

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

August

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Prepared by
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GENERAL BULLETIN INFORMATION

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

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

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

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

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

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

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

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

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

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

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

STATIONS USED

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

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

STATION	LATITUDE	LONGITUDE	HEIGHT (m)	NAME	COMMENTS
BHL	3354.25N	3539.25E	1000	BHANNES	Opened May 1980
HWQ	3416.68N	3556.78E	1161	HAWQA	Opened Jan 2001
MATL	3329.32N	3519.78E	5	MATARIH	Nov2000-Sep2012
FKH	3414.69N	3624.61E	1152	FAKEHEH	Opened Dec 2004
RCY	3329.79N	3550.14E	1370	RACHAYA	Opened Jun 2006
BEYL	3352.30N	3529.59E	49	BEIRUT	Opened Jul 2006
NAQL	3307.02N	3508.46E	83	NAQOURA	Jul2008-Jan2012
DQRL	3342.34N	3534.21E	963	DEIR QAMAR	Opened Mar 2010
QRWL	3332.86N	3540.93E	875	QARAOUN	Opened Oct 2011
SHBL	3320.90N	3544.63E	1422	CHEBAA	Opened Oct 2011
ZAHL	3351.48N	3553.12E	1211	ZAHLE	Opened Aug 2015
BEIL	3432.50N	3611.08E	572	BEINO	Opened Jan 2017

REGIONAL AND DISTANT EARTHQUAKES

Because regional events and teleseisms are not localized, but simply identified, EMSC determination data are given along with phase arrivals (in general first arrival) at the stations of our network.

MACROSEISMIC DATA

Macroseismic data, if available, are included in the bulletin.

MONTHLY EPICENTER MAPS

Maps will be found on the last page.

ELECTRONIC PUBLICATION

This provisional bulletin is available for download in pdf format on:
<http://www.cnrs.edu.lb/grdownload.html>

REFERENCES

- Havskov, J. and Ottemoller, L. (2001). SEISAN: The Earthquake Analysis Software. -version 7.2-
Institute of Solid Earth Physics, University of Bergen.
<http://www.ifjf.uib.no/seismo/software/seisan.html>
- Lienert, B.R., Berg, E. and Frazer, L.N. (1986). Hypocenter: An earthquake location method using centered, scaled, and adaptively least squares. Bull. Seism. Soc. Am., 76., pp 771-783.

Abbreviations:

TIME: Origin time in UTC (hr. min. and sec.) or data file onset time if event is not located.

LAT: Latitude of epicenter

LON: Longitude of epicenter

DEPTH: Focal depth in kilometer (trailing F indicates fixed depth)

AGENCY: REL throughout the bulletin, aka. REsearch Lebanon

MAGNITUDES: Up to 3 different magnitudes can be given followed by type and reporting agency, e.g. 3.1 MC REL - coda magnitude calculated according to above mentioned formula.

EMSC: Euro-Mediterranean Seismological Centre.

OT: Origin Time

RMS: Root mean square value of travel time residuals

STAT: Station code

CO: Component; S:short period, L:long period, B:broadband.

DIST: Epicenter distance (km)

AZI: Azimuth from source to station

PHAS: Phase; The first letter characterizes onset E(mergent) or I(mpulsive)

P: Polarity (C for compression, D for dilatation)

HR: Hour

MN: Minute

SECON: Seconds

TRES: Residual (seconds)

CODA: Signal duration in seconds

AMPL: Ground Amplitude ($0.5 * (\text{peak to peak})$), (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 1 2018 Hour: 0:50 17.5 Lat: 34.37N Lon: 34.13E Depth: 0 Agency: REL Regional
Magnitudes: 3.2MC REL Rms: 0.1 secs

CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	150	110	EP		050	41.39	-0.10	69						1.0
DQRL	SZ	152	118	EP		050	41.81	0.01							1.0
HWQ	BZ	168	93	EP		050	44.16	0.03							1.0
QRWL	SZ	170	122	EP		050	44.41	-0.02							1.0
ZAHL	SZ	172	109	EP		050	44.64	-0.07							1.0
RCY	SZ	185	121	EP		050	46.67	-0.01							1.0
RCY	SN	185	121	ES		051	8.30	0.04							1.0
SHBL	SZ	187	127	EP		050	47.07	0.09							1.0
BEIL	SZ	190	84	EP		050	47.25	0.02							1.0
BEIL	SN	190	84	ES		051	9.23	0.02							1.0

August 1 2018 Hour: 0:55 19.5 Lat: 33.79N Lon: 35.78E 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	12	55	EP		055	21.53	-0.02							1.0
BHL	BZ	17	317	EP		055	22.18	-0.06	28						1.0
DQRL	SZ	22	243	EP		055	22.96	-0.07							1.0
DQRL	SE	22	243	ES		055	25.70	0.09							1.0
QRWL	SZ	29	198	EP		055	24.15	-0.04							1.0
RCY	SZ	34	171	EP		055	24.93	-0.03							1.0
RCY	SN	34	171	ES		055	29.01	0.04							1.0
HWQ	BZ	56	16	EP		055	28.65	0.10							1.0

August 2 2018 Hour: 9:24 4.2 Lat: 34.02N Lon: 35.76E 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
BHL	BZ	16	219	EP		924	6.83	-0.04							1.0
BHL	BN	16	219	ES		924	8.83	-0.00							1.0
ZAHL	SZ	21	148	EP		924	7.55	-0.07							1.0
HWQ	BZ	33	30	EP		924	9.52	-0.04	44						1.0
DQRL	SZ	39	207	EP		924	10.55	0.01							1.0
QRWL	SZ	53	188	EP		924	12.77	0.02							1.0
RCY	SZ	58	174	EP		924	13.73	0.09							1.0
RCY	SN	58	174	ES		924	20.60	-0.01							1.0
BEIL	SZ	70	34	EP		924	15.48	0.05							1.0

August 2 2018 Hour: 13:15 22.4 Lat: 33.84N Lon: 36.15E Depth: 13 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	25	275	EP		1315	26.99	-0.05							1.0
ZAHL	SN	25	275	ES		1315	30.49	0.02							1.0
BHL	BZ	47	279	EP		1315	30.26	-0.02							1.0
BHL	BE	47	279	ES		1315	36.09	-0.02							1.0
RCY	SZ	48	218	EP		1315	30.53	0.02	53						1.0
HWQ	BZ	52	339	EP		1315	31.25	0.10							1.0
DQRL	SZ	56	255	EP		1315	31.71	0.02							1.0
BEIL	SZ	78	2	EP		1315	34.83	-0.06							1.0

August 2 2018 Hour: 15:0 58.1 Lat: 33.78N 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	13	46	EP		15 1	0.48	0.03							1.0
BHL	BZ	19	319	EP		15 1	1.17	-0.09	40						1.0
DQRL	SZ	21	248	EP		15 1	1.71	0.00							1.0
DQRL	SN	21	248	ES		15 1	4.45	0.04							1.0

QRWL	SZ	27	200	EP	15	1	2.60	-0.00									1.0
RCY	SZ	32	171	EP	15	1	3.35	0.05									1.0
RCY	SN	32	171	ES	15	1	7.12	-0.06									1.0
HWQ	BZ	57	15	EP	15	1	7.41	0.02									1.0

August 2 2018 Hour: 15:26 22.5 Lat: 33.82N Lon: 35.78E Depth: 22 Agency: REL Local
Magnitudes: 2.4MC REL Rms: 0.0 secs

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	10	65	EP		1526	26.48	-0.00							1.0
BHL	BZ	15	309	EP		1526	26.77	-0.05	26						1.0
DQRL	SZ	23	238	EP		1526	27.58	-0.04							1.0
DQRL	SN	23	238	ES		1526	31.47	0.07							1.0
QRWL	SZ	31	197	EP		1526	28.51	-0.06							1.0
RCY	SZ	36	172	EP		1526	29.27	0.07							1.0
RCY	SN	36	172	ES		1526	34.14	-0.02							1.0
BEIL	SZ	88	25	EP		1526	36.58	0.03							1.0

August 3 2018 Hour: 1:40 41.3 Lat: 34.43N Lon: 32.39E Depth: 0 Agency: REL Regional
Magnitudes: 3.6MC REL Rms: 0.0 secs

CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	304	104	EP		141	25.19	-0.00							1.0
DQRL	SN	304	104	ES		141	57.62	-0.06							1.0
BHL	BZ	306	100	EP		141	25.48	0.01							1.0
QRWL	SZ	319	107	EP		141	27.11	0.04							1.0
HWQ	BZ	327	92	EP		141	28.06	-0.04							1.0
ZAHL	SZ	328	100	EP		141	28.23	0.01							1.0
SHBL	SZ	332	110	EP		141	28.78	0.03							1.0
RCY	SZ	335	107	EP		141	29.04	0.02							1.0
BEIL	SZ	349	87	EP		141	30.61	-0.06	88						1.0
BEIL	SN	349	87	ES		142	7.27	0.06							1.0

August 3 2018 Hour: 10: 8 16.8 Lat: 33.79N Lon: 35.78E Depth: 9 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	13	54	EP		10	8	19.36	-0.04						1.0
BHL	BZ	17	318	EP		10	8	19.93	-0.01	37					1.0
DQRL	SZ	21	244	EP		10	8	20.57	0.01						1.0
QRWL	SZ	28	198	EP		10	8	21.55	-0.06						1.0
RCY	SZ	33	170	EP		10	8	22.43	0.06						1.0
HWQ	BZ	56	16	EP		10	8	26.04	0.03						1.0
HWQ	BN	56	16	ES		10	8	32.86	0.02						1.0
BEIL	SZ	92	24	EP		10	8	31.58	0.05						1.0
BEIL	SN	92	24	ES		10	8	42.39	-0.05						1.0

August 3 2018 Hour: 15:30 4.4 Lat: 33.80N Lon: 35.77E Depth: 13 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	12	58	EP		1530	7.51	0.01							1.0
BHL	BZ	16	317	EP		1530	7.87	-0.03	29						1.0
DQRL	SZ	22	241	EP		1530	8.64	0.06							1.0
QRWL	SZ	29	197	EP		1530	9.56	-0.08							1.0
RCY	SZ	34	170	EP		1530	10.43	0.04							1.0
HWQ	BZ	56	17	EP		1530	13.88	0.29							0.2
HWQ	BN	56	17	ES		1530	20.40	0.00							1.0
BEIL	SZ	91	25	EP		1530	18.83	0.10							0.2
BEIL	SN	91	25	ES		1530	29.32	-0.02							1.0

August 4 2018 Hour: 7:9 29.6 Agency: REL Regional

EMSC OT=07:09:29.6 37.49N 36.26E 8Km M=4.2 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		710	16.63								
HWQ	BZ			EP		710	20.66								
BHL	BZ			EP		710	25.86								
DQRL	SZ			EP		710	28.41								
QRWL	SZ			EP		710	30.39								
RCY	SZ			EP		710	30.78								

August 5 2018 Hour: 9:19 0.1 Lat: 33.70N Lon: 35.15E Depth: 1 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEYL	SZ	37	59	EP		919	6.20	0.07							1.0
DQRL	SZ	39	89	EP		919	6.31	-0.13	58						1.0
DQRL	SN	39	89	ES		919	11.15	0.04							1.0
BHL	BZ	52	64	EP		919	8.37	-0.16							1.0
QRWL	SZ	52	109	EP		919	8.57	0.01							1.0
QRWL	SN	52	109	ES		919	14.75	-0.06							1.0
RCY	SZ	68	109	EP		919	11.13	0.09							1.0
RCY	SN	68	109	ES		919	19.16	0.05							1.0
ZAHL	SZ	71	75	EP		919	11.46	-0.04							1.0
HWQ	BZ	98	49	EP		919	16.01	0.12							1.0
BEIL	SZ	134	45	EP		919	21.58	-0.01							1.0

August 5 2018 Hour: 11:46 37.3 Agency: REL Distant

EMSC OT=11:46:37.3 8.32S 116.46E 33Km M=6.9 LOMBOK REGION. I P F Q P G U C

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1159	17.78								
HWQ	BZ			EP		1159	17.25								

August 5 2018 Hour: 13:31 44.5 Lat: 33.97N Lon: 36.10E Depth: 12 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	23	238	EP		1331	48.97	0.02							1.0
HWQ	BZ	37	337	EP		1331	50.88	-0.05	52						1.0
HWQ	BN	37	337	ES		1331	55.71	0.05							1.0
BHL	BZ	42	260	EP		1331	51.61	-0.05							1.0
DQRL	SZ	57	239	EP		1331	54.02	0.02							1.0
RCY	SZ	58	205	EP		1331	54.20	0.05							1.0
QRWL	SZ	61	220	EP		1331	54.50	-0.03							1.0
BEIL	SZ	64	7	EP		1331	54.96	-0.01							1.0
BEIL	SN	64	7	ES		1332	2.69	-0.00							1.0

August 5 2018 Hour: 18:30 31.3 Lat: 33.79N 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	53	EP		1830	33.42	-0.03							1.0
BHL	BZ	17	319	EP		1830	33.99	-0.11	51						1.0
BHL	BE	17	319	ES		1830	36.25	0.05							1.0
DQRL	SZ	21	244	EP		1830	34.78	0.06							1.0
QRWL	SZ	28	198	EP		1830	35.72	-0.10							1.0
RCY	SZ	33	170	EP		1830	36.60	-0.00							1.0
RCY	SE	33	170	ES		1830	40.60	0.05							1.0
SHBL	SZ	49	183	EP		1830	39.20	0.03							1.0
HWQ	BZ	57	16	EP		1830	40.45	0.03							1.0
BEIL	SZ	92	24	EP		1830	46.11	0.03							1.0

August 5 2018 Hour: 22:55 31.0 Lat: 33.78N Lon: 35.79E 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	12	47	EP		2255	32.94	-0.11	41						1.0
ZAHL	SN	12	47	ES		2255	34.60	0.06							1.0
BHL	BZ	18	318	EP		2255	33.95	-0.03							1.0
BHL	BN	18	318	ES		2255	36.17	0.01							1.0
DQRL	SZ	22	247	EP		2255	34.56	0.01							1.0
QRWL	SZ	28	200	EP		2255	35.56	0.04							1.0
RCY	SZ	32	172	EP		2255	36.20	-0.01							1.0
SHBL	SZ	48	185	EP		2255	38.83	-0.00							1.0
HWQ	BZ	57	15	EP		2255	40.27	0.05							1.0

August 6 2018 Hour: 5:19 2.7 Agency: REL Regional

EMSC OT=05:19:02.7 35.39N 31.35E 54Km M=4.3 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		520	0.19								
BEIL	SZ			EP		520	1.70								
QRWL	SZ			EP		520	1.87								
RCY	SZ			EP		520	3.19								
HWQ	BZ			EP		520	0.82								

August 6 2018 Hour: 11:27 58.2 Agency: REL Regional

EMSC OT=11:27:58.2 36.78N 35.59E 15Km M=3.7 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1128	37.64								
HWQ	BZ			EP		1128	39.58								
QRWL	SZ			EP		1128	49.65								
RCY	SZ			EP		1128	50.52								

August 6 2018 Hour: 17:21 31.4 Lat: 34.03N Lon: 35.96E Depth: 0 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
ZAHL	SZ	20	198	EP		1721	34.68	-0.02							1.0
ZAHL	SN	20	198	ES		1721	37.12	-0.02							1.0
HWQ	BZ	27	358	EP		1721	35.72	-0.08	37						1.0
HWQ	BN	27	358	ES		1721	39.08	0.03							1.0
BHL	BZ	31	243	EP		1721	36.45	0.01							1.0
FKH	SZ	48	61	EP		1721	39.11	-0.05							1.0
DQRL	SZ	51	225	EP		1721	39.56	-0.04							1.0
BEIL	SZ	60	20	EP		1721	41.20	0.08							1.0
RCY	SZ	61	191	EP		1721	41.20	0.04							1.0
SHBL	SZ	78	195	EP		1721	44.09	0.05							1.0

August 6 2018 Hour: 19: 1 9.7 Lat: 34.22N Lon: 35.73E Depth: 20 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.0 secs

BATROUN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	21	73	EP		19 1	14.45	0.02	45						1.0
HWQ	BN	21	73	ES		19 1	17.93	0.01							1.0
BHL	BZ	36	191	EP		19 1	16.28	-0.04							1.0
ZAHL	SZ	43	161	EP		19 1	17.16	-0.11							1.0
BEIL	SZ	55	50	EP		19 1	18.82	-0.02							1.0
DQRL	SZ	59	195	EP		19 1	19.64	0.08							1.0
FKH	SZ	63	88	EP		19 1	20.07	0.03							1.0
QRWL	SZ	75	183	EP		19 1	21.83	-0.01							1.0
QRWL	SN	75	183	ES		19 1	30.84	0.03							1.0
RCY	SZ	81	173	EP		19 1	22.79	0.03							1.0
SHBL	SZ	97	179	EP		19 1	25.07	-0.02							1.0

August 7 2018 Hour: 7:35 38.3 Lat: 33.87N Lon: 35.83E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs

ZAHLE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	5	100	EP		735	39.08	-0.02							1.0
BHL	BZ	17	285	EP		735	41.14	0.06							1.0
BHL	BN	17	285	ES		735	43.09	-0.05							1.0
DQRL	SZ	30	234	EP		735	43.25	0.08							1.0
QRWL	SZ	38	202	EP		735	44.31	-0.11	52						1.0
RCY	SZ	41	180	EP		735	44.91	0.01							1.0
RCY	SN	41	180	ES		735	49.81	0.03							1.0
HWQ	BZ	47	13	EP		735	45.85	-0.02							1.0
BEIL	SZ	82	23	EP		735	51.50	0.03							1.0

August 7 2018 Hour: 14:19 44.7 Lat: 34.16N Lon: 36.47E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	11	330	EP		1419	46.35	-0.09							1.0
BEIL	SZ	50	328	EP		1419	52.81	0.11	38						1.0
BEIL	SN	50	328	ES		1419	58.65	0.03							1.0
HWQ	BZ	50	285	EP		1419	52.73	0.00							1.0
BHL	BZ	80	249	EP		1419	57.60	-0.06							1.0
RCY	SZ	94	219	EP		1419	59.93	0.05							1.0
RCY	SN	94	219	ES		1420	11.20	0.09							1.0
DQRL	SZ	97	239	EP		1420	0.22	-0.15							1.0
QRWL	SZ	100	227	EP		1420	0.77	0.01							1.0

August 9 2018 Hour: 23:34 38.3 Lat: 35.16N Lon: 37.06E Depth: 3 Agency: REL Regional
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	105	230	EP		2334	55.35	0.07	50						1.0
BEIL	SN	105	230	ES		2335	7.79	-0.03							1.0
FKH	SZ	117	210	EP		2334	57.26	-0.01							1.0
HWQ	BZ	141	226	EP		2335	0.70	-0.08							1.0
HWQ	BN	141	226	ES		2335	17.44	0.03							1.0
BHL	BZ	190	223	EP		2335	7.66	-0.02							1.0
DQRL	SZ	211	221	EP		2335	10.41	0.03							1.0
RCY	SZ	216	212	EP		2335	11.00	0.01							1.0

August 10 2018 Hour: 14:40 48.7 Lat: 32.77N Lon: 35.60E Depth: 0 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
RCY	SZ	84	15	EP		1441	2.10	-0.11	52						1.0
RCY	SN	84	15	ES		1441	12.26	0.06							1.0
DQRL	SZ	104	359	EP		1441	5.58	0.10							1.0
DQRL	SE	104	359	ES		1441	17.84	-0.05							1.0
BHL	BZ	126	2	EP		1441	9.02	-0.02							1.0
HWQ	BZ	171	11	EP		1441	15.70	-0.02							1.0
BEIL	SZ	204	15	EP		1441	20.18	0.04							1.0

August 10 2018 Hour: 14:51 3.9 Lat: 33.98N Lon: 35.70E Depth: 1 Agency: REL Local
Magnitudes: 2.3MC 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	9	210	EP		1451	5.42	-0.08	23						1.0
BHL	BN	9	210	ES		1451	6.69	0.04							1.0
ZAHL	SZ	21	128	EP		1451	7.38	-0.03							1.0
DQRL	SZ	32	203	EP		1451	9.20	0.01							1.0
HWQ	BZ	40	34	EP		1451	10.50	0.03							1.0
RCY	SZ	55	167	EP		1451	12.77	0.01							1.0

RCY SN 55 167 ES 1451 19.29 0.02 1.0

August 10 2018 Hour: 17:19 6.1 Lat: 33.79N Lon: 35.78E 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	13	53	EP		1719	8.44	-0.03							1.0
BHL	BZ	17	319	EP		1719	8.97	-0.09	49						1.0
DQRL	SZ	21	244	EP		1719	9.72	0.03							1.0
DQRL	SN	21	244	ES		1719	12.45	0.08							1.0
QRWL	SZ	28	198	EP		1719	10.67	-0.11							1.0
RCY	SZ	33	170	EP		1719	11.49	-0.06							1.0
RCY	SN	33	170	ES		1719	15.65	0.05							1.0
SHBL	SZ	49	183	EP		1719	14.11	0.02							1.0
HWQ	BZ	56	16	EP		1719	15.34	0.09							1.0
FKH	SZ	77	49	EP		1719	18.70	0.09							1.0
BEIL	SZ	92	24	EP		1719	20.82	-0.06							1.0

August 10 2018 Hour: 18:12 7.0 Agency: REL Distant
EMSC OT=18:12:07.0 48.41N 154.97E 30Km M=5.9 KURIL ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1824	22.69								
HWQ	BZ			EP		1824	19.74								

August 11 2018 Hour: 13:0 54.2 Lat: 34.14N Lon: 35.92E Depth: 0 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

JBEIL REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	16	10	EP		13	0	56.65	-0.06	56					1.0
HWQ	BN	16	10	ES		13	0	58.59	-0.00						1.0
ZAHL	SZ	31	185	EP		13	0	59.12	-0.08						1.0
BHL	BZ	36	223	EP		13	0	59.90	0.00						1.0
BEIL	SZ	51	29	EP		13	1	2.39	-0.01						1.0
BEIL	SN	51	29	ES		13	1	8.55	0.05						1.0
DQRL	SZ	58	214	EP		13	1	3.52	0.05						1.0
RCY	SZ	72	186	EP		13	1	5.75	0.04						1.0

August 12 2018 Hour: 13:44 23.0 Agency: REL Regional
EMSC OT=13:42:23 36.05N 31.25E 30Km M=4.3 WESTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1343	25.59								
BEIL	SZ			EP		1343	26.23								
RCY	SZ			EP		1343	29.86								

August 12 2018 Hour: 13:52 1.8 Lat: 33.72N Lon: 35.88E Depth: 2 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	16	0	EP		1352	4.40	0.01							1.0
ZAHL	SN	16	0	ES		1352	6.31	0.01							1.0
RCY	SZ	25	190	EP		1352	5.83	-0.07	52						1.0
QRWL	SZ	27	225	EP		1352	6.23	0.08							1.0
DQRL	SZ	29	267	EP		1352	6.57	0.02							1.0
DQRL	SN	29	267	ES		1352	10.05	-0.00							1.0
BHL	BZ	30	314	EP		1352	6.55	-0.08							1.0
HWQ	BZ	62	5	EP		1352	11.90	0.01							1.0
BEIL	SZ	96	17	EP		1352	17.59	0.37							0.2

August 12 2018 Hour: 14:58 54.7 Agency: REL Distant
EMSC OT=14:58:54.7 69.62N 145.25W 10Km M=6.4 NORTHERN ALASKA
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 1510 53.27
 HWQ BZ EP 1510 52.36

August 12 2018 Hour: 18:1 45.7 Lat: 33.79N Lon: 35.78E Depth: 1 Agency: REL Local
 Magnitudes: 3.0MC REL Rms: 0.0 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	13	51	EP		18	1	47.85	0.01	64					1.0
BHL	BZ	17	319	EP		18	1	48.50	-0.04						1.0
DQRL	SZ	21	245	EP		18	1	49.19	0.05						1.0
QRWL	SZ	28	198	EP		18	1	50.17	-0.05						1.0
RCY	SZ	33	170	EP		18	1	50.92	-0.06						1.0
SHBL	SZ	49	184	EP		18	1	53.60	0.03						1.0
SHBL	SN	49	184	ES		18	1	59.42	0.04						1.0
HWQ	BZ	57	16	EP		18	1	54.93	0.03						1.0
BEIL	SZ	92	24	EP		18	2	0.50	-0.05						1.0
BEIL	SN	92	24	ES		18	2	11.57	0.04						1.0

August 12 2018 Hour: 21:15 2.0 Agency: REL Distant
EMSC OT=21:15:02.0 69.60N 144.33W 10Km M=6.0 NORTHERN ALASKA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		2126	54.79								
QRWL	SZ			EP		2126	57.22								

August 13 2018 Hour: 8:48 7.1 Lat: 33.60N Lon: 35.97E Depth: 13 Agency: REL Local
 Magnitudes: 2.8MC REL Rms: 0.0 secs

RACHAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	17	227	EP		848	10.63	-0.02	45						1.0
RCY	SN	17	227	ES		848	13.31	0.02							1.0
ZAHL	SZ	30	345	EP		848	12.40	0.01							1.0
DQRL	SZ	39	288	EP		848	13.72	0.01							1.0
DQRL	SN	39	288	ES		848	18.62	0.01							1.0
BHL	BZ	44	319	EP		848	14.57	-0.04							1.0
HWQ	BZ	75	359	EP		848	19.23	0.02							1.0
BEIL	SZ	106	11	EP		848	23.72	-0.03							0.2

August 14 2018 Hour: 16:13 5.3 Lat: 33.79N Lon: 35.78E Depth: 10 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	52	EP		1613	7.98	-0.08							1.0
BHL	BZ	17	317	EP		1613	8.70	0.01	42						1.0
DQRL	SZ	22	245	EP		1613	9.31	0.02							1.0
QRWL	SZ	28	199	EP		1613	10.19	-0.07							1.0
RCY	SZ	33	171	EP		1613	10.98	0.01							1.0
RCY	SN	33	171	ES		1613	15.21	0.07							1.0
HWQ	BZ	56	16	EP		1613	14.55	-0.05							1.0
HWQ	BN	56	16	ES		1613	21.55	0.09							1.0
BEIL	SZ	91	24	EP		1613	19.98	0.01							0.2

August 15 2018 Hour: 12:20 5.4 Lat: 33.45N Lon: 35.68E Depth: 1 Agency: REL Local
 Magnitudes: 2.6MC REL Rms: 0.1 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	11	1	EP		1220	7.02	-0.11	35						1.0
QRWL	SN	11	1	ES		1220	8.47	0.03							1.0
RCY	SZ	15	71	EP		1220	7.89	0.03							1.0
DQRL	SZ	30	340	EP		1220	10.31	0.09							1.0
DQRL	SE	30	340	ES		1220	13.83	0.00							1.0

BHL BZ 50 357 EP 1220 13.44-0.05 1.0

August 15 2018 Hour: 16:59 41.2 Lat: 33.80N Lon: 35.78E Depth: 8 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	12	57	EP		1659	43.71	0.02							1.0
BHL	BZ	16	316	EP		1659	44.25	0.02	36						1.0
DQRL	SZ	22	242	EP		1659	45.02	0.02							1.0
QRWL	SZ	29	197	EP		1659	46.06	-0.06							1.0
RCY	SZ	34	171	EP		1659	46.87	-0.01							1.0
RCY	SN	34	171	ES		1659	51.15	0.03							1.0
SHBL	SZ	50	183	EP		1659	49.45	0.05							1.0
SHBL	SN	50	183	ES		1659	55.48	-0.02							1.0
HWQ	BZ	55	16	EP		1659	50.19	-0.05							1.0
BEIL	SZ	91	24	EP		1659	56.18	0.39							0.2

August 15 2018 Hour: 20:35 10.3 Lat: 33.83N Lon: 35.76E Depth: 19 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	12	72	EP		2035	14.02	-0.04							1.0
BHL	BZ	14	310	EP		2035	14.25	0.07	30						1.0
DQRL	SZ	22	234	EP		2035	15.02	-0.06							1.0
QRWL	SZ	32	194	EP		2035	16.18	-0.05							1.0
QRWL	SN	32	194	ES		2035	20.66	0.02							1.0
RCY	SZ	37	170	EP		2035	17.05	0.07							1.0
RCY	SN	37	170	ES		2035	21.94	-0.00							1.0

August 16 2018 Hour: 15:46 15.6 Lat: 33.79N Lon: 35.77E Depth: 1 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	13	56	EP		1546	17.64	-0.05							1.0
BHL	BZ	16	318	EP		1546	18.31	0.04	44						1.0
DQRL	SZ	21	242	EP		1546	18.99	-0.05							1.0
DQRL	SN	21	242	ES		1546	21.59	0.02							1.0
QRWL	SZ	29	197	EP		1546	20.18	-0.06							1.0
RCY	SZ	34	170	EP		1546	20.98	-0.06							1.0
RCY	SN	34	170	ES		1546	25.16	0.10							1.0
HWQ	BZ	56	17	EP		1546	24.66	0.00							1.0
BEIL	SZ	91	25	EP		1546	30.38	0.05							1.0

August 17 2018 Hour: 7:53 10.1 Lat: 32.86N Lon: 35.50E Depth: 0 Agency: REL Regional
Magnitudes: 2.8MC REL Rms: 0.0 secs

DEAD SEA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	77	24	EP		753	22.49	-0.07							1.0
RCY	SN	77	24	ES		753	31.81	0.02							1.0
QRWL	SZ	78	12	EP		753	22.72	0.01	43						1.0
DQRL	SZ	94	4	EP		753	25.25	-0.02							1.0
DQRL	SN	94	4	ES		753	36.50	-0.01							1.0
HWQ	BZ	163	15	EP		753	36.03	0.07							1.0
BEIL	SZ	197	19	EP		753	40.67	0.00							1.0

August 17 2018 Hour: 15:35 2.3 Agency: REL Distant
EMSC OT=15:35:02.3 7.36S 119.81E 546Km M=6.5 FLORES SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		1547	1.71								
HWQ	BZ			EP		1547	0.69								

August 17 2018 Hour: 15:52 29.6 Lat: 33.78N 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
BHL	BZ	17	322	EP		1552	32.55	-0.09	40						1.0
DQRL	SZ	20	244	EP		1552	33.20	0.07							1.0
QRWL	SZ	27	197	EP		1552	34.14	-0.08							1.0
QRWL	SN	27	197	ES		1552	37.74	0.08							1.0
RCY	SZ	33	169	EP		1552	34.95	-0.10							1.0
RCY	SN	33	169	ES		1552	39.12	0.03							1.0
HWQ	BZ	57	17	EP		1552	38.99	0.07							1.0
BEIL	SZ	92	25	EP		1552	44.58	0.03							1.0

August 19 2018 Hour: 0:19 37.3 Agency: REL Distant

EMSC OT=00:19:37.3 18.13S 178.14W 558Km M=8.2 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		038	14.44								
BHL	BZ			EP		038	14.35								

August 19 2018 Hour: 4:28 58.7 Agency: REL Distant

EMSC OT=04:28:58.7 17.03S 178.04W 420Km M=6.8 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		447	47.63								
HWQ	BZ			EP		447	46.74								

August 19 2018 Hour: 5:46 11.5 Agency: REL Regional

EMSC OT=05:46:11.5 36.19N 25.81E 134Km M=4.2 DODECANESE ISLANDS, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		548	6.50								
HWQ	BZ			EP		548	9.24								
BEIL	SZ			EP		548	10.88								

August 19 2018 Hour: 6:36 53.9 Agency: REL Distant

EMSC OT=06:36:53.9 18.18S 178.28W 515Km M=5.9 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		655	35.48								
HWQ	BZ			EP		655	34.32								

August 19 2018 Hour: 15:22 14.7 Agency: REL Regional

EMSC OT=15:22:14.7 37.38N 36.39E 10Km M=4.8 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1523	0.32								
HWQ	BZ			EP		1523	4.18								
BHL	BZ			EP		1523	9.16								
ZAHL	SZ			EP		1523	10.40								
QRWL	SZ			EP		1523	14.42								
RCY	SZ			EP		1523	15.24								

August 19 2018 Hour: 16:32 46.5 Lat: 33.78N Lon: 35.76E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

ALEY REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	14	51	EP		1632	48.81	0.02							1.0
BHL	BZ	17	324	EP		1632	49.22	-0.08	61						1.0
DQRL	SZ	20	246	EP		1632	49.75	0.08							1.0
QRWL	SZ	27	197	EP		1632	50.68	-0.09							1.0
QRWL	SN	27	197	ES		1632	53.96	0.01							1.0
BEYL	SZ	27	293	EP		1632	50.90	0.02							1.0
RCY	SZ	32	168	EP		1632	51.64	0.02							1.0
RCY	SN	32	168	ES		1632	55.41	-0.01							1.0
HWQ	BZ	58	17	EP		1632	55.86	0.02							0.2
BEIL	SZ	93	24	EP		1633	1.87	0.36							0.2

August 21 2018 Hour: 21:31 43.8 Agency: REL Distant
EMSC OT=21:31:43.8 10.78N 63.02W 127Km M=7.3 OFFSHORE SUCRE, VENEZUELA
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BHL BZ EP 2144 36.10
 HWQ BZ EP 2144 36.65

August 23 2018 Hour: 23: 2 3.6 Lat: 33.83N Lon: 35.82E Depth: 26 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
BHL	BZ	17	300	EP		23	2	8.60	0.06	35					1.0
BHL	BE	17	300	ES		23	2	12.18	-0.02						1.0
DQRL	SZ	26	239	EP		23	2	9.43	0.00						1.0
QRWL	SZ	33	202	EP		23	2	10.16	-0.05						1.0
RCY	SZ	37	177	EP		23	2	10.70	0.03						1.0
RCY	SN	37	177	ES		23	2	15.92	0.00						1.0
HWQ	BZ	51	14	EP		23	2	12.54	-0.02						1.0

August 24 2018 Hour: 6:14 36.0 Lat: 33.63N Lon: 35.52E Depth: 4 Agency: REL Local
 Magnitudes: 2.8MC REL Rms: 0.0 secs

CHOUF REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	10	30	EP		614	37.79	0.00	47						1.0
QRWL	SZ	18	120	EP		614	38.92	-0.04							1.0
RCY	SZ	33	116	EP		614	41.42	0.05							1.0
BHL	BZ	33	23	EP		614	41.25	-0.14							0.2
HWQ	BZ	82	29	EP		614	49.22	-0.05							1.0
HWQ	BN	82	29	ES		614	59.15	0.03							1.0
BEIL	SZ	119	31	EP		614	54.97	-0.04							1.0
BEIL	SN	119	31	ES		615	9.14	0.03							1.0

August 24 2018 Hour: 11:44 50.5 Lat: 33.66N Lon: 35.40E Depth: 0 Agency: REL Local
 Magnitudes: 2.7MC 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	17	71	EP		1144	53.10	-0.11	38						1.0
DQRL	SN	17	71	ES		1144	55.19	0.01							1.0
QRWL	SZ	29	115	EP		1144	55.18	0.01							1.0
QRWL	SN	29	115	ES		1144	58.61	0.01							1.0
BHL	BZ	36	40	EP		1144	56.32	-0.04							1.0
RCY	SZ	44	114	EP		1144	57.66	0.01							1.0
ZAHL	SZ	50	63	EP		1144	58.64	0.03							1.0
HWQ	BZ	85	36	EP		1145	4.38	0.08							1.0

August 25 2018 Hour: 22:13 25.8 Agency: REL Distant
EMSC OT=22:13:25.8 34.58N 46.30E 10Km M=6.1 WESTERN IRAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2215	26.13								
HWQ	BZ			EP		2215	29.14								
ZAHL	SZ			EP		2215	32.22								
RCY	SZ			EP		2215	32.22								
BHL	BZ			EP		2215	34.46								
QRWL	SZ			EP		2215	34.04								
DQRL	SZ			EP		2215	35.47								

August 26 2018 Hour: 11:24 18.0 Lat: 33.97N Lon: 36.20E Depth: 11 Agency: REL Local
 Magnitudes: 2.8MC REL Rms: 0.1 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	32	247	EP		1124	23.62	0.05	47						1.0
HWQ	BZ	42	325	EP		1124	24.97	-0.09							1.0
HWQ	BN	42	325	ES		1124	30.23	-0.02							1.0
BHL	BZ	51	262	EP		1124	26.42	-0.12							1.0

BHL	BN	51	262	ES		1124	32.90	0.06									1.0
RCY	SZ	63	213	EP		1124	28.24	-0.09									1.0
RCY	SN	63	213	ES		1124	35.98	0.03									1.0
BEIL	SZ	64	359	EP		1124	28.58	0.11									1.0
DQRL	SZ	65	244	EP		1124	28.83	0.05									1.0
QRWL	SZ	67	226	EP		1124	29.08	0.02									1.0

August 26 2018 Hour: 16:32 30.6 Lat: 33.79N Lon: 35.78E Depth: 5 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		1632	32.87	0.01							1.0
BHL	BZ	18	318	EP		1632	33.54	-0.08	37						1.0
DQRL	SZ	22	246	EP		1632	34.26	0.04							1.0
DQRL	SN	22	246	ES		1632	36.93	0.04							1.0
QRWL	SZ	28	199	EP		1632	35.17	-0.06							1.0
QRWL	SN	28	199	ES		1632	38.65	0.00							1.0
RCY	SZ	33	171	EP		1632	35.95	0.00							1.0
HWQ	BZ	57	15	EP		1632	39.84	0.04							1.0
BEIL	SZ	92	24	EP		1632	45.53	0.11							0.2

August 26 2018 Hour: 22:57 16.5 Lat: 33.81N Lon: 35.74E Depth: 26 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs

BAABDA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	13	324	EP		2257	21.11	-0.02	30						1.0
BHL	BE	13	324	ES		2257	24.60	0.02							1.0
DQRL	SZ	19	234	EP		2257	21.65	0.04							1.0
QRWL	SZ	29	190	EP		2257	22.53	-0.11							1.0
RCY	SZ	36	165	EP		2257	23.47	0.02							1.0
RCY	SE	36	165	ES		2257	28.61	0.00							1.0
SHBL	SZ	51	179	EP		2257	25.48	0.05							1.0

August 28 2018 Hour: 12:38 44.2 Lat: 33.84N Lon: 36.15E Depth: 1 Agency: REL Local
Magnitudes: 3.0MC 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	25	276	EP		1238	48.28	0.05							1.0
ZAHL	SN	25	276	ES		1238	51.17	-0.01							1.0
BHL	BZ	46	279	EP		1238	51.68	-0.06							1.0
RCY	SZ	48	218	EP		1238	51.94	-0.01	60						1.0
RCY	SN	48	218	ES		1238	57.62	-0.03							1.0
HWQ	BZ	52	339	EP		1238	52.68	-0.02							1.0
QRWL	SZ	54	234	EP		1238	52.97	0.02	59						1.0
DQRL	SZ	56	255	EP		1238	53.27	0.05							1.0
BEIL	SZ	78	2	EP		1238	56.87	0.01							1.0

August 29 2018 Hour: 11:23 18.4 Lat: 34.19N Lon: 36.44E Depth: 0 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ	6	339	EP		1123	19.40	-0.04							1.0
BEIL	SZ	45	329	EP		1123	25.76	0.08	41						1.0
BEIL	SN	45	329	ES		1123	31.08	0.00							1.0
HWQ	BZ	46	282	EP		1123	25.70	-0.12							1.0
HWQ	BN	46	282	ES		1123	31.36	0.04							1.0
RCY	SZ	95	216	EP		1123	33.75	0.04							1.0
QRWL	SZ	100	225	EP		1123	34.47	-0.01							1.0

August 29 2018 Hour: 14: 8 18.2 Lat: 33.79N Lon: 35.78E Depth: 0 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	13	52	EP		14 8	20.25	-0.01							1.0
BHL	BZ	17	319	EP		14 8	20.88	-0.09							1.0
DQRL	SZ	21	245	EP		14 8	21.69	0.08	48						1.0
QRWL	SZ	28	198	EP		14 8	22.77	0.06							0.2
RCY	SZ	33	170	EP		14 8	23.49	0.01							1.0
RCY	SN	33	170	ES		14 8	27.37	-0.02							1.0
HWQ	BZ	57	16	EP		14 8	27.27	-0.06							1.0
HWQ	BN	57	16	ES		14 8	34.18	0.09							1.0

August 30 2018 Hour: 9:57 46.8 Lat: 34.03N Lon: 35.74E Depth: 0 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	17	210	EP		957	49.37	-0.09							1.0
ZAHL	SZ	24	146	EP		957	50.50	-0.07							1.0
ZAHL	SN	24	146	ES		957	53.40	0.03							1.0
HWQ	BZ	33	34	EP		957	52.08	-0.00							1.0
DQRL	SZ	40	204	EP		957	53.29	0.09	42						1.0
RCY	SZ	60	172	EP		957	56.58	0.09							1.0
RCY	SN	60	172	ES		958	3.63	-0.05							1.0

August 30 2018 Hour: 12:10 43.8 Lat: 34.65N Lon: 36.13E Depth: 9 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	14	157	EP		1210	46.56	0.07	58						1.0
BEIL	SN	14	157	ES		1210	48.46	-0.04							1.0
HWQ	BZ	45	202	EP		1210	51.15	-0.07							1.0
HWQ	BN	45	202	ES		1210	56.76	0.04							1.0
BHL	BZ	94	208	EP		1210	59.07	0.18							0.2
DQRL	SZ	117	206	EP		1211	2.34	0.05							1.0
QRWL	SZ	129	199	EP		1211	3.98	-0.13							1.0
RCY	SZ	131	192	EP		1211	4.47	0.07							1.0

August 30 2018 Hour: 13:46 0.5 Lat: 34.59N Lon: 36.11E Depth: 5 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

AKKAR REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	9	127	EP		1346	2.28	0.02	52						1.0
BEIL	SN	9	127	ES		1346	3.53	-0.01							1.0
HWQ	BZ	38	203	EP		1346	6.71	0.01							1.0
HWQ	BN	38	203	ES		1346	11.28	0.01							1.0
BHL	BZ	87	209	EP		1346	14.56	-0.02							1.0
DQRL	SZ	110	207	EP		1346	18.21	-0.05							1.0
QRWL	SZ	122	199	EP		1346	20.12	0.08							1.0
RCY	SZ	124	192	EP		1346	20.30	-0.03							1.0

August 31 2018 Hour: 12:29 24.9 Lat: 34.04N Lon: 35.74E Depth: 6 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.0 secs

KESROUAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	17	208	EP		1229	27.95	0.03	49						1.0
BHL	BN	17	208	ES		1229	30.14	-0.02							1.0
ZAHL	SZ	24	147	EP		1229	29.00	0.01							1.0
HWQ	BZ	32	36	EP		1229	30.29	0.05							1.0
HWQ	BN	32	36	ES		1229	34.21	-0.00							1.0
DQRL	SZ	41	203	EP		1229	31.49	-0.03							1.0
QRWL	SZ	55	186	EP		1229	33.92	0.08							1.0
RCY	SZ	61	172	EP		1229	34.76	-0.05							1.0

BEIL SZ 69 36 EP 1229 36.00-0.05 1.0

August 31 2018 Hour: 13:11 11.9 Lat: 34.07N Lon: 35.67E Depth: 0 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.1 secs

KESROUAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	18	186	EP		1311	14.77	-0.13	31						1.0
ZAHL	SZ	30	140	EP		1311	16.80	-0.05							1.0
HWQ	BZ	34	47	EP		1311	17.48	0.02							1.0
DQRL	SZ	41	194	EP		1311	18.66	0.04							1.0
DQRL	SN	41	194	ES		1311	23.58	0.02							1.0
QRWL	SZ	58	179	EP		1311	21.25	-0.01							1.0
QRWL	SN	58	179	ES		1311	28.16	0.01							1.0
RCY	SZ	65	167	EP		1311	22.57	0.11							1.0

August 31 2018 Hour: 14:40 29.1 Agency: REL Distant
EMSC OT=14:40:29.1 13.56N 120.89E 145Km M=5.5 MINDORO, PHILIPPINES

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		1452	14.13								
BHL	BZ			EP		1452	15.13								

August 31 2018 Hour: 18:44 43.1 Lat: 33.70N Lon: 35.83E Depth: 17 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
ZAHL	SZ	18	18	EP		1844	47.29	0.00							1.0
QRWL	SZ	22	218	EP		1844	47.67	-0.01	29						1.0
QRWL	SN	22	218	ES		1844	51.04	-0.00							1.0
RCY	SZ	23	178	EP		1844	47.86	-0.02							1.0
DQRL	SZ	24	271	EP		1844	47.92	0.01							1.0
BHL	BZ	27	325	EP		1844	48.30	-0.08							1.0
BHL	BN	27	325	ES		1844	52.31	0.05							1.0
SHBL	SZ	40	191	EP		1844	50.20	0.04							1.0
HWQ	BZ	65	10	EP		1844	53.92	0.23							0.2

August 31 2018 Hour: 21: 5 43.8 Agency: REL Distant
EMSC OT=21:05:43.8 34.51N 46.17E 10Km M=4.9 WESTERN IRAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		21 7	50.51								
HWQ	BZ			EP		21 7	46.23								

August 31 2018 Hour: 23: 4 11.9 Lat: 33.80N Lon: 35.83E 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	8	40	EP		23 4	15.20	0.05							1.0
BHL	BZ	20	305	EP		23 4	16.18	-0.03	32						1.0
BHL	BN	20	305	ES		23 4	19.36	-0.04							1.0
DQRL	SZ	26	246	EP		23 4	17.07	0.07							1.0
QRWL	SZ	31	206	EP		23 4	17.69	0.04							1.0
RCY	SZ	34	179	EP		23 4	17.95	-0.09							1.0
RCY	SN	34	179	ES		23 4	22.59	0.00							1.0

Epicentral Map of Lebanon

AUGUST 2018

