

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

July

2020

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
SAIL	3334.52N	3524.09E	159	SAIDA	Opened Jan 2020
CPTL	3353.47N	3528.60E	32	QRAYTEM	Opened Mar 2020

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.

July 2 2020 Hour: 20:35 43.0 Lat: 33.54N Lon: 34.84E Depth: 30 Agency: REL Local
Magnitudes: 2.9MC REL Rms: 0.1 secs

OFFSHORE SOUTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	70	75	EP		2035	54.67	-0.04	50						1.0
DQRL	SN	70	75	ES		2036	3.41	0.03							1.0
QRWL	SZ	78	89	EP		2035	55.85	0.02							1.0
QRWL	SN	78	89	ES		2036	5.34	0.02							1.0
BHL	BZ	85	62	EP		2035	56.83	-0.04							1.0
SHBL	SZ	87	104	EP		2035	57.02	-0.05							1.0
SHBL	SN	87	104	ES		2036	7.41	-0.07							1.0
RCY	SZ	92	93	EP		2035	58.05	0.15							1.0
ZAHL	SZ	103	70	EP		2035	59.26	0.05							1.0
HWQ	BZ	131	51	EP		2036	2.67	-0.00							1.0
BEIL	SZ	166	48	EP		2036	6.98	-0.05							1.0

July 3 2020 Hour: 1: 8 40.5 Lat: 34.15N Lon: 36.26E Depth: 8 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
HWQ	BZ	32	296	EP		1 8	45.71	-0.16							1.0
HWQ	BN	32	296	ES		1 8	49.97	0.14							1.0
BEIL	SZ	43	351	EP		1 8	47.77	0.09	39						1.0
BEIL	SN	43	351	ES		1 8	52.94	-0.05							1.0
ZAHL	SZ	48	226	EP		1 8	48.26	-0.09							1.0
BHL	BZ	62	244	EP		1 8	50.61	-0.06							1.0
DQRL	SZ	81	232	EP		1 8	53.58	-0.04							1.0
RCY	SZ	83	208	EP		1 8	54.11	0.15							1.0
SHBL	SZ	101	208	EP		1 8	56.79	0.02							1.0

July 3 2020 Hour: 19:44 28.0 Agency: REL Regional
EMSC OT=19:44:28.0 34.30N 44.95E 2Km M=4.0 IRAQ

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1946	19.50								
HWQ	BZ			EP		1946	23.92								
BHL	BZ			EP		1946	26.66								
QRWL	SZ			EP		1946	26.49								
DQRL	SZ			EP		1946	26.54								

July 4 2020 Hour: 19:58 46.4 Lat: 33.97N Lon: 36.21E Depth: 8 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	248	EP		1958	51.96	0.06							1.0
ZAHL	SN	32	248	ES		1958	55.89	-0.04							1.0
HWQ	BZ	42	325	EP		1958	53.24	-0.18	42						1.0
HWQ	BN	42	325	ES		1958	58.69	0.11							1.0
BHL	BZ	52	262	EP		1958	54.85	-0.09							1.0
BHL	BN	52	262	ES		1959	1.24	0.00							1.0
RCY	SZ	63	214	EP		1958	56.61	-0.07							1.0
BEIL	SZ	64	358	EP		1958	56.86	0.04							1.0
DQRL	SZ	66	244	EP		1958	57.23	0.04							1.0
QRWL	SZ	68	227	EP		1958	57.56	0.12							1.0
SHBL	SZ	81	212	EP		1958	59.64	0.01							1.0

July 5 2020 Hour: 14:17 17.7 Lat: 34.65N Lon: 36.10E Depth: 4 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.1 secs

LEBANON - SYRIA BORDER REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	14	147	EP		1417	20.14	0.14	47						1.0
BEIL	SN	14	147	ES		1417	21.66	-0.07							1.0
HWQ	BZ	43	200	EP		1417	24.71	0.02							1.0
HWQ	BN	43	200	ES		1417	29.92	0.03							1.0

ZAHL	SZ	90	193	EP		1417	32.06	-0.08									1.0
BHL	BZ	92	207	EP		1417	32.51	-0.02									1.0
DQRL	SZ	115	205	EP		1417	36.16	-0.06									1.0
DQRL	SN	115	205	ES		1417	50.01	0.06									1.0
RCY	SZ	130	191	EP		1417	38.33	-0.05									1.0
SHBL	SZ	148	193	EP		1417	41.05	0.04									1.0

July 5 2020 Hour: 14:26 1.5 Lat: 33.60N Lon: 36.37E Depth: 6 Agency: REL Regional
Magnitudes: 2.7MC REL Rms: 0.1 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	51	258	EP		1426	9.67	-0.14	38						1.0
RCY	SN	51	258	ES		1426	15.95	-0.01							1.0
ZAHL	SZ	54	303	EP		1426	10.32	0.08							1.0
QRWL	SZ	64	265	EP		1426	11.88	-0.04							1.0
SHBL	SZ	64	245	EP		1426	12.11	0.14							1.0
BHL	BZ	75	297	EP		1426	13.67	0.06							1.0
DQRL	SZ	75	280	EP		1426	13.67	-0.03							1.0
HWQ	BZ	85	333	EP		1426	15.24	-0.07							1.0
HWQ	BN	85	333	ES		1426	25.55	0.02							1.0
BEIL	SZ	106	351	EP		1426	18.59	-0.00							1.0

July 6 2020 Hour: 15: 3 32.8 Lat: 33.58N Lon: 37.10E Depth: 0 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
ZAHL	SZ	117	285	EP		15 3	51.52	-0.07							1.0
RCY	SZ	118	266	EP		15 3	51.76	-0.02							1.0
SHBL	SZ	129	259	EP		15 3	53.53	-0.01							1.0
SHBL	SN	129	259	ES		15 4	8.87	-0.03							1.0
HWQ	BZ	131	306	EP		15 3	53.98	-0.02							1.0
QRWL	SZ	132	269	EP		15 3	54.11	0.09							1.0
BEIL	SZ	136	322	EP		15 3	54.59	-0.05	57						1.0
BEIL	SN	136	322	ES		15 4	10.83	0.03							1.0
BHL	BZ	138	285	EP		15 3	55.16	0.08							1.0
DQRL	SZ	142	276	EP		15 3	55.65	-0.01							1.0

July 6 2020 Hour: 22:54 47.9 Lat: 36.20N Lon: 40.63E Depth: 49 Agency: REL Regional
Magnitudes: 4.9MC 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	444	247	EP		2255	45.36	-0.05	480						1.0
BEIL	SN	444	247	ES		2256	27.80	-0.15							1.0
HWQ	BZ	477	245	EP		2255	49.56	0.12							1.0
HWQ	BN	477	245	ES		2256	35.12	0.15							1.0
ZAHL	SZ	505	240	EP		2255	52.81	-0.07							1.0
BHL	BZ	521	242	EP		2255	54.64	-0.10							1.0
RCY	SZ	531	237	EP		2255	56.13	0.06							1.0
RCY	SN	531	237	ES		2256	46.51	0.00							1.0
CPTL	SZ	536	243	EP		2255	56.59	0.15							1.0
DQRL	SZ	539	241	EP		2255	56.96	0.03							1.0
QRWL	SZ	540	238	EP		2255	56.96	-0.08							1.0
SHBL	SZ	548	236	EP		2255	58.04	-0.05							1.0

July 6 2020 Hour: 22:54 46.5 Agency: REL Distant

EMSC OT=22:54:46.5 5.62S 110.59E 530Km M=6.4 JAVA SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		23 6	3.92								
RCY	SZ			EP		23 6	4.56								
HWQ	BZ			EP		23 6	4.50								
ZAHL	SZ			EP		23 6	5.26								
SHBL	SZ			EP		23 6	4.77								
QRWL	SZ			EP		23 6	5.75								
BHL	BZ			EP		23 6	5.51								

DQRL SZ EP 23 6 6.01
 CPTL SZ EP 23 6 6.30

July 7 2020 Hour: 1:10 35.1 Agency: REL Distant
EMSC OT=01:10:35.1 25.85N 58.30E 15Km M=4.9 NEAR COAST OF IRAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ			EP		115	19.59								
SHBL	SZ			EP		115	19.75								
BHL	BZ			EP		115	22.45								
DQRL	SZ			EP		115	22.50								
HWQ	BZ			EP		115	21.13								
BEIL	SZ			EP		115	27.06								

July 7 2020 Hour: 11:52 19.5 Lat: 33.59N Lon: 35.78E Depth: 5 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.0 secs

RACHAYA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	11	244	EP		1152	21.55	0.05							1.0
QRWL	SN	11	244	ES		1152	23.01	0.01							1.0
RCY	SZ	11	156	EP		1152	21.58-0.05		24						1.0
RCY	SN	11	156	ES		1152	23.22-0.01								1.0
DQRL	SZ	24	303	EP		1152	23.38-0.08								1.0
SHBL	SZ	27	188	EP		1152	23.94-0.04								1.0
SHBL	SN	27	188	ES		1152	27.38	0.06							1.0
ZAHL	SZ	31	17	EP		1152	24.70	0.06							1.0
BHL	BZ	37	341	EP		1152	25.56	0.02							1.0

July 7 2020 Hour: 15: 6 56.5 Lat: 33.62N Lon: 35.79E Depth: 3 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	13	232	EP		15 6	58.73	0.07	48						1.0
QRWL	SN	13	232	ES		15 7	0.31	0.04							1.0
RCY	SZ	14	163	EP		15 6	58.83-0.06								1.0
DQRL	SZ	23	295	EP		15 7	0.25	0.05							1.0
DQRL	SN	23	295	ES		15 7	2.93-0.01								1.0
ZAHL	SZ	28	18	EP		15 7	0.91-0.13								1.0
SHBL	SZ	30	188	EP		15 7	1.43-0.01								1.0
SHBL	SN	30	188	ES		15 7	5.12	0.01							1.0
BHL	BZ	34	338	EP		15 7	1.77-0.25								1.0
HWQ	BZ	74	11	EP		15 7	8.47-0.05								1.0
HWQ	BN	74	11	ES		15 7	17.56	0.14							1.0
BEIL	SZ	109	19	EP		15 7	14.20	0.19							1.0

July 7 2020 Hour: 21:11 16.0 Agency: REL Regional
EMSC OT=21:11:16.0 34.30N 25.22E 10Km M=3.6 CRETE, GREECE

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ			EP		2113	21.20								
SHBL	SZ			EP		2113	22.62								
RCY	SZ			EP		2113	23.13								
ZAHL	SZ			EP		2113	23.02								
HWQ	BZ			EP		2113	23.67								
BEIL	SZ			EP		2113	25.78								

July 7 2020 Hour: 21:35 42.8 Lat: 35.88N Lon: 35.49E Depth: 14 Agency: REL Regional
Magnitudes: 3.5MC 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	161	157	EP		2136	7.72	0.23	105						1.0
BEIL	SN	161	157	ES		2136	25.79	0.06							1.0
HWQ	BZ	182	167	EP		2136	9.91-0.28								1.0
HWQ	BN	182	167	ES		2136	30.18-0.24								1.0
BHL	BZ	220	176	EP		2136	14.67-0.12								1.0
CPTL	SZ	221	180	EP		2136	14.82	0.01							1.0

ZAHL	SZ	227	171	EP		2136	16.17	0.43								1.0
DQRL	SZ	241	178	EP		2136	17.34	-0.14								1.0
DQRL	SN	241	178	ES		2136	43.45	0.34								1.0
QRWL	SZ	259	176	EP		2136	19.68	-0.02								1.0
RCY	SZ	266	173	EP		2136	20.57	-0.05								1.0
RCY	SN	266	173	ES		2136	48.43	-0.14								1.0
SHBL	SZ	282	175	EP		2136	22.49	-0.06								1.0

July 7 2020 Hour: 22:29 58.8 Lat: 33.01N Lon: 35.88E Depth: 0 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
SHBL	SZ	39	341	EP		2230	5.14	-0.05	63						1.0
SHBL	SN	39	341	ES		2230	9.95	0.06							1.0
RCY	SZ	54	356	EP		2230	7.34	-0.18							1.0
RCY	SN	54	356	ES		2230	13.91	-0.05							1.0
QRWL	SZ	62	343	EP		2230	8.81	-0.05							1.0
DQRL	SZ	82	340	EP		2230	12.15	0.07							1.0
DQRL	SN	82	340	ES		2230	21.91	0.03							1.0
ZAHL	SZ	94	0	EP		2230	13.97	0.01							1.0
BHL	BZ	101	348	EP		2230	15.01	-0.13							1.0
CPTL	SZ	104	339	EP		2230	15.76	0.08							1.0
HWQ	BZ	141	2	EP		2230	21.44	0.01							1.0
BEIL	SZ	172	9	EP		2230	26.20	0.19							1.0

July 8 2020 Hour: 5:47 9.9 Agency: REL Regional
EMSC OT=05:47:09.9 35.67N 40.66E 11Km M=3.9 SYRIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		548	10.84								
HWQ	BZ			EP		548	14.83								
RCY	SZ			EP		548	21.52								
QRWL	SZ			EP		548	23.02								
DQRL	SZ			EP		548	22.96								
SHBL	SZ			EP		548	23.07								

July 8 2020 Hour: 20:57 54.4 Agency: REL Regional
EMSC OT=20:57:54.4 38.19N 38.57E 7Km M=4.1 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2058	58.15								
HWQ	BZ			EP		2059	2.67								
ZAHL	SZ			EP		2059	8.37								
BHL	BZ			EP		2059	9.50								
CPTL	SZ			EP		2059	10.63								
DQRL	SZ			EP		2059	11.82								
QRWL	SZ			EP		2059	13.82								
RCY	SZ			EP		2059	13.42								
SHBL	SZ			EP		2059	15.70								

July 8 2020 Hour: 22:39 27.1 Agency: REL Regional
EMSC OT=22:39:27.1 38.17N 38.56E 5Km M=4.0 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2240	30.12								
HWQ	BZ			EP		2240	34.48								
ZAHL	SZ			EP		2240	40.48								
BHL	BZ			EP		2240	41.41								
DQRL	SZ			EP		2240	44.40								
RCY	SZ			EP		2240	45.36								
QRWL	SZ			EP		2240	45.81								
SHBL	SZ			EP		2240	47.47								

July 9 2020 Hour: 13:20 5.4 Lat: 34.63N Lon: 35.88E Depth: 58 Agency: REL Local
Magnitudes: 2.7MC REL Rms: 0.1 secs

OFFSHORE NORTH LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	29	110	EP		1320	14.77	0.12	36						1.0
BEIL	SN	29	110	ES		1320	21.41	-0.10							1.0
HWQ	BZ	40	172	EP		1320	15.45	0.00							1.0
HWQ	BN	40	172	ES		1320	22.96	0.06							1.0
BHL	BZ	83	195	EP		1320	19.56	-0.08							1.0
DQRL	SZ	107	196	EP		1320	22.26	0.01							1.0
QRWL	SZ	122	189	EP		1320	23.93	-0.06							1.0
RCY	SZ	126	182	EP		1320	24.54	-0.01							1.0
RCY	SN	126	182	ES		1320	38.75	0.01							1.0
SHBL	SZ	143	185	EP		1320	26.61	0.05							1.0

July 10 2020 Hour: 19:7 26.1 Agency: REL Regional

EMSC OT=19:07:26.1 35.95N 31.33E 20Km M=3.5 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		19 8	30.79								
HWQ	BZ			EP		19 8	29.91								
QRWL	SZ			EP		19 8	33.29								
RCY	SZ			EP		19 8	34.17								
SHBL	SZ			EP		19 8	34.97								

July 10 2020 Hour: 20:14 6.2 Agency: REL Distant

EMSC OT=20:14:06.2 27.67N 53.56E 10Km M=4.9 SOUTHERN IRAN

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ			EP		2017	56.89								
BHL	BZ			EP		2017	58.70								

July 12 2020 Hour: 1:57 2.5 Lat: 33.67N Lon: 35.69E Depth: 11 Agency: REL Local
Magnitudes: 2.3MC 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	12	291	EP		157	5.22	-0.05	22						1.0
DQRL	SN	12	291	ES		157	7.35	0.02							1.0
QRWL	SZ	13	183	EP		157	5.48	0.05							1.0
QRWL	SN	13	183	ES		157	7.61	0.00							1.0
RCY	SZ	23	145	EP		157	6.68	-0.11							1.0
BHL	BZ	26	353	EP		157	7.18	-0.02							1.0
ZAHL	SZ	28	41	EP		157	7.47	0.06							1.0
SHBL	SZ	36	172	EP		157	8.69	0.06							1.0

July 14 2020 Hour: 8:33 11.1 Lat: 35.78N Lon: 30.99E Depth: 79 Agency: REL Regional

Magnitudes: 4.2MC REL Rms: 0.1 secs

EASTERN MEDITERRANEAN SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	475	115	EP		834	11.93	-0.05							1.0
DQRL	SZ	479	117	EP		834	12.23	-0.19							1.0
HWQ	BZ	482	109	EP		834	12.78	-0.08							1.0
HWQ	BN	482	109	ES		834	58.70	0.17							1.0
BEIL	SZ	493	105	EP		834	14.17	0.10	180						1.0
BEIL	SN	493	105	ES		835	0.48	-0.15							1.0
ZAHL	SZ	496	114	EP		834	14.65	0.13							1.0
QRWL	SZ	497	119	EP		834	14.55	0.04							1.0
RCY	SZ	512	118	EP		834	16.34	-0.00							1.0
RCY	SN	512	118	ES		835	4.57	-0.02							1.0
SHBL	SZ	513	120	EP		834	16.58	0.05							1.0

July 14 2020 Hour: 11:31 12.6

Agency: REL Regional

EMSC OT=11:31:12.6 35.99N 40.81E 2Km M=4.1 SYRIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1132	5.49								
HWQ	BZ			EP		1132	9.75								
RCY	SZ			EP		1132	16.49								
SHBL	SZ			EP		1132	18.03								

July 14 2020 Hour: 18:31 59.6

Lat: 34.69N Lon: 33.98E Depth:106 Agency: REL Regional

Magnitudes: 3.1MC REL

Rms: 0.1 secs

CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ	182	126	EP		1832	26.84	-0.05							0.2
HWQ	BZ	186	103	EP		1832	27.30	-0.01							1.0
HWQ	BN	186	103	ES		1832	47.88	0.04							1.0
ZAHL	SZ	198	117	EP		1832	28.62	0.01							1.0
QRWL	SZ	201	128	EP		1832	28.89	-0.06							1.0
BEIL	SZ	202	94	EP		1832	29.06	-0.00	55						1.0
BEIL	SN	202	94	ES		1832	50.87	-0.01							1.0
RCY	SZ	216	127	EP		1832	30.73	0.10							1.0
RCY	SN	216	127	ES		1832	53.51	-0.11							1.0
SHBL	SZ	220	132	EP		1832	31.08	-0.02							1.0
SHBL	SN	220	132	ES		1832	54.52	0.08							1.0

July 14 2020 Hour: 20:44 55.2

Lat: 36.55N Lon: 41.42E Depth: 45 Agency: REL Regional

Magnitudes: 4.3MC 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	524	246	EP		2046	2.40	-0.06	193						1.0
BEIL	SN	524	246	ES		2046	52.12	-0.13							1.0
HWQ	BZ	557	245	EP		2046	6.62	0.11							1.0
HWQ	BN	557	245	ES		2046	59.44	0.13							1.0
ZAHL	SZ	585	241	EP		2046	9.73	-0.23							1.0
BHL	BZ	601	242	EP		2046	11.94	0.12							1.0
RCY	SZ	612	238	EP		2046	13.20	0.08							1.0
DQRL	SZ	619	241	EP		2046	13.97	-0.00							1.0
QRWL	SZ	620	239	EP		2046	14.20	0.13							1.0
SHBL	SZ	628	237	EP		2046	14.92	-0.15							1.0

July 14 2020 Hour: 20:52 32.7

Lat: 34.30N Lon: 34.64E Depth: 15 Agency: REL Local

Magnitudes: 2.8MC REL

Rms: 0.1 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ	103	115	EP		2052	48.88	-0.03							1.0
DQRL	SZ	108	127	EP		2052	49.35	-0.29							1.0
HWQ	BZ	120	91	EP		2052	51.47	0.09							1.0
HWQ	BN	120	91	ES		2053	5.36	0.15							1.0
ZAHL	SZ	125	113	EP		2052	52.21	0.12							1.0
QRWL	SZ	128	131	EP		2052	52.49	0.03							1.0
RCY	SZ	142	129	EP		2052	54.69	0.06							1.0
BEIL	SZ	144	79	EP		2052	54.92	0.03	40						1.0
BEIL	SN	144	79	ES		2053	11.13	-0.19							1.0
SHBL	SZ	147	136	EP		2052	55.38	0.03							1.0

July 15 2020 Hour: 3:51 41.2

Agency: REL Distant

EMSC OT=03:51:41.2 26.66S 178.43E 623Km M=5.3 SOUTH OF FIJI ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		410	15.82								
HWQ	BZ			EP		410	15.99								
BHL	BZ			EP		410	16.93								
RCY	SZ			EP		410	17.06								
QRWL	SZ			EP		410	17.15								
DQRL	SZ			EP		410	17.66								

SHBL SZ EP 410 17.32

July 15 2020 Hour: 4:19 13.4

Agency: REL Regional

EMSC OT=04:19:13.4 38.21N 38.72E 6Km M=3.5 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		420	20.36								
HWQ	BZ			EP		420	25.01								

July 16 2020 Hour: 11:22 32.7

Lat: 35.26N

Lon: 36.47E

Depth: 0

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	83	198	EP		1122	46.18	0.07	53						1.0
BEIL	SN	83	198	ES		1122	56.04	-0.02							1.0
HWQ	BZ	119	204	EP		1122	51.66	-0.13							1.0
HWQ	BN	119	204	ES		1123	5.89	-0.05							1.0
BHL	BZ	168	207	EP		1122	59.38	0.16							1.0
DQRL	SZ	191	206	EP		1123	2.50	0.01							1.0
RCY	SZ	204	197	EP		1123	4.00	-0.13							1.0
RCY	SN	204	197	ES		1123	27.51	0.10							1.0
SHBL	SZ	222	198	EP		1123	6.37	-0.02							1.0

July 16 2020 Hour: 11:46 55.1

Lat: 33.79N

Lon: 36.77E

Depth: 27

Agency: REL Regional

Magnitudes: 3.2MC REL

Rms: 0.2 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	92	249	EP		1147	10.06	0.08							1.0
RCY	SN	92	249	ES		1147	21.02	0.06							1.0
HWQ	BZ	93	306	EP		1147	9.71	-0.33							1.0
HWQ	BN	93	306	ES		1147	21.02	-0.04							1.0
BEIL	SZ	99	327	EP		1147	10.94	0.09	68						1.0
BEIL	SN	99	327	ES		1147	22.70	0.22							1.0
BHL	BZ	104	277	EP		1147	11.37	-0.21							1.0
QRWL	SZ	104	255	EP		1147	11.56	-0.08							1.0
SHBL	SZ	107	243	EP		1147	12.30	0.21							1.0
DQRL	SZ	111	265	EP		1147	12.57	-0.00							1.0

July 16 2020 Hour: 22:33 34.6

Lat: 35.58N

Lon: 40.60E

Depth: 42

Agency: REL Regional

Magnitudes: 4.4MC REL

Rms: 0.4 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	419	255	EP		2234	28.41	-0.78	261						1.0
BEIL	SN	419	255	ES		2235	9.43	-0.18							1.0
HWQ	BZ	449	253	EP		2234	32.97	0.07							1.0
HWQ	BN	449	253	ES		2235	16.84	0.77							1.0
ZAHL	SZ	472	248	EP		2234	35.47	-0.24							1.0
BHL	BZ	489	249	EP		2234	37.75	-0.04							1.0
RCY	SZ	494	244	EP		2234	39.16	0.72							1.0
RCY	SN	494	244	ES		2235	25.12	-0.59							1.0
QRWL	SZ	504	245	EP		2234	39.67	0.09							1.0
CPTL	SZ	505	250	EP		2234	39.67	0.09							1.0
DQRL	SZ	506	247	EP		2234	39.91	0.16							1.0
SHBL	SZ	510	242	EP		2234	40.26	-0.07							1.0

July 16 2020 Hour: 22:52 3.5

Lat: 35.98N

Lon: 40.56E

Depth: 48

Agency: REL Regional

Magnitudes: 4.1MC 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	429	249	EP		2252	58.94	-0.19	176						1.0
BEIL	SN	429	249	ES		2253	40.40	0.08							1.0
HWQ	BZ	461	247	EP		2253	3.27	0.19							1.0
HWQ	BN	461	247	ES		2253	47.11	-0.07							1.0
ZAHL	SZ	488	242	EP		2253	6.37	0.04							1.0
BHL	BZ	504	244	EP		2253	8.19	-0.07							1.0

RCY	SZ	513	239	EP		2253	9.54	0.14											1.0
RCY	SN	513	239	ES		2253	58.18	-0.01											1.0
DQRL	SZ	521	242	EP		2253	10.44	0.05											1.0
QRWL	SZ	522	240	EP		2253	10.43	0.01											1.0
SHBL	SZ	529	238	EP		2253	11.24	-0.15											1.0

July 17 2020 Hour: 21:32 22.4 Agency: REL Regional

EMSC OT=21:32:22.4 37.38N 36.38E 10Km M=3.9 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		2133	9.13								
HWQ	BZ			EP		2133	13.20								
BHL	BZ			EP		2133	18.34								
ZAHL	SZ			EP		2133	19.04								
DQRL	SZ			EP		2133	21.18								
RCY	SZ			EP		2133	23.97								
SHBL	SZ			EP		2133	25.31								

July 18 2020 Hour: 19:52 57.1 Agency: REL Regional

EMSC OT=19:52:57.1 38.25N 38.74E 5Km M=4.0 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1954	2.65								
HWQ	BZ			EP		1954	7.41								
ZAHL	SZ			EP		1954	13.12								
BHL	BZ			EP		1954	13.77								
DQRL	SZ			EP		1954	16.63								
QRWL	SZ			EP		1954	19.22								
RCY	SZ			EP		1954	18.25								
SHBL	SZ			EP		1954	20.69								

July 19 2020 Hour: 2:23 26.0 Agency: REL Regional

EMSC OT=02:23:26.0 38.26N 38.79E 7Km M=2.9 EASTERN TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		224	32.63								
HWQ	BZ			EP		224	37.77								

July 19 2020 Hour: 10:43 34.5 Lat: 34.69N Lon: 36.11E Depth: 0 Agency: REL Local
Magnitudes: 3.0MC REL Rms: 0.1 secs

LEBANON - SYRIA BORDER REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ	18	156	EP		1043	37.21	-0.11	59						1.0
BEIL	SN	18	156	ES		1043	39.46	0.05							1.0
HWQ	BZ	48	198	EP		1043	42.11	-0.05							1.0
HWQ	BN	48	198	ES		1043	47.78	-0.06							1.0
BHL	BZ	96	206	EP		1043	49.96	-0.04							1.0
DQRL	SZ	119	205	EP		1043	53.82	0.07							1.0
RCY	SZ	134	191	EP		1043	56.30	0.16							1.0
SHBL	SZ	152	193	EP		1043	58.75	-0.02							1.0

July 19 2020 Hour: 21:3 2.9 Agency: REL Regional

EMSC OT=21:03:02.9 36.96N 36.10E 8Km M=3.2 TURKEY-SYRIA BORDER REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		21 3	43.67								
HWQ	BZ			EP		21 3	47.76								
BHL	BZ			EP		21 3	53.35								
ZAHL	SZ			EP		21 3	58.72								
QRWL	SZ			EP		21 3	57.85								
RCY	SZ			EP		21 4	1.66								
SHBL	SZ			EP		21 4	1.85								

July 21 2020 Hour: 20:56 24.8 Agency: REL Distant
EMSC OT=20:56:24.8 20.87S 178.51W 608Km M=6.0 FIJI REGION
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BEIL SZ EP 2115 0.35
 HWQ BZ EP 2115 0.62
 ZAHL SZ EP 2115 1.32
 BHL BZ EP 2115 1.72
 RCY SZ EP 2115 1.66
 CPTL SZ EP 2115 1.60
 QRWL SZ EP 2115 2.00
 DQRL SZ EP 2115 2.35
 SHBL SZ EP 2115 2.12

July 22 2020 Hour: 6:12 44.9 Agency: REL Distant
EMSC OT=06:12:44.9 55.14N 158.56W 30Km M=7.8 ALASKA PENINSULA
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BEIL SZ EP 625 40.50
 HWQ BZ EP 625 42.20
 BHL BZ EP 625 44.47
 CPTL SZ EP 625 48.85
 DQRL SZ EP 625 49.18
 RCY SZ EP 625 49.51
 QRWL SZ EP 625 48.19
 SHBL SZ EP 625 49.43

July 22 2020 Hour: 20: 7 19.2 Agency: REL Distant
EMSC OT=20:07:19.2 33.12N 86.87E 10Km M=6.3 WESTERN XIZAN
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BEIL SZ EP 2015 9.87
 HWQ BZ EP 2015 11.33
 ZAHL SZ EP 2015 13.51
 BHL BZ EP 2015 13.92
 RCY SZ EP 2015 14.34
 CPTL SZ EP 2015 15.17
 QRWL SZ EP 2015 15.27
 DQRL SZ EP 2015 15.07
 SHBL SZ EP 2015 15.48

July 23 2020 Hour: 4:48 2.9 Lat: 32.61N Lon: 35.60E Depth: 0 Agency: REL Regional
Magnitudes: 3.2MC 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 83 10 EP 448 16.13-0.13 75 1.0
 SHBL SN 83 10 ES 448 26.13-0.02 1.0
 RCY SZ 101 13 EP 448 18.89-0.24 1.0
 RCY SN 101 13 ES 448 31.23 0.09 1.0
 QRWL SZ 104 4 EP 448 19.72 0.03 1.0
 DQRL SZ 121 359 EP 448 22.44-0.03 1.0
 BHL BZ 143 2 EP 448 25.81-0.10 1.0
 HWQ BZ 188 10 EP 448 32.41 0.05 1.0
 HWQ BN 188 10 ES 448 54.30 0.15 1.0
 BEIL SZ 221 14 EP 448 36.39-0.04 1.0

July 23 2020 Hour: 10:45 30.3 Lat: 35.37N Lon: 36.53E Depth: 0 Agency: REL Regional
Magnitudes: 3.2MC REL Rms: 0.2 secs
SYRIA REGION
 STAT CO DIST AZI PHASE P HRMN SECON TRES CODA AMPL PERI BAZ ARES VELO WT
 BEIL SZ 98 199 EP 1045 45.62-0.40 74 1.0
 BEIL SN 98 199 ES 1045 57.53-0.13 1.0
 HWQ BZ 133 204 EP 1045 51.61-0.09 1.0
 HWQ BN 133 204 ES 1046 7.48-0.05 1.0
 BHL BZ 182 206 EP 1045 59.07 0.14 1.0
 DQRL SZ 205 206 EP 1046 2.03 0.16 1.0

QRWL	SZ	217	201	EP		1046	3.50	0.13									0.2
RCY	SZ	218	197	EP		1046	3.51	-0.01									1.0
RCY	SN	218	197	ES		1046	28.56	0.47									1.0
SHBL	SZ	236	198	EP		1046	5.68	-0.10									1.0

July 23 2020 Hour: 23:20 10.9 Lat: 34.08N Lon: 36.32E Depth: 10 Agency: REL Local
Magnitudes: 3.9MC REL Rms: 0.1 secs

Earthquake was felt
BAALBECK REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
HWQ	BZ	41	302	EP		2320	17.77	0.02							1.0
HWQ	BN	41	302	ES		2320	22.85	0.02							1.0
ZAHL	SZ	47	239	EP		2320	18.76	0.02							1.0
ZAHL	SN	47	239	ES		2320	24.51	-0.04							1.0
BEIL	SZ	53	346	EP		2320	19.62	0.05							1.0
BEIL	SN	53	346	ES		2320	26.02	0.03							1.0
BHL	BZ	65	253	EP		2320	21.28	-0.21	190						1.0
RCY	SZ	79	215	EP		2320	23.59	-0.16							1.0
RCY	SN	79	215	ES		2320	33.51	0.24							1.0
BEYL	SZ	80	253	EP		2320	23.88	0.04							1.0
CPTL	SZ	81	255	EP		2320	23.99	0.02							1.0
DQRL	SZ	81	239	EP		2320	24.00	-0.05							1.0
QRWL	SZ	84	225	EP		2320	24.49	0.06							1.0
SHBL	SZ	97	214	EP		2320	26.44	-0.03							1.0

July 26 2020 Hour: 15:22 22.1 Lat: 33.84N Lon: 34.94E Depth: 26 Agency: REL Local
Magnitudes: 2.8MC REL Rms: 0.2 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
CPTL	SZ	50	83	EP		1522	30.98	0.14							1.0
DQRL	SZ	60	104	EP		1522	32.48	0.16	41						1.0
BHL	BZ	67	84	EP		1522	32.82	-0.37							1.0
QRWL	SZ	76	115	EP		1522	34.55	0.02							1.0
ZAHL	SZ	88	88	EP		1522	36.62	0.42							1.0
RCY	SZ	92	114	EP		1522	36.83	0.07							1.0
RCY	SN	92	114	ES		1522	47.63	0.01							1.0
SHBL	SZ	93	126	EP		1522	36.58	-0.32							1.0
HWQ	BZ	105	62	EP		1522	38.65	-0.05							1.0
HWQ	BN	105	62	ES		1522	50.91	-0.09							1.0
BEIL	SZ	139	56	EP		1522	43.00	0.02							1.0

July 28 2020 Hour: 9: 5 44.1 Agency: REL Regional
EMSC OT=09:05:44.1 36.81N 35.08E 16Km M=3.3 CENTRAL TURKEY

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		9 6	24.73								
HWQ	BZ			EP		9 6	27.38								
RCY	SZ			EP		9 6	36.93								
SHBL	SZ			EP		9 6	39.00								

July 28 2020 Hour: 16: 4 34.2 Lat: 34.31N Lon: 36.27E Depth: 12 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
BEIL	SZ	28	343	EP		16 4	39.23	0.10	44						1.0
BEIL	SN	28	343	ES		16 4	42.69	-0.07							1.0
HWQ	BZ	30	264	EP		16 4	39.55	-0.01							1.0
HWQ	BN	30	264	ES		16 4	43.52	0.01							1.0
ZAHL	SZ	61	216	EP		16 4	44.34	0.02							1.0
BHL	BZ	72	232	EP		16 4	46.00	0.04							1.0
DQRL	SZ	93	225	EP		16 4	48.97	-0.01							1.0
RCY	SZ	98	204	EP		16 4	49.66	-0.15							1.0
SHBL	SZ	117	205	EP		16 4	52.62	0.09							1.0

July 28 2020 Hour: 19:11 54.9 Agency: REL Distant

EMSC OT=19:11:54.9 18.76S 177.80W 540Km M=4.8 FIJI REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1930	34.79								
HWQ	BZ			EP		1930	34.98								
ZAHL	SZ			EP		1930	36.36								
BHL	BZ			EP		1930	36.30								
DQRL	SZ			EP		1930	36.55								
RCY	SZ			EP		1930	36.61								
QRWL	SZ			EP		1930	36.93								
SHBL	SZ			EP		1930	37.18								

July 29 2020 Hour: 14:10 38.1 Lat: 33.75N Lon: 36.85E Depth: 61 Agency: REL Regional

Magnitudes: 3.1MC REL Rms: 0.1 secs

SYRIA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	90	278	EP		1410	53.12	-0.10							1.0
RCY	SZ	98	254	EP		1410	54.25	0.12							1.0
RCY	SN	98	254	ES		1411	6.03	0.02							1.0
HWQ	BZ	102	305	EP		1410	54.57	0.03							1.0
HWQ	BN	102	305	ES		1411	6.72	-0.01							1.0
BEIL	SZ	107	325	EP		1410	55.09	0.02	64						1.0
QRWL	SZ	110	259	EP		1410	55.37	-0.10							1.0
SHBL	SZ	112	247	EP		1410	55.63	-0.05							1.0
DQRL	SZ	118	268	EP		1410	56.49	0.08							1.0

July 29 2020 Hour: 19:25 12.4 Lat: 33.65N Lon: 35.88E Depth: 3 Agency: REL Local

Magnitudes: 2.8MC REL Rms: 0.0 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
RCY	SZ	17	195	EP		1925	15.23	-0.08	46						1.0
RCY	SN	17	195	ES		1925	17.45	-0.00							1.0
QRWL	SZ	22	240	EP		1925	16.06	0.08							1.0
ZAHL	SZ	24	0	EP		1925	16.35	0.06							1.0
DQRL	SZ	30	283	EP		1925	17.25	-0.03							1.0
DQRL	SN	30	283	ES		1925	20.89	0.00							1.0
SHBL	SZ	36	202	EP		1925	18.23	0.04							1.0
BHL	BZ	36	323	EP		1925	18.15	-0.06							1.0
HWQ	BZ	70	5	EP		1925	23.82	0.04							1.0
BEIL	SZ	103	16	EP		1925	29.02	-0.04							1.0

July 30 2020 Hour: 0:35 56.3 Agency: REL Distant

EMSC OT=00:35:56.3 30.66N 141.77E 10Km M=5.8 IZU ISLANDS, JAPAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		048	29.93								
HWQ	BZ			EP		048	31.16								
ZAHL	SZ			EP		048	32.89								
BHL	BZ			EP		048	33.22								
CPTL	SZ			EP		048	33.47								
RCY	SZ			EP		048	33.72								
DQRL	SZ			EP		048	33.88								
QRWL	SZ			EP		048	34.13								
SHBL	SZ			EP		048	34.71								

July 30 2020 Hour: 2:31 5.4 Agency: REL Regional

EMSC OT=02:31:05.4 34.99N 33.05E 32Km M=3.7 CYPRUS REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BHL	BZ			EP		231	40.07								
DQRL	SZ			EP		231	40.79								
HWQ	BZ			EP		231	42.98								
BEIL	SZ			EP		231	44.37								
QRWL	SZ			EP		231	44.41								
ZAHL	SZ			EP		231	43.93								

SHBL SZ EP 231 46.64
 RCY SZ EP 231 46.21

July 30 2020 Hour: 19:16 49.8

Agency: REL Distant

EMSC OT=19:16:49.8 18.94S 173.53W 10Km M=5.7 TONGA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		1936	39.90								
HWQ	BZ			EP		1936	40.43								
ZAHL	SZ			EP		1936	41.31								
BHL	BZ			EP		1936	41.40								
DQRL	SZ			EP		1936	42.10								
RCY	SZ			EP		1936	41.93								
QRWL	SZ			EP		1936	42.10								
SHBL	SZ			EP		1936	42.19								

July 30 2020 Hour: 23:40 49.8

Agency: REL Regional

EMSC OT=23:40:49.8 34.90N 27.14E 10Km M=3.7 EASTERN MEDITERRANEAN SEA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ			EP		2342	35.94								
SHBL	SZ			EP		2342	36.42								
HWQ	BZ			EP		2342	36.70								
RCY	SZ			EP		2342	37.01								
BEIL	SZ			EP		2342	37.53								

July 31 2020 Hour: 2:23 50.5

Lat: 34.08N Lon: 36.19E Depth: 6 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	32	315	EP		223	55.64	-0.08	36						1.0
HWQ	BN	32	315	ES		223	59.57	-0.03							1.0
ZAHL	SZ	37	229	EP		223	56.61	0.02							1.0
ZAHL	SN	37	229	ES		224	1.14	0.03							1.0
BEIL	SZ	52	360	EP		223	58.90	0.03							1.0
BEIL	SN	52	360	ES		224	5.13	0.04							1.0
BHL	BZ	53	249	EP		223	59.16	0.06							1.0
DQRL	SZ	70	234	EP		224	1.91	0.01							1.0
RCY	SZ	72	207	EP		224	2.16	-0.03							1.0
QRWL	SZ	75	219	EP		224	2.67	0.02							1.0
SHBL	SZ	91	207	EP		224	5.08	-0.08							1.0

July 31 2020 Hour: 6: 6 44.5

Agency: REL Distant

EMSC OT=06:06:44.5 8.53N 126.56E 60Km M=5.6 MINDANAO, PHILIPPINES

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		619	16.89								
HWQ	BZ			EP		619	17.78								
ZAHL	SZ			EP		619	18.45								
RCY	SZ			EP		619	19.12								
BHL	BZ			EP		619	19.18								
SHBL	SZ			EP		619	19.29								
QRWL	SZ			EP		619	19.23								
DQRL	SZ			EP		619	19.46								

Epicentral Map of Lebanon

JULY 2020

