIL	SZ	93	24	EP		1753	22.14	0.01							1.0

**February 9 2018 Hour: 22: 8 45.8 Lat: 34.66N Lon: 36.12E Depth: 3 Agency: REL Local**  
**Magnitudes: 3.0MC REL Rms: 0.1 secs**

**SYRIA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	14	155	EP		22 8	48.21	-0.01	63						1.0
BEIL	SN	14	155	ES		22 8	49.91	-0.09							1.0
HWQ	BZ	45	201	EP		22 8	53.01	-0.11							1.0
HWQ	BN	45	201	ES		22 8	58.53	0.00							1.0
ZAHL	SZ	91	194	EP		22 9	0.62	0.06							1.0
ZAHL	SN	91	194	ES		22 9	11.62	0.14							1.0
BHL	BZ	94	207	EP		22 9	0.98	0.00							1.0
DQRL	SZ	117	206	EP		22 9	4.53	-0.18							1.0
DQRL	SN	117	206	ES		22 9	18.56	-0.13							1.0
RCY	SZ	132	192	EP		22 9	7.15	0.31							1.0

**February 9 2018 Hour: 23:59 24.7 Agency: REL Distant**

**EMSC OT=23:59:24.7 21.47S 179.28W 617Km M=5.6 FIJI REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2417	58.45								
HWQ	BZ			EP		2417	58.70								
BHL	BZ			EP		2417	59.81								
DQRL	SZ			EP		2418	0.45								
QRWL	SZ			EP		2418	0.14								

**February 10 2018 Hour: 12: 7 54.9 Lat: 33.38N Lon: 35.66E Depth: 0 Agency: REL Local**  
**Magnitudes: 2.8MC REL Rms: 0.1 secs**

**HASBAYA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	21	53	EP		12 7	58.34	0.05	44						1.0
RCY	SN	21	53	ES		12 8	0.81	0.01							1.0
DQRL	SZ	37	347	EP		12 8	0.90	0.05							1.0
DQRL	SN	37	347	ES		12 8	5.24	-0.00							1.0
ZAHL	SZ	57	22	EP		12 8	3.89	-0.20							1.0
BHL	BZ	58	360	EP		12 8	4.19	-0.06							1.0
BHL	BN	58	360	ES		12 8	11.21	0.04							1.0
HWQ	BZ	103	15	EP		12 8	11.51	-0.01							1.0
BEIL	SZ	138	21	EP		12 8	17.17	0.13							1.0

**February 10 2018 Hour: 12:44 26.7 Lat: 33.98N Lon: 36.12E Depth: 14 Agency: REL Local**  
**Magnitudes: 3.2MC REL Rms: 0.1 secs**

**BAALBECK REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	26	238	EP		1244	31.49	-0.03							1.0
HWQ	BZ	37	334	EP		1244	33.10	0.00							1.0
HWQ	BN	37	334	ES		1244	37.90	0.06							1.0
BHL	BZ	44	259	EP		1244	34.04	-0.11							1.0

DQRL	SZ	59	239	EP		1244	36.34	-0.07	72							1.0
DQRL	SN	59	239	ES		1244	43.61	0.01								1.0
RCY	SZ	60	206	EP		1244	36.36	-0.15								1.0
RCY	SN	60	206	ES		1244	43.87	0.10								1.0
BEIL	SZ	63	5	EP		1244	36.86	0.00								1.0
QRWL	SZ	63	220	EP		1244	37.10	0.18								1.0

**February 11 2018 Hour: 15:9 23.9 Lat: 33.83N Lon: 36.52E Depth: 28 Agency: REL Local**  
**Magnitudes: 3.0MC REL Rms: 0.1 secs**

**SYRIA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	59	274	EP		15	9	34.18	0.10						1.0
ZAHL	SN	59	274	ES		15	9	41.56	-0.03						1.0
HWQ	BZ	73	314	EP		15	9	36.09	0.06						1.0
RCY	SZ	73	240	EP		15	9	35.98	-0.10	55					1.0
BHL	BZ	81	276	EP		15	9	37.10	0.00						1.0
BEIL	SZ	85	339	EP		15	9	37.59	-0.13						1.0
BEIL	SN	85	339	ES		15	9	47.95	0.04						1.0
DQRL	SZ	89	262	EP		15	9	38.30	0.01						1.0
DQRL	SN	89	262	ES		15	9	48.88	-0.03						1.0
SHBL	SZ	90	234	EP		15	9	38.47	0.09						1.0

**February 12 2018 Hour: 0:58 54.0 Agency: REL Regional**  
**EMSC OT=00:58:54.0 36.36N 35.79E 10Km M=3.1 CENTRAL TURKEY**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		059	25.00								
BHL	BZ			EP		059	32.56								
ZAHL	SZ			EP		059	34.20								
DQRL	SZ			EP		059	36.12								
QRWL	SZ			EP		059	38.46								
RCY	SZ			EP		059	38.68								
SHBL	SZ			EP		059	40.91								

**February 12 2018 Hour: 11:21 38.3 Lat: 34.49N Lon: 36.80E Depth: 9 Agency: REL Local**  
**Magnitudes: 2.8MC REL Rms: 0.1 secs**

**SYRIA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	56	276	EP		1121	47.46	-0.05	42						1.0
BEIL	SN	56	276	ES		1121	54.36	0.00							1.0
HWQ	BZ	82	253	EP		1121	51.68	0.14							1.0
HWQ	BN	82	253	ES		1122	1.36	-0.01							1.0
RCY	SZ	142	219	EP		1122	0.39	0.03							1.0
DQRL	SZ	143	233	EP		1122	0.38	-0.14							1.0
QRWL	SZ	147	225	EP		1122	1.12	0.03							1.0

**February 14 2018 Hour: 14:23 3.5 Lat: 34.62N Lon: 36.19E Depth: 6 Agency: REL Local**  
**Magnitudes: 2.7MC REL Rms: 0.1 secs**

**AKKAR REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	9	183	EP		1423	5.39	0.05	41						1.0
BEIL	SN	9	183	ES		1423	6.67	-0.06							1.0
HWQ	BZ	44	210	EP		1423	10.66	-0.06							1.0
HWQ	BN	44	210	ES		1423	16.14	0.04							1.0
ZAHL	SZ	89	198	EP		1423	17.98	0.05							1.0
BHL	BZ	94	212	EP		1423	18.68	0.05							1.0
DQRL	SZ	117	209	EP		1423	22.07	-0.02							1.0
QRWL	SZ	128	202	EP		1423	23.58	-0.19							1.0
RCY	SZ	129	195	EP		1423	24.11	0.16							1.0

February 14 2018 Hour: 18:27 8.0

Agency: REL Regional

EMSC OT=18:27:08.0 36.40N 25.00E 105Km M=3.8 DODECANESE ISLANDS, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ			EP		1829	13.78								
HWQ	BZ			EP		1829	14.26								
ZAHL	SZ			EP		1829	14.57								
BEIL	SZ			EP		1829	15.05								
RCY	SZ			EP		1829	15.59								

February 15 2018 Hour: 12:37 44.0 Lat: 33.47N Lon: 35.69E Depth: 3 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	8	354	EP		1237	45.42	-0.11							1.0
QRWL	SN	8	354	ES		1237	46.67	-0.02							1.0
RCY	SZ	14	78	EP		1237	46.33	0.02	33						1.0
RCY	SN	14	78	ES		1237	48.08	0.03							1.0
SHBL	SZ	15	161	EP		1237	46.46	0.02							1.0
DQRL	SZ	28	336	EP		1237	48.64	0.05							1.0
DQRL	SN	28	336	ES		1237	52.07	0.05							1.0
BHL	BZ	48	356	EP		1237	51.72	-0.03							1.0
BEIL	SZ	127	21	EP		1238	4.16	-0.12							0.2

February 16 2018 Hour: 1:38 26.6 Lat: 35.33N Lon: 36.62E Depth: 16 Agency: REL Local

Magnitudes: 3.0MC REL

Rms: 0.1 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	96	205	EP		138	41.66	-0.05	51						1.0
BEIL	SN	96	205	ES		138	52.86	-0.04							1.0
HWQ	BZ	132	208	EP		138	47.08	0.05							1.0
HWQ	BN	132	208	ES		139	2.20	0.04							1.0
ZAHL	SZ	177	203	EP		138	53.12	0.08							1.0
BHL	BZ	181	210	EP		138	53.58	-0.02							1.0
DQRL	SZ	205	209	EP		138	56.39	-0.07							1.0

February 16 2018 Hour: 13:25 30.6 Lat: 33.47N Lon: 35.69E Depth: 0 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	9	358	EP		1325	31.98	-0.01	28						1.0
RCY	SZ	14	78	EP		1325	32.90	-0.01							1.0
SHBL	SZ	15	158	EP		1325	32.90	-0.04							1.0
SHBL	SN	15	158	ES		1325	34.71	0.02							1.0
DQRL	SZ	28	338	EP		1325	35.20	0.05							1.0
DQRL	SN	28	338	ES		1325	38.49	-0.03							1.0
HWQ	BZ	93	15	EP		1325	45.58	0.02							1.0

February 19 2018 Hour: 15:33 21.5 Lat: 33.73N Lon: 35.20E Depth: 22 Agency: REL Local

Magnitudes: 2.6MC REL

Rms: 0.1 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	34	94	EP		1533	28.04	0.07							1.0
DQRL	SN	34	94	ES		1533	32.78	0.01							1.0
BHL	BZ	46	65	EP		1533	29.53	-0.03							1.0
QRWL	SZ	49	114	EP		1533	29.74	-0.18							1.0
RCY	SZ	64	113	EP		1533	32.22	0.10	32						1.0
RCY	SE	64	113	ES		1533	40.01	0.02							1.0
ZAHL	SZ	65	77	EP		1533	32.27	0.06							1.0
ZAHL	SE	65	77	ES		1533	40.11	-0.04							1.0

February 19 2018 Hour: 21:31 39.6

Agency: REL Regional

EMSC OT=21:31:39.6 36.09N 45.04E 10Km M=4.3 IRAN-IRAQ BORDER REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2133	27.32								
HWQ	BZ			EP		2133	32.33								
ZAHL	SZ			EP		2133	36.36								
BHL	BZ			EP		2133	38.96								
RCY	SZ			EP		2133	37.08								
QRWL	SZ			EP		2133	39.13								
DQRL	SZ			EP		2133	39.04								
SHBL	SZ			EP		2133	38.42								

February 20 2018 Hour: 0:9 43.1 Lat: 33.80N Lon: 35.80E Depth: 10 Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.1 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	10	51	EP		0 9	45.58	0.01							1.0
ZAHL	SN	10	51	ES		0 9	47.40	-0.01							1.0
BHL	BZ	18	310	EP		0 9	46.56	0.07	37						1.0
BHL	BN	18	310	ES		0 9	48.98	-0.03							1.0
DQRL	SZ	24	244	EP		0 9	47.37	0.01							1.0
QRWL	SZ	30	201	EP		0 9	48.17	-0.13							1.0
QRWL	SN	30	201	ES		0 9	52.18	0.03							1.0
RCY	SZ	34	174	EP		0 9	48.95	0.05							1.0
HWQ	BZ	55	14	EP		0 9	52.08	-0.01							1.0

February 20 2018 Hour: 14:12 50.1 Lat: 33.88N Lon: 35.86E Depth: 0 Agency: REL Local

Magnitudes: 2.8MC REL

Rms: 0.1 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	4	131	EP		1412	50.77	-0.00							1.0
BHL	BZ	19	279	EP		1412	53.08	-0.10	45						1.0
BHL	BN	19	279	ES		1412	55.46	0.03							1.0
DQRL	SZ	33	234	EP		1412	55.47	0.06							1.0
RCY	SZ	43	182	EP		1412	56.90	-0.09							1.0
RCY	SN	43	182	ES		1413	2.11	0.05							1.0
HWQ	BZ	45	11	EP		1412	57.45	0.05							1.0
SHBL	SZ	60	190	EP		1412	59.90	0.12							0.2
BEIL	SZ	80	22	EP		1413	2.94	-0.01							1.0

February 20 2018 Hour: 23:29 8.0 Lat: 34.77N Lon: 34.18E Depth: 25 Agency: REL Regional

Magnitudes: 3.1MC REL

Rms: 0.1 secs

EASTERN MEDITERRANEAN SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	166	125	EP		2329	32.44	-0.01							1.0
BHL	BN	166	125	ES		2329	50.49	-0.03							1.0
HWQ	BZ	171	108	EP		2329	33.11	0.04	60						1.0
HWQ	BN	171	108	ES		2329	51.64	0.03							1.0
DQRL	SZ	174	132	EP		2329	33.32	-0.12							1.0
BEIL	SZ	185	97	EP		2329	34.75	-0.05							1.0
ZAHL	SZ	187	122	EP		2329	35.09	0.07							1.0
RCY	SZ	208	132	EP		2329	37.62	-0.06							1.0
SHBL	SZ	214	137	EP		2329	38.55	0.14							1.0

February 21 2018 Hour: 14:19 24.7 Lat: 33.97N Lon: 36.19E Depth: 10 Agency: REL Local

Magnitudes: 2.9MC REL

Rms: 0.0 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	30	246	EP		1419	29.89	-0.01							1.0
ZAHL	SN	30	246	ES		1419	33.79	0.01							1.0
HWQ	BZ	41	327	EP		1419	31.48	-0.02	48						1.0
HWQ	BN	41	327	ES		1419	36.51	-0.04							1.0
BHL	BZ	50	262	EP		1419	32.87	-0.01							1.0

BHL	BN	50	262	ES		1419	39.00	0.05									1.0
RCY	SZ	62	212	EP		1419	34.78	-0.00									1.0
RCY	SN	62	212	ES		1419	42.27	0.00									1.0
BEIL	SZ	64	360	EP		1419	35.12	0.06									1.0
DQRL	SZ	64	243	EP		1419	35.11	-0.04									1.0

**February 21 2018 Hour: 17:38 3.7 Lat: 33.78N Lon: 35.77E 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
ZAHL	SZ	14	51	EP		1738	6.02	-0.04							1.0
ZAHL	SN	14	51	ES		1738	7.83	0.02							1.0
BHL	BZ	18	323	EP		1738	6.48	-0.12	44						1.0
BHL	BN	18	323	ES		1738	8.80	0.04							1.0
DQRL	SZ	20	246	EP		1738	7.11	0.11							1.0
QRWL	SZ	27	197	EP		1738	7.94	-0.13							1.0
RCY	SZ	32	169	EP		1738	8.96	0.08							1.0
HWQ	BZ	58	16	EP		1738	13.10	0.06							1.0
BEIL	SZ	93	24	EP		1738	18.68	-0.01							1.0

**February 21 2018 Hour: 23:44 55.7 Agency: REL Regional**  
**EMSC OT=23:44:55.7 37.80N 20.44E 15Km M=5.0 IONIAN SEA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2347	58.70								
HWQ	BZ			EP		2347	58.24								
BEIL	SZ			EP		2347	59.49								
QRWL	SZ			EP		2347	58.84								
RCY	SZ			EP		2348	0.88								

**February 22 2018 Hour: 12:44 2.2 Lat: 33.47N Lon: 35.69E Depth: 2 Agency: REL Local**  
**Magnitudes: 2.8MC 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	354	EP		1244	3.63	-0.13							1.0
RCY	SZ	14	77	EP		1244	4.53	-0.00	46						1.0
RCY	SN	14	77	ES		1244	6.21	-0.02							1.0
SHBL	SZ	14	160	EP		1244	4.66	0.02							1.0
DQRL	SZ	29	337	EP		1244	6.84	-0.04							1.0
DQRL	SN	29	337	ES		1244	10.33	0.02							1.0
ZAHL	SZ	47	22	EP		1244	9.88	0.09							0.2
BHL	BZ	48	356	EP		1244	10.15	0.09							1.0
HWQ	BZ	93	15	EP		1244	17.35	0.15							1.0
BEIL	SZ	127	21	EP		1244	22.58	-0.10							1.0

**February 23 2018 Hour: 13:21 16.6 Lat: 33.47N Lon: 35.69E 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	9	356	EP		1321	17.93	-0.08							1.0
RCY	SZ	14	77	EP		1321	18.86	0.00	37						1.0
RCY	SN	14	77	ES		1321	20.55	0.01							1.0
SHBL	SZ	14	159	EP		1321	18.92	0.01							1.0
DQRL	SZ	29	337	EP		1321	21.16	-0.02							1.0
DQRL	SN	29	337	ES		1321	24.63	0.05							1.0
HWQ	BZ	93	15	EP		1321	31.98	0.41							0.2
BEIL	SZ	128	21	EP		1321	37.05	-0.10							0.2

**February 24 2018 Hour: 0:7 54.5 Lat: 33.78N Lon: 35.79E Depth: 5 Agency: REL Local**  
**Magnitudes: 2.9MC REL Rms: 0.1 secs**

**ALEY REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	12	45	EP		0	7	56.68	-0.07	60					1.0
ZAHL	SN	12	45	ES		0	7	58.42	0.03						1.0
BHL	BZ	19	317	EP		0	7	57.62	-0.13	55					1.0

BHL	BN	19	317	ES		0	8	0.19	0.07								1.0
DQRL	SZ	22	248	EP		0	7	58.27	-0.02								1.0
QRWL	SZ	28	202	EP		0	7	59.24	0.09								1.0
RCY	SZ	32	173	EP		0	7	59.74	-0.04	50							1.0
HWQ	BZ	57	14	EP		0	8	3.83	0.04								1.0
BEIL	SZ	92	23	EP		0	8	9.41	0.03								1.0

**February 24 2018 Hour: 1:22 5.0 Lat: 33.07N Lon: 35.45E Depth: 8 Agency: REL Local**  
**Magnitudes: 2.3MC REL Rms: 0.0 secs**

**DEAD SEA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	SZ	41	42	EP		122	11.87	0.01	23						1.0
SHBL	SN	41	42	ES		122	16.95	0.00							1.0
QRWL	SZ	57	22	EP		122	14.27	-0.09							1.0
RCY	SZ	60	37	EP		122	14.75	0.03							1.0
DQRL	SZ	71	9	EP		122	16.67	0.05							1.0
DQRL	SN	71	9	ES		122	25.23	0.00							1.0

**February 24 2018 Hour: 2:3 0.1 Agency: REL Regional**  
**EMSC OT=02:03:00.1 33.97N 26.08E 15Km M=4.4 EASTERN MEDITERRAN SEA**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		2	4	52.68							
QRWL	SZ			EP		2	4	54.24							
SHBL	SZ			EP		2	4	55.72							
RCY	SZ			EP		2	4	56.29							
ZAHL	SZ			EP		2	4	55.72							
HWQ	BZ			EP		2	4	57.36							
BEIL	SZ			EP		2	4	59.57							
FKH	SZ			EP		2	5	2.94							

**February 24 2018 Hour: 15:52 58.6 Lat: 33.87N Lon: 35.85E Depth: 0 Agency: REL Local**  
**Magnitudes: 3.0MC REL Rms: 0.1 secs**

**ZAHLE REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	4	111	EP		1552	59.11	-0.11							1.0
BHL	BZ	18	282	EP		1553	1.44	-0.11	59						1.0
BHL	BN	18	282	ES		1553	3.81	0.08							1.0
DQRL	SZ	32	235	EP		1553	3.63	-0.04							1.0
DQRL	SN	32	235	ES		1553	7.42	-0.01							1.0
QRWL	SZ	39	203	EP		1553	4.86	-0.00							1.0
RCY	SZ	41	182	EP		1553	5.24	-0.04							1.0
RCY	SN	41	182	ES		1553	10.26	0.04							1.0
HWQ	BZ	46	11	EP		1553	6.02	-0.02							1.0
SHBL	SZ	59	189	EP		1553	8.03	-0.02							1.0
SHBL	SN	59	189	ES		1553	15.15	0.10							1.0
FKH	SZ	67	51	EP		1553	9.43	0.11							1.0
BEIL	SZ	81	23	EP		1553	11.62	0.01							1.0
BEIL	SN	81	23	ES		1553	21.27	0.02							1.0

**February 25 2018 Hour: 13:19 13.1 Lat: 33.53N Lon: 37.07E Depth: 25 Agency: REL Local**  
**Magnitudes: 3.3MC REL Rms: 0.0 secs**

**SYRIA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	115	268	EP		1319	31.14	0.00	83						1.0
RCY	SE	115	268	ES		1319	44.46	0.00							1.0
ZAHL	SZ	116	289	EP		1319	31.25	-0.00							1.0
HWQ	BZ	133	309	EP		1319	33.36	-0.07							1.0
BHL	BZ	137	288	EP		1319	34.02	0.02							1.0
BEIL	SZ	139	324	EP		1319	34.13	0.04							1.0
BEIL	SN	139	324	ES		1319	49.60	0.00							1.0

February 25 2018 Hour: 16:23 13.4 Lat: 34.70N Lon: 36.09E Depth: 0 Agency: REL Local  
Magnitudes: 2.5MC REL Rms: 0.1 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	20	153	EP		1623	16.60	0.02	28						1.0
BEIL	SN	20	153	ES		1623	18.93	0.01							1.0
HWQ	BZ	49	196	EP		1623	21.29	0.05							1.0
HWQ	BN	49	196	ES		1623	27.04	0.01							1.0
ZAHL	SZ	95	191	EP		1623	28.62	-0.14							1.0
BHL	BZ	97	205	EP		1623	29.10	0.07							1.0
DQRL	SZ	120	204	EP		1623	32.78	-0.01							1.0
RCY	SZ	135	190	EP		1623	35.22	0.01							1.0

February 26 2018 Hour: 15:4 36.5 Lat: 33.13N Lon: 35.48E Depth: 4 Agency: REL Local  
Magnitudes: 2.5MC 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	50	22	EP		15 4	44.66	0.02							1.0
RCY	SZ	52	39	EP		15 4	45.07	0.04	27						1.0
RCY	SE	52	39	ES		15 4	51.21	-0.09							1.0
DQRL	SZ	64	7	EP		15 4	46.79	-0.17							1.0
DQRL	SE	64	7	ES		15 4	54.74	0.08							1.0
BHL	BZ	87	10	EP		15 4	50.57	-0.08							1.0
ZAHL	SZ	89	25	EP		15 4	51.13	0.21							1.0
HWQ	BZ	134	19	EP		15 4	57.92	-0.01							1.0

February 26 2018 Hour: 16:5 43.3 Lat: 33.38N Lon: 35.65E Depth: 0 Agency: REL Local  
Magnitudes: 2.7MC REL Rms: 0.2 secs

HASBAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	18	10	EP		16 5	46.19	-0.08							1.0
RCY	SZ	22	54	EP		16 5	46.91	0.15	39						1.0
RCY	SE	22	54	ES		16 5	49.27	-0.06							1.0
DQRL	SZ	36	349	EP		16 5	49.07	-0.10							1.0
DQRL	SE	36	349	ES		16 5	53.59	0.08							1.0
ZAHL	SZ	57	23	EP		16 5	52.43	-0.06							1.0
BHL	BZ	58	1	EP		16 5	52.63	0.03							1.0
HWQ	BZ	103	15	EP		16 6	0.59	0.69							0.2

February 27 2018 Hour: 10:47 11.5 Lat: 34.21N Lon: 36.42E Depth: 0 Agency: REL Local  
Magnitudes: 2.7MC REL Rms: 0.1 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	4	351	EP		1047	12.13	-0.13							1.0
BEIL	SZ	43	330	EP		1047	18.53	0.07	38						1.0
BEIL	SN	43	330	ES		1047	23.69	0.09							1.0
HWQ	BZ	44	281	EP		1047	18.58	-0.07							1.0
HWQ	BN	44	281	ES		1047	23.82	-0.10							1.0
ZAHL	SZ	63	232	EP		1047	21.68	0.08							1.0
BHL	BZ	78	245	EP		1047	24.19	0.09							1.0
RCY	SZ	95	215	EP		1047	26.87	-0.02							1.0
DQRL	SZ	96	235	EP		1047	27.06	0.06							1.0
SHBL	SZ	114	213	EP		1047	29.78	-0.08							1.0

February 27 2018 Hour: 17:35 52.6 Lat: 33.86N Lon: 35.84E Depth: 0 Agency: REL Local  
Magnitudes: 3.0MC REL Rms: 0.1 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	4	96	EP		1735	53.28	-0.02							1.0
BHL	BZ	18	285	EP		1735	55.35	-0.16							1.0
BHL	BN	18	285	ES		1735	57.69	0.03							1.0
DQRL	SZ	31	235	EP		1735	57.57	0.03							1.0
DQRL	SN	31	235	ES		1736	1.31	0.13							1.0



QRWL	SZ	38	203	EP		1735	58.57	-0.15								1.0
RCY	SZ	41	181	EP		1735	59.26	0.11	59							1.0
RCY	SN	41	181	ES		1736	4.01	0.02								1.0
HWQ	BZ	47	12	EP		1736	0.21	-0.01								1.0
SHBL	SZ	58	189	EP		1736	1.82	-0.10								1.0
FKH	SZ	68	51	EP		1736	3.56	0.05								1.0
BEIL	SZ	82	23	EP		1736	5.87	0.07								1.0

**February 28 2018 Hour: 0:24 24.8 Lat: 33.79N Lon: 35.79E Depth: 6 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
ZAHL	SZ	12	49	EP		024	26.84	-0.18							1.0
ZAHL	SN	12	49	ES		024	28.80	0.10							1.0
BHL	BZ	18	316	EP		024	27.88	-0.02	26						1.0
DQRL	SZ	22	246	EP		024	28.62	0.07							1.0
DQRL	SN	22	246	ES		024	31.32	-0.04							1.0
QRWL	SZ	29	201	EP		024	29.57	0.07							1.0
RCY	SZ	33	173	EP		024	30.14	-0.03							1.0
HWQ	BZ	56	15	EP		024	33.96	0.05							1.0

**February 28 2018 Hour: 2:12 36.1 Agency: REL Regional**  
**EMSC OT=02:12:36.1 37.15N 38.48E 9Km M=3.3 EASTERN TURKEY**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		213	23.04								
FKH	SZ			EP		213	27.34								
HWQ	BZ			EP		213	27.66								
ZAHL	SZ			EP		213	32.21								
BHL	BZ			EP		213	34.37								
DQRL	SZ			EP		213	36.80								
QRWL	SZ			EP		213	40.17								
RCY	SZ			EP		213	37.40								
SHBL	SZ			EP		213	39.18								

**February 28 2018 Hour: 17:15 27.4 Lat: 33.79N Lon: 35.77E 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
ZAHL	SZ	13	54	EP		1715	30.28	-0.01							1.0
ZAHL	SN	13	54	ES		1715	32.43	0.00							1.0
BHL	BZ	17	320	EP		1715	30.74	0.01							1.0
DQRL	SZ	21	243	EP		1715	31.32	0.03							1.0
DQRL	SN	21	243	ES		1715	34.16	-0.00							1.0
QRWL	SZ	28	197	EP		1715	32.26	-0.07							1.0
RCY	SZ	33	170	EP		1715	33.16	0.05	40						1.0
HWQ	BZ	57	17	EP		1715	36.64	-0.10							0.2



# Epicentral Map of Lebanon

## FEBRUARY 2018

