

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

August

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

August 4 2017 Hour: 14:15 17.2 Lat: 33.78N Lon: 35.78E Depth: 0 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	48	EP		1415	19.32	-0.04							1.0
BHL	BZ	18	321	EP		1415	20.08	-0.08	34						1.0
DQRL	SZ	21	248	EP		1415	20.53	-0.07							1.0
DQRL	SN	21	248	ES		1415	23.17	0.06							1.0
QRWL	SZ	27	200	EP		1415	21.57	-0.00							1.0
RCY	SZ	32	171	EP		1415	22.29	-0.02							1.0
RCY	SE	32	171	ES		1415	26.10	0.02							1.0
SHBL	SZ	48	184	EP		1415	24.91	0.00							1.0
HWQ	SZ	58	15	EP		1415	26.65	0.14							1.0
BEIL	SZ	93	24	EP		1415	32.16	0.00							1.0

August 4 2017 Hour: 15:25 54.2 Lat: 34.57N Lon: 36.25E Depth: 5 Agency: REL Local
Magnitudes: 2.9MC 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	7	238	EP		1525	55.60	-0.07	50						1.0
HWQ	SZ	43	220	EP		1526	1.34	0.12							1.0
HWQ	SN	43	220	ES		1526	6.29	-0.13							1.0
BHL	BZ	92	217	EP		1526	9.23	0.11							1.0
BHL	BN	92	217	ES		1526	20.25	0.08							1.0
DQRL	SZ	115	213	EP		1526	12.63	-0.02							1.0
RCY	SZ	125	198	EP		1526	14.15	-0.09							1.0

August 4 2017 Hour: 16: 6 17.2 Lat: 33.79N Lon: 35.78E Depth: 11 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		16 6	20.16	0.06							1.0
BHL	BZ	17	319	EP		16 6	20.53	-0.11	34						1.0
DQRL	SZ	21	245	EP		16 6	21.28	0.10							1.0
DQRL	SN	21	245	ES		16 6	24.09	-0.00							1.0
RCY	SZ	33	170	EP		16 6	22.88	-0.01							1.0
RCY	SN	33	170	ES		16 6	27.04	-0.04							1.0
SHBL	SZ	49	184	EP		16 6	25.37	-0.00							1.0
HWQ	SZ	57	16	EP		16 6	26.67	0.08							0.2
BEIL	SZ	92	24	EP		16 6	31.87	-0.02							0.2

August 6 2017 Hour: 16:45 30.6 Lat: 33.78N Lon: 35.78E Depth: 7 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		1645	33.18	-0.02							1.0
BHL	BZ	18	320	EP		1645	33.75	-0.08	36						1.0
DQRL	SZ	21	247	EP		1645	34.22	-0.04							1.0
DQRL	SN	21	247	ES		1645	37.04	0.07							1.0
RCY	SZ	32	170	EP		1645	35.88	-0.07							1.0
RCY	SN	32	170	ES		1645	39.95	0.04							1.0
HWQ	SZ	58	16	EP		1645	40.09	0.10							1.0
BEIL	SZ	93	24	EP		1645	45.59	0.00							1.0

August 7 2017 Hour: 5:18 47.7 Agency: REL Regional
EMSC OT=05:18:47.7 37.00N 27.63E 2Km M=4.6 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		520	35.02								
HWQ	SZ			EP		520	35.41								
BEIL	SZ			EP		520	36.20								
RCY	SZ			EP		520	38.96								

August 7 2017 Hour: 13:24 7.8 Lat: 33.79N Lon: 35.78E Depth: 5 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	53	EP		1324	9.99	-0.01							1.0
BHL	BZ	17	316	EP		1324	10.74	-0.01	30						1.0
DQRL	SZ	22	244	EP		1324	11.53	0.03							1.0
DQRL	SN	22	244	ES		1324	14.21	-0.01							1.0
RCY	SZ	33	172	EP		1324	13.22	-0.07							1.0
RCY	SN	33	172	ES		1324	17.38	0.04							1.0
HWQ	SZ	56	16	EP		1324	17.07	0.20							0.2
BEIL	SZ	91	24	EP		1324	22.61	0.11							0.2

August 7 2017 Hour: 15:43 58.6 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	13	52	EP		1544	1.14	0.02							1.0
BHL	BZ	17	321	EP		1544	1.58	-0.11	35						1.0
DQRL	SZ	21	245	EP		1544	2.22	0.03							1.0
DQRL	SN	21	245	ES		1544	4.85	0.04							1.0
RCY	SZ	32	170	EP		1544	3.94	-0.07							1.0
RCY	SN	32	170	ES		1544	8.01	0.02							1.0
HWQ	SZ	57	16	EP		1544	8.02	0.08							1.0

August 7 2017 Hour: 18:25 57.2 Agency: REL Regional
EMSC OT=18:25:57.2 37.00N 27.64E 1Km M=4.1 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1827	46.10								
BEIL	SZ			EP		1827	46.63								
SHBL	SZ			EP		1827	49.30								

August 8 2017 Hour: 1:46 19.3 Agency: REL Regional
EMSC OT=01:46:19.3 36.99N 27.64E 1Km M=4.2 DODECANESE-TURKEY BORDER REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		148	6.28								
HWQ	SZ			EP		148	6.41								
ZAHL	SZ			EP		148	8.15								
SHBL	SZ			EP		148	9.70								

August 8 2017 Hour: 7:42 20.3 Agency: REL Regional
EMSC OT=07:42:20.3 37.00N 27.63E 1Km M=5.3 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		744	8.88								
HWQ	SZ			EP		744	8.70								
BEIL	SZ			EP		744	9.43								
RCY	SZ			EP		744	11.74								

August 8 2017 Hour: 13:19 50.2 Agency: REL Distant
EMSC OT=13:19:50.2 33.21N 104.03E 10Km M=6.5 GANSU, CHINA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1329	25.33								
HWQ	SZ			EP		1329	26.91								
RCY	SZ			EP		1329	28.63								
BHL	BZ			EP		1329	27.50								
QRWL	SZ			EP		1329	29.28								
DQRL	SZ			EP		1329	30.60								

August 8 2017 Hour: 23:27 54.8 Agency: REL Distant
EMSC OT=23:27:54.8 44.37N 82.90E 30Km M=6.3 NORTHERN XINJIANG, CHINA
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BEIL SZ EP 2335 2.10
 HWQ SZ EP 2335 3.96
 ZAHL SZ EP 2335 6.79
 BHL BZ EP 2335 7.51
 RCY SZ EP 2335 7.91
 DQRL SZ EP 2335 8.25
 SHBL SZ EP 2335 9.08

August 9 2017 Hour: 1:41 26.1 Lat: 32.86N Lon: 35.59E Depth: 3 Agency: REL Regional
Magnitudes: 3.0MC REL Rms: 0.1 secs

DEAD SEA REGION

STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 SHBL SZ 56 15 EP 141 35.18 0.06 1.0
 RCY SZ 74 18 EP 141 37.94-0.10 60 1.0
 RCY SN 74 18 ES 141 46.91 0.01 1.0
 QRWL SZ 77 6 EP 141 38.45 0.01 1.0
 DQRL SZ 94 359 EP 141 41.16-0.03 56 1.0
 DQRL SN 94 359 ES 141 52.38 0.00 1.0
 ZAHL SZ 114 14 EP 141 44.49 0.04 1.0
 ZAHL SN 114 14 ES 141 58.04-0.02 1.0
 BHL BZ 116 3 EP 141 44.74-0.02 1.0
 HWQ SZ 161 12 EP 141 51.50 0.12 1.0
 BEIL SZ 194 16 EP 141 55.88-0.06 1.0
 BEIL SE 194 16 ES 142 18.04-0.01 1.0

August 10 2017 Hour: 15:55 12.1 Lat: 33.99N Lon: 36.06E Depth: 18 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
 ZAHL SZ 22 228 EP 1555 16.72-0.04 1.0
 HWQ SZ 34 341 EP 1555 18.14-0.05 34 1.0
 HWQ SN 34 341 ES 1555 22.77 0.05 1.0
 BHL BZ 39 256 EP 1555 18.94-0.01 1.0
 RCY SZ 59 201 EP 1555 21.84 0.04 1.0
 RCY SN 59 201 ES 1555 29.05 0.04 1.0
 BEIL SZ 62 10 EP 1555 22.19 0.01 1.0
 SHBL SZ 77 203 EP 1555 24.46-0.03 1.0

August 10 2017 Hour: 23:59 43.8 Lat: 34.16N Lon: 35.80E Depth: 32 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs

JBEIL REGION

STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 HWQ SZ 19 45 EP 2359 49.66-0.02 1.0
 HWQ SE 19 45 ES 2359 54.13 0.12 1.0
 BHL BZ 31 206 EP 2359 50.84 0.04 1.0
 BHL BN 31 206 ES 2359 55.90-0.05 1.0
 ZAHL SZ 34 167 EP 2359 51.10-0.03 1.0
 ZAHL SN 34 167 ES 2359 56.52-0.02 1.0
 DQRL SZ 55 203 EP 2359 53.59 0.01 30 1.0
 BEIL SZ 55 39 EP 2359 53.53-0.11 1.0
 SHBL SZ 90 183 EP 2359 58.38 0.06 1.0

August 11 2017 Hour: 5:17 1.9 Agency: REL Regional

EMSC OT=05:17:01.9 35.75N 36.47E 31Km M=2.6 SYRIA

STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BEIL SZ EP 517 21.35
 HWQ SZ EP 517 26.44
 BHL BZ EP 517 32.18
 DQRL SZ EP 517 34.65

August 11 2017 Hour: 5:28 26.9 Agency: REL Distant
EMSC OT=05:28:26.9 13.96N 120.69E 189Km M=6.2 MINDORO,PHILIPPINES
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BEIL SZ EP 540 3.80
 HWQ SZ EP 540 4.83
 BHL BZ EP 540 6.54
 RCY SZ EP 540 6.69
 QRWL SZ EP 540 7.13

August 11 2017 Hour: 16:28 58.2 Lat: 33.79N Lon: 35.78E Depth: 7 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
 Z AHL SZ 13 52 EP 1629 0.67-0.00 1.0
 BHL BZ 17 319 EP 1629 1.30-0.00 27 1.0
 DQRL SZ 21 245 EP 1629 1.92 0.05 1.0
 DQRL SN 21 245 ES 1629 4.58-0.03 1.0
 RCY SZ 33 171 EP 1629 3.58-0.06 1.0
 RCY SN 33 171 ES 1629 7.72 0.04 1.0
 HWQ SZ 57 16 EP 1629 7.56 0.13 0.2

August 12 2017 Hour: 23:39 22.5 Lat: 33.50N Lon: 36.32E Depth: 6 Agency: REL Local
Magnitudes: 2.7MC 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 45 270 EP 2339 29.70-0.07 37 1.0
 RCY SN 45 270 ES 2339 35.22 0.05 1.0
 SHBL SZ 56 253 EP 2339 31.57 0.03 1.0
 Z AHL SZ 57 315 EP 2339 31.71 0.06 1.0
 DQRL SZ 73 289 EP 2339 34.28-0.01 1.0
 DQRL SN 73 289 ES 2339 43.02-0.02 1.0
 BHL BZ 76 306 EP 2339 34.76-0.04 1.0
 BEIL SZ 116 354 EP 2339 41.09 0.01 1.0

August 13 2017 Hour: 3: 8 13.8 Agency: REL Distant
EMSC OT=03:08:13.8 3.60S 101.72E 53Km M=6.4 SOUTHERN SUMATRA, INDONESIA
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 RCY SZ EP 319 33.35
 SHBL SZ EP 319 33.76
 BEIL SZ EP 319 33.76
 Z AHL SZ EP 319 33.76
 BHL BZ EP 319 34.97
 DQRL SZ EP 319 35.20

August 13 2017 Hour: 11:16 52.2 Agency: REL Regional
EMSC OT=11:16:52.2 37.13N 27.71E 4Km M=4.9 WESTERN TURKEY
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 1118 37.16
 DQRL SZ EP 1118 38.51
 HWQ SZ EP 1118 38.32
 BEIL SZ EP 1118 39.37
 Z AHL SZ EP 1118 40.62
 RCY SZ EP 1118 41.39
 SHBL SZ EP 1118 42.35

August 13 2017 Hour: 12:28 15.2 Agency: REL Regional
EMSC OT=12:28:15.2 37.13N 27.67E 7Km M=4.2 WESTERN TURKEY
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 HWQ SZ EP 1230 1.85
 Z AHL SZ EP 1230 2.63
 BEIL SZ EP 1230 3.09
 RCY SZ EP 1230 5.11
 SHBL SZ EP 1230 5.11

August 13 2017 Hour: 16:35 23.2 Agency: REL Regional

EMSC OT=16:35:23.2 37.14N 27.67E 5Km M=4.4 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1637	9.83								
BEIL	SZ			EP		1637	10.48								
ZAHL	SZ			EP		1637	11.55								
RCY	SZ			EP		1637	11.97								

August 14 2017 Hour: 2:43 48.8 Agency: REL Regional

EMSC OT=02:43:48.8 37.13N 27.73E 10Km M=4.7 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		245	33.32								
DQRL	SZ			EP		245	33.83								
HWQ	SZ			EP		245	35.06								
BEIL	SZ			EP		245	35.60								
QRWL	SZ			EP		245	37.20								
ZAHL	SZ			EP		245	37.35								
RCY	SZ			EP		245	38.77								
SHBL	SZ			EP		245	39.04								

August 14 2017 Hour: 16: 8 48.1 Lat: 34.69N Lon: 36.09E Depth: 3 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	18	152	EP		16	8	51.18	0.02	54					1.0
BEIL	SN	18	152	ES		16	8	53.36	-0.02						1.0
HWQ	SZ	47	196	EP		16	8	55.86	0.07						1.0
HWQ	SN	47	196	ES		16	9	1.47	0.02						1.0
BHL	BZ	96	205	EP		16	9	3.50	-0.08						1.0
DQRL	SZ	119	204	EP		16	9	7.32	0.00						1.0

August 14 2017 Hour: 16:10 51.5 Lat: 34.08N Lon: 35.83E Depth: 6 Agency: REL Local
Magnitudes: 2.6MC REL Rms: 0.1 secs

JBEIL REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	25	220	EP		1610	55.52	-0.13	34						1.0
BHL	BN	25	220	ES		1610	58.80	0.04							1.0
ZAHL	SZ	25	167	EP		1610	55.52	-0.16							1.0
HWQ	SZ	25	27	EP		1610	55.69	0.00							1.0
HWQ	SE	25	27	ES		1610	58.91	0.10							1.0
DQRL	SZ	47	210	EP		1610	59.20	-0.01							1.0
BEIL	SZ	61	33	EP		1611	1.31	-0.10							1.0
SHBL	SZ	81	185	EP		1611	4.87	0.26							1.0

August 15 2017 Hour: 13: 7 58.7 Lat: 34.57N Lon: 36.20E Depth: 5 Agency: REL Local
Magnitudes: 3.0MC 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	4	206	EP		13	7	59.88	0.01	64					1.0
HWQ	SZ	40	216	EP		13	8	5.09	-0.19						1.0
HWQ	SN	40	216	ES		13	8	10.25	0.08						1.0
ZAHL	SZ	85	200	EP		13	8	12.45	0.09						1.0
BHL	BZ	90	214	EP		13	8	13.27	0.07						1.0
BHL	BN	90	214	ES		13	8	23.89	-0.06						1.0
DQRL	SZ	113	211	EP		13	8	16.88	0.12						1.0
QRWL	SZ	124	203	EP		13	8	18.32	-0.04						1.0
RCY	SZ	124	196	EP		13	8	18.44	-0.05						1.0
RCY	SN	124	196	ES		13	8	33.15	-0.01						1.0

August 16 2017 Hour: 13:31 14.5 Lat: 33.87N Lon: 35.84E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	4	112	EP		1331	15.14	-0.08							1.0
BHL	BZ	18	281	EP		1331	17.38	-0.00	39						1.0
DQRL	SZ	31	234	EP		1331	19.58	0.02							1.0
DQRL	SN	31	234	ES		1331	23.24	-0.06							1.0
RCY	SZ	42	181	EP		1331	21.27	0.03							1.0
RCY	SN	42	181	ES		1331	26.27	0.05							1.0
HWQ	SZ	46	12	EP		1331	21.97	0.04							1.0

August 16 2017 Hour: 15:54 22.6 Lat: 33.99N Lon: 36.13E Depth: 18 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
ZAHL	SZ	27	237	EP		1554	27.87	0.01							1.0
ZAHL	SN	27	237	ES		1554	31.74	0.01							1.0
HWQ	SZ	36	332	EP		1554	29.01	-0.10	43						1.0
HWQ	SN	36	332	ES		1554	33.95	0.05							1.0
BHL	BZ	45	258	EP		1554	30.41	0.08							1.0
BHL	BN	45	258	ES		1554	35.95	-0.08							1.0
DQRL	SZ	61	239	EP		1554	32.65	0.07							1.0
RCY	SZ	61	207	EP		1554	32.63	-0.04							1.0
BEIL	SZ	62	5	EP		1554	32.68	0.00							1.0

August 16 2017 Hour: 15:53 30.3 Agency: REL Regional
EMSC OT=15:53:30.3 36.48N 24.66E 103Km M=4.8 SOUTHERN GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1555	37.06								
BHL	BZ			EP		1555	36.55								
HWQ	SZ			EP		1555	39.59								
QRWL	SZ			EP		1555	39.59								
ZAHL	SZ			EP		1555	40.05								
RCY	SZ			EP		1555	41.60								
SHBL	SZ			EP		1555	41.02								
BEIL	SZ			EP		1555	41.14								

August 16 2017 Hour: 17:33 40.9 Agency: REL Regional
EMSC OT=17:33:40.9 34.27N 25.81E 10Km M=3.6 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	SZ			EP		1735	39.46								
HWQ	SZ			EP		1735	41.53								
BEIL	SZ			EP		1735	43.38								

August 16 2017 Hour: 19:39 33.8 Agency: REL Regional
EMSC OT=19:39:33.8 35.45N 31.16E 10Km M=3.7 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1940	36.24								
HWQ	SZ			EP		1940	37.87								
BEIL	SZ			EP		1940	39.22								
SHBL	SZ			EP		1940	40.68								
RCY	SZ			EP		1940	39.98								

August 16 2017 Hour: 20: 2 30.4 Lat: 34.04N Lon: 35.95E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

KESROUAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	21	196	EP		20 2	33.77	-0.07							1.0
ZAHL	SN	21	196	ES		20 2	36.38	0.02							1.0
HWQ	SZ	26	360	EP		20 2	34.66	-0.02							1.0
BHL	BZ	31	241	EP		20 2	35.36	-0.10	41						1.0
BHL	BN	31	241	ES		20 2	39.20	0.03							1.0

DQRL	SZ	51	223	EP		20	2	38.73	0.06								1.0
BEIL	SZ	60	21	EP		20	2	40.10	0.04								1.0
QRWL	SZ	60	204	EP		20	2	40.18	0.07								1.0
RCY	SZ	61	190	EP		20	2	40.41	0.09								1.0
RCY	SN	61	190	ES		20	2	47.60	-0.03								1.0
SHBL	SZ	79	194	EP		20	2	43.12	-0.08								1.0

August 17 2017 Hour: 15:14 18.9 Lat: 33.78N Lon: 35.79E Depth: 6 Agency: REL Local
Magnitudes: 2.7MC 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	12	45	EP		1514	21.32	0.04							1.0
BHL	BZ	19	318	EP		1514	21.97	-0.21	42						1.0
DQRL	SZ	22	248	EP		1514	22.57	-0.10							1.0
DQRL	SN	22	248	ES		1514	25.50	0.06							1.0
QRWL	SZ	28	201	EP		1514	23.36	-0.18							1.0
BEYL	SZ	29	291	EP		1514	24.06	0.27							1.0
RCY	SZ	32	172	EP		1514	24.17	-0.02							1.0
RCY	SN	32	172	ES		1514	28.19	0.11							1.0
HWQ	SZ	57	15	EP		1514	28.50	0.26							0.2
BEIL	SZ	92	23	EP		1514	34.11	0.28							0.2

August 18 2017 Hour: 3:46 48.1 Agency: REL Regional
EMSC OT=03:46:48.1 34.68N 23.95E 10Km M=4.6 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		349	8.50								
HWQ	SZ			EP		349	9.18								
BEIL	SZ			EP		349	10.14								

August 18 2017 Hour: 4:30 2.6 Agency: REL Regional
EMSC OT=04:30:02.6 37.59N 37.48E 6Km M=4.3 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		430	52.71								
HWQ	SZ			EP		430	57.11								
ZAHL	SZ			EP		431	3.70								
BHL	BZ			EP		431	2.84								
DQRL	SZ			EP		431	6.14								
QRWL	SZ			EP		431	8.30								
RCY	SZ			EP		431	7.96								
SHBL	SZ			EP		431	10.28								

August 18 2017 Hour: 7:45 36.1 Lat: 33.83N Lon: 36.08E Depth: 9 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	18	279	EP		745	39.51	-0.02							1.0
BHL	BZ	40	281	EP		745	42.75	-0.05							1.0
RCY	SZ	44	211	EP		745	43.39	0.00	48						1.0
RCY	SN	44	211	ES		745	48.77	0.01							1.0
DQRL	SZ	49	253	EP		745	44.18	-0.05							1.0
DQRL	SN	49	253	ES		745	50.30	0.07							1.0
HWQ	SZ	51	346	EP		745	44.49	-0.00							1.0
BEIL	SZ	79	7	EP		745	49.04	0.05							1.0

August 18 2017 Hour: 14:10 48.8 Agency: REL Regional
EMSC OT=14:10:48.8 36.93N 27.66E 1Km M=4.4 DODECANESE-TURKEY BORDER REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	SZ			EP		1412	34.82								
BEIL	SZ			EP		1412	36.70								
RCY	SZ			EP		1412	37.24								

August 18 2017 Hour: 15: 7 57.5 Lat: 33.78N Lon: 35.79E Depth: 7 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	12	47	EP		15	7	59.99	0.00						1.0
BHL	BZ	18	318	EP		15	8	0.74	-0.05	42					1.0
DQRL	SZ	22	247	EP		15	8	1.30	0.00						1.0
DQRL	SN	22	247	ES		15	8	4.15	0.05						1.0
QRWL	SZ	28	201	EP		15	8	2.06	-0.13						1.0
RCY	SZ	32	172	EP		15	8	2.86	-0.00						1.0
RCY	SN	32	172	ES		15	8	6.83	0.01						1.0
SHBL	SZ	48	185	EP		15	8	5.50	0.08						1.0
HWQ	SZ	57	15	EP		15	8	7.12	0.30						0.2
BEIL	SZ	92	23	EP		15	8	12.66	0.26						0.2

August 19 2017 Hour: 2: 0 51.2 Agency: REL Distant

EMSC OT=02:00:51.2 17.92S 178.83W 527Km M=6.4 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		219		27.94							
HWQ	SZ			EP		219		28.84							
ZAHL	SZ			EP		219		29.32							
BHL	BZ			EP		219		28.31							
DQRL	SZ			EP		219		29.38							
QRWL	SZ			EP		219		28.95							
RCY	SZ			EP		219		29.32							
SHBL	SZ			EP		219		29.48							

August 19 2017 Hour: 7:42 2.1 Lat: 33.82N Lon: 35.81E Depth: 8 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	9	58	EP		742		4.16	-0.07						1.0
ZAHL	SN	9	58	ES		742		5.85	0.03						1.0
BHL	BZ	17	305	EP		742		5.27	-0.01	23					1.0
BHL	BN	17	305	ES		742		7.65	0.02						1.0
DQRL	SZ	25	241	EP		742		6.38	-0.05						1.0
QRWL	SZ	32	201	EP		742		7.53	0.06						1.0
HWQ	SZ	53	14	EP		742		10.79	0.02						1.0

August 19 2017 Hour: 9: 5 39.2 Lat: 33.63N Lon: 35.37E Depth: 3 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	21	64	EP		9	5	42.53	-0.05	35					1.0
DQRL	SN	21	64	ES		9	5	44.99	-0.12						1.0
BHL	BZ	41	41	EP		9	5	45.71	-0.06						1.0
BHL	BE	41	41	ES		9	5	50.70	0.04						1.0
RCY	SZ	46	108	EP		9	5	46.66	0.09						1.0
RCY	SN	46	108	ES		9	5	52.05	-0.01						1.0
HWQ	SZ	90	36	EP		9	5	53.83	0.14						1.0
BEIL	SZ	127	36	EP		9	5	58.94	-0.50						0.2

August 19 2017 Hour: 9:53 37.2 Lat: 33.80N Lon: 35.77E Depth: 1 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	59	EP		953		39.20	-0.05						1.0
BHL	BZ	16	318	EP		953		39.63	-0.08	32					1.0
BHL	BE	16	318	ES		953		41.65	0.06						1.0
DQRL	SZ	21	240	EP		953		40.54	-0.03						1.0
RCY	SZ	34	169	EP		953		42.67	-0.03						1.0
RCY	SE	34	169	ES		953		46.85	0.06						1.0
HWQ	SZ	56	17	EP		953		46.23	0.09						1.0

BEIL SZ 91 25 EP 953 51.80-0.02 1.0

August 21 2017 Hour: 9:27 35.1 Lat: 33.53N 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	3	301	EP		927	35.53	-0.11	34						1.0
RCY	SZ	12	109	EP		927	37.01	-0.03							1.0
RCY	SN	12	109	ES		927	38.50	0.01							1.0
SHBL	SZ	21	172	EP		927	38.46	0.05							1.0
DQRL	SZ	23	325	EP		927	38.89	0.04							1.0
DQRL	SN	23	325	ES		927	41.71	0.07							1.0
BHL	BZ	42	352	EP		927	41.76	-0.03							1.0

August 22 2017 Hour: 0:23 6.8 Lat: 35.03N Lon: 36.29E Depth: 6 Agency: REL Regional
Magnitudes: 3.1MC 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	55	190	EP		023	15.66	-0.09	68						1.0
BEIL	SN	55	190	ES		023	22.43	0.03							1.0
HWQ	SZ	89	201	EP		023	21.28	0.06							1.0
HWQ	SE	89	201	ES		023	31.92	-0.01							1.0
ZAHL	SZ	135	196	EP		023	28.19	-0.01							1.0
BHL	BZ	138	205	EP		023	28.53	-0.04							1.0
BHL	BE	138	205	ES		023	44.68	-0.02							1.0
DQRL	SZ	161	204	EP		023	32.03	0.05							1.0
RCY	SZ	175	194	EP		023	34.10	0.03							1.0

August 22 2017 Hour: 13:48 53.9 Lat: 33.78N Lon: 35.76E Depth: 6 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		1348	56.56	0.03							1.0
BHL	BZ	17	323	EP		1348	56.75	-0.16	54						1.0
DQRL	SZ	20	245	EP		1348	57.34	0.01							1.0
DQRL	SN	20	245	ES		1348	59.97	0.11							1.0
BEYL	SZ	27	292	EP		1348	57.97	-0.41							0.2
RCY	SZ	32	168	EP		1348	59.23	-0.07							1.0
RCY	SN	32	168	ES		1349	3.28	-0.01							1.0
HWQ	BZ	58	17	EP		1349	3.27	-0.02							1.0
BEIL	SZ	93	25	EP		1349	9.07	0.14							1.0

August 22 2017 Hour: 14: 1 10.7 Lat: 33.62N Lon: 35.99E Depth: 0 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
RCY	SZ	20	226	EP		14 1	13.87	-0.04	57						1.0
RCY	SN	20	226	ES		14 1	16.30	-0.01							1.0
ZAHL	SZ	28	340	EP		14 1	15.14	-0.03							1.0
QRWL	SZ	30	254	EP		14 1	15.61	0.13							1.0
SHBL	SZ	38	217	EP		14 1	16.76	-0.06							1.0
DQRL	SZ	40	283	EP		14 1	17.19	0.06							1.0
DQRL	SN	40	283	ES		14 1	21.88	-0.03							1.0
BHL	BZ	44	315	EP		14 1	17.74	-0.05							1.0
HWQ	BZ	73	357	EP		14 1	22.34	-0.08							1.0
BEIL	SZ	104	10	EP		14 1	27.48	0.10							1.0

August 22 2017 Hour: 16:40 4.1 Lat: 33.79N Lon: 35.77E Depth: 7 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	55	EP		1640	6.56	0.02							1.0
BHL	BZ	17	319	EP		1640	6.97	-0.07	38						1.0
DQRL	SZ	21	243	EP		1640	7.67	-0.02							1.0

DQRL	SN	21	243	ES		1640	10.42	0.05									1.0
RCY	SZ	33	170	EP		1640	9.54	-0.07									1.0
RCY	SN	33	170	ES		1640	13.72	0.00									1.0
SHBL	SZ	49	183	EP		1640	12.17	0.04									1.0
HWQ	BZ	56	17	EP		1640	13.98	0.74									0.2

August 23 2017 Hour: 3:51 32.5 Lat: 33.83N Lon: 35.86E Depth: 0 Agency: REL Local
Magnitudes: 2.3MC 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	34	EP		351	33.03	-0.11	23						1.0
BHL	BZ	21	293	EP		351	35.85	-0.01							1.0
DQRL	SZ	30	243	EP		351	37.56	0.19							1.0
DQRL	SN	30	243	ES		351	40.85	-0.13							1.0
RCY	SZ	37	184	EP		351	38.46	0.01							1.0
RCY	SN	37	184	ES		351	42.85	-0.01							1.0
HWQ	BZ	50	9	EP		351	40.67	0.06							1.0

August 23 2017 Hour: 13:42 54.3 Agency: REL Regional
EMSC OT=13:42:54.3 36.09N 44.91E 10Km M=5.1 IRAN-IRAQ BORDER REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1344	42.25								
HWQ	BZ			EP		1344	45.96								
ZAHL	SZ			EP		1344	49.72								
BHL	BZ			EP		1344	51.01								
DQRL	SZ			EP		1344	53.69								
QRWL	SZ			EP		1344	53.02								
SHBL	SZ			EP		1344	53.27								

August 23 2017 Hour: 15:51 26.0 Lat: 33.79N Lon: 35.77E 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	13	55	EP		1551	28.55	0.00							1.0
BHL	BZ	17	320	EP		1551	29.00	-0.02	33						1.0
BHL	BN	17	320	ES		1551	31.27	0.02							1.0
DQRL	SZ	21	243	EP		1551	29.60	-0.02							1.0
RCY	SZ	33	169	EP		1551	31.53	-0.01							1.0
RCY	SN	33	169	ES		1551	35.61	-0.01							1.0
SHBL	SZ	49	183	EP		1551	34.10	0.05							1.0
HWQ	BZ	57	17	EP		1551	35.24	-0.01							1.0

August 23 2017 Hour: 16:27 21.7 Lat: 33.79N Lon: 35.78E 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	12	50	EP		1627	24.24	0.05							1.0
BHL	BZ	18	317	EP		1627	24.92	0.00	33						1.0
DQRL	SZ	22	245	EP		1627	25.55	0.03							1.0
DQRL	SN	22	245	ES		1627	28.32	-0.01							1.0
RCY	SZ	33	171	EP		1627	27.15	-0.05							1.0
RCY	SN	33	171	ES		1627	31.26	0.01							1.0
HWQ	BZ	56	15	EP		1627	30.86	-0.09							1.0
BEIL	SZ	92	24	EP		1627	36.59	0.05							1.0

August 25 2017 Hour: 15:50 36.2 Lat: 33.80N Lon: 35.76E Depth: 14 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	13	61	EP		1550	39.43	-0.01							1.0
BHL	BZ	15	318	EP		1550	39.74	0.04	30						1.0
DQRL	SZ	21	239	EP		1550	40.39	-0.01							1.0
DQRL	SN	21	239	ES		1550	43.47	-0.02							1.0

RCY	SZ	35	169	EP		1550	42.35	0.02									1.0
RCY	SE	35	169	ES		1550	46.85	0.00									1.0
HWQ	BZ	55	18	EP		1550	45.35	-0.02									1.0

August 25 2017 Hour: 20:55 13.2 Lat: 34.84N Lon: 33.32E Depth: 0 Agency: REL Regional
Magnitudes: 3.4MC REL Rms: 0.2 secs

CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	238	115	EP		2055	48.86	-0.04							1.0
DQRL	SZ	242	121	EP		2055	49.42	0.03							1.0
HWQ	BZ	249	104	EP		2055	50.45	0.23							1.0
HWQ	BN	249	104	ES		2056	17.46	-0.16							1.0
ZAHL	SZ	260	114	EP		2055	51.89	0.30							0.2
BEIL	SZ	264	96	EP		2055	51.85	-0.24	73						1.0
BEIL	SN	264	96	ES		2056	21.05	0.16							1.0

August 25 2017 Hour: 21:45 32.5 Agency: REL Regional
EMSC OT=21:45:32.5 36.44N 35.87E 18Km M=2.7 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2146		6.64							
HWQ	BZ			EP		2146		10.27							
BHL	BZ			EP		2146		16.09							
DQRL	SZ			EP		2146		20.13							

August 26 2017 Hour: 10:24 19.9 Lat: 33.79N Lon: 35.78E Depth: 8 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	52	EP		1024	22.53	0.00							1.0
BHL	BZ	17	319	EP		1024	23.05	-0.06	40						1.0
DQRL	SZ	21	245	EP		1024	23.65	-0.03							1.0
DQRL	SN	21	245	ES		1024	26.50	0.05							1.0
RCY	SZ	33	170	EP		1024	25.45	0.00							1.0
RCY	SN	33	170	ES		1024	29.52	-0.01							1.0
HWQ	BZ	57	16	EP		1024	29.26	0.05							1.0
BEIL	SZ	92	24	EP		1024	34.70	-0.05							0.2

August 26 2017 Hour: 16:13 49.9 Lat: 33.97N Lon: 36.22E Depth: 0 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	33	247	EP		1613	55.16	-0.09							1.0
HWQ	BZ	42	323	EP		1613	56.64	-0.00	49						1.0
HWQ	BN	42	323	ES		1614	1.69	0.03							1.0
BHL	BZ	53	262	EP		1613	58.32	-0.05							1.0
BEIL	SZ	63	357	EP		1614	0.02	-0.01							0.2
RCY	SZ	64	214	EP		1614	0.20	0.05							1.0
DQRL	SZ	67	244	EP		1614	0.69	0.02							1.0
DQRL	SN	67	244	ES		1614	8.69	0.03							1.0

August 27 2017 Hour: 11: 9 34.5 Lat: 33.79N Lon: 35.78E Depth: 7 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	53	EP		11 9	36.90	0.01							1.0
ZAHL	SN	12	53	ES		11 9	38.71	0.01							1.0
BHL	BZ	17	317	EP		11 9	37.43	-0.09	25						1.0
DQRL	SZ	22	244	EP		11 9	38.27	0.06							1.0
DQRL	SN	22	244	ES		11 9	41.00	0.02							1.0
RCY	SZ	33	171	EP		11 9	39.96	-0.05							1.0
HWQ	BZ	56	16	EP		11 9	43.65	0.05							1.0

August 28 2017 Hour: 6:21 14.6 Lat: 33.64N Lon: 35.58E Depth: 6 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	7	352	EP		621	16.24	-0.08	34						1.0
DQRL	SN	7	352	ES		621	17.65	0.07							1.0
QRWL	SZ	14	137	EP		621	17.02	-0.13							1.0
QRWL	SN	14	137	ES		621	19.02	-0.00							1.0
RCY	SZ	29	124	EP		621	19.45	0.06							1.0
BHL	BZ	30	13	EP		621	19.63	-0.01							1.0
SHBL	SZ	36	155	EP		621	20.60	0.09							1.0

August 28 2017 Hour: 9:44 27.8 Lat: 33.88N Lon: 35.85E Depth: 0 Agency: REL Local
Magnitudes: 2.3MC 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	133	EP		944	28.44	-0.02							1.0
BHL	BZ	19	277	EP		944	30.72	-0.03	24						1.0
BHL	BN	19	277	ES		944	32.92	-0.03							1.0
DQRL	SZ	33	233	EP		944	33.14	0.09							1.0
HWQ	BZ	45	11	EP		944	34.86	-0.10							1.0
HWQ	BN	45	11	ES		944	40.37	0.09							1.0
BEIL	SZ	79	23	EP	*	944	40.79	0.26							0.0

August 28 2017 Hour: 19:10 29.6 Lat: 36.52N Lon: 34.69E Depth: 14 Agency: REL Regional
Magnitudes: 3.9MC REL Rms: 0.1 secs

OFFSHORE SYRIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	258	148	EP		1911	6.21	-0.02							1.0
BEIL	SN	258	148	ES		1911	33.40	0.03							1.0
HWQ	BZ	274	155	EP		1911	8.19	-0.05	146						1.0
HWQ	BN	274	155	ES		1911	36.84	-0.03							1.0
BHL	BZ	304	163	EP		1911	11.73	-0.16							1.0
ZAHL	SZ	315	159	EP		1911	13.41	0.06							1.0
DQRL	SZ	323	165	EP		1911	14.18	-0.09							1.0
QRWL	SZ	342	164	EP		1911	16.67	-0.02							1.0
RCY	SZ	352	162	EP		1911	18.08	0.17							1.0
SHBL	SZ	365	164	EP		1911	19.69	0.11							1.0

August 29 2017 Hour: 13:54 53.9 Lat: 34.03N Lon: 35.75E Depth: 2 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	214	EP		1354	56.46	-0.07	38						1.0
BHL	BN	16	214	ES		1354	58.54	0.04							1.0
ZAHL	SZ	22	146	EP		1354	57.45	-0.07							1.0
HWQ	BZ	33	33	EP		1354	59.16	-0.12							1.0
HWQ	BN	33	33	ES		1355	3.37	0.09							1.0
DQRL	SZ	39	205	EP		1355	0.24	0.02							1.0
RCY	SZ	59	172	EP		1355	3.53	0.09							1.0
BEIL	SZ	70	35	EP		1355	5.18	0.03							1.0

August 29 2017 Hour: 16:39 58.7 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	14	48	EP		1640	0.99	0.05							1.0
ZAHL	SN	14	48	ES		1640	2.60	-0.01							1.0
BHL	BZ	18	321	EP		1640	1.52	-0.15	40						1.0
BHL	BE	18	321	ES		1640	3.89	0.03							1.0
DQRL	SZ	21	248	EP		1640	2.19	0.11							1.0
RCY	SZ	32	170	EP		1640	3.76	-0.07							1.0
HWQ	BZ	58	16	EP		1640	7.98	-0.05							1.0

BEIL SZ 93 24 EP 1640 13.76 0.09 1.0

August 30 2017 Hour: 7:34 4.2 Agency: REL Regional

EMSC OT=07:34:04.2 37.67N 37.45E 5Km M=3.9 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		734	56.45								
HWQ	BZ			EP		735	1.03								
DQRL	SZ			EP		735	11.73								
RCY	SZ			EP		735	11.58								

August 30 2017 Hour: 13:32 41.0 Lat: 34.01N Lon: 35.76E Depth: 1 Agency: REL Local

Magnitudes: 2.7MC REL

Rms: 0.0 secs

KESROUAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	15	218	EP		1332	43.50	-0.06	38						1.0
BHL	BN	15	218	ES		1332	45.44	0.02							1.0
ZAHL	SZ	21	145	EP		1332	44.47	0.01							1.0
HWQ	BZ	34	31	EP		1332	46.52	-0.04							1.0
HWQ	BN	34	31	ES		1332	50.66	0.02							1.0
DQRL	SZ	38	207	EP		1332	47.28	0.05							1.0
RCY	SZ	58	173	EP		1332	50.35	-0.03							1.0
BEIL	SZ	71	34	EP		1332	52.45	0.02							1.0

August 31 2017 Hour: 1:30 27.1

Agency: REL Regional

EMSC OT=01:30:27.1 27.90N 57.02E 10Km M=5.2 SOUTHERN IRAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		134	50.64								
SHBL	SZ			EP		134	51.16								
ZAHL	SZ			EP		134	51.16								
HWQ	BZ			EP		134	51.58								
BHL	BZ			EP		134	53.27								
DQRL	SZ			EP		134	54.01								

August 31 2017 Hour: 8:34 35.3 Lat: 33.55N Lon: 35.71E Depth: 0 Agency: REL Local

Magnitudes: 2.5MC REL

Rms: 0.0 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	3	265	EP		834	35.76	-0.06							1.0
RCY	SZ	13	118	EP		834	37.31	-0.07	29						1.0
RCY	SN	13	118	ES		834	38.94	0.02							1.0
DQRL	SZ	22	322	EP		834	38.86	0.02							1.0
DQRL	SN	22	322	ES		834	41.47	0.02							1.0
SHBL	SZ	23	173	EP		834	39.02	0.06							1.0

August 31 2017 Hour: 12:15 28.0 Lat: 33.79N Lon: 35.78E Depth: 3 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	53	EP		1215	30.21	0.02							1.0
BHL	BZ	17	318	EP		1215	30.82	-0.05	26						1.0
BHL	BN	17	318	ES		1215	32.95	-0.01							1.0
DQRL	SZ	21	244	EP		1215	31.59	0.06							1.0
RCY	SZ	33	170	EP		1215	33.34	-0.06							1.0
RCY	SN	33	170	ES		1215	37.37	0.01							1.0
HWQ	BZ	56	16	EP		1215	37.18	0.02							1.0

August 31 2017 Hour: 17:46 1.8

Agency: REL Distant

EMSC OT=17:46:01.8 58.44N 153.64W 63Km M=5.5 KODIAK ISLAND REGION, ALASKA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1758	38.47								
HWQ	BZ			EP		1758	39.31								
BHL	BZ			EP		1758	41.07								
ZAHL	SZ			EP		1758	41.61								
DQRL	SZ			EP		1758	42.83								

QRWL	SZ	EP	1758	43.44
RCY	SZ	EP	1758	43.60
SHBL	SZ	EP	1758	44.51

August 31 2017 Hour: 22:57 40.1

Agency: REL Distant

EMSC OT=22:57:40.1 0.19S 125.23E 60Km M=5.4 MOLUCCA SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2310	30.83								
HWQ	BZ			EP		2310	31.64								
ZAHL	SZ			EP		2310	32.04								
SHBL	SZ			EP		2310	32.65								
BHL	BZ			EP		2310	32.39								
DQRL	SZ			EP		2310	33.30								

Epicentral Map of Lebanon

AUGUST 2017

