

Republic of Lebanon
National Council for Scientific Research

Provisional Seismological Bulletin

from the

NATIONAL SEISMIC NETWORK

April

2021

Prepared by
The National Centre for Geophysical Research
Bhannes

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

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

GENERAL BULLETIN INFORMATION

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

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

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

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

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

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

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

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

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

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

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

STATIONS USED

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

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

STATION	LATITUDE	LONGITUDE	HEIGHT (m)	NAME	COMMENTS
BHL	3354.25N	3539.25E	1000	BHANNES	Opened May 1980
HWQ	3416.68N	3556.78E	1161	HAWQA	Opened Jan 2001
MATL	3329.32N	3519.78E	5	MATARIH	Nov2000-Sep2012
FKH	3414.69N	3624.61E	1152	FAKEHEH	Opened Dec 2004
RCY	3329.79N	3550.14E	1370	RACHAYA	Opened Jun 2006
BEYL	3352.30N	3529.59E	49	BEIRUT	Opened Jul 2006
NAQL	3307.02N	3508.46E	83	NAQOURA	Jul2008-Jan2012
DQRL	3342.34N	3534.21E	963	DEIR QAMAR	Opened Mar 2010
QRWL	3332.86N	3540.93E	875	QARAOUN	Opened Oct 2011
SHBL	3320.90N	3544.63E	1422	CHEBAA	Opened Oct 2011
ZAHL	3351.48N	3553.12E	1211	ZAHLE	Opened Aug 2015
BEIL	3432.50N	3611.08E	572	BEINO	Opened Jan 2017
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 ($0.5 \times (\text{peak to peak})$), (nm) at period PERI

PERI: Period where amplitude is measured

BAZ: Back azimuth (station to event)

ARES: Back azimuth residual

VELO: Apparent phase velocity (km/sec)

WT: Weight of phase in the location

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

April 1 2021 Hour: 12:33 40.4

Agency: REL Regional

EMSC OT=12:33:40.4 36.20N 26.54E 98Km M=4.4 DODECANESE ISLANDS

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
DQRL	SZ			EP		1235	27.58								
BHL	BZ			EP		1235	27.47								
HWQ	BZ			EP		1235	30.06								
QRWL	SZ			EP		1235	30.90								
ZAHL	SZ			EP		1235	30.90								
BEIL	SZ			EP		1235	31.62								
SHBL	SZ			EP		1235	32.57								
RCY	SZ			EP		1235	32.33								

April 3 2021 Hour: 18:30 36.8

Lat: 33.54N Lon: 35.59E Depth: 9 Agency: REL Local

Magnitudes: 2.3MC REL

Rms: 0.0 secs

JEZZINE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	83	EP		1830	38.90	-0.07	22						1.0
QRWL	SN	9	83	ES		1830	40.60	0.00							1.0
SAIL	SZ	18	284	EP		1830	40.00	0.00							1.0
DQRL	SZ	19	356	EP		1830	40.28	0.06							1.0
RCY	SZ	24	101	EP		1830	40.96	0.00							1.0
RCY	SN	24	101	ES		1830	44.09	0.03							1.0
SHBL	SZ	26	145	EP		1830	41.25	0.00							1.0
BHL	BZ	41	9	EP		1830	43.60	-0.02							1.0
ZAHL	SZ	45	38	EP		1830	44.23	-0.02							1.0

April 5 2021 Hour: 18:42 32.4

Lat: 32.91N Lon: 35.77E Depth: 5 Agency: REL Regional

Magnitudes: 2.8MC REL

Rms: 0.1 secs

GOLAN REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	SZ	49	358	EP		1842	40.39	0.04	45						1.0
SHBL	SN	49	358	ES		1842	46.12	-0.09							1.0
RCY	SZ	65	6	EP		1842	42.96	-0.07							1.0
RCY	SN	65	6	ES		1842	50.97	0.11							1.0
QRWL	SZ	71	354	EP		1842	43.88	-0.07							1.0
QRWL	SN	71	354	ES		1842	52.45	-0.02							1.0
DQRL	SZ	90	348	EP		1842	47.13	0.13							1.0
ZAHL	SZ	106	6	EP		1842	49.50	-0.02							1.0
BHL	BZ	111	355	EP		1842	50.27	-0.01							1.0

April 6 2021 Hour: 8: 8 31.9

Lat: 34.74N Lon: 33.81E Depth: 76 Agency: REL Regional

Magnitudes: 3.4MC 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	193	118	EP		8 8	59.45	0.03							1.0
DQRL	SZ	198	125	EP		8 8	59.97	-0.07							1.0
HWQ	BZ	202	104	EP		8 9	0.53	-0.00							1.0
HWQ	BN	202	104	ES		8 9	21.76	0.03							1.0
ZAHL	SZ	214	117	EP		8 9	2.11	0.16							1.0
QRWL	SZ	217	127	EP		8 9	2.18	-0.08							1.0
BEIL	SZ	218	95	EP		8 9	2.34	-0.03	80						1.0
BEIL	SN	218	95	ES		8 9	24.88	-0.04							1.0
RCY	SZ	232	126	EP		8 9	4.05	-0.01							1.0
SHBL	SZ	236	130	EP		8 9	4.52	0.00							1.0

April 7 2021 Hour: 5:48 18.0

Lat: 33.72N Lon: 35.86E Depth: 17 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
ZAHL	SZ	15	9	EP		548	21.84	0.02							1.0
RCY	SZ	25	185	EP		548	22.87	-0.09							1.0
RCY	SN	25	185	ES		548	26.65	0.04							1.0
QRWL	SZ	25	220	EP		548	22.91	-0.03	44						1.0

DQRL	SZ	27	266	EP	548	23.13	-0.01										1.0
DQRL	SN	27	266	ES	548	26.97	0.04										1.0
BHL	BZ	28	317	EP	548	23.17	-0.10										1.0
SHBL	SZ	43	194	EP	548	25.89	0.51										0.2
HWQ	BZ	62	8	EP	548	28.27	0.07										1.0
BEIL	SZ	96	18	EP	548	33.23	0.14										0.2

April 7 2021 Hour: 5:49 5.5 Lat: 33.72N Lon: 35.83E Depth: 19 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	16	20	EP		549	9.54	-0.03							1.0
QRWL	SZ	24	215	EP		549	10.34	-0.01	31						1.0
QRWL	SN	24	215	ES		549	13.91	-0.04							1.0
DQRL	SZ	24	266	EP		549	10.47	0.08							1.0
RCY	SZ	25	178	EP		549	10.61	0.02							1.0
RCY	SN	25	178	ES		549	14.41	0.04							1.0
BHL	BZ	26	322	EP		549	10.60	-0.03							1.0
SHBL	SZ	42	190	EP		549	12.82	-0.04							1.0
HWQ	BZ	63	10	EP		549	16.03	0.26							0.2

April 7 2021 Hour: 6:47 52.2 Lat: 33.72N Lon: 35.83E Depth: 15 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
ZAHL	SZ	16	19	EP		647	55.87	0.05							1.0
QRWL	SZ	24	215	EP		647	56.75	-0.07	36						1.0
QRWL	SN	24	215	ES		648	0.26	0.01							1.0
DQRL	SZ	24	265	EP		647	56.92	0.06							1.0
DQRL	SN	24	265	ES		648	0.31	0.00							1.0
RCY	SZ	25	179	EP		647	56.99	-0.06							1.0
BHL	BZ	26	321	EP		647	57.00	-0.06							1.0
SHBL	SZ	43	191	EP		647	59.56	0.07							1.0
HWQ	BZ	62	10	EP		648	2.34	-0.02							1.0
BEIL	SZ	96	20	EP		648	7.44	0.12							0.2

April 8 2021 Hour: 4:22 38.1 Lat: 33.72N Lon: 35.22E Depth: 28 Agency: REL Local
Magnitudes: 3.2MC REL Rms: 0.0 secs

OFFSHORE CENTRAL LEBANON

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SAIL	SZ	24	134	EP		422	43.73	-0.02							1.0
BEYL	SZ	30	57	EP		422	44.53	0.08							1.0
BEYL	SN	30	57	ES		422	49.16	-0.00							1.0
DQRL	SZ	33	93	EP		422	44.75	-0.07	73						1.0
DQRL	SN	33	93	ES		422	49.79	-0.02							1.0
QRWL	SZ	47	114	EP		422	46.69	0.08							1.0
QRWL	SN	47	114	ES		422	52.95	0.02							1.0
RCY	SZ	63	113	EP		422	48.73	0.01							1.0
ZAHL	SZ	64	76	EP		422	48.83	-0.02							1.0
SHBL	SZ	64	130	EP		422	48.91	-0.03							1.0
HWQ	BZ	91	47	EP		422	52.72	-0.02							1.0
BEIL	SZ	127	44	EP		422	57.44	-0.00							1.0

April 8 2021 Hour: 12:9 58.2 Lat: 33.72N Lon: 35.81E Depth: 5 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
ZAHL	SZ	17	23	EP		1210	1.09	-0.02							1.0
QRWL	SZ	23	213	EP		1210	1.98	-0.02							1.0
DQRL	SZ	23	266	EP		1210	1.98	-0.03	33						1.0
QRWL	SN	23	213	ES		1210	4.92	0.10							1.0
DQRL	SN	23	266	ES		1210	4.92	0.08							1.0
RCY	SZ	25	176	EP		1210	2.27	-0.08							1.0
BHL	BZ	25	324	EP		1210	2.21	-0.21							1.0

SHBL	SZ	42	189	EP	1210	4.97	-0.04										1.0
HWQ	BZ	63	11	EP	1210	8.49	0.05										1.0
BEIL	SZ	97	20	EP	1210	14.10	0.17										1.0

April 8 2021 Hour: 12:10 22.8 Lat: 33.72N Lon: 35.81E Depth: 6 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
ZAHL	SZ	17	24	EP		1210	25.81	0.04							1.0
DQRL	SZ	23	266	EP		1210	26.64	0.03							1.0
DQRL	SN	23	266	ES		1210	29.48	0.02							1.0
QRWL	SZ	23	213	EP		1210	26.56	-0.05	24						1.0
RCY	SZ	25	175	EP		1210	27.00	0.03							1.0
RCY	SN	25	175	ES		1210	30.06	-0.03							1.0
BHL	BZ	25	325	EP		1210	26.95	-0.08							1.0
SHBL	SZ	42	189	EP		1210	29.64	0.04							1.0

April 8 2021 Hour: 23:43 48.3 Lat: 34.84N Lon: 36.28E Depth: 0 Agency: REL Regional
Magnitudes: 2.3MC 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	35	194	EP		2343	53.94	0.09	23						1.0
BEIL	SN	35	194	ES		2343	57.97	-0.01							1.0
HWQ	BZ	70	206	EP		2343	59.29	-0.23							1.0
HWQ	BN	70	206	ES		2344	7.85	0.01							1.0
ZAHL	SZ	115	198	EP		2344	6.83	-0.01							1.0
BHL	BZ	119	209	EP		2344	7.55	0.10							1.0
DQRL	SZ	142	207	EP		2344	11.17	0.10							1.0
RCY	SZ	155	195	EP		2344	13.00	0.01							1.0
SHBL	SZ	173	197	EP		2344	15.60	-0.06							1.0

April 13 2021 Hour: 7:59 59.6 Agency: REL Regional
EMSC OT=07:59:59.6 35.85N 35.94E 7Km M=2.1 NEAR COAST SYRIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
BEIL	SZ			EP		8 0	25.52								
HWQ	BZ			EP		8 0	29.76								

April 13 2021 Hour: 16:34 7.0 Lat: 33.62N Lon: 35.64E Depth: 0 Agency: REL Local
Magnitudes: 2.5MC REL Rms: 0.0 secs

CHOUF REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	9	156	EP		1634	8.36	-0.06	32						1.0
QRWL	SN	9	156	ES		1634	9.45	-0.04							1.0
DQRL	SZ	12	324	EP		1634	8.77	-0.06							1.0
DQRL	SN	12	324	ES		1634	10.27	0.06							1.0
RCY	SZ	23	128	EP		1634	10.63	0.01							1.0
SAIL	SZ	23	257	EP		1634	10.64	-0.03							1.0
BHL	BZ	31	2	EP		1634	12.02	-0.00							1.0
SHBL	SZ	32	163	EP		1634	12.19	0.11							1.0
SHBL	SN	32	163	ES		1634	15.89	0.02							1.0
ZAHL	SZ	35	40	EP		1634	12.53	-0.00							1.0

April 17 2021 Hour: 16:48 54.2 Lat: 33.74N Lon: 35.92E Depth: 4 Agency: REL Local
Magnitudes: 2.4MC 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	14	345	EP		1648	56.55	0.00	26						1.0
ZAHL	SN	14	345	ES		1648	58.33	0.01							1.0
RCY	SZ	28	197	EP		1648	58.64	-0.14							1.0
RCY	SN	28	197	ES		1649	2.28	0.08							1.0
QRWL	SZ	31	227	EP		1648	59.23	0.04							1.0
BHL	BZ	31	306	EP		1648	59.33	0.11							1.0
BHL	BN	31	306	ES		1649	2.85	-0.11							1.0
DQRL	SZ	33	264	EP		1648	59.59	0.06							1.0
SHBL	SZ	46	201	EP		1649	1.64	-0.05							1.0
HWQ	BZ	60	2	EP		1649	4.03	0.18							0.2

April 17 2021 Hour: 21:19 45.9 Lat: 33.76N Lon: 35.88E Depth: 13 Agency: REL Local
Magnitudes: 2.3MC REL Rms: 0.1 secs

WEST BEKAA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
ZAHL	SZ	11	1	EP		2119	48.97	0.12	21						1.0
ZAHL	SN	11	1	ES		2119	50.98	-0.06							1.0
BHL	BZ	27	308	EP		2119	50.79	0.01							1.0
RCY	SZ	29	189	EP		2119	51.09	-0.06							1.0
DQRL	SZ	30	259	EP		2119	51.00	-0.17							1.0
DQRL	SN	30	259	ES		2119	55.15	0.08							1.0
QRWL	SZ	30	219	EP		2119	51.23	0.04							1.0
SHBL	SZ	47	196	EP		2119	53.89	0.05							1.0

April 18 2021 Hour: 11: 6 35.0 Lat: 33.76N Lon: 36.75E Depth: 29 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
ZAHL	SZ	81	278	EP		11 6	47.68	-0.47							1.0
RCY	SZ	89	251	EP		11 6	49.74	0.31							1.0
HWQ	BZ	94	308	EP		11 6	50.05	0.04							1.0
HWQ	BN	94	308	ES		11 7	1.31	0.16							1.0
BEIL	SZ	101	329	EP		11 6	50.99	0.04	77						1.0
BEIL	SN	101	329	ES		11 7	2.87	0.10							1.0
QRWL	SZ	102	257	EP		11 6	51.08	0.04							1.0
BHL	BZ	102	279	EP		11 6	50.69	-0.47							1.0
SHBL	SZ	104	244	EP		11 6	51.67	0.30							1.0
SHBL	SN	104	244	ES		11 7	3.51	0.00							1.0
DQRL	SZ	109	267	EP		11 6	51.95	-0.05							1.0

April 24 2021 Hour: 13:47 15.3 Lat: 33.60N Lon: 36.49E Depth: 27 Agency: REL Regional
Magnitudes: 3.6MC 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	61	260	EP		1347	25.58	-0.15							1.0
RCY	SN	61	260	ES		1347	33.49	0.05							1.0
ZAHL	SZ	63	298	EP		1347	25.92	0.00							1.0
SHBL	SZ	74	248	EP		1347	27.56	0.02							1.0
QRWL	SZ	75	266	EP		1347	27.69	0.11	124						1.0
BHL	BZ	84	294	EP		1347	28.80	-0.14							1.0
BHL	BN	84	294	ES		1347	39.01	-0.01							1.0
DQRL	SZ	86	278	EP		1347	29.21	0.06							1.0
HWQ	BZ	91	327	EP		1347	29.87	0.01							1.0
BEIL	SZ	109	345	EP		1347	32.46	0.05							1.0

April 28 2021 Hour: 1:54 59.3 Lat: 32.24N Lon: 35.47E Depth: 0 Agency: REL Regional
 Magnitudes: 3.3MC REL Rms: 1.0 secs

DEAD SEA REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
SHBL	SZ	125	12	EP		155	18.57	-0.99							1.0
RCY	SZ	143	14	EP		155	20.91	-1.45							1.0
RCY	SN	143	14	ES		155	39.00	-0.39							1.0
QRWL	SZ	146	8	EP		155	22.11	-0.64	80						1.0
DQRL	SZ	163	3	EP		155	24.72	-0.45							1.0
DQRL	SN	163	3	ES		155	45.54	1.26							1.0
ZAHL	SZ	183	12	EP		155	27.61	-0.63							1.0
BHL	BZ	185	5	EP		155	28.10	-0.37							1.0
HWQ	BZ	230	11	EP		155	34.72	0.64							1.0
FKH	SZ	239	21	EP		155	36.60	1.44							1.0
BEIL	SZ	264	14	EP		155	39.75	1.58							1.0

April 28 2021 Hour: 2:21 25.6 Agency: REL Distant

EMSC OT=02:21:25.6 26.77N 92.43E 35Km M=6.0 ASSAM, INDIA

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
FKH	SZ			EP		230	4.37								
BEIL	SZ			EP		230	5.59								
HWQ	BZ			EP		230	7.50								
ZAHL	SZ			EP		230	8.42								
RCY	SZ			EP		230	8.80								
SHBL	SZ			EP		230	9.41								
BHL	BZ			EP		230	9.64								
QRWL	SZ			EP		230	9.79								
DQRL	SZ			EP		230	10.33								

April 28 2021 Hour: 12:22 28.9 Lat: 33.44N Lon: 35.55E Depth: 9 Agency: REL Local
 Magnitudes: 2.4MC REL Rms: 0.1 secs

JEZZINE REGION

STAT	CO	DIST	AZI	PHASE	P	HRMN	SECON	TRES	CODA	AMPL	PERI	BAZ	ARES	VELO	WT
QRWL	SZ	17	46	EP		1222	32.11	0.03	25						1.0
SAIL	SZ	20	316	EP		1222	32.48	-0.05							1.0
SHBL	SZ	21	121	EP		1222	32.74	0.05							1.0
RCY	SZ	27	77	EP		1222	33.50	-0.11							1.0
RCY	SN	27	77	ES		1222	37.06	0.00							1.0
DQRL	SZ	29	3	EP		1222	34.01	0.10							1.0
DQRL	SN	29	3	ES		1222	37.57	-0.02							1.0

Epicentral Map of Lebanon

APRIL 2021

