

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

September

2017

Prepared by
The National Centre for Geophysical Research
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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 ($0.5 * (\text{peak to peak})$), (nm) at period PERI

PERI: Period where amplitude is measured

BAZ: Back azimuth (station to event)

ARES: Back azimuth residual

VELO: Apparent phase velocity (km/sec)

WT: Weight of phase in the location

*: An asterisk before the phase arrival time implies a potential timing error. If an S phase is read, differential S-P times will be used in the hypocenter location.

September 3 2017 Hour: 3:30 1.0

Agency: REL Distant

EMSC OT=03:30:01.0 41.36N 129.00E 1Km M=6.3 NORTH KOREA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		341	15.56								
HWQ	BZ			EP		341	17.04								
ZAHL	SZ			EP		341	19.21								
BHL	BZ			EP		341	19.26								
DQRL	SZ			EP		341	20.74								
QRWL	SZ			EP		341	20.88								
SHBL	SZ			EP		341	21.20								

September 3 2017 Hour: 5:25 11.6 Lat: 34.81N Lon: 34.19E Depth: 3

Agency: REL Regional

Magnitudes: 3.4MC REL

Rms: 0.2 secs

EASTERN MEDITERRANEAN SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	168	126	EP		525	37.65	-0.33							1.0
HWQ	BZ	171	110	EP		525	38.60	0.07							1.0
HWQ	BN	171	110	ES		525	58.69	0.26							1.0
DQRL	SZ	176	134	EP		525	39.01	-0.22							1.0
BEIL	SZ	185	99	EP		525	40.57	0.25	81						1.0
BEIL	SN	185	99	ES		526	1.18	-0.37							1.0
ZAHL	SZ	188	124	EP		525	40.95	0.17							1.0
QRWL	SZ	196	135	EP		525	41.62	-0.10							1.0
RCY	SZ	210	133	EP		525	43.59	0.07							1.0
RCY	SN	210	133	ES		526	7.23	0.10							1.0
SHBL	SZ	216	138	EP		525	44.39	0.10							1.0

September 4 2017 Hour: 1:1 27.1 Lat: 34.85N Lon: 36.45E 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
BEIL	SZ	42	216	EP		1	33.83	-0.05	62						1.0
BEIL	SN	42	216	ES		1	38.92	0.01							1.0
HWQ	BZ	79	216	EP		1	39.80	0.02							1.0
HWQ	BN	79	216	ES		1	49.14	-0.02							1.0
ZAHL	SZ	122	206	EP		1	46.73	-0.00							1.0
ZAHL	SN	122	206	ES		1	2	1.23	-0.03						1.0
BHL	BZ	128	215	EP		1	1	47.70	-0.05						1.0
BHL	BN	128	215	ES		1	2	3.11	0.08						1.0
DQRL	SZ	151	213	EP		1	1	51.10	-0.05						1.0
SHBL	SZ	179	202	EP		1	1	55.46	0.13						1.0
SHBL	SN	179	202	ES		1	2	16.18	-0.04						1.0

September 4 2017 Hour: 14:33 52.5

Agency: REL Regional

EMSC OT=14:33:52.5 34.19N 24.93E 10Km M=4.8 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		1436	4.39								
HWQ	BZ			EP		1436	5.29								
BEIL	SZ			EP		1436	7.56								

September 4 2017 Hour: 14:43 48.7 Lat: 33.78N Lon: 35.78E Depth: 4

Agency: REL Local

Magnitudes: 2.4MC REL

Rms: 0.1 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	13	51	EP		1443	51.05	0.00							1.0
BHL	BZ	17	320	EP		1443	51.59	-0.09	25						1.0
DQRL	SZ	21	246	EP		1443	52.24	0.04							1.0
DQRL	SN	21	246	ES		1443	54.81	0.03							1.0
RCY	SZ	32	170	EP		1443	53.91	-0.12							1.0
RCY	SE	32	170	ES		1443	58.01	0.06							1.0
HWQ	BZ	57	16	EP		1443	58.04	0.07							1.0
BEIL	SZ	92	24	EP		1444	3.63	0.02							1.0

September 4 2017 Hour: 15:32 54.9 Lat: 34.71N Lon: 36.07E Depth: 0 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	21	152	EP		1532	58.45	0.15	49						1.0
BEIL	SN	21	152	ES		1533	0.77	-0.08							1.0
HWQ	BZ	50	194	EP		1533	2.68	-0.16							1.0
BHQ	BN	50	194	ES		1533	8.83	0.09							1.0
BHL	BZ	98	203	EP		1533	10.57	-0.02							1.0
DQRL	SZ	121	203	EP		1533	14.37	0.02							1.0

September 7 2017 Hour: 10:27 2.8 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	306	EP		1027	3.30	-0.09							1.0
RCY	SZ	12	108	EP		1027	4.68	-0.10	36						1.0
RCY	SN	12	108	ES		1027	6.28	0.05							1.0
SHBL	SZ	20	172	EP		1027	6.17	0.06							1.0
DQRL	SZ	24	326	EP		1027	6.65	0.03							1.0
DQRL	SN	24	326	ES		1027	9.48	0.05							1.0
ZAHL	SZ	40	24	EP		1027	9.26	0.01							1.0

September 7 2017 Hour: 10:41 12.7 Lat: 33.47N Lon: 35.70E Depth: 0 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	352	EP		1041	13.98	-0.13							1.0
RCY	SZ	13	77	EP		1041	14.84	-0.00	31						1.0
RCY	SE	13	77	ES		1041	16.47	0.02							1.0
SHBL	SZ	14	162	EP		1041	14.98	0.01							1.0
DQRL	SZ	29	336	EP		1041	17.35	0.03							1.0
DQRL	SN	29	336	ES		1041	20.81	0.06							1.0

September 7 2017 Hour: 15: 4 11.3 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	12	49	EP		15 4	13.80	-0.02							1.0
BHL	BZ	18	318	EP		15 4	14.49	-0.07	34						1.0
BHL	BN	18	318	ES		15 4	16.98	0.04							1.0
DQRL	SZ	22	246	EP		15 4	15.16	0.04							1.0
QRWL	SZ	28	200	EP		15 4	15.94	-0.12							1.0
RCY	SZ	32	171	EP		15 4	16.76	-0.00							1.0
RCY	SN	32	171	ES		15 4	20.80	0.03							1.0
SHBL	SZ	49	184	EP		15 4	19.40	0.09							1.0
HWQ	BZ	57	15	EP		15 4	20.81	0.21							0.2
BEIL	SZ	92	24	EP		15 4	26.34	0.14							0.2

September 7 2017 Hour: 17:26 50.8 Agency: REL Distant
EMSC OT=17:26:50.8 27.77N 139.76E 480Km M=6.1 BONIN ISLANDS, JAPAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1738	35.05								
HWQ	BZ			EP		1738	36.05								
BHL	BZ			EP		1738	37.60								
ZAHL	SZ			EP		1738	37.76								

September 8 2017 Hour: 7:39 55.8 Lat: 33.84N Lon: 36.09E Depth: 7 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	19	277	EP		739	59.17	-0.00							1.0
BHL	BZ	41	281	EP		740	2.58	0.04							1.0
RCY	SZ	45	212	EP		740	2.94	-0.17	48						1.0
RCY	SN	45	212	ES		740	8.59	0.05							1.0
DQRL	SZ	50	253	EP		740	3.96	-0.05							1.0
DQRL	SN	50	253	ES		740	10.12	0.01							1.0
HWQ	BZ	51	345	EP		740	4.04	-0.03							1.0
SHBL	SZ	63	211	EP		740	6.16	0.11							1.0
BEIL	SZ	79	6	EP		740	8.56	0.04							1.0

September 8 2017 Hour: 17:20 42.3 Lat: 34.70N Lon: 36.12E Depth: 4 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	19	162	EP		1720	45.38	-0.03	53						1.0
BEIL	SN	19	162	ES		1720	47.75	0.03							1.0
HWQ	BZ	50	199	EP		1720	50.27	-0.07							1.0
HWQ	BN	50	199	ES		1720	56.29	-0.02							1.0
ZAHL	SZ	96	193	EP		1720	57.79	-0.02							0.2
BHL	BZ	98	206	EP		1720	58.27	0.10							1.0
DQRL	SZ	122	205	EP		1721	1.81	-0.00							1.0

September 8 2017 Hour: 22:7 10.0 Lat: 32.15N Lon: 33.11E Depth: 28 Agency: REL Regional
Magnitudes: 3.4MC 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	281	61	EP		22 7	48.31	-0.09							1.0
DQRL	SZ	288	53	EP		22 7	49.16	-0.08	80						1.0
DQRL	SE	288	53	ES		22 8	18.22	-0.09							1.0
RCY	SZ	296	59	EP		22 7	50.46	0.16							1.0
BHL	BZ	307	50	EP		22 7	51.58	-0.10							1.0
ZAHL	SZ	321	53	EP		22 7	53.44	-0.00							1.0
HWQ	BZ	355	48	EP		22 7	57.55	0.02							1.0
BEIL	SZ	390	46	EP		22 8	1.84	0.03							1.0
BEIL	SN	390	46	ES		22 8	40.25	0.08							1.0

September 8 2017 Hour: 23:23 33.8 Agency: REL Regional
EMSC OT=23:23:33.8 37.16N 27.72E 8Km M=3.9 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2325	19.74								
HWQ	BZ			EP		2325	20.04								
BEIL	SZ			EP		2325	21.10								
SHBL	SZ			EP		2325	23.56								

September 9 2017 Hour: 14:14 40.2 Lat: 33.80N Lon: 35.77E Depth: 8 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	12	59	EP		1414	42.65	-0.06							1.0
BHL	BZ	16	316	EP		1414	43.19	0.02	39						1.0
BHL	BN	16	316	ES		1414	45.44	0.03							1.0
DQRL	SZ	22	241	EP		1414	43.92	-0.05							1.0
DQRL	SE	22	241	ES		1414	46.78	-0.02							1.0
RCY	SZ	34	170	EP		1414	45.93	0.01							1.0
RCY	SN	34	170	ES		1414	50.23	0.05							1.0
HWQ	BZ	55	17	EP		1414	49.57	0.35							0.2
BEIL	SZ	91	25	EP		1414	54.73	-0.04							0.2

September 9 2017 Hour: 14:59 47.9 Lat: 33.81N Lon: 35.80E Depth: 17 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	55	EP		1459	51.20	-0.05							1.0
BHL	BZ	17	310	EP		1459	51.81	-0.07	32						1.0
DQRL	SZ	24	242	EP		1459	52.48	-0.16							1.0
DQRL	SN	24	242	ES		1459	56.30	0.14							1.0
RCY	SZ	35	174	EP		1459	54.11	0.01							1.0
RCY	SN	35	174	ES		1459	58.75	0.05							1.0
SHBL	SZ	51	186	EP		1459	56.41	-0.04							1.0
HWQ	BZ	54	15	EP		1459	57.03	0.12							1.0

September 9 2017 Hour: 15:26 46.9 Lat: 33.99N Lon: 36.11E Depth: 16 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	25	236	EP		1526	51.76	0.01							1.0
HWQ	BZ	36	335	EP		1526	53.11	-0.10							1.0
HWQ	BN	36	335	ES		1526	57.97	0.06							1.0
BHL	BZ	43	258	EP		1526	54.08	-0.16	45						1.0
DQRL	SZ	59	238	EP		1526	56.59	0.07							1.0
DQRL	SN	59	238	ES		1527	3.73	0.06							1.0
RCY	SZ	60	205	EP		1526	56.62	-0.08							1.0
RCY	SN	60	205	ES		1527	4.04	0.06							1.0
BEIL	SZ	62	6	EP		1526	57.06	0.08							1.0
SHBL	SZ	78	206	EP		1526	59.42	0.00							1.0

September 10 2017 Hour: 10:55 56.8 Lat: 33.77N 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	45	EP		1055	59.15	-0.01							1.0
ZAHL	SN	13	45	ES		1056	0.88	0.02							1.0
BHL	BZ	19	320	EP		1055	59.84	-0.16	33						1.0
DQRL	SZ	21	249	EP		1056	0.43	0.04							1.0
DQRL	SN	21	249	ES		1056	3.06	0.06							1.0
RCY	SZ	31	171	EP		1056	1.91	-0.06							1.0
HWQ	BZ	58	15	EP		1056	6.32	0.10							1.0

September 10 2017 Hour: 12:27 6.7 Lat: 33.79N Lon: 35.78E Depth: 6 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	50	EP		1227	9.02	0.04							1.0
ZAHL	SN	12	50	ES		1227	10.68	-0.01							1.0
BHL	BZ	18	318	EP		1227	9.69	-0.06	38						1.0
BHL	BN	18	318	ES		1227	12.02	-0.01							1.0
DQRL	SZ	22	246	EP		1227	10.40	0.06							1.0
RCY	SZ	33	171	EP		1227	11.99	-0.05							1.0
HWQ	BZ	57	15	EP		1227	15.88	0.01							1.0

September 10 2017 Hour: 14:53 17.3 Lat: 32.94N Lon: 35.64E Depth: 7 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	47	12	EP		1453	24.97	0.05							1.0
SHBL	SN	47	12	ES		1453	30.55	-0.02							1.0
RCY	SZ	65	17	EP		1453	27.68	-0.12	65						1.0
RCY	SN	65	17	ES		1453	35.64	0.06							1.0
QRWL	SZ	68	4	EP		1453	28.26	-0.03							1.0
DQRL	SZ	85	356	EP		1453	30.99	-0.12	55						1.0
DQRL	SN	85	356	ES		1453	41.35	0.01							1.0

ZAHL	SZ	105	13	EP	1453	34.22	0.08										1.0
ZAHL	SN	105	13	ES	1453	46.72	0.12										1.0
BHL	BZ	107	1	EP	1453	34.49	-0.01										1.0
BHL	BN	107	1	ES	1453	47.16	-0.07										1.0
HWQ	BZ	151	11	EP	1453	41.10	0.09										1.0
BEIL	SZ	185	16	EP	1453	45.47	-0.16										1.0

September 11 2017 Hour: 16:217.2 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	51	EP		16	2	19.66	0.00						1.0
BHL	BZ	18	323	EP		16	2	20.14	-0.04	54					1.0
DQRL	SZ	20	246	EP		16	2	20.69	0.13						1.0
DQRL	SN	20	246	ES		16	2	22.99	-0.03						1.0
QRWL	SZ	27	197	EP		16	2	21.52	-0.10						1.0
RCY	SZ	32	169	EP		16	2	22.46	0.02						1.0
RCY	SN	32	169	ES		16	2	26.32	0.02						1.0
SHBL	SZ	48	183	EP		16	2	24.96	-0.02						1.0
HWQ	BZ	58	16	EP		16	2	26.58	-0.03						1.0
BEIL	SZ	93	24	EP		16	2	32.79	0.53						0.2

September 14 2017 Hour: 10:4738.7 Lat: 33.54N Lon: 35.72E 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	3	279	EP		1047		39.16	-0.07	25					1.0
RCY	SZ	12	115	EP		1047		40.69	-0.00						1.0
RCY	SN	12	115	ES		1047		42.14	-0.03						1.0
SHBL	SZ	22	173	EP		1047		42.27	0.05						1.0
DQRL	SZ	23	323	EP		1047		42.37	0.03						1.0
DQRL	SN	23	323	ES		1047		45.04	0.01						1.0

September 14 2017 Hour: 14:4949.1 Lat: 34.11N Lon: 36.16E Depth: 11 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	27	313	EP		1449		53.86	-0.01	32					1.0
HWQ	BN	27	313	ES		1449		57.42	0.01						1.0
ZAHL	SZ	38	222	EP		1449		55.57	0.01						1.0
ZAHL	SN	38	222	ES		1450		0.35	-0.00						1.0
BHL	BZ	52	244	EP		1449		57.72	-0.02						1.0
DQRL	SZ	71	230	EP		1450		0.65	0.01						1.0

September 15 2017 Hour: 15:3634.2 Lat: 33.78N Lon: 35.77E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	53	EP		1536		36.46	0.02						1.0
BHL	BZ	17	322	EP		1536		36.91	-0.08	50					1.0
DQRL	SZ	20	245	EP		1536		37.55	0.03						1.0
DQRL	SN	20	245	ES		1536		39.98	0.03						1.0
RCY	SZ	33	169	EP		1536		39.45	-0.03						1.0
SHBL	SZ	48	183	EP		1536		42.05	0.01						1.0
SHBL	SN	48	183	ES		1536		47.80	-0.02						1.0
HWQ	BZ	57	17	EP		1536		43.48	0.01						1.0
BEIL	SZ	92	24	EP		1536		49.16	0.02						1.0

September 16 2017 Hour: 12:32 29.2 Lat: 34.18N Lon: 36.35E Depth: 8 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
HWQ	BZ	38	286	EP		1232	35.53	-0.00	50						1.0
HWQ	BN	38	286	ES		1232	40.24	-0.00							1.0
BEIL	SZ	42	340	EP		1232	36.12	-0.04							1.0
BEIL	SN	42	340	ES		1232	41.37	0.04							1.0
ZAHL	SZ	56	230	EP		1232	38.37	0.06							1.0
BHL	BZ	71	244	EP		1232	40.66	-0.06							1.0
DQRL	SZ	89	234	EP		1232	43.63	0.01							1.0

September 18 2017 Hour: 9:13 56.8 Lat: 33.60N Lon: 35.70E Depth: 3 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	6	197	EP		913	57.81	-0.10	29						1.0
QRWL	SN	6	197	ES		913	58.81	0.04							1.0
RCY	SZ	17	131	EP		913	59.55	-0.02	28						1.0
RCY	SN	17	131	ES		914	1.67	0.02							1.0
DQRL	SZ	17	315	EP		913	59.64	0.03							1.0
SHBL	SZ	28	172	EP		914	1.33	0.03							1.0

September 18 2017 Hour: 11:4 26.6 Lat: 33.54N Lon: 35.72E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC 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	281	EP		11 4	27.00	-0.11	41						1.0
RCY	SZ	12	115	EP		11 4	28.53	-0.03							1.0
RCY	SN	12	115	ES		11 4	30.01	-0.02							1.0
SHBL	SZ	22	173	EP		11 4	30.16	0.08							1.0
DQRL	SZ	23	323	EP		11 4	30.28	0.06							1.0
DQRL	SE	23	323	ES		11 4	32.94	0.02							1.0
BHL	BZ	41	352	EP		11 4	32.99	-0.12							0.2

September 18 2017 Hour: 12:23 50.3 Lat: 33.78N Lon: 35.76E Depth: 8 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	55	EP		1223	53.00	-0.04							1.0
BHL	BZ	17	324	EP		1223	53.24	-0.08	44						1.0
BHL	BN	17	324	ES		1223	55.60	0.04							1.0
DQRL	SZ	20	244	EP		1223	53.81	0.05							1.0
QRWL	SZ	27	195	EP		1223	54.78	-0.12							1.0
RCY	SZ	33	167	EP		1223	55.85	0.07							1.0
RCY	SN	33	167	ES		1223	59.86	0.03							1.0
HWQ	BZ	58	18	EP		1223	59.73	0.05							1.0

September 18 2017 Hour: 14:28 7.8 Lat: 33.88N Lon: 35.85E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	3	125	EP		1428	8.36	-0.02	39						1.0
BHL	BZ	19	280	EP		1428	10.67	-0.16							1.0
BHL	BN	19	280	ES		1428	13.18	0.10							1.0
DQRL	SZ	32	234	EP		1428	13.01	-0.01							1.0
RCY	SZ	42	182	EP		1428	14.61	0.02							1.0
RCY	SN	42	182	ES		1428	19.64	0.02							1.0
HWQ	BZ	45	11	EP		1428	15.16	0.05							1.0

September 18 2017 Hour: 14:31 24.0 Lat: 33.79N Lon: 35.77E 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	55	EP		1431	26.34	0.02							1.0
BHL	BZ	17	319	EP		1431	26.79	-0.10	35						1.0
DQRL	SZ	21	243	EP		1431	27.60	0.02							1.0
DQRL	SN	21	243	ES		1431	30.24	0.05							1.0
RCY	SZ	33	170	EP		1431	29.45	-0.06							1.0
RCY	SN	33	170	ES		1431	33.55	0.01							1.0
HWQ	BZ	56	16	EP		1431	33.24	0.07							1.0

September 18 2017 Hour: 23:13 35.3 Lat: 33.81N Lon: 35.79E 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	11	59	EP		2313	37.29	-0.04							1.0
BHL	BZ	16	311	EP		2313	38.22	0.09	28						1.0
BHL	BE	16	311	ES		2313	40.22	0.02							1.0
DQRL	SZ	23	240	EP		2313	39.00	-0.18							1.0
SHBL	SZ	51	184	EP		2313	43.73	0.08							1.0
SHBL	SN	51	184	ES		2313	49.85	0.04							1.0
HWQ	BZ	54	16	EP		2313	44.18	0.07							1.0
BEIL	SZ	89	24	EP		2313	49.67	-0.08							1.0

September 19 2017 Hour: 10:37 36.3 Agency: REL Regional
EMSC OT=10:37:36.3 35.88N 35.66E 10Km M=3.0 NEAR THE COAST OF SYRIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1038	3.81								
HWQ	BZ			EP		1038	6.17								
BHL	BZ			EP		1038	11.69								
ZAHL	SZ			EP		1038	13.06								
DQRL	SZ			EP		1038	15.31								

September 19 2017 Hour: 15:32 34.6 Lat: 33.79N Lon: 35.79E 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	50	EP		1532	37.33	-0.05							1.0
BHL	BZ	18	315	EP		1532	38.04	-0.04	42						1.0
BHL	BE	18	315	ES		1532	40.72	0.04							1.0
DQRL	SZ	22	245	EP		1532	38.67	-0.03							1.0
RCY	SZ	33	172	EP		1532	40.28	0.00							1.0
RCY	SN	33	172	ES		1532	44.53	0.03							1.0
HWQ	BZ	56	15	EP		1532	43.88	0.04							1.0

September 19 2017 Hour: 15:54 47.0 Lat: 33.79N Lon: 35.77E Depth: 9 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	55	EP		1554	49.74	-0.04							1.0
BHL	BZ	17	321	EP		1554	50.14	-0.04	33						1.0
BHL	BN	17	321	ES		1554	52.58	0.07							1.0
DQRL	SZ	20	243	EP		1554	50.64	-0.09							1.0
RCY	SZ	33	169	EP		1554	52.60	-0.04							1.0
RCY	SN	33	169	ES		1554	56.80	0.02							1.0
SHBL	SZ	49	183	EP		1554	55.21	0.10							1.0
HWQ	BZ	57	17	EP		1554	56.36	0.02							1.0

September 20 2017 Hour: 0: 8 15.2

Agency: REL Distant

EMSC OT=00:08:15.2 30.67N 57.43E 10Km M=5.0 EASTERN IRAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		012	32.79								
ZAHL	SZ			EP		012	33.48								
SHBL	SZ			EP		012	34.53								
BHL	BZ			EP		012	35.56								

September 20 2017 Hour: 3:40 52.8 Lat: 33.88N Lon: 34.69E Depth: 16 Agency: REL Local
Magnitudes: 3.1MC 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	84	103	EP		341	6.27	0.09							1.0
DQRL	SN	84	103	ES		341	16.15	0.10							1.0
BHL	BZ	89	88	EP		341	6.85	-0.14	62						1.0
BHL	BN	89	88	ES		341	17.61	0.15							1.0
QRWL	SZ	99	111	EP		341	8.41	-0.00							1.0
ZAHL	SZ	111	91	EP		341	10.25	0.11							1.0
SHBL	SZ	114	121	EP		341	10.58	-0.09							1.0
RCY	SZ	115	111	EP		341	10.68	-0.02							1.0
RCY	SN	115	111	ES		341	23.80	-0.12							1.0
HWQ	BZ	124	69	EP		341	12.21	0.08							1.0
HWQ	BN	124	69	ES		341	26.23	-0.17							1.0
BEIL	SZ	156	62	EP		341	16.74	0.01							1.0

September 20 2017 Hour: 7:38 51.7 Lat: 33.82N Lon: 36.06E Depth: 20 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.2 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	17	285	EP		738	55.55	-0.40							1.0
ZAHL	SN	17	285	ES		738	59.15	0.05							1.0
BHL	BZ	39	284	EP		738	58.57	-0.01							1.0
RCY	SZ	41	210	EP		738	59.16	0.18							1.0
RCY	SN	41	210	ES		739	4.53	0.15							1.0
DQRL	SZ	47	255	EP		738	59.63	-0.11							1.0
HWQ	BZ	52	349	EP		739	0.26	-0.21	48						1.0
HWQ	BN	52	349	ES		739	7.36	0.39							1.0
BEIL	SZ	81	8	EP		739	4.59	-0.04							1.0

September 20 2017 Hour: 16:37 16.4

Agency: REL Distant

EMSC OT=16:37:16.4 38.01N 144.65E 10Km M=6.1 OFF EAST COAST OF HONSHU, JAPAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1649	37.87								
HWQ	BZ			EP		1649	38.73								
BHL	BZ			EP		1649	41.03								
SHBL	SZ			EP		1649	43.11								

September 21 2017 Hour: 14:40 23.5 Lat: 33.88N 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	122	EP		1440	24.14	-0.07							1.0
BHL	BZ	18	280	EP		1440	26.41	-0.10	33						1.0
DQRL	SZ	32	234	EP		1440	28.70	-0.02							1.0
DQRL	SN	32	234	ES		1440	32.64	0.08							1.0
RCY	SZ	42	182	EP		1440	30.36	0.01							1.0
RCY	SN	42	182	ES		1440	35.40	0.01							1.0
HWQ	BZ	45	11	EP		1440	30.75	-0.12							1.0
BEIL	SZ	80	23	EP		1440	36.66	0.21							1.0

September 23 2017 Hour: 11:44 44.5 Lat: 33.79N Lon: 35.77E Depth: 2 Agency: REL Local
Magnitudes: 2.3MC 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	54	EP		1144	46.64	-0.01							1.0
BHL	BZ	17	319	EP		1144	47.18	-0.04	24						1.0
DQRL	SZ	21	243	EP		1144	47.93	0.06							1.0
DQRL	SN	21	243	ES		1144	50.39	-0.01							1.0
RCY	SZ	33	170	EP		1144	49.71	-0.12							1.0
RCY	SN	33	170	ES		1144	53.88	0.07							1.0
HWQ	BZ	57	17	EP		1144	53.64	0.05							1.0

September 23 2017 Hour: 14:26 14.0 Lat: 33.78N Lon: 35.78E Depth: 5 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		1426	16.32	-0.03							1.0
ZAHL	SN	13	50	ES		1426	18.15	0.04							1.0
BHL	BZ	18	321	EP		1426	16.88	-0.12	41						1.0
BHL	BN	18	321	ES		1426	19.25	0.02							1.0
DQRL	SZ	21	247	EP		1426	17.55	0.09							1.0
RCY	SZ	32	170	EP		1426	19.29	0.06							1.0
RCY	SN	32	170	ES		1426	23.05	-0.07							1.0
HWQ	BZ	57	16	EP		1426	23.21	-0.08							1.0
BEIL	SZ	93	24	EP		1426	29.01	0.09							1.0

September 23 2017 Hour: 14:36 8.7 Lat: 33.78N Lon: 35.78E Depth: 6 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	51	EP		1436	11.23	-0.00							1.0
BHL	BZ	18	320	EP		1436	11.71	-0.13	38						1.0
BHL	BN	18	320	ES		1436	14.18	0.06							1.0
DQRL	SZ	21	246	EP		1436	12.36	0.03							1.0
RCY	SZ	32	170	EP		1436	14.14	0.03							1.0
RCY	SE	32	170	ES		1436	18.05	-0.02							1.0
HWQ	BZ	57	16	EP		1436	18.20	0.14							0.2
BEIL	SZ	92	24	EP		1436	24.00	0.32							0.2

September 23 2017 Hour: 15: 8 50.0 Lat: 33.52N Lon: 35.65E Depth: 6 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	4	45	EP		15 8	51.51	0.07							1.0
RCY	SZ	18	98	EP		15 8	53.08	-0.06	44						1.0
RCY	SN	18	98	ES		15 8	55.47	0.01							1.0
SHBL	SZ	21	155	EP		15 8	53.64	0.00							1.0
DQRL	SZ	22	341	EP		15 8	53.71	-0.05							1.0
DQRL	SN	22	341	ES		15 8	56.59	0.06							1.0
BHL	BZ	43	1	EP		15 8	56.93	-0.08							1.0
BHL	BN	43	1	ES		15 9	2.15	-0.04							1.0
ZAHL	SZ	44	30	EP		15 8	57.15	-0.00							1.0
HWQ	BZ	89	18	EP		15 9	4.34	-0.01							1.0
BEIL	SZ	124	23	EP		15 9	9.75	0.09							1.0

September 24 2017 Hour: 16:57 17.0

Agency: REL Regional

EMSC OT=16:57:17.0 36.94N 27.30E 7Km M=4.5 DODECANESE-TURKEY BORDER REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ			EP		1658	59.84								
BHL	BZ			EP		1659	4.15								
HWQ	BZ			EP		1659	5.89								
DQRL	SZ			EP		1659	5.44								
RCY	SZ			EP		1659	8.63								

BEIL SZ EP 1659 6.90

September 25 2017 Hour: 10: 4 32.0 Lat: 34.51N Lon: 36.73E Depth: 10 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.5 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	50	274	EP		10	4	40.47	0.19	61					1.0
BEIL	SN	50	274	ES		10	4	46.26	-0.15						1.0
HWQ	BZ	77	250	EP		10	4	44.40	-0.07						1.0
HWQ	BN	77	250	ES		10	4	53.85	0.14						1.0
ZAHL	SZ	106	227	EP		10	4	46.90	-1.96						0.2
BHL	BZ	120	236	EP		10	4	51.19	0.36						0.2
DQRL	SZ	139	230	EP		10	4	53.64	-0.07						0.2

September 25 2017 Hour: 13:38 1.5 Lat: 33.87N Lon: 35.84E Depth: 0 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.1 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	4	111	EP		1338		2.05	-0.18						1.0
BHL	BZ	18	282	EP		1338		4.25	-0.11	68					1.0
BHL	BN	18	282	ES		1338		6.49	0.01						1.0
DQRL	SZ	31	234	EP		1338		6.50	-0.03						1.0
RCY	SZ	42	181	EP		1338		8.28	0.06						1.0
RCY	SN	42	181	ES		1338		13.34	0.15						1.0
HWQ	BZ	46	12	EP		1338		8.91	-0.03						1.0
HWQ	BN	46	12	ES		1338		14.60	0.16						1.0
SHBL	SZ	59	189	EP		1338		10.97	-0.01						1.0
BEIL	SZ	81	23	EP		1338		14.52	-0.01						1.0

September 25 2017 Hour: 15:53 14.5 Lat: 33.78N Lon: 35.77E Depth: 7 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	52	EP		1553		17.01	-0.06						1.0
BHL	BZ	17	321	EP		1553		17.51	-0.06	62					1.0
DQRL	SZ	20	245	EP		1553		18.05	-0.00						1.0
DQRL	SN	20	245	ES		1553		20.76	0.08						1.0
QRWL	SZ	27	197	EP		1553		19.02	-0.09						1.0
RCY	SZ	32	169	EP		1553		19.87	-0.04						1.0
RCY	SN	32	169	ES		1553		23.97	0.06						1.0
SHBL	SZ	48	183	EP		1553		22.46	0.04						1.0
HWQ	BZ	57	16	EP		1553		23.70	-0.12						1.0
BEIL	SZ	92	24	EP		1553		29.50	0.05						1.0
BEIL	SN	92	24	ES		1553		40.65	0.14						1.0

September 25 2017 Hour: 21: 6 51.9 Lat: 36.05N Lon: 35.73E Depth: 32 Agency: REL Regional
Magnitudes: 3.6MC REL Rms: 0.2 secs

OFFSHORE SYRIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	172	166	EP		21	7	16.62	0.20	114					1.0
BEIL	SN	172	166	ES		21	7	34.37	-0.22						1.0
HWQ	BZ	197	174	EP		21	7	19.69	0.08						1.0
HWQ	BN	197	174	ES		21	7	40.28	0.14						1.0
BHL	BZ	238	182	EP		21	7	24.54	-0.09						1.0
ZAHL	SZ	243	177	EP		21	7	25.39	0.06						1.0
DQRL	SZ	260	183	EP		21	7	27.14	-0.26						1.0
DQRL	SN	260	183	ES		21	7	53.78	0.08						1.0

September 26 2017 Hour: 4:20 0.7

Agency: REL Distant

EMSC OT=04:20:00.7 23.63S 176.94W 100Km M=6.4 SOUTH OF FIJI ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		439	33.29								
HWQ	BZ			EP		439	32.94								
BHL	BZ			EP		439	33.63								
RCY	SZ			EP		439	34.16								
SHBL	SZ			EP		439	34.50								

September 26 2017 Hour: 12:40 6.0 Lat: 34.04N Lon: 35.68E Depth: 3 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	15	188	EP		1240	8.52	0.01	43						1.0
BHL	BN	15	188	ES		1240	10.41	0.01							1.0
ZAHL	SZ	28	136	EP		1240	10.42	-0.11							1.0
HWQ	BZ	36	43	EP		1240	11.85	-0.02							1.0
HWQ	BN	36	43	ES		1240	16.25	0.01							1.0
DQRL	SZ	38	195	EP		1240	12.16	-0.03							1.0
RCY	SZ	62	166	EP		1240	15.98	-0.02							1.0
RCY	SN	62	166	ES		1240	23.52	0.09							1.0
BEIL	SZ	73	40	EP		1240	17.79	0.07							1.0

September 26 2017 Hour: 14:42 42.6 Lat: 34.07N Lon: 35.82E Depth: 7 Agency: REL Local

Magnitudes: 2.6MC REL

Rms: 0.0 secs

JBEIL REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	24	220	EP		1442	46.67	0.00	35						1.0
BHL	BN	24	220	ES		1442	49.67	0.00							1.0
ZAHL	SZ	24	165	EP		1442	46.70	-0.05							1.0
ZAHL	SN	24	165	ES		1442	49.82	0.01							1.0
HWQ	BZ	26	27	EP		1442	46.95	-0.05							1.0
HWQ	BN	26	27	ES		1442	50.29	0.04							1.0
DQRL	SZ	46	210	EP		1442	50.19	-0.02							1.0
SHBL	SZ	80	185	EP		1442	55.71	0.07							1.0

September 26 2017 Hour: 20:22 13.2

Agency: REL Distant

EMSC OT=20:22:13.2 40.31N 142.37E 52Km M=5.9 NEAR EAST COAST OF HONSHU, JAPAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2034	13.33								
HWQ	BZ			EP		2034	14.58								
ZAHL	SZ			EP		2034	16.66								
BHL	BZ			EP		2034	17.01								
RCY	SZ			EP		2034	18.26								
SHBL	SZ			EP		2034	18.61								

September 27 2017 Hour: 14:4 38.5 Lat: 34.02N Lon: 35.74E Depth: 0 Agency: REL Local

Magnitudes: 3.0MC 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	15	211	EP		14	4	40.94	-0.03	58					1.0
BHL	BN	15	211	ES		14	4	42.78	-0.00						1.0
ZAHL	SZ	23	143	EP		14	4	42.09	-0.11						1.0
ZAHL	SN	23	143	ES		14	4	44.91	-0.00						1.0
HWQ	BZ	34	34	EP		14	4	44.09	0.03						1.0
DQRL	SZ	38	204	EP		14	4	44.64	-0.07						1.0
RCY	SZ	59	171	EP		14	4	48.07	0.03						1.0
RCY	SN	59	171	ES		14	4	55.10	0.02						1.0
BEIL	SZ	71	35	EP		14	4	50.19	0.24						0.2
SHBL	SZ	75	180	EP		14	4	50.69	0.12						1.0

September 27 2017 Hour: 19:50 19.2 Lat: 34.10N Lon: 36.02E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	21	342	EP		1950	22.44	-0.10	52						1.0
HWQ	BN	21	342	ES		1950	25.10	0.06							1.0
ZAHL	SZ	29	204	EP		1950	23.90	-0.00							1.0
ZAHL	SE	29	204	ES		1950	27.36	-0.06							1.0
BHL	BZ	40	237	EP		1950	25.59	-0.00							1.0
BHL	BN	40	237	ES		1950	30.39	0.03							1.0
BEIL	SZ	52	17	EP		1950	27.49	0.03							1.0
DQRL	SZ	60	224	EP		1950	28.81	-0.04							1.0
RCY	SZ	69	194	EP		1950	30.26	-0.02							1.0
RCY	SN	69	194	ES		1950	38.59	0.08							1.0
SHBL	SZ	87	197	EP		1950	33.21	0.01							1.0

September 27 2017 Hour: 23:17 7.7 Lat: 33.78N Lon: 35.80E Depth: 9 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	11	44	EP		2317	10.24	0.00							1.0
ZAHL	SN	11	44	ES		2317	12.14	0.01							1.0
BHL	BZ	19	315	EP		2317	11.08	-0.12	32						1.0
DQRL	SZ	23	248	EP		2317	11.79	0.02							1.0
DQRL	SN	23	248	ES		2317	14.85	0.06							1.0
RCY	SZ	32	174	EP		2317	13.13	-0.02							1.0
SHBL	SZ	49	186	EP		2317	15.75	0.03							1.0
SHBL	SN	49	186	ES		2317	21.63	-0.04							1.0
HWQ	BZ	57	14	EP		2317	17.02	0.06							1.0

September 28 2017 Hour: 15:19 42.3 Lat: 34.68N Lon: 36.13E Depth: 0 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	16	162	EP		1519	44.94	-0.03	50						1.0
BEIL	SN	16	162	ES		1519	46.95	0.03							1.0
HWQ	BZ	48	201	EP		1519	49.93	-0.13							1.0
HWQ	BN	48	201	ES		1519	55.76	-0.02							1.0
ZAHL	SZ	94	194	EP		1519	57.56	0.04							0.2
BHL	BZ	97	207	EP		1519	58.09	0.14							1.0
DQRL	SZ	120	206	EP		1520	1.70	0.01							1.0

September 28 2017 Hour: 15:44 13.4 Lat: 33.79N Lon: 35.78E Depth: 12 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	12	54	EP		1544	16.33	-0.04							1.0
ZAHL	SN	12	54	ES		1544	18.61	0.03							1.0
BHL	BZ	17	317	EP		1544	16.97	0.08	51						1.0
DQRL	SZ	22	243	EP		1544	17.63	0.11							1.0
DQRL	SN	22	243	ES		1544	20.47	-0.11							1.0
RCY	SZ	33	171	EP		1544	19.22	-0.01							1.0
RCY	SN	33	171	ES		1544	23.57	0.01							1.0
HWQ	BZ	56	16	EP		1544	22.61	-0.07							1.0

September 28 2017 Hour: 17:51 23.2 Lat: 36.53N Lon: 34.32E Depth: 14 Agency: REL Regional
Magnitudes: 3.5MC REL Rms: 0.1 secs

TURKEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	278	142	EP		1752	2.51	0.10	93						1.0
BEIL	SN	278	142	ES		1752	31.29	-0.14							1.0
HWQ	BZ	291	149	EP		1752	3.94	-0.06							1.0
HWQ	BN	291	149	ES		1752	34.39	0.20							1.0

BHL	BZ	316	157	EP		1752	7.14	0.01									1.0
ZAHL	SZ	329	154	EP		1752	8.72	-0.09									1.0
DQRL	SZ	334	160	EP		1752	9.34	0.00									1.0
RCY	SZ	364	157	EP		1752	13.16	-0.00									1.0
RCY	SN	364	157	ES		1752	50.08	-0.06									1.0
SHBL	SZ	377	159	EP		1752	14.70	0.03									1.0
SHBL	SN	377	159	ES		1752	52.75	-0.01									1.0

September 28 2017 Hour: 23:11 15.5 Agency: REL Distant
EMSC OT=23:11:15.5 25.01S 179.68W 447Km M=5.3 SOUTH OF FIJI ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		2330	9.17								
BHL	BZ			EP		2330	10.01								
RCY	SZ			EP		2330	10.28								
DQRL	SZ			EP		2330	10.72								

September 29 2017 Hour: 12:43 28.9 Lat: 33.75N Lon: 35.50E Depth: 24 Agency: REL Local
Magnitudes: 3.1MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	8	127	EP		1243	32.85	-0.08	64						1.0
DQRL	SN	8	127	ES		1243	35.95	0.01							1.0
BEYL	SZ	14	356	EP		1243	33.19	0.02							1.0
BHL	BZ	22	39	EP		1243	34.11	0.04							1.0
BHL	BN	22	39	ES		1243	37.94	0.01							1.0
QRWL	SZ	28	143	EP		1243	34.61	-0.04							1.0
ZAHL	SZ	38	71	EP		1243	35.91	0.03							1.0
ZAHL	SN	38	71	ES		1243	41.09	0.02							1.0
SHBL	SZ	50	153	EP		1243	37.54	0.03							1.0
HWQ	BZ	72	35	EP		1243	40.61	0.02	61						1.0
HWQ	BN	72	35	ES		1243	49.20	-0.07							1.0
BEIL	SZ	108	35	EP		1243	45.86	0.02							1.0

September 29 2017 Hour: 16: 8 40.6 Agency: REL Regional
EMSC OT=16:08:40.6 37.03N 30.69E 84Km M=4.6 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		16 9	53.85								
BEIL	SZ			EP		16 9	53.59								
BHL	BZ			EP		16 9	53.25								
DQRL	SZ			EP		16 9	54.27								
ZAHL	SZ			EP		16 9	56.94								
RCY	SZ			EP		16 9	59.40								
SHBL	SZ			EP		16 9	59.74								

September 30 2017 Hour: 0:25 37.6 Agency: REL Regional
EMSC OT=00:25:37.6 36.52N 34.53E 5Km M=3.1 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		026	17.45								
HWQ	BZ			EP		026	19.41								
BHL	BZ			EP		026	22.07								
ZAHL	SZ			EP		026	24.66								
DQRL	SZ			EP		026	24.07								
RCY	SZ			EP		026	28.76								
SHBL	SZ			EP		026	30.13								

September 30 2017 Hour: 15:17 23.1 Lat: 33.98N Lon: 36.28E Depth: 0 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	39	250	EP		1517	29.38	-0.02							1.0
ZAHL	SN	39	250	ES		1517	34.02	-0.03							1.0
HWQ	BZ	46	317	EP		1517	30.52	0.05	35						1.0
HWQ	BN	46	317	ES		1517	35.91	0.01							1.0
BEIL	SZ	63	352	EP		1517	33.28	-0.05							1.0

Epicentral Map of Lebanon

SEPTEMBER 2017

