

Republic of Lebanon  
National Council for Scientific Research

# Provisional Seismological Bulletin

from the

## NATIONAL SEISMIC NETWORK

March

2017

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
ZAHL	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 ( $0.5 \times (\text{peak to peak})$ ), (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.

March 2 2017 Hour: 11: 7 25.4 Agency: REL Regional

EMSC OT=11:07:25.4 37.60N 38.49E 11Km M=5.5 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		11 8	21.88								
HWQ	BZ			EP		11 8	26.31								
ZAHL	SZ			EP		11 8	32.69								
BHL	BZ			EP		11 8	32.62								
DQRL	SZ			EP		11 8	36.80								
RCY	SZ			EP		11 8	37.11								
QRWL	SZ			EP		11 8	38.42								

March 2 2017 Hour: 11:20 52.7 Agency: REL Regional

EMSC OT=11:20:52.7 37.64N 38.46E 7Km M=3.2 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1125	25.25								
HWQ	BZ			EP		1125	28.16								
BHL	BZ			EP		1125	41.34								
DQRL	SZ			EP		1125	43.86								

March 2 2017 Hour: 16:45 16.3 Agency: REL Regional

EMSC OT=16:45:16.3 37.56N 38.51E 7Km M=3.9 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1646	10.75								
BHL	BZ			EP		1646	31.95								
DQRL	SZ			EP		1646	37.64								

March 2 2017 Hour: 17: 3 2.5 Agency: Regional

EMSC OT=17:03:02.5 37.59N 38.49E 9Km M=4.0 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		17 4	0.08								
HWQ	BZ			EP		17 4	3.15								
RCY	SZ			EP		17 4	14.31								
BHL	BZ			EP		17 4	9.56								
DQRL	SZ			EP		17 4	15.94								

March 3 2017 Hour: 20:51 54.1 Agency: REL Regional

EMSC OT=20:51:54.1 37.62N 38.47E 11Km M=3.8 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2052	50.87								
HWQ	SZ			EP		2052	55.69								
BHL	BZ			EP		2053	1.46								
QRWL	SZ			EP		2053	6.84								

March 3 2017 Hour: 21:30 39.6 Agency: REL Regional

EMSC OT=21:30:39.6 37.60N 38.48E 8Km M=3.6 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2131	37.01								
HWQ	SZ			EP		2131	42.67								
BHL	BZ			EP		2131	45.92								
QRWL	SZ			EP		2131	53.37								

March 3 2017 Hour: 23:17 0.1 Agency: REL Regional

EMSC OT=23:17:00.1 35.45N 25.90E 17Km M=4.5 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ			EP		2318	58.88								
ZAHL	SZ			EP		2319	0.60								
RCY	SZ			EP		2319	1.05								
BEIL	SZ			EP		2319	2.33								

March 4 2017 Hour: 4:04.9 Agency: REL Regional

EMSC OT=04:00:41.9 37.64N 38.45E 2Km M=3.7 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		4	1	38.40							
HWQ	SZ			EP		4	1	47.97							

March 4 2017 Hour: 16:40 40.5 Lat: 33.77N 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
ZAHL	SZ	14	48	EP		1640	42.73	-0.04							1.0
BHL	BZ	18	322	EP		1640	43.39	-0.10	41						1.0
BHL	BN	18	322	ES		1640	45.69	0.02							1.0
QRWL	SZ	27	199	EP		1640	44.86	0.05							1.0
RCY	SZ	31	170	EP		1640	45.55	-0.03							1.0
RCY	SN	31	170	ES		1640	49.32	0.01							1.0
HWQ	BZ	58	16	EP		1640	50.00	0.09							1.0

March 5 2017 Hour: 16:7 34.9 Lat: 34.03N Lon: 35.75E Depth: 0 Agency: REL Local  
Magnitudes: 2.9MC 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	17	211	EP		16	7	37.56	-0.04	52					1.0
ZAHL	SZ	23	147	EP		16	7	38.65	-0.01						1.0
ZAHL	SN	23	147	ES		16	7	41.47	0.03						1.0
BEYL	SZ	30	233	EP		16	7	39.70	0.03						1.0
HWQ	BZ	33	34	EP		16	7	40.11	-0.07						1.0
HWQ	BN	33	34	ES		16	7	44.11	0.02						1.0
QRWL	SZ	54	186	EP		16	7	43.69	0.05						1.0
RCY	SZ	60	172	EP		16	7	44.59	-0.01						1.0
RCY	SE	60	172	ES		16	7	51.74	-0.04						1.0
BEIL	SZ	69	35	EP		16	7	46.10	0.03						1.0

March 6 2017 Hour: 9:33 3.4 Lat: 33.87N Lon: 35.85E Depth: 0 Agency: REL Local  
Magnitudes: 2.9MC 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	113	EP		933	4.06	-0.02							1.0
BHL	BZ	18	281	EP		933	6.24	-0.06							1.0
DQRL	SZ	31	234	EP		933	8.49	0.02							1.0
RCY	SZ	42	181	EP		933	10.13	0.01	51						1.0
RCY	SN	42	181	ES		933	15.05	-0.05							1.0
HWQ	BZ	46	12	EP		933	10.89	0.08							1.0
HWQ	BN	46	12	ES		933	16.32	0.02							1.0
SHBL	BZ	59	189	EP		933	12.99	0.10							1.0
BEIL	SZ	81	23	EP		933	16.30	-0.09							1.0

March 6 2017 Hour: 10:56 34.1 Lat: 33.53N Lon: 35.71E Depth: 0 Agency: REL Local  
Magnitudes: 2.8MC REL Rms: 0.1 secs

RACHAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	297	EP		1056	34.53	-0.16							1.0
RCY	SZ	12	110	EP		1056	36.06	-0.04	43						1.0
RCY	SN	12	110	ES		1056	37.60	0.04							1.0
SHBL	BZ	21	172	EP		1056	37.57	0.06							1.0
DQRL	SZ	23	325	EP		1056	37.97	0.08							1.0
DQRL	SN	23	325	ES		1056	40.78	0.12							1.0
ZAHL	SZ	39	24	EP		1056	40.41	-0.07							1.0
BHL	BZ	41	352	EP		1056	40.76	-0.06							1.0
HWQ	BZ	85	15	EP		1056	47.92	0.03							1.0

March 6 2017 Hour: 11:13 44.7 Lat: 33.88N Lon: 35.84E Depth: 0 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
ZAHL	SZ	5	117	EP		1113	45.38	-0.18							1.0
BHL	BZ	17	280	EP		1113	47.51	0.01	46						1.0
BHL	BN	17	280	ES		1113	49.52	-0.03							1.0
DQRL	SZ	31	232	EP		1113	49.71	-0.06							1.0
DQRL	SN	31	232	ES		1113	53.49	-0.02							1.0
RCY	SZ	42	180	EP		1113	51.62	0.06	42						1.0
RCY	SN	42	180	ES		1113	56.78	0.16							1.0
HWQ	BZ	45	13	EP		1113	52.14	0.08							1.0
SHBL	BZ	59	188	EP		1113	54.24	-0.07							1.0
BEIL	SZ	80	23	EP		1113	57.72	0.05							1.0

March 7 2017 Hour: 9:43 12.5 Lat: 34.03N Lon: 35.75E Depth: 3 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	17	210	EP		943	15.25	-0.08	66						1.0
BHL	BN	17	210	ES		943	17.48	0.07							1.0
ZAHL	SZ	24	147	EP		943	16.49	0.11							1.0
HWQ	BZ	33	34	EP		943	17.74	-0.10							1.0
HWQ	BN	33	34	ES		943	21.72	-0.06							1.0
DQRL	SZ	40	204	EP		943	19.00	-0.01							1.0
QRWL	SZ	54	186	EP		943	21.31	-0.01							1.0
RCY	SZ	60	172	EP		943	22.37	0.09							1.0
RCY	SN	60	172	ES		943	29.37	-0.13							1.0
BEIL	SZ	69	36	EP		943	23.77	0.08							1.0
BEIL	SN	69	36	ES		943	32.01	0.04							1.0

March 8 2017 Hour: 7:55 2.8 Agency: REL Regional  
EMSC OT=07:55:02.8 35.76N 24.52E 48Km M=4.4 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		757	11.76								
RCY	SZ			EP		757	13.11								
BEIL	SZ			EP		757	13.49								

March 8 2017 Hour: 16:22 58.7 Lat: 33.38N Lon: 35.59E Depth: 4 Agency: REL Local  
Magnitudes: 2.5MC REL Rms: 0.0 secs

NABATIYE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	20	25	EP		1623	2.01	-0.03	30						1.0
RCY	SZ	26	61	EP		1623	2.99	0.02							1.0
RCY	SN	26	61	ES		1623	6.14	-0.01							1.0
DQRL	SZ	36	357	EP		1623	4.56	0.03							1.0
DQRL	SN	36	357	ES		1623	8.88	0.01							1.0
BHL	BZ	58	6	EP		1623	8.03	-0.07							1.0
HWQ	BZ	105	18	EP		1623	15.63	0.06							1.0
BEIL	SZ	140	23	EP		1623	20.82	-0.01							1.0

March 9 2017 Hour: 5:54 41.5 Lat: 33.88N Lon: 35.85E Depth: 0 Agency: REL Local  
Magnitudes: 2.4MC 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	4	129	EP		554	42.14	-0.05							1.0
BHL	BZ	18	278	EP		554	44.39	-0.05	25						1.0
BHL	BN	18	278	ES		554	46.64	0.01							1.0
DQRL	SZ	33	233	EP		554	46.74	0.01							1.0
RCY	SZ	43	182	EP		554	48.34	-0.05							1.0
RCY	SN	43	182	ES		554	53.56	0.07							1.0
HWQ	BZ	45	11	EP		554	48.78	0.06							1.0

March 10 2017 Hour: 22:23 42.6 Agency: REL Regional

EMSC OT=22:23:42.6 37.57N 38.52E 8Km M=4.1 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2224	39.39								
HWQ	BZ			EP		2224	43.50								
BHL	BZ			EP		2224	50.18								
DQRL	SZ			EP		2224	50.08								
RCY	SZ			EP		2224	56.32								

March 11 2017 Hour: 6:54 54.7 Lat: 33.69N Lon: 35.51E Depth: 4 Agency: REL Local

Magnitudes: 2.4MC REL

Rms: 0.0 secs

CHOUF REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	6	77	EP		654	56.02	-0.01	27						1.0
DQRL	SN	6	77	ES		654	57.01	0.01							1.0
BHL	BZ	27	30	EP		654	59.10	-0.04							1.0
RCY	SZ	37	126	EP		655	0.84	0.02							1.0
RCY	SN	37	126	ES		655	5.32	-0.01							1.0
ZAHL	SZ	39	62	EP		655	1.10	-0.01							1.0
HWQ	BZ	76	32	EP		655	7.10	0.05							1.0

March 11 2017 Hour: 11:30 1.8 Lat: 34.24N Lon: 36.30E Depth: 9 Agency: REL Local

Magnitudes: 2.6MC REL

Rms: 0.0 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	33	278	EP		1130	7.35	0.06							1.0
HWQ	BN	33	278	ES		1130	11.35	-0.02							1.0
BEIL	SZ	35	343	EP		1130	7.66	-0.02	33						1.0
BEIL	SN	35	343	ES		1130	12.06	0.01							1.0
ZAHL	SZ	57	222	EP		1130	11.08	0.00							1.0
BHL	BZ	70	238	EP		1130	13.15	-0.02							1.0

March 12 2017 Hour: 8:5 31.1 Lat: 35.41N Lon: 35.83E Depth: 6 Agency: REL Local

Magnitudes: 2.6MC REL

Rms: 0.2 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	102	162	EP		8 5	47.71	0.17	31						1.0
BEIL	SN	102	162	ES		8 5	59.71	-0.01							1.0
HWQ	BZ	126	175	EP		8 5	50.96	-0.22							1.0
HWQ	BE	126	175	ES		8 6	6.07	0.02							1.0
BHL	BZ	168	186	EP		8 5	57.59	0.27							1.0
ZAHL	SZ	173	178	EP		8 5	57.75	-0.23							1.0

March 14 2017 Hour: 4:36 29.5

Agency: REL Distant

EMSC OT=04:36:29.5 5.71S 110.13E 550Km M=5.1 JAVA SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		447	44.17								
RCY	SZ			EP		447	44.50								
HWQ	BZ			EP		447	44.44								
BHL	BZ			EP		447	45.34								

March 14 2017 Hour: 14:56 46.1 Lat: 33.81N Lon: 36.05E Depth: 8 Agency: REL Local

Magnitudes: 2.4MC 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	16	289	EP		1456	49.11	0.00	25						1.0
BHL	BZ	38	286	EP		1456	52.38	-0.03							1.0
RCY	SZ	40	209	EP		1456	52.78	-0.01							1.0
RCY	SE	40	209	ES		1456	57.71	0.00							1.0
DQRL	SZ	46	255	EP		1456	53.69	0.03							1.0
DQRL	SN	46	255	ES		1456	59.23	0.00							1.0
HWQ	BZ	53	350	EP		1456	54.76	0.01							1.0

March 15 2017 Hour: 13:29 17.6

Agency: REL Regional

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1329	33.38								
HWQ	BZ			EP		1329	37.83								
BHL	BZ			EP		1329	44.12								

March 15 2017 Hour: 23:29 47.7

Agency: REL Regional

EMSC OT=23:29:47.7 35.86N 27.65E 12Km M=4.3 DODECANESE ISLANDS,GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2331	26.58								
HWQ	SZ			EP		2331	29.36								
ZAHL	SZ			EP		2331	30.27								
BEIL	SZ			EP		2331	30.24								
RCY	SZ			EP		2331	30.83								

March 16 2017 Hour: 12:17 4.6

Lat: 33.51N

Lon: 35.69E

Depth: 0

Agency: REL Local

Magnitudes: 2.6MC 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	4	345	EP		1217	5.32-0.00								1.0
RCY	SZ	13	97	EP		1217	6.84 0.03	37							1.0
RCY	SN	13	97	ES		1217	8.34-0.07								1.0
DQRL	SZ	24	332	EP		1217	8.63 0.06								1.0
DQRL	SN	24	332	ES		1217	11.42-0.06								1.0
ZAHL	SZ	42	25	EP		1217	11.61 0.14								1.0
BHL	BZ	44	355	EP		1217	11.59-0.10								1.0

March 17 2017 Hour: 10:18 40.2

Agency: REL Distant

EMSC OT=10:18:40.2 23.66S 176.78W 124Km M=5.5 SOUTH OF FIJI ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1038	15.87								
HWQ	BZ			EP		1038	16.31								
BHL	BZ			EP		1038	16.90								
QRWL	SZ			EP		1038	17.58								

March 18 2017 Hour: 18:15 28.8

Agency: REL Regional

EMSC OT=18:15:28.8 34.42N 32.22E 40Km M=4.5 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1816	10.96								
BHL	BZ			EP		1816	10.97								
QRWL	SZ			EP		1816	12.98								
HWQ	BZ			EP		1816	14.58								
ZAHL	SZ			EP		1816	14.47								
RCY	SZ			EP		1816	14.94								
BEIL	SZ			EP		1816	16.32								

March 19 2017 Hour: 11:32 26.1

Lat: 33.93N

Lon: 36.10E

Depth: 19

Agency: REL Local

Magnitudes: 2.7MC 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	21	248	EP		1132	30.72-0.05								1.0
ZAHL	SN	21	248	ES		1132	34.26 0.03								1.0
BHL	BZ	41	266	EP		1132	33.32 0.02								1.0
BHL	BN	41	266	ES		1132	38.62-0.01								1.0
HWQ	SZ	41	340	EP		1132	33.25-0.06	36							1.0
RCY	SZ	54	207	EP		1132	35.12-0.01								1.0
DQRL	SZ	55	243	EP		1132	35.24 0.01								1.0
BEIL	SZ	68	7	EP		1132	37.23 0.06								1.0

March 19 2017 Hour: 14:21 6.8 Lat: 34.19N Lon: 36.57E Depth: 5 Agency: REL Local  
Magnitudes: 2.5MC REL Rms: 0.0 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	53	317	EP		1421	15.41	0.02	30						1.0
BEIL	SN	53	317	ES		1421	21.71	-0.01							1.0
HWQ	SZ	59	279	EP		1421	16.35	0.00							1.0
ZAHL	SZ	74	240	EP		1421	18.76	-0.01							1.0
ZAHL	SN	74	240	ES		1421	27.62	0.01							1.0
BHL	BZ	91	250	EP		1421	21.49	-0.03							1.0
DQRL	SZ	107	240	EP		1421	24.23	0.03							1.0
QRWL	SZ	109	229	EP		1421	24.45	-0.01							1.0

March 19 2017 Hour: 23:52 42.1 Lat: 33.79N Lon: 35.80E Depth: 7 Agency: REL Local  
Magnitudes: 2.4MC 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	48	EP		2352	44.43	-0.01							1.0
BHL	BZ	18	314	EP		2352	45.39	0.01	25						1.0
DQRL	SZ	23	246	EP		2352	46.12	0.02							1.0
DQRL	SN	23	246	ES		2352	49.03	-0.00							1.0
QRWL	SZ	29	201	EP		2352	46.96	-0.06							1.0
RCY	SZ	33	174	EP		2352	47.69	0.04							1.0
RCY	SN	33	174	ES		2352	51.74	0.01							1.0

March 20 2017 Hour: 10:31 9.3 Lat: 33.85N Lon: 35.83E Depth: 0 Agency: REL Local  
Magnitudes: 2.9MC REL Rms: 0.1 secs

Earthquake was felt

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	5	83	EP		1031	10.02	-0.01							1.0
BHL	BZ	18	289	EP		1031	11.99	-0.12	56						1.0
DQRL	SZ	30	236	EP		1031	13.97	-0.04							1.0
DQRL	SN	30	236	ES		1031	17.66	0.13							1.0
QRWL	SZ	37	203	EP		1031	15.12	-0.06							1.0
RCY	SZ	40	180	EP		1031	15.60	-0.04							1.0
RCY	SN	40	180	ES		1031	20.40	0.04							1.0
HWQ	SZ	48	12	EP		1031	17.09	0.06							1.0
HWQ	SN	48	12	ES		1031	22.82	0.03							1.0
BEIL	SZ	83	23	EP		1031	22.62	0.00							1.0

March 20 2017 Hour: 11:24 45.9 Lat: 33.53N Lon: 35.71E Depth: 0 Agency: REL Local  
Magnitudes: 2.2MC REL Rms: 0.1 secs

RACHAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	308	EP		1124	46.24	-0.13	20						1.0
RCY	SZ	13	108	EP		1124	47.92	-0.08							1.0
RCY	SN	13	108	ES		1124	49.60	0.06							1.0
SHBL	BZ	21	170	EP		1124	49.33	0.05							1.0
DQRL	SZ	23	327	EP		1124	49.66	0.05							1.0
DQRL	SN	23	327	ES		1124	52.43	0.09							1.0
ZAHL	SZ	40	25	EP		1124	52.29	-0.04							1.0

March 20 2017 Hour: 16:42 6.2 Lat: 33.40N Lon: 35.60E Depth: 0 Agency: REL Local  
Magnitudes: 2.9MC REL Rms: 0.0 secs

JEZZINE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	14	115	EP		1642	8.55	0.02							1.0
QRWL	SZ	18	24	EP		1642	8.98	-0.06							1.0
QRWL	SN	18	24	ES		1642	11.15	0.01							1.0
RCY	SZ	24	64	EP		1642	10.02	-0.03							1.0
RCY	SN	24	64	ES		1642	12.91	0.01							1.0
DQRL	SZ	34	354	EP		1642	11.63	-0.01	54						1.0

BHL	BZ	56	5	EP	1642	15.24	0.04										1.0
ZAHL	SZ	57	27	EP	1642	15.42	0.06										1.0
HWQ	SZ	102	18	EP	1642	22.63	-0.03										1.0
BEIL	SZ	137	23	EP	1642	28.22	-0.00										1.0

**March 21 2017 Hour: 3:56 58.5 Lat: 34.31N Lon: 36.33E Depth: 5 Agency: REL Local**  
**Magnitudes: 3.8MC REL Rms: 0.0 secs**

**Earthquake was felt**  
**HERMEL REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	29	333	EP		357	3.21	-0.03							1.0
BEIL	SN	29	333	ES		357	6.77	0.02							1.0
HWQ	SZ	35	264	EP		357	4.28	-0.01							1.0
HWQ	SN	35	264	ES		357	8.61	0.02							1.0
ZAHL	SZ	65	219	EP		357	8.96	-0.03							1.0
ZAHL	SN	65	219	ES		357	16.71	-0.06							1.0
BHL	BZ	77	234	EP		357	10.93	0.00							1.0
BHL	BN	77	234	ES		357	20.21	0.08							1.0
DQRL	SZ	97	226	EP		357	14.14	-0.03	161						1.0
DQRL	SN	97	226	ES		357	25.69	-0.09							1.0
RCY	SZ	101	207	EP		357	14.86	0.01							1.0
RCY	SN	101	207	ES		357	26.99	0.04							1.0
QRWL	SZ	104	215	EP		357	15.32	0.09							1.0

**March 21 2017 Hour: 14:50 52.3 Lat: 34.69N Lon: 36.12E Depth: 4 Agency: REL Local**  
**Magnitudes: 2.7MC 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	18	159	EP		1450	55.28	-0.00	42						1.0
BEIL	SN	18	159	ES		1450	57.48	0.01							1.0
HWQ	SZ	48	199	EP		1450	59.99	-0.19							1.0
HWQ	SE	48	199	ES		1451	5.99	-0.01							1.0
ZAHL	SZ	95	193	EP		1451	7.72	0.08							1.0
BHL	BZ	97	206	EP		1451	8.14	0.13							1.0
DQRL	SZ	120	205	EP		1451	11.65	-0.02							1.0

**March 22 2017 Hour: 9:45 30.1 Lat: 33.80N Lon: 35.76E Depth: 12 Agency: REL Local**  
**Magnitudes: 2.3MC 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	59	EP		945	33.10	0.00							1.0
ZAHL	SN	13	59	ES		945	35.31	-0.01							1.0
BHL	BZ	16	320	EP		945	33.39	0.01	23						1.0
DQRL	SZ	21	241	EP		945	33.97	-0.05							1.0
DQRL	SN	21	241	ES		945	36.94	0.02							1.0
RCY	SZ	34	169	EP		945	35.98	0.01							1.0
HWQ	SZ	56	17	EP		945	39.38	0.01							1.0

**March 22 2017 Hour: 20:42 48.3 Lat: 33.42N Lon: 35.34E Depth: 13 Agency: REL Local**  
**Magnitudes: 2.6MC REL Rms: 0.1 secs**

**SAIDA REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	34	66	EP		2042	54.23	-0.06							1.0
QRWL	SN	34	66	ES		2042	58.68	-0.05							1.0
DQRL	SZ	38	34	EP		2042	54.87	0.07	34						1.0
DQRL	SE	38	34	ES		2042	59.64	0.01							1.0
RCY	SZ	47	80	EP		2042	56.16	0.01							1.0
RCY	SN	47	80	ES		2043	2.01	0.04							1.0
BHL	BZ	61	28	EP		2042	58.33	0.06							1.0

ZAHL	SZ	70	46	EP		2042	59.72	0.11									1.0
HWQ	SZ	110	30	EP		2043	5.42	-0.12									1.0
BEIL	SZ	147	32	EP		2043	10.78	-0.07									1.0

**March 23 2017 Hour: 15: 6 31.5 Lat: 33.78N Lon: 35.77E 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
ZAHL	SZ	13	52	EP		15	6	33.70	0.04						1.0
BHL	BZ	17	321	EP		15	6	34.16	-0.11	41					1.0
DQRL	SZ	21	245	EP		15	6	34.80	-0.00						1.0
DQRL	SN	21	245	ES		15	6	37.34	0.08						1.0
RCY	SZ	32	169	EP		15	6	36.67	-0.05						1.0
RCY	SN	32	169	ES		15	6	40.57	-0.02						1.0
HWQ	SZ	57	16	EP		15	6	40.57	-0.14						1.0
BEIL	SZ	92	24	EP		15	6	46.57	0.19						1.0

**March 24 2017 Hour: 4:24 31.0 Agency: REL Regional**  
**EMSC OT=04:24:31.0 37.70N 24.07E 140Km M=4.7 SOUTHERN GREECE**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		426	53.53								
ZAHL	SZ			EP		426	54.33								
BEIL	SZ			EP		426	54.67								
RCY	SZ			EP		426	55.80								

**March 24 2017 Hour: 13:27 25.0 Lat: 33.80N Lon: 35.75E Depth: 13 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	14	61	EP		1327	28.32	-0.02							1.0
ZAHL	SN	14	61	ES		1327	30.81	0.01							1.0
BHL	BZ	15	323	EP		1327	28.43	0.01	38						1.0
BHL	BE	15	323	ES		1327	30.94	-0.01							1.0
DQRL	SZ	20	239	EP		1327	29.03	0.04							1.0
QRWL	SZ	28	193	EP		1327	30.10	-0.07							1.0
RCY	SZ	34	167	EP		1327	31.08	0.04							1.0
RCY	SN	34	167	ES		1327	35.51	0.00							1.0

**March 24 2017 Hour: 15: 7 21.0 Lat: 33.78N Lon: 35.78E Depth: 4 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
ZAHL	SZ	14	48	EP		15	7	23.39	-0.02						1.0
BHL	BZ	18	321	EP		15	7	24.06	-0.05	37					1.0
BHL	BN	18	321	ES		15	7	26.40	0.02						1.0
DQRL	SZ	21	248	EP		15	7	24.55	0.04						1.0
DQRL	SN	21	248	ES		15	7	27.08	0.02						1.0
QRWL	SZ	27	199	EP		15	7	25.38	-0.09						1.0
RCY	SZ	32	170	EP		15	7	26.20	-0.02						1.0
RCY	SE	32	170	ES		15	7	30.11	0.06						1.0
HWQ	SZ	58	16	EP		15	7	30.29	-0.12						1.0
BEIL	SZ	93	24	EP		15	7	36.21	0.17						1.0

**March 25 2017 Hour: 16:11 31.6 Lat: 33.40N Lon: 35.58E Depth: 1 Agency: REL Local**  
**Magnitudes: 3.0MC REL Rms: 0.0 secs**

**JEZZINE REGION**

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	BZ	16	110	EP		1611	34.30	0.03							1.0
SHBL	BN	16	110	ES		1611	36.18	-0.04							1.0
QRWL	SZ	19	29	EP		1611	34.72	-0.01							1.0
RCY	SZ	26	65	EP		1611	35.84	-0.02							1.0
RCY	SN	26	65	ES		1611	39.01	0.03							1.0
DQRL	SZ	34	358	EP		1611	37.15	-0.00	59						1.0
DQRL	SE	34	358	ES		1611	41.19	-0.04							1.0

BHL	BZ	57	7	EP	1611	40.82	0.06										1.0
ZAHL	SZ	58	29	EP	1611	41.05	0.00										1.0
HWQ	SZ	103	19	EP	1611	48.31	0.01										1.0
BEIL	SZ	139	24	EP	1611	53.81	-0.02										1.0

**March 26 2017 Hour: 10:35 16.4 Lat: 33.71N Lon: 34.97E Depth: 26 Agency: REL Local**  
**Magnitudes: 3.2MC 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	52	70	EP		1035	25.45	0.06							1.0
DQRL	SZ	56	91	EP		1035	26.15	0.12							1.0
DQRL	SN	56	91	ES		1035	33.06	-0.07							1.0
BHL	BZ	67	71	EP		1035	27.62	0.04	73						1.0
BHL	BN	67	71	ES		1035	35.82	-0.02							1.0
QRWL	SZ	69	105	EP		1035	27.88	0.06							1.0
SHBL	BZ	83	119	EP		1035	29.67	-0.16							1.0
RCY	SZ	84	106	EP		1035	30.08	0.05							1.0
RCY	SN	84	106	ES		1035	40.14	0.03							1.0
ZAHL	SZ	87	79	EP		1035	30.33	-0.05							1.0
ZAHL	SN	87	79	ES		1035	40.74	0.04							1.0
HWQ	SZ	110	55	EP		1035	33.66	-0.11							1.0
BEIL	SZ	145	50	EP		1035	38.18	0.02							1.0

**March 26 2017 Hour: 11:45 17.5 Lat: 33.79N Lon: 35.78E Depth: 1 Agency: REL Local**  
**Magnitudes: 2.6MC 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	52	EP		1145	19.59	-0.00							1.0
BHL	BZ	17	319	EP		1145	20.24	-0.08	35						1.0
DQRL	SZ	21	245	EP		1145	20.97	0.03							1.0
DQRL	SN	21	245	ES		1145	23.51	0.02							1.0
RCY	SZ	33	170	EP		1145	22.70	-0.09							1.0
RCY	SE	33	170	ES		1145	26.74	0.04							1.0
HWQ	SZ	57	16	EP		1145	26.80	0.15							1.0
BEIL	SZ	92	24	EP		1145	32.23	-0.07							1.0

**March 26 2017 Hour: 22:48 47.8 Lat: 33.79N Lon: 35.79E Depth: 4 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
ZAHL	SZ	12	47	EP		2248	49.92	0.03							1.0
ZAHL	SN	12	47	ES		2248	51.40	-0.02							1.0
BHL	BZ	18	316	EP		2248	50.82	-0.05	30						1.0
BHL	BN	18	316	ES		2248	53.14	0.01							1.0
DQRL	SZ	22	247	EP		2248	51.58	0.05							1.0
QRWL	SZ	28	201	EP		2248	52.43	-0.03							1.0
RCY	SZ	32	173	EP		2248	53.09	-0.03							1.0
RCY	SN	32	173	ES		2248	57.06	0.02							1.0
HWQ	SZ	56	15	EP		2248	56.94	-0.01							1.0
BEIL	SZ	91	23	EP		2249	2.58	0.02							1.0

**March 27 2017 Hour: 9: 6 19.3 Lat: 34.55N Lon: 36.44E Depth: 22 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	24	267	EP		9 6	24.45	-0.00	51						1.0
BEIL	SN	24	267	ES		9 6	28.28	-0.00							1.0
HWQ	SZ	55	236	EP		9 6	28.61	0.04							1.0
HWQ	SN	55	236	ES		9 6	35.44	-0.01							1.0
BHL	BZ	102	225	EP		9 6	35.34	-0.05							0.2
DQRL	SZ	124	221	EP		9 6	38.24	-0.29							0.2
RCY	SZ	130	206	EP		9 6	39.45	-0.01							1.0
RCY	SN	130	206	ES		9 6	54.42	0.01							1.0

**March 27 2017 Hour: 10:48 50.4** Agency: REL Distant  
**EMSC OT=10:48:50.4 59.15S 17.64W 10Km M=5.4 EAST OF SOUTH SANDWICH ISLANDS**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 BEIL SZ EP 11 2 54.23  
 BHL BZ EP 11 2 57.96  
 DQRL SZ EP 11 2 59.38  
 RCY SZ EP 11 2 59.44  
 QRWL SZ EP 11 2 59.44

**March 27 2017 Hour: 15:48 4.5 Lat: 34.28N Lon: 36.33E Depth: 0 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  
 BEIL SZ 32 335 EP 1548 9.68-0.07 45 1.0  
 BEIL SN 32 335 ES 1548 13.66 0.05 1.0  
 HWQ SZ 36 270 EP 1548 10.31 0.01 1.0  
 HWQ SN 36 270 ES 1548 14.55-0.03 1.0  
 DQRL SZ 95 228 EP 1548 19.89 0.05 1.0  
 RCY SZ 98 208 EP 1548 20.35-0.01 1.0

**March 27 2017 Hour: 22:49 15.2 Lat: 33.79N Lon: 35.80E Depth: 10 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  
 ZAHL SZ 11 47 EP 2249 17.80-0.02 1.0  
 BHL BZ 18 312 EP 2249 18.74-0.04 26 1.0  
 BHL BN 18 312 ES 2249 21.41 0.02 1.0  
 DQRL SZ 24 246 EP 2249 19.60 0.10 1.0  
 QRWL SZ 29 202 EP 2249 20.20-0.16 1.0  
 QRWL SN 29 202 ES 2249 24.11-0.03 1.0  
 RCY SZ 33 175 EP 2249 21.03 0.10 1.0  
 RCY SN 33 175 ES 2249 25.15 0.02 1.0

**March 28 2017 Hour: 21:53 30.9** Agency: REL Regional  
**EMSC OT=21:53:30.9 38.31N 37.18E 7Km M=4.1 CENTRAL TURKEY**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 BEIL SZ EP 2154 30.76  
 HWQ SZ EP 2154 35.24  
 BHL BZ EP 2154 42.19  
 ZAHL SZ EP 2154 45.07  
 DQRL SZ EP 2154 45.50  
 QRWL SZ EP 2154 47.02  
 RCY SZ EP 2154 47.02

**March 28 2017 Hour: 22:52 10.7 Lat: 33.79N Lon: 35.79E Depth: 7 Agency: REL Local**  
**Magnitudes: 3.0MC 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 48 EP 2252 13.06-0.01 1.0  
 BHL BZ 18 316 EP 2252 13.97 0.03 58 1.0  
 DQRL SZ 22 246 EP 2252 14.63 0.08 1.0  
 DQRL SN 22 246 ES 2252 17.36-0.05 1.0  
 QRWL SZ 28 201 EP 2252 15.39-0.07 1.0  
 BEYL SZ 29 289 EP 2252 15.57 0.02 1.0  
 RCY SZ 32 173 EP 2252 16.09-0.03 1.0  
 RCY SE 32 173 ES 2252 20.19 0.06 1.0  
 HWQ SZ 56 15 EP 2252 19.83-0.07 1.0  
 BEIL SZ 91 23 EP 2252 25.53 0.05 1.0  
 BEIL SN 91 23 ES 2252 36.42-0.00 1.0

**March 29 2017 Hour: 4:9 24.0 Agency: REL Distant**  
**EMSC OT=04:09:24.0 56.96N 162.71E 20Km M=6.6 NEAR EAST COAST OF KAMCHATKA**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 BEIL SZ EP 421 22.90  
 HWQ SZ EP 421 24.09  
 BHL BZ EP 421 27.10  
 DQRL SZ EP 421 28.22  
 RCY SZ EP 421 28.50  
 QRWL SZ EP 421 29.13

**March 29 2017 Hour: 8:54 3.3 Lat: 33.78N Lon: 35.76E Depth: 11 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  
 Z AHL SZ 15 53 EP 854 6.39-0.01 1.0  
 Z AHL SN 15 53 ES 854 8.67-0.01 1.0  
 BHL BZ 17 325 EP 854 6.53-0.14 40 1.0  
 BHL BN 17 325 ES 854 9.13-0.02 1.0  
 DQRL SZ 19 245 EP 854 7.15 0.15 1.0  
 QRWL SZ 27 195 EP 854 8.04-0.00 1.0  
 RCY SZ 32 167 EP 854 8.90 0.01 1.0  
 HWQ SZ 58 17 EP 854 13.09 0.23 0.2  
 BEIL SZ 93 25 EP 854 18.27 0.11 0.2

**March 29 2017 Hour: 9:32 36.7 Lat: 33.69N Lon: 35.36E 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 19 84 EP 932 39.78-0.03 39 1.0  
 DQRL SN 19 84 ES 932 42.09-0.03 1.0  
 BHL BZ 36 48 EP 932 42.43-0.08 1.0  
 BHL BN 36 48 ES 932 46.85 0.02 1.0  
 RCY SZ 49 116 EP 932 44.57 0.02 1.0  
 Z AHL SZ 52 69 EP 932 45.17 0.10 1.0

**March 29 2017 Hour: 15:23 39.8 Lat: 33.78N Lon: 35.77E Depth: 2 Agency: REL Local**  
**Magnitudes: 2.6MC REL Rms: 0.1 secs**  
**ALEY REGION**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 Z AHL SZ 14 51 EP 1523 42.11-0.01 1.0  
 Z AHL SN 14 51 ES 1523 43.86 0.00 1.0  
 BHL BZ 18 323 EP 1523 42.54-0.11 35 1.0  
 BHL BN 18 323 ES 1523 44.80 0.02 1.0  
 DQRL SZ 20 246 EP 1523 43.13 0.09 1.0  
 QRWL SZ 27 197 EP 1523 44.03-0.08 1.0  
 RCY SZ 32 168 EP 1523 44.95 0.01 1.0  
 RCY SN 32 168 ES 1523 48.79 0.02 1.0  
 HWQ SZ 58 17 EP 1523 49.19 0.06 1.0  
 BEIL SZ 93 24 EP 1523 54.79-0.00 1.0

**March 29 2017 Hour: 17:14 42.3 Lat: 33.32N Lon: 35.53E Depth: 4 Agency: REL Local**  
**Magnitudes: 2.6MC REL Rms: 0.1 secs**  
**NABATIYE REGION**  
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT  
 QRWL SZ 29 29 EP 1714 47.02 0.06 1.0  
 RCY SZ 34 56 EP 1714 47.80-0.07 34 1.0  
 RCY SE 34 56 ES 1714 52.00-0.02 1.0  
 DQRL SZ 43 5 EP 1714 49.20 0.01 1.0  
 DQRL SN 43 5 ES 1714 54.30-0.01 1.0  
 BHL BZ 65 10 EP 1714 52.71-0.15 1.0  
 Z AHL SZ 68 29 EP 1714 53.42 0.18 1.0  
 BEIL SZ 148 24 EP 1715 5.62-0.01 1.0

March 29 2017 Hour: 18:43 19.3 Lat: 33.55N Lon: 35.60E Depth: 2 Agency: REL Local  
Magnitudes: 3.4MC REL Rms: 0.1 secs

Earthquake was felt

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	7	92	EP		1843	20.55	0.00							1.0
DQRL	SZ	18	350	EP		1843	22.18	0.05	103						1.0
DQRL	SN	18	350	ES		1843	24.27	0.02							1.0
RCY	SZ	23	105	EP		1843	22.89	-0.03							1.0
RCY	SN	23	105	ES		1843	25.62	-0.02							1.0
SHBL	BZ	26	150	EP		1843	23.52	0.04							1.0
SHBL	BN	26	150	ES		1843	26.61	0.01							1.0
BHL	BZ	40	7	EP		1843	25.53	-0.13							1.0
BHL	BN	40	7	ES		1843	30.39	-0.01							1.0
ZAHL	SZ	43	37	EP		1843	26.22	-0.00							1.0
HWQ	SZ	87	21	EP		1843	33.18	-0.08							1.0
BEIL	SZ	122	26	EP		1843	39.05	0.04							1.0
BEIL	SN	122	26	ES		1843	53.72	0.10							1.0

March 30 2017 Hour: 8: 3 27.3 Lat: 33.68N Lon: 35.49E Depth: 4 Agency: REL Local  
Magnitudes: 2.7MC REL Rms: 0.0 secs

CHOUF REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	9	68	EP		8 3	28.95	0.05	42						1.0
DQRL	SN	9	68	ES		8 3	30.06	-0.03							1.0
QRWL	SZ	23	128	EP		8 3	31.16	0.02							1.0
BHL	BZ	30	32	EP		8 3	32.19	0.03							1.0
BHL	BN	30	32	ES		8 3	35.75	-0.01							1.0
RCY	SZ	38	121	EP		8 3	33.44	-0.09							1.0
RCY	SN	38	121	ES		8 3	38.19	0.05							1.0

March 30 2017 Hour: 11: 3 44.6 Lat: 33.87N Lon: 35.84E Depth: 0 Agency: REL Local  
Magnitudes: 2.9MC 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	112	EP		11 3	45.23	-0.11							1.0
BHL	BZ	18	282	EP		11 3	47.45	-0.08	53						1.0
BHL	BN	18	282	ES		11 3	49.68	0.01							1.0
DQRL	SZ	31	234	EP		11 3	49.70	0.00							1.0
RCY	SZ	42	181	EP		11 3	51.48	0.12							1.0
RCY	SN	42	181	ES		11 3	56.32	-0.01							1.0
HWQ	SZ	46	12	EP		11 3	52.07	0.00							0.2
BEIL	SZ	81	23	EP		11 3	57.73	0.08							1.0

March 30 2017 Hour: 14:15 31.8 Lat: 33.51N 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	4	357	EP		1415	32.34	-0.10							1.0
RCY	SZ	14	96	EP		1415	34.06	0.01	25						1.0
RCY	SN	14	96	ES		1415	35.76	0.02							1.0
DQRL	SZ	24	334	EP		1415	35.66	0.01							1.0
DQRL	SN	24	334	ES		1415	38.61	0.07							1.0
ZAHL	SZ	43	26	EP		1415	38.66	-0.01							1.0
BHL	BZ	44	356	EP		1415	38.81	-0.01							1.0

March 30 2017 Hour: 23:55 14.5

Agency: REL Regional

EMSC OT=23:55:14.5 38.01N 39.81E 2Km M=3.8 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2356	25.46								
HWQ	SZ			EP		2356	30.51								
ZAHL	SZ			EP		2356	36.12								
BHL	BZ			EP		2356	36.98								

DQRL SZ EP 2356 40.01  
 QRWL SZ EP 2356 40.69

March 31 2017 Hour: 0:13 22.0 Lat: 33.70N Lon: 35.89E 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	18	358	EP		013	24.81	0.01							1.0
RCY	SZ	23	193	EP		013	25.60	-0.12							1.0
RCY	SN	23	193	ES		013	28.52	0.03							1.0
QRWL	SZ	26	229	EP		013	26.19	0.07							1.0
QRWL	SN	26	229	ES		013	29.19	-0.00							1.0
DQRL	SZ	30	271	EP		013	26.81	0.04	63						1.0
DQRL	SN	30	271	ES		013	30.32	0.00							1.0
BHL	BZ	31	316	EP		013	26.98	-0.07							1.0
HWQ	SZ	64	5	EP		013	32.31	-0.03							1.0
HWQ	SE	64	5	ES		013	39.99	-0.03							1.0
BEIL	SZ	97	16	EP		013	37.77	0.12							1.0



# Epicentral Map of Lebanon

## MARCH 2017

