

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

June

2017

Prepared by
The National Centre for Geophysical Research
Bhannes

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

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

GENERAL BULLETIN INFORMATION

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

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

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

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

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

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

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

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

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

June 1 2017 Hour: 10:23 31.9 Lat: 33.54N Lon: 35.70E Depth: 0 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
QRWL	SZ	2	304	EP		10	2	32.18-0.08							1.0
SHBL	SZ	22	168	EP		10	2	35.28-0.14	26						1.0
SHBL	SN	22	168	ES		10	2	38.13 0.13							1.0
DQRL	SZ	22	327	EP		10	2	35.51 0.03							1.0
DQRL	SN	22	327	ES		10	2	38.16 0.05							1.0
ZAHL	SZ	39	26	EP		10	2	38.35 0.05							0.2
BHL	BZ	41	354	EP		10	2	38.53 0.02							1.0
HWQ	SZ	85	16	EP		10	2	45.45-0.22							0.2

June 1 2017 Hour: 15:50 7.6 Lat: 33.78N Lon: 35.77E Depth: 6 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	14	51	EP		1550		10.09-0.00							1.0
BHL	BZ	18	322	EP		1550		10.50-0.14	36						1.0
DQRL	SZ	20	246	EP		1550		11.01-0.06							1.0
DQRL	SN	20	246	ES		1550		13.77 0.11							1.0
RCY	SZ	32	169	EP		1550		12.93 0.04							1.0
RCY	SN	32	169	ES		1550		16.80-0.02							1.0
SHBL	SZ	48	183	EP		1550		15.36-0.05							1.0
HWQ	SZ	58	16	EP		1550		17.06 0.12							1.0

June 2 2017 Hour: 10:41 41.4 Lat: 33.87N Lon: 35.85E Depth: 0 Agency: REL Local
Magnitudes: 2.6MC 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	116	EP		1041		41.96-0.07							1.0
BHL	BZ	18	281	EP		1041		44.16-0.15	35						1.0
BHL	BN	18	281	ES		1041		46.51 0.02							1.0
DQRL	SZ	32	234	EP		1041		46.56 0.07							1.0
HWQ	SZ	46	11	EP		1041		48.88 0.12							1.0
SHBL	SZ	59	189	EP		1041		50.98 0.09							1.0
SHBL	SN	59	189	ES		1041		57.90-0.03							1.0
BEIL	SZ	80	23	EP		1041		54.28-0.05							1.0

June 2 2017 Hour: 17:28 19.4 Lat: 35.15N Lon: 33.79E Depth: 32 Agency: REL Regional
Magnitudes: 3.2MC REL Rms: 0.4 secs

CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	219	128	EP		1728		49.42-0.47							1.0
HWQ	SZ	219	115	EP		1728		50.44 0.53	63						1.0
HWQ	SN	219	115	ES		1729		12.99 0.53							1.0
BEIL	SZ	229	106	EP		1728		51.07 0.07							1.0
DQRL	SZ	229	134	EP		1728		50.56-0.45							1.0
BEIL	SN	229	106	ES		1729		13.79-0.57							1.0
ZAHL	SZ	239	126	EP		1728		52.50 0.11							1.0
RCY	SZ	262	134	EP		1728		55.39 0.13							1.0
SHBL	SZ	268	137	EP		1728		56.14 0.12							1.0

June 2 2017 Hour: 22:24 47.4 Agency: REL Distant
EMSC OT=22:24:47.4 54.03N 170.90E 10Km M=6.8 NEAR ISLANDS, ALEUTIAN ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2237		16.24							
HWQ	SZ			EP		2237		16.99							
ZAHL	SZ			EP		2237		20.25							
BHL	BZ			EP		2237		20.00							
DQRL	SZ			EP		2237		21.32							
QRWL	SZ			EP		2237		21.82							
RCY	SZ			EP		2237		21.94							

SHBL SZ EP 2237 22.51

June 4 2017 Hour: 12:50 41.0 Lat: 33.78N Lon: 35.78E Depth: 4 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	49	EP		1250	43.29	0.02							1.0
BHL	BZ	18	319	EP		1250	43.94	-0.08	34						1.0
DQRL	SZ	21	246	EP		1250	44.59	0.03							1.0
DQRL	SN	21	246	ES		1250	47.26	0.06							1.0
QRWL	SZ	28	199	EP		1250	45.52	-0.03							1.0
QRWL	SN	28	199	ES		1250	48.85	-0.07							1.0
RCY	SZ	32	171	EP		1250	46.32	0.04							1.0
HWQ	SZ	57	15	EP		1250	50.10	-0.14							0.2
BEIL	SZ	92	24	EP		1250	55.89	0.03							1.0

June 4 2017 Hour: 13: 8 43.5 Lat: 33.79N Lon: 35.77E Depth: 2 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
ZAHL	SZ	13	55	EP		13 8	45.67	0.02							1.0
BHL	BZ	17	319	EP		13 8	46.20	-0.06	28						1.0
DQRL	SZ	21	243	EP		13 8	47.03	0.07							1.0
DQRL	SE	21	243	ES		13 8	49.51	-0.00							1.0
RCY	SZ	33	170	EP		13 8	48.81	-0.10							1.0
RCY	SN	33	170	ES		13 8	52.94	0.04							1.0
HWQ	SZ	56	16	EP		13 8	52.59	-0.02							1.0
BEIL	SZ	91	24	EP		13 8	58.32	0.05							1.0

June 5 2017 Hour: 3:56 52.2 Lat: 33.90N Lon: 35.86E Depth: 2 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs

METN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	5	153	EP		356	53.26	-0.02							1.0
BHL	BZ	19	271	EP		356	55.47	0.13	31						1.0
DQRL	SZ	34	231	EP		356	57.72	-0.08							1.0
DQRL	SN	34	231	ES		357	1.87	-0.07							1.0
HWQ	SZ	43	11	EP		356	59.18	0.05							0.2
RCY	SZ	45	183	EP		356	59.55	0.07							1.0
RCY	SN	45	183	ES		357	4.87	0.02							1.0
BEIL	SZ	77	23	EP		357	4.63	-0.05							1.0

June 5 2017 Hour: 6: 0 22.2 Lat: 35.46N Lon: 36.93E Depth: 1 Agency: REL Regional
Magnitudes: 3.4MC 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	122	214	EP		6 0	42.06	0.14	88						1.0
BEIL	SN	122	214	ES		6 0	56.50	-0.01							1.0
HWQ	SZ	159	215	EP		6 0	47.04	-0.37							1.0
HWQ	SN	159	215	ES		6 1	6.08	0.03							1.0
BHL	BZ	208	214	EP		6 0	54.20	0.11							1.0
DQRL	SZ	231	213	EP		6 0	57.03	0.13							1.0
RCY	SZ	240	205	EP		6 0	57.99	-0.04							1.0

June 5 2017 Hour: 16: 7 32.0 Lat: 33.80N Lon: 35.78E Depth: 11 Agency: REL Local
Magnitudes: 2.5MC 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	12	56	EP		16 7	34.82	-0.01							1.0
BHL	BZ	16	316	EP		16 7	35.34	-0.01	28						1.0
DQRL	SZ	22	242	EP		16 7	36.02	-0.05							1.0
DQRL	SN	22	242	ES		16 7	39.14	0.05							1.0
QRWL	SZ	29	198	EP		16 7	37.01	-0.11							1.0
RCY	SZ	34	171	EP		16 7	37.90	0.05							1.0

RCY	SN	34	171	ES	16	7	42.18	-0.01									1.0
SHBL	SZ	50	184	EP	16	7	40.38	0.06									1.0
HWQ	SZ	55	16	EP	16	7	41.48	0.31									0.2

June 5 2017 Hour: 22:55 58.3 Lat: 33.79N Lon: 35.80E Depth: 11 Agency: REL Local
Magnitudes: 2.6MC 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	47	EP		2256	0.99	0.01							1.0
BHL	BZ	18	311	EP		2256	1.93	-0.00	36						1.0
BHL	BN	18	311	ES		2256	4.62	0.02							1.0
DQRL	SZ	24	246	EP		2256	2.63	-0.05							1.0
RCY	SZ	33	175	EP		2256	4.02	-0.06							1.0
RCY	SN	33	175	ES		2256	8.33	-0.01							1.0
SHBL	SZ	50	186	EP		2256	6.75	0.11							1.0
HWQ	SZ	55	14	EP		2256	7.21	-0.25							0.2

June 6 2017 Hour: 15:36 21.2 Lat: 33.78N Lon: 35.78E Depth: 2 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	13	48	EP		1536	23.36	-0.00							1.0
BHL	BZ	18	318	EP		1536	24.16	-0.06	54						1.0
QRWL	SZ	28	200	EP		1536	25.62	-0.11							1.0
QRWL	SN	28	200	ES		1536	29.16	0.10							1.0
RCY	SZ	32	171	EP		1536	26.47	0.03							1.0
RCY	SN	32	171	ES		1536	30.27	-0.02							1.0
SHBL	SZ	48	184	EP		1536	28.97	-0.07							1.0
HWQ	SZ	57	15	EP		1536	30.46	0.01							1.0
BEIL	SZ	92	24	EP		1536	36.13	0.05							1.0
DQRL	SZ	22	247	EP		1536	24.85	0.09							1.0

June 6 2017 Hour: 16:19 22.4 Lat: 33.78N Lon: 35.78E Depth: 10 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
ZAHL	SZ	13	49	EP		1619	25.04	-0.06							1.0
BHL	BZ	18	319	EP		1619	25.66	-0.09	29						1.0
BHL	BN	18	319	ES		1619	28.24	-0.02							1.0
DQRL	SZ	21	246	EP		1619	26.24	-0.01							1.0
RCY	SZ	32	171	EP		1619	27.89	0.01							1.0
RCY	SN	32	171	ES		1619	32.11	0.15							1.0
HWQ	SZ	57	15	EP		1619	32.15	0.42							0.2

June 6 2017 Hour: 16:51 40.6 Lat: 33.80N 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	12	57	EP		1651	43.44	0.01							1.0
BHL	BZ	16	317	EP		1651	43.91	0.03	38						1.0
BHL	BN	16	317	ES		1651	46.30	-0.01							1.0
DQRL	SZ	21	242	EP		1651	44.53	-0.04							1.0
RCY	SZ	34	170	EP		1651	46.35	-0.07							1.0
RCY	SN	34	170	ES		1651	50.73	-0.00							1.0
SHBL	SZ	50	183	EP		1651	48.97	0.08							1.0
HWQ	SZ	56	17	EP		*1651	49.84	0.05							0.0
BEIL	SZ	91	25	EP		1651	55.08	-0.01							1.0

June 7 2017 Hour: 16: 2 40.9 Lat: 33.80N Lon: 35.77E Depth: 11 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
ZAHL	SZ	13	56	EP		16	2	43.84	0.00						1.0
BHL	BZ	16	318	EP		16	2	44.29	0.02	43					1.0
DQRL	SZ	21	242	EP		16	2	44.93	0.00						1.0
DQRL	SN	21	242	ES		16	2	47.89	0.01						1.0
QRWL	SZ	29	197	EP		16	2	45.90	-0.10						1.0
RCY	SZ	34	170	EP		16	2	46.77	0.01						1.0
RCY	SN	34	170	ES		16	2	51.08	0.00						1.0
SHBL	SZ	50	183	EP		16	2	49.30	0.08						1.0
HWQ	SZ	56	17	EP		16	2	50.16	-0.02						1.0
BEIL	SZ	91	25	EP		16	2	55.44	0.00						1.0

June 7 2017 Hour: 21: 7 44.8 Agency: REL Distant

EMSC OT=21:07:44.8 17.79S 178.72W 541Km M=4.9 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		2126	21.50								
RCY	SZ			EP		2126	22.86								
BHL	BZ			EP		2126	22.74								
SHBL	SZ			EP		2126	23.18								

June 8 2017 Hour: 9:58 30.8 Lat: 33.55N Lon: 35.71E Depth: 0 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	265	EP		958	31.19	-0.05							1.0
RCY	SZ	13	117	EP		958	32.83	-0.02	23						1.0
RCY	SN	13	117	ES		958	34.39	-0.01							1.0
DQRL	SZ	22	323	EP		958	34.29	0.02							1.0
DQRL	SN	22	323	ES		958	36.89	0.02							1.0
SHBL	SZ	23	173	EP		958	34.46	0.05							1.0

June 8 2017 Hour: 11:37 0.8 Lat: 33.54N Lon: 35.71E Depth: 0 Agency: REL Local
Magnitudes: 2.6MC 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	2	291	EP		1137	1.08	-0.10							1.0
RCY	SZ	13	112	EP		1137	2.80	-0.07	34						1.0
RCY	SN	13	112	ES		1137	4.43	0.00							1.0
SHBL	SZ	22	171	EP		1137	4.34	0.09							1.0
DQRL	SZ	22	326	EP		1137	4.38	0.01							1.0
DQRL	SN	22	326	ES		1137	7.06	0.03							1.0
BHL	BZ	41	353	EP		1137	7.37	0.04							1.0

June 8 2017 Hour: 12:20 11.6 Lat: 33.63N Lon: 35.47E Depth: 5 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.1 secs

CHOUF REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	13	49	EP		1220	13.81	-0.12							1.0
DQRL	SN	13	49	ES		1220	15.70	0.07							1.0
QRWL	SZ	22	114	EP		1220	15.33	-0.01							1.0
BHL	BZ	35	30	EP		1220	17.58	0.19							0.2
RCY	SZ	38	113	EP		1220	17.86	0.09	32						1.0
RCY	SN	38	113	ES		1220	22.26	-0.05							1.0
SHBL	SZ	41	140	EP		1220	18.29	0.02							1.0

June 8 2017 Hour: 14:15 6.3 Lat: 33.78N Lon: 35.79E Depth: 8 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	13	46	EP		1415	8.83	0.01							1.0
BHL	BZ	19	318	EP		1415	9.54	-0.07	36						1.0
DQRL	SZ	22	248	EP		1415	10.15	0.08							1.0
DQRL	SN	22	248	ES		1415	12.88	-0.00							1.0
SHBL	SZ	48	185	EP		1415	14.13	-0.04							1.0
SHBL	SN	48	185	ES		1415	20.00	-0.00							1.0
HWQ	SZ	57	15	EP		1415	15.66	0.02							1.0

June 9 2017 Hour: 15:36 10.6 Lat: 33.78N Lon: 35.76E 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	15	53	EP		1536	13.01	-0.10							1.0
ZAHL	SN	15	53	ES		1536	15.03	0.07							1.0
BHL	BZ	17	325	EP		1536	13.32	-0.12	47						1.0
DQRL	SZ	19	245	EP		1536	13.96	0.16							1.0
QRWL	SZ	27	195	EP		1536	14.84	-0.13							1.0
RCY	SZ	32	167	EP		1536	15.91	0.04							1.0
RCY	SN	32	167	ES		1536	19.73	-0.03							1.0
SHBL	SZ	48	182	EP		1536	18.44	0.07							1.0
HWQ	SZ	58	17	EP		1536	19.94	-0.07							1.0
HWQ	SE	58	17	ES		1536	27.02	0.07							1.0
BEIL	SZ	93	25	EP		1536	25.76	0.08							1.0
BEIL	SN	93	25	ES		1536	36.80	-0.03							1.0

June 9 2017 Hour: 15:51 16.0 Lat: 33.78N Lon: 35.77E Depth: 3 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	53	EP		1551	18.21	-0.08							1.0
BHL	BZ	17	322	EP		1551	18.64	-0.13	37						1.0
DQRL	SZ	20	245	EP		1551	19.16	-0.11							1.0
DQRL	SN	20	245	ES		1551	21.87	0.15							1.0
RCY	SZ	33	169	EP		1551	21.04	-0.20							1.0
RCY	SN	33	169	ES		1551	25.35	0.19							1.0
SHBL	SZ	48	182	EP		1551	23.69	-0.09							1.0
HWQ	SZ	57	17	EP		1551	25.34	0.11							1.0
BEIL	SZ	93	25	EP		1551	31.06	0.16							1.0

June 10 2017 Hour: 17:8 32.3 Lat: 33.78N Lon: 35.76E 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
ZAHL	SZ	15	51	EP		17 8	34.62	0.01							1.0
BHL	BZ	18	324	EP		17 8	35.03	-0.07	42						1.0
DQRL	SZ	20	247	EP		17 8	35.51	0.08							1.0
DQRL	SN	20	247	ES		17 8	37.79	0.02							1.0
QRWL	SZ	26	197	EP		17 8	36.49	-0.04							1.0
BEYL	SZ	27	293	EP		17 8	36.63	-0.03							1.0
RCY	SZ	32	168	EP		17 8	37.34	-0.04							1.0
RCY	SN	32	168	ES		17 8	41.18	0.01							1.0
SHBL	SZ	47	182	EP		17 8	39.98	0.05							1.0
SHBL	SN	47	182	ES		17 8	45.56	-0.03							1.0
HWQ	SZ	58	17	EP		17 8	41.62	-0.04							1.0
BEIL	SZ	93	24	EP		17 8	47.42	0.09							1.0

June 10 2017 Hour: 21:20 53.3 Lat: 33.25N Lon: 35.40E Depth: 1 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

Earthquake was felt
SOUR REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	SZ	33	71	EP		2120	58.61	-0.08							1.0
QRWL	SZ	42	38	EP		2120	59.99	-0.06							1.0
RCY	SZ	49	56	EP		2121	1.15	0.03							1.0
RCY	SN	49	56	ES		2121	7.01	0.08							1.0
DQRL	SZ	53	17	EP		2121	1.77	-0.05	57						1.0
DQRL	SN	53	17	ES		2121	8.11	-0.03							1.0
BHL	BZ	76	18	EP		2121	5.68	0.10							1.0
ZAHL	SZ	81	33	EP		2121	6.21	-0.13							1.0
ZAHL	SN	81	33	ES		2121	16.01	0.01							1.0
HWQ	SZ	125	24	EP		2121	13.49	0.11							1.0
BEIL	SZ	161	27	EP		2121	18.67	-0.00							1.0

June 11 2017 Hour: 15:54 38.4 Lat: 33.78N Lon: 35.76E Depth: 3 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	15	54	EP		1554	40.71	-0.13							1.0
ZAHL	SN	15	54	ES		1554	42.75	0.07							1.0
BHL	BZ	17	325	EP		1554	41.18	0.04	39						1.0
DQRL	SZ	19	244	EP		1554	41.58	0.05							1.0
DQRL	SN	19	244	ES		1554	43.83	-0.05							1.0
RCY	SZ	32	167	EP		1554	43.67	0.03							1.0
RCY	SN	32	167	ES		1554	47.55	-0.00							1.0
SHBL	SZ	48	181	EP		1554	46.15	0.01							1.0
BEIL	SZ	93	25	EP		1554	53.39	-0.01							1.0

June 12 2017 Hour: 8:12 42.9 Lat: 33.89N Lon: 35.88E Depth: 7 Agency: REL Local
Magnitudes: 2.8MC 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	3	179	EP		812	44.36	-0.00							1.0
BHL	BZ	21	275	EP		812	46.59	-0.01	44						1.0
BHL	BN	21	275	ES		812	49.35	0.01							1.0
DQRL	SZ	35	235	EP		812	48.79	0.02							1.0
DQRL	SE	35	235	ES		812	53.10	-0.01							1.0
RCY	SZ	44	186	EP		812	50.00	-0.07							1.0
RCY	SN	44	186	ES		812	55.42	0.05							1.0
HWQ	SZ	44	7	EP		812	50.03	-0.05							1.0
BEIL	SZ	78	21	EP		812	55.56	0.07							1.0

June 12 2017 Hour: 10:4 24.9 Lat: 33.54N Lon: 35.71E 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	2	279	EP		104	25.32	-0.02							1.0
RCY	SZ	13	114	EP		104	27.01	-0.03	27						1.0
RCY	SE	13	114	ES		104	28.62	0.01							1.0
DQRL	SZ	22	325	EP		104	28.48	0.00							1.0
DQRL	SE	22	325	ES		104	31.12	0.02							1.0
SHBL	SZ	22	171	EP		104	28.51	0.02							1.0

June 12 2017 Hour: 10:54 27.4 Lat: 33.55N Lon: 35.71E Depth: 0 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.1 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	273	EP		1054	27.84	-0.08	28						1.0
RCY	SZ	13	116	EP		1054	29.42	-0.03							1.0
RCY	SN	13	116	ES		1054	30.96	0.00							1.0

SHBL	SZ	22	173	EP		1054	31.09	0.09									1.0
DQRL	SZ	22	323	EP		1054	30.91	-0.09									1.0
DQRL	SN	22	323	ES		1054	33.75	0.11									1.0

June 12 2017 Hour: 12:28 37.9 Agency: REL Regional
EMSC OT=12:28:37.9 38.85N 26.31E 9Km M=6.3 NEAR THE COAST OF WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1230	45.91								
DQRL	SZ			EP		1230	48.35								
BEIL	SZ			EP		1230	49.30								
QRWL	SZ			EP		1230	50.24								
RCY	SZ			EP		1230	51.65								
SHBL	SZ			EP		1230	52.22								

June 12 2017 Hour: 16:24 21.0 Lat: 33.78N Lon: 35.78E Depth: 2 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	50	EP		1624	23.09	-0.11							1.0
ZAHL	SN	13	50	ES		1624	24.89	0.05							1.0
BHL	BZ	18	321	EP		1624	23.72	-0.16	37						1.0
BHL	BE	18	321	ES		1624	26.05	0.03							1.0
DQRL	SZ	21	246	EP		1624	24.37	-0.01							1.0
DQRL	SN	21	246	ES		1624	26.96	0.06							1.0
HWQ	SZ	57	16	EP		1624	30.38	0.13							1.0

June 12 2017 Hour: 17:17 20.2 Lat: 33.79N Lon: 35.76E Depth: 4 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	14	54	EP		1717	22.50	-0.08							1.0
BHL	BZ	17	322	EP		1717	22.85	-0.16	54						1.0
BHL	BN	17	322	ES		1717	25.17	0.06							1.0
DQRL	SZ	20	244	EP		1717	23.53	-0.00							1.0
DQRL	SN	20	244	ES		1717	26.06	0.04							1.0
RCY	SZ	33	168	EP		1717	25.48	-0.05							1.0
RCY	SE	33	168	ES		1717	29.62	0.11							1.0
SHBL	SZ	49	182	EP		1717	27.97	-0.09							1.0
HWQ	SZ	57	17	EP		1717	29.57	0.14							1.0
BEIL	SZ	92	25	EP		1717	35.12	0.03							1.0

June 12 2017 Hour: 22:42 58.5 Lat: 33.79N Lon: 35.80E Depth: 9 Agency: REL Local
Magnitudes: 2.3MC 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	50	EP		2243	0.98	0.00							1.0
ZAHL	SN	11	50	ES		2243	2.79	0.01							1.0
BHL	BZ	18	313	EP		2243	1.91	0.03	24						1.0
BHL	BE	18	313	ES		2243	4.36	0.01							1.0
DQRL	SZ	23	245	EP		2243	2.67	0.03							1.0
DQRL	SN	23	245	ES		2243	5.64	-0.03							1.0
HWQ	SZ	55	14	EP		2243	7.55	-0.08							1.0
BEIL	SZ	90	23	EP		2243	13.12	0.03							1.0

June 13 2017 Hour: 15:35 52.0 Lat: 33.80N Lon: 35.78E Depth: 13 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
ZAHL	SZ	12	56	EP		1535	55.14	0.04							1.0
BHL	BZ	17	315	EP		1535	55.57	-0.03	32						1.0
BHL	BN	17	315	ES		1535	58.25	0.02							1.0
DQRL	SZ	22	242	EP		1535	56.26	-0.03							1.0
DQRL	SN	22	242	ES		1535	59.45	0.01							1.0
RCY	SZ	34	171	EP		1535	57.99	-0.03							1.0

RCY	SE	34	171	ES		1536	2.43	-0.01									1.0
SHBL	SZ	50	184	EP		1536	0.50	0.05									1.0
BEIL	SZ	91	24	EP		1536	6.32	-0.03									1.0

June 15 2017 Hour: 0:26 14.8 Agency: REL Distant
EMSC OT=00:26:14.8 30.66S 177.91W 20Km M=5.9 KERMADEC ISLANDS, NEW ZEALAND

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		046	5.98								
HWQ	SZ			EP		046	6.52								
ZAHL	SZ			EP		046	6.66								
RCY	SZ			EP		046	6.93								
BHL	BZ			EP		046	6.98								
DQRL	SZ			EP		046	7.53								

June 15 2017 Hour: 9:25 17.1 Lat: 33.56N Lon: 35.72E Depth: 0 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.1 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	255	EP		925	17.59	-0.06							1.0
RCY	SZ	13	120	EP		925	19.22	-0.00	25						1.0
RCY	SN	13	120	ES		925	20.80	0.02							1.0
DQRL	SZ	21	321	EP		925	20.61	0.03							1.0
DQRL	SN	21	321	ES		925	23.22	0.08							1.0
SHBL	SZ	23	173	EP		925	20.88	0.03							1.0
BHL	BZ	39	352	EP		925	23.34	-0.09							1.0

June 15 2017 Hour: 19:0 32.7 Lat: 35.03N Lon: 36.89E Depth: 17 Agency: REL Regional
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	84	230	EP		19 0	46.15	0.07	55						1.0
BEIL	SN	84	230	ES		19 0	55.95	-0.02							1.0
HWQ	SZ	120	226	EP		19 0	51.27	-0.12							1.0
HWQ	SN	120	226	ES		19 1	5.26	0.05							1.0
ZAHL	SZ	159	216	EP		19 0	57.04	0.09							1.0
ZAHL	SN	159	216	ES		19 1	14.84	-0.03							1.0
BHL	BZ	169	223	EP		19 0	58.09	0.01							1.0
DQRL	SZ	190	220	EP		19 1	0.74	-0.05							1.0

June 16 2017 Hour: 13:17 39.9 Lat: 34.02N Lon: 36.14E Depth: 15 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	30	233	EP		1317	45.22	-0.07							1.0
ZAHL	SN	30	233	ES		1317	49.33	0.05							1.0
HWQ	SZ	34	328	EP		1317	45.90	-0.01	38						1.0
HWQ	SN	34	328	ES		1317	50.34	-0.01							1.0
BEIL	SZ	58	4	EP		1317	49.43	0.01							1.0
BEIL	SN	58	4	ES		1317	56.49	0.02							1.0
SHBL	SZ	83	206	EP		1317	53.13	0.02							1.0

June 16 2017 Hour: 15:40 1.6 Lat: 33.80N Lon: 35.78E Depth: 9 Agency: REL Local
Magnitudes: 2.6MC 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	16	315	EP		1540	4.75	0.03	35						1.0
DQRL	SZ	22	242	EP		1540	5.42	-0.10							1.0
DQRL	SN	22	242	ES		1540	8.50	0.04							1.0
RCY	SZ	34	171	EP		1540	7.29	-0.06							1.0
SHBL	SZ	50	184	EP		1540	9.98	0.12							1.0
SHBL	SE	50	184	ES		1540	15.99	-0.02							1.0
BEIL	SZ	90	24	EP		1540	16.06	-0.00							1.0

June 16 2017 Hour: 16:11 5.7 Lat: 33.79N Lon: 35.79E Depth: 7 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	50	EP		1611	8.01	0.02							1.0
BHL	BZ	18	316	EP		1611	8.82	0.01	32						1.0
BHL	BN	18	316	ES		1611	11.11	-0.03							1.0
DQRL	SZ	22	246	EP		1611	9.44	-0.01							1.0
DQRL	SN	22	246	ES		1611	12.28	0.02							1.0
QRWL	SZ	28	200	EP		1611	10.36	-0.06							0.2
RCY	SZ	33	172	EP		1611	11.01	-0.09							1.0
RCY	SN	33	172	ES		1611	15.14	0.01							1.0
SHBL	SZ	49	185	EP		1611	13.73	0.06							1.0
BEIL	SZ	91	24	EP		1611	20.43	0.01							1.0

June 16 2017 Hour: 17:27 9.7 Lat: 34.03N Lon: 35.95E Depth: 0 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
ZAHL	SZ	20	196	EP		1727	12.93	-0.05	46						1.0
ZAHL	SN	20	196	ES		1727	15.33	-0.05							1.0
HWQ	SZ	27	0	EP		1727	14.08	-0.05							1.0
BHL	BZ	31	242	EP		1727	14.64	-0.01							1.0
BHL	BN	31	242	ES		1727	18.32	0.03							1.0
DQRL	SZ	50	224	EP		1727	17.81	-0.02							1.0
BEIL	SZ	61	21	EP		1727	19.57	0.06							1.0
SHBL	SZ	78	194	EP		1727	22.38	0.05							1.0
SHBL	SN	78	194	ES		1727	31.70	0.04							1.0

June 16 2017 Hour: 23:42 45.2 Agency: REL Regional
EMSC OT=23:42:45.2 36.81N 23.05E 53Km M=4.8 SOUTHERN GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		2345	11.98								
QRWL	SZ			EP		2345	14.34								
ZAHL	SZ			EP		2345	15.01								
SHBL	SZ			EP		2345	15.30								
RCY	SZ			EP		2345	16.34								
BEIL	SZ			EP		2345	16.19								

June 17 2017 Hour: 19:50 5.2 Agency: REL Regional
EMSC OT=19:50:05.2 38.85N 26.46E 10Km M=5.2 NEAR THE COAST OF WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1952	12.68								
DQRL	SZ			EP		1952	12.60								
HWQ	SZ			EP		1952	14.32								
BEIL	SZ			EP		1952	13.50								
QRWL	SZ			EP		1952	15.30								
ZAHL	SZ			EP		1952	14.97								
RCY	SZ			EP		1952	17.02								
SHBL	SZ			EP		1952	17.35								

June 17 2017 Hour: 22:26 2.5 Agency: REL Distant
EMSC OT=22:26:02.5 24.08S 179.60E 525Km M=6.1 SOUTH OF FIJI ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2244	43.48								
BHL	BZ			EP		2244	43.34								
DQRL	SZ			EP		2244	44.37								
ZAHL	SZ			EP		2244	43.91								
SHBL	SZ			EP		2244	44.35								

June 18 2017 Hour: 10:55 4.7 Agency: REL Regional
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 RCY SZ EP 1055 10.15
 DQRL SZ EP 1055 14.52
 BHL BZ EP 1055 16.72
 HWQ SZ EP 1055 23.94
 BEIL SZ EP 1055 28.04

June 18 2017 Hour: 22:21 15.9 Lat: 35.54N Lon: 36.78E Depth: 0 Agency: REL Regional
Magnitudes: 3.3MC 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	124	206	EP		2221	35.53	-0.34	76						1.0
BEIL	SN	124	206	ES		2221	50.83	0.20							1.0
HWQ	SZ	160	209	EP		2221	41.27	-0.07							1.0
HWQ	SN	160	209	ES		2222	0.04	-0.11							1.0
ZAHL	SZ	204	204	EP		2221	47.44	0.01							1.0
ZAHL	SN	204	204	ES		2222	13.75	3.00							0.0
BHL	BZ	209	210	EP		2221	48.06	0.04							1.0
BHL	BN	209	210	ES		2222	11.74	-0.03							1.0
DQRL	SZ	232	209	EP		2221	51.18	0.30							1.0

June 19 2017 Hour: 20:24 32.6 Lat: 34.93N Lon: 36.49E Depth: 0 Agency: REL Local
Magnitudes: 2.6MC 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	51	213	EP		2024	40.80	-0.04	33						1.0
BEIL	SN	51	213	ES		2024	46.96	0.01							1.0
HWQ	SZ	88	215	EP		2024	46.66	-0.07							1.0
ZAHL	SZ	131	205	EP		2024	53.70	-0.03							1.0
BHL	BZ	137	214	EP		2024	54.67	-0.00							1.0
DQRL	SZ	160	212	EP		2024	58.15	0.14							1.0
DQRL	SN	160	212	ES		2025	16.83	0.01							1.0

June 19 2017 Hour: 23:1 49.2 Lat: 33.78N Lon: 35.78E Depth: 4 Agency: REL Local
Magnitudes: 2.2MC REL Rms: 0.2 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	13	51	EP		23 1	51.07	-0.34							1.0
ZAHL	SN	13	51	ES		23 1	53.30	0.23							1.0
BHL	BZ	18	319	EP		23 1	52.02	-0.12	19						1.0
DQRL	SZ	21	246	EP		23 1	52.79	0.07							1.0
DQRL	SN	21	246	ES		23 1	55.35	-0.00							1.0
RCY	SZ	33	171	EP		23 1	54.15	-0.34							1.0
RCY	SN	33	171	ES		23 1	58.42	-0.01							1.0
SHBL	SZ	49	184	EP		23 1	57.44	0.38							1.0
HWQ	SZ	57	16	EP		23 1	58.49	0.12							1.0

June 20 2017 Hour: 17:54 17.3 Lat: 33.79N Lon: 35.77E Depth: 8 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
ZAHL	SZ	13	54	EP		1754	19.96	-0.02							1.0
BHL	BZ	17	320	EP		1754	20.42	-0.02	26						1.0
BHL	BN	17	320	ES		1754	22.76	0.02							1.0
DQRL	SZ	21	244	EP		1754	21.01	0.03							1.0
DQRL	SN	21	244	ES		1754	23.68	-0.01							1.0
QRWL	SZ	28	197	EP		1754	21.97	-0.08							1.0
RCY	SZ	33	169	EP		1754	22.92	0.07							1.0

June 21 2017 Hour: 11:22 43.9 Lat: 33.84N Lon: 35.84E 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	67	EP		1122	44.49	-0.12							1.0
BHL	BZ	19	292	EP		1122	46.77	-0.10	38						1.0
BHL	BN	19	292	ES		1122	49.16	0.06							1.0
DQRL	SZ	29	239	EP		1122	48.52	-0.08							1.0
RCY	SZ	38	181	EP		1122	50.13	0.07							1.0
RCY	SN	38	181	ES		1122	54.66	0.03							1.0
HWQ	SZ	49	11	EP		1122	51.89	0.07							1.0
BEIL	SZ	84	22	EP		1122	57.46	0.07							1.0

June 22 2017 Hour: 2:48 53.0 Agency: REL Regional
EMSC OT=02:48:53.0 38.82N 26.47E 10Km M=4.9 NEAR THE COAST OF WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		251	2.60								
RCY	SZ			EP		251	5.94								
SHBL	SZ			EP		251	6.19								

June 22 2017 Hour: 8:55 40.1 Lat: 33.53N Lon: 35.70E Depth: 0 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
QRWL	SZ	2	312	EP		855	40.35	-0.08							1.0
RCY	SZ	14	109	EP		855	42.09	-0.18	26						1.0
RCY	SE	14	109	ES		855	43.99	0.11							1.0
SHBL	SZ	21	168	EP		855	43.58	0.08							1.0
DQRL	SZ	22	328	EP		855	43.66	-0.02							1.0
DQRL	SN	22	328	ES		855	46.44	0.10							1.0

June 22 2017 Hour: 14: 3 6.8 Lat: 34.65N Lon: 36.15E Depth: 6 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	12	164	EP		14 3	9.09	0.00							1.0
HWQ	SZ	45	204	EP		14 3	14.12	-0.04	52						1.0
HWQ	SN	45	204	ES		14 3	19.61	-0.01							1.0
BHL	BZ	94	209	EP		14 3	22.09	0.06							1.0
DQRL	SZ	117	207	EP		14 3	25.49	-0.04							1.0
DQRL	SN	117	207	ES		14 3	39.41	0.01							1.0
RCY	SZ	131	193	EP		14 3	27.58	0.02							1.0

June 22 2017 Hour: 15:42 14.8 Lat: 33.83N Lon: 36.06E Depth: 11 Agency: REL Local
Magnitudes: 3.0MC 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	17	280	EP		1542	18.18	0.00							1.0
BHL	BZ	39	282	EP		1542	21.25	-0.10							1.0
RCY	SZ	43	209	EP		1542	21.94	-0.07							1.0
RCY	SN	43	209	ES		1542	27.35	0.02							1.0
DQRL	SZ	48	253	EP		1542	22.80	0.04							1.0
DQRL	SN	48	253	ES		1542	28.66	0.03							1.0
HWQ	SZ	51	348	EP		1542	23.27	0.04	55						1.0
SHBL	SZ	61	209	EP		1542	24.93	0.02							1.0
BEIL	SZ	80	8	EP		1542	27.66	0.00							1.0

June 23 2017 Hour: 17:52 0.3 Lat: 33.78N Lon: 35.76E 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	53	EP		1752	2.48	-0.06							1.0
BHL	BZ	17	323	EP		1752	2.92	-0.07	42						1.0
DQRL	SZ	20	245	EP		1752	3.57	0.10							1.0
QRWL	SZ	27	196	EP		1752	4.53	-0.12							1.0
RCY	SZ	32	168	EP		1752	5.50	-0.01							1.0
RCY	SN	32	168	ES		1752	9.42	0.03							1.0
SHBL	SZ	48	182	EP		1752	8.08	0.03							1.0
HWQ	SZ	58	17	EP		1752	9.50	-0.04							1.0
BEIL	SZ	93	25	EP		1752	15.37	0.15							1.0

June 24 2017 Hour: 13:29 0.8 Lat: 33.45N Lon: 35.65E 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	11	14	EP		1329	2.39	-0.12	23						1.0
SHBL	SZ	14	144	EP		1329	3.02	-0.05							1.0
SHBL	SN	14	144	ES		1329	4.84	0.05							1.0
RCY	SZ	18	74	EP		1329	3.63	0.04							1.0
DQRL	SZ	29	344	EP		1329	5.44	-0.01							1.0
DQRL	SE	29	344	ES		1329	9.00	0.07							1.0
BHL	BZ	50	360	EP		1329	8.85	0.02							1.0

June 25 2017 Hour: 9:37 27.2 Lat: 34.29N Lon: 34.61E Depth: 3 Agency: REL Local
Magnitudes: 3.4MC REL Rms: 0.1 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	106	114	EP		937	44.33	0.07							1.0
BHL	BN	106	114	ES		937	56.87	-0.00							1.0
DQRL	SZ	110	126	EP		937	44.90	-0.08							1.0
HWQ	SZ	123	90	EP		937	47.15	0.09							1.0
ZAHL	SZ	127	112	EP		937	47.76	0.09							1.0
ZAHL	SN	127	112	ES		938	2.70	-0.09							1.0
QRWL	SZ	129	129	EP		937	47.97	0.06							1.0
RCY	SZ	144	128	EP		937	50.16	0.06							1.0
RCY	SN	144	128	ES		938	7.13	0.10							1.0
BEIL	SZ	147	79	EP		937	50.54	-0.05	89						1.0
BEIL	SE	147	79	ES		938	7.86	-0.03							1.0
SHBL	SZ	148	135	EP		937	50.56	-0.22							1.0

June 28 2017 Hour: 18:20 52.9 Agency: REL Distant
EMSC OT=18:20:52.9 30.44S 177.44W 10Km M=6.0 KERMADEC ISLANDS, NEW ZEALAND

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1840	47.65								
HWQ	SZ			EP		1840	48.19								
ZAHL	SZ			EP		1840	49.05								
BHL	BZ			EP		1840	49.10								
RCY	SZ			EP		1840	49.05								
DQRL	SZ			EP		1840	49.25								

June 29 2017 Hour: 15:29 6.6 Lat: 33.97N Lon: 36.19E Depth: 12 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
ZAHL	SZ	31	246	EP		1529	12.08	0.04							1.0
HWQ	SZ	41	326	EP		1529	13.47	-0.02	43						1.0
HWQ	SN	41	326	ES		1529	18.58	-0.04							1.0
BHL	BZ	51	262	EP		1529	14.93	-0.05							1.0
BHL	BN	51	262	ES		1529	21.25	0.04							1.0
RCY	SZ	62	212	EP		1529	16.83	-0.02							1.0

RCY	SN	62	212	ES	1529	24.46	-0.01										1.0
BEIL	SZ	63	359	EP	1529	16.99	0.05										1.0
DQRL	SZ	65	243	EP	1529	17.24	0.01										1.0
SHBL	SZ	81	211	EP	1529	19.59	-0.01										1.0

June 29 2017 Hour: 17:59 5.5 Lat: 33.78N Lon: 35.77E Depth: 4 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	14	53	EP		1759	7.87	-0.03							1.0
BHL	BZ	17	322	EP		1759	8.32	-0.07	56						1.0
DQRL	SZ	20	245	EP		1759	8.78	-0.09							1.0
DQRL	SN	20	245	ES		1759	11.47	0.13							1.0
QRWL	SZ	27	197	EP		1759	9.81	-0.17							1.0
RCY	SZ	32	169	EP		1759	10.86	0.05							1.0
RCY	SN	32	169	ES		1759	14.75	0.03							1.0
SHBL	SZ	48	183	EP		1759	13.38	0.04							1.0
HWQ	SZ	57	17	EP		1759	14.90	0.08							1.0
BEIL	SZ	93	24	EP		1759	20.50	0.03							1.0

June 29 2017 Hour: 20:31 30.7 Lat: 33.78N Lon: 35.78E Depth: 3 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	13	49	EP		2031	33.03	0.01							1.0
BHL	BZ	18	320	EP		2031	33.74	-0.01	49						1.0
DQRL	SZ	21	247	EP		2031	34.26	0.04							1.0
DQRL	SN	21	247	ES		2031	36.80	0.01							1.0
QRWL	SZ	27	199	EP		2031	35.06	-0.14							1.0
RCY	SZ	32	170	EP		2031	35.89	-0.06							1.0
RCY	SN	32	170	ES		2031	39.83	0.03							1.0
SHBL	SZ	48	184	EP		2031	38.65	0.13							1.0
HWQ	SZ	57	16	EP		2031	39.99	-0.04							1.0
BEIL	SZ	92	24	EP		2031	45.71	0.04							1.0

June 30 2017 Hour: 11:52 56.8 Lat: 33.99N Lon: 35.74E Depth: 4 Agency: REL Local
Magnitudes: 2.8MC 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	13	220	EP		1152	59.08	0.04	47						1.0
BHL	BN	13	220	ES		1153	0.69	-0.01							1.0
ZAHL	SZ	20	139	EP		1153	0.06	-0.08							1.0
DQRL	SZ	36	207	EP		1153	2.53	-0.08							1.0
HWQ	SZ	37	31	EP		1153	2.86	0.09							1.0
HWQ	SN	37	31	ES		1153	7.23	0.02							1.0
RCY	SZ	56	171	EP		1153	5.88	0.05							1.0
RCY	SN	56	171	ES		1153	12.56	0.03							1.0
SHBL	SZ	72	180	EP		1153	8.41	0.04							1.0
BEIL	SZ	73	34	EP		1153	8.51	-0.10							1.0

June 30 2017 Hour: 23:14 38.3 Lat: 33.79N Lon: 35.79E Depth: 7 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	11	51	EP		2314	40.61	-0.04							1.0
BHL	BZ	18	314	EP		2314	41.53	0.02	40						1.0
DQRL	SZ	23	245	EP		2314	42.27	0.01							1.0
DQRL	SN	23	245	ES		2314	45.19	0.02							1.0
QRWL	SZ	29	200	EP		2314	43.13	-0.11							1.0
RCY	SZ	33	173	EP		2314	43.86	-0.03							1.0
RCY	SN	33	173	ES		2314	48.08	0.08							1.0
SHBL	SZ	50	185	EP		2314	46.48	0.01							1.0
HWQ	SZ	56	15	EP		2314	47.35	-0.07							1.0
BEIL	SZ	91	23	EP		2314	53.11	0.11							1.0

Epicentral Map of Lebanon

JUNE 2017

