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**BULETINI MUJOR I SIZMOLOGJISË**



**Universiteti Politeknik i Tiranës**  
**Instituti i Gjeoshkencave, Energjisë, Ujit dhe Mjedisit**

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# BULETINI MUJOR I SIZMOLOGJISË (MONTHLY BULLETIN OF SEISMOLOGY)

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# Korrik 2019

## H Y R J E

Buletini sizmologjik përmban ngjarjet sizmike (tërmetet), e regjistruar, lokalizuar dhe analizuar gjatë periudhës kohore një-mujore. Përpos pasqyrimin kronologjik të aktivitetit sizmik të regjistruar, në territorin Shqipëtar dhe rreth tij, me anë të stacioneve të rrjetit sizmologjik shqipëtar, por edhe të rrjeteve fqinjë, periodiku përmban një analizë të gjithanëshme të parametrave të vlerësuar në drejtim të cilësisë së vlerësimit të tyre dhe statistikës së aktivitetit sizmik në vend. Përmbajtja e buletinit konsiston në terminologjinë përkatëse, në karakteristikat e stacioneve sizmologjik, të dhënat parametrike të vlerësuara nga analiza e çdo tërmeti, në analizën e cilësisë së vlerësimit të këtyre parametrave, në analizën e ngjarjeve të veçanta ( $M > 4.0$ ), nëse ka të tilla, si dhe në përpilimin e katalogut mujor dhe paraqitjen grafike në hartë, të epiqendrave të tërmeteve të lokalizuar. Analiza e të dhënave kryhet me anë të programit Hypoinverse-2000 (Pakete rutinash në gjuhën Fortran), me autor Fred W Klein (2002) [Referenca: *Open File Report 02-171*, v. 1.0, U. S. Geological Survey, 345 Middlefield Rd., MS#977, Menlo Park CA 94025; [klein@usgs.gov](mailto:klein@usgs.gov)]. Ky program është baza llogaritëse e përdorur nga **Nanometrics** në programin interaktiv të përpunimit dhe lokalizimit të tërmeteve, në sistemin Libra 1, ATLAS (një ndërfaqe grafike në gjuhën Java). Të dhënat e përfuara ruhen në formatet standart të Hypoinverse 2000, në skedarin hyp.prt dhe atë akiv, që shërbejnë edhe si baza për përpilimin e këtij buletini dhe analizës së kryer.

### **Briefing:**

The seismological bulletin represents a reassume of the seismic events (earthquakes), occurred within Albania and surroundings for a period of one month. These events are permanently recorded, located and further processed by Albanian Seismological Network. This report, along with the chronologic ordering of events, contains a comprehensive analysis of the evaluated parameters as well as the quality of this process. It contains the description of output parameters, parametric data, statistical analysis and quality data analysis, catalogue and epicenter map. Program used for this analysis is Hyponverse 2000 (Klein, 2002; USGS), implicitly implemented in Atlas (Java Interface Nanometrics Firmware), part of Libra 1 VSAT system.

### **Stacionet Sizmikë** (*Seismic Stations*)

#### **A. Rrjeti Sizmologjik Shqipëtar** (*Albanian Seismological Network, ASN*)

Të dhënat për këtë rrjet janë dhënë në **Tab. 1**.

**3C** – sensor të shpejtësisë me tre komponente regjistrimi (3 – component velocimeters)

**BB** – sensor me reagim frekuencial me bandë të gjerë, në intervalin e frekuencave të fushës sizmike  $10^{-3} - 10^2$  Hz (Broadband sensors)

**RT** – regjistrim dhe tranmetim i të dhënave valore nga stacionet periferik në Qendrën Kombëtare të Monitorimit, në kohë reale (Real time communication)

**T<sub>0</sub>** – perioda vetjake e reagimit të sizmometrit (sensorit), mbi të cilën ai reagon linearisht si filtër i frekuencave të larta (High-Pass). Ky parametër është karakteristik për një tip të dhënë sensori (Sensor Natural Period)

**Shënim:** të gjithë stacionet janë të regjistruar në regjistrin ndërkombëtar (WDC), ku identifikohen me kodin përkatës të përbërë nga 3-5 karaktere.

**Tab. 1** – Rrjeti Sizmologjik Shqipëtar (Albanian Seismological Network, ASN, Rrjeti Sizmologjik Virtual (Virtual Seismological Network)

Kodi	Regjistruar (Po/Jo)	Gjer. Gjeo.	Gjat. Gjeo.	Lartesia	Tipi i stacionit	Sensori	Terheqja e Informacionit	Komunikimi	T <sub>0</sub>
Station Code	Registered (WDC)	Latitude (degree)	Longitude (degree)	Elev. (m)	Station type	Sensor type	Acquisition system	Communication	Nat.l Period (s)
TIR	Po (Y)	41.3477	19.8650	198	3C-BB	STS-2	Libra VSAT (InterNaqs)	RT satellite	120
BCI	Po (Y)	42.3666	20.0675	500	3C-BB	CMG-40T	Libra VSAT	RT satellite	40
PHP	Po (Y)	41.6847	20.4408	670	3C-BB	Trillium 40T	Libra VSAT	RT satellite	40
SDA	Po (Y)	42.0519	19.4986	80	3C-SP	SM-4	GBV-316	Dial-up	0.2
LACI	Po (Y)	41.6363	19.7094	40	3C-SP	SM-4	GBV-316	Dial-up	0.2
TPE	Po (Y)	40.2952	20.0109	240	3C-SP	SM-4	GBV-316	Dial-up	0.2
LSK	Po (Y)	40.1500	20.6000	920	3C-BB	CMG-40T	Libra VSAT	RT satellite	40
KBN	Po (Y)	40.6236	20.7874	800	3C-BB	Trillium 40T	Libra VSAT	RT satellite	40
VLO	Po (Y)	40.4686	19.4955	80	3C-BB	Trillium 40T	Libra VSAT	RT satellite	40
SRN	Po (Y)	39.8800	20.0005	20	3C-BB	Trillium 40T	Libra VSAT.	RT satellite	40
PUK	Po (Y)	42.0426	19.8926	900	3C-BB	Trillium 40T	Libra VSAT	RT satellite	40
KKS	Po (Y)	42.0756	20.4113	300	3C-SP	SM-4	GBV-316	Dial-up	0.2

**Tab. 2** – Rrjeti Sizmologjik Virtual - InterNaqs (INGV, AUTH)

Kodi	Regjistruar (Po/Jo)	Gjer. Gjeo.	Gjat. Gjeo.	Lartesia	Tipi i stacionit	Sensori	Terheqja e Informacionit	Komunikimi	T <sub>0</sub>
Station Code	Registered (WDC)	Latitude (degree)	Longitude (degree)	Elev. (m)	Station type	Sensor type	Acquisition system	Communication	Nat.l Period (s)
MRVN	Po (Y)	41.0609	16.1958	610	3C-BB	Trillium 40T	Libra VSAT	RT satellite	40
NOCI	Po (Y)	40.7888	17.0644	420	3C-BB	Trillium 40T	Libra VSAT	RT satellite	40
SCTE	Po (Y)	40.0724	18.4675	150	3C-BB	Trillium 40T, 120S	Libra VSAT	RT satellite	40/120
SGRT	Po (Y)	41.7546	15.7437	960	3C-BB	Trillium 40T	Libra VSAT	RT satellite	40
LKD2	Po (Y)	38.7889	20.6578	485	3C-BB	CMG-3ESP/100	Trident	RT	40
THE	Po (Y)	40.6319	22.9628	124	3C-BB	Trillium 120	Taurus	GPRS	120
NEST	Po (Y)	40.4147	21.0489	1056	3C-BB	Trillium 120	Taurus	GPRS	120
FNA	Po (Y)	40.7818	21.3835	750	3C-BB	CMG-3EPS/100	Trident	RT	40
IGT	Po (Y)	39.5315	20.3299	270	3C-BB	CMG-3EPS/100	HRD24	RT	40

**Tab. 3 – Rrjeti Sizmologjik Ndihmës (MSO, SKO, AUTH, NAO, INGV)**

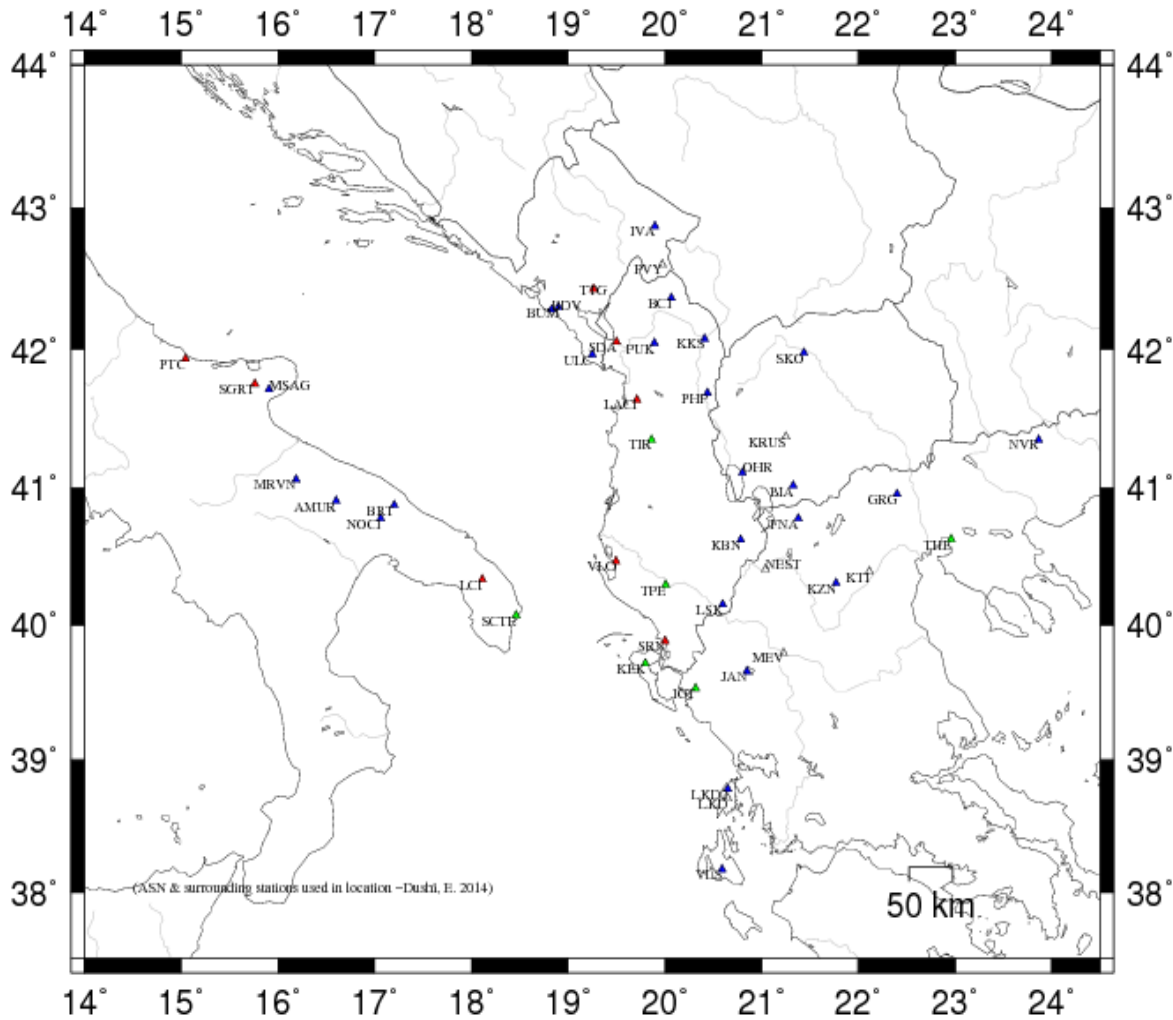
Kodi	Regjistruar (Po/Jo)	Gjer. Gjeo.	Gjat. Gjeo.	Lartesia	Tipi i stacionit	Sensori	Terheqja e Informacionit	Komunikimi	T <sub>0</sub>
Station Code	Registered (WDC)	Latitude (degree)	Longitude (degree)	Elev. (m)	Station type	Sensor type	Acquisition system	Communication	Nat.l Period (s)
MEV	Po (Y)	39.7850	21.2290	1500	3C-SP	S-13	Trident	RT	<b>1.0</b>
KTI	Po (Y)	40.39289	22.11650	1329	#	#	#	#	#
GRG	Po (Y)	40.9558	22.4029	600	3C-BB	CMG-3EPS/100	Trident	RT	<b>40</b>
LKD	Po (Y)	38.70722	20.65056	1140	#	#	#	#	#
ULC	Po (Y)	41.9633	19.2497	465	3C-SP	S-13	Smart-24D	RT	<b>1.0</b>
TTG	Po (Y)	42.43020	19.25530	97	#	#	#	#	#
PVY	Po (Y)	42.5950	19.9735	1250	3C-SP	S-13	Smart-24D	RT	<b>1.0</b>
BUM	Po (Y)	42.3008	18.8986	724	3C-SP	S-13	Smart-24D	RT	<b>1.0</b>
BDV	Po (Y)	42.28340	18.82790	385	#	#	#	#	#
IVA	Po (Y)	42.87180	19.89310	996	#	#	#	#	#
KEK	Po (Y)	39.7127	19.7962	227	3C-BB	STS-2	DR24-SC	RT	<b>120</b>
JAN	Po (Y)	39.6561	20.8487	526	3C-BB	CMG-3ESPC/60	DR24-SC	RT	<b>40</b>
KZN	Po (Y)	40.3033	21.7820	791	3C-BB	STS-2	DR24-SC	RT	<b>120</b>
VLS	Po (Y)	38.1768	20.5886	402	3C-BB	Trillium 120	DR24-SC	RT	<b>120</b>
NVR	Po (Y)	41.3484	23.8651	627	3C-BB	CMG-3ESPC/60	DR24-SC	RT	<b>40</b>

Kodi	Regjistruar (Po/Jo)	Gjer. Gjeo.	Gjat. Gjeo.	Lartesia	Tipi i stacionit	Sensori	Terheqja e Informacionit	Komunikimi	T <sub>0</sub>
Station Code	Registered (WDC)	Latitude (degree)	Longitude (degree)	Elev. (m)	Station type	Sensor type	Acquisition system	Communication	Nat.l Period (s)
BRT	Po (Y)	40.8778	17.2036	333	#	#	#	#	#
AMUR	Po (Y)	40.9071	16.6041	443	3C-BB	Trillium 40T	Libra VSAT	RT satellite	<b>40</b>
MSAG	Po (Y)	41.712	15.9096	890	3C-BB	Trillium 40T	Libra VSAT	RT satellite	<b>40/120</b>
PTC	Po (Y)	41.7546	15.7437	960	3C-BB	Trillium 40T	Libra VSAT	RT satellite	<b>40</b>
LCI	Po (Y)	40.33461	18.11197	46	#	#	#	#	#
OHR	Po (Y)	41.1114	20.7989	739	#	#	#	#	#
BIA	Po (Y)	41.0194	21.3239	720	#	#	#	#	#
KRUS	Po (Y)	41.3689	21.2488	1015	#	#	#	#	#
SKO	Po (Y)	41.9721	21.4396	346	#	#	#	#	#

**Shënim:**

Rrjeti plotësues (ndihmës) konsiston në stacionet sizmologjike të rajonit, të cilat janë pjesë e Rrjetit Sizmologjik Malazezë (MSO), atij Maqedonas (SKO), të Selanikut (AUTH), Athinës (NAO) dhe Institutit Kombëtar të Gjeofizikës dhe Vullkanologjisë në Romë (INGV), dhe përdoren për përfshirjen manuale të leximeve të fazave sizmike në procesin e lokalizimit. (#) – është përdorur në rastin kur nuk njihet instrumentimi i stacioneve.



**-Fig. 1-**

Harta e shpërndarjes së stacioneve të rrjetit sizmologjik Shqipëtar (ASN), Universitetit ‘Aristotel’ të Selanikut (THE), Observatorit Kombëtar të Athinës (ATH), INGV, rrjetit sizmologjik Malazez (PDG) dhe atij Maqedonas (SKO).  
 [Seismological station distribution map for ASN, THE, ATH, INGV, PDG & SKO]

**Përshkrimi i terminologjisë së përdorur për parametrat e përfutur**  
 (Output parameter’s description)

**Informacioni gjithpërfshirës i kreut të ngjarjes (EVENT HEADER INFORMATION)**

YEAR MO DA Data (viti, muaji, data) [Date]  
 ORIGIN Koha (ora, minuta, sekonda) [Origine Time]  
 LAT N Gjerësia gjeografike (gradë, minuta) [latitude in degree and minute]  
 LON W Gjatësia gjeografike (gradë, minuta) [longitude in degree and minutes]

DEPTH	Thellësia vatrore ( <i>km</i> ) [ <i>hypocenter depth in km</i> ]
RMS	Shmangia kuadratike mesatare për diferencat e peshuara të kohë-udhëtimit, për Fazat Sizmike, [ <i>root mean squarre for the weighted travel time residuals</i> ]
ERH	Gabimi horizontal në lokalizim (përafërsisht aksi maksimal i elipsit të gabimit në epiqendër), [ <i>horizontal location error, aproximately equal to the major epicenter's error ellipse</i> ].
ERZ	Gabimi në thellësi, [ <i>Defined as the largest projections of the three principal errors on a vertical line</i> ].
XMAG	Magnituda primare bazuar në amplitudë [ <i>Primary weighted median amplitude magnitude</i> ].
FMAG	Magnituda primare bazuar në zgjatshmërinë e sinjalit [ <i>Primary weighted median coda magnitude</i> ].
PMAG	Magnituda e përzgjedhur si përfaqësuese, për ngjarjen e lokalizuar [ <i>preferred magnitude selected by PRE command, as representative of available magnitudes ML and Md</i> ].
NSTA	Numuri i stacioneve të përdorur në lokalizim [ <i>the number of stations read for this event</i> ].
NPHS	Numuri i fazave të përdorura [ <i>Number of used phases in location</i> ].
DMIN	Distanca hypoqender-stacioni më i afërt [ <i>distance to the nearest station</i> ].
MODEL	Modeli shpejtësior i përdorur [ <i>velocity crustal model code</i> ].
GAP	Shmangia maksimale, këndore, ndërmjet stacioneve të përdorur [ <i>the largest azimuthal gap between azimuthally adjacent stations</i> ].
ITR	Numri i iteracioneve për zgjidhje [ <i>number of iterations required for the solution</i> ].
NFM	Numri i hyrjeve të para P [ <i>number of P first motions reported</i> ].
NWR	Numri i fazave P & S me peshë statistikore > 0.1 [ <i>number of P &amp; S readings with weights &gt; 0.1</i> ].
NWS	Numri i fazave S me peshë statistikore > 0.1 [ <i>number of S-phases with weights &gt; 0.1</i> ].
NVR	Numri i fazave P & S, të vlefshme për lokalizim [ <i>number of P &amp; S phases valid for location, assigned weights &gt; 0</i> ].
QGEO	Cilesia e katalogut bazuar ne gjeometrin e rrjetit sizmologjik [Quality rating based on station geometry]
QLOC	Cilesia e katalogut bazuar ne lokalizimin e ngjarjeve sizmike [Quality rating based on localization of seismic event]
REMARKS	Kodi (3 karaktere) i rajonit (region code), bazuar në lokalizim dhe thellësinë e vlerësuar; kodi (1 karakter) për të karakterizuar ngjarjen: F – e ndjerë (felt), Q/ B – shpërthime sipërfaqësore në karriera (quarry blasts), R/N – shpërthime në thellësi (explosions), T – vibrime (tremors) dhe L – kontraktimet me period të gjatë (long period tidal waves); # - problem me konvergjimimin e zgjidhjes së përfutur në mënyrë iterative [ <i>convergence problems</i> ], ose zgjidhje e pa pranueshme me RMS të lartë; (-) – tregon se thellësia është fiksuar [ <i>fixed depth solution</i> ]; X – lokalizimi i fiksuar për të rritur performancën në llogaritjen e thellësisë [ <i>fixed location solution</i> ].
AVH	Shënime për statusin [ <i>status remarks</i> ].
N.XMG	Numri i magnitudave bazuar në amplitudë [ <i>number of primary amplitude based magnitudes</i> ].
X.MMAD	Gabimi i bërë në vlerësimin e ML [ <i>weighted median absolute difference for the primary amplitude magnitudes</i> ].
T	Kodi i identifikimit për magnitudën XMAG1 [ <i>label code for XMAG1</i> ].
N.FMAG	Numri i magnitudave, bazuar në zgjatshmërinë e sinjalit [ <i>number of primary coda magnitudes</i> ].
FMMAD	Gabimi i bërë në vlerësimin e Md [ <i>weighted median absolute difference for the primary coda magnitudes</i> ].
T	Kodi i identifikimit për magnitudën FMAG1 [ <i>label code for FMAG1</i> ].

**Shënimi:** parametrat XMAG2 dhe FMAG2, së bashku me parametrat e tjerë suksesiv të indeksuar me #####2, paraqesin informacionin për magnitudat dytësore [*secondary magnitude information parameters*].

### **Informacioni parametrik i ngjarjes (EVENT PARAMETRIC DATA)**

STA	Kodi i stacionit me 5-karaktare (station code, max 5 characters). (*) –tregon se për këtë stacion është përdorur një model alternative shpejtësie [ <i>alternative crustal velocity model used for that station</i> ].
NET	Kodi i rrjetit [ <i>the network code</i> ].
COM	komponentja e përdorur [3 –letters component code]
C	shkurtimi i kodit të rrjetit (1 karakter) [ <i>abbreviation for the station code</i> ]
R	Shënimi për stacionin [station remark]
DIST	Distanca epiqendrore [ <i>epicentral distance</i> ]
AZM	Azimuti stacion-hypoqendër [ <i>station azimuth in degree</i> ]
AN	Këndi i daljes së rezeve valore në sferën vatrore [ <i>emergence angle at the hypocenter</i> ]
P/S	Kodi i fazave të përcaktuara nga leximi në formën valore [ <i>phase code</i> ]
WT	Pesha e vlerësimit të fazave [ <i>weighted code</i> ].
SEC	Koha e vrojtuar për hyrjet valore [ <i>observed arrival time</i> ]
TOBS	Koha e vrojtuar e udhëtimit vatër-stacion për fazën sizmike [ <i>observed travel time</i> ]
TCAL	Koha e llogaritur nga modeli i shpejtësisë për udhëtimin vatër-stacion, të fazës sizmike [ <i>calculated travel time</i> ].
DLY	Vonesa në kohë, karakteristikë për stacionin [ <i>station delay</i> ].
RES	Diferenca në kohë-përhapjen, model-vrojtim. [ <i>Travel time residuals</i> ].
WT	Pesha e normalizuar, përfshirë këtu edhe peshën e caktuar dhënë më sipër [ <i>normalized weight</i> ].
SR	Kodi i burimit (1 karakter), që zakonisht i referohet rrjetit [ <i>1 letter source code</i> ]
R	Shënime lidhur me formën valore (sizmogramën), mbartur nga të dhënat fazore [ <i>Seismogram remark</i> ].
INFO	Informacioni për rëndësinë e kontributit të stacionit apo fazës në zgjidhjen e përgjithshme [ <i>the information of the importance of contribution</i> ].
CAL	Faktori korigjues që përdoret në llogaritjen e magnitudës [ <i>calibration factor for magnitude calculation</i> ].
DUR	Zgjatshmëria e fazës koda (s) [ <i>coda duration in sec</i> ]
W	Kodi i peshimit 0-4 për magnitudën bazuar në zgjatshmërinë e sinjalit, Md, [ <i>duration magnitude weight code</i> ].
FMAG	Magnituda Md, për stacionin [ <i>duration magnitude for that station</i> ].
T	Kodi për llojin e magnitudës [ <i>the magnitude type code assigned by FC1 &amp; FC2 commands</i> ].
AMP	amplituda maksimale (pik-pik) [ <i>peak to peak maximum amplitude</i> ]
U	Kodi për njësinë e përdorur për amplitudën M – mm, C – counts, etj. [ <i>amplitude units code</i> ]
PER	Perioda (s), ku është matur $A_{max}$ , [ <i>max amplitude corresponding period in sec.</i> ].
W	Kodi i peshimit 0-9, për magnitudën, bazuar në amplitudë, [ <i>amplitude based magnitude weight code</i> ].
XMAG	Magnituda bazuar në amplitudë, për stacionin, [ <i>amplitude magnitude for that station</i> ].
T	Kodi për llojin e magnitudës [ <i>the magnitude type code assigned by XC1 &amp; XC2 commands</i> ].



## Tërmetet Lokalë (Parametric Data for Albanian local Events)

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819898 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1316 1.6 km from Kozel, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/01	00:02:39.32		0.04	40.4670	20.7557				16.6	1.1	5	7	265	0.16	0.57	m	
OrigID																	
1372																	

Magnitude	Err	Nsta	Author	OrigID
M1	1.5	0.0	3	1372

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.00	0.0	Pg	00:02:44.848	0.0					---				m		18503	
NEST	0.23	103.0	Sg	00:02:48.952	-0.0					---				m		18500	
NEST	0.23	103.0	AM1	00:02:49.400						---		0.3	0.16	a	M1	1.4	10057
NEST	0.23	103.0	AM1	00:02:51.130						---		0.2	0.22	a	M1	1.4	10056
KBN	0.16	8.0	Sg	00:02:46.196	0.0					---				m		18499	
KBN	0.16	8.0	Pg	00:02:43.176	-0.1					---				m		18498	
KBN	0.16	8.0	AM1	00:02:46.470						---		0.4	0.42	a	M1	1.5	10055
FNA	0.57	56.0	Sg	00:02:59.704	-0.0					---				m		18502	
FNA	0.57	56.0	Pg	00:02:51.040	0.1					---				m		18501	
FNA	0.57	56.0	AM1	00:03:00.500						---		0.3	0.36	a	M1	1.8	10058

DATA\_TYPE COMMENT GSE2.1  
Event 1316

Official Magnitude:  
M1 1.46

Error ellipse:

	Azim	Dip	Mag
Max:	233	47	1.4600
Intermediate:	32	41	0.9700
Min:	131	11	0.5500

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819898 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1318 1.8 km from Butkë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/01	03:14:58.78		0.20	40.4388	20.7427				0.8	1.3	14	28	99	0.19	1.99	m	

Magnitude	Err	Nsta	Author	OrigID
M1	2.8	0.0	8	1375

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.19	10.0	Sg	03:15:05.617	0.0									m		18519
KBN	0.19	10.0	Pg	03:15:02.662	-0.0									m		18518
KBN	0.19	10.0	AM1	03:15:09.280								13.4	0.36	a	M1	3.0
NEST	0.23	95.0	Sg	03:15:08.117	-0.1									m		18521
NEST	0.23	95.0	Pg	03:15:04.239	0.1									m		18520
NEST	0.23	95.0	AM1	03:15:08.750								8.1	0.12	a	M1	2.8
FNA	0.60	54.0	Sg	03:15:19.102	-1.6									m		18523
FNA	0.60	54.0	Pg	03:15:10.065	-1.3									m		18522
FNA	0.60	54.0	AM1	03:15:21.650								3.2	0.30	a	M1	2.9
SRN	0.80	226.0	Sg	03:15:27.969	-0.1									m		18525
SRN	0.80	226.0	Pg	03:15:15.287	-0.2									m		18524
SRN	0.80	226.0	AM1	03:15:30.620								0.7	0.44	a	M1	2.4
SRN	0.80	226.0	AM1	03:15:32.060								0.6	0.60	a	M1	2.4
IGT	0.96	200.0	Sg	03:15:33.048	0.2									m		18527
IGT	0.96	200.0	Pg	03:15:18.167	-0.1									m		18526
TIR	1.13	325.0	Sn	03:15:38.675	0.2									m		18529
TIR	1.13	325.0	Pn	03:15:21.233	-0.2									m		18528
TIR	1.13	325.0	AM1	03:15:49.170								0.4	0.50	a	M1	2.5
LKD2	1.65	183.0	Sn	03:15:56.227	1.0									m		18531
LKD2	1.65	183.0	Pn	03:15:31.596	0.6									m		18530
LKD2	1.65	183.0	AM1	03:16:04.760								0.3	0.46	a	M1	2.8
PUK	1.72	339.0	Sg	03:15:57.362	-0.0									m		18533
PUK	1.72	339.0	Pn	03:15:32.590	0.3									m		18532
PUK	1.72	339.0	AM1	03:16:01.310								0.6	0.82	a	M1	3.1
BCI	1.99	0.0	Pn	03:15:37.281	0.0									m		18535
BCI	1.99	346.0	Sn	03:16:05.476	-0.2									m		18534
BCI	1.99	346.0	AM1	03:16:13.780								0.4	0.56	a	M1	3.1

DATA\_TYPE COMMENT GSE2.1  
 Event 1318

Official Magnitude:  
 M1 2.83

Error ellipse:

	Azim	Dip	Mag
Max:	104	78	1.3100
Intermediate:	274	10	0.4500
Min:	5	2	0.3300

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819898 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1317 2.0 km from Bezhan, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
OrigID	2019/07/01	03:47:01.95	0.09	40.4217	20.7582				6.3	13.5	5	7	138	0.21	0.79	m	
1374																	

Magnitude	Err	Nsta	Author	OrigID
M1	1.7	0.0	3	1374

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.00	0.0	Pg	03:47:05.811	0.0					---				m_		18517	
KBN	0.20	6.0	Sg	03:47:08.931	-0.1					---				m_		18511	
KBN	0.20	6.0	AM1	03:47:10.420						---		0.7	0.14	a_	M1	1.7	10063
NEST	0.22	91.0	Sg	03:47:10.435	-0.0					---				m_		18513	
NEST	0.22	91.0	Pg	03:47:06.675	-0.1					---				m_		18512	
NEST	0.22	91.0	AM1	03:47:11.430						---		0.5	0.18	a_	M1	1.6	10065
NEST	0.22	91.0	AM1	03:47:14.730						---		0.4	0.30	a_	M1	1.5	10064
FNA	0.60	52.0	Sg	03:47:22.296	-0.7					---				m_		18515	
FNA	0.60	52.0	Pg	03:47:14.100	0.1					---				m_		18514	
FNA	0.60	52.0	AM1	03:47:25.100						---		0.3	0.18	a_	M1	1.9	10066
SRN	0.79	228.0	Pg	03:47:18.093	-0.0					---				m_		18516	

DATA\_TYPE COMMENT GSE2.1  
Event 1317

Official Magnitude:  
M1 1.66

Error ellipse:

	Azim	Dip	Mag
Max:	37	89	13.4800
Intermediate:	325	0	0.5800
Min:	235	1	0.5300

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819898 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1319 1.4 km from Bezhan, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/01	03:49:37.46		0.18	40.4160	20.7492				0.1	0.8	17	27	93	0.21	2.02	m	

Magnitude	Err	Nsta	Author	OrigID
M1	3.0	0.0	7	1376

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.21	7.0	Sg	03:49:45.029	-0.2									m		18537
KBN	0.21	7.0	Pg	03:49:42.077	0.2									m		18536
KBN	0.21	7.0	AM1	03:49:46.400								13.6	0.16	a	M1	3.0
NEST	0.23	90.0	Sg	03:49:46.840	0.1									m		18539
NEST	0.23	90.0	Pg	03:49:42.987	0.2									m		18538
NEST	0.23	90.0	AM1	03:49:48.140								13.1	0.38	a	M1	3.0
FNA	0.61	52.0	Sg	03:49:59.630	-0.3									m		18541
FNA	0.61	52.0	Pg	03:49:49.595	-0.7									m		18540
FNA	0.61	52.0	AM1	03:50:02.650								4.3	0.20	a	M1	3.0
SRN	0.79	228.0	Sg	03:50:06.394	-0.1									m		18543
SRN	0.79	228.0	Pg	03:49:53.567	-0.5									m		18542
SRN	0.79	228.0	AM1	03:50:12.030								0.6	0.40	a	M1	2.4
SRN	0.79	228.0	AM1	03:50:11.130								1.0	0.72	a	M1	2.6
BPA1	0.89	291.0	Pg	03:49:55.464	-0.2									m		18544
IGT	0.94	201.0	Sg	03:50:11.108	0.0									m		18546
IGT	0.94	201.0	Pg	03:49:56.556	-0.1									m		18545
VLO	0.96	274.0	Pn	03:49:56.693	0.4									m		18547
TIR	1.15	325.0	Sn	03:50:17.999	0.0									m		18549
TIR	1.15	325.0	Pn	03:49:59.926	-0.7									m		18548
TIR	1.15	325.0	AM1	03:50:28.040								0.4	0.42	a	M1	2.5
LKD2	1.63	183.0	Sn	03:50:33.472	0.1									m		18551
LKD2	1.63	183.0	Pn	03:50:10.025	0.6									m		18550
LKD2	1.63	183.0	AM1	03:50:43.010								0.5	0.70	a	M1	3.0
PUK	1.75	339.0	Sn	03:50:37.085	0.1									m		18553
PUK	1.75	339.0	Pn	03:50:11.307	-0.2									m		18552
BCI	2.02	0.0	Pn	03:50:16.183	0.0									m		18555
BCI	2.01	346.0	Sn	03:50:45.454	0.2									m		18554
BCI	2.01	346.0	AM1	03:50:52.310								0.4	0.74	a	M1	3.1

DATA\_TYPE COMMENT GSE2.1  
 Event 1319

Official Magnitude:

Ml 3.00

Error ellipse:

	Azim	Dip	Mag
Max:	94	84	0.8300
Intermediate:	286	5	0.3200
Min:	196	1	0.2500

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819898 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1320 1.7 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/01	03:52:25.90		0.00	40.4723	20.8265				9.1	2.5	4	6	241	0.15	0.52	m	1377

Magnitude	Err	Nsta	Author	OrigID
Ml	1.3	0.0	3	1377

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.00	0.0	Pg	03:52:29.137	0.0					---				m_		18561	
NEST	0.18	108.0	Sg	03:52:33.129	0.0					---				m_		18558	
NEST	0.18	108.0	AMl	03:52:33.700						---		0.3	0.12	a_	Ml	1.3	10086
NEST	0.18	108.0	AMl	03:52:35.940						---		0.2	0.26	a_	Ml	1.3	10085
KBN	0.15	349.0	Sg	03:52:31.512	0.0					---				m_		18557	
KBN	0.15	349.0	Pg	03:52:28.204	-0.9					---				m_		18556	
KBN	0.15	349.0	AMl	03:52:31.930						---		0.7	0.42	a_	Ml	1.7	10084
FNA	0.52	53.0	Sg	03:52:44.573	0.0					---				m_		18560	
FNA	0.52	53.0	Pg	03:52:36.566	0.0					---				m_		18559	
FNA	0.52	53.0	AMl	03:52:47.520						---		0.1	0.14	a_	Ml	1.3	10087

DATA\_TYPE COMMENT GSE2.1  
Event 1320

Official Magnitude:  
Ml 1.32

Error ellipse:

	Azim	Dip	Mag
Max:	234	65	2.7700
Intermediate:	46	24	1.0900
Min:	137	3	0.4300

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819898 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1321 1.7 km from Arrëz, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/01	03:54:29.32		0.11	40.4872	20.8480				2.1	3.6	4	6	227	0.14	0.50	m	

OrigID  
1378

Magnitude	Err	Nsta	Author	OrigID
M1	1.2	0.0	3	1378

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.14	342.0	Sg	03:54:34.172	-0.1					---						18563	
KBN	0.14	342.0	Pg	03:54:30.900	-1.3					---						18562	
KBN	0.14	342.0	AM1	03:54:36.620						---		0.2	0.24	a	M1	1.0	10088
NEST	0.18	0.0	Pg	03:54:31.894	0.0					---						18567	
NEST	0.17	115.0	Sg	03:54:35.930	-0.1					---						18564	
NEST	0.17	115.0	AM1	03:54:37.570						---		0.2	0.20	a	M1	1.2	10090
NEST	0.17	115.0	AM1	03:54:38.240						---		0.2	0.14	a	M1	1.2	10089
FNA	0.50	53.0	Sg	03:54:47.748	-0.1					---						18566	
FNA	0.50	53.0	Pg	03:54:40.013	0.1					---						18565	
FNA	0.50	53.0	AM1	03:54:50.620						---		0.1	0.28	a	M1	1.0	10092
FNA	0.50	53.0	AM1	03:54:51.420						---		0.1	0.26	a	M1	1.2	10091

DATA\_TYPE COMMENT GSE2.1  
 Event 1321

Official Magnitude:  
 M1 1.16

Error ellipse:

	Azim	Dip	Mag
Max:	229	45	5.0300
Intermediate:	47	44	0.9900
Min:	138	1	0.4200

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819897 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1323 2.6 km from Bezhan, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/01	04:21:59.71		0.19	40.4190	20.7652				16.7	1.5	8	7	136	0.21	0.95	m	

OrigID  
1380

Magnitude	Err	Nsta	Author	OrigID
M1	1.7	0.0	4	1380

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.00	0.0	Pg	04:22:04.003	0.0									m		18589	
KBN	0.21	4.0	Sg	04:22:07.791	-0.1									m		18580	
KBN	0.21	4.0	AM1	04:22:09.640								0.6	0.22	a	M1	1.7	10099
NEST	0.22	91.0	Sg	04:22:08.987	0.0									m		18582	
NEST	0.22	91.0	Pg	04:22:05.027	0.0									m		18581	
NEST	0.22	91.0	AM1	04:22:11.040								1.0	0.24	a	M1	2.0	10100
FNA	0.59	52.0	Sg	04:22:20.779	-0.1									m		18584	
FNA	0.59	52.0	Pg	04:22:12.714	0.9									m		18583	
FNA	0.59	52.0	AM1	04:22:23.880								0.2	0.28	a	M1	1.8	10101
SRN	0.80	228.0	Sg	04:22:27.819	-0.3									m		18586	
SRN	0.80	228.0	Pg	04:22:16.311	0.4									m		18585	
SRN	0.80	228.0	AM1	04:22:31.180								0.1	0.58	a	M1	1.4	10102
IGT	0.95	201.0	Sg	04:22:32.083	-0.1									m		18588	
IGT	0.95	201.0	Pg	04:22:20.148	1.9									m		18587	

DATA\_TYPE COMMENT GSE2.1  
Event 1323

Official Magnitude:  
M1 1.74

Error ellipse:

	Azim	Dip	Mag
Max:	10	71	1.5600
Intermediate:	131	9	0.7500
Min:	224	16	0.3500

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819897 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1324 1.7 km from Kamenicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/01	10:26:18.38		0.01	40.5417	20.7423				16.1	1.5	4	7	264	0.09	0.54	m	

OrigID  
1381

Magnitude Err Nsta Author OrigID  
M1 1.4 0.0 3 1381

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.00	0.0	Pg	10:26:22.090	0.0									m		18595
KBN	0.09	22.0	Sg	10:26:23.591	0.0									m		18590
KBN	0.09	22.0	AM1	10:26:25.040								1.3	0.16	a	M1	2.0
NEST	0.27	118.0	Sg	10:26:27.714	-1.3									m		18592
NEST	0.27	118.0	Pg	10:26:24.459	-0.0									m		18591
NEST	0.27	118.0	AM1	10:26:31.250								0.2	0.20	a	M1	1.3
FNA	0.54	63.0	Sg	10:26:37.862	0.0									m		18594
FNA	0.54	63.0	Pg	10:26:29.514	0.0									m		18593
FNA	0.54	63.0	AM1	10:26:40.040								0.1	0.22	a	M1	1.4

DATA\_TYPE COMMENT GSE2.1  
Event 1324

Official Magnitude:  
M1 1.41

Error ellipse:

	Azim	Dip	Mag
Max:	297	37	2.3800
Intermediate:	205	3	0.9100
Min:	111	53	0.7400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819897 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1325 1.9 km from Bezhan, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/01	17:02:03.92		0.19	40.4143	20.7555				0.0	1.7	9	6	112	0.21	1.75	m	

Magnitude Err Nsta Author OrigID  
M1 2.2 0.0 5 1382

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.21	6.0	Sg	17:02:11.705	-0.0									m		18597
KBN	0.21	6.0	Pg	17:02:08.362	-0.0									m		18596
KBN	0.21	6.0	AM1	17:02:14.300								2.7	0.54	a	M1	2.3
NEST	0.21	0.0	Pg	17:02:09.181	0.0									m		18607
NEST	0.22	89.0	Sg	17:02:13.194	0.1									m		18598
NEST	0.22	89.0	AM1	17:02:14.150								1.9	0.16	a	M1	2.2



FNA	0.60	52.0	Sg	17:02:25.136	-1.1	---	m	18600
FNA	0.60	52.0	P	17:02:16.285	-0.4	---	m	18599
FNA	0.60	52.0	AM1	17:02:26.940		---	0.6 0.30 a M1	2.2 10108
SRN	0.79	228.0	Sg	17:02:31.009	-2.1	---	m	18602
SRN	0.79	228.0	Pg	17:02:20.280	-0.3	---	m	18601
SRN	0.79	228.0	AM1	17:02:35.500		---	0.1 0.68 a M1	1.8 10109
IGT	0.94	201.0	Sg	17:02:37.704	0.2	---	m	18604
IGT	0.94	201.0	Pg	17:02:23.110	-0.0	---	m	18603
PUK	1.75	339.0	Sg	17:03:03.557	0.0	---	m	18606
PUK	1.75	339.0	P	17:02:38.211	0.2	---	m	18605
PUK	1.75	339.0	AM1	17:03:08.740		---	0.1 0.52 a M1	2.5 10110

DATA\_TYPE COMMENT GSE2.1  
Event 1325

Official Magnitude:  
Ml 2.19

Error ellipse:

	Azim	Dip	Mag
Max:	95	85	1.6700
Intermediate:	286	4	0.6000
Min:	196	1	0.4100

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819897 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1326 3.5 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/01	17:19:23.29		0.03	40.5273	20.7872				13.5	1.3	5	7	241	0.10	0.52	m	1383

Magnitude	Err	Nsta	Author	OrigID
Ml	2.3	0.0	3	1383

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
NEST	0.00	0.0	P	17:19:28.301	0.0					---				m		18613
NEST	0.23	119.0	S	17:19:32.535	-0.0					---				m		18610
NEST	0.23	119.0	AM1	17:19:32.870						---		1.3	0.10	a M1	2.1	10112
KBN	0.10	0.0	Sg	17:19:28.014	-0.0					---				m		18609
KBN	0.10	0.0	Pg	17:19:26.038	0.0					---				m		18608
KBN	0.10	0.0	AM1	17:19:28.800						---		4.3	0.26	a M1	2.5	10111
FNA	0.52	60.0	Sg	17:19:41.984	0.0					---				m		18612
FNA	0.52	60.0	P	17:19:33.918	-0.0					---				m		18611

FNA 0.52 60.0 AM1 17:19:42.710 \_\_\_\_\_ 1.0 0.38 a\_\_ M1 2.3 10113

DATA\_TYPE COMMENT GSE2.1  
Event 1326

Official Magnitude:  
M1 2.28

Error ellipse:

	Azim	Dip	Mag
Max:	248	54	1.5500
Intermediate:	32	30	0.7900
Min:	132	17	0.4700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819897 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1327 1.4 km from Skorovot, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/01	18:11:29.56		0.18	40.3990	20.7377				13.9	1.2	8	6	141	0.22	0.92	m	
1384																	

Magnitude	Err	Nsta	Author	OrigID
M1	2.3	0.0	3	1384

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.23	9.0	Sg	18:11:37.964	-0.0					___				m__		18615	
KBN	0.23	9.0	Pg	18:11:34.442	0.1					___				m__		18614	
KBN	0.23	9.0	AM1	18:11:40.570						___		1.5	0.32	a__	M1	2.1	10114
NEST	0.24	0.0	Pg	18:11:35.310	0.0					___				m__		18623	
NEST	0.24	86.0	Sg	18:11:39.027	-0.1					___				m__		18616	
NEST	0.24	86.0	AM1	18:11:41.200						___		2.0	0.30	a__	M1	2.3	10115
FNA	0.62	51.0	Sg	18:11:51.463	-0.2					___				m__		18618	
FNA	0.62	51.0	Pg	18:11:42.310	0.2					___				m__		18617	
FNA	0.62	51.0	AM1	18:11:53.250						___		0.8	0.32	a__	M1	2.3	10116
SRN	0.77	228.0	Sg	18:11:56.748	-0.2					___				m__		18620	
SRN	0.77	228.0	Pg	18:11:44.684	-0.5					___				m__		18619	
IGT	0.92	201.0	Sg	18:12:04.414	3.1					___				m__		18622	
IGT	0.92	201.0	P	18:11:48.068	0.3					___				m__		18621	

DATA\_TYPE COMMENT GSE2.1  
Event 1327

Official Magnitude:

M1 2.28

Error ellipse:

	Azim	Dip	Mag
Max:	1	74	1.2500
Intermediate:	132	10	0.8000
Min:	224	12	0.4000

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819897 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1329 0.3 km from Dorëz, Gjirokastër, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/03	14:13:47.68		0.06	40.3877	19.8193				24.9	0.8	20	15	90	0.26	2.41	m	
OrigID	1386																

Magnitude	Err	Nsta	Author	OrigID
M1	3.7	0.0	10	1386
Md	3.3	0.0	12	1386

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
VLO	0.26	289.0	Sg	14:13:57.157	-0.1					---				m		18643	
VLO	0.26	289.0	Pg	14:13:53.256	0.1					---				m		18642	
VLO	0.26	289.0	AMl	14:14:01.270						---		229.6	0.46	a	M1	4.4	10137
VLO	0.26	289.0	AMd	14:14:46.334						---		0.0	53.08	a	Md	2.8	10125
SRN	0.53	164.0	Sg	14:14:07.395	0.0					---				m		18645	
SRN	0.53	164.0	Pg	14:13:58.957	0.0					---				m		18644	
SRN	0.53	164.0	AMl	14:14:09.070						---		7.1	0.68	a	M1	3.2	10138
SRN	0.53	164.0	AMd	14:15:17.802						---		0.0	78.85	a	Md	3.2	10126
KBN	0.77	0.0	Pn	14:14:03.327	0.0					---				m		18664	
KBN	0.77	71.0	Sn	14:14:13.615	-0.0					---				m		18646	
KBN	0.77	71.0	AMl	14:14:22.180						---		7.7	0.50	a	M1	3.5	10139
NEST	0.94	87.0	Sg	14:14:19.517	-0.1					---				m		18648	
NEST	0.94	87.0	Pg	14:14:05.844	-0.1					---				m		18647	
NEST	0.94	87.0	AMl	14:14:36.010						---		2.5	0.48	a	M1	3.2	10140
NEST	0.94	87.0	AMd	14:15:31.439						---		0.0	85.59	a	Md	3.3	10127
IGT	0.94	155.0	Sg	14:14:19.586	-0.0					---				m		18650	
IGT	0.94	155.0	Pg	14:14:05.958	0.0					---				m		18649	
IGT	0.94	155.0	AMd	14:15:30.604						---		0.0	84.65	a	Md	2.7	10128
TIR	0.96	2.0	Sg	14:14:20.151	-0.0					---				m		18652	
TIR	0.96	2.0	Pg	14:14:06.340	0.1					---				m		18651	
TIR	0.96	2.0	AMl	14:14:27.040						---		7.5	0.44	a	M1	3.7	10141
TIR	0.96	2.0	AMd	14:15:15.285						---		0.0	68.94	a	Md	3.1	10129
SCTE	1.08	254.0	Sg	14:14:23.873	-0.1					---				m		18654	

SCTE	1.08	254.0	Pg	14:14:08.405	0.0	---											m		18653
SCTE	1.08	254.0	AMl	14:14:28.570		---				12.7	0.74	a	Ml	4.0					10142
SCTE	1.08	254.0	AMd	14:15:25.145		---				0.0	76.74	a	Md	3.2					10130
FNA	1.25	71.0	Sn	14:14:29.438	0.1	---											m		18656
FNA	1.25	71.0	Pn	14:14:11.433	-0.1	---											m		18655
FNA	1.25	71.0	AMl	14:14:36.540		---				5.9	0.68	a	Ml	3.8					10143
FNA	1.25	71.0	AMd	14:15:35.848		---				0.0	84.42	a	Md	3.3					10131
ULC	1.63	345.0	Pg	14:14:17.911	-0.0	---											m		18657
ULC	1.63	345.0	AMd	14:15:57.872		---				0.0	99.96	a	Md	3.5					10132
PUK	1.65	1.0	Sn	14:14:41.022	0.0	---											m		18659
PUK	1.65	1.0	Pn	14:14:18.166	0.0	---											m		18658
PUK	1.65	1.0	AMl	14:14:46.650		---				2.7	0.44	a	Ml	3.7					10144
PUK	1.65	1.0	AMd	14:15:41.718		---				0.0	83.55	a	Md	3.4					10133
LKD2	1.72	157.0	Sn	14:14:43.094	-0.1	---											m		18661
LKD2	1.72	157.0	Pn	14:14:19.646	0.3	---											m		18660
LKD2	1.72	157.0	AMl	14:14:50.560		---				3.0	0.36	a	Ml	3.8					10145
LKD2	1.72	157.0	AMd	14:15:59.131		---				0.0	99.48	a	Md	3.5					10134
NOCI	2.14	282.0	Pn	14:14:25.568	0.1	---											m		18662
NOCI	2.14	282.0	AMl	14:15:04.710		---				4.6	0.48	a	Ml	4.2					10146
NOCI	2.14	282.0	AMd	14:16:10.250		---				0.0	104.68	a	Md	3.6					10135
THE	2.41	83.0	Pn	14:14:29.970	0.5	---											m		18663
THE	2.41	83.0	AMd	14:15:55.355		---				0.0	85.38	a	Md	3.4					10136

DATA\_TYPE COMMENT GSE2.1  
Event 1329

Official Magnitude:  
Ml 3.74

Error ellipse:

	Azim	Dip	Mag
Max:	146	87	0.8200
Intermediate:	39	0	0.2400
Min:	309	3	0.2200

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819896 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1330 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/03	19:36:51.05		0.17	40.3867	19.8093				28.8	0.8	15	14	91	0.25	2.48	m	
1387																	

Magnitude Err Nsta Author OrigID

Ml 2.9 0.0 6 1387  
Md 3.0 0.0 9 1387

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
VLO	0.25	289.0	Sg	19:37:02.191	0.2									m		18666
VLO	0.25	289.0	Pg	19:36:57.242	-0.1									m		18665
VLO	0.25	289.0	AMl	19:37:03.950								95.3	0.66	a	Ml	4.1
VLO	0.25	289.0	AMd	19:37:32.799								0.0	35.56	a	Md	2.4
SRN	0.53	163.0	Sg	19:37:08.096	-3.2									m		18668
SRN	0.53	163.0	Pg	19:37:02.213	-0.4									m		18667
SRN	0.53	163.0	AMl	19:37:17.140								1.1	0.60	a	Ml	2.4
SRN	0.53	163.0	AMd	19:37:59.444								0.0	57.23	a	Md	2.9
KBN	0.78	0.0	Pg	19:37:04.895	0.0									m		18681
KBN	0.78	72.0	Sg	19:37:17.486	0.0									m		18669
KBN	0.78	72.0	AMl	19:37:27.230								1.8	1.18	a	Ml	2.9
IGT	0.94	154.0	Sn	19:37:22.954	-0.3									m		18671
IGT	0.94	154.0	Pn	19:37:09.633	0.2									m		18670
IGT	0.94	154.0	AMd	19:38:20.736								0.0	71.10	a	Md	2.5
NEST	0.95	87.0	Sn	19:37:23.534	0.2									m		18673
NEST	0.95	87.0	Pn	19:37:09.615	0.1									m		18672
NEST	0.95	87.0	AMl	19:37:36.130								0.7	0.44	a	Ml	2.6
NEST	0.95	87.0	AMd	19:38:21.632								0.0	72.02	a	Md	3.2
TIR	0.96	2.0	Sg	19:37:23.672	-0.1									m		18675
TIR	0.96	2.0	Pg	19:37:09.477	-0.3									m		18674
TIR	0.96	2.0	AMl	19:37:29.480								1.5	0.42	a	Ml	3.0
TIR	0.96	2.0	AMd	19:38:00.078								0.0	50.60	a	Md	2.8
SCTE	1.07	254.0	Sn	19:37:27.290	0.1									m		18677
SCTE	1.07	254.0	Pn	19:37:11.690	-0.0									m		18676
SCTE	1.07	254.0	AMl	19:37:31.490								2.9	0.24	a	Ml	3.3
SCTE	1.07	254.0	AMd	19:38:14.796								0.0	63.11	a	Md	3.0
FNA	1.26	71.0	Pn	19:37:15.083	0.1									m		18678
FNA	1.26	71.0	AMd	19:38:20.877								0.0	65.79	a	Md	3.1
BUM	2.03	341.0	Pn	19:37:26.484	-0.5									m		18679
BUM	2.03	341.0	AMd	19:38:51.673								0.0	85.19	a	Md	3.4
BEY	2.48	1.0	Pn	19:37:33.653	0.1									m		18680
BEY	2.48	1.0	AMd	19:38:49.395								0.0	75.74	a	Md	3.3

DATA\_TYPE COMMENT GSE2.1  
Event 1330

Official Magnitude:  
Ml 2.92

Error ellipse:

	Azim	Dip	Mag
Max:	343	87	0.8200
Intermediate:	180	2	0.4400
Min:	90	1	0.3500

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819896 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1331 3.3 km from Pulaj, Shkodër, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/03	19:15:26.21		0.06	41.8477	19.3852				24.8	1.9	20	24	73	0.15	2.42	m	

OrigID  
1388

Magnitude	Err	Nsta	Author	OrigID
Ml	2.6	0.0	6	1388
Md	3.1	0.0	16	1388

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
ULC	0.15	319.0	Pg	19:15:30.472	-0.0									m		18682	
ULC	0.15	319.0	AMd	19:16:17.018								0.0	46.55	a	Md	2.7	10162
DRME	0.37	337.0	Pg	19:15:34.277	-0.0									m		18683	
DRME	0.37	337.0	AMd	19:16:23.312								0.0	49.03	a	Md	2.7	10163
PUK	0.43	62.0	Sg	19:15:41.321	-0.6									m		18685	
PUK	0.43	62.0	Pg	19:15:35.169	-0.0									m		18684	
PUK	0.43	62.0	AMl	19:15:45.110								1.9	0.10	a	Ml	2.5	10178
PUK	0.43	62.0	AMd	19:16:33.592								0.0	58.42	a	Md	2.9	10164
BUM	0.58	322.0	Pg	19:15:38.065	0.0									m		18686	
BUM	0.58	322.0	AMd	19:16:41.354								0.0	63.29	a	Md	3.0	10165
BCI	0.72	0.0	Pg	19:15:40.515	0.0									m		18705	
BCI	0.73	44.0	Sg	19:15:50.730	-0.5									m		18687	
BCI	0.73	44.0	AMl	19:15:52.610								1.1	0.42	a	Ml	2.6	10179
CEME	0.78	334.0	Pg	19:15:41.496	-0.1									m		18688	
CEME	0.78	334.0	AMd	19:16:47.228								0.0	65.73	a	Md	3.0	10166
HCY	0.90	313.0	Pg	19:15:43.625	-0.0									m		18689	
HCY	0.90	313.0	AMd	19:16:49.536								0.0	65.91	a	Md	3.1	10167
KOME	1.01	5.0	Pg	19:15:45.611	-0.0									m		18690	
KOME	1.01	5.0	AMd	19:17:00.235								0.0	74.62	a	Md	3.2	10168
BEY	1.09	20.0	Pg	19:15:46.810	-0.3									m		18691	
BEY	1.09	20.0	AMd	19:16:45.763								0.0	58.95	a	Md	3.0	10169
BRY	1.22	330.0	Pg	19:15:49.536	0.1									m		18692	
BRY	1.22	330.0	AMd	19:17:03.172								0.0	73.64	a	Md	3.2	10170
PLE	1.48	0.0	Pg	19:15:54.151	0.1									m		18693	
PLE	1.48	0.0	AMd	19:17:00.445								0.0	66.29	a	Md	3.1	10171
FNA	1.84	124.0	Sn	19:16:24.845	-0.0									m		18695	
FNA	1.84	124.0	Pn	19:15:59.760	0.0									m		18694	
FNA	1.84	124.0	AMl	19:16:29.640								0.2	0.68	a	Ml	2.7	10180
FNA	1.84	124.0	AMd	19:17:14.715								0.0	74.96	a	Md	3.3	10172
SCTE	1.90	202.0	Sn	19:16:26.289	-0.0									m		18697	
SCTE	1.90	202.0	Pn	19:16:00.536	-0.0									m		18696	
SCTE	1.90	202.0	AMl	19:16:41.270								0.2	1.24	a	Ml	2.8	10181



SRN	0.54	162.0	Sg	13:43:22.776	-3.1	---	m	---	18709
SRN	0.54	162.0	Pg	13:43:17.093	0.0	---	m	---	18708
SRN	0.54	162.0	AMl	13:43:26.260		---	1.5	0.70 a	Ml 2.5 10197
SRN	0.54	162.0	AMd	13:44:23.911		---	0.0	66.82 a	Md 3.0 10185
KBN	0.80	72.0	Sg	13:43:32.213	0.0	---	m	---	18711
KBN	0.80	72.0	Pg	13:43:20.682	0.0	---	m	---	18710
KBN	0.80	72.0	AMl	13:43:40.410		---	1.6	0.68 a	Ml 2.9 10198
KBN	0.80	72.0	AMd	13:44:25.543		---	0.0	64.86 a	Md 3.0 10186
IGT	0.96	153.0	Sg	13:43:37.917	-0.0	---	m	---	18713
IGT	0.96	153.0	Pg	13:43:23.978	0.0	---	m	---	18712
IGT	0.96	153.0	AMd	13:44:35.103		---	0.0	71.13 a	Md 2.5 10187
SCTE	1.06	254.0	Sg	13:43:41.038	0.0	---	m	---	18715
SCTE	1.06	254.0	Pg	13:43:25.590	-0.1	---	m	---	18714
SCTE	1.06	254.0	AMl	13:43:45.710		---	2.1	0.72 a	Ml 3.2 10199
SCTE	1.06	254.0	AMd	13:44:33.316		---	0.0	67.73 a	Md 3.1 10188
FNA	1.28	71.0	Sg	13:43:47.591	-0.1	---	m	---	18717
FNA	1.28	71.0	Pg	13:43:29.491	-0.0	---	m	---	18716
FNA	1.28	71.0	AMl	13:43:54.740		---	0.9	0.38 a	Ml 3.0 10200
FNA	1.28	71.0	AMd	13:44:40.232		---	0.0	70.74 a	Md 3.2 10189
ULC	1.62	346.0	Pn	13:43:35.316	0.2	---	m	---	18718
ULC	1.62	346.0	AMd	13:45:00.974		---	0.0	85.66 a	Md 3.4 10190
PUK	1.65	2.0	Sn	13:43:58.042	-0.0	---	m	---	18720
PUK	1.65	2.0	Pn	13:43:35.459	-0.0	---	m	---	18719
PUK	1.65	2.0	AMl	13:44:03.810		---	0.6	0.26 a	Ml 3.0 10201
PUK	1.65	2.0	AMd	13:44:42.093		---	0.0	66.63 a	Md 3.1 10191
LKD2	1.74	156.0	Sn	13:44:00.698	-0.0	---	m	---	18722
LKD2	1.74	156.0	Pn	13:43:37.085	0.1	---	m	---	18721
LKD2	1.74	156.0	AMl	13:44:07.650		---	1.3	0.62 a	Ml 3.4 10202
LKD2	1.74	156.0	AMd	13:44:53.281		---	0.0	76.20 a	Md 3.3 10192
DRME	1.85	347.0	Pn	13:43:38.645	0.1	---	m	---	18723
DRME	1.85	347.0	AMd	13:45:11.463		---	0.0	92.82 a	Md 3.5 10193
BCI	1.98	0.0	Pn	13:43:41.953	0.0	---	m	---	18727
BCI	1.98	6.0	Sn	13:44:06.803	0.0	---	m	---	18724
BCI	1.98	6.0	AMl	13:44:13.350		---	0.8	0.58 a	Ml 3.4 10203
BUM	2.02	341.0	Pn	13:43:40.986	-0.1	---	m	---	18725
BUM	2.02	341.0	AMd	13:45:13.794		---	0.0	92.81 a	Md 3.5 10194
BRY	2.67	340.0	Pn	13:43:50.920	0.2	---	m	---	18726
BRY	2.67	340.0	AMd	13:45:41.766		---	0.0	110.85 a	Md 3.7 10195

DATA\_TYPE COMMENT GSE2.1  
Event 1332

Official Magnitude:  
Ml 3.10

Error ellipse:

	Azim	Dip	Mag
Max:	229	68	0.4400
Intermediate:	102	13	0.2500
Min:	8	17	0.2400



BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819895 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1333 2.9 km from Pepellash, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/04	15:44:28.64		0.17	40.4970	20.6780				6.4	1.6	11	9	136	0.15	1.74	m	
OrigID 1390																	

Magnitude	Err	Nsta	Author	OrigID
Ml	2.3	0.0	6	1390
Md	2.9	0.0	6	1390

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.15	0.0	Pg	15:44:32.769	0.0					---				m		18741
KBN	0.15	33.0	Sg	15:44:34.122	0.1					---				m		18728
KBN	0.15	33.0	AMl	15:44:36.300						---		3.3	0.32	a	Ml	2.3
NEST	0.29	106.0	Sg	15:44:36.206	-3.4					---				m		18730
NEST	0.29	106.0	Pg	15:44:34.609	-0.3					---				m		18729
NEST	0.29	106.0	AMl	15:44:41.180						---		1.6	0.20	a	Ml	2.2
NEST	0.29	106.0	AMd	15:45:23.557						---		0.0	48.95	a	Md	2.7
FNA	0.61	61.0	Sg	15:44:47.281	-2.8					---				m		18732
FNA	0.61	61.0	Pg	15:44:40.877	0.0					---				m		18731
FNA	0.61	61.0	AMl	15:44:49.720						---		0.7	0.28	a	Ml	2.3
FNA	0.61	61.0	AMd	15:45:32.626						---		0.0	51.75	a	Md	2.8
SRN	0.81	221.0	S	15:44:57.270	-0.1					---				m		18734
SRN	0.81	221.0	Pg	15:44:44.981	-0.1					---				m		18733
SRN	0.81	221.0	AMl	15:45:02.580						---		0.1	0.42	a	Ml	1.6
SRN	0.81	221.0	AMd	15:45:46.895						---		0.0	61.91	a	Md	3.0
IGT	1.00	196.0	Sg	15:45:03.337	0.2					---				m		18736
IGT	1.00	196.0	Pg	15:44:48.389	0.0					---				m		18735
IGT	1.00	196.0	AMd	15:45:57.854						---		0.0	69.47	a	Md	2.5
LKD2	1.71	181.0	Sn	15:45:25.685	-0.0					---				m		18738
LKD2	1.71	181.0	Pn	15:45:01.899	0.7					---				m		18737
LKD2	1.71	181.0	AMl	15:45:40.470						---		0.1	0.72	a	Ml	2.5
LKD2	1.71	181.0	AMd	15:46:23.259						---		0.0	81.36	a	Md	3.3
SCTE	1.74	257.0	Sn	15:45:26.800	-0.0					---				m		18740
SCTE	1.74	257.0	Pn	15:45:01.768	-0.1					---				m		18739
SCTE	1.74	257.0	AMl	15:45:32.970						---		0.2	1.18	a	Ml	2.6
SCTE	1.74	257.0	AMd	15:46:05.543						---		0.0	63.78	a	Md	3.1

DATA\_TYPE COMMENT GSE2.1  
 Event 1333

Official Magnitude:  
Ml 2.31

Error ellipse:

	Azim	Dip	Mag
Max:	87	80	1.6300
Intermediate:	313	6	0.6400
Min:	222	7	0.3500

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819895 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1334 1.1 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/04	20:01:21.13		0.01	40.5193	20.8402				7.0	4.3	5	5	216	0.11	0.49	m	1391

Magnitude	Err	Nsta	Author	OrigID
Ml	1.0	0.0	3	1391
Md	2.3	0.0	2	1391

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.11	0.0	Pg	20:01:22.929	0.0					---				m		18747
KBN	0.11	339.0	Sg	20:01:25.189	0.0					---				m		18742
KBN	0.11	339.0	AMl	20:01:25.790						---		0.2	0.20	a	Ml 1.1	10218
NEST	0.19	123.0	Sg	20:01:28.605	-0.0					---				m		18744
NEST	0.19	123.0	Pg	20:01:25.422	0.0					---				m		18743
NEST	0.19	123.0	AMl	20:01:30.790						---		0.1	0.16	a	Ml 0.9	10219
NEST	0.19	123.0	AMd	20:01:57.264						---		0.0	31.84	a	Md 2.3	10216
FNA	0.49	57.0	Sg	20:01:38.618	0.0					---				m		18746
FNA	0.49	57.0	Pg	20:01:31.109	-0.0					---				m		18745
FNA	0.49	57.0	AMl	20:01:41.280						---		0.1	0.28	a	Ml 1.0	10220
FNA	0.49	57.0	AMd	20:02:06.542						---		0.0	35.43	a	Md 2.4	10217

DATA\_TYPE COMMENT GSE2.1  
Event 1334

Official Magnitude:  
Ml 1.00

Error ellipse:

	Azim	Dip	Mag
Max:	264	78	4.4100
Intermediate:	54	10	0.7600

Min: 145 6 0.3600

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819895 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1335 2.6 km from Lavdari i Korcës, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/05	03:50:36.78		0.08	40.5922	20.6255				10.1	2.6	6	7	220	0.13	0.86	m	
OrigID	1392																

Magnitude	Err	Nsta	Author	OrigID
M1	1.9	0.0	4	1392

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.13	75.0	Sg	03:50:41.714	0.0					---				m		18749	
KBN	0.13	75.0	P	03:50:39.190	-0.4					---				m		18748	
KBN	0.13	75.0	AM1	03:50:42.470						---		6.3	0.40	a	M1	2.6	10221
NEST	0.37	118.0	Sg	03:50:50.222	-0.1					---				m		18751	
NEST	0.37	118.0	Pg	03:50:44.582	0.1					---				m		18750	
NEST	0.37	118.0	AM1	03:50:53.950						---		0.3	0.36	a	M1	1.6	10222
FNA	0.61	0.0	Pg	03:50:46.834	0.0					---				m		18755	
FNA	0.61	71.0	Sg	03:50:57.329	-0.9					---				m		18752	
FNA	0.61	71.0	AM1	03:50:59.050						---		0.6	0.28	a	M1	2.2	10223
SRN	0.86	215.0	Sg	03:51:07.230	0.0					---				m		18754	
SRN	0.86	215.0	P	03:50:54.136	-0.0					---				m		18753	
SRN	0.86	215.0	AM1	03:51:10.160						---		0.1	0.62	a	M1	1.5	10224

DATA\_TYPE COMMENT GSE2.1  
Event 1335

Official Magnitude:  
M1 1.89

Error ellipse:

	Azim	Dip	Mag
Max:	358	65	2.8300
Intermediate:	150	21	0.9500
Min:	244	11	0.3400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819895 athena

DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1336 3.3 km from Kozel, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/05	05:05:03.45		0.29	40.4568	20.7743				4.6	1.4	11	7	111	0.17	1.72	m	
OrigID 1393																	

Magnitude	Err	Nsta	Author	OrigID
M1	3.0	0.0	5	1393

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.17	0.0	Pg	05:05:06.559	0.0					---				m		18767
KBN	0.17	3.0	S	05:05:09.367	0.0					---				m		18756
KBN	0.17	3.0	AM1	05:05:09.770						---		20.0	0.34	a	M1	10225
NEST	0.21	101.0	S	05:05:12.280	0.4					---				m		18758
NEST	0.21	101.0	Pg	05:05:08.094	-0.2					---				m		18757
NEST	0.21	101.0	AM1	05:05:13.260						---		8.5	0.18	a	M1	10226
FNA	0.57	54.0	Sg	05:05:23.365	-0.3					---				m		18760
FNA	0.57	54.0	Pg	05:05:14.334	-0.7					---				m		18759
FNA	0.57	54.0	AM1	05:05:24.180						---		12.1	0.28	a	M1	10227
SRN	0.83	227.0	S	05:05:32.636	-0.4					---				m		18762
SRN	0.83	227.0	Pg	05:05:20.192	-0.2					---				m		18761
SRN	0.83	227.0	AM1	05:05:36.070						---		0.4	0.30	a	M1	10228
IGT	0.98	201.0	Sg	05:05:37.971	0.3					---				m		18764
IGT	0.98	201.0	P	05:05:23.260	0.2					---				m		18763
PUK	1.72	338.0	Sn	05:06:01.309	0.3					---				m		18766
PUK	1.72	338.0	Pn	05:05:37.099	0.8					---				m		18765
PUK	1.72	338.0	AM1	05:06:04.220						---		0.5	0.48	a	M1	10229

DATA\_TYPE COMMENT GSE2.1

Event 1336

Official Magnitude:

M1 3.02

Error ellipse:

	Azim	Dip	Mag
Max:	338	80	1.4400
Intermediate:	119	7	0.6200
Min:	210	6	0.4300

BEGIN GSE2.1

MSG\_TYPE DATA

MSG\_ID 1564819895 athena

DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1337 0.8 km from Porodinë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/05	23:35:01.59		0.02	40.6515	20.7110				11.7	0.5	5	4	303	0.06	0.53	m	

Magnitude	Err	Nsta	Author	OrigID
M1	2.0	0.0	3	1394

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.05	0.0	Pg	23:35:04.621	0.0					---				mdi		18773	
KBN	0.06	115.0	Sg	23:35:05.261	0.0					---				m__		18768	
KBN	0.06	115.0	AM1	23:35:07.100						---		2.0	0.34	a__	M1	2.0	10230
NEST	0.35	132.0	Sg	23:35:14.564	0.0					---				m__		18770	
NEST	0.35	132.0	Pg	23:35:08.973	-0.0					---				mde		18769	
NEST	0.35	132.0	AM1	23:35:14.660						---		0.3	0.26	a__	M1	1.5	10231
FNA	0.53	75.0	Sg	23:35:20.419	0.0					---				m__		18772	
FNA	0.53	75.0	Pg	23:35:12.385	0.0					---				mce		18771	
FNA	0.53	75.0	AM1	23:35:21.410						---		0.7	0.26	a__	M1	2.1	10232

DATA\_TYPE COMMENT GSE2.1  
Event 1337

Official Magnitude:  
M1 2.03

Error ellipse:

	Azim	Dip	Mag
Max:	283	10	1.4100
Intermediate:	183	40	0.7800
Min:	24	48	0.6100

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819895 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1339 1.8 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/06	01:26:22.02		0.07	40.4828	20.7882				14.5	1.2	5	5	159	0.14	1.01	m	

Magnitude	Err	Nsta	Author	OrigID
M1	1.9	0.0	3	1396

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.14	0.0	Pg	01:26:25.606	0.0					---						18794
KBN	0.14	0.0	Sg	01:26:28.032	-0.0					---						18787
KBN	0.14	0.0	AMl	01:26:28.870						---		0.9	0.26	a_	Ml	1.9
NEST	0.21	108.0	Sg	01:26:30.706	-0.1					---						18789
NEST	0.21	108.0	Pg	01:26:27.163	0.1					---						18788
NEST	0.21	108.0	AMl	01:26:31.770						---		0.6	0.20	a_	Ml	1.7
FNA	0.54	56.0	Sg	01:26:40.959	-0.5					---						18791
FNA	0.54	56.0	Pg	01:26:33.099	-0.0					---						18790
FNA	0.54	56.0	AMl	01:26:42.860						---		0.5	0.32	a_	Ml	2.0
IGT	1.01	201.0	Sn	01:26:57.338	0.6					---						18793
IGT	1.01	201.0	Pn	01:26:41.819	-0.0					---						18792

DATA\_TYPE COMMENT GSE2.1  
Event 1339

Official Magnitude:  
Ml 1.86

Error ellipse:

	Azim	Dip	Mag
Max:	42	62	1.4000
Intermediate:	293	9	0.6900
Min:	199	26	0.5200

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819895 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1340 1.2 km from Mali Hebjaj, Shkodër, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/06	11:57:55.91		0.08	41.9972	19.4995				43.4	1.6	15	12	170	0.30	2.54	m	
1397																	

Magnitude	Err	Nsta	Author	OrigID
Ml	3.2	0.0	9	1397
Md	3.4	0.0	9	1397

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
PUK	0.30	81.0	Sg	11:58:11.022	-0.5					---						18796
PUK	0.30	81.0	Pg	11:58:04.811	-0.0					---						18795
PUK	0.30	81.0	AMl	11:58:11.670						---		28.8	0.28	a_	Ml	3.7
PUK	0.30	81.0	AMd	11:58:48.053						---		0.0	43.24	a_	Md	2.6
BCI	0.56	0.0	Pg	11:58:10.647	0.0					---						18812
BCI	0.56	48.0	Sg	11:58:17.656	0.0					---						18797

BCI	0.56	48.0	AMl	11:58:22.990		---	4.8	0.30	a__	Ml	3.2	10250
VLO	1.53	181.0	Sn	11:58:42.627	-0.0	---			m__			18799
VLO	1.53	181.0	Pn	11:58:22.417	-0.2	---			m__			18798
VLO	1.53	181.0	AMl	11:58:48.620		---	1.5	0.16	a__	Ml	3.4	10251
VLO	1.53	181.0	AMd	11:59:18.887		---	0.0	56.47	a__	Md	2.9	10241
KBN	1.68	144.0	Sg	11:58:46.960	-0.1	---			m__			18801
KBN	1.68	144.0	Pg	11:58:25.340	0.2	---			m__			18800
KBN	1.68	144.0	AMl	11:58:49.050		---	0.7	1.08	a__	Ml	3.1	10252
KBN	1.68	144.0	AMd	11:59:31.524		---	0.0	66.18	a__	Md	3.1	10242
FNA	1.87	129.0	Sg	11:58:51.994	-0.6	---			m__			18803
FNA	1.87	129.0	Pg	11:58:28.246	-0.1	---			m__			18802
FNA	1.87	129.0	AMl	11:58:54.560		---	1.2	0.68	a__	Ml	3.5	10253
FNA	1.87	129.0	AMd	11:59:52.252		---	0.0	84.01	a__	Md	3.4	10243
NEST	1.97	143.0	Sn	11:58:55.283	0.1	---			m__			18805
NEST	1.97	143.0	Pn	11:58:29.541	-0.3	---			m__			18804
NEST	1.97	143.0	AMl	11:59:07.490		---	0.4	0.48	a__	Ml	3.0	10254
NEST	1.97	143.0	AMd	11:59:54.270		---	0.0	84.73	a__	Md	3.4	10244
SCTE	2.07	203.0	Sn	11:58:57.911	0.1	---			m__			18807
SCTE	2.07	203.0	Pn	11:58:31.340	0.0	---			m__			18806
SCTE	2.07	203.0	AMl	11:59:06.150		---	0.4	0.20	a__	Ml	3.2	10255
SCTE	2.07	203.0	AMd	12:00:06.654		---	0.0	95.31	a__	Md	3.5	10245
SRN	2.15	169.0	Pn	11:58:32.892	0.1	---			m__			18808
SRN	2.15	169.0	AMl	11:59:10.030		---	0.1	0.30	a__	Ml	2.7	10256
SRN	2.15	169.0	AMd	11:59:58.567		---	0.0	85.67	a__	Md	3.4	10246
NOCI	2.19	238.0	Sn	11:59:01.017	-0.0	---			m__			18810
NOCI	2.19	238.0	Pn	11:58:33.174	0.0	---			m__			18809
NOCI	2.19	238.0	AMl	11:59:08.200		---	0.3	0.30	a__	Ml	3.1	10257
NOCI	2.19	238.0	AMd	12:00:24.346		---	0.0	111.17	a__	Md	3.7	10247
IGT	2.54	165.0	Pn	11:58:38.285	0.0	---			m__			18811
IGT	2.54	165.0	AMd	12:00:09.439		---	0.0	91.15	a__	Md	2.9	10248

DATA\_TYPE COMMENT GSE2.1  
Event 1340

Official Magnitude:  
Ml 3.15

Error ellipse:

	Azim	Dip	Mag
Max:	8	60	1.8800
Intermediate:	127	15	0.4900
Min:	224	25	0.3300

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819894 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1341 1.3 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/06	18:40:00.08		0.24	40.4833	20.8177				2.7	1.2	10	7	110	0.14	1.71	m	

Magnitude	Err	Nsta	Author	OrigID
M1	1.9	0.0	4	1398

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.15	0.0	Pg	18:40:02.882	0.0					---				m		18824	
KBN	0.14	351.0	Sg	18:40:04.961	-0.0					---				m		18813	
KBN	0.14	351.0	AM1	18:40:06.040						---		4.3	0.28	a	M1	2.4	10258
NEST	0.19	111.0	Sg	18:40:07.755	0.2					---				m		18815	
NEST	0.19	111.0	P	18:40:04.513	0.2					---				m		18814	
NEST	0.19	111.0	AM1	18:40:09.270						---		1.4	0.32	a	M1	2.0	10259
FNA	0.52	55.0	Sg	18:40:19.062	-0.2					---				m		18817	
FNA	0.52	55.0	P	18:40:10.591	-0.4					---				m		18816	
FNA	0.52	55.0	AM1	18:40:20.830						---		0.4	0.28	a	M1	1.9	10260
SRN	0.87	227.0	S	18:40:31.227	-0.2					---				m		18819	
SRN	0.87	227.0	P	18:40:17.801	-0.2					---				m		18818	
SRN	0.87	227.0	AM1	18:40:33.810						---		0.1	0.38	a	M1	1.7	10261
IGT	1.02	202.0	S	18:40:36.091	0.2					---				m		18821	
IGT	1.02	202.0	P	18:40:19.813	-0.7					---				m		18820	
PUK	1.71	337.0	S	18:40:58.010	0.4					---				m		18823	
PUK	1.71	337.0	Pn	18:40:34.268	1.3					---				m		18822	

DATA\_TYPE COMMENT GSE2.1  
Event 1341

Official Magnitude:  
M1 1.94

Error ellipse:

	Azim	Dip	Mag
Max:	90	76	1.2600
Intermediate:	301	11	0.4800
Min:	210	7	0.4100

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819894 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1342 1.3 km from Dardhë, Korçë, Albania



Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/07	00:38:16.97		0.24	40.5173	20.8417				4.3	1.1	8	6	110	0.12	1.68	m	

OrigID  
1399

Magnitude	Err	Nsta	Author	OrigID
M1	2.0	0.0	3	1399

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.12	0.0	Pg	00:38:18.691	0.0									m		18834
KBN	0.11	339.0	Sg	00:38:20.979	0.1									m		18825
KBN	0.11	339.0	AM1	00:38:21.550								1.8	0.28	a	M1	2.0
NEST	0.19	122.0	Sg	00:38:24.673	0.2									m		18827
NEST	0.19	122.0	P	00:38:20.832	-0.4									m		18826
NEST	0.19	122.0	AM1	00:38:28.990								0.4	0.24	a	M1	1.5
FNA	0.49	57.0	S	00:38:34.898	0.2									m		18829
FNA	0.49	57.0	Pg	00:38:26.834	-0.3									m		18828
FNA	0.49	57.0	AM1	00:38:35.550								0.9	0.38	a	M1	2.2
SRN	0.91	226.0	Sg	00:38:49.181	-0.1									m		18831
SRN	0.91	226.0	Pg	00:38:35.889	0.5									m		18830
PUK	1.68	336.0	Sn	00:39:14.479	1.0									m		18833
PUK	1.68	336.0	Pn	00:38:49.169	-0.1									m		18832

DATA\_TYPE COMMENT GSE2.1  
Event 1342

Official Magnitude:  
M1 1.97

Error ellipse:

	Azim	Dip	Mag
Max:	53	82	1.1400
Intermediate:	214	7	0.5500
Min:	304	3	0.5400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819894 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1343 3.8 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/07	04:40:20.87		0.03	40.5050	20.7848				25.2	0.8	9	8	135	0.12	1.82	m	

OrigID  
1400

Magnitude	Err	Nsta	Author	OrigID

Ml 2.1 0.0 5 1400  
Md 2.8 0.0 5 1400

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.12	0.0	Pg	04:40:25.183	0.0									m		18846
KBN	0.12	0.0	Sg	04:40:28.782	0.0									m		18835
KBN	0.12	0.0	AMl	04:40:30.350								2.0	0.20	a	Ml	10270
NEST	0.22	114.0	Sg	04:40:31.596	-0.0									m		18837
NEST	0.22	114.0	Pg	04:40:27.015	0.0									m		18836
NEST	0.22	114.0	AMl	04:40:34.810								0.8	0.20	a	Ml	10271
NEST	0.22	114.0	AMd	04:41:12.365								0.0	45.35	a	Md	10265
FNA	0.53	58.0	Sg	04:40:40.352	-0.0									m		18839
FNA	0.53	58.0	Pg	04:40:32.008	0.0									m		18838
FNA	0.53	58.0	AMl	04:40:44.920								0.5	0.18	a	Ml	10272
FNA	0.53	58.0	AMd	04:41:25.730								0.0	53.72	a	Md	10266
SRN	0.87	225.0	Sg	04:40:51.230	0.0									m		18841
SRN	0.87	225.0	Pg	04:40:38.127	-0.1									m		18840
SRN	0.87	225.0	AMl	04:40:53.690								0.1	0.26	a	Ml	10273
SRN	0.87	225.0	AMd	04:41:26.770								0.0	48.64	a	Md	10267
IGT	1.03	200.0	Sg	04:40:55.737	0.0									m		18843
IGT	1.03	200.0	Pg	04:40:40.814	0.0									m		18842
IGT	1.03	200.0	AMd	04:41:45.145								0.0	64.33	a	Md	10268
SCTE	1.82	258.0	Sn	04:41:16.402	-2.5									m		18845
SCTE	1.82	258.0	Pn	04:40:54.354	0.3									m		18844
SCTE	1.82	258.0	AMl	04:41:26.380								0.1	0.48	a	Ml	10274
SCTE	1.82	258.0	AMd	04:42:05.196								0.0	70.84	a	Md	10269

DATA\_TYPE COMMENT GSE2.1  
Event 1343

Official Magnitude:  
Ml 2.08

Error ellipse:

	Azim	Dip	Mag
Max:	354	68	0.8100
Intermediate:	132	16	0.6200
Min:	226	14	0.2800

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819894 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1347 2.5 km from Dardhë, Korçë, Albania

Date Time Err RMS Latitude Longitude Smaj Smin Az Depth Err Ndef Nsta Gap mdist Mdist Qual Author  
OrigID

2019/07/07 14:35:34.20 0.07 40.5078 20.8013 12.2 1.6 5 3 239 0.12 0.52 m  
1404

Magnitude Err Nsta Author OrigID  
M1 1.2 0.0 3 1404

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
NEST	0.00	0.0	Pg	14:35:38.562	0.0					___				mdi		18886
NEST	0.21	116.0	Sg	14:35:42.705	-0.0					___				m__		18883
NEST	0.21	116.0	AM1	14:35:43.770						___		0.2	0.28	a__ M1	1.2	10292
KBN	0.12	355.0	Sg	14:35:39.084	-0.1					___				m__		18882
KBN	0.12	355.0	Pg	14:35:37.111	0.1					___				m__		18881
KBN	0.12	355.0	AM1	14:35:40.750						___		0.2	0.14	a__ M1	1.2	10291
FNA	0.52	58.0	Sg	14:35:52.873	0.1					___				m__		18885
FNA	0.52	58.0	Pg	14:35:44.714	-0.1					___				m__		18884
FNA	0.52	58.0	AM1	14:35:56.230						___		0.0	0.24	a__ M1	0.9	10293

DATA\_TYPE COMMENT GSE2.1  
Event 1347

Official Magnitude:  
M1 1.18

Error ellipse:

	Azim	Dip	Mag
Max:	244	60	1.8800
Intermediate:	37	26	0.8900
Min:	133	12	0.4700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819894 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1348 2.2 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/08	22:00:03.54		0.02	40.4950	20.8023				8.0	2.9	5	3	242	0.13	0.53	m	

1405

Magnitude Err Nsta Author OrigID  
M1 0.9 0.0 3 1405

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.13	355.0	Sg	22:00:08.212	-0.0					___				m__		18888
KBN	0.13	355.0	Pg	22:00:06.249	0.0					___				mci		18887
KBN	0.13	355.0	AM1	22:00:09.390						___		0.2	0.28	a__ M1	1.1	10294

NEST	0.20	0.0	Pg	22:00:08.652	0.0	---											mci	18892
NEST	0.20	113.0	Sg	22:00:11.516	0.0	---											m__	18889
NEST	0.20	113.0	AMl	22:00:15.210		---					0.1	0.22	a__	Ml		0.9		10295
FNA	0.53	56.0	Sg	22:00:22.289	0.0	---											m__	18891
FNA	0.53	56.0	Pg	22:00:14.206	-0.0	---											mde	18890
FNA	0.53	56.0	AMl	22:00:25.300		---					0.0	0.26	a__	Ml		0.8		10296

DATA\_TYPE COMMENT GSE2.1  
Event 1348

Official Magnitude:  
Ml 0.85

Error ellipse:

	Azim	Dip	Mag
Max:	254	76	2.9400
Intermediate:	45	11	0.9700
Min:	136	7	0.4000

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819894 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1351 2.6 km from Gjyrës, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/09	01:52:37.21		0.05	40.5415	20.8658				2.0	2.0	5	5	192	0.10	0.46	m	
1408																	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.4	0.0	3	1408

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.10	324.0	Sg	01:52:40.474	-0.1					---						18928	
KBN	0.10	324.0	Pg	01:52:39.111	-0.0					---						18927	
KBN	0.10	324.0	AMl	01:52:42.640						---		0.6	0.14	a__	Ml	1.4	10307
NEST	0.19	0.0	Pg	01:52:40.968	0.0					---							18932
NEST	0.19	132.0	Sg	01:52:44.626	-0.1					---							18929
NEST	0.19	132.0	AMl	01:52:46.610						---		0.3	0.40	a__	Ml	1.4	10308
FNA	0.46	58.0	Sg	01:52:54.364	0.0					---							18931
FNA	0.46	58.0	Pg	01:52:47.001	-0.0					---							18930
FNA	0.46	58.0	AMl	01:52:57.660						---		0.1	0.30	a__	Ml	0.9	10309

DATA\_TYPE COMMENT GSE2.1  
Event 1351

Official Magnitude:  
Ml 1.38

Error ellipse:

	Azim	Dip	Mag
Max:	234	74	2.0400
Intermediate:	39	15	0.6600
Min:	130	4	0.3000

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819894 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1352 0.7 km from Buckaj, Gjirokastër, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/09	08:28:30.76		0.23	40.4470	19.8342				11.8	1.0	17	11	84	0.26	2.14	m	
OrigID 1409																	

Magnitude	Err	Nsta	Author	OrigID
Ml	3.4	0.0	8	1409

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
VLO	0.26	275.0	Sg	08:28:39.612	0.1					---				m		18934
VLO	0.26	275.0	Pg	08:28:35.832	0.0					---				mci		18933
VLO	0.26	275.0	AMl	08:28:43.030						---		119.0	0.54	a	Ml	4.1
BPA2	0.33	330.0	Pg	08:28:37.997	0.3					---				mce		18935
SRN	0.58	167.0	Sg	08:28:51.240	-0.8					---				m		18937
SRN	0.58	167.0	Pg	08:28:41.459	-1.4					---				mde		18936
SRN	0.58	167.0	AMl	08:28:51.830						---		1.7	0.64	a	Ml	2.6
NEST	0.93	91.0	Sn	08:29:02.646	-0.2					---				m		18939
NEST	0.93	91.0	Pn	08:28:48.810	-0.3					---				m		18938
NEST	0.93	91.0	AMl	08:29:12.900						---		1.1	0.74	a	Ml	2.8
IGT	0.99	157.0	Sn	08:29:05.239	0.3					---				m_e		18941
IGT	0.99	157.0	Pn	08:28:50.357	0.1					---				mce		18940
IGT	0.99	157.0	AMl	08:29:13.560						---		1.4	0.72	a	Ml	2.9
SCTE	1.10	0.0	Pn	08:28:52.005	0.0					---				mde		18953
SCTE	1.11	251.0	Sn	08:29:08.568	-0.1					---				m		18942
SCTE	1.11	251.0	AMl	08:29:10.470						---		6.2	0.68	a	Ml	3.7
FNA	1.23	73.0	Sn	08:29:12.554	0.2					---				m		18944
FNA	1.23	73.0	Pn	08:28:54.402	-0.1					---				m		18943
FNA	1.23	73.0	AMl	08:29:18.770						---		2.1	0.76	a	Ml	3.3
PUK	1.59	1.0	Sn	08:29:23.154	-0.4					---				m		18946
PUK	1.59	1.0	Pn	08:29:00.946	0.0					---				m		18945
PUK	1.59	1.0	AMl	08:29:32.610						---		2.3	0.60	a	Ml	3.6
LKD2	1.77	158.0	Sn	08:29:30.687	1.3					---				m		18948

LKD2	1.77	158.0	Pn	08:29:04.247	0.0	---										m	18947
BCI	1.93	5.0	Sn	08:29:33.943	0.4	---										m	18950
BCI	1.93	5.0	Pn	08:29:06.932	0.3	---										m	18949
BCI	1.93	5.0	AMl	08:29:38.120		---				1.6	0.82	a	Ml	3.7			10317
NOCI	2.14	281.0	S	08:29:39.057	-0.1	---										m	18952
NOCI	2.14	281.0	P	08:29:07.101	-2.8	---										m	18951

DATA\_TYPE COMMENT GSE2.1  
Event 1352

Official Magnitude:  
Ml 3.43

Error ellipse:

	Azim	Dip	Mag
Max:	200	80	0.9900
Intermediate:	357	8	0.4400
Min:	88	4	0.3800

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819894 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1353 1.2 km from Hasanbegaj, Gjirokastër, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/09	17:37:45.50		0.11	40.3927	19.8047				26.1	0.6	17	11	91	0.25	1.98	m	
1410																	

Magnitude	Err	Nsta	Author	OrigID
Ml	3.3	0.0	10	1410
Md	3.3	0.0	9	1410

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
VLO	0.25	288.0	Sg	17:37:55.848	0.0									m		18955	
VLO	0.25	288.0	Pg	17:37:51.523	0.1									m		18954	
VLO	0.25	288.0	AMl	17:37:58.730								118.8	0.66	a	Ml	4.2	10327
VLO	0.25	288.0	AMd	17:38:39.603								0.0	48.08	a	Md	2.7	10318
SRN	0.53	163.0	Sg	17:38:02.648	-3.1									m		18957	
SRN	0.53	163.0	Pg	17:37:56.761	-0.3									m		18956	
SRN	0.53	163.0	AMl	17:38:12.600								2.4	0.78	a	Ml	2.7	10328
SRN	0.53	163.0	AMd	17:39:04.418								0.0	67.66	a	Md	3.1	10319
KBN	0.78	0.0	Pg	17:38:00.164	0.0									m		18973	
KBN	0.78	72.0	Sg	17:38:12.084	0.2									m		18958	
KBN	0.78	72.0	AMl	17:38:22.080								4.2	1.12	a	Ml	3.3	10329
NEST	0.95	88.0	Sg	17:38:17.843	0.0									m		18960	

NEST	0.95	88.0	Pg	17:38:03.945	-0.0	---	m				18959	
NEST	0.95	88.0	AMl	17:38:33.210		---	1.0	0.62	a	Ml	2.8	10330
NEST	0.95	88.0	AMd	17:39:30.784		---	0.0	86.84	a	Md	3.3	10320
TIR	0.96	2.0	Sg	17:38:17.937	-0.0	---				m		18962
TIR	0.96	2.0	Pg	17:38:04.027	-0.0	---				m		18961
TIR	0.96	2.0	AMl	17:38:24.320		---	3.2	0.42	a	Ml	3.3	10331
TIR	0.96	2.0	AMd	17:39:10.400		---	0.0	66.37	a	Md	3.1	10321
SCTE	1.07	254.0	Sg	17:38:21.538	0.0	---				m		18964
SCTE	1.07	254.0	Pg	17:38:06.086	0.0	---				m		18963
SCTE	1.07	254.0	AMl	17:38:25.760		---	4.3	0.70	a	Ml	3.5	10332
SCTE	1.07	254.0	AMd	17:39:25.467		---	0.0	79.38	a	Md	3.3	10322
FNA	1.26	71.0	Sg	17:38:27.318	-0.2	---				m		18966
FNA	1.26	71.0	Pg	17:38:09.587	0.1	---				m		18965
FNA	1.26	71.0	AMl	17:38:36.130		---	2.1	0.86	a	Ml	3.3	10333
FNA	1.26	71.0	AMd	17:39:23.255		---	0.0	73.67	a	Md	3.2	10323
PUK	1.65	2.0	Sn	17:38:37.828	-0.8	---				m		18968
PUK	1.65	2.0	Pn	17:38:15.761	-0.1	---				m		18967
PUK	1.65	2.0	AMl	17:38:49.770		---	1.1	0.40	a	Ml	3.3	10334
PUK	1.65	2.0	AMd	17:39:34.108		---	0.0	78.35	a	Md	3.3	10324
LKD2	1.73	157.0	Sn	17:38:41.194	0.1	---				m		18970
LKD2	1.73	157.0	Pn	17:38:17.225	-0.0	---				m		18969
LKD2	1.73	157.0	AMl	17:38:47.700		---	2.7	0.64	a	Ml	3.8	10335
LKD2	1.73	157.0	AMd	17:39:43.635		---	0.0	86.41	a	Md	3.4	10325
BCI	1.98	5.0	Sn	17:38:47.372	0.0	---				m		18972
BCI	1.98	5.0	Pn	17:38:20.729	-0.1	---				m		18971
BCI	1.98	5.0	AMl	17:38:53.410		---	1.7	0.60	a	Ml	3.7	10336
BCI	1.98	5.0	AMd	17:39:39.870		---	0.0	79.14	a	Md	3.3	10326

DATA\_TYPE COMMENT GSE2.1  
Event 1353

Official Magnitude:  
Ml 3.31

Error ellipse:

	Azim	Dip	Mag
Max:	285	80	0.5900
Intermediate:	174	3	0.3500
Min:	84	9	0.2900

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819893 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1355 1.6 km from Skënderbe, Elbasan, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/11	07:30:58.23		0.20	41.1280	20.5460				0.2	1.3	13	9	126	0.56	1.60	m	

Magnitude	Err	Nsta	Author	OrigID
M1	2.7	0.0	6	1412

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.54	159.0	Sg	07:31:16.590	-0.9					---				m		18984	
KBN	0.54	159.0	Pg	07:31:08.190	-1.0					---				mde		18983	
KBN	0.54	159.0	AM1	07:31:21.820						---		2.5	0.44	a	M1	2.7	10345
TIR	0.56	0.0	Pg	07:31:08.250	0.0					---				mce		19000	
TIR	0.56	294.0	Sg	07:31:18.843	-0.2					---				m		18985	
TIR	0.56	294.0	AM1	07:31:20.460						---		1.7	0.60	a	M1	2.6	10346
PHP	0.56	352.0	Sg	07:31:18.396	-0.3					---				m		18987	
PHP	0.56	352.0	Pg	07:31:08.976	-0.9					---				mde		18986	
PHP	0.56	352.0	AM1	07:31:23.280						---		1.0	0.56	a	M1	2.3	10347
FNA	0.72	118.0	Sn	07:31:24.626	0.1					---				m		18989	
FNA	0.72	118.0	Pn	07:31:13.156	-0.1					---				mdi		18988	
FNA	0.72	118.0	AM1	07:31:28.550						---		1.7	0.34	a	M1	2.8	10348
NEST	0.81	151.0	Sn	07:31:27.344	-0.1					---				m		18991	
NEST	0.81	151.0	Pn	07:31:14.373	-0.5					---				mce		18990	
NEST	0.81	151.0	AM1	07:31:30.730						---		1.6	0.42	a	M1	2.8	10349
PUK	1.04	333.0	Sn	07:31:34.940	0.1					---				m		18993	
PUK	1.04	333.0	Pn	07:31:17.783	-1.4					---				mce		18992	
PUK	1.04	333.0	AM1	07:31:40.360						---		0.8	0.42	a	M1	2.7	10350
BCI	1.29	345.0	Sn	07:31:43.414	0.2					---				m		18995	
BCI	1.29	345.0	Pn	07:31:24.015	0.1					---				mde		18994	
SRN	1.31	199.0	Sn	07:31:45.013	0.1					---				m		18997	
SRN	1.31	199.0	Pn	07:31:24.466	-0.5					---				mce		18996	
IGT	1.60	186.0	Sn	07:31:53.462	0.1					---				m		18999	
IGT	1.60	186.0	Pn	07:31:30.108	0.4					---				m		18998	

DATA\_TYPE COMMENT GSE2.1  
Event 1355

Official Magnitude:  
M1 2.72

Error ellipse:

	Azim	Dip	Mag
Max:	78	84	1.2900
Intermediate:	254	5	0.5100
Min:	344	0	0.2500

BEGIN GSE2.1  
MSG\_TYPE DATA



MSG\_ID 1564819893 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1358 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/12	14:24:26.08		0.23	40.4262	20.7870				11.4	1.2	11	18	109	0.20	1.75	m	

Magnitude	Err	Nsta	Author	OrigID
M1	2.3	0.0	6	1415

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.20	0.0	Pg	14:24:29.828	0.0									m		19052
KBN	0.20	0.0	Sg	14:24:33.380	0.1									m		19039
KBN	0.20	0.0	AM1	14:24:34.010								4.9	0.32	a	M1	2.6
NEST	0.20	93.0	Sg	14:24:34.319	0.1									m		19041
NEST	0.20	93.0	Pg	14:24:31.066	0.4									m		19040
NEST	0.20	93.0	AM1	14:24:37.000								3.7	0.32	a	M1	2.5
NEST	0.20	93.0	AM1	14:24:37.370								2.4	0.20	a	M1	2.3
FNA	0.58	51.0	Sg	14:24:46.174	-0.4									m		19043
FNA	0.58	51.0	Pg	14:24:37.208	-0.6									m		19042
FNA	0.58	51.0	AM1	14:24:49.290								0.8	0.22	a	M1	2.3
SRN	0.81	229.0	Sg	14:24:54.987	-0.1									m		19045
SRN	0.81	229.0	Pg	14:24:42.326	-0.3									m		19044
SRN	0.81	229.0	AM1	14:24:57.040								0.2	0.44	a	M1	1.8
IGT	0.96	202.0	Sg	14:24:59.337	0.1									m		19047
IGT	0.96	202.0	Pg	14:24:45.194	0.1									m		19046
PHP	1.28	349.0	Sn	14:25:08.983	-0.0									m		19049
PHP	1.28	349.0	Pn	14:24:49.749	-0.9									m		19048
PHP	1.28	349.0	AM1	14:25:18.840								0.2	0.68	a	M1	2.2
PUK	1.75	338.0	Sn	14:25:23.946	0.2									m		19051
PUK	1.75	338.0	Pn	14:24:59.979	1.0									m		19050
PUK	1.75	338.0	AM1	14:25:29.310								0.1	0.40	a	M1	2.4

DATA\_TYPE COMMENT GSE2.1  
 Event 1358

Official Magnitude:  
 M1 2.29

Error ellipse:

	Azim	Dip	Mag
Max:	108	69	1.3200
Intermediate:	300	19	0.5000
Min:	209	4	0.3600

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819893 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1359 3.2 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/12	14:39:06.86		0.21	40.4582	20.7753				12.2	2.2	7	18	162	0.16	1.72	m	

Magnitude	Err	Nsta	Author	OrigID
M1	2.2	0.0	4	1416

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
NEST	0.00	0.0	Pg	14:39:11.789	0.0									m		19062
NEST	0.21	101.0	Sg	14:39:15.473	0.0									m		19055
NEST	0.21	101.0	AM1	14:39:18.200								2.6	0.28	a	M1	2.4
KBN	0.17	3.0	Sg	14:39:13.040	-0.2									m		19054
KBN	0.17	3.0	Pg	14:39:10.609	0.1									m		19053
KBN	0.17	3.0	AM1	14:39:19.200								2.2	0.36	a	M1	2.2
FNA	0.56	54.0	Sg	14:39:26.976	0.0									m		19057
FNA	0.56	54.0	Pg	14:39:18.137	-0.2									m		19056
FNA	0.56	54.0	AM1	14:39:30.660								0.5	0.28	a	M1	2.1
IGT	0.99	201.0	Sg	14:39:40.619	-0.3									m		19059
IGT	0.99	201.0	Pg	14:39:26.692	0.4									m		19058
IGT	0.99	201.0	AM1	14:39:49.290								0.1	0.44	a	M1	1.8
LKD2	1.67	184.0	Pn	14:39:40.522	2.1									m		19060
PUK	1.72	338.0	Pn	14:39:41.002	1.8									m		19061

DATA\_TYPE COMMENT GSE2.1  
 Event 1359

Official Magnitude:  
 M1 2.16

Error ellipse:

	Azim	Dip	Mag
Max:	22	73	2.2900
Intermediate:	116	1	0.8300
Min:	206	17	0.4800

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819893 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1360 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/13	20:35:38.53		0.19	39.7972	20.6445				25.0	1.2	17	17	150	0.36	2.60	m	

Magnitude	Err	Nsta	Author	OrigID
M1	2.9	0.0	8	1417

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
IGT	0.36	223.0	Sg	20:35:52.933	0.0									m		19064	
IGT	0.36	223.0	Pg	20:35:46.617	-0.1									m		19063	
SRN	0.50	280.0	Sg	20:35:57.969	0.5									m		19066	
SRN	0.50	280.0	Pg	20:35:49.376	0.0									m		19065	
SRN	0.50	280.0	AM1	20:36:01.508								3.8	0.32	a	M1	2.9	10384
NEST	0.69	26.0	Sg	20:36:02.655	-0.0									m		19068	
NEST	0.69	26.0	Pg	20:35:52.142	-0.2									m		19067	
NEST	0.69	26.0	AM1	20:36:06.188								1.4	0.38	a	M1	2.7	10385
KBN	0.83	7.0	Sg	20:36:06.251	-0.0									m		19070	
KBN	0.83	7.0	Pg	20:35:54.590	0.2									m		19069	
KBN	0.83	7.0	AM1	20:36:09.938								0.7	0.48	a	M1	2.5	10386
LKD2	1.01	179.0	Sn	20:36:12.386	-0.1									m		19072	
LKD2	1.01	179.0	Pn	20:35:58.211	0.3									m		19071	
LKD2	1.01	179.0	AM1	20:36:19.548								1.1	0.28	a	M1	2.9	10387
VLO	1.11	308.0	Pg	20:36:01.532	2.5									m		19073	
VLO	1.11	308.0	AM1	20:36:20.908								4.6	0.42	a	M1	3.6	10388
FNA	1.13	29.0	Sg	20:36:16.881	0.4									m		19075	
FNA	1.13	29.0	Pg	20:36:00.317	0.1									m		19074	
FNA	1.13	29.0	AM1	20:36:20.438								1.2	0.58	a	M1	3.0	10389
BPA1	1.19	322.0	Pg	20:36:01.068	-0.2									m		19076	
TIR	1.66	0.0	Pn	20:36:09.581	0.0									m		19081	
TIR	1.66	340.0	Sn	20:36:32.140	-0.1									m		19077	
TIR	1.66	340.0	AM1	20:36:38.708								0.3	0.26	a	M1	2.7	10390
PHP	1.89	356.0	Pn	20:36:12.840	0.4									m		19078	
PHP	1.89	356.0	AM1	20:36:45.378								0.3	0.38	a	M1	2.9	10391
PUK	2.31	346.0	Pn	20:36:18.455	-0.4									m		19079	
BCI	2.60	351.0	Pn	20:36:23.215	0.1									m		19080	

DATA\_TYPE COMMENT GSE2.1  
Event 1360

Official Magnitude:  
M1 2.87

Error ellipse:

	Azim	Dip	Mag
Max:	164	77	1.2000
Intermediate:	286	6	0.7100
Min:	17	11	0.3400

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819893 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1365 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/14	13:44:37.58		0.40	40.0698	19.8210				1.9	1.8	15	18	119	0.23	2.22	m	
OrigID 1422																	

Magnitude	Err	Nsta	Author	OrigID
M1	2.1	0.0	6	1422

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
SRN	0.23	143.0	Sg	13:44:47.398	-0.1					___				m		19159	
SRN	0.23	143.0	Pg	13:44:42.968	-0.3					___				m		19158	
SRN	0.23	143.0	AM1	13:44:49.488						___		0.5	0.26	a	M1	1.7	10427
VLO	0.47	329.0	Sg	13:44:54.524	0.7					___				m		19161	
VLO	0.47	329.0	Pg	13:44:47.362	0.5					___				m		19160	
VLO	0.47	329.0	AM1	13:44:58.388						___		1.3	0.34	a	M1	2.3	10428
IGT	0.67	143.0	Sg	13:45:01.901	0.3					___				m		19163	
IGT	0.67	143.0	Pg	13:44:51.039	-0.3					___				m		19162	
IGT	0.67	143.0	AM1	13:45:04.178						___		0.1	0.36	a	M1	1.7	10429
KBN	0.92	52.0	P	13:44:55.918	0.2					___				m		19164	
NEST	1.00	69.0	Sn	13:45:12.622	-0.2					___				m		19166	
NEST	1.00	69.0	Pn	13:44:57.192	-0.5					___				m		19165	
NEST	1.00	69.0	AM1	13:45:20.388						___		0.1	0.42	a	M1	1.9	10430
SCTE	1.05	0.0	Pn	13:44:58.447	0.0					___				m		19174	
SCTE	1.04	271.0	Sn	13:45:13.258	-0.8					___				m		19167	
SCTE	1.04	271.0	AM1	13:45:14.898						___		0.3	0.80	a	M1	2.3	10431
FNA	1.39	58.0	Sn	13:45:25.636	-0.1					___				m		19169	
FNA	1.39	58.0	Pn	13:45:04.132	-0.9					___				m		19168	
FNA	1.39	58.0	AM1	13:45:28.458						___		0.2	0.52	a	M1	2.3	10432
LKD2	1.43	152.0	Sn	13:45:27.275	0.2					___				m		19171	
LKD2	1.43	152.0	Pn	13:45:06.422	0.6					___				m		19170	
PUK	1.97	1.0	Pn	13:45:12.470	-2.8					___				m		19172	
NOCI	2.22	290.0	Sn	13:45:50.140	-0.3					___				m		19173	

DATA\_TYPE COMMENT GSE2.1  
 Event 1365

Official Magnitude:  
 M1 2.08

Error ellipse:

	Azim	Dip	Mag
Max:	105	85	1.7700
Intermediate:	227	2	0.8100
Min:	317	4	0.5800

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819893 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1361 2.4 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/14	00:59:01.40		0.59	40.4558	20.8200				4.1	2.5	10	17	109	0.17	1.73	m	

Magnitude	Err	Nsta	Author	OrigID
M1	1.5	0.0	4	1418

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.15	0.0	Pg	00:59:04.013	0.0									m		19093
KBN	0.17	352.0	Sg	00:59:07.026	-0.3									m		19082
KBN	0.17	352.0	AM1	00:59:07.260								0.6	0.26	a	M1	1.6
NEST	0.18	103.0	Sg	00:59:09.093	0.5									m		19084
NEST	0.18	103.0	Pg	00:59:05.891	0.4									m		19083
NEST	0.18	103.0	AM1	00:59:10.440								0.5	0.12	a	M1	1.5
NEST	0.18	103.0	AM1	00:59:10.850								0.5	0.28	a	M1	1.5
FNA	0.54	52.0	Sg	00:59:20.339	-0.5									m		19086
FNA	0.54	52.0	Pg	00:59:11.854	-0.6									m		19085
FNA	0.54	52.0	AM1	00:59:22.700								0.4	0.34	a	M1	1.9
SRN	0.85	228.0	Sg	00:59:29.641	-2.3									m		19088
SRN	0.85	228.0	Pg	00:59:18.723	-0.1									m		19087
SRN	0.85	228.0	AM1	00:59:34.040								0.0	0.62	a	M1	1.4
IGT	1.00	203.0	Sg	00:59:37.431	1.3									m		19090
IGT	1.00	203.0	Pg	00:59:20.492	-0.8									m		19089
PUK	1.73	337.0	Sn	01:00:00.480	1.0									m		19092
PUK	1.73	337.0	Pn	00:59:34.976	0.4									m		19091

DATA\_TYPE COMMENT GSE2.1  
 Event 1361

Official Magnitude:  
 M1 1.54

Error ellipse:

Azim	Dip	Mag

Max: 99 76 2.5800  
 Intermediate: 242 10 1.1700  
 Min: 333 8 1.0800

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819892 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1364 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/14	21:16:15.82		0.25	40.4643	21.3703				17.6	0.7	17	10	118	0.25	1.93	m	
OrigID 1421																	

Magnitude	Err	Nsta	Author	OrigID
M1	2.8	0.0	8	1421

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
NEST	0.25	259.0	Sg	21:16:25.906	-0.3									m__		19139
NEST	0.25	259.0	Pg	21:16:21.664	-0.1									mdi		19138
NEST	0.25	259.0	AM1	21:16:26.620								11.9	0.20	a__ M1	3.1	10419
FNA	0.32	1.0	Sg	21:16:28.273	0.1									m__		19141
FNA	0.32	1.0	Pg	21:16:23.108	0.2									mdi		19140
FNA	0.32	1.0	AM1	21:16:29.940								5.5	0.24	a__ M1	2.8	10420
KBN	0.47	290.0	Sg	21:16:32.248	0.0									m__		19143
KBN	0.47	290.0	Pg	21:16:25.286	0.1									mdi		19142
KBN	0.47	290.0	AM1	21:16:34.510								10.3	0.38	a__ M1	3.2	10421
SRN	1.20	242.0	Sn	21:16:56.786	0.1									m__		19145
SRN	1.20	242.0	Pn	21:16:39.235	0.1									mce		19144
THE	1.22	81.0	Sn	21:16:56.134	-0.7									m__		19147
THE	1.22	81.0	Pn	21:16:39.065	-0.2									mce		19146
THE	1.22	81.0	AM1	21:17:02.280								0.2	0.70	a__ M1	2.4	10422
IGT	1.23	221.0	Sn	21:16:56.661	-0.2									m__		19149
IGT	1.23	221.0	Pn	21:16:40.133	0.9									mde		19148
IGT	1.23	221.0	AM1	21:17:02.820								0.5	0.38	a__ M1	2.7	10423
PHP	1.41	331.0	Sn	21:17:01.110	-0.8									m__		19151
PHP	1.41	331.0	Pn	21:16:40.558	-1.6									mde		19150
PHP	1.41	331.0	AM1	21:17:05.800								0.5	0.64	a__ M1	2.8	10424
TIR	1.44	0.0	Pn	21:16:43.444	0.0									mdi		19157
TIR	1.44	309.0	Sn	21:17:03.260	-0.3									m__		19152
TIR	1.44	309.0	AM1	21:17:11.680								0.4	0.62	a__ M1	2.7	10425
LKD2	1.76	199.0	Sn	21:17:14.790	1.4									m__		19154
LKD2	1.76	199.0	Pn	21:16:49.086	0.4									mde		19153
PUK	1.93	326.0	Sn	21:17:17.535	-0.1									m__		19156
PUK	1.93	326.0	Pn	21:16:51.554	0.4									m__		19155
PUK	1.93	326.0	AM1	21:17:28.230								0.4	0.64	a__ M1	3.0	10426

DATA\_TYPE COMMENT GSE2.1  
Event 1364

Official Magnitude:  
Ml 2.80

Error ellipse:

	Azim	Dip	Mag
Max:	300	74	0.7300
Intermediate:	127	15	0.5900
Min:	37	2	0.4700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819892 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1367 1.9 km from Arrëz, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author	
OrigID																		
2019/07/15	13:47:47.89		0.10	40.4843	20.8390				2.9	1.2	5	18	223	0.14	1.71	m		
1424																		

Magnitude	Err	Nsta	Author	OrigID
Ml	2.1	0.0	3	1424

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.14	0.0	Pg	13:47:50.617	0.0					---				m		19188	
KBN	0.14	345.0	Sg	13:47:52.902	0.0					---				m		19182	
KBN	0.14	345.0	AMl	13:47:54.870						---		3.0	0.36	a	Ml	2.2	10437
NEST	0.17	113.0	Sg	13:47:55.555	0.7					---				m		19184	
NEST	0.17	113.0	Pg	13:47:51.901	0.0					---				m		19183	
NEST	0.17	113.0	AMl	13:47:58.020						---		1.8	0.54	a	Ml	2.1	10438
FNA	0.51	54.0	Sg	13:48:06.576	0.1					---				m		19186	
FNA	0.51	54.0	Pg	13:47:58.226	-0.3					---				m		19185	
FNA	0.51	54.0	AMl	13:48:07.570						---		0.8	0.30	a	Ml	2.1	10439
PUK	1.71	336.0	Pn	13:48:20.893	0.0					---				m		19187	

DATA\_TYPE COMMENT GSE2.1  
Event 1367

Official Magnitude:  
Ml 2.14

Error ellipse:

Azim Dip Mag

Max: 232 57 1.3700  
 Intermediate: 39 31 0.8000  
 Min: 133 6 0.4600

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819892 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1368 1.5 km from Lumëbardhë, Shkodër, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/15	14:11:12.27		0.04	42.0493	20.0458				10.9	3.8	5	18	138	0.12	0.47	m	
OrigID 1425																	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.4	0.0	3	1425

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
PUK	0.11	267.0	Sg	14:11:17.495	-0.0									m		19190	
PUK	0.11	267.0	Pg	14:11:15.327	0.1									m		19189	
PUK	0.11	267.0	AM1	14:11:18.390								2.4	0.14	a	Ml	2.2	10440
BCI	0.30	0.0	Pg	14:11:18.708	0.0									m		19194	
BCI	0.32	2.0	Sg	14:11:23.933	0.0									m		19191	
BCI	0.32	2.0	AM1	14:11:26.880								0.2	0.16	a	Ml	1.4	10441
PHP	0.47	140.0	Sg	14:11:28.647	0.0									m		19193	
PHP	0.47	140.0	Pg	14:11:21.561	-0.1									m		19192	
PHP	0.47	140.0	AM1	14:11:31.040								0.1	0.18	a	Ml	1.1	10442

DATA\_TYPE COMMENT GSE2.1  
 Event 1368

Official Magnitude:  
 Ml 1.39

Error ellipse:

	Azim	Dip	Mag
Max:	261	70	4.0600
Intermediate:	47	16	0.5000
Min:	140	11	0.3500

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819892 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT



Event 1370 1.3 km from Kaparjel, Gjirokastër, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/16	02:53:55.17		0.36	40.1375	19.9595				9.4	2.6	10	17	141	0.26	1.46	m	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.7	0.0	4	1428

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
SRN	0.26	173.0	Sg	02:54:05.451	-0.2					---				m		19231	
SRN	0.26	173.0	Pg	02:54:00.225	-0.9					---				m		19230	
SRN	0.26	173.0	AM1	02:54:06.530						---		0.4	0.16	a	Ml	1.5	10452
VLO	0.48	314.0	Sg	02:54:11.415	0.1					---				m		19233	
VLO	0.48	314.0	Pg	02:54:04.497	0.1					---				m		19232	
VLO	0.48	314.0	AM1	02:54:13.100						---		0.5	0.24	a	Ml	1.9	10453
IGT	0.67	154.0	Sg	02:54:19.190	0.5					---				m		19235	
IGT	0.67	154.0	Pg	02:54:08.513	-0.1					---				m		19234	
IGT	0.67	154.0	AM1	02:54:26.290						---		0.1	0.22	a	Ml	1.5	10454
KBN	0.80	52.0	Sg	02:54:26.334	4.2					---				m		19237	
KBN	0.80	52.0	Pg	02:54:09.493	-1.1					---				m		19236	
NEST	0.88	71.0	Pg	02:54:12.885	0.3					---				m		19238	
FNA	1.26	58.0	Pg	02:54:19.436	-0.3					---				m		19239	
LKD2	1.46	158.0	Pn	02:54:22.660	0.0					---				m		19241	
LKD2	1.45	157.0	Sn	02:54:44.065	0.1					---				m		19240	
LKD2	1.45	157.0	AM1	02:54:48.180						---		0.1	0.18	a	Ml	1.9	10455

DATA\_TYPE COMMENT GSE2.1  
Event 1370

Official Magnitude:  
Ml 1.72

Error ellipse:

	Azim	Dip	Mag
Max:	254	76	2.7100
Intermediate:	64	13	1.1800
Min:	155	2	0.6000

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819892 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1371 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/16	20:33:52.96		0.16	40.0928	19.9057				7.4	1.1	16	17	160	0.22	1.95	m	

Magnitude	Err	Nsta	Author	OrigID
M1	2.7	0.0	7	1429

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
SRN	0.23	0.0	Pg	20:33:58.162	0.0									m__		19260	
SRN	0.22	161.0	Sg	20:34:02.338	0.1									m__		19242	
SRN	0.22	161.0	AM1	20:34:03.380								10.6	0.40	a__	M1	3.0	10456
VLO	0.49	321.0	Sg	20:34:09.173	-0.0									m__		19244	
VLO	0.49	321.0	Pg	20:34:02.238	0.0									m__		19243	
VLO	0.49	321.0	AM1	20:34:13.930								6.3	0.16	a__	M1	3.0	10457
IGT	0.65	149.0	Sg	20:34:16.014	0.2									m__		19246	
IGT	0.65	149.0	Pg	20:34:05.678	-0.3									m__		19245	
KBN	0.86	51.0	Sg	20:34:24.602	2.7									m__		19248	
KBN	0.86	51.0	Pg	20:34:09.430	-0.1									m__		19247	
KBN	0.86	51.0	AM1	20:34:25.500								0.6	1.08	a__	M1	2.5	10458
NEST	0.93	69.0	Sg	20:34:25.500	0.2									m__		19250	
NEST	0.93	69.0	Pg	20:34:11.162	-0.3									m__		19249	
NEST	0.93	69.0	AM1	20:34:32.920								0.7	0.82	a__	M1	2.6	10459
TIR	1.25	359.0	Sn	20:34:36.076	0.2									m__		19252	
TIR	1.25	359.0	Pn	20:34:17.484	-0.0									m__		19251	
TIR	1.25	359.0	AM1	20:34:43.240								0.6	0.58	a__	M1	2.7	10460
FNA	1.32	58.0	Sn	20:34:37.891	-0.1									m__		19254	
FNA	1.32	58.0	Pn	20:34:18.579	-0.1									m__		19253	
FNA	1.32	58.0	AM1	20:34:45.160								1.1	0.56	a__	M1	3.1	10461
LKD2	1.43	155.0	Sn	20:34:41.134	-0.1									m__		19256	
LKD2	1.43	155.0	Pn	20:34:20.685	0.1									m__		19255	
PHP	1.64	14.0	Sn	20:34:47.510	0.1									m__		19258	
PHP	1.64	14.0	Pn	20:34:23.524	-0.5									m__		19257	
PHP	1.64	14.0	AM1	20:34:57.820								0.3	0.62	a__	M1	2.7	10462
PUK	1.95	0.0	Pn	20:34:26.594	-3.0									m__		19259	

DATA\_TYPE COMMENT GSE2.1  
Event 1371

Official Magnitude:  
M1 2.73

Error ellipse:

	Azim	Dip	Mag
Max:	228	81	1.0800
Intermediate:	75	7	0.4800
Min:	344	4	0.2700

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819892 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1372 0.6 km from Bolenë, Vlorë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/16	21:07:37.59		0.04	40.2455	19.7577				1.0	1.1	10	17	165	0.30	1.80	m	

Magnitude	Err	Nsta	Author	OrigID
M1	2.0	0.0	5	1430

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
VLO	0.30	319.0	Sg	21:07:48.177	-0.0									m		19262	
VLO	0.30	319.0	Pg	21:07:43.726	0.1									m		19261	
VLO	0.30	319.0	AM1	21:07:51.290								2.2	0.18	a	M1	2.3	10463
SRN	0.41	152.0	Sg	21:07:53.934	0.0									m		19264	
SRN	0.41	152.0	Pg	21:07:46.934	0.0									m		19263	
SRN	0.41	152.0	AM1	21:07:54.960								0.2	0.26	a	M1	1.3	10464
IGT	0.84	148.0	Sg	21:08:07.533	-0.1									m		19266	
IGT	0.84	148.0	Pg	21:07:54.341	-0.4									m		19265	
NEST	1.00	0.0	Pg	21:07:58.136	0.0									m		19273	
NEST	1.00	79.0	Sg	21:08:13.089	0.0									m		19267	
NEST	1.00	79.0	AM1	21:08:19.270								0.1	0.68	a	M1	1.6	10465
FNA	1.35	66.0	Sg	21:08:24.711	0.0									m		19269	
FNA	1.35	66.0	Pg	21:08:04.442	-0.1									m		19268	
FNA	1.35	66.0	AM1	21:08:29.420								0.1	0.42	a	M1	2.0	10466
LKD2	1.61	154.0	Sn	21:08:32.889	0.0									m		19271	
LKD2	1.61	154.0	Pn	21:08:09.164	-0.0									m		19270	
LKD2	1.61	154.0	AM1	21:08:36.470								0.2	0.98	a	M1	2.5	10467
PUK	1.80	3.0	Pn	21:08:12.060	-0.3									m		19272	

DATA\_TYPE COMMENT GSE2.1  
 Event 1372

Official Magnitude:  
 M1 1.95

Error ellipse:

	Azim	Dip	Mag
Max:	288	78	1.1300
Intermediate:	55	6	0.3800
Min:	146	10	0.2400

BEGIN GSE2.1

MSG\_TYPE DATA  
MSG\_ID 1564819892 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1374 1.4 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/18	00:21:49.01		0.01	40.4710	20.8217				8.4	3.3	4	3	244	0.15	0.53	m	
1432																	

Magnitude	Err	Nsta	Author	OrigID
Ml	0.9	0.0	3	1432

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.15	351.0	Sg	00:21:54.573	0.0					---				m__		19287	
KBN	0.15	351.0	Pg	00:21:51.077	-1.1					---				mce		19286	
KBN	0.15	351.0	AM1	00:21:57.190						---		0.1	0.30	a__	Ml	0.9	10473
NEST	0.18	0.0	Pg	00:21:52.080	0.0					---				mde		19291	
NEST	0.18	107.0	Sg	00:21:56.293	0.0					---				m__		19288	
NEST	0.18	107.0	AM1	00:21:56.780						---		0.1	0.32	a__	Ml	0.8	10474
FNA	0.53	53.0	Sg	00:22:07.801	-0.0					---				m__		19290	
FNA	0.53	53.0	Pg	00:21:59.746	0.0					---				mde		19289	
FNA	0.53	53.0	AM1	00:22:11.940						---		0.0	0.30	a__	Ml	1.0	10475

DATA\_TYPE COMMENT GSE2.1  
Event 1374

Official Magnitude:  
Ml 0.91

Error ellipse:

	Azim	Dip	Mag
Max:	238	70	3.5300
Intermediate:	41	18	1.1000
Min:	133	5	0.4300

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819892 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1375 1.2 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/18	01:28:45.15		0.05	40.5143	20.8143				8.3	2.7	5	3	231	0.11	0.51	m	
1433																	

Magnitude Err Nsta Author OrigID  
 Ml 0.7 0.0 3 1433

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.11	350.0	Sg	01:28:49.290	-0.0					---				m_		19293
KBN	0.11	350.0	Pg	01:28:47.605	0.1					---				mdi		19292
KBN	0.11	350.0	AM1	01:28:50.350						---		0.1	0.24	a_ Ml	0.9	10476
NEST	0.21	0.0	Pg	01:28:49.346	0.0					---				mdi		19297
NEST	0.21	119.0	Sg	01:28:53.151	0.0					---				m_		19294
NEST	0.21	119.0	AM1	01:28:53.820						---		0.1	0.24	a_ Ml	0.7	10477
FNA	0.51	58.0	Sg	01:29:03.298	0.0					---				m_		19296
FNA	0.51	58.0	Pg	01:28:55.440	-0.1					---				mdi		19295
FNA	0.51	58.0	AM1	01:29:04.850						---		0.0	0.16	a_ Ml	0.6	10478

DATA\_TYPE COMMENT GSE2.1  
 Event 1375

Official Magnitude:  
 Ml 0.68

Error ellipse:

	Azim	Dip	Mag
Max:	257	72	2.8500
Intermediate:	40	14	0.8000
Min:	133	10	0.4200

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819891 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1376 0.5 km from Kozel, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/18	03:58:15.30		0.01	40.4670	20.7407				17.4	1.2	5	3	270	0.16	0.58	m	
1434																	

Magnitude Err Nsta Author OrigID  
 Ml 0.8 0.0 2 1434

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.16	12.0	Sg	03:58:22.344	-0.0					---				m_		19299
KBN	0.16	12.0	Pg	03:58:19.360	0.0					---				m_		19298
KBN	0.16	12.0	AM1	03:58:23.230						---		0.1	0.26	a_ Ml	1.1	10479
NEST	0.23	0.0	Pg	03:58:21.345	0.0					---				m_		19303
NEST	0.24	102.0	Sg	03:58:25.368	0.0					---				m_		19300

NEST	0.24	102.0	AM1	03:58:25.450	---	0.0	0.28	a__	M1	0.5	10480
FNA	0.58	57.0	S	03:58:36.068	0.0	---		m__			19302
FNA	0.58	57.0	P	03:58:27.156	-0.0	---		m__			19301

DATA\_TYPE COMMENT GSE2.1  
Event 1376

Official Magnitude:  
M1 0.79

Error ellipse:

	Azim	Dip	Mag
Max:	222	52	1.4500
Intermediate:	66	35	0.9300
Min:	328	12	0.6100

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819891 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1377 2.2 km from Vrrin, Kukës, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/19	01:07:41.40		0.05	41.9428	20.3162				7.0	12.3	5	8	183	0.27	0.46	m	1435

Magnitude	Err	Nsta	Author	OrigID
M1	0.9	0.0	3	1435

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
PHP	0.27	0.0	Pg	01:07:46.477	0.0					---				m__		19309	
PHP	0.27	160.0	Sg	01:07:51.198	0.0					---				m__		19304	
PHP	0.27	160.0	AM1	01:07:53.990						---		0.0	0.16	a__	M1	0.6	10481
PUK	0.33	288.0	Sg	01:07:53.394	0.0					---				m__		19306	
PUK	0.33	288.0	Pg	01:07:48.116	-0.1					---				m__		19305	
PUK	0.33	288.0	AM1	01:07:57.500						---		0.1	0.22	a__	M1	0.9	10482
BCI	0.46	337.0	Sg	01:07:57.788	0.0					---				m__		19308	
BCI	0.46	337.0	Pg	01:07:50.736	-0.0					---				m__		19307	
BCI	0.46	337.0	AM1	01:07:59.640						---		0.1	0.14	a__	M1	1.0	10483

DATA\_TYPE COMMENT GSE2.1  
Event 1377

Official Magnitude:  
M1 0.88

Error ellipse:

	Azim	Dip	Mag
Max:	205	88	12.2600
Intermediate:	241	0	0.8000
Min:	331	1	0.3400

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819891 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1379 1.3 km from Gjyrës, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/20	18:44:09.52		0.05	40.5538	20.8960				2.3	1.1	7	4	107	0.11	1.11	m	
OrigID 1437																	

Magnitude	Err	Nsta	Author	OrigID
M1	1.8	0.0	2	1437

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.11	311.0	Sg	18:44:13.180	0.0									m		19319	
KBN	0.11	311.0	Pg	18:44:11.510	-0.1									m		19318	
KBN	0.11	311.0	AM1	18:44:14.220								2.3	0.18	a	M1	2.0	10487
NEST	0.18	139.0	Sg	18:44:16.686	-0.0									m		19321	
NEST	0.18	139.0	Pg	18:44:13.679	0.0									m		19320	
NEST	0.18	139.0	AM1	18:44:19.650								0.9	0.20	a	M1	1.8	10489
NEST	0.18	139.0	AM1	18:44:19.540								0.9	0.14	a	M1	1.8	10488
FNA	0.44	58.0	Sg	18:44:25.736	0.0									m		19323	
FNA	0.44	58.0	Pg	18:44:19.035	0.3									m		19322	
IGT	1.11	204.0	Sg	18:44:47.224	-1.1									m		19325	
IGT	1.11	204.0	Pg	18:44:31.676	0.0									m		19324	

DATA\_TYPE COMMENT GSE2.1  
 Event 1379

Official Magnitude:  
 M1 1.78

Error ellipse:

	Azim	Dip	Mag
Max:	233	72	1.1300
Intermediate:	41	16	0.4000
Min:	132	4	0.2500

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819891 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1380 2.5 km from Sinicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/20	18:45:07.11		0.01	40.5372	20.8767				3.5	0.8	5	6	119	0.11	1.09	m	

OrigID  
1438

Magnitude	Err	Nsta	Author	OrigID
M1	1.5	0.0	2	1438

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.11	322.0	Sg	18:45:10.811	-0.0									m		19327	
KBN	0.11	322.0	Pg	18:45:09.249	0.0									m		19326	
KBN	0.11	322.0	AM1	18:45:11.610								1.0	0.18	a	M1	1.7	10490
NEST	0.18	0.0	Pg	18:45:11.304	0.0									m		19332	
NEST	0.18	132.0	Sg	18:45:14.251	0.0									m		19328	
NEST	0.18	132.0	AM1	18:45:15.400								0.4	0.10	a	M1	1.4	10492
NEST	0.18	132.0	AM1	18:45:17.030								0.4	0.26	a	M1	1.5	10491
FNA	0.46	57.0	Pg	18:45:17.502	0.8									m		19330	
FNA	0.46	57.0	Sg	18:45:23.860	0.0									m		19329	
IGT	1.09	203.0	Sg	18:45:44.981	-0.0									m		19331	

DATA\_TYPE COMMENT GSE2.1  
 Event 1380

Official Magnitude:  
 M1 1.46

Error ellipse:

	Azim	Dip	Mag
Max:	316	79	0.7600
Intermediate:	57	1	0.3800
Min:	147	11	0.2800

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819891 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1381 0.1 km from Kozel, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author

OrigID



2019/07/20 20:14:45.32 0.33 40.4643 20.7375 17.7 2.5 7 21 148 0.16 0.98 m  
1439

Magnitude Err Nsta Author OrigID  
Ml 1.5 0.0 1 1439

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.16	13.0	Sg	20:14:52.241	-0.3					___				m		19334
KBN	0.16	13.0	Pg	20:14:49.818	0.4					___				m		19333
NEST	0.24	101.0	Sg	20:14:55.250	-0.2					___				m		19336
NEST	0.24	101.0	Pg	20:14:51.523	0.4					___				m		19335
NEST	0.24	101.0	AMl	20:14:57.380						___		0.3	0.22	a	Ml 1.5	10493
FNA	0.58	56.0	Sg	20:15:05.216	-1.0					___				m		19338
FNA	0.58	56.0	Pg	20:14:57.323	0.1					___				m		19337
SRN	0.81	225.0	Pg	20:15:01.552	-0.2					___				m		19339
IGT	0.98	199.0	Pg	20:15:02.259	-2.2					___				m		19340

DATA\_TYPE COMMENT GSE2.1  
Event 1381

Official Magnitude:  
Ml 1.54

Error ellipse:

	Azim	Dip	Mag
Max:	37	60	2.9000
Intermediate:	132	2	1.2100
Min:	223	30	1.0000

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819891 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1382 1.9 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/20	20:32:36.56		0.04	40.5327	20.8140				10.8	1.6	5	3	225	0.09	0.50	m	

1440

Magnitude Err Nsta Author OrigID  
Ml 1.3 0.0 2 1440

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.09	348.0	Sg	20:32:40.659	0.0					___				m		19342
KBN	0.09	348.0	Pg	20:32:38.747	-0.2					___				m		19341
KBN	0.09	348.0	AMl	20:32:41.520						___		0.4	0.18	a	Ml 1.4	10494

NEST	0.21	0.0	Pg	20:32:41.105	0.0	---										m		19346
NEST	0.21	123.0	Sg	20:32:45.059	0.0	---										m		19343
NEST	0.21	123.0	AMl	20:32:46.950		---					0.2	0.20	a	Ml			1.3	10495
FNA	0.50	59.0	Sg	20:32:54.435	0.0	---										m		19345
FNA	0.50	59.0	Pg	20:32:46.785	0.0	---										m		19344

DATA\_TYPE COMMENT GSE2.1  
Event 1382

Official Magnitude:  
Ml 1.34

Error ellipse:

	Azim	Dip	Mag
Max:	252	56	1.9500
Intermediate:	39	29	0.7200
Min:	138	15	0.4000

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819891 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1383 0.8 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/20	20:35:56.03		0.01	40.5118	20.8268				7.4	3.5	5	3	226	0.12	0.50	m	1441

Magnitude	Err	Nsta	Author	OrigID
Ml	1.3	0.0	2	1441

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.12	345.0	Sg	20:36:00.240	-0.0											19348	
KBN	0.12	345.0	Pg	20:35:58.454	0.0											19347	
KBN	0.12	345.0	AMl	20:36:00.840								0.3	0.20	a	Ml	1.3	10496
NEST	0.20	0.0	Pg	20:36:00.195	0.0											19352	
NEST	0.20	119.0	Sg	20:36:03.678	0.0											19349	
NEST	0.20	119.0	AMl	20:36:06.290								0.2	0.18	a	Ml	1.3	10498
NEST	0.20	119.0	AMl	20:36:06.180								0.2	0.12	a	Ml	1.2	10497
FNA	0.50	57.0	S	20:36:13.943	0.0											19351	
FNA	0.50	57.0	Pg	20:36:06.235	-0.0											19350	

DATA\_TYPE COMMENT GSE2.1  
Event 1383

Official Magnitude:

Ml 1.25

Error ellipse:

	Azim	Dip	Mag
Max:	255	77	3.6000
Intermediate:	42	10	0.8500
Min:	133	7	0.3600

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819891 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1384 2.1 km from Solloman, Lezhë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/21	09:26:57.86		0.06	41.9338	20.0873				21.6	13.4	8	19	168	0.18	1.51	m	1442

Magnitude	Err	Nsta	Author	OrigID
Ml	2.3	0.0	3	1442

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
PUK	0.18	307.0	Sg	09:27:06.026	0.0					---				m		19354	
PUK	0.18	307.0	Pg	09:27:02.367	-0.1					---				m		19353	
PUK	0.18	307.0	AMl	09:27:06.780						---		5.3	0.22	a	Ml	2.7	10499
PHP	0.36	133.0	Sg	09:27:11.362	0.0					---				m		19356	
PHP	0.36	133.0	Pg	09:27:05.543	-0.0					---				m		19355	
PHP	0.36	133.0	AMl	09:27:13.300						---		1.4	0.36	a	Ml	2.3	10500
BCI	0.43	359.0	Sg	09:27:13.874	0.0					---				m		19358	
BCI	0.43	359.0	Pg	09:27:06.886	-0.1					---				m		19357	
BCI	0.43	359.0	AMl	09:27:15.080						---		1.3	0.24	a	Ml	2.3	10502
BCI	0.43	359.0	AMl	09:27:15.320						---		1.2	0.52	a	Ml	2.3	10501
FNA	1.51	139.0	Sn	09:27:47.453	0.0					---				m		19360	
FNA	1.51	139.0	Pn	09:27:26.163	-0.0					---				m		19359	

DATA\_TYPE COMMENT GSE2.1  
Event 1384

Official Magnitude:  
Ml 2.30

Error ellipse:

	Azim	Dip	Mag
Max:	0	90	13.3600
Intermediate:	235	0	0.8000
Min:	325	0	0.2600

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819891 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1387 1.9 km from Arrëz, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/23	04:02:35.15		0.44	40.4962	20.8178				0.0	1.7	11	7	111	0.13	1.69	m	1445

Magnitude	Err	Nsta	Author	OrigID
M1	2.7	0.0	2	1445

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.13	350.0	S	04:02:39.816	-0.0					---				m		19392	
KBN	0.13	350.0	P	04:02:37.890	0.1					---				m		19391	
NEST	0.20	0.0	Pg	04:02:40.210	0.0					---				m		19402	
NEST	0.19	114.0	Sg	04:02:43.736	0.6					---				m		19393	
NEST	0.19	114.0	AM1	04:02:45.750						---		4.6	0.34	a	M1	2.5	10526
FNA	0.52	56.0	S	04:02:54.177	-0.4					---				m		19395	
FNA	0.52	56.0	Pg	04:02:45.578	-0.7					---				m		19394	
SRN	0.88	226.0	Sg	04:03:07.087	-0.2					---				m		19397	
SRN	0.88	226.0	Pg	04:02:52.929	-0.6					---				m		19396	
IGT	1.03	202.0	S	04:03:12.508	0.6					---				m		19399	
IGT	1.03	202.0	P	04:02:55.694	-0.5					---				m		19398	
PUK	1.69	337.0	S	04:03:33.395	0.4					---				m		19401	
PUK	1.69	337.0	Pn	04:03:08.693	0.5					---				m		19400	
PUK	1.69	337.0	AM1	04:03:36.040						---		0.4	0.84	a	M1	2.9	10527

DATA\_TYPE COMMENT GSE2.1  
 Event 1387

Official Magnitude:  
 M1 2.72

Error ellipse:

	Azim	Dip	Mag
Max:	338	75	1.7900
Intermediate:	98	6	0.8900
Min:	190	13	0.6400

BEGIN GSE2.1  
 MSG\_TYPE DATA

MSG\_ID 1564819891 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1389 1.7 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/24	01:10:51.70		0.13	40.5052	20.8168				14.1	1.4	6	11	234	0.12	0.51	m	1448

Magnitude	Err	Nsta	Author	OrigID
M1	1.1	0.0	2	1448

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.12	350.0	Sg	01:10:57.224	0.1					---				m		19416	
KBN	0.12	350.0	Pg	01:10:54.612	-0.2					---				m		19415	
KBN	0.12	350.0	AM1	01:11:00.140						---		0.2	0.24	a	M1	1.1	10530
NEST	0.20	116.0	Sg	01:11:00.096	0.0					---				m			19418
NEST	0.20	116.0	Pg	01:10:56.115	-0.4					---				m			19417
NEST	0.20	116.0	AM1	01:11:01.070						---		0.1	0.30	a	M1	1.1	10531
FNA	0.51	57.0	Sg	01:11:10.017	-0.1					---				m			19420
FNA	0.51	57.0	Pg	01:11:02.388	0.2					---				m			19419

DATA\_TYPE COMMENT GSE2.1  
Event 1389

Official Magnitude:  
M1 1.10

Error ellipse:

	Azim	Dip	Mag
Max:	236	47	1.8700
Intermediate:	26	38	0.7800
Min:	129	16	0.4900

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819890 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1390 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/24	14:42:16.79		0.45	40.1592	19.9282				27.0	1.5	19	22	80	0.45	1.88	m	1449

Magnitude	Err	Nsta	Author	OrigID

M1 3.5 0.0 8 1449

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
SRN	0.28	168.0	Sg	14:42:26.805	-3.3									m		19422
SRN	0.28	168.0	Pg	14:42:22.046	-2.3									m		19421
SRN	0.28	168.0	AM1	14:42:30.530								7.0	0.52	a	M1	3.0
VLO	0.45	314.0	Sg	14:42:32.942	0.1									m		19424
VLO	0.45	314.0	Pg	14:42:26.070	0.1									m		19423
VLO	0.45	314.0	AM1	14:42:39.270								35.8	0.62	a	M1	3.8
KEK	0.46	193.0	Sg	14:42:34.265	0.1									m		19426
KEK	0.46	193.0	Pg	14:42:27.656	0.9									m		19425
BPA1	0.60	340.0	Sg	14:42:38.586	0.2									m		19428
BPA1	0.60	340.0	Pg	14:42:28.463	-0.7									m		19427
IGT	0.70	153.0	Sg	14:42:41.648	0.2									m		19430
IGT	0.70	153.0	Pg	14:42:30.010	-0.9									m		19429
KBN	0.80	54.0	Sg	14:42:44.295	0.5									m		19432
KBN	0.80	54.0	Pg	14:42:31.516	-0.7									m		19431
KBN	0.80	54.0	AM1	14:42:51.950								2.9	0.44	a	M1	3.1
NEST	0.89	73.0	Sg	14:42:47.815	0.4									m		19434
NEST	0.89	73.0	Pg	14:42:33.022	-1.3									m		19433
NEST	0.89	73.0	AM1	14:42:53.030								2.1	0.84	a	M1	3.0
SCTE	1.12	0.0	Pn	14:42:37.808	0.0									m		19442
SCTE	1.12	267.0	Sn	14:42:54.491	0.0									m		19435
SCTE	1.12	267.0	AM1	14:42:56.270								9.8	0.30	a	M1	3.9
FNA	1.27	60.0	Pn	14:42:40.708	-0.3									m		19436
LKD2	1.48	157.0	Sn	14:43:05.492	0.2									m		19438
LKD2	1.48	157.0	Pn	14:42:44.204	-0.3									m		19437
LKD2	1.48	157.0	AM1	14:43:11.480								2.2	0.48	a	M1	3.5
PHP	1.57	14.0	Pn	14:42:46.900	1.2									m		19439
PHP	1.57	14.0	AM1	14:43:18.700								2.9	0.78	a	M1	3.7
PUK	1.88	0.0	Sn	14:43:15.991	0.1									m		19441
PUK	1.88	0.0	Pn	14:42:50.597	0.1									m		19440
PUK	1.88	0.0	AM1	14:43:22.400								1.3	0.80	a	M1	3.5

DATA\_TYPE COMMENT GSE2.1  
Event 1390

Official Magnitude:  
M1 3.52

Error ellipse:

	Azim	Dip	Mag
Max:	260	81	1.4800
Intermediate:	73	8	0.7800
Min:	163	1	0.6300

BEGIN GSE2.1  
MSG\_TYPE DATA

MSG\_ID 1564819890 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1391 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/25	02:52:33.27		0.86	39.4312	20.2975				7.6	1.8	26	19	144	0.10	2.94	m	

Magnitude	Err	Nsta	Author	OrigID
M1	3.7	0.0	10	1450

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
IGT	0.10	14.0	Sg	02:52:36.402	-1.6									m__		19444
IGT	0.10	14.0	Pg	02:52:35.440	-0.5									md__		19443
IGT	0.10	14.0	AM1	02:52:36.968								113.7	0.16	a__ M1	3.8	10540
KEK	0.48	307.0	Sg	02:52:55.016	4.6									m__		19446
KEK	0.48	307.0	Pg	02:52:46.561	3.5									mc__		19445
KEK	0.48	307.0	AM1	02:53:03.550								36629.0	0.46	a__ M1	6.8	10541
SRN	0.50	334.0	Sn	02:52:52.251	0.4									m__		19450
SRN	0.50	334.0	P	02:52:43.818	-0.1									mc__		19449
SRN	0.50	334.0	Sg	02:52:52.907	1.1									m__		19448
SRN	0.50	334.0	Pg	02:52:43.757	-0.1									md__		19447
LKD2	0.70	156.0	Sg	02:52:59.141	1.4									m__		19452
LKD2	0.70	156.0	Pg	02:52:47.617	0.3									mc__		19451
NEST	1.14	30.0	Sg	02:53:13.408	0.9									m__		19454
NEST	1.14	30.0	Pg	02:52:54.424	-1.3									mc__		19453
NEST	1.14	30.0	AM1	02:53:24.158								2.0	0.48	a__ M1	3.2	10542
VLO	1.21	330.0	Sn	02:53:16.849	3.4									m__		19456
VLO	1.21	330.0	Pn	02:52:58.752	2.5									mc__		19455
VLO	1.21	330.0	AM1	02:53:39.408								4.5	0.56	a__ M1	3.6	10543
KBN	1.25	17.0	Sn	02:53:18.307	3.1									m__		19458
KBN	1.25	17.0	Pn	02:52:57.881	0.6									mc__		19457
FNA	1.59	31.0	Sn	02:53:27.166	0.7									m__		19460
FNA	1.59	31.0	Pn	02:53:03.345	-0.3									mc__		19459
TIR	1.94	351.0	Sn	02:53:37.318	-0.1									m__		19462
TIR	1.94	351.0	Pn	02:53:12.788	2.8									mc__		19461
TIR	1.94	351.0	AM1	02:53:55.078								0.6	1.08	a__ M1	3.3	10544
PHP	2.25	2.0	Sn	02:53:44.761	-0.3									m__		19464
PHP	2.25	2.0	Pn	02:53:14.150	-0.1									mc__		19463
PHP	2.25	2.0	AM1	02:54:07.428								1.0	1.58	a__ M1	3.6	10545
ITM	2.59	149.0	Sn	02:53:53.600	-0.6									m__		19466
ITM	2.59	149.0	Pn	02:53:18.845	-0.6									mc__		19465
ITM	2.59	149.0	AM1	02:54:11.340								1815.0	1.56	a__ M1	7.0	10546
PUK	2.63	354.0	Sn	02:53:55.365	0.5									m__		19468
PUK	2.63	354.0	Pn	02:53:19.454	-0.5									mc__		19467
PUK	2.63	354.0	AM1	02:54:08.528								0.5	0.54	a__ M1	3.4	10547
NOCI	2.83	300.0	Sn	02:53:54.269	-6.0									m__		19470
NOCI	2.83	300.0	Pn	02:53:21.018	-2.0									mc__		19469

NOCI	2.83	300.0	AM1	02:54:20.418										0.9	0.42	a__	M1	3.8	10548
BCI	2.94	357.0	Sn	02:54:03.130	0.2											m__			19472
BCI	2.94	357.0	Pn	02:53:24.658	0.2											md_			19471
BCI	2.94	357.0	AM1	02:54:23.638										0.7	1.24	a__	M1	3.8	10549

DATA\_TYPE COMMENT GSE2.1  
Event 1391

Official Magnitude:  
Ml 3.68

Error ellipse:

	Azim	Dip	Mag
Max:	74	3	2.1100
Intermediate:	277	85	1.7700
Min:	164	2	0.9800

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819890 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1396 2.6 km from Vërmik, Vlorë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/26	16:31:35.12		0.05	40.2735	19.7917				42.8	1.4	15	15	102	0.56	1.77	m	1455

Magnitude	Err	Nsta	Author	OrigID
Ml	3.3	0.0	3	1455
Md	2.9	0.0	10	1455

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
SRN	0.42	157.0	Sg	16:31:51.888	-2.4									m__		19522
SRN	0.42	157.0	Pg	16:31:43.688	-2.4									m__		19521
SRN	0.42	157.0	AMd	16:32:46.299								0.0	62.61	a__	Md	2.4
KEK	0.56	179.0	Sg	16:31:56.985	0.0									m__		19524
KEK	0.56	179.0	Pg	16:31:47.552	-0.1									m__		19523
KEK	0.56	179.0	AM1	16:32:05.930								5714.0	0.34	a__	M1	6.2
KEK	0.56	179.0	AMd	16:32:56.121								0.0	68.57	a__	Md	3.1
KBN	0.84	64.0	Sg	16:32:03.610	0.0									m__		19526
KBN	0.84	64.0	Pg	16:31:51.371	-0.0									m__		19525
KBN	0.84	64.0	AMd	16:33:00.392								0.0	69.02	a__	Md	2.5
IGT	0.85	150.0	Sg	16:32:04.745	-0.0									m__		19528
IGT	0.85	150.0	Pg	16:31:51.893	-0.2									m__		19527
IGT	0.85	150.0	AMd	16:33:09.150								0.0	77.26	a__	Md	2.6
NEST	0.97	81.0	Sg	16:32:08.170	0.1									m__		19530



NEST	0.97	81.0	Pg	16:31:53.986	0.0	---											m		19529
NEST	0.97	81.0	AMl	16:32:16.320		---				0.6	0.38	a	Ml	2.6					10574
NEST	0.97	81.0	AMd	16:33:07.865		---				0.0	73.88	a	Md	3.2					10567
SCTE	1.03	260.0	Sg	16:32:09.832	0.0	---											m		19532
SCTE	1.03	260.0	Pg	16:31:55.024	0.1	---											m		19531
SCTE	1.03	260.0	AMl	16:32:14.810		---				2.9	0.40	a	Ml	3.3					10575
SCTE	1.03	260.0	AMd	16:33:02.100		---				0.0	67.08	a	Md	3.1					10568
FNA	1.31	66.0	Sg	16:32:17.632	0.0	---											m		19534
FNA	1.31	66.0	Pg	16:31:59.455	0.1	---											m		19533
FNA	1.31	66.0	AMd	16:33:03.171		---				0.0	63.72	a	Md	2.5					10569
PHP	1.49	19.0	Pn	16:32:01.763	-0.0	---											m		19535
PHP	1.49	19.0	AMd	16:33:14.911		---				0.0	73.15	a	Md	3.2					10570
LKD2	1.63	155.0	Pn	16:32:04.067	0.0	---											m		19536
LKD2	1.63	155.0	AMd	16:33:29.858		---				0.0	85.79	a	Md	2.8					10571
PUK	1.77	2.0	Pn	16:32:05.900	-0.1	---											m		19537
PUK	1.77	2.0	AMd	16:33:16.833		---				0.0	70.93	a	Md	3.2					10572

DATA\_TYPE COMMENT GSE2.1  
Event 1396

Official Magnitude:  
Ml 3.32

Error ellipse:

	Azim	Dip	Mag
Max:	161	78	1.3800
Intermediate:	324	11	0.3900
Min:	55	3	0.2800

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819890 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1397 3.1 km from Voskopojë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/26	18:53:41.11		0.04	40.6135	20.6158				24.0	2.0	8	6	180	0.13	1.73	m	1456

Magnitude	Err	Nsta	Author	OrigID
Ml	2.3	0.0	2	1456
Md	2.2	0.0	5	1456

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.13	85.0	Sg	18:53:47.115	0.0					---				m		19539
KBN	0.13	85.0	Pg	18:53:45.187	0.7					---				m		19538

KBN	0.13	85.0	AMd	18:54:08.006	---	0.0	22.82	a__	Md	1.3	10576
NEST	0.38	120.0	Sg	18:53:55.773	-0.0	---	---	m__	---	---	19541
NEST	0.38	120.0	Pg	18:53:49.505	0.0	---	---	m__	---	---	19540
NEST	0.38	120.0	AMl	18:53:57.380	---	0.6	0.24	a__	Ml	2.0	10581
NEST	0.38	120.0	AMd	18:54:17.656	---	0.0	28.15	a__	Md	2.2	10577
FNA	0.61	73.0	Sg	18:54:01.641	-1.1	---	---	m__	---	---	19543
FNA	0.61	73.0	Pg	18:53:53.451	0.0	---	---	m__	---	---	19542
FNA	0.61	73.0	AMd	18:54:21.450	---	0.0	28.00	a__	Md	1.6	10578
SRN	0.87	213.0	Sg	18:54:11.587	0.1	---	---	m__	---	---	19545
SRN	0.87	213.0	Pg	18:53:58.404	-0.1	---	---	m__	---	---	19544
SRN	0.87	213.0	AMd	18:54:49.871	---	0.0	51.47	a__	Md	2.2	10579
SCTE	1.73	253.0	Sn	18:54:36.780	-0.0	---	---	m__	---	---	19547
SCTE	1.73	253.0	Pn	18:54:12.940	0.0	---	---	m__	---	---	19546
SCTE	1.73	253.0	AMl	18:54:41.830	---	0.2	0.68	a__	Ml	2.6	10582
SCTE	1.73	253.0	AMd	18:55:17.008	---	0.0	64.07	a__	Md	3.1	10580

DATA\_TYPE COMMENT GSE2.1  
Event 1397

Official Magnitude:  
Ml 2.27

Error ellipse:

	Azim	Dip	Mag
Max:	142	69	2.1000
Intermediate:	351	18	0.6900
Min:	258	10	0.2900

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819890 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1398 2.5 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/26	22:35:07.14		0.09	40.5410	20.8328				1.0	0.9	7	21	113	0.09	1.08	m	1457

Magnitude	Err	Nsta	Author	OrigID
Ml	1.4	0.0	3	1457

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.09	338.0	Sg	22:35:10.274	0.1	---	---	---	---	---	---	---	---	m__	---	19549	
KBN	0.09	338.0	Pg	22:35:08.724	-0.1	---	---	---	---	---	---	---	---	m__	---	19548	
KBN	0.09	338.0	AMl	22:35:11.250	---	---	---	---	---	---	---	1.1	0.14	a__	Ml	1.6	10583
NEST	0.21	127.0	Sg	22:35:15.613	0.1	---	---	---	---	---	---	---	---	m__	---	19551	

NEST	0.21	127.0	Pg	22:35:11.839	-0.1	---											m		19550			
NEST	0.21	127.0	AM1	22:35:18.050		---											0.3	0.16	a	M1	1.4	10585
NEST	0.21	127.0	AM1	22:35:18.130		---											0.4	0.18	a	M1	1.4	10584
FNA	0.48	59.0	Sg	22:35:25.208	-0.1	---																19553
FNA	0.48	59.0	Pg	22:35:16.967	-0.5	---																19552
SRN	0.92	225.0	Pg	22:35:26.189	0.0	---																19554
IGT	1.08	202.0	Pg	22:35:28.467	-0.4	---																19556
IGT	1.08	202.0	Sg	22:35:45.183	-0.0	---																19555
IGT	1.08	202.0	AM1	22:35:48.680		---											0.0	0.42	a	M1	1.2	10586

DATA\_TYPE COMMENT GSE2.1  
Event 1398

Official Magnitude:  
M1 1.41

Error ellipse:

	Azim	Dip	Mag
Max:	321	68	0.9300
Intermediate:	65	5	0.3500
Min:	157	21	0.2400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819889 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1404 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/29	23:24:37.59		0.46	40.3987	20.7852				2.5	1.7	18	21	118	0.20	2.04	m	1463

Magnitude	Err	Nsta	Author	OrigID
M1	2.8	0.0	7	1463

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.20	85.0	Sg	23:24:45.670	0.1					---						19637	
NEST	0.20	85.0	Pg	23:24:43.079	0.9					---						19636	
NEST	0.20	85.0	AM1	23:24:49.220						---		9.4	0.26	a	M1	2.9	10620
KBN	0.22	0.0	Sg	23:24:45.643	0.0					---						19639	
KBN	0.22	0.0	Pg	23:24:42.161	-0.0					---						19638	
KBN	0.22	0.0	AM1	23:24:46.210						---		7.5	0.26	a	M1	2.8	10621
FNA	0.59	49.0	Sg	23:24:58.958	-0.2					---						19641	
FNA	0.59	49.0	Pg	23:24:49.427	-0.5					---						19640	
SRN	0.79	230.0	Sg	23:25:06.901	0.5					---						19643	
SRN	0.79	230.0	Pg	23:24:53.379	-0.7					---						19642	

SRN	0.79	230.0	AM1	23:25:12.840	---	0.3	0.40	a	M1	2.1	10622
IGT	0.93	203.0	Sg	23:25:09.689	-0.8	---	---	m	---	---	19645
IGT	0.93	203.0	Pg	23:24:56.655	0.3	---	---	m	---	---	19644
VLO	0.99	275.0	Pg	23:24:57.600	0.9	---	---	m	---	---	19646
TIR	1.18	324.0	Sn	23:25:18.260	-0.3	---	---	m	---	---	19648
TIR	1.18	324.0	Pn	23:24:59.906	-1.1	---	---	m	---	---	19647
TIR	1.18	324.0	AM1	23:25:27.020	---	0.3	0.46	a	M1	2.4	10623
PHP	1.31	349.0	Sn	23:25:21.951	-0.6	---	---	m	---	---	19650
PHP	1.31	349.0	Pn	23:25:01.480	-1.8	---	---	m	---	---	19649
PHP	1.31	349.0	AM1	23:25:24.630	---	0.4	0.48	a	M1	2.6	10624
PUK	1.77	339.0	Sn	23:25:37.532	0.2	---	---	m	---	---	19652
PUK	1.77	339.0	Pn	23:25:11.869	0.2	---	---	m	---	---	19651
PUK	1.77	339.0	AM1	23:25:40.420	---	0.5	0.68	a	M1	3.0	10625
BCI	2.04	345.0	Sn	23:25:45.862	0.6	---	---	m	---	---	19654
BCI	2.04	345.0	Pn	23:25:16.645	0.4	---	---	m	---	---	19653
BCI	2.04	345.0	AM1	23:25:51.650	---	0.5	0.66	a	M1	3.2	10626

DATA\_TYPE COMMENT GSE2.1  
Event 1404

Official Magnitude:  
M1 2.78

Error ellipse:

	Azim	Dip	Mag
Max:	103	72	1.7700
Intermediate:	296	16	0.7600
Min:	205	4	0.6000

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819889 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1405 2.7 km from Rehovë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/29	23:35:00.98		0.18	40.3120	20.7213				6.2	19.3	5	8	167	0.27	0.84	m	1464

Magnitude	Err	Nsta	Author	OrigID
M1	1.1	0.0	1	1464

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.31	9.0	Sg	23:35:10.105	-1.7				---	---	---			m	---	19657
KBN	0.31	9.0	Pg	23:35:07.326	0.2				---	---	---			m	---	19656
NEST	0.32	0.0	Pg	23:35:08.180	0.0				---	---	---			m	---	19661

NEST	0.27	67.0	Sg	23:35:11.308	0.2	---											m		19655			
NEST	0.27	67.0	AM1	23:35:12.960		---											0.1	0.16	a	M1	1.1	10628
NEST	0.27	67.0	AM1	23:35:13.030		---											0.1	0.26	a	M1	1.1	10627
FNA	0.69	46.0	Sg	23:35:24.817	-0.3	---														m		19659
FNA	0.69	46.0	Pg	23:35:14.737	-0.0	---														m		19658
IGT	0.84	202.0	Pg	23:35:17.508	-0.1	---														m		19660

DATA\_TYPE COMMENT GSE2.1  
Event 1405

Official Magnitude:  
M1 1.13

Error ellipse:

	Azim	Dip	Mag
Max:	0	90	19.2700
Intermediate:	313	0	1.4300
Min:	43	0	0.6300

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819889 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1406 2.4 km from Bezhan, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/29	23:38:43.01		0.16	40.4257	20.7620				19.1	1.3	6	8	137	0.20	1.03	m	1465

Magnitude	Err	Nsta	Author	OrigID
M1	1.5	0.0	2	1465

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.00	0.0	Pg	23:38:48.632	0.0					---						19669	
NEST	0.22	92.0	Sg	23:38:52.744	0.0					---						19664	
NEST	0.22	92.0	AM1	23:38:53.430						---		0.3	0.18	a	M1	1.5	10631
NEST	0.22	92.0	AM1	23:38:53.500						---		0.3	0.30	a	M1	1.5	10630
KBN	0.20	5.0	Sg	23:38:51.477	0.1					---						19663	
KBN	0.20	5.0	Pg	23:38:47.163	-0.6					---						19662	
KBN	0.20	5.0	AM1	23:38:52.060						---		0.4	0.28	a	M1	1.6	10629
FNA	0.59	52.0	Sg	23:39:04.146	-0.0					---						19666	
FNA	0.59	52.0	Pg	23:38:55.204	0.1					---						19665	
SRN	0.80	228.0	Pg	23:38:59.182	0.0					---						19667	
KEK	1.03	227.0	Pg	23:39:08.402	5.6					---						19668	

DATA\_TYPE COMMENT GSE2.1

Event 1406

Official Magnitude:  
Ml 1.50

Error ellipse:

	Azim	Dip	Mag
Max:	30	65	1.4500
Intermediate:	138	8	0.8600
Min:	231	23	0.5700

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819889 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1407 5.0 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/29	23:40:35.57		0.26	40.4313	20.7932				14.8	1.3	13	21	120	0.19	1.28	m	
OrigID 1466																	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.7	0.0	2	1466

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.19	359.0	Sg	23:40:43.105	0.1					---				m		19671
KBN	0.19	359.0	Pg	23:40:39.600	-0.2					---				m		19670
KBN	0.19	359.0	AMl	23:40:48.570						---		0.5	0.50	a	Ml 1.6	10632
NEST	0.20	94.0	Sg	23:40:44.229	0.2					---				m		19673
NEST	0.20	94.0	Pg	23:40:40.555	0.2					---				m		19672
NEST	0.20	94.0	AMl	23:40:45.400						---		0.5	0.20	a	Ml 1.7	10634
NEST	0.20	94.0	AMl	23:40:46.720						---		0.7	0.26	a	Ml 1.8	10633
FNA	0.57	51.0	Sg	23:40:55.563	-0.3					---				m		19675
FNA	0.57	51.0	Pg	23:40:47.104	-0.1					---				m		19674
SRN	0.82	229.0	Sg	23:41:04.694	-0.0					---				m		19677
SRN	0.82	229.0	Pg	23:40:51.676	-0.6					---				m		19676
IGT	0.97	202.0	Sg	23:41:08.634	-0.2					---				m		19679
IGT	0.97	202.0	Pg	23:40:54.434	-0.1					---				m		19678
KEK	1.05	228.0	Sg	23:41:11.715	0.4					---				m		19681
KEK	1.05	228.0	Pg	23:40:57.933	1.9					---				m		19680
PHP	1.28	349.0	Sn	23:41:17.132	-0.9					---				m		19683
PHP	1.28	349.0	Pn	23:41:00.195	0.4					---				m		19682

DATA\_TYPE COMMENT GSE2.1  
 Event 1407

Official Magnitude:  
Ml 1.65

Error ellipse:

	Azim	Dip	Mag
Max:	52	74	1.3900
Intermediate:	312	2	0.7600
Min:	221	16	0.3800

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819889 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1408 2.3 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/29	23:45:11.68		0.01	40.4545	20.8012				10.8	1.5	5	7	256	0.17	0.55	m	1467

Magnitude	Err	Nsta	Author	OrigID
Ml	0.6	0.0	2	1467

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.00	0.0	Pg	23:45:15.639	0.0					---				m		19689	
NEST	0.19	101.0	Sg	23:45:19.507	0.0					---				m		19686	
NEST	0.19	101.0	AMl	23:45:20.770						---		0.1	0.22	a	Ml	0.6	10637
NEST	0.19	101.0	AMl	23:45:22.340						---		0.1	0.18	a	Ml	0.6	10636
KBN	0.17	357.0	Sg	23:45:17.936	0.0					---				m		19685	
KBN	0.17	357.0	Pg	23:45:15.046	-0.2					---				m		19684	
KBN	0.17	357.0	AMl	23:45:19.420						---		0.1	0.16	a	Ml	0.8	10635
FNA	0.55	53.0	Sg	23:45:31.259	0.0					---				m		19688	
FNA	0.55	53.0	Pg	23:45:22.873	0.0					---				m		19687	

DATA\_TYPE COMMENT GSE2.1  
Event 1408

Official Magnitude:  
Ml 0.61

Error ellipse:

	Azim	Dip	Mag
Max:	233	57	1.7700
Intermediate:	46	32	1.0000
Min:	138	3	0.3900

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819889 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1409 3.2 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/29	23:50:43.10		0.01	40.4490	20.7907				15.1	1.7	4	7	261	0.17	0.56	m	

OrigID  
1468

Magnitude	Err	Nsta	Author	OrigID
M1	1.0	0.0	1	1468

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.00	0.0	Pg	23:50:47.805	0.0					---					m	19695	
NEST	0.20	99.0	Sg	23:50:51.664	-0.0					---					m	19692	
NEST	0.20	99.0	AM1	23:50:52.630						---		0.1	0.26	a	M1	1.1	10639
NEST	0.20	99.0	AM1	23:50:54.190						---		0.1	0.24	a	M1	1.0	10638
KBN	0.17	0.0	Sg	23:50:50.130	-0.0					---					m	19691	
KBN	0.17	0.0	Pg	23:50:47.104	-0.0					---					m	19690	
FNA	0.56	53.0	Sg	23:51:03.101	0.0					---					m	19694	
FNA	0.56	53.0	Pg	23:50:57.281	2.8					---					m	19693	

DATA\_TYPE COMMENT GSE2.1  
 Event 1409

Official Magnitude:  
 M1 1.03

Error ellipse:

	Azim	Dip	Mag
Max:	225	56	2.0600
Intermediate:	35	33	0.9600
Min:	128	5	0.5100

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819889 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1411 2.6 km from Kozel, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author

OrigID



2019/07/30 00:24:51.25 0.02 40.4702 20.7658 16.4 1.1 5 8 262 0.15 0.56 m  
1470

Magnitude Err Nsta Author OrigID  
Ml 1.1 0.0 1 1470

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.15	6.0	Sg	00:24:57.974	0.0					---				m		19715
KBN	0.15	6.0	Pg	00:24:55.063	-0.0					---				m		19714
NEST	0.22	0.0	Pg	00:24:56.641	0.0					---				m		19719
NEST	0.22	104.0	Sg	00:25:00.655	-0.0					---				m		19716
NEST	0.22	104.0	AMl	00:25:03.680						---		0.1	0.20	a	Ml 1.1	10647
FNA	0.56	56.0	Sg	00:25:11.376	-0.0					---				m		19718
FNA	0.56	56.0	Pg	00:25:02.790	0.0					---				m		19717

DATA\_TYPE COMMENT GSE2.1  
Event 1411

Official Magnitude:  
Ml 1.10

Error ellipse:

	Azim	Dip	Mag
Max:	233	47	1.4400
Intermediate:	31	40	0.9200
Min:	131	11	0.5300

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819889 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1410 2.9 km from Bezhan, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/30	01:08:44.06		0.23	40.4202	20.7687				5.8	1.6	15	21	111	0.21	2.01	m	

OrigID  
1469

Magnitude Err Nsta Author OrigID  
Ml 2.1 0.0 6 1469

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.20	3.0	Sg	01:08:51.164	-0.0					---				m		19697
KBN	0.20	3.0	Pg	01:08:47.853	-0.3					---				m		19696
KBN	0.20	3.0	AMl	01:08:52.030						---		2.4	0.40	a	Ml 2.3	10640
NEST	0.21	91.0	Sg	01:08:52.261	-0.1					---				m		19699
NEST	0.21	91.0	Pg	01:08:48.929	0.1					---				m		19698

NEST	0.21	91.0	AM1	01:08:58.930	---	1.6	0.60	a	M1	2.1	10642
NEST	0.21	91.0	AM1	01:08:53.500	---	1.3	0.32	a	M1	2.0	10641
FNA	0.59	52.0	Sg	01:09:04.728	-0.2	---	---	m	---	---	19701
FNA	0.59	52.0	Pg	01:08:55.939	-0.1	---	---	m	---	---	19700
SRN	0.80	228.0	Sg	01:09:12.398	-0.2	---	---	m	---	---	19703
SRN	0.80	228.0	Pg	01:08:58.815	-1.5	---	---	m	---	---	19702
IGT	0.95	201.0	Sg	01:09:16.702	-0.2	---	---	m	---	---	19705
IGT	0.95	201.0	Pg	01:09:02.846	0.0	---	---	m	---	---	19704
IGT	0.95	201.0	AM1	01:09:20.380	---	0.1	0.42	a	M1	1.7	10643
KEK	1.03	227.0	Pn	01:09:05.778	1.4	---	---	m	---	---	19706
TIR	1.15	324.0	Pn	01:09:07.638	0.9	---	---	m	---	---	19707
PHP	1.29	350.0	Sn	01:09:27.537	-0.2	---	---	m	---	---	19709
PHP	1.29	350.0	Pn	01:09:08.252	-0.8	---	---	m	---	---	19708
PHP	1.29	350.0	AM1	01:09:34.990	---	0.1	0.70	a	M1	2.0	10644
PUK	1.75	339.0	Pn	01:09:17.905	0.5	---	---	m	---	---	19711
PUK	1.75	339.0	Sn	01:09:42.305	-0.1	---	---	m	---	---	19710
PUK	1.75	339.0	AM1	01:09:49.840	---	0.1	0.52	a	M1	2.4	10645
BCI	2.01	346.0	Sn	01:09:50.150	-0.2	---	---	m	---	---	19713
BCI	2.01	346.0	Pn	01:09:22.315	0.4	---	---	m	---	---	19712
BCI	2.01	346.0	AM1	01:09:57.520	---	0.1	1.04	a	M1	2.6	10646

DATA\_TYPE COMMENT GSE2.1  
Event 1410

Official Magnitude:  
M1 2.09

Error ellipse:

	Azim	Dip	Mag
Max:	129	82	1.6500
Intermediate:	288	6	0.4900
Min:	18	3	0.3600

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819889 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1414 2.5 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
OrigID	2019/07/31	01:43:59.46	0.51	40.4527	20.8083				14.3	1.9	14	9	101	0.17	1.73	m	
1473																	

Magnitude	Err	Nsta	Author	OrigID
M1	2.5	0.0	5	1473

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.17	355.0	Sg	01:44:06.488	0.2					---				m		19757	
KBN	0.17	355.0	Pg	01:44:02.382	-1.0					---				m		19756	
NEST	0.19	101.0	Sg	01:44:08.160	0.6					---				m		19759	
NEST	0.19	101.0	P	01:44:03.925	-0.2					---				m		19758	
NEST	0.19	101.0	AM1	01:44:08.710						---		3.6	0.10	a	M1	2.5	10658
FNA	0.55	52.0	S	01:44:19.131	0.1					---				m		19761	
FNA	0.55	52.0	P	01:44:09.990	-0.7					---				m		19760	
SRN	0.84	228.0	S	01:44:28.824	-0.5					---				m		19763	
SRN	0.84	228.0	Pg	01:44:15.038	-1.5					---				m		19762	
IGT	0.99	202.0	Sg	01:44:33.858	0.4					---				m		19765	
IGT	0.99	202.0	P	01:44:18.481	-0.4					---				m		19764	
IGT	0.99	202.0	AM1	01:44:35.280						---		0.2	0.34	a	M1	2.0	10659
VLO	1.00	272.0	S	01:44:34.396	1.8					---				m		19767	
VLO	1.00	272.0	P	01:44:19.271	0.9					---				m		19766	
VLO	1.00	272.0	AM1	01:44:38.420						---		1.0	0.32	a	M1	2.8	10660
PHP	1.26	348.0	Sn	01:44:41.213	-0.2					---				m		19769	
PHP	1.26	348.0	Pn	01:44:22.878	-0.5					---				m		19768	
PHP	1.26	348.0	AM1	01:44:46.730						---		0.1	0.46	a	M1	2.2	10661
PUK	1.73	337.0	Sn	01:44:56.419	0.2					---				m		19771	
PUK	1.73	337.0	Pn	01:44:32.668	0.8					---				m		19770	
PUK	1.73	337.0	AM1	01:45:04.700						---		0.2	0.62	a	M1	2.6	10662

DATA\_TYPE COMMENT GSE2.1  
Event 1414

Official Magnitude:  
M1 2.49

Error ellipse:

	Azim	Dip	Mag
Max:	96	67	2.0700
Intermediate:	296	21	0.9200
Min:	203	7	0.7400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819888 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1415 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	14:21:19.90		0.05	40.5110	20.7933				13.1	0.5	17	14	69	0.12	2.85	m	
1474																	

Magnitude Err Nsta Author OrigID

Ml 4.7 0.0 5 1474  
Md 4.5 0.0 12 1474

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.11	358.0	Sg	14:21:24.964	0.0									m		19773	
KBN	0.11	358.0	Pg	14:21:22.796	0.0									m		19772	
KBN	0.11	358.0	AMd	14:21:57.748								0.0	34.95	a	Md	1.8	10663
NEST	0.22	116.0	Sg	14:21:28.725	-0.0									m		19775	
NEST	0.22	116.0	Pg	14:21:24.897	-0.1									m		19774	
NEST	0.22	116.0	AMl	14:21:30.300								640.6	0.34	a	Ml	4.8	10675
NEST	0.22	116.0	AMd	14:22:06.632								0.0	41.74	a	Md	2.6	10664
FNA	0.52	58.0	Sg	14:21:38.657	-0.0									m		19777	
FNA	0.52	58.0	Pg	14:21:30.684	0.1									m		19776	
FNA	0.52	58.0	AMd	14:22:15.313								0.0	44.63	a	Md	2.0	10665
SRN	0.88	225.0	Sg	14:21:50.875	0.0									m		19779	
SRN	0.88	225.0	Pg	14:21:37.596	0.0									m		19778	
SRN	0.88	225.0	AMl	14:22:00.480								41.4	0.66	a	Ml	4.3	10676
SRN	0.88	225.0	AMd	14:22:56.839								0.0	79.24	a	Md	2.6	10666
VLO	0.99	268.0	Sg	14:21:52.760	-0.0									m		19781	
VLO	0.99	268.0	Pg	14:21:38.696	0.0									m		19780	
VLO	0.99	268.0	AMl	14:22:03.550								137.0	0.58	a	Ml	4.9	10677
VLO	0.99	268.0	AMd	14:23:04.070								0.0	85.37	a	Md	3.3	10667
IGT	1.04	201.0	Pg	14:21:40.307	0.0									m		19782	
IGT	1.04	201.0	AMd	14:22:58.083								0.0	77.78	a	Md	2.6	10668
PHP	1.20	348.0	Pn	14:21:42.860	-0.0									m		19783	
PHP	1.20	348.0	AMd	14:23:07.996								0.0	85.14	a	Md	3.3	10669
THE	1.66	85.0	Pn	14:21:50.097	-1.1									m		19784	
THE	1.66	85.0	AMd	14:23:21.839								0.0	91.74	a	Md	3.5	10670
PUK	1.67	337.0	Sn	14:22:14.943	-0.1									m		19786	
PUK	1.67	337.0	Pn	14:21:51.550	0.2									m		19785	
PUK	1.67	337.0	AMl	14:22:19.800								25.2	0.92	a	Ml	4.7	10678
PUK	1.67	337.0	AMd	14:23:25.145								0.0	93.60	a	Md	3.5	10671
LKD2	1.72	184.0	Sn	14:22:16.804	0.1									m		19788	
LKD2	1.72	184.0	Pn	14:21:52.385	0.0									m		19787	
LKD2	1.72	184.0	AMl	14:22:26.080								19.7	0.82	a	Ml	4.6	10679
LKD2	1.72	184.0	AMd	14:23:45.806								0.0	113.42	a	Md	3.1	10672
BCI	1.93	344.0	Pn	14:21:55.744	-0.0									m		19789	
BCI	1.93	344.0	AMd	14:23:38.161								0.0	102.42	a	Md	3.0	10673
NOCI	2.85	277.0	Pn	14:22:06.095	-3.3									m		19790	
NOCI	2.85	277.0	AMd	14:24:06.054								0.0	119.96	a	Md	3.8	10674

DATA\_TYPE COMMENT GSE2.1  
Event 1415

Official Magnitude:  
Ml 4.68

Error ellipse:

Azim Dip Mag  
Max: 75 66 0.5500

Intermediate: 311 13 0.2700  
 Min: 216 19 0.2300

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819888 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1483 2.8 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	14:24:00.65		0.08	40.5365	20.8043				11.5	1.9	5	5	229	0.09	0.50	m	1543

Magnitude	Err	Nsta	Author	OrigID
Ml	1.9	0.0	1	1543
Md	2.1	0.0	1	1543

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.09	352.0	Sg	14:24:04.703	-0.1					---				m_		20357	
KBN	0.09	352.0	Pg	14:24:03.112	0.1					---				md_		20356	
NEST	0.22	123.0	Sg	14:24:09.538	0.1					---				m_		20359	
NEST	0.22	123.0	Pg	14:24:05.586	-0.1					---				m_		20358	
NEST	0.22	123.0	AMl	14:24:13.460						---		0.8	0.18	a_	Ml	1.9	10978
NEST	0.22	123.0	AMd	14:24:32.162						---		0.0	26.58	a_	Md	2.1	10977
FNA	0.50	60.0	Sg	14:24:18.711	0.0					---				m_		20361	
FNA	0.50	60.0	Pg	14:24:08.954	-2.0					---				md_		20360	

DATA\_TYPE COMMENT GSE2.1  
 Event 1483

Official Magnitude:  
 Ml 1.85

Error ellipse:

	Azim	Dip	Mag
Max:	271	65	2.1100
Intermediate:	45	17	0.8100
Min:	140	17	0.4400

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819888 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1416 2.8 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	14:28:24.52		0.04	40.5205	20.7942				13.2	0.6	13	12	82	0.10	1.66	m	

Magnitude	Err	Nsta	Author	OrigID
Ml	3.5	0.0	1	1475
Md	2.5	0.0	9	1475

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.10	358.0	Sg	14:28:29.378	0.0									m		19792	
KBN	0.10	358.0	Pg	14:28:27.196	-0.1									m		19791	
KBN	0.10	358.0	AMd	14:29:22.333								0.0	55.14	a	Md	2.2	10680
NEST	0.22	118.0	Sg	14:28:33.493	0.0									m		19794	
NEST	0.22	118.0	Pg	14:28:29.647	0.0									m		19793	
NEST	0.22	118.0	AMl	14:28:34.930								38.6	0.30	a	Ml	3.5	10689
NEST	0.22	118.0	AMd	14:29:10.689								0.0	41.04	a	Md	2.5	10681
FNA	0.52	59.0	Sg	14:28:43.120	0.0									m		19796	
FNA	0.52	59.0	Pg	14:28:35.209	0.1									m		19795	
FNA	0.52	59.0	AMd	14:29:21.633								0.0	46.42	a	Md	2.1	10682
SRN	0.88	224.0	Sg	14:28:55.739	0.0									m		19798	
SRN	0.88	224.0	Pg	14:28:42.378	0.0									m		19797	
SRN	0.88	224.0	AMd	14:29:52.648								0.0	70.27	a	Md	2.5	10683
VLO	0.99	268.0	Pn	14:28:43.375	0.1									m		19799	
VLO	0.99	268.0	AMd	14:29:51.163								0.0	67.79	a	Md	3.1	10684
IGT	1.05	200.0	Sg	14:29:00.461	-0.0									m		19801	
IGT	1.05	200.0	Pg	14:28:45.077	0.0									m		19800	
IGT	1.05	200.0	AMd	14:29:51.272								0.0	66.20	a	Md	2.5	10685
PHP	1.19	348.0	Pn	14:28:47.330	0.0									m		19802	
PHP	1.19	348.0	AMd	14:30:04.383								0.0	77.05	a	Md	3.2	10686
THE	1.66	85.0	Pn	14:28:54.807	-1.0									m		19803	
THE	1.66	85.0	AMd	14:29:56.434								0.0	61.63	a	Md	3.1	10687
PUK	1.66	337.0	Pn	14:28:55.809	-0.0									m		19804	
PUK	1.66	337.0	AMd	14:30:12.970								0.0	77.16	a	Md	3.3	10688

DATA\_TYPE COMMENT GSE2.1  
Event 1416

Official Magnitude:  
Ml 3.54

Error ellipse:

	Azim	Dip	Mag
Max:	58	66	0.6400
Intermediate:	313	6	0.3400
Min:	220	23	0.2400

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819888 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1484 2.0 km from Boboshticë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	14:36:31.85		0.17	40.5525	20.7882				13.5	1.0	10	6	137	0.07	1.63	m	

Magnitude	Err	Nsta	Author	OrigID
M1	2.9	0.0	3	1544

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.07	0.0	Sg	14:36:36.056	-0.0									m		20363
KBN	0.07	0.0	Pg	14:36:34.485	0.2									mc		20362
KBN	0.07	0.0	AM1	14:36:37.120								38.4	0.16	a	M1	3.4
NEST	0.24	124.0	Sg	14:36:41.499	0.0									m		20365
NEST	0.24	124.0	Pg	14:36:37.213	-0.1									mc		20364
NEST	0.24	124.0	AM1	14:36:45.290								4.4	0.38	a	M1	2.6
FNA	0.51	63.0	Sg	14:36:50.154	0.1									m		20367
FNA	0.51	63.0	Pg	14:36:42.113	-0.2									mc		20366
SRN	0.90	223.0	Sg	14:37:03.457	-0.3									m		20369
SRN	0.90	223.0	Pg	14:36:50.022	-0.0									m		20368
IGT	1.08	200.0	Sn	14:37:09.002	0.3									m		20371
IGT	1.08	200.0	Pn	14:36:53.576	0.7									m		20370
PUK	1.63	336.0	Pn	14:37:05.100	2.5									m		20372
PUK	1.63	336.0	AM1	14:37:32.740								0.4	0.86	a	M1	2.9

DATA\_TYPE COMMENT GSE2.1  
 Event 1484

Official Magnitude:  
 M1 2.86

Error ellipse:

	Azim	Dip	Mag
Max:	359	58	1.1200
Intermediate:	123	18	0.6000
Min:	222	25	0.3500

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819888 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1423 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	14:38:07.37		0.04	40.4917	20.7788				12.9	1.0	9	7	137	0.13	1.02	m	

Magnitude	Err	Nsta	Author	OrigID
Md	2.1	0.0	5	1482
Ml	2.5	0.0	1	1482

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.13	2.0	Sg	14:38:12.860	0.0					---				m		19865	
KBN	0.13	2.0	Pg	14:38:08.353	-2.2					---				m		19864	
KBN	0.13	2.0	AMd	14:38:55.823						---		0.0	47.47	a	Md	2.1	10736
NEST	0.22	110.0	Sg	14:38:16.268	0.0					---				m		19867	
NEST	0.22	110.0	Pg	14:38:12.453	0.0					---				m		19866	
NEST	0.22	110.0	AMd	14:38:50.593						---		0.0	38.14	a	Md	2.5	10737
NEST	0.22	110.0	AMl	14:38:18.230						---		3.4	0.24	a	Ml	2.5	10741
FNA	0.54	57.0	Sg	14:38:26.782	-0.0					---				m		19869	
FNA	0.54	57.0	Pg	14:38:18.447	-0.0					---				m		19868	
FNA	0.54	57.0	AMd	14:39:00.467						---		0.0	42.02	a	Md	2.0	10738
SRN	0.85	225.0	Sg	14:38:37.660	0.0					---				m		19871	
SRN	0.85	225.0	Pg	14:38:24.667	-0.0					---				m		19870	
SRN	0.85	225.0	AMd	14:39:09.339						---		0.0	44.67	a	Md	2.1	10739
IGT	1.02	200.0	Sn	14:38:42.347	-0.1					---				m		19873	
IGT	1.02	200.0	Pn	14:38:27.511	0.1					---				m		19872	
IGT	1.02	200.0	AMd	14:39:24.409						---		0.0	56.90	a	Md	2.3	10740

DATA\_TYPE COMMENT GSE2.1  
Event 1423

Official Magnitude:  
Ml 2.48

Error ellipse:

	Azim	Dip	Mag
Max:	23	67	1.0600
Intermediate:	130	7	0.4800
Min:	223	22	0.2400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819888 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1424 3.9 km from Nikolicë, Korçë, Albania



Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	14:41:10.58		0.01	40.5052	20.7840				16.8	1.9	5	3	247	0.12	0.53	m	

Magnitude	Err	Nsta	Author	OrigID
Md	1.6	0.0	3	1483
Ml	1.8	0.0	1	1483

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.12	1.0	Sg	14:41:15.954	-0.6									m		19875	
KBN	0.12	1.0	Pg	14:41:13.993	0.0									m		19874	
KBN	0.12	1.0	AMd	14:41:35.646								0.0	21.65	a	Md	1.3	10742
NEST	0.22	114.0	Sg	14:41:19.988	-0.0									m		19877	
NEST	0.22	114.0	Pg	14:41:15.977	0.0									m		19876	
NEST	0.22	114.0	AMd	14:41:47.382								0.0	31.40	a	Md	2.2	10743
NEST	0.22	114.0	AMl	14:41:25.250								0.6	0.36	a	Ml	1.8	10745
FNA	0.53	58.0	Sg	14:41:29.765	0.0									m		19879	
FNA	0.53	58.0	Pg	14:41:21.524	-0.0									m		19878	
FNA	0.53	58.0	AMd	14:41:50.232								0.0	28.71	a	Md	1.6	10744

DATA\_TYPE COMMENT GSE2.1  
Event 1424

Official Magnitude:  
Ml 1.75

Error ellipse:

	Azim	Dip	Mag
Max:	216	67	2.0800
Intermediate:	70	19	0.7900
Min:	336	12	0.6200

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819888 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1485 2.8 km from Bradvicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	14:42:51.62		0.10	40.5540	20.8505				13.7	1.7	6	5	194	0.08	0.46	m	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.8	0.0	1	1545

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.08	326.0	Sg	14:42:56.210	0.0					---				m_		20374	
KBN	0.08	326.0	Pg	14:42:54.087	-0.1					---				mc_		20373	
NEST	0.21	132.0	Sg	14:43:00.223	0.0					---				m_		20376	
NEST	0.21	132.0	Pg	14:42:56.361	-0.2					---				mc_		20375	
NEST	0.21	132.0	AM1	14:43:00.650						---		0.8	0.26	a_	M1	1.8	10982
FNA	0.46	60.0	Sg	14:43:08.400	-0.1					---				m_		20378	
FNA	0.46	60.0	Pg	14:43:01.388	0.1					---				mc_		20377	

DATA\_TYPE COMMENT GSE2.1  
Event 1485

Official Magnitude:  
M1 1.84

Error ellipse:

	Azim	Dip	Mag
Max:	254	62	1.8600
Intermediate:	28	20	0.6400
Min:	125	19	0.4500

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819887 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1425 1.8 km from Helmës, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	14:51:59.31		0.02	40.4675	20.6707				44.5	1.3	5	5	289	0.18	0.63	m	1484

Magnitude	Err	Nsta	Author	OrigID
Md	1.7	0.0	3	1484
M1	1.8	0.0	2	1484

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.18	29.0	Sg	14:52:12.633	0.0					---				m_		19881	
KBN	0.18	29.0	Pg	14:52:06.877	-0.0					---				m_		19880	
KBN	0.18	29.0	AMd	14:52:31.461						---		0.0	24.58	a_	Md	1.4	10746
KBN	0.18	29.0	AM1	14:52:13.230						---		0.8	0.12	a_	M1	2.2	10749
NEST	0.29	100.0	Sg	14:52:15.236	-0.0					---				m_		19883	
NEST	0.29	100.0	Pg	14:52:08.453	0.0					---				m_		19882	
NEST	0.29	100.0	AMd	14:52:40.552						---		0.0	32.10	a_	Md	2.3	10747
NEST	0.29	100.0	AM1	14:52:17.030						---		0.1	0.18	a_	M1	1.3	10750
FNA	0.63	59.0	Sg	14:52:23.044	0.0					---				m_		19885	

FNA 0.63 59.0 Pg 14:52:14.457 1.6 \_\_\_\_\_ m\_\_\_\_\_ 19884  
 FNA 0.63 59.0 AMd 14:52:47.309 \_\_\_\_\_ 0.0 32.85 a\_\_\_\_\_ Md 1.7 10748

DATA\_TYPE COMMENT GSE2.1  
 Event 1425

Official Magnitude:  
 Ml 1.76

Error ellipse:

	Azim	Dip	Mag
Max:	254	60	1.5100
Intermediate:	355	6	1.1000
Min:	88	29	0.9800

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819887 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1486 1.1 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	14:56:51.62		0.06	40.5277	20.8222				12.6	1.3	5	4	222	0.10	0.50	m	1546

Magnitude	Err	Nsta	Author	OrigID
Ml	1.1	0.0	1	1546

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.10	345.0	Sg	14:56:56.237	0.0									m_____		20380
KBN	0.10	345.0	Pg	14:56:53.999	-0.3									mc_____		20379
NEST	0.21	123.0	Sg	14:57:00.009	-0.1									m_____		20382
NEST	0.21	123.0	Pg	14:56:56.530	0.1									mc_____		20381
NEST	0.21	123.0	AM1	14:57:01.730								0.1	0.12	a_____ Ml	1.1	10983
FNA	0.50	59.0	Sg	14:57:09.519	0.1									m_____		20384
FNA	0.50	59.0	Pg	14:57:01.732	-0.1									m_____		20383

DATA\_TYPE COMMENT GSE2.1  
 Event 1486

Official Magnitude:  
 Ml 1.08

Error ellipse:

	Azim	Dip	Mag
Max:	257	57	1.5500

Intermediate: 48 29 0.6200  
 Min: 146 13 0.3900

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819887 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1427 3.2 km from Gjyrës, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	14:59:57.83		0.04	40.5458	20.8522				9.5	1.3	8	6	126	0.09	1.09	m	1486

Magnitude	Err	Nsta	Author	OrigID
Ml	2.0	0.0	2	1486
Md	2.0	0.0	4	1486

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.09	328.0	Sg	15:00:01.630	-0.0									m		19907
KBN	0.09	328.0	Pg	15:00:00.038	0.0									m		19906
KBN	0.09	328.0	AMl	15:00:02.930								5.3	0.34	a	Ml	2.5
KBN	0.09	328.0	AMd	15:00:24.238								0.0	24.20	a	Md	1.4
NEST	0.20	131.0	Sg	15:00:05.750	0.0									m		19909
NEST	0.20	131.0	Pg	15:00:02.363	0.0									m		19908
NEST	0.20	131.0	AMl	15:00:11.120								0.5	0.32	a	Ml	1.6
NEST	0.20	131.0	AMd	15:00:32.089								0.0	29.73	a	Md	2.2
FNA	0.47	59.0	Sg	15:00:14.548	-0.1									m		19911
FNA	0.47	59.0	Pg	15:00:07.504	0.1									m		19910
FNA	0.47	59.0	AMd	15:00:42.009								0.0	34.51	a	Md	1.8
IGT	1.09	202.0	Sg	15:00:35.356	-0.0									m		19913
IGT	1.09	202.0	Pg	15:00:19.277	-0.0									m		19912
IGT	1.09	202.0	AMd	15:01:11.798								0.0	52.52	a	Md	2.3

DATA\_TYPE COMMENT GSE2.1  
 Event 1427

Official Magnitude:  
 Ml 2.04

Error ellipse:

	Azim	Dip	Mag
Max:	321	75	1.2900
Intermediate:	96	9	0.3700
Min:	188	10	0.3100

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819887 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1487 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	15:06:21.44		0.15	40.4208	20.3847				36.1	1.8	5	5	326	0.37	0.84	m	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.9	0.0	1	1547

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.37	56.0	Sg	15:06:36.759	-0.0					---				m		20386	
KBN	0.37	56.0	Pg	15:06:33.024	2.8					---				mc		20385	
NEST	0.51	90.0	Sg	15:06:41.075	-0.1					---				m		20388	
NEST	0.51	90.0	Pg	15:06:32.927	0.2					---				md		20387	
NEST	0.51	90.0	AMl	15:06:41.240						---		0.3	0.16	a	Ml	1.9	10984
FNA	0.84	64.0	Sg	15:06:50.884	0.1					---				m		20390	
FNA	0.84	64.0	Pg	15:06:37.985	-0.2					---				mc		20389	

DATA\_TYPE COMMENT GSE2.1  
 Event 1487

Official Magnitude:  
 Ml 1.87

Error ellipse:

	Azim	Dip	Mag
Max:	89	45	2.4600
Intermediate:	324	29	1.9300
Min:	215	30	1.6300

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819887 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1428 1.5 km from Boboshticë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	15:09:12.88		0.01	40.5677	20.7690				30.5	1.0	5	5	248	0.05	0.51	m	

Magnitude	Err	Nsta	Author	OrigID
Md	1.8	0.0	3	1487
Ml	1.8	0.0	2	1487

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.06	13.0	Sg	15:09:21.474	-0.0									m		19915	
KBN	0.06	13.0	Pg	15:09:15.496	-2.3									m		19914	
KBN	0.06	13.0	AMd	15:09:39.663								0.0	24.17	a	Md	1.4	10774
KBN	0.06	13.0	AMl	15:09:25.540								1.3	0.16	a	Ml	2.2	10777
NEST	0.26	125.0	Sg	15:09:25.601	0.0									m		19917	
NEST	0.26	125.0	Pg	15:09:20.147	0.0									m		19916	
NEST	0.26	125.0	AMd	15:09:47.389								0.0	27.24	a	Md	2.1	10775
NEST	0.26	125.0	AMl	15:09:30.100								0.2	0.14	a	Ml	1.4	10778
FNA	0.51	65.0	Sg	15:09:32.264	0.0									m		19919	
FNA	0.51	65.0	Pg	15:09:23.950	0.0									m		19918	
FNA	0.51	65.0	AMd	15:09:57.912								0.0	33.96	a	Md	1.8	10776

DATA\_TYPE COMMENT GSE2.1  
Event 1428

Official Magnitude:  
Ml 1.80

Error ellipse:

	Azim	Dip	Mag
Max:	264	43	1.4800
Intermediate:	158	15	0.8100
Min:	54	43	0.6700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819887 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1429 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	15:10:51.84		0.20	40.5588	20.8732				11.0	3.4	5	6	178	0.09	0.45	m	1488

Magnitude	Err	Nsta	Author	OrigID
Md	1.6	0.0	3	1488
Ml	1.5	0.0	2	1488

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.09	315.0	Sg	15:10:56.118	0.2									m		19921

KBN	0.09	315.0	Pg	15:10:53.926	-0.3	---												m		19920	
KBN	0.09	315.0	AMd	15:11:10.416		---												a	Md	1.0	10779
KBN	0.09	315.0	AMl	15:10:57.460		---												a	Ml	2.1	10782
NEST	0.20	137.0	Sg	15:10:59.804	0.0	---												m			19923
NEST	0.20	137.0	Pg	15:10:54.348	-2.0	---												m			19922
NEST	0.20	137.0	AMd	15:11:22.416		---												a	Md	2.1	10780
NEST	0.20	137.0	AMl	15:11:01.650		---												a	Ml	1.0	10783
FNA	0.45	60.0	Sn	15:11:07.846	-0.1	---												m			19925
FNA	0.45	60.0	Pn	15:11:01.345	0.3	---												m			19924
FNA	0.45	60.0	AMd	15:11:31.296		---												a	Md	1.6	10781

DATA\_TYPE COMMENT GSE2.1  
Event 1429

Official Magnitude:  
Ml 1.53

Error ellipse:

	Azim	Dip	Mag
Max:	248	67	3.6500
Intermediate:	22	16	0.9200
Min:	117	16	0.6100

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819887 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1430 3.5 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	15:12:42.58		0.05	40.4970	20.7772				15.0	0.9	6	6	163	0.13	1.02	m	1489

Magnitude	Err	Nsta	Author	OrigID
Ml	1.7	0.0	1	1489
Md	1.7	0.0	4	1489

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.13	3.0	Sg	15:12:48.330	-0.0					---						19927	
KBN	0.13	3.0	Pg	15:12:44.676	-1.2					---						19926	
KBN	0.13	3.0	AMd	15:13:08.019						---		0.0	23.34	a	Md	1.3	10784
NEST	0.22	111.0	Sg	15:12:51.807	0.0					---						19929	
NEST	0.22	111.0	Pg	15:12:47.879	0.0					---						19928	
NEST	0.22	111.0	AMl	15:12:53.100						---		0.6	0.22	a	Ml	1.7	10788
NEST	0.22	111.0	AMd	15:13:11.976						---		0.0	24.10	a	Md	2.0	10785
FNA	0.54	58.0	Sg	15:13:01.905	-0.1					---						19931	





Official Magnitude:  
Ml 0.97

Error ellipse:

	Azim	Dip	Mag
Max:	251	65	2.1800
Intermediate:	22	17	0.6000
Min:	118	18	0.3800

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819887 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1488 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	15:21:06.23		0.10	40.5157	20.8195				16.0	1.8	5	3	229	0.11	0.50	m	

OrigID  
1548

Magnitude	Err	Nsta	Author	OrigID
Ml	0.9	0.0	1	1548

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.11	348.0	Sg	15:21:11.753	-0.1					---				m_		20392
KBN	0.11	348.0	Pg	15:21:09.498	0.1					---				mc_		20391
NEST	0.20	119.0	Sg	15:21:15.057	0.1					---				m_		20394
NEST	0.20	119.0	Pg	15:21:11.054	-0.2					---				mc_		20393
NEST	0.20	119.0	AMl	15:21:16.510						---		0.1	0.20	a_	Ml 0.9	10985
FNA	0.50	58.0	Sg	15:21:24.395	-0.1					---				m_		20396
FNA	0.50	58.0	Pg	15:21:22.127	5.5					---				mc_		20395

DATA\_TYPE COMMENT GSE2.1  
 Event 1488

Official Magnitude:  
Ml 0.87

Error ellipse:

	Azim	Dip	Mag
Max:	251	62	2.0000
Intermediate:	39	23	0.8400
Min:	135	13	0.5300

BEGIN GSE2.1

MSG\_TYPE DATA  
 MSG\_ID 1564819887 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1489 3.0 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	15:24:41.68		0.05	40.5355	20.7998				12.7	1.4	5	5	232	0.09	0.51	m	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.1	0.0	1	1549

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.09	354.0	Sg	15:24:46.082	0.0					---				m_		20398	
KBN	0.09	354.0	Pg	15:24:43.364	-0.8					---				mc_		20397	
NEST	0.22	122.0	Sg	15:24:50.667	-0.0					---				m_		20400	
NEST	0.22	122.0	Pg	15:24:46.909	0.1					---				mc_		20399	
NEST	0.22	122.0	AML	15:24:51.250						---		0.1	0.14	a_	Ml	1.1	10986
FNA	0.51	60.0	Sg	15:24:59.941	0.0					---				m_		20402	
FNA	0.51	60.0	Pg	15:24:52.017	-0.1					---				mc_		20401	

DATA\_TYPE COMMENT GSE2.1  
 Event 1489

Official Magnitude:  
 Ml 1.13

Error ellipse:

	Azim	Dip	Mag
Max:	262	53	1.7000
Intermediate:	48	31	0.7600
Min:	148	17	0.4700

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819887 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1432 1.8 km from Sinicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	15:34:16.68		0.32	40.5193	20.8488				0.0	2.2	8	5	110	0.12	1.06	m	

Magnitude	Err	Nsta	Author	OrigID

Md 2.0 0.0 4 1491  
 Ml 1.8 0.0 1 1491

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.11	336.0	Sg	15:34:20.971	0.2									m		19940
KBN	0.11	336.0	Pg	15:34:18.206	-0.8									m		19939
KBN	0.11	336.0	AMd	15:34:41.834								0.0	23.63	a	Md	1.4
NEST	0.19	124.0	Sg	15:34:24.741	0.4									m		19942
NEST	0.19	124.0	Pg	15:34:18.765	-2.3									m		19941
NEST	0.19	124.0	AMd	15:35:01.320								0.0	42.56	a	Md	2.6
NEST	0.19	124.0	AMl	15:34:28.570								0.8	0.14	a	Ml	1.8
FNA	0.48	57.0	Sg	15:34:35.217	0.2									m		19944
FNA	0.48	57.0	Pg	15:34:27.274	0.1									m		19943
FNA	0.48	57.0	AMd	15:35:04.776								0.0	37.50	a	Md	1.9
SRN	0.91	226.0	Sg	15:34:50.084	0.1									m		19946
SRN	0.91	226.0	Pg	15:34:35.152	-0.6									m		19945
SRN	0.91	226.0	AMd	15:35:23.121								0.0	47.97	a	Md	2.1
IGT	1.06	203.0	Sn	15:34:54.697	0.3									m		19947

DATA\_TYPE COMMENT GSE2.1  
 Event 1432

Official Magnitude:  
 Ml 1.75

Error ellipse:

	Azim	Dip	Mag
Max:	333	70	2.3600
Intermediate:	100	11	0.6400
Min:	193	16	0.5400

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819887 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1418 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	15:41:36.05		0.11	40.5160	20.8317				0.4	0.8	6	5	141	0.12	1.06	m	1477

Magnitude	Err	Nsta	Author	OrigID
Ml	2.6	0.0	3	1477
Md	2.0	0.0	4	1477

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.11	343.0	Sg	15:41:40.164	0.1									m		19816

KBN	0.11	343.0	Pg	15:41:38.138	-0.2	---	---	---	---	---	---	---	---	---	---	---	---	---	mc_	---	19815	
KBN	0.11	343.0	AMl	15:41:40.750		---	---	---	---	---	---	---	---	---	---	---	---	---	a__	Ml	2.9	10702
KBN	0.11	343.0	AMd	15:42:12.653		---	---	---	---	---	---	---	---	---	---	---	---	---	a__	Md	1.8	10698
NEST	0.19	121.0	Sg	15:41:43.958	-0.1	---	---	---	---	---	---	---	---	---	---	---	---	---	m__	---	19818	
NEST	0.19	121.0	Pg	15:41:40.738	0.1	---	---	---	---	---	---	---	---	---	---	---	---	---	mc_	---	19817	
NEST	0.19	121.0	AMl	15:41:49.180		---	---	---	---	---	---	---	---	---	---	---	---	---	a__	Ml	2.6	10703
NEST	0.19	121.0	AMd	15:42:11.342		---	---	---	---	---	---	---	---	---	---	---	---	---	a__	Md	2.2	10699
FNA	0.50	57.0	Sg	15:41:54.749	-0.0	---	---	---	---	---	---	---	---	---	---	---	---	---	m__	---	19820	
FNA	0.50	57.0	Pg	15:41:46.180	-0.6	---	---	---	---	---	---	---	---	---	---	---	---	---	mc_	---	19819	
FNA	0.50	57.0	AMd	15:42:16.604		---	---	---	---	---	---	---	---	---	---	---	---	---	a__	Md	1.6	10700
IGT	1.06	202.0	Sn	15:42:13.460	0.0	---	---	---	---	---	---	---	---	---	---	---	---	---	m__	---	19822	
IGT	1.06	202.0	Pn	15:41:56.836	-0.6	---	---	---	---	---	---	---	---	---	---	---	---	---	mc_	---	19821	
IGT	1.06	202.0	AMl	15:42:15.600		---	---	---	---	---	---	---	---	---	---	---	---	---	a__	Ml	2.4	10704
IGT	1.06	202.0	AMd	15:43:06.768		---	---	---	---	---	---	---	---	---	---	---	---	---	a__	Md	2.5	10701

DATA\_TYPE COMMENT GSE2.1  
Event 1418

Official Magnitude:  
Ml 2.58

Error ellipse:

	Azim	Dip	Mag
Max:	320	69	0.8900
Intermediate:	66	5	0.3600
Min:	158	20	0.2300

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819887 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1490 2.1 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
OrigID	2019/07/31	15:43:51.89	0.06	40.5348	20.8152				11.3	1.7	5	7	224	0.09	0.50	m	
1550																	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.5	0.0	2	1550

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.00	0.0	Pg	15:43:56.701	0.0									m__		20408	
NEST	0.21	123.0	S	15:44:00.457	-0.0									m__		20405	
NEST	0.21	123.0	AMl	15:44:03.470								0.4	0.42	a__	Ml	1.5	10989
NEST	0.21	123.0	AMl	15:44:01.030								0.3	0.32	a__	Ml	1.4	10988
KBN	0.09	347.0	Sg	15:43:56.011	-0.1									m__		20404	

KBN	0.09	347.0	Pg	15:43:54.348	0.1	---										m		20403	
KBN	0.09	347.0	AM1	15:43:57.040		---										a	M1	1.7	10987
FNA	0.50	60.0	Sg	15:44:09.765	0.1	---										m		20407	
FNA	0.50	60.0	Pg	15:44:01.974	-0.1	---										m		20406	

DATA\_TYPE COMMENT GSE2.1  
Event 1490

Official Magnitude:  
M1 1.54

Error ellipse:

	Azim	Dip	Mag
Max:	250	59	1.9300
Intermediate:	33	25	0.7900
Min:	131	16	0.4400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819886 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1491 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	15:46:25.79		0.02	40.5347	20.8243				10.8	1.6	6	4	219	0.09	0.49	m	
OrigID 1551																	

Magnitude	Err	Nsta	Author	OrigID
M1	1.6	0.0	2	1551

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.09	343.0	Sg	15:46:29.870	-0.0											m	20410
KBN	0.09	343.0	Pg	15:46:28.166	0.0											m	20409
KBN	0.09	343.0	AM1	15:46:30.860								0.8	0.14	a	M1	1.6	10990
NEST	0.21	124.0	Sg	15:46:34.109	0.0											m	20412
NEST	0.21	124.0	Pg	15:46:30.543	0.0											m	20411
NEST	0.21	124.0	AM1	15:46:37.310								0.4	0.42	a	M1	1.5	10991
FNA	0.49	59.0	Sg	15:46:43.418	0.0											m	20414
FNA	0.49	59.0	Pg	15:46:35.821	-0.0											m	20413

DATA\_TYPE COMMENT GSE2.1  
Event 1491

Official Magnitude:  
M1 1.57

Error ellipse:

	Azim	Dip	Mag
Max:	260	64	1.7100
Intermediate:	42	20	0.6600
Min:	137	15	0.3800

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819886 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1417 1.9 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	15:48:01.47		0.05	40.4918	20.8040				7.8	2.3	10	7	129	0.13	1.03	m	

Magnitude	Err	Nsta	Author	OrigID
Ml	2.5	0.0	3	1476
Md	2.2	0.0	5	1476

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.13	355.0	Sg	15:48:06.274	0.0					---				m		19806	
KBN	0.13	355.0	Pg	15:48:04.152	-0.1					---				m		19805	
KBN	0.13	355.0	AMd	15:48:38.274						---		0.0	34.12	a	Md	1.7	10690
NEST	0.20	112.0	Sg	15:48:09.400	0.0					---				m		19808	
NEST	0.20	112.0	Pg	15:48:05.889	-0.1					---				m		19807	
NEST	0.20	112.0	AMl	15:48:13.920						---		7.3	0.36	a	Ml	2.8	10695
NEST	0.20	112.0	AMd	15:48:45.075						---		0.0	39.19	a	Md	2.5	10691
FNA	0.53	56.0	Sg	15:48:20.260	0.1					---				m		19810	
FNA	0.53	56.0	Pg	15:48:12.150	-0.0					---				m		19809	
FNA	0.53	56.0	AMd	15:48:51.985						---		0.0	39.83	a	Md	1.9	10692
SRN	0.87	226.0	Sg	15:48:32.047	-0.2					---				m		19812	
SRN	0.87	226.0	Pg	15:48:19.085	0.0					---				m		19811	
SRN	0.87	226.0	AMl	15:48:33.970						---		0.7	0.38	a	Ml	2.5	10696
SRN	0.87	226.0	AMd	15:49:11.274						---		0.0	52.19	a	Md	2.2	10693
IGT	1.03	201.0	Sg	15:48:36.907	0.0					---				m		19814	
IGT	1.03	201.0	Pn	15:48:21.749	0.0					---				m		19813	
IGT	1.03	201.0	AMl	15:48:46.410						---		0.5	0.52	a	Ml	2.5	10697
IGT	1.03	201.0	AMd	15:49:21.731						---		0.0	59.98	a	Md	2.4	10694

DATA\_TYPE COMMENT GSE2.1  
Event 1417

Official Magnitude:  
Ml 2.53

Error ellipse:

	Azim	Dip	Mag
Max:	348	83	2.3000
Intermediate:	116	3	0.3600
Min:	206	6	0.2600

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819886 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1433 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	15:56:14.84		0.06	40.4712	20.8940				28.3	1.3	5	6	217	0.13	0.48	m	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.7	0.0	1	1492
Md	2.0	0.0	3	1492

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.13	115.0	Sg	15:56:24.554	0.1					---				m		19949	
NEST	0.13	115.0	Pg	15:56:20.285	-0.1					---				m		19948	
NEST	0.13	115.0	AMl	15:56:35.510						---		0.4	0.38	a	Ml	1.7	10801
NEST	0.13	115.0	AMd	15:56:54.481						---		0.0	34.20	a	Md	2.3	10798
KBN	0.17	332.0	Sg	15:56:24.402	0.0					---				m		19951	
KBN	0.17	332.0	Pg	15:56:17.606	-2.7					---				m		19950	
KBN	0.17	332.0	AMd	15:56:42.155						---		0.0	24.55	a	Md	1.4	10799
FNA	0.48	50.0	Sg	15:56:33.117	-0.0					---				m		19953	
FNA	0.48	50.0	Pg	15:56:25.391	0.1					---				m		19952	
FNA	0.48	50.0	AMd	15:57:08.296						---		0.0	42.91	a	Md	2.0	10800

DATA\_TYPE COMMENT GSE2.1  
Event 1433

Official Magnitude:  
Ml 1.66

Error ellipse:

	Azim	Dip	Mag
Max:	232	53	1.5800
Intermediate:	330	5	0.7300
Min:	64	36	0.6900

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819886 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1434 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	15:56:15.06		0.01	40.5508	20.7982				14.2	1.0	6	6	229	0.07	0.50	m	

OrigID  
1493

Magnitude	Err	Nsta	Author	OrigID
Ml	1.6	0.0	1	1493
Md	2.0	0.0	3	1493

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.07	354.0	Sg	15:56:19.524	0.0					---				m		19955	
KBN	0.07	354.0	Pg	15:56:17.606	0.0					---				m		19954	
KBN	0.07	354.0	AMd	15:56:42.155						---		0.0	24.55	a	Md	1.4	10802
NEST	0.23	125.0	Sg	15:56:24.554	0.0					---				m		19957	
NEST	0.23	125.0	Pg	15:56:20.285	-0.2					---				m		19956	
NEST	0.23	125.0	AMl	15:56:35.510						---		0.4	0.38	a	Ml	1.6	10805
NEST	0.23	125.0	AMd	15:56:54.481						---		0.0	34.20	a	Md	2.3	10803
FNA	0.50	62.0	Sg	15:56:33.117	0.0					---				m		19959	
FNA	0.50	62.0	Pg	15:56:25.391	0.0					---				m		19958	
FNA	0.50	62.0	AMd	15:57:08.296						---		0.0	42.91	a	Md	2.0	10804

DATA\_TYPE COMMENT GSE2.1  
 Event 1434

Official Magnitude:  
 Ml 1.56

Error ellipse:

	Azim	Dip	Mag
Max:	249	47	1.4200
Intermediate:	16	29	0.5600
Min:	123	28	0.3900

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819886 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1492 Region N/A



Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	16:03:18.29		0.01	40.5050	20.8032				15.3	1.8	4	4	240	0.12	0.52	m	

OrigID  
1552

Magnitude	Err	Nsta	Author	OrigID
M1	1.4	0.0	2	1552

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.00	0.0	Pg	16:03:23.669	0.0					---				m		20420	
NEST	0.21	115.0	Sg	16:03:27.128	0.0					---				m		20417	
NEST	0.21	115.0	AM1	16:03:28.040						---		0.1	0.12	a	M1	1.1	10993
KBN	0.12	355.0	Sg	16:03:23.939	0.0					---				m		20416	
KBN	0.12	355.0	Pg	16:03:21.520	0.0					---				m		20415	
KBN	0.12	355.0	AM1	16:03:24.420						---		0.6	0.24	a	M1	1.6	10992
FNA	0.52	57.0	Sg	16:03:37.006	-0.0					---				m		20419	
FNA	0.52	57.0	Pg	16:03:28.586	-0.4					---				m		20418	

DATA\_TYPE COMMENT GSE2.1  
Event 1492

Official Magnitude:  
M1 1.38

Error ellipse:

	Azim	Dip	Mag
Max:	239	56	2.1300
Intermediate:	33	30	0.7800
Min:	130	12	0.4700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819886 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1493 1.9 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	16:04:51.03		0.06	40.5220	20.8488				3.8	2.5	5	5	211	0.11	0.48	m	

OrigID  
1553

Magnitude	Err	Nsta	Author	OrigID
M1	1.3	0.0	2	1553

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.11	336.0	Sg	16:04:54.892	0.1					---				m		20422
KBN	0.11	336.0	Pg	16:04:53.122	-0.1					---				m		20421

KBN	0.11	336.0	AM1	16:04:56.150	___	0.8	0.22	a__	M1	1.6	10994	
NEST	0.18	0.0	Pg	16:04:55.369	0.0	___		m__			20426	
NEST	0.19	125.0	Sg	16:04:58.446	0.0	___		m__			20423	
NEST	0.19	125.0	AM1	16:05:00.590		___	0.2	0.16	a__	M1	1.1	10995
FNA	0.48	57.0	Sg	16:05:08.545	-0.1	___		m__			20425	
FNA	0.48	57.0	Pg	16:05:01.156	0.1	___		m__			20424	

DATA\_TYPE COMMENT GSE2.1  
Event 1493

Official Magnitude:  
M1 1.33

Error ellipse:

	Azim	Dip	Mag
Max:	232	45	3.4500
Intermediate:	35	42	0.6300
Min:	133	9	0.3300

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819886 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1467 3.2 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	16:06:11.00		0.10	40.5235	20.7898				12.2	1.0	6	5	159	0.10	1.05	m	
1526																	

Magnitude	Err	Nsta	Author	OrigID
M1	1.7	0.0	1	1526

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.10	359.0	Sg	16:06:15.408	-0.1									m__		20230	
KBN	0.10	359.0	Pg	16:06:13.802	0.2									m__		20229	
NEST	0.22	0.0	Pg	16:06:16.336	0.0									m__		20236	
NEST	0.23	118.0	Sg	16:06:20.001	0.0									m__		20231	
NEST	0.23	118.0	AM1	16:06:21.820								0.5	0.14	a__	M1	1.7	10900
FNA	0.52	60.0	Sg	16:06:29.559	-0.0									m__		20233	
FNA	0.52	60.0	Pg	16:06:21.662	0.0									m__		20232	
IGT	1.05	200.0	Sg	16:06:47.076	-0.1									m__		20235	
IGT	1.05	200.0	Pg	16:06:34.742	3.1									m__		20234	

DATA\_TYPE COMMENT GSE2.1  
Event 1467

Official Magnitude:  
Ml 1.68

Error ellipse:

	Azim	Dip	Mag
Max:	3	64	1.1500
Intermediate:	104	5	0.5700
Min:	196	25	0.3900

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819886 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1466 1.3 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	16:18:49.07		0.11	40.5300	20.8290				4.5	0.8	7	19	140	0.10	1.07	m	1525

Magnitude	Err	Nsta	Author	OrigID
Ml	1.6	0.0	2	1525

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.10	342.0	Sg	16:18:52.545	0.1					---				m		20221	
KBN	0.10	342.0	Pg	16:18:50.958	-0.1					---				m		20220	
KBN	0.10	342.0	AMl	16:18:53.590						---		2.5	0.18	a	Ml	2.1	10897
NEST	0.20	124.0	Sg	16:18:57.227	0.1					---				m		20223	
NEST	0.20	124.0	Pg	16:18:53.615	-0.1					---				m		20222	
NEST	0.20	124.0	AMl	16:18:58.050						---		0.4	0.18	a	Ml	1.5	10899
NEST	0.20	124.0	AMl	16:18:57.960						---		0.6	0.12	a	Ml	1.6	10898
FNA	0.49	59.0	Sg	16:19:06.819	0.0					---				m		20225	
FNA	0.49	59.0	Pg	16:18:57.798	-1.4					---				m		20224	
SRN	0.91	225.0	Pg	16:19:06.036	-1.5					---				m		20226	
IGT	1.07	202.0	Sg	16:19:26.260	0.1					---				m		20228	
IGT	1.07	202.0	Pg	16:19:10.039	-0.2					---				m		20227	

DATA\_TYPE COMMENT GSE2.1  
Event 1466

Official Magnitude:  
Ml 1.64

Error ellipse:

	Azim	Dip	Mag
Max:	2	75	0.7900
Intermediate:	260	2	0.4400

Min: 169 15 0.3300

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819886 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1494 2.8 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	16:20:11.43		0.00	40.5422	20.8153				11.1	1.4	6	5	221	0.08	0.49	m	1554

Magnitude	Err	Nsta	Author	OrigID
M1	1.2	0.0	1	1554

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.08	346.0	Sg	16:20:15.359	-0.0					---				m		20428	
KBN	0.08	346.0	Pg	16:20:13.677	0.0					---				m		20427	
NEST	0.22	125.0	Sg	16:20:20.107	0.0					---				m		20430	
NEST	0.22	125.0	Pg	16:20:16.392	0.0					---				m		20429	
NEST	0.22	125.0	AM1	16:20:20.800						---		0.2	0.14	a	M1	1.2	10996
FNA	0.49	60.0	Sg	16:20:29.128	0.0					---				m		20432	
FNA	0.49	60.0	Pg	16:20:21.541	0.0					---				m		20431	

DATA\_TYPE COMMENT GSE2.1  
Event 1494

Official Magnitude:  
M1 1.19

Error ellipse:

	Azim	Dip	Mag
Max:	263	62	1.6000
Intermediate:	41	21	0.6500
Min:	138	17	0.3800

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819886 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1452 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	16:52:10.23		0.02	40.5067	20.8280				8.2	2.7	5	4	228	0.12	0.50	m	

OrigID  
1511

Magnitude	Err	Nsta	Author	OrigID
Ml	1.1	0.0	2	1511

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
NEST	0.00	0.0	Pg	16:52:14.944	0.0									m		20090
NEST	0.19	118.0	Sg	16:52:17.821	0.0									m		20087
NEST	0.19	118.0	AMl	16:52:21.920								0.1	0.14	a	Ml	1.0
NEST	0.19	118.0	AMl	16:52:19.240								0.2	0.10	a	Ml	1.1
KBN	0.12	346.0	Sg	16:52:14.715	0.0									m		20086
KBN	0.12	346.0	Pg	16:52:12.771	-0.0									m		20085
KBN	0.12	346.0	AMl	16:52:15.480								0.4	0.18	a	Ml	1.4
FNA	0.50	56.0	Sg	16:52:28.191	-0.0									m		20089
FNA	0.50	56.0	Pg	16:52:20.523	0.0									m		20088

DATA\_TYPE COMMENT GSE2.1  
Event 1452

Official Magnitude:  
Ml 1.14

Error ellipse:

	Azim	Dip	Mag
Max:	248	73	2.7600
Intermediate:	42	15	0.8400
Min:	134	7	0.3700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819886 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1450 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	17:00:34.97		0.06	40.5085	20.8218				7.1	4.1	6	5	230	0.12	0.51	m	

OrigID  
1509

Magnitude	Err	Nsta	Author	OrigID
Ml	1.4	0.0	2	1509

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.12	348.0	Sg	17:00:39.246	0.0									m		20072

KBN	0.12	348.0	Pg	17:00:37.412	0.0	---											m		20071			
KBN	0.12	348.0	AM1	17:00:40.370		---											0.4	0.20	a	M1	1.4	10845
NEST	0.20	118.0	Sg	17:00:42.622	-0.1	---													m			20074
NEST	0.20	118.0	Pg	17:00:39.460	0.1	---													m			20073
NEST	0.20	118.0	AM1	17:00:43.630		---											0.4	0.16	a	M1	1.5	10846
FNA	0.51	57.0	Sg	17:00:53.092	0.0	---													m			20076
FNA	0.51	57.0	Pg	17:00:45.208	-0.1	---													m			20075

DATA\_TYPE COMMENT GSE2.1  
Event 1450

Official Magnitude:  
M1 1.43

Error ellipse:

	Azim	Dip	Mag
Max:	267	80	4.1000
Intermediate:	50	7	0.8400
Min:	141	6	0.3700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819886 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1419 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	17:09:24.21		0.05	40.5735	20.8723				16.3	0.7	7	5	113	0.08	1.12	m	1478

Magnitude	Err	Nsta	Author	OrigID
M1	2.0	0.0	1	1478
Md	1.8	0.0	4	1478

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.08	308.0	Sg	17:09:29.386	0.1					---						m	19824
KBN	0.08	308.0	Pg	17:09:27.036	-0.1					---						mc	19823
KBN	0.08	308.0	AMd	17:10:00.758						---		0.0	33.72	a	Md	1.7	10705
NEST	0.21	139.0	Sg	17:09:33.165	-0.0					---						m	19826
NEST	0.21	139.0	Pg	17:09:29.363	0.0					---						mc	19825
NEST	0.21	139.0	AM1	17:09:33.630						---		1.0	0.18	a	M1	2.0	10709
NEST	0.21	139.0	AMd	17:09:50.242						---		0.0	20.88	a	Md	1.9	10706
FNA	0.44	61.0	Sg	17:09:40.381	0.0					---						m	19828
FNA	0.44	61.0	Pg	17:09:33.818	0.4					---						mc	19827
FNA	0.44	61.0	AMd	17:10:08.338						---		0.0	34.52	a	Md	1.8	10707
IGT	1.12	202.0	Sn	17:10:03.649	1.6					---						m	19830

IGT 1.12 202.0 Pn 17:09:45.861 0.0 \_\_\_\_\_ md\_ 19829  
 IGT 1.12 202.0 AMd 17:10:37.773 \_\_\_\_\_ 0.0 51.91 a\_\_ Md 2.2 10708

DATA\_TYPE COMMENT GSE2.1  
 Event 1419

Official Magnitude:  
 Ml 1.96

Error ellipse:

	Azim	Dip	Mag
Max:	332	65	0.7200
Intermediate:	219	10	0.4400
Min:	125	23	0.3900

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819885 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1420 3.8 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	17:18:01.49		0.04	40.5132	20.7830				16.7	0.6	11	7	104	0.11	1.82	m	
OrigID 1479																	

Magnitude	Err	Nsta	Author	OrigID
Ml	3.0	0.0	4	1479
Md	1.8	0.0	6	1479

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.11	1.0	Sg	17:18:07.236	-0.0									m__		19832
KBN	0.11	1.0	Pg	17:18:04.852	0.1									m__		19831
KBN	0.11	1.0	AMl	17:18:08.200								19.4	0.24	a__	Ml	3.2
KBN	0.11	1.0	AMd	17:18:28.847								0.0	24.00	a__	Md	1.4
NEST	0.23	115.0	Sg	17:18:10.978	-0.1									m__		19834
NEST	0.23	115.0	Pg	17:18:06.942	0.0									m__		19833
NEST	0.23	115.0	AMl	17:18:11.660								8.0	0.20	a__	Ml	2.9
NEST	0.23	115.0	AMd	17:18:28.114								0.0	21.17	a__	Md	1.9
FNA	0.53	59.0	Sg	17:18:20.571	0.0									m__		19836
FNA	0.53	59.0	Pg	17:18:12.355	-0.0									m__		19835
FNA	0.53	59.0	AMd	17:18:44.485								0.0	32.13	a__	Md	1.7
SRN	0.87	224.0	Sg	17:18:32.189	-0.0									m__		19838
SRN	0.87	224.0	Pg	17:18:19.049	0.0									m__		19837
SRN	0.87	224.0	AMl	17:18:34.140								0.6	0.36	a__	Ml	2.5
SRN	0.87	224.0	AMd	17:18:40.772								0.0	21.72	a__	Md	1.4
IGT	1.04	200.0	Sg	17:18:36.925	0.1									m__		19840

IGT	1.04	200.0	Pg	17:18:21.660	-0.0	---											m		19839	
IGT	1.04	200.0	AMd	17:19:33.835		---											a	Md	2.6	10714
SCTE	1.82	257.0	Sn	17:19:00.854	-0.0	---											m		19842	
SCTE	1.82	257.0	Pn	17:18:35.199	-0.2	---											m		19841	
SCTE	1.82	257.0	AM1	17:19:05.080		---											a	M1	3.0	10719
SCTE	1.82	257.0	AMd	17:19:44.092		---											a	Md	3.2	10715

DATA\_TYPE COMMENT GSE2.1  
Event 1420

Official Magnitude:  
M1 2.96

Error ellipse:

	Azim	Dip	Mag
Max:	39	60	0.6700
Intermediate:	138	5	0.4000
Min:	231	29	0.2100

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819885 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1443 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	17:26:19.52		0.17	40.5267	20.8262				10.5	1.1	9	23	142	0.10	1.67	m	

Magnitude	Err	Nsta	Author	OrigID
M1	2.4	0.0	2	1502

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.10	344.0	Sg	17:26:23.613	-0.2											20021	
KBN	0.10	344.0	Pg	17:26:22.166	0.2											20020	
KBN	0.10	344.0	AM1	17:26:25.000								6.9	0.18	a	M1	2.6	10828
NEST	0.20	123.0	Sg	17:26:27.542	-0.1											20023	
NEST	0.20	123.0	Pg	17:26:24.250	0.1											20022	
NEST	0.20	123.0	AM1	17:26:28.460								2.9	0.14	a	M1	2.4	10830
NEST	0.20	123.0	AM1	17:26:28.470								2.3	0.22	a	M1	2.3	10829
FNA	0.49	58.0	Sg	17:26:37.174	-0.1											20025	
FNA	0.49	58.0	Pg	17:26:29.793	0.2											20024	
IGT	1.06	202.0	Sg	17:26:56.399	0.2											20027	
IGT	1.06	202.0	Pg	17:26:40.160	-0.3											20026	
KEK	1.13	225.0	Pn	17:26:44.755	3.0											20028	
PHP	1.19	346.0	Pn	17:26:42.418	-0.1											20029	



PUK 1.67 336.0 Pn 17:26:52.731 1.6 \_\_\_\_\_ m\_\_ 20030

DATA\_TYPE COMMENT GSE2.1  
Event 1443

Official Magnitude:  
Ml 2.37

Error ellipse:

	Azim	Dip	Mag
Max:	29	74	1.1300
Intermediate:	281	4	0.5700
Min:	190	15	0.4400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819885 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1442 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	17:28:25.07		0.30	40.4965	20.8083				6.2	3.5	14	23	111	0.13	1.71	m	

Magnitude	Err	Nsta	Author	OrigID
Ml	2.7	0.0	4	1501

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.13	353.0	Sg	17:28:29.726	0.1					_____				m__		20005
KBN	0.13	353.0	Pg	17:28:27.799	0.1					_____				m__		20004
KBN	0.13	353.0	AMl	17:28:30.800						_____		12.3	0.18	a__	Ml 2.9	10823
NEST	0.20	113.0	Sg	17:28:32.747	-0.1					_____				m__		20007
NEST	0.20	113.0	Pg	17:28:29.961	0.4					_____				m__		20006
NEST	0.20	113.0	AMl	17:28:34.270						_____		4.5	0.18	a__	Ml 2.5	10825
NEST	0.20	113.0	AMl	17:28:34.240						_____		7.5	0.16	a__	Ml 2.8	10824
FNA	0.52	56.0	Sg	17:28:43.138	-0.5					_____				m__		20009
FNA	0.52	56.0	Pg	17:28:35.376	-0.3					_____				m__		20008
SRN	0.87	226.0	Sg	17:28:55.525	-0.5					_____				m__		20011
SRN	0.87	226.0	Pg	17:28:42.184	-0.6					_____				m__		20010
SRN	0.87	226.0	AMl	17:28:56.870						_____		0.5	0.38	a__	Ml 2.4	10826
IGT	1.03	202.0	Sg	17:29:00.500	-0.2					_____				m__		20013
IGT	1.03	202.0	Pg	17:28:45.456	0.1					_____				m__		20012
KEK	1.10	226.0	Pn	17:28:47.079	0.3					_____				m__		20014
PHP	1.22	347.0	Pn	17:28:45.514	-3.2					_____				m__		20015
PUK	1.69	337.0	Sn	17:29:22.551	1.0					_____				m__		20017
PUK	1.69	337.0	Pn	17:28:57.315	0.0					_____				m__		20016

PUK	1.69	337.0	AM1	17:29:31.160							0.3	0.48	a__	M1	2.7	10827
LKD2	1.71	184.0	Sn	17:29:26.185	3.9								m__			20019
LKD2	1.71	184.0	Pn	17:28:57.792	0.0								m__			20018

DATA\_TYPE COMMENT GSE2.1  
Event 1442

Official Magnitude:  
M1 2.72

Error ellipse:

		Azim	Dip	Mag
Max:	90	88		3.4900
Intermediate:	302	1		0.6800
Min:	212	1		0.4700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819885 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1496 0.5 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	17:41:24.93		0.02	40.5170	20.8210				9.6	2.3	5	4	227	0.11	0.50	m	1556

Magnitude	Err	Nsta	Author	OrigID
M1	1.5	0.0	1	1556

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.11	347.0	Sg	17:41:29.239	-0.0									m__		20440	
KBN	0.11	347.0	Pg	17:41:27.437	0.0									m__		20439	
NEST	0.20	120.0	Sg	17:41:32.946	0.0									m__		20442	
NEST	0.20	120.0	Pg	17:41:29.471	-0.0									m__		20441	
NEST	0.20	120.0	AM1	17:41:33.780								0.4	0.20	a__	M1	1.5	10998
FNA	0.50	58.0	Sg	17:41:42.894	0.0									m__		20444	
FNA	0.50	58.0	Pg	17:41:34.633	-0.6									m__		20443	

DATA\_TYPE COMMENT GSE2.1  
Event 1496

Official Magnitude:  
M1 1.45

Error ellipse:

	Azim	Dip	Mag
--	------	-----	-----

Max: 265 72 2.4000  
 Intermediate: 47 13 0.7500  
 Min: 139 11 0.3700

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819885 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1421 2.9 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	17:59:33.36		0.16	40.4993	20.7925				20.0	1.1	10	6	159	0.22	1.83	m	
OrigID 1480																	

Magnitude	Err	Nsta	Author	OrigID
ML	3.0	0.0	4	1480
Md	2.6	0.0	6	1480

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.12	359.0	Sg	17:59:39.496	-0.7									m		19844
KBN	0.12	359.0	Pg	17:59:36.691	-0.6									m		19843
KBN	0.12	359.0	AMl	17:59:39.930								45.0	0.40	a	Ml	3.6
KBN	0.12	359.0	AMd	18:00:12.359								0.0	35.67	a	Md	1.8
NEST	0.21	113.0	Sg	17:59:42.787	-0.3									m		19846
NEST	0.21	113.0	Pg	17:59:38.645	-0.3									m		19845
NEST	0.21	113.0	AMl	17:59:43.890								9.7	0.26	a	Ml	3.0
NEST	0.21	113.0	AMd	18:00:26.772								0.0	48.13	a	Md	2.7
FNA	0.53	57.0	Sg	17:59:52.387	-0.2									m		19848
FNA	0.53	57.0	Pg	17:59:44.021	-0.3									m		19847
FNA	0.53	57.0	AMd	18:00:38.502								0.0	54.48	a	Md	2.2
SRN	0.87	225.0	Sg	18:00:03.639	0.0									m		19850
SRN	0.87	225.0	Pg	17:59:50.616	-0.0									m		19849
SRN	0.87	225.0	AMl	18:00:14.490								0.6	0.50	a	Ml	2.5
SRN	0.87	225.0	AMd	18:01:04.639								0.0	74.02	a	Md	2.6
IGT	1.03	201.0	Sn	18:00:08.091	0.0									m		19852
IGT	1.03	201.0	Pg	17:59:53.145	-0.0									m		19851
IGT	1.03	201.0	AMd	18:01:06.841								0.0	73.70	a	Md	2.6
SCTE	1.83	258.0	Sn	18:00:32.358	0.0									m		19854
SCTE	1.83	258.0	Pn	18:00:06.984	-0.1									m		19853
SCTE	1.83	258.0	AMl	18:00:36.510								0.4	0.46	a	Ml	3.0
SCTE	1.83	258.0	AMd	18:01:30.535								0.0	83.55	a	Md	3.4

DATA\_TYPE COMMENT GSE2.1  
 Event 1421

Official Magnitude:

Ml 3.00

Error ellipse:

	Azim	Dip	Mag
Max:	133	46	1.4500
Intermediate:	349	37	0.5900
Min:	244	19	0.3300

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819885 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1497 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	18:02:27.77		0.00	40.4862	20.7815				8.7	3.3	4	5	252	0.13	0.54	m	
1557																	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.5	0.0	2	1557

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.00	0.0	Pg	18:02:32.921	0.0					---				m_		20450	
NEST	0.22	109.0	Sg	18:02:36.169	0.0					---				m_		20447	
NEST	0.22	109.0	AMl	18:02:37.140						---		0.3	0.16	a_	Ml	1.4	11000
KBN	0.14	1.0	Sg	18:02:32.812	0.0					---				m_		20446	
KBN	0.14	1.0	Pg	18:02:30.654	0.0					---				m_		20445	
KBN	0.14	1.0	AMl	18:02:33.600						---		0.6	0.22	a_	Ml	1.6	10999
FNA	0.54	57.0	Sg	18:02:47.105	0.0					---				m_		20449	
FNA	0.54	57.0	Pg	18:02:38.330	-0.5					---				m_		20448	

DATA\_TYPE COMMENT GSE2.1  
Event 1497

Official Magnitude:  
Ml 1.50

Error ellipse:

	Azim	Dip	Mag
Max:	252	75	3.4400
Intermediate:	45	12	1.0400
Min:	136	7	0.4200

BEGIN GSE2.1

MSG\_TYPE DATA  
 MSG\_ID 1564819885 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1498 0.6 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	18:18:44.63		0.00	40.5203	20.8198				9.0	3.0	4	4	226	0.11	0.50	m	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.3	0.0	2	1558

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.00	0.0	Pg	18:18:49.334	0.0									m		20456	
NEST	0.20	121.0	Sg	18:18:52.650	0.0									m		20453	
NEST	0.20	121.0	AMl	18:18:53.560								0.2	0.14	a	Ml	1.3	11003
NEST	0.20	121.0	AMl	18:18:53.710								0.2	0.30	a	Ml	1.3	11002
KBN	0.11	347.0	Sg	18:18:48.762	0.0									m		20452	
KBN	0.11	347.0	Pg	18:18:46.990	0.0									m		20451	
KBN	0.11	347.0	AMl	18:18:49.800								0.4	0.14	a	Ml	1.4	11001
FNA	0.50	58.0	Sg	18:19:02.554	0.0									m		20455	
FNA	0.50	58.0	Pg	18:18:54.559	-0.3									m		20454	

DATA\_TYPE COMMENT GSE2.1  
 Event 1498

Official Magnitude:  
 Ml 1.25

Error ellipse:

	Azim	Dip	Mag
Max:	255	70	3.1700
Intermediate:	42	16	0.8100
Min:	135	10	0.3800

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819885 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1441 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	18:23:29.58		0.09	40.5110	20.8120				8.9	2.4	6	23	234	0.12	1.05	m	

Magnitude Err Nsta Author OrigID  
Ml 2.2 0.0 2 1500

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.11	351.0	Sg	18:23:33.924	-0.0									m		19997
KBN	0.11	351.0	Pg	18:23:32.056	-0.0									m		19996
KBN	0.11	351.0	AMl	18:23:35.000								2.8	0.16	a	Ml 2.2	10821
NEST	0.21	117.0	Sg	18:23:37.538	-0.1									m		19999
NEST	0.21	117.0	Pg	18:23:34.316	0.2									m		19998
NEST	0.21	117.0	AMl	18:23:38.470								1.5	0.14	a	Ml 2.1	10822
FNA	0.51	57.0	Sg	18:23:47.905	0.1									m		20001
FNA	0.51	57.0	Pg	18:23:39.865	-0.1									m		20000
IGT	1.05	201.0	Sg	18:24:06.476	0.8									m		20003
IGT	1.05	201.0	Pg	18:23:49.452	-0.8									m		20002

DATA\_TYPE COMMENT GSE2.1  
Event 1441

Official Magnitude:  
Ml 2.16

Error ellipse:

	Azim	Dip	Mag
Max:	262	72	2.4800
Intermediate:	48	14	0.9100
Min:	140	10	0.4300

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819885 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1499 3.6 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	18:28:18.19		0.02	40.4952	20.7738				11.2	1.5	5	4	254	0.13	0.54	m	
1559																	

Magnitude Err Nsta Author OrigID  
Ml 1.3 0.0 2 1559

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.13	4.0	Sg	18:28:23.297	-0.0									m		20458
KBN	0.13	4.0	Pg	18:28:21.139	0.0									m		20457
KBN	0.13	4.0	AMl	18:28:24.680								0.6	0.36	a	Ml 1.6	11004
NEST	0.23	0.0	Pg	18:28:23.360	0.0									m		20462

NEST	0.22	110.0	Sg	18:28:27.047	-0.0	---												m		20459	
NEST	0.22	110.0	AMl	18:28:28.060		---												a	Ml	1.1	11006
NEST	0.22	110.0	AMl	18:28:27.950		---												a	Ml	1.3	11005
FNA	0.54	58.0	Sg	18:28:37.598	0.0	---												m			20461
FNA	0.54	58.0	Pg	18:28:29.253	-0.0	---												m			20460

DATA\_TYPE COMMENT GSE2.1  
Event 1499

Official Magnitude:  
Ml 1.31

Error ellipse:

	Azim	Dip	Mag
Max:	249	64	1.7100
Intermediate:	41	23	0.9800
Min:	136	11	0.4500

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819885 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1440 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	18:47:50.16		0.06	40.5290	20.8152				8.3	2.4	5	23	226	0.10	0.50	m	
1499																	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.4	0.0	2	1499

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.10	348.0	Sg	18:47:53.918	0.0											19991
KBN	0.10	348.0	Pg	18:47:51.989	-0.3											19990
KBN	0.10	348.0	AMl	18:47:54.940								2.6	0.36	a	Ml	2.1
NEST	0.21	122.0	Sg	18:47:58.450	0.1											19993
NEST	0.21	122.0	Pg	18:47:54.792	-0.1											19992
NEST	0.21	122.0	AMl	18:47:59.370								0.3	0.16	a	Ml	1.4
NEST	0.21	122.0	AMl	18:48:00.730								0.2	0.22	a	Ml	1.3
FNA	0.50	59.0	Sg	18:48:07.964	-0.1											19995
FNA	0.50	59.0	Pg	18:48:00.451	0.1											19994

DATA\_TYPE COMMENT GSE2.1  
Event 1440

Official Magnitude:

M1 1.36

Error ellipse:

	Azim	Dip	Mag
Max:	267	67	2.6200
Intermediate:	54	19	0.8400
Min:	148	12	0.4100

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819884 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1426 2.8 km from Gjyrës, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	19:23:35.42		0.19	40.5465	20.8562				15.6	0.6	18	14	74	0.09	1.91	m	
OrigID	1485																

Magnitude	Err	Nsta	Author	OrigID
M1	3.9	0.0	5	1485
Md	2.7	0.0	12	1485

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.09	326.0	Sg	19:23:40.503	-0.1					___				m		19887	
KBN	0.09	326.0	Pg	19:23:38.266	-0.1					___				m		19886	
KBN	0.09	326.0	AMl	19:23:41.200						___		109.6	0.26	a	M1	3.9	10763
KBN	0.09	326.0	AMd	19:24:07.934						___		0.0	29.67	a	Md	1.6	10751
NEST	0.20	131.0	Sg	19:23:44.040	0.1					___				m		19889	
NEST	0.20	131.0	Pg	19:23:40.430	0.1					___				m		19888	
NEST	0.20	131.0	AMl	19:23:47.820						___		32.1	0.24	a	M1	3.5	10764
NEST	0.20	131.0	AMd	19:24:18.952						___		0.0	38.52	a	Md	2.5	10752
FNA	0.46	59.0	Sg	19:23:52.268	-0.1					___				m		19891	
FNA	0.46	59.0	Pg	19:23:45.207	0.1					___				m		19890	
FNA	0.46	59.0	AMd	19:24:25.067						___		0.0	39.86	a	Md	1.9	10753
SRN	0.93	225.0	P	19:23:52.661	-1.5					___				m		19893	
SRN	0.93	225.0	Sg	19:24:04.673	-3.5					___				m		19892	
SRN	0.93	225.0	AMd	19:24:55.283						___		0.0	62.62	a	Md	2.4	10754
VLO	1.04	267.0	Sn	19:24:09.720	0.1					___				m		19895	
VLO	1.04	267.0	Pn	19:23:55.042	0.1					___				m		19894	
VLO	1.04	267.0	AMl	19:24:17.810						___		11.9	0.68	a	M1	3.9	10765
VLO	1.04	267.0	AMd	19:25:00.091						___		0.0	65.05	a	Md	3.1	10755
IGT	1.09	202.0	Sg	19:24:11.889	-0.5					___				m		19897	
IGT	1.09	202.0	Pg	19:23:56.296	-0.3					___				m		19896	
IGT	1.09	202.0	AMd	19:25:07.779						___		0.0	71.48	a	Md	2.6	10756
KEK	1.16	225.0	Sg	19:24:14.814	0.1					___				m		19899	
KEK	1.16	225.0	Pg	19:23:58.119	0.3					___				m		19898	



KEK	1.16	225.0	AMl	19:24:26.090		---	6641.0	0.36	a__	Ml	6.7	10766
KEK	1.16	225.0	AMd	19:25:13.511		---	0.0	75.39	a__	Md	3.2	10757
PHP	1.18	345.0	Sn	19:24:14.610	-0.1	---			m__			19901
PHP	1.18	345.0	Pn	19:23:57.637	-0.2	---			m__			19900
PHP	1.18	345.0	AMl	19:24:26.230		---	4.5	0.52	a__	Ml	3.6	10767
PHP	1.18	345.0	AMd	19:24:58.660		---	0.0	61.02	a__	Md	3.0	10758
THE	1.61	86.0	Pn	19:24:04.844	-0.9	---			m__			19902
THE	1.61	86.0	AMd	19:25:16.764		---	0.0	71.92	a__	Md	3.2	10759
PUK	1.66	335.0	Pn	19:24:06.604	0.1	---			m__			19903
PUK	1.66	335.0	AMd	19:25:17.060		---	0.0	70.46	a__	Md	3.2	10760
LKD2	1.76	186.0	Pn	19:24:08.656	0.2	---			m__			19904
LKD2	1.76	186.0	AMd	19:25:28.998		---	0.0	80.34	a__	Md	2.7	10761
BCI	1.91	343.0	Pn	19:24:10.844	0.1	---			m__			19905
BCI	1.91	343.0	AMd	19:25:32.739		---	0.0	81.90	a__	Md	2.8	10762

DATA\_TYPE COMMENT GSE2.1  
Event 1426

Official Magnitude:  
Ml 3.89

Error ellipse:

	Azim	Dip	Mag
Max:	87	62	0.7000
Intermediate:	313	19	0.4100
Min:	216	19	0.3600

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819884 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1500 0.1 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	19:27:43.37		0.03	40.5192	20.8258				10.0	1.9	5	6	224	0.11	0.50	m	
1560																	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.9	0.0	2	1560

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.00	0.0	Pg	19:27:48.572	0.0									m__		20468	
NEST	0.20	121.0	Sg	19:27:51.313	-0.0									m__		20465	
NEST	0.20	121.0	AMl	19:27:53.220								0.3	0.20	a__	Ml	1.4	11008
KBN	0.11	345.0	Sg	19:27:47.693	-0.0									m__		20464	
KBN	0.11	345.0	Pg	19:27:45.892	0.0									m__		20463	

KBN	0.11	345.0	AM1	19:27:48.650											3.6	0.16	a	M1	2.3	11007
FNA	0.50	58.0	Sg	19:28:01.206	0.0												m			20467
FNA	0.50	58.0	Pg	19:27:53.507	-0.1												m			20466

DATA\_TYPE COMMENT GSE2.1  
Event 1500

Official Magnitude:  
M1 1.88

Error ellipse:

	Azim	Dip	Mag
Max:	247	65	2.0900
Intermediate:	38	21	0.7800
Min:	132	11	0.3900

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819884 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1501 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	19:30:37.35		0.04	40.5032	20.8027				10.4	1.8	5	6	240	0.12	0.52	m	1561

Magnitude	Err	Nsta	Author	OrigID
M1	1.6	0.0	2	1561

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.12	355.0	Sg	19:30:42.077	-0.0											20470
KBN	0.12	355.0	Pg	19:30:40.128	0.1											20469
KBN	0.12	355.0	AM1	19:30:43.378								1.0	0.26	a	M1	1.8
NEST	0.21	115.0	Sg	19:30:45.601	0.0									m		20472
NEST	0.21	115.0	Pg	19:30:42.392	0.3									m		20471
NEST	0.21	115.0	AM1	19:30:46.648								0.2	0.24	a	M1	1.3
FNA	0.52	57.0	Sg	19:30:56.001	0.0									m		20474
FNA	0.52	57.0	Pg	19:30:47.926	-0.1									m		20473

DATA\_TYPE COMMENT GSE2.1  
Event 1501

Official Magnitude:  
M1 1.56

Error ellipse:

	Azim	Dip	Mag
Max:	247	65	1.9600
Intermediate:	41	22	0.9100
Min:	135	10	0.4300

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819884 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1439 3.1 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	19:58:19.21		0.03	40.5430	20.8443				3.7	2.6	6	6	203	0.09	0.47	m	
OrigID 1498																	

Magnitude	Err	Nsta	Author	OrigID
M1	0.8	0.0	2	1498

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.09	332.0	Sg	19:58:22.232	-0.0									m		19985	
KBN	0.09	332.0	Pg	19:58:21.012	0.1									m		19984	
KBN	0.09	332.0	AM1	19:58:23.540								0.4	0.14	a	M1	1.3	10815
NEST	0.20	129.0	Sg	19:58:27.220	0.0									m		19987	
NEST	0.20	129.0	Pg	19:58:23.725	-0.1									m		19986	
NEST	0.20	129.0	AM1	19:58:28.110								0.1	0.12	a	M1	0.8	10817
NEST	0.20	129.0	AM1	19:58:29.650								0.0	0.20	a	M1	0.5	10816
FNA	0.47	59.0	Sg	19:58:36.548	0.0									m		19989	
FNA	0.47	59.0	Pg	19:58:29.103	-0.0									m		19988	

DATA\_TYPE COMMENT GSE2.1  
Event 1439

Official Magnitude:  
M1 0.78

Error ellipse:

	Azim	Dip	Mag
Max:	236	49	3.3900
Intermediate:	41	39	0.5200
Min:	137	8	0.2900

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819884 athena

DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1438 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	20:06:15.78		0.06	40.5313	20.8333				3.8	2.0	6	21	215	0.10	0.49	m	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.0	0.0	2	1497

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.10	340.0	Sg	20:06:19.053	-0.1					---				m		19979	
KBN	0.10	340.0	Pg	20:06:17.772	0.1					---				m		19978	
KBN	0.10	340.0	AMl	20:06:20.820						---		0.2	0.12	a	Ml	1.0	10813
NEST	0.20	125.0	Sg	20:06:23.767	0.0					---				m		19981	
NEST	0.20	125.0	Pg	20:06:20.324	-0.0					---				m		19980	
NEST	0.20	125.0	AMl	20:06:24.520						---		0.1	0.14	a	Ml	1.0	10814
FNA	0.49	58.0	Sg	20:06:33.569	0.1					---				m		19983	
FNA	0.49	58.0	Pg	20:06:25.843	-0.1					---				m		19982	

DATA\_TYPE COMMENT GSE2.1

Event 1438

Official Magnitude:

Ml 1.01

Error ellipse:

	Azim	Dip	Mag
Max:	237	46	2.7800
Intermediate:	45	43	0.5800
Min:	141	6	0.3100

BEGIN GSE2.1

MSG\_TYPE DATA

MSG\_ID 1564819884 athena

DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1437 1.6 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	20:14:09.58		0.02	40.5333	20.8263				8.9	1.8	5	8	218	0.10	0.49	m	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.1	0.0	2	1496

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.10	342.0	Sg	20:14:13.369	-0.0					---				m		19973
KBN	0.10	342.0	Pg	20:14:11.774	0.0					---				m		19972
KBN	0.10	342.0	AM1	20:14:14.340						---		0.5	0.10	a	M1	1.4
NEST	0.21	124.0	Sg	20:14:17.686	-0.0					---				m		19975
NEST	0.21	124.0	Pg	20:14:14.445	0.2					---				m		19974
NEST	0.21	124.0	AM1	20:14:19.920						---		0.1	0.18	a	M1	0.8
FNA	0.49	59.0	Sg	20:14:27.135	0.0					---				m		19977
FNA	0.49	59.0	Pg	20:14:19.591	-0.0					---				m		19976

DATA\_TYPE COMMENT GSE2.1  
Event 1437

Official Magnitude:  
M1 1.08

Error ellipse:

	Azim	Dip	Mag
Max:	255	66	1.9400
Intermediate:	37	18	0.6200
Min:	132	14	0.3100

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819884 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1436 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	20:15:57.19		0.07	40.5063	20.8238				3.3	2.0	5	6	229	0.12	0.51	m	1495

Magnitude	Err	Nsta	Author	OrigID
M1	0.9	0.0	2	1495

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.12	347.0	Sg	20:16:01.253	-0.0					---				m		19967
KBN	0.12	347.0	Pg	20:15:59.620	0.1					---				m		19966
KBN	0.12	347.0	AM1	20:16:02.290						---		0.2	0.10	a	M1	1.1
NEST	0.18	0.0	Pg	20:16:02.436	0.0					---				m		19971
NEST	0.19	118.0	Sg	20:16:04.887	0.0					---				m		19968
NEST	0.19	118.0	AM1	20:16:06.880						---		0.1	0.14	a	M1	0.7
FNA	0.51	56.0	Sg	20:16:15.700	0.1					---				m		19970
FNA	0.51	56.0	Pg	20:16:07.613	-0.1					---				m		19969

DATA\_TYPE COMMENT GSE2.1  
Event 1436

Official Magnitude:  
Ml 0.89

Error ellipse:

	Azim	Dip	Mag
Max:	233	43	2.8800
Intermediate:	40	46	0.7100
Min:	137	7	0.3400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819884 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1435 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	20:23:52.31		0.03	40.5560	20.8520				11.8	1.6	6	22	191	0.08	0.46	m	
1494																	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.5	0.0	2	1494

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.08	324.0	Sg	20:23:56.383	-0.0					---				m		19961	
KBN	0.08	324.0	Pg	20:23:54.700	0.1					---				m		19960	
KBN	0.08	324.0	AMl	20:23:57.408						---		0.9	0.16	a	Ml	1.7	10806
NEST	0.21	133.0	Sg	20:24:00.669	0.0					---				m		19963	
NEST	0.21	133.0	Pg	20:23:57.047	-0.0					---				m		19962	
NEST	0.21	133.0	AMl	20:24:01.768						---		0.3	0.24	a	Ml	1.4	10808
NEST	0.21	133.0	AMl	20:24:01.628						---		0.4	0.22	a	Ml	1.5	10807
FNA	0.46	60.0	Sg	20:24:09.025	0.0					---				m		19965	
FNA	0.46	60.0	Pg	20:24:01.836	-0.0					---				m		19964	

DATA\_TYPE COMMENT GSE2.1  
Event 1435

Official Magnitude:  
Ml 1.47

Error ellipse:

	Azim	Dip	Mag
Max:	259	64	1.7400
Intermediate:	33	18	0.5600

Min: 129 17 0.3800

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819884 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1444 2.2 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	21:26:11.70		0.03	40.5370	20.8360				8.5	2.4	5	22	211	0.09	0.48	m	1503

Magnitude	Err	Nsta	Author	OrigID
M1	1.6	0.0	2	1503

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.09	337.0	Sg	21:26:15.423	0.0					---				m		20032	
KBN	0.09	337.0	Pg	21:26:13.769	-0.1					---				m		20031	
KBN	0.09	337.0	AM1	21:26:16.410						---		1.1	0.10	a	M1	1.8	10831
NEST	0.20	126.0	Sg	21:26:19.665	0.0					---				m		20034	
NEST	0.20	126.0	Pg	21:26:16.591	0.3					---				m		20033	
NEST	0.20	126.0	AM1	21:26:21.010						---		0.3	0.14	a	M1	1.4	10832
FNA	0.48	59.0	Sg	21:26:28.950	-0.0					---				m		20036	
FNA	0.48	59.0	Pg	21:26:21.613	0.0					---				m		20035	

DATA\_TYPE COMMENT GSE2.1  
Event 1444

Official Magnitude:  
M1 1.60

Error ellipse:

	Azim	Dip	Mag
Max:	255	68	2.5800
Intermediate:	36	16	0.7300
Min:	130	13	0.3700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819884 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1445 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	21:30:57.96		0.09	40.5263	20.8315				4.1	0.7	7	22	139	0.10	1.07	m	

Magnitude	Err	Nsta	Author	OrigID
M1	2.0	0.0	2	1504

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.10	341.0	Sg	21:31:01.516	0.1									m		20038	
KBN	0.10	341.0	Pg	21:30:59.857	-0.1									m		20037	
KBN	0.10	341.0	AM1	21:31:02.580								3.9	0.16	a	M1	2.3	10833
NEST	0.20	123.0	Sg	21:31:05.801	-0.1									m		20040	
NEST	0.20	123.0	Pg	21:31:02.648	0.2									m		20039	
NEST	0.20	123.0	AM1	21:31:06.950								1.2	0.14	a	M1	2.0	10835
NEST	0.20	123.0	AM1	21:31:08.270								0.6	0.22	a	M1	1.7	10834
FNA	0.49	58.0	Sg	21:31:15.802	0.0									m		20042	
FNA	0.49	58.0	Pg	21:31:07.631	-0.5									m		20041	
IGT	1.07	202.0	Sg	21:31:34.982	0.0									m		20044	
IGT	1.07	202.0	Pg	21:31:19.949	0.8									m		20043	

DATA\_TYPE COMMENT GSE2.1  
Event 1445

Official Magnitude:  
M1 1.96

Error ellipse:

	Azim	Dip	Mag
Max:	353	78	0.7000
Intermediate:	250	2	0.4000
Min:	160	12	0.2800

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819884 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1446 2.8 km from Nikolicë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	21:46:47.63		0.00	40.4955	20.7875				8.6	2.4	4	7	249	0.13	0.54	m	

Magnitude	Err	Nsta	Author	OrigID
M1	1.9	0.0	2	1505



Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.13	0.0	Sg	21:46:52.370	0.0					---				m		20046
KBN	0.13	0.0	Pg	21:46:49.536	-0.8					---				m		20045
KBN	0.13	0.0	AM1	21:46:53.720						---		1.9	0.14	a	M1	2.1
NEST	0.21	0.0	Pg	21:46:52.902	0.0					---				m		20050
NEST	0.21	111.0	Sg	21:46:55.994	0.0					---				m		20047
NEST	0.21	111.0	AM1	21:46:57.270						---		0.9	0.16	a	M1	1.9
NEST	0.21	111.0	AM1	21:46:57.400						---		0.8	0.22	a	M1	1.8
FNA	0.54	57.0	Sg	21:47:06.673	0.0					---				m		20049
FNA	0.54	57.0	Pg	21:46:58.513	0.0					---				m		20048

DATA\_TYPE COMMENT GSE2.1  
Event 1446

Official Magnitude:  
M1 1.87

Error ellipse:

	Azim	Dip	Mag
Max:	251	65	2.6800
Intermediate:	51	23	1.1900
Min:	144	8	0.4400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819884 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1447 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	22:14:13.75		0.03	40.4942	20.7873				12.5	1.1	6	22	159	0.13	1.02	m	1506

Magnitude Err Nsta Author OrigID  
M1 1.5 0.0 2 1506

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.13	0.0	Sg	22:14:19.116	0.0					---				m		20052
KBN	0.13	0.0	Pg	22:14:16.770	-0.0					---				m		20051
KBN	0.13	0.0	AM1	22:14:19.920						---		0.9	0.34	a	M1	1.8
NEST	0.21	111.0	Sg	22:14:22.425	0.0					---				m		20054
NEST	0.21	111.0	Pg	22:14:19.179	0.5					---				m		20053
NEST	0.21	111.0	AM1	22:14:24.170						---		0.3	0.24	a	M1	1.4
NEST	0.21	111.0	AM1	22:14:23.510						---		0.4	0.16	a	M1	1.5
FNA	0.54	57.0	Sg	22:14:32.888	-0.0					---				m		20056
FNA	0.54	57.0	Pg	22:14:24.757	0.1					---				m		20055

IGT 1.02 201.0 Pg 22:14:33.870 -0.0 \_\_\_\_\_ m\_\_ 20057

DATA\_TYPE COMMENT GSE2.1  
Event 1447

Official Magnitude:  
Ml 1.52

Error ellipse:

	Azim	Dip	Mag
Max:	7	72	1.1300
Intermediate:	272	1	0.4900
Min:	182	18	0.4200

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819884 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1448 2.0 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	22:16:23.15		0.06	40.5092	20.8072				13.5	1.4	5	4	236	0.12	0.52	m	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.1	0.0	1	1507

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.12	353.0	Sg	22:16:28.295	-0.1					_____				m__		20059
KBN	0.12	353.0	Pg	22:16:26.196	0.1					_____				m__		20058
NEST	0.19	0.0	Pg	22:16:28.497	0.0					_____				m__		20063
NEST	0.21	117.0	Sg	22:16:31.725	0.0					_____				m__		20060
NEST	0.21	117.0	AMl	22:16:32.640						_____		0.1	0.14	a__	Ml 1.1	10842
FNA	0.52	57.0	Sg	22:16:41.728	0.1					_____				m__		20062
FNA	0.52	57.0	Pg	22:16:33.664	-0.1					_____				m__		20061

DATA\_TYPE COMMENT GSE2.1  
Event 1448

Official Magnitude:  
Ml 1.09

Error ellipse:

	Azim	Dip	Mag
Max:	241	57	1.7000
Intermediate:	34	30	0.8300

Min: 131 12 0.4800

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819884 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1449 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	22:21:40.92		0.17	40.5033	20.7800				12.0	1.5	6	10	162	0.12	1.03	m	1508

Magnitude	Err	Nsta	Author	OrigID
M1	1.7	0.0	2	1508

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.12	2.0	Sg	22:21:45.826	-0.1					---				m		20065	
KBN	0.12	2.0	Pg	22:21:44.319	0.5					---				m		20064	
KBN	0.12	2.0	AMl	22:21:47.010						---		1.5	0.14	a	Ml	2.0	10843
NEST	0.22	113.0	Sg	22:21:49.836	0.0					---				m		20067	
NEST	0.22	113.0	Pg	22:21:47.007	1.0					---				m		20066	
NEST	0.22	113.0	AMl	22:21:51.430						---		0.3	0.16	a	Ml	1.4	10844
FNA	0.54	58.0	Sg	22:21:59.919	-0.1					---				m		20069	
FNA	0.54	58.0	Pg	22:21:52.060	0.2					---				m		20068	
IGT	1.03	200.0	Pg	22:22:01.102	-0.1					---				m		20070	

DATA\_TYPE COMMENT GSE2.1  
Event 1449

Official Magnitude:  
M1 1.70

Error ellipse:

	Azim	Dip	Mag
Max:	5	72	1.5900
Intermediate:	99	1	0.7300
Min:	189	18	0.5800

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819883 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1451 1.0 km from Gjyrës, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	22:37:57.48		0.07	40.5542	20.8767				0.0	1.0	6	6	113	0.10	1.10	m	

Magnitude	Err	Nsta	Author	OrigID
M1	1.6	0.0	2	1510

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
KBN	0.10	316.0	Sg	22:38:00.839	0.0									m		20078	
KBN	0.10	316.0	Pg	22:37:59.295	-0.1									m		20077	
KBN	0.10	316.0	AMl	22:38:01.890								1.0	0.14	a	M1	1.6	10847
NEST	0.19	0.0	Pg	22:38:01.774	0.0									m		20084	
NEST	0.19	136.0	Sg	22:38:05.365	-0.0									m		20079	
NEST	0.19	136.0	AMl	22:38:06.170								0.4	0.14	a	M1	1.5	10848
FNA	0.45	59.0	Sg	22:38:14.704	0.1									m		20081	
FNA	0.45	59.0	Pg	22:38:07.030	-0.3									m		20080	
IGT	1.10	203.0	Sg	22:38:36.663	0.1									m		20083	
IGT	1.10	203.0	Pg	22:38:19.668	-0.2									m		20082	

DATA\_TYPE COMMENT GSE2.1  
Event 1451

Official Magnitude:  
M1 1.55

Error ellipse:

	Azim	Dip	Mag
Max:	308	69	1.0400
Intermediate:	49	4	0.3300
Min:	141	21	0.2200

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819883 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1453 1.2 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	23:31:26.96		0.00	40.5293	20.8238				8.3	2.8	4	7	221	0.10	0.49	m	

Magnitude	Err	Nsta	Author	OrigID
M1	1.2	0.0	1	1512

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
NEST	0.00	0.0	Pg	23:31:31.982	0.0					---				m		20096
NEST	0.21	123.0	Sg	23:31:35.022	-0.0					---				m		20093
NEST	0.21	123.0	AMl	23:31:36.500						---		0.2	0.10	a	Ml	1.3
NEST	0.21	123.0	AMl	23:31:38.080						---		0.2	0.16	a	Ml	1.2
KBN	0.10	344.0	Sg	23:31:30.750	-0.0					---				m		20092
KBN	0.10	344.0	Pg	23:31:28.610	-0.5					---				m		20091
FNA	0.49	59.0	Sg	23:31:44.617	0.0					---				m		20095
FNA	0.49	59.0	Pg	23:31:37.053	0.0					---				m		20094

DATA\_TYPE COMMENT GSE2.1  
Event 1453

Official Magnitude:  
Ml 1.23

Error ellipse:

	Azim	Dip	Mag
Max:	255	64	3.0500
Intermediate:	46	22	0.8400
Min:	141	11	0.4000

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819883 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1455 0.3 km from Dardhë, Korçë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	23:47:25.23		0.14	40.5163	20.8273				1.3	1.1	9	22	134	0.11	1.68	m	
OrigID 1514																	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.4	0.0	2	1514

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
KBN	0.11	345.0	Sg	23:47:29.201	0.1					---				m		20108
KBN	0.11	345.0	Pg	23:47:27.622	0.2					---				m		20107
KBN	0.11	345.0	AMl	23:47:30.610						---		0.9	0.28	a	Ml	1.6
NEST	0.20	120.0	Sg	23:47:32.693	-0.5					---				m		20110
NEST	0.20	120.0	Pg	23:47:29.976	0.2					---				m		20109
NEST	0.20	120.0	AMl	23:47:34.520						---		0.3	0.16	a	Ml	1.4
NEST	0.20	120.0	AMl	23:47:34.590						---		0.3	0.12	a	Ml	1.4
FNA	0.50	57.0	Sg	23:47:43.875	0.1					---				m		20112
FNA	0.50	57.0	Pg	23:47:35.641	-0.2					---				m		20111
IGT	1.05	202.0	Sg	23:48:02.509	0.1					---				m		20114

IGT	1.05	202.0	Pg	23:47:46.320	-0.2	---	m	20113
PUK	1.68	336.0	Sn	23:48:22.197	-0.1	---	m	20116
PUK	1.68	336.0	Pn	23:47:57.690	-0.1	---	m	20115

DATA\_TYPE COMMENT GSE2.1  
Event 1455

Official Magnitude:  
Ml 1.40

Error ellipse:

	Azim	Dip	Mag
Max:	114	85	1.0900
Intermediate:	271	3	0.4800
Min:	2	2	0.3200

**Tërmetet Rajonalë (Parametric Data for Regional Events recorded by ASN)**

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819897 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1322 3.7 km from Gramos, West Macedonia, Greece

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
OrigID																	

2019/07/01 04:05:08.62 0.22 40.4082 20.7982 6.3 2.8 10 27 116 0.19 1.77 m  
1379

Magnitude Err Nsta Author OrigID  
M1 2.3 0.0 6 1379

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
NEST	0.19	87.0	Sg	04:05:15.967	-0.2									m		18569
NEST	0.19	87.0	Pg	04:05:09.499	-3.4									m		18568
NEST	0.19	87.0	AM1	04:05:19.660								2.4	0.16	a	M1	2.3
KBN	0.22	0.0	Pg	04:05:08.412	0.0									m		18579
KBN	0.22	358.0	Sg	04:05:16.027	-0.1									m		18570
KBN	0.22	358.0	AM1	04:05:16.680								3.7	0.40	a	M1	2.5
FNA	0.58	49.0	Sg	04:05:28.877	-0.3									m		18572
FNA	0.58	49.0	Pg	04:05:20.381	0.0									m		18571
FNA	0.58	49.0	AM1	04:05:30.790								1.2	0.20	a	M1	2.4
SRN	0.81	230.0	Sg	04:05:36.997	-0.4									m		18574
SRN	0.81	230.0	Pg	04:05:24.323	-0.7									m		18573
SRN	0.81	230.0	AM1	04:05:40.000								0.1	0.56	a	M1	1.7
IGT	0.95	203.0	Sg	04:05:41.205	-0.2									m		18576
IGT	0.95	203.0	Pg	04:05:27.647	0.3									m		18575
IGT	0.95	203.0	AM1	04:05:49.950								0.1	0.44	a	M1	1.7
PUK	1.77	338.0	Sg	04:06:07.297	-0.2									m		18578
PUK	1.77	338.0	Pg	04:05:42.424	0.2									m		18577
PUK	1.77	338.0	AM1	04:06:12.960								0.1	0.58	a	M1	2.3

DATA\_TYPE COMMENT GSE2.1  
Event 1322

Official Magnitude:  
M1 2.30

Error ellipse:

	Azim	Dip	Mag
Max:	132	79	2.8600
Intermediate:	302	10	0.5800
Min:	32	2	0.3800

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819897 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1328 2.6 km from Trilofo, West Macedonia, Greece

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author

2019/07/01 23:07:47.92 0.24 40.4478 20.8473 12.8 0.9 14 9 102 0.15 2.00 m  
1385

Magnitude Err Nsta Author OrigID  
M1 2.9 0.0 8 1385

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
NEST	0.16	102.0	Sg	23:07:54.981	0.1									m		18625
NEST	0.16	102.0	Pg	23:07:51.826	-0.1									m		18624
NEST	0.16	102.0	AM1	23:07:57.840								11.1	0.30	a	M1 2.9	10117
KBN	0.18	346.0	Sg	23:07:54.852	0.0									m		18627
KBN	0.18	346.0	Pg	23:07:50.701	-1.2									m		18626
KBN	0.18	346.0	AM1	23:07:58.980								10.3	0.50	a	M1 2.9	10118
FNA	0.53	50.0	Sg	23:08:07.059	0.3									m		18629
FNA	0.53	50.0	Pg	23:07:58.300	-0.4									m		18628
FNA	0.53	50.0	AM1	23:08:10.840								1.5	0.26	a	M1 2.5	10119
SRN	0.86	230.0	Sg	23:08:18.209	-0.3									m		18631
SRN	0.86	230.0	Pg	23:08:03.067	-2.3									m		18630
SRN	0.86	230.0	AM1	23:08:18.890								0.9	0.54	a	M1 2.6	10120
IGT	1.00	204.0	S	23:08:22.584	0.3									m		18633
IGT	1.00	204.0	P	23:08:06.349	-1.2									m		18632
VLO	1.03	272.0	Sg	23:08:22.156	0.0									m		18635
VLO	1.03	272.0	Pg	23:08:07.577	0.1									m		18634
VLO	1.03	272.0	AM1	23:08:29.990								4.2	0.44	a	M1 3.4	10121
TIR	1.17	0.0	Pg	23:08:08.951	0.0									m		18641
TIR	1.17	321.0	Sg	23:08:27.745	0.2									m		18636
TIR	1.17	321.0	AM1	23:08:34.420								0.4	0.50	a	M1 2.5	10122
PUK	1.75	337.0	Sn	23:08:45.514	0.2									m		18638
PUK	1.75	337.0	Pn	23:08:20.335	-0.4									m		18637
PUK	1.75	337.0	AM1	23:08:50.260								0.5	0.54	a	M1 3.0	10123
BCI	2.00	344.0	Sn	23:08:52.357	-0.2									m		18640
BCI	2.00	344.0	Pn	23:08:25.251	0.4									m		18639
BCI	2.00	344.0	AM1	23:08:58.000								0.4	0.54	a	M1 3.1	10124

DATA\_TYPE COMMENT GSE2.1  
Event 1328

Official Magnitude:  
M1 2.93

Error ellipse:

	Azim	Dip	Mag
Max:	106	60	1.0600
Intermediate:	350	14	0.4200
Min:	253	26	0.3800

BEGIN GSE2.1  
MSG\_TYPE DATA



MSG\_ID 1564819895 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1338 4.0 km from Gramos, West Macedonia, Greece

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/06	01:37:12.58		0.47	40.4122	20.8738				27.8	1.6	10	7	118	0.13	1.79	m	

Magnitude	Err	Nsta	Author	OrigID
M1	3.8	0.0	4	1395

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.13	88.0	Sg	01:37:19.657	-2.5					---				m		18775	
NEST	0.13	88.0	Pg	01:37:17.952	-0.1					---				m		18774	
NEST	0.13	88.0	AM1	01:37:22.500						---		30.3	0.22	a	M1	3.6	10233
KBN	0.24	0.0	Pg	01:37:16.368	0.0					---				mci			18786
KBN	0.22	343.0	Sg	01:37:18.516	-4.5					---				m			18776
KBN	0.22	343.0	AM1	01:37:19.580						---		69.0	0.40	a	M1	3.9	10234
FNA	0.54	46.0	Sg	01:37:32.355	0.0					---				m			18778
FNA	0.54	46.0	Pg	01:37:23.802	-0.1					---				m			18777
FNA	0.54	46.0	AM1	01:37:32.960						---		18.5	0.36	a	M1	3.6	10235
SRN	0.85	232.0	Pn	01:37:29.654	-0.1					---				m			18779
IGT	0.97	206.0	Sn	01:37:45.146	-0.5					---				m			18781
IGT	0.97	206.0	Pn	01:37:32.793	1.3					---				m			18780
THE	1.61	81.0	Sn	01:38:04.044	-0.5					---				m			18783
THE	1.61	81.0	Pn	01:37:42.929	0.7					---				m			18782
PUK	1.79	336.0	Sn	01:38:09.228	0.1					---				m			18785
PUK	1.79	336.0	Pn	01:37:44.569	-0.3					---				m			18784
PUK	1.79	336.0	AM1	01:38:15.130						---		4.2	0.70	a	M1	4.0	10236

DATA\_TYPE COMMENT GSE2.1  
Event 1338

Official Magnitude:  
M1 3.78

Error ellipse:

	Azim	Dip	Mag
Max:	142	54	1.9800
Intermediate:	305	33	1.3600
Min:	40	8	0.9500

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819893 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1356 3.1 km from SpatharaÄ-oi, Epirus, Greece

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/12	01:11:48.30		0.25	39.3433	20.4757				24.6	1.0	18	11	140	0.22	2.73 m		

Magnitude	Err	Nsta	Author	OrigID
Ml	3.8	0.0	10	1413
Md	3.8	0.0	3	1413

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
IGT	0.22	330.0	Sg	01:11:57.553	-0.3									m		19002
IGT	0.22	330.0	Pg	01:11:54.071	0.3									mdi		19001
IGT	0.22	330.0	AMl	01:12:01.268								41.7	0.32	a__ Ml	3.7	10354
IGT	0.22	330.0	AMd	01:14:04.953								0.0	130.88	a__ Md	3.1	10351
LKD2	0.57	165.0	Sg	01:12:08.568	-0.2									m		19004
LKD2	0.57	165.0	Pg	01:12:00.421	0.4									mci		19003
LKD2	0.57	165.0	AMl	01:12:19.008								12.8	0.48	a__ Ml	3.5	10355
LKD2	0.57	165.0	AMd	01:14:21.495								0.0	141.07	a__ Md	3.8	10352
SRN	0.65	326.0	Sg	01:12:11.944	0.1									m		19006
SRN	0.65	326.0	Pg	01:12:01.453	-0.3									mdi		19005
SRN	0.65	326.0	AMl	01:12:15.148								6.3	0.40	a__ Ml	3.3	10356
SRN	0.65	326.0	AMd	01:14:19.296								0.0	137.84	a__ Md	3.8	10353
NEST	1.16	22.0	Sn	01:12:26.916	-0.0									m		19008
NEST	1.16	22.0	Pn	01:12:09.912	-0.5									mce		19007
NEST	1.16	22.0	AMl	01:12:33.538								15.7	0.54	a__ Ml	4.1	10357
KBN	1.30	10.0	Sn	01:12:31.476	0.9									m		19010
KBN	1.30	10.0	Pn	01:12:12.659	0.2									mdi		19009
KBN	1.30	10.0	AMl	01:12:35.608								8.9	0.84	a__ Ml	4.0	10358
VLO	1.35	327.0	Sn	01:12:32.013	0.2									m		19012
VLO	1.35	327.0	Pn	01:12:15.728	2.6									mde		19011
VLO	1.35	327.0	AMl	01:12:42.648								11.5	0.48	a__ Ml	4.1	10359
FNA	1.60	25.0	Sn	01:12:40.336	0.0									m		19014
FNA	1.60	25.0	Pn	01:12:17.962	-0.1									mde		19013
FNA	1.60	25.0	AMl	01:12:46.108								3.9	0.50	a__ Ml	3.8	10360
SCTE	1.71	296.0	Sn	01:12:41.861	-1.7									m		19016
SCTE	1.71	296.0	Pn	01:12:19.540	-0.3									mce		19015
SCTE	1.71	296.0	AMl	01:12:56.288								3.2	0.48	a__ Ml	3.8	10361
TIR	2.06	0.0	Pn	01:12:25.355	0.0									mdi		19022
TIR	2.05	348.0	Sn	01:12:52.494	0.0									m		19017
TIR	2.05	348.0	AMl	01:13:19.778								1.1	0.64	a__ Ml	3.5	10362
PHP	2.34	0.0	Sn	01:12:59.388	0.2									m		19019
PHP	2.34	0.0	Pn	01:12:29.156	0.3									m		19018
PUK	2.73	351.0	Sn	01:13:09.513	-0.1									m		19021
PUK	2.73	351.0	Pn	01:12:34.201	-0.6									mce		19020
PUK	2.73	351.0	AMl	01:13:24.818								1.1	0.44	a__ Ml	3.9	10363

DATA\_TYPE COMMENT GSE2.1

Event 1356

Official Magnitude:  
Ml 3.82

Error ellipse:

	Azim	Dip	Mag
Max:	231	66	1.0800
Intermediate:	82	19	0.7900
Min:	348	11	0.4900

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819892 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1366 1.2 km from Lopuški Han, Prizren, Kosovo

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/15	00:31:14.50		0.10	42.1303	20.6478				8.4	3.5	6	17	230	0.47	1.74	m	1423

Magnitude	Err	Nsta	Author	OrigID
Ml	1.2	0.0	3	1423

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
PHP	0.47	200.0	Sg	00:31:30.741	-0.1					---				m		19176
PHP	0.47	200.0	Pg	00:31:23.990	0.1					---				m		19175
PHP	0.47	200.0	AMl	00:31:31.448						---		0.1	0.22	a	Ml	1.2
BCI	0.49	0.0	Pg	00:31:25.446	0.0					---				m		19181
BCI	0.49	299.0	Sg	00:31:31.764	-0.1					---				m		19177
BCI	0.49	299.0	AMl	00:31:35.948						---		0.1	0.16	a	Ml	1.3
PUK	0.57	262.0	Sg	00:31:34.491	0.1					---				m		19179
PUK	0.57	262.0	Pg	00:31:26.148	0.3					---				m		19178
PUK	0.57	262.0	AMl	00:31:37.378						---		0.1	0.30	a	Ml	1.1
PUK	0.57	262.0	AMl	00:31:37.058						---		0.1	0.22	a	Ml	1.1
NEST	1.74	169.0	Pn	00:31:47.587	-0.0					---				m		19180

DATA\_TYPE COMMENT GSE2.1  
 Event 1366

Official Magnitude:  
Ml 1.17

Error ellipse:

	Azim	Dip	Mag
Max:	247	73	3.6500

Intermediate: 50 15 0.8900  
 Min: 141 5 0.4000

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819892 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1373 1.7 km from Gorno Palčište, Bogovinje, North Macedonia

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/17	19:03:01.14		0.12	41.9807	20.8998				1.9	1.2	9	6	219	0.45	1.36	m	1431

Magnitude	Err	Nsta	Author	OrigID
M1	2.6	0.0	5	1431

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
PHP	0.45	230.0	Sg	19:03:16.113	-1.4					---				m__		19275
PHP	0.45	230.0	Pg	19:03:10.333	-0.2					---				mci		19274
PHP	0.45	230.0	AM1	19:03:16.720						---		2.0	0.40	a__ M1	2.5	10468
BCI	0.73	303.0	Sg	19:03:27.045	-0.0					---				m__		19277
BCI	0.73	303.0	Pg	19:03:15.992	0.0					---				m__		19276
BCI	0.73	303.0	AM1	19:03:29.530						---		1.4	0.42	a__ M1	2.7	10469
PUK	0.75	276.0	Sg	19:03:26.740	-1.1					---				m__		19279
PUK	0.75	276.0	Pg	19:03:15.911	-0.5					---				mce		19278
PUK	0.75	276.0	AM1	19:03:31.680						---		0.7	0.46	a__ M1	2.4	10470
TIR	1.00	232.0	S	19:03:36.362	0.0					---				m__		19281
TIR	1.00	232.0	P	19:03:21.295	0.1					---				m__		19280
FNA	1.25	0.0	Pn	19:03:25.936	0.0					---				mce		19285
FNA	1.25	162.0	Sn	19:03:44.612	-0.1					---				m__		19282
FNA	1.25	162.0	AM1	19:03:47.750						---		0.5	0.40	a__ M1	2.7	10471
KBN	1.36	184.0	Sn	19:03:47.455	0.0					---				m__		19284
KBN	1.36	184.0	Pn	19:03:27.800	0.2					---				m__		19283
KBN	1.36	184.0	AM1	19:03:49.720						---		0.3	0.50	a__ M1	2.6	10472

DATA\_TYPE COMMENT GSE2.1  
 Event 1373

Official Magnitude:  
 M1 2.59

Error ellipse:

	Azim	Dip	Mag
Max:	44	69	1.3300
Intermediate:	239	19	0.7800
Min:	147	5	0.3900

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819891 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1388 2.8 km from Nea Kotyli, West Macedonia, Greece

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/23	06:19:25.30		0.26	40.3215	21.0148				28.2	3.3	4	4	183	0.10	0.95	m	

Magnitude	Err	Nsta	Author	OrigID
M1	1.2	0.0	1	1447

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.24	0.0	Pg	06:19:29.223	0.0									mc_		19414	
NEST	0.10	15.0	Sg	06:19:34.431	-0.0									m_		19409	
NEST	0.10	15.0	AM1	06:19:37.240								0.1	0.26	a_	M1	1.2	10529
FNA	0.54	31.0	Sg	06:19:45.500	0.3									m_		19411	
FNA	0.54	31.0	Pg	06:19:36.271	-0.4									md_		19410	
IGT	0.95	214.0	Sg	06:19:59.688	2.1									m_		19413	
IGT	0.95	214.0	Pg	06:19:43.885	0.1									m_		19412	

DATA\_TYPE COMMENT GSE2.1  
 Event 1388

Official Magnitude:  
 M1 1.18

Error ellipse:

	Azim	Dip	Mag
Max:	303	7	24.9300
Intermediate:	62	74	1.7100
Min:	211	14	0.9400

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1564819890 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1392 2.0 km from NounesĀiti, Epirus, Greece

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author

2019/07/25 13:44:43.64 0.28 39.4443 20.3763 4.8 2.9 9 22 134 0.52 1.60 m  
1451

Magnitude Err Nsta Author OrigID  
M1 1.9 0.0 4 1451

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
IGT	0.09	338.0	Sg	13:44:46.034	-1.7									m		19474
IGT	0.09	338.0	Pg	13:44:44.524	-1.4									m		19473
IGT	0.09	338.0	AM1	13:44:46.188								12.9	0.20	a	M1	2.8
SRN	0.52	327.0	Sg	13:45:02.760	-0.3									m		19478
SRN	0.52	327.0	Pg	13:44:54.249	-0.5									m		19477
SRN	0.52	327.0	AM1	13:45:04.918								0.2	0.46	a	M1	1.5
KEK	0.52	302.0	Sg	13:45:02.587	0.2									m		19476
KEK	0.52	302.0	P	13:44:54.966	0.6									m		19475
LKD2	0.69	161.0	Sg	13:45:07.897	-0.1									m		19480
LKD2	0.69	161.0	Pg	13:44:57.619	0.1									m		19479
LKD2	0.69	161.0	AM1	13:45:18.258								0.4	0.44	a	M1	2.1
NEST	1.10	27.0	Sg	13:45:21.853	0.2									m		19482
NEST	1.10	27.0	Pg	13:45:05.354	0.0									m		19481
NEST	1.10	27.0	AM1	13:45:31.408								0.1	0.54	a	M1	1.8
NEST	1.10	27.0	AM1	13:45:33.838								0.1	0.88	a	M1	1.9
SCTE	1.60	294.0	Sn	13:45:37.753	0.0									m		19483

DATA\_TYPE COMMENT GSE2.1  
Event 1392

Official Magnitude:  
M1 1.86

Error ellipse:

	Azim	Dip	Mag
Max:	90	84	2.9300
Intermediate:	238	4	0.8200
Min:	328	3	0.5400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819890 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1395 2.2 km from Asproklisia, West Macedonia, Greece

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/26	08:24:46.66		0.04	40.3917	21.2735				4.9	0.6	7	20	209	0.17	1.12	m	
1454																	

Magnitude Err Nsta Author OrigID  
M1 2.2 0.0 1 1454

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
NEST	0.17	278.0	Sg	08:24:53.663	0.0									m__		19514
NEST	0.17	278.0	Pg	08:24:50.628	-0.0									mc__		19513
NEST	0.17	278.0	AM1	08:24:53.930								2.4	0.16	a__	M1 2.2	10562
FNA	0.40	12.0	Sg	08:25:01.304	0.1									m__		19516
FNA	0.40	12.0	Pg	08:24:54.938	-0.1									md__		19515
KBN	0.44	303.0	Sg	08:25:01.684	-0.0									m__		19518
KBN	0.44	303.0	Pg	08:24:54.891	-0.4									m__		19517
IGT	1.12	221.0	Sg	08:25:25.535	0.0									m__		19520
IGT	1.12	221.0	Pg	08:25:10.139	1.3									m__		19519

DATA\_TYPE COMMENT GSE2.1  
Event 1395

Official Magnitude:  
M1 2.22

Error ellipse:

	Azim	Dip	Mag
Max:	294	56	0.7700
Intermediate:	137	31	0.4900
Min:	40	11	0.2900

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819889 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1412 4.5 km from Gramos, West Macedonia, Greece

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/30	01:07:23.62		0.12	40.4103	20.7892				11.4	2.1	6	8	157	0.20	0.95	m	
1471																	

Magnitude Err Nsta Author OrigID  
M1 1.4 0.0 2 1471

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
NEST	0.00	0.0	Pg	01:07:28.507	0.0									m__		19727
NEST	0.20	88.0	Sg	01:07:31.627	-0.0									m__		19720
NEST	0.20	88.0	AM1	01:07:33.450								0.3	0.26	a__	M1 1.4	10649
NEST	0.20	88.0	AM1	01:07:34.750								0.3	0.30	a__	M1 1.4	10648
KBN	0.21	0.0	Sg	01:07:31.401	0.1									m__		19722
KBN	0.21	0.0	Pg	01:07:27.881	-0.1									m__		19721

KBN	0.21	0.0	AMl	01:07:31.720								0.3	0.32	a__	Ml	1.4	10650
FNA	0.59	50.0	Sg	01:07:44.523	0.2									m__			19724
FNA	0.59	50.0	Pg	01:07:35.306	-0.2									m__			19723
IGT	0.95	203.0	Sg	01:07:56.460	0.1									m__			19726
IGT	0.95	203.0	Pg	01:07:43.383	1.0									m__			19725

DATA\_TYPE COMMENT GSE2.1  
Event 1412

Official Magnitude:  
Ml 1.41

Error ellipse:

	Azim	Dip	Mag
Max:	36	76	2.1600
Intermediate:	297	2	0.6300
Min:	207	14	0.4000

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1564819888 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 1422 2.3 km from Glykon@ri, West Macedonia, Greece

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/07/31	14:30:05.48		0.07	40.3758	20.9883				29.0	0.8	8	7	163	0.06	0.98	m	1481

Magnitude	Err	Nsta	Author	OrigID
Ml	3.4	0.0	2	1481
Md	2.8	0.0	4	1481

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.06	49.0	Sg	14:30:14.495	-0.0									m__		19856	
NEST	0.06	49.0	Pg	14:30:10.616	-0.0									m__		19855	
NEST	0.06	49.0	AMl	14:30:18.000								46.5	0.32	a__	Ml	3.7	10734
NEST	0.06	49.0	AMd	14:31:14.867								0.0	64.25	a__	Md	3.0	10730
KBN	0.29	329.0	Sg	14:30:17.798	0.0									m__		19858	
KBN	0.29	329.0	Pg	14:30:08.900	-3.6									m__		19857	
FNA	0.50	36.0	Pg	14:30:16.352	0.0									m__		19859	
FNA	0.50	36.0	AMd	14:31:03.632								0.0	47.28	a__	Md	2.1	10731
SRN	0.90	238.0	Sg	14:30:37.151	-0.0									m__		19861	
SRN	0.90	238.0	Pg	14:30:23.526	-0.1									m__		19860	
SRN	0.90	238.0	AMl	14:30:53.100								2.5	1.18	a__	Ml	3.1	10735
SRN	0.90	238.0	AMd	14:31:49.802								0.0	86.28	a__	Md	2.7	10732
IGT	0.98	212.0	Sg	14:30:39.153	0.2									m__		19863	



IGT 0.98 212.0 Pg 14:30:24.377 -0.2  
 IGT 0.98 212.0 AMd 14:31:56.158

\_\_\_\_\_ m \_\_\_\_\_ 19862  
 \_\_\_\_\_ a \_\_\_\_\_ Md 2.8 10733

DATA\_TYPE COMMENT GSE2.1  
 Event 1422

Official Magnitude:  
 Ml 3.44

Error ellipse:

	Azim	Dip	Mag
Max:	26	66	0.8500
Intermediate:	127	5	0.7400
Min:	219	23	0.3600

### Tërmete të largëta (Long distance earthquake)

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2019-07-27	1831	08.1			33.17N	137.26 E	376			6.3		NEAR S. COAST OF HONSHU, JAPAN
RDO	HHZ	P	2019-07-27	18:42:52.5152								
FNA	HHZ	P	2019-07-27	18:43:05.1380								
NEST	HHZ	P	2019-07-27	18:43:07.0376								
KBN	HHZ	P	2019-07-27	18:43:06.6564								
BCI	HHZ	P	2019-07-27	18:43:03.8901								
IGT	HHZ	P	2019-07-27	18:43:11.2242								
PUK	HHZ	P	2019-07-27	18:43:05.3929								
SRN	HHZ	P	2019-07-27	18:43:10.9428								
ITM	HHZ	P	2019-07-27	18:43:13.7020								

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2019-07-31	0440	03.9	35.32	24.97	80	5.0	CRETE, GREECE					
ARG	HHZ	PN	2019-07-27	04:40:47.6821								
THE	HHZ	PN	2019-07-27	04:41:33.7670								
SRN	HHZ	PN	2019-07-27	04:41:38.2688								
NEST	HHZ	PN	2019-07-27	04:41:38.8040								
KBN	HHZ	PN	2019-07-27	04:41:42.3450								
VLO	HHZ	PN	2019-07-27	04:41:48.0212								
TIR	HHZ	PN	2019-07-27	04:41:54.4000								
PHP	HHZ	PN	2019-07-27	04:41:54.5528								
PUK	HHZ	PN	2019-07-27	04:42:01.7574								
BCI	HHZ	PN	2019-07-27	04:42:04.4095								

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2019-07-31	1502	35.2	16.21S	167.98E	120	6.5	VANUATU					
PHP	HHZ	P	2019-07-31	15:21:32.4379								
PUK	HHZ	P	2019-07-31	15:21:38.2651								
KBN	HHZ	P	2019-07-31	15:21:39.1622								
FNA	HHZ	P	2019-07-31	15:21:40.0486								
BCI	HHZ	P	2019-07-31	15:21:40.8318								
VLO	HHZ	P	2019-07-31	15:21:45.4395								
SRN	HHZ	P	2019-07-31	15:21:51.4663								

**Tërmete të pa-lokalizueshëm, me më pak se tre stacione (un-locatable earthquakes with less than three stations)**

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter

2019-07-06 2350 49.772 KBN  
GAP= hor.err= ver.err=

STAT SP IPHASW D HRMM SECON AZIMU RES DIS DUR Md  
KBN SZ IPG 2350 49.772  
KBN SE ISG 2350 50.835

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter

2019-07-23 0432 15.76 KBN-NEST  
GAP= hor.err= ver.err=

STAT SP IPHASW D HRMM SECON AZIMU RES DIS DUR Md  
KBN SZ IPG 0432 13.18  
KBN SE ISG 0432 16.03  
NEST SZ IPG 0432 15.76  
NEST SE ISG 0432 19.97

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter

2019-07-23 1339 33.13 PUK  
GAP= hor.err= ver.err=

STAT SP IPHASW D HRMM SECON AZIMU RES DIS DUR Md  
PUK SZ IPG 1339 33.13  
PUK SE ISG 1339 34.36

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter

2019-07-23 1642 36.92 PUK  
GAP= hor.err= ver.err=

STAT SP IPHASW D HRMM SECON AZIMU RES DIS DUR Md

PUK SZ IPG 1642 36.92  
 PUK SE ISG 1642 41.48

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter

2019-07-25 1707 04.514 PHP-PUK  
 GAP= hor.err= ver.err=

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		1707	04.514					
PHP	SE	ISG		1707	08.595					
PUK	SZ	IPG		1707	08.574					
PUK	SE	ISG		1707	14.389					

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter

2019-07-29 0808 32.127 PHP-PUK  
 GAP= hor.err= ver.err=

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0808	32.12					
PHP	SE	ISG		0808	36.05					
PUK	SZ	IPG		0808	37.44					
PUK	SE	ISG		0808	45.94					

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter

2019-07-29 1352 58.60 SRN  
 GAP= hor.err= ver.err=

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
SRN	SZ	IPG		1352	58.60					
SRN	SE	ISG		1352	58.83					

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter

2019-07-31 1644 17.61 KBN-NEST

GAP=		hor.err=		ver.err=					
STAT SP IPHASW D HRMM SECON				AZIMU RES	DIS	DUR	Md		
KBN SZ IPG		1644	17.61						
KBN SE ISG		1644	19.11						
NEST SZ IPG		1644	20.34						
NEST SE ISG		1644	24.36						

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2019-07-31			1704	08.97								KBN-NEST
GAP=					hor.err=					ver.err=		

STAT SP IPHASW D HRMM SECON				AZIMU RES	DIS	DUR	Md		
KBN SZ IPG		1704	08.97						
KBN SE ISG		1704	10.47						
NEST SZ IPG		1704	11.63						
NEST SE ISG		1704	15.45						

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2019-07-31			1723	15.54								KBN-NEST
GAP=					hor.err=					ver.err=		

STAT SP IPHASW D HRMM SECON				AZIMU RES	DIS	DUR	Md		
KBN SZ IPG		1723	15.54						
KBN SE ISG		1723	17.54						
NEST SZ IPG		1723	17.58						
NEST SE ISG		1723	20.31						

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2019-07-31			1822	00.42								KBN-NEST
GAP=					hor.err=					ver.err=		

STAT SP IPHASW D HRMM SECON				AZIMU RES	DIS	DUR	Md		
KBN SZ IPG		1822	00.42						
KBN SE ISG		1822	02.75						
NEST SZ IPG		1822	02.70						

NEST SE ISG 1822 05.63

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter

2019-07-31 2225 21.77 KBN-NEST  
GAP= hor.err= ver.err=

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
KBN	SZ	IPG		2225	21.77					
KBN	SE	ISG		2225	23.38					
NEST	SZ	IPG		2225	24.03					
NEST	SE	ISG		2225	27.07					

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter

2019-07-31 2240 51.24 KBN-NEST  
GAP= hor.err= ver.err=

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
KBN	SZ	IPG		2240	51.24					
KBN	SE	ISG		2240	53.26					
NEST	SZ	IPG		2240	54.34					
NEST	SE	ISG		2240	57.78					

**Katalogu i termeteve** (Catalog of earthquakes)

Datetime. Origin time	Rms	Lat	Long	Mag	Depth	D. err	N. st	N. ph	Gap
2019-07-01 00:02:39	0	40.467	20.756	1.5	16.6	1.1	7	5	265
2019-07-01 03:14:58	0.2	40.439	20.743	2.8	0.8	1.3	28	14	99
2019-07-01 03:47:01	0.1	40.422	20.758	1.7	6.3	13.5	7	5	138
2019-07-01 03:49:37	0.2	40.416	20.749	3	5	0.8	27	17	93
2019-07-01 03:52:25	0	40.472	20.827	1.3	9.1	2.5	6	4	241
2019-07-01 03:54:29	0.1	40.487	20.848	1.2	2.1	3.6	6	4	227
2019-07-01 04:05:08	0.2	40.408	20.798	2.3	6.3	2.8	27	10	116
2019-07-01 04:21:59	0.2	40.419	20.765	1.7	16.7	1.5	7	8	136
2019-07-01 10:26:18	0	40.542	20.742	1.4	16.1	1.5	7	4	264
2019-07-01 17:02:03	0.2	40.414	20.756	2.2	4	1.7	6	9	112
2019-07-01 17:19:23	0	40.527	20.787	2.3	13.5	1.3	7	5	241
2019-07-01 18:11:29	0.2	40.399	20.738	2.3	13.9	1.2	6	8	141
2019-07-01 23:07:47	0.2	40.448	20.847	2.9	12.8	0.9	9	14	102
2019-07-03 14:13:47	0.1	40.388	19.819	3.7	24.9	0.8	15	20	90
2019-07-03 19:15:26	0.1	41.848	19.385	2.6	24.8	1.9	24	20	73
2019-07-03 19:36:51	0.2	40.387	19.809	2.9	28.8	0.8	14	15	91
2019-07-04 13:43:05	0.1	40.394	19.787	3.1	28.4	0.4	18	20	92
2019-07-04 15:44:28	0.2	40.497	20.678	2.3	6.4	1.6	9	11	136
2019-07-04 20:01:21	0	40.519	20.840	1	7	4.3	5	5	216
2019-07-05 03:50:36	0.1	40.592	20.626	1.9	10.1	2.6	7	6	220
2019-07-05 05:05:03	0.3	40.457	20.774	3	4.6	1.4	7	11	111
2019-07-05 23:35:01	0	40.652	20.711	2	11.7	0.5	4	5	303
2019-07-06 01:26:22	0.1	40.483	20.788	1.9	14.5	1.2	5	5	159
2019-07-06 01:37:12	0.5	40.412	20.874	3.8	27.8	1.6	7	10	118

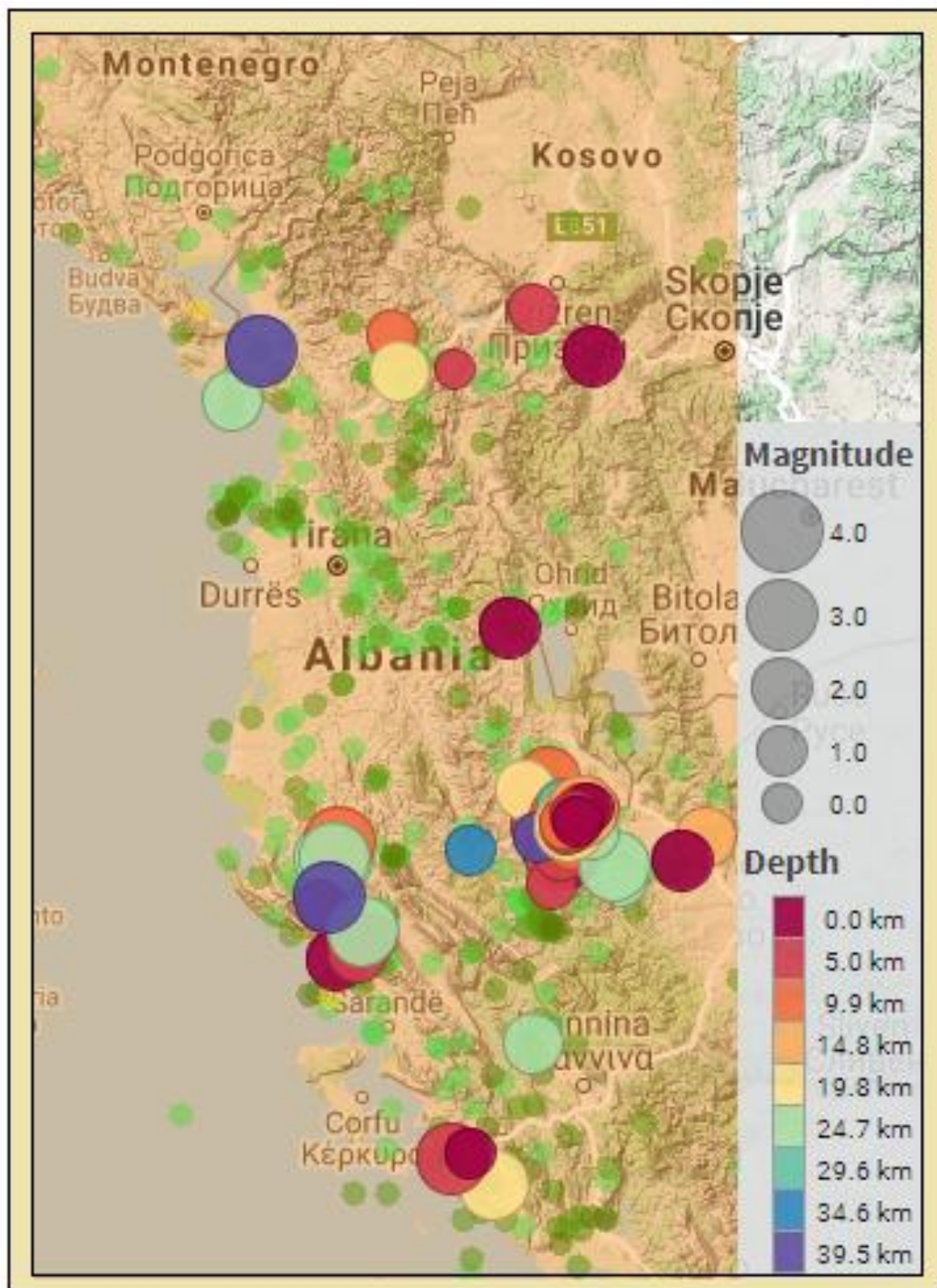
2019-07-06 11:57:55	0.1	41.997	19.500	3.2	43.4	1.6	12	15	170
2019-07-06 18:40:00	0.2	40.483	20.818	1.9	2.7	1.2	7	10	110
2019-07-07 00:38:16	0.2	40.517	20.842	2	4.3	1.1	6	8	110
2019-07-07 04:40:20	0	40.505	20.785	2.1	25.2	0.8	8	9	135
2019-07-07 14:35:34	0.1	40.508	20.801	1.2	12.2	1.6	3	5	239
2019-07-08 22:00:03	0	40.495	20.802	0.9	8	2.9	3	5	242
2019-07-09 01:52:37	0.1	40.542	20.866	1.4	2	2	5	5	192
2019-07-09 08:28:30	0.2	40.447	19.834	3.4	11.8	1	11	17	84
2019-07-09 17:37:45	0.1	40.393	19.805	3.3	26.1	0.6	11	17	91
2019-07-11 07:30:58	0.2	41.128	20.546	2.7	0.2	1.3	9	13	126
2019-07-12 01:11:48	0.3	39.343	20.476	3.8	24.6	1	11	18	140
2019-07-12 14:24:26	0.2	40.426	20.787	2.3	11.4	1.2	18	11	109
2019-07-12 14:39:06	0.2	40.458	20.775	2.2	12.2	2.2	18	7	162
2019-07-13 20:35:38	0.2	39.797	20.645	2.9	25	1.2	17	17	150
2019-07-14 00:59:01	0.6	40.456	20.820	1.5	4.1	2.5	17	10	109
2019-07-14 13:44:37	0.4	40.070	19.821	2.1	1.9	1.8	18	15	119
2019-07-14 21:16:15	0.3	40.464	21.370	2.8	17.6	0.7	10	17	118
2019-07-15 00:31:14	0.1	42.130	20.648	1.2	8.4	3.5	17	6	230
2019-07-15 13:47:47	0.1	40.484	20.839	2.1	2.9	1.2	18	5	223
2019-07-15 14:11:12	0	42.049	20.046	1.4	10.9	3.8	18	5	138
2019-07-16 02:53:55	0.4	40.138	19.960	1.7	9.4	2.6	17	10	141
2019-07-16 20:33:52	0.2	40.093	19.906	2.7	7.4	1.1	17	16	160
2019-07-16 21:07:37	0	40.246	19.758	2	1	1.1	17	10	165
2019-07-17 19:03:01	0.1	41.981	20.900	2.6	1.9	1.2	6	9	219
2019-07-18 00:21:49	0	40.471	20.822	0.9	8.4	3.3	3	4	244
2019-07-18 01:28:45	0.1	40.514	20.814	0.7	8.3	2.7	3	5	231
2019-07-18 03:58:15	0	40.467	20.741	0.8	17.4	1.2	3	5	270
2019-07-19 01:07:41	0.1	41.943	20.316	0.9	7	12.3	8	5	183
2019-07-20 18:44:09	0.1	40.554	20.896	1.8	2.3	1.1	4	7	107
2019-07-20 18:45:07	0	40.537	20.877	1.5	3.5	0.8	6	5	119
2019-07-20 20:14:45	0.3	40.464	20.738	1.5	17.7	2.5	21	7	148
2019-07-20 20:32:36	0	40.533	20.814	1.3	10.8	1.6	3	5	225
2019-07-20 20:35:56	0	40.512	20.827	1.3	7.4	3.5	3	5	226



2019-07-21 09:26:57	0.1	41.934	20.087	2.3	21.6	13.4	19	8	168
2019-07-23 04:02:35	0.4	40.496	20.818	2.7	3	1.7	7	11	111
2019-07-23 06:19:25	0.3	40.322	21.015	1.2	28.2	3.3	4	4	183
2019-07-24 01:10:51	0.1	40.505	20.817	1.1	14.1	1.4	11	6	234
2019-07-24 14:42:16	0.5	40.159	19.928	3.5	27	1.5	22	19	80
2019-07-25 02:52:33	0.9	39.431	20.298	3.7	7.6	1.8	19	26	144
2019-07-25 13:44:43	0.3	39.444	20.376	1.9	4.8	2.9	22	9	134
2019-07-26 08:24:46	0	40.392	21.274	2.2	4.9	0.6	20	7	209
2019-07-26 16:31:35	0.1	40.274	19.792	3.3	42.8	1.4	15	15	102
2019-07-26 18:53:41	0	40.614	20.616	2.3	24	2	6	8	180
2019-07-26 22:35:07	0.1	40.541	20.833	1.4	1	0.9	21	7	113
2019-07-29 23:24:37	0.5	40.399	20.785	2.8	2.5	1.7	21	18	118
2019-07-29 23:35:00	0.2	40.312	20.721	1.1	6.2	19.3	8	5	167
2019-07-29 23:38:43	0.2	40.426	20.762	1.5	19.1	1.3	8	6	137
2019-07-29 23:40:35	0.3	40.431	20.793	1.7	14.8	1.3	21	13	120
2019-07-29 23:45:11	0	40.455	20.801	0.6	10.8	1.5	7	5	256
2019-07-29 23:50:43	0	40.449	20.791	1	15.1	1.7	7	4	261
2019-07-30 00:24:51	0	40.470	20.766	1.1	16.4	1.1	8	5	262
2019-07-30 01:07:23	0.1	40.410	20.789	1.4	11.4	2.1	8	6	157
2019-07-30 01:08:44	0.2	40.420	20.769	2.1	5.8	1.6	21	15	111
2019-07-31 01:43:59	0.5	40.453	20.808	2.5	14.3	1.9	9	14	101
2019-07-31 14:21:19	0.1	40.511	20.793	4.7	13.1	0.5	14	17	69
2019-07-31 14:24:00	0.1	40.537	20.804	1.9	11.5	1.9	5	5	229
2019-07-31 14:28:24	0	40.521	20.794	3.5	13.2	0.6	12	13	82
2019-07-31 14:30:05	0.1	40.376	20.988	3.4	29	0.8	7	8	163
2019-07-31 14:36:31	0.2	40.553	20.788	2.9	13.5	1	6	10	137
2019-07-31 14:38:07	0	40.492	20.779	2.5	12.9	1	7	9	137
2019-07-31 14:41:10	0	40.505	20.784	1.8	16.8	1.9	3	5	247
2019-07-31 14:42:51	0.1	40.554	20.851	1.8	13.7	1.7	5	6	194
2019-07-31 14:51:59	0	40.468	20.671	1.8	44.5	1.3	5	5	289
2019-07-31 14:56:51	0.1	40.528	20.822	1.1	12.6	1.3	4	5	222
2019-07-31 14:59:57	0	40.546	20.852	2	9.5	1.3	6	8	126
2019-07-31 15:06:21	0.2	40.421	20.385	1.9	36.1	1.8	5	5	326

2019-07-31 15:09:12	0	40.568	20.769	1.8	30.5	1	5	5	248
2019-07-31 15:10:51	0.2	40.559	20.873	1.5	11	3.4	6	5	178
2019-07-31 15:12:42	0.1	40.497	20.777	1.7	15	0.9	6	6	163
2019-07-31 15:14:47	0	40.563	20.860	1	11	2	6	5	183
2019-07-31 15:21:06	0.1	40.516	20.820	0.9	16	1.8	3	5	229
2019-07-31 15:24:41	0.1	40.536	20.800	1.1	12.7	1.4	5	5	232
2019-07-31 15:34:16	0.3	40.519	20.849	1.8	3	2.2	5	8	110
2019-07-31 15:41:36	0.1	40.516	20.832	2.6	0.4	0.8	5	6	141
2019-07-31 15:43:51	0.1	40.535	20.815	1.5	11.3	1.7	7	5	224
2019-07-31 15:46:25	0	40.535	20.824	1.6	10.8	1.6	4	6	219
2019-07-31 15:48:01	0.1	40.492	20.804	2.5	7.8	2.3	7	10	129
2019-07-31 15:56:14	0.1	40.471	20.894	1.7	28.3	1.3	6	5	217
2019-07-31 15:56:15	0	40.551	20.798	1.6	14.2	1	6	6	229
2019-07-31 16:03:18	0	40.505	20.803	1.4	15.3	1.8	4	4	240
2019-07-31 16:04:51	0.1	40.522	20.849	1.3	3.8	2.5	5	5	211
2019-07-31 16:06:11	0.1	40.524	20.790	1.7	12.2	1	5	6	159
2019-07-31 16:18:49	0.1	40.530	20.829	1.6	4.5	0.8	19	7	140
2019-07-31 16:20:11	0	40.542	20.815	1.2	11.1	1.4	5	6	221
2019-07-31 16:52:10	0	40.507	20.828	1.1	8.2	2.7	4	5	228
2019-07-31 17:00:34	0.1	40.509	20.822	1.4	7.1	4.1	5	6	230
2019-07-31 17:09:24	0.1	40.574	20.872	2	16.3	0.7	5	7	113
2019-07-31 17:18:01	0	40.513	20.783	3	16.7	0.6	7	11	104
2019-07-31 17:26:19	0.2	40.527	20.826	2.4	10.5	1.1	23	9	142
2019-07-31 17:28:25	0.3	40.497	20.808	2.7	6.2	3.5	23	14	111
2019-07-31 17:41:24	0	40.517	20.821	1.5	9.6	2.3	4	5	227
2019-07-31 17:59:33	0.2	40.499	20.793	3	20	1.1	6	10	159
2019-07-31 18:02:27	0	40.486	20.782	1.5	8.7	3.3	5	4	252
2019-07-31 18:18:44	0	40.520	20.820	1.3	9	3	4	4	226
2019-07-31 18:23:29	0.1	40.511	20.812	2.2	8.9	2.4	23	6	234
2019-07-31 18:28:18	0	40.495	20.774	1.3	11.2	1.5	4	5	254
2019-07-31 18:47:50	0.1	40.529	20.815	1.4	8.3	2.4	23	5	226
2019-07-31 19:23:35	0.2	40.547	20.856	3.9	15.6	0.6	14	18	74
2019-07-31 19:27:43	0	40.519	20.826	1.9	10	1.9	6	5	224

2019-07-31 19:30:37	0	40.503	20.803	1.6	10.4	1.8	6	5	240
2019-07-31 19:58:19	0	40.543	20.844	0.8	3.7	2.6	6	6	203
2019-07-31 20:06:15	0.1	40.531	20.833	1	3.8	2	21	6	215
2019-07-31 20:14:09	0	40.533	20.826	1.1	8.9	1.8	8	5	218
2019-07-31 20:15:57	0.1	40.506	20.824	0.9	3.3	2	6	5	229
2019-07-31 20:23:52	0	40.556	20.852	1.5	11.8	1.6	22	6	191
2019-07-31 21:26:11	0	40.537	20.836	1.6	8.5	2.4	22	5	211
2019-07-31 21:30:57	0.1	40.526	20.832	2	4.1	0.7	22	7	139
2019-07-31 21:46:47	0	40.496	20.788	1.9	8.6	2.4	7	4	249
2019-07-31 22:14:13	0	40.494	20.787	1.5	12.5	1.1	22	6	159
2019-07-31 22:16:23	0.1	40.509	20.807	1.1	13.5	1.4	4	5	236
2019-07-31 22:21:40	0.2	40.503	20.780	1.7	12	1.5	10	6	162
2019-07-31 22:37:57	0.1	40.554	20.877	1.6	2	1	6	6	113
2019-07-31 23:31:26	0	40.529	20.824	1.2	8.3	2.8	7	4	221
2019-07-31 23:47:25	0.1	40.516	20.827	1.4	1.3	1.1	22	9	134



**-Fig. 2 -**

Harta e shpërndarjes në hapësirë të epiqendrave, në përputhje me magnitudë (madhësia e simbolit) dhe thellësinë (ngjyra e simbolit); Ngjarjet janë lokalizuar gjatë muajit Korrik 2019, bazuar në regjistrimet e ASN dhe stacioneve sizmologjike në rajon.  
*(Epicentral map for located seismicity within Albania and surrounding during July 2019)*

## 1. Statistika e ngjarjeve (Events Statistics)

Tab. 5 – Të dhënat përfaqësuese për statistikën e ngjarjeve (representative earthquake statistical data)

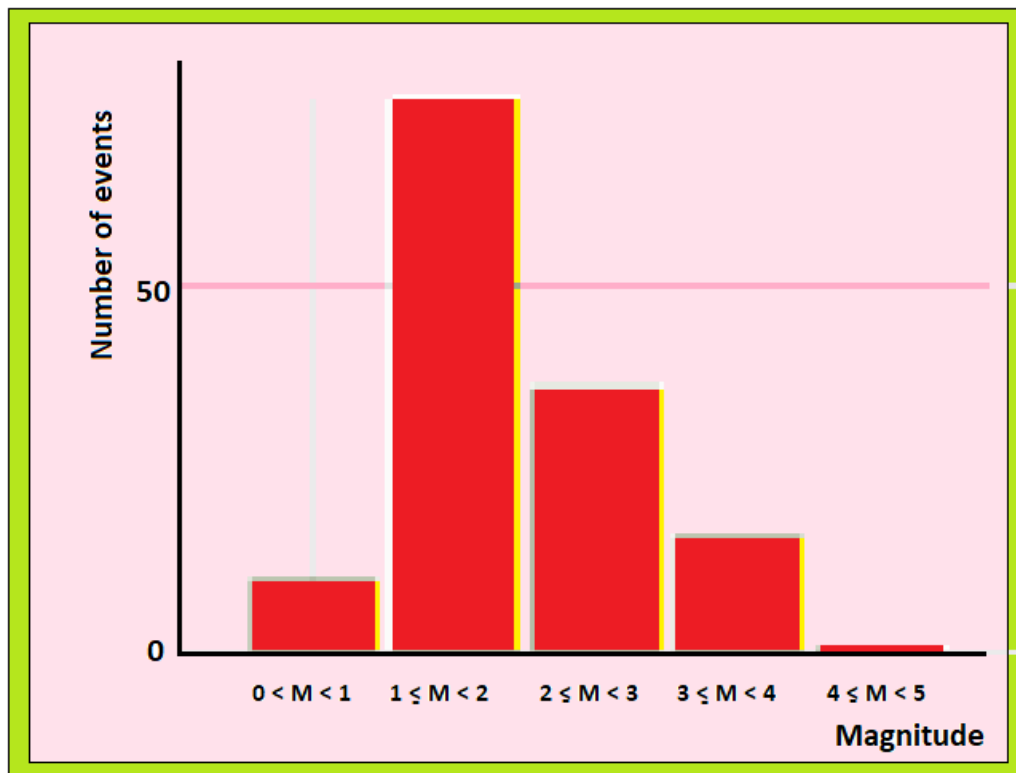
Të dhënat përfaqësuese	Representative Parameters	Vlerat (observed values)
Numuri i përgjithshëm i ngjarjeve të regjistruara (kuandrat 39o-43o V; 18.5o-21.5oL)	[total recorded number of seismic events]	138
Numuri i ngjarjeve sizmike brenda kufirit shtetëror	[earthquakes occurred within state border]	130
Thellësia mesatare e vrojtuar (km)	[mean observed depth]	12
Thellësia maksimale e vrojtuar (km)	[maximum observed depth]	44
Magnituda lokale minimale e vrojtuar ( $M_{L/d}$ )	[minimum observed local magnitude]	0.6
Magnituda lokale maksimale e vrojtuar ( $M_{L/d}$ )	[maximum observed local magnitude]	4.7
Intensiteti maksimal i vrojtuar (MSK-64)	[maximum observed intensity]	VI

## 2. Karakteristikat kryesore të sizmitetit për muajin korrik 2019

Gjatë muajit korrik, Rrjeti Sizmologjik i Shqipërisë, regjistroi një sizmitetin të moderuar. Rritja më e madhe e aktivitetit sizmik u regjistrua në juglindje të Shqipërisë e shprehur me sekuencën e pasgoditjeve të një tërmetit të Dardhës (Korçë)  $M_L 4.7$ . Në këtë muaj janë lokalizuar 138 tërmete me magnitudë që varion nga 0.6 në 4.7 (Richter), 8 prej tyre me magnitudë  $M_L > 3.5$  Richter, 1 prej tyre me  $M_L > 4.5$ , dhe më i forti me  $M_L = 4.7$ . (Fig 2). Prej tyre 46 kanë ndodhur gjatë ditës dhe 92 gjatë natës. Frekuenca më e madhe në nivelin e magnitudës  $1 < M < 3$  me 115 tërmete (Grafik 1). Numër mesatar i tërmeteve në ditë ishte 4 dhe maksimumi - 61 (44% e të gjithë tërmeteve të ndodhura) u regjistrua gjatë 31 korrikut si rezultat i një serie të tërmeteve në zonën sizmogenike të Korçës. Tërmeti më i fortë i gjeneruar në këtë zonë ndodhi në 31 korrik në orën 16:21 me orën lokale, me magnitudë 4.7 Richter, 3 kilometra në jug-perëndim të fshatit Dardhe dhe 15 km në juglindje nga qyteti Korçës. Muaji Korrik u karakterizua nga rritja e sizmitetit në një zonë të gjerë në juglindje të qytetit të Korçës. Goditja kryesore u ndje me intensitet VI ballë (EMS-98) në një zonë brenda 10 kilometrave largësi nga epiqendra, dhe me intensitet V ballë (EMS-98) në qytetin e Korçës dhe në një zonë deri 20 kilometra largësi. Aktiviteti sizmik afatshkurtër është vërejtur edhe në veri-perëndim të qytetit të Tepelens në zonën e Kalivaci, ku janë regjistruar 5 tërmete nga 3 deri në 9 korrik, në periudhën kohore prej gjashtë ditësh. Tërmeti i parë u regjistrua në 3 korrik në orën 16:13 me orën lokale, me madhësi 3.7 Richter, në fshatin Kalivaci dhe thellësi vatre 25 kilometra. Ky tërmet ishte më i forti në këtë serie, dhe u ndje në fshatrat e Kalivacit, Sinanaj, Krahas dhe Sevasterit me intensitet prej III-IV gradë në shkallën (EMS-98). Kater tërmetet e tjere kishin magnitudë që varjon nga 2.9 në 3.4 Richter. Shumica e tërmeteve lokale rreth 90.5% janë shpërndarë në thellësi midis 0 dhe 25 km, me thellësi mesatare 12 km dhe thellësi maksimale 44 km. Rreth 3 tërmete u ndien nga popullsia e Shqipërisë. Magnituda e ngjarjeve sizmike të ndjera në këtë muaj varion nga 3.7 në 4.7 Richter.

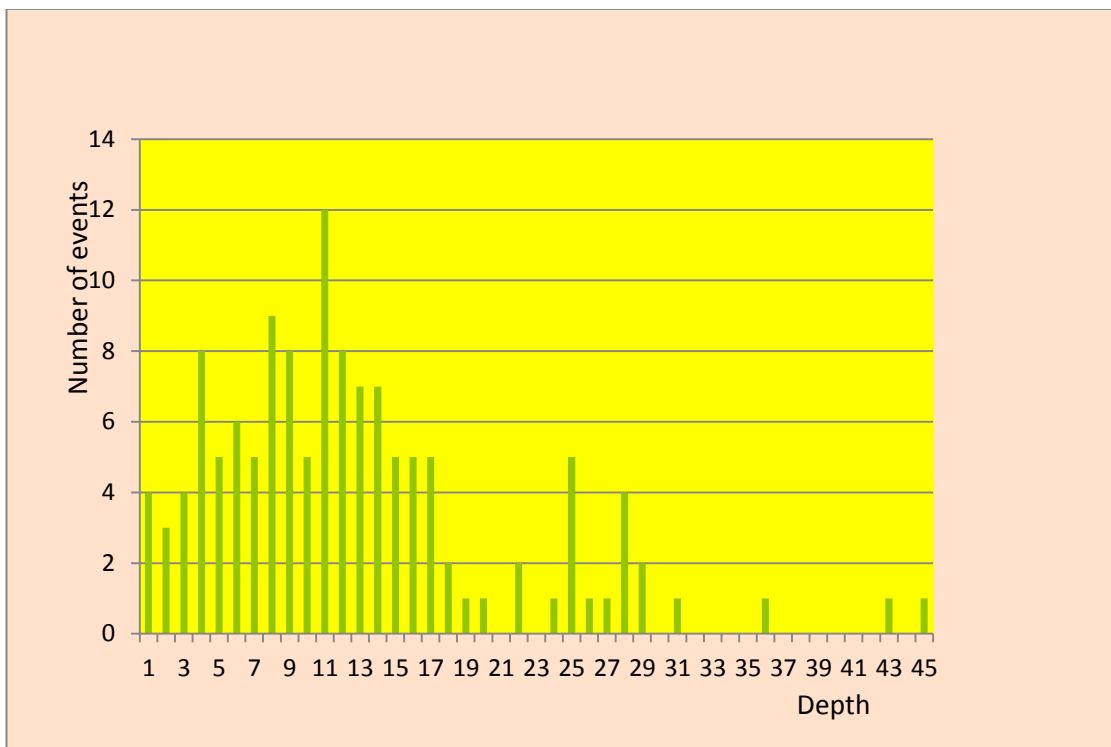
## 2. Main features of seismicity during July month 2019

During the July, Albania Seismological network, recorded moderate seismicity. Highest increased of seismic activity was registered in southeastern Albania expressed by sequences of moderate earthquake of Dardha (Korca)  $M_L 4.7$ . At that month, 138 earthquakes were recorded totally with magnitude ranging from 0.6 to 4.7 (Richter), 8 of them with magnitude  $M_L \geq 3.5$  Richter, 1 of them with  $M_L \geq 4.5$ , the strongest with  $M_L = 4.7$  (Fig 2). During the daytime 46 of total number of earthquakes occurred and 92 at the night. Higher frequency presented at magnitude level  $1 \leq M < 3$  with 115 earthquakes (Fig 3). An average number of earthquakes per day were 4 and the maximum – 61 (44 % of all occurred earthquakes) was registered during 31 July as a result of series of aftershocks in Korca seismogenic zone (Fig 5). The strongest earthquake generated from this seismogenic source occurred on 31th of July at 16:21 local time, with Richter magnitude of 4.7, on 3 kilometers southwest from Dardha village and 15 km southeast from Korca town. Earthquake felt with intensity of VI degrees on the EMS-98 Scale in the area of the accumulation within 10 kilometers distance, and with intensity of V degrees in Korca and area inside 20 kilometers distance. Short-lasting seismic activity was observed on 20 kilometers on the north-west from Tepelena in Kalivaci area, where 5 earthquakes were located from 3th to 9th of July, in the time period of six days. First earthquake in this sequence was registered on 3th July at 16:13 local time, with Richter magnitude of 3.7, on Kalivaci village and hypocenter depth of 25 kilometers. This earthquake was the strongest in this serie, and felt it on the Kalivaci, Sinanaj, Krahas and Sevasteri area with intensity of III-IV degrees on EMS-98 scale. Following four earthquakes had magnitude ranging from 2.9 to 3.4. The most of local earthquakes about 90.5% are distributed in depth between 0 and 25 km, with average depth 12 km and maximum depth 44 km (Fig 4). About 3 earthquakes were felt by population of Albania. The magnitude of seismic event felt in this month ranging from 3.7 to 4.7 Richter



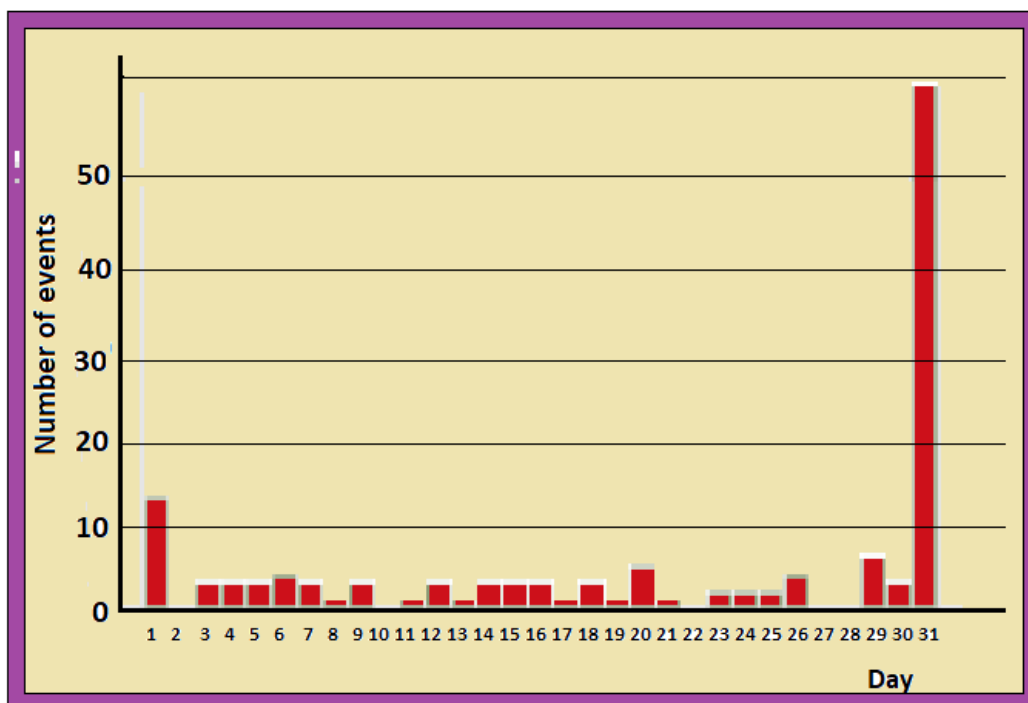
-Fig. 3 -

. Grafiku i numurit të ngjarjeve për nivelin e magnitudave



**-Fig. 4 -**

*Grafik 2. Grafiku i frekuencës së tërmeteve në lidhje me thellësin.*



**-Fig. 5 -**

*Grafiku ishpërndarjes së numurit të ngjarjeve për ditë*

#### 4. Përshkrim i të dhënave makrosizmike (Macro-seismic data description for individual events)

##### Ngjarja 1:

Datë 31.07.2019, në orën 14:11:01.52 (UTC); (16:21:01.52 ora lokale); lokalizuar 40.51V; 20.79L, ne Dardhe, në Juglindje te Korces; Intensiteti i tërmetit në epiqendër  $I_0 = VI$  ballë (EMS-98); Ndjerë: VI ballë në fshatrat e Dardhe, Arrez, Nikolice; V-VI ballë ne fshatrat e Butke, Lubonjr, Mollas, Zicisht; V ballë ne qytetet Korces, Maliqit, Voskopoj, Bilisht; IV ballë ne Leskovik, Permet, Pogradec dhe Corovod; III - IV ballë ne Tepelene, Gramesh, Gjirokaster, Berat; Elbasan, Librazhd; III ballë ne Fier, Lushnje, Vlore dhe Peqin;

(Event 1):

(Intensity  $I_0 = VII$  degree EMS-98, felt VI degree at Dardhe, Arrez, Nikolice villages ; V-VI degree at Butke, Lubonjr, Mollas, Zicisht villages; V at Korces, Maliqit, Voskopoj, Bilisht towns; IV at Leskovik, Permet, Pogradec and Corovoda towns; III - IV at Tepelene, Gramesh, Gjirokaster, Berat Elbasan, Librazhd; III - IV at Balesh, Elbasan, Librazhd towns; III at Fier, Lushnje, Vlore at Peqin;

##### Ngjarja 3:

Datë 03.07.2019, në orën 14:13:47.52 (UTC); (16:13:47.52 ora lokale); lokalizuar 40.39V; 19.82L, ne Dorez, 20 km në veriperndim te Tepelenes; Intensiteti i tërmetit në epiqendër  $I_0 = IV-V$  ballë (EMS-98); Ndjerë: IV- V ballë në fshatrat e Dorez, Kalivac, Sinanaj; IV ballë ne fshatrat e Dhemblan, Krahas, Sevaster, Qesarat; III ballë ne qytetet Memaliaj, Tepelene, Balesh;

**Shënim:** Intensiteti i tërmetit në epiqendër  $I_0$  është përcaktuar nga relacioni  $I_0 = (\text{Mag} (M_{L/d}) - 1)/0.6$

**Note:** The earthquake Intensity in epicenter  $I_0$  is derived from the relation  $I_0 = (\text{Mag} (ML/d) - 1)/0.6$

##### Ngjarja 2:

Datë 31.07.2019, në orën 19:23:03.01 (UTC); (19:23:03.01ora lokale); lokalizuar 40.55V; 20.86L, ne Gjyras, në Juglindje te Korces; Intensiteti i tërmetit në epiqendër  $I_0 = V$  ballë (EMS-98); Ndjerë: V ballë në fshatrat Zicisht, Miras, Dardh; IV-V ballë ne fshatrat e Nikolic, Boboshtic, Hociisht; IV ballë ne qytetet Korces, Maliqit, Voskopoj, Bilisht; III ballë ne Leskovik, Permet, Pogradec dhe Corovod.

(Event 2):

(Intensity  $I_0 = VII$  degree EMS-98, felt V degree at Zicisht, Miras, Dardh villages; IV-V degree at Nikolic, Boboshtic, Hociisht villages; IV at Korces, Maliqit, Voskopoj, Bilisht towns; III at Leskovik, Permet, Pogradec and Corovoda town.;

(Event 3):

(Intensity  $I_0 = IV-V$  degree EMS-98, felt IV-V degree at Dorez, Kalivac, Sinanaj; villages; IV-V degree at Nikolic, Boboshtic, Hociisht villages; IV at Dhemblan, Krahas, Sevaster, Qesarat villages; III at Memaliaj, Tepelene, Balesh towns.;

## 2. Mekanizmat fokal (Focal mechanisms) (Fig 6)

### 1. Main shock

Source parameters (relocated)

Date	Time	Coordinates	Depth	Magnitude
2019 0703	141347	40.39N 19.83E	0.4	3.7 ( $M_W$ moment magnitude)

Source geometry: FOCMEC F

Active fault plane

Strike Dip Rake



179.62 81.35 -5.04

Auxiliary fault plane

Strike Dip Rake  
179.62 81.35 -5.04

## 2. Main shock

Source parameters (relocated)

Date	Time	Coordinates	Depth	Magnitude
2019 0724	144216	40.14N 19.91E	2.8	3.5 ( $M_W$ moment magnitude)

Source geometry: FOCMEC F

Active fault plane

Strike Dip Rake  
228.24 74.81 -13.17

Auxiliary fault plane

Strike Dip Rake  
321.7 77.3 -164.4

## 3. Main shock

Source parameters (relocated)

Date	Time	Coordinates	Depth	Magnitude
2019 0731	142119	40.47N 20.70E	8.0	4.6 ( $M_W$ moment magnitude)

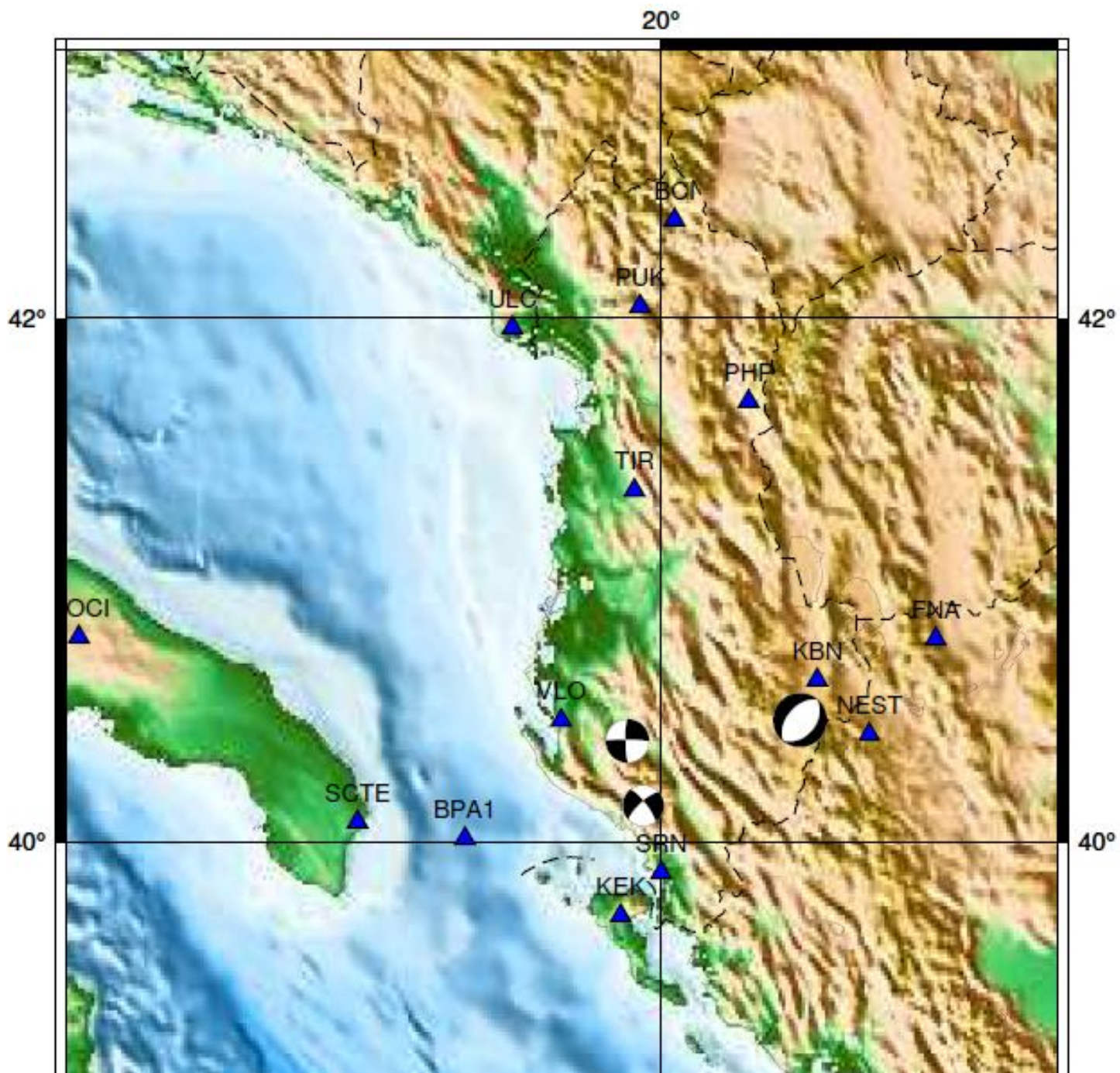
Source geometry: FOCMEC F

Active fault plane

Strike Dip Rake  
220.00 50.00 -90.00

Auxiliary fault plane

Strike Dip Rake  
40.0 40.0 -90.0



**-Fig. 6 -**  
*Harta e paraqitjes së mekanizmave vatrore për tërmetet Korrik 2019*

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# SERIA SIZMIKE, NË ZONËN KORÇË-ERSEKË, QERSHOR 2019

Departamenti i Sizmologjisë<sup>1</sup>

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## I. Hyrje

Gjate periudhës Qershor-Korrik, rajoni juglindor i Shqipërisë u godit nga një seri sizmike. Seria kulmoi me një numër shumë të lartë tërmetesh në datat 1 dhe 29 Qershor, 2019. Seria u karakterizua nga 10 tërmete me magnitudë  $M_L \geq 4.0$  dhe intensitete në epiqender  $I_0 \geq V$  balle (EMS-98). Goditja kryesore u regjistrua në 1 Qershor 2019, në orën 04:26 (UTC). Ajo pati magnitudë lokale  $M_L = 5.3$  (Rihter) dhe intensitet në epiqender  $I_0 \geq VII$  balle (EMS-98). Efektet e kësaj goditje prekën fshatrat: Floq, Mollas, Butkë, Bezhan, Qafzes, Lubonjë, Nikolicë, Vodice, Kreshovë, etj. ku pjesa më e madhe e banesave pësuan çarje në mure dhe suvatur. Kjo goditje u pasua nga 3 tërmete të tjerë, të afërt në kohë dhe hapësirë, përkatesisht në orën 06:33 (UTC),  $M_L=4.9$ ; në orën 06:51 (UTC),  $M_L=4.7$ ; në orën 07:00 (UTC),  $M_L=5.0$ . Seria sizmike përvijoi me zvogelim gradual të numrit të tërmeteve deri me 29 Qershor, kur tërmeti i orës 13:01 (UTC)  $M_L=4.5$ , shënoi një rritje të ndjeshme të aktivitetit sizmik pasues. Nga analiza e të dhënave të përftuara evidentohet një situatë sizmike shumë komplekse, ku prania e një sistemi shkëputjesh paralele në afersi të thyerjes kryesore ndikon në rishpërndarjen dhe transferimin e sforcimit tektonik, duke gjeneruar një aktivitet sizmik të ngjashëm me atë të tërmeteve të përberë. Nga zgjidhja e mekanizmave vatror rezulton se thyerja tektonike që gjeneroi këtë tërmet është e tipit të thyerjes normale, me një komponente të shtytjes së djathtë, me shtrirje VVL. Analiza e paraqitur në këtë përmbledhje përfshin shpërndarjen hapësirë-kohore të aktivitetit, percaktimin e gjeometrisë së vatrës për goditjen dhe pasgoditjen kryesore, percaktimin e parametrave spektral të burimit, analizën makrosizmike dhe sizmotektonike të rajonit të goditur.

**Fjalë kyçe:** *Goditje kryesore, pasgoditje, mekanizmi vatror, thyerje tektonike.*

## II. Vështrim i përgjithshëm

Seria sizmike që nisi më datën 1 Qershor, në orën 04:26 (UTC), e cila përvijoi deri 15 Korrik, preku gjerësisht rajonin juglindor Korçë-Ersekë, të Shqipërisë. Në këtë seri prej 465 ngjarjesh sizmike të lokalizuara goditja më e fortë ishte dhe goditja e parë e orës 04:26 (UTC),  $M_L=5.3$ .

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<sup>1</sup> Analiza dhe interpretimi i të dhënave parametrike sizmike: Prof. Dr. Rrapo ORMENI

Pershkrimi gjeologo-tektonik dhe makrosizmik: Prof. Asoc. Dr. Rexhep KOCI

Pershkrimi gjeologo-tektonik dhe makrosizmik: Prof. Asoc. Dr. Rexhep KOCI

Zgjidhja dhe interpretimi i mekanizmit të vatrës dhe analiza spektrale: Dr. Edmond DUSHI

Lokalizimi hypoqendror, ruajtja dhe korrektimi i të dhënave, nga specialistet: Ardian MINAROLLI, Olgert GJUZI, Suela HAJRULLAI & Irena DUSHI.

Nga pikpamja gjeodinamike gropa e Korçës përfaqëson një nga zonat më sizmoaktive në vend. Kjo zonë njihet, për aktivitetin më të lartë sizmik, në pjesën jug-lindore të Shqipërisë duke qënë se ndodhet nën një regjim tektonik në zgjerim. Bazuar në të dhënat mikrotektonike dhe nga zgjidhja e mekanizmit të vatrave të tërmeteve është arritur në konkluzionin se zona në studim ndërpritet nga shkëputje normale që janë karakteristike për regjimin në zgjerim, me drejtim VP – JL të akseve kryesore të sforcimit minimal ngjeshes, ose zgjerimit maksimal, (Muço 1994, Aliaj et al, 2010). Analizat e mekanizmave vatrës të kësaj serie tregojnë predominimin e thyerjeve normale me komponente strike-slip në përputhje me studimet e mëparshme për regjimin në zgjerim në drejtimin VP - JL për Albanidet e brendshme (Aliaj et al 2010; Ormeni et al 2013).

Nga të dhënat e sizmicitetit historik rezulton se rajoni i Korçës është prekur vazhdimisht nga tërmete të fortë (Sulstarova & Kociaj, 1975). Ndër tërmetet e fortë, që kanë goditur zonën, gjatë shekullit XIX-të janë:

- Tërmeti i 4 Korrikut 1878, I = VII (ballë MSK-64)
- Tërmeti i 2 Qershorit 1896, I = VIII (ballë MSK-64)
- Gjatë shekullit të kaluar, zona e Korçës, është goditur nga disa tërmete, ku përmenden:
- Tërmeti i 28 Janarit 1931,  $M_S=5.8$ , epiqendra në Korçë; (Sulstarova & Kociaj 1975).
- Tërmeti i 26 Majit 1960,  $M_S=6.4$ , epiqendra në Korçë (Sulstarova & Kociaj 1975).

Tërmetet Moderat që kanë prekur zonën për rreth Korçës, gjatë këtij shekulli janë:

- Tërmeti i 28 Gushtit 2008 me epiqendrë në Voskopoj (Korçë) me magnitudë  $M_S=4.3$  (Ormeni & Dushi 2009).

Tërmeti me i fundit, i 1 Qershorit 2019 ( $M_L5.3$ ), u regjistrua në jug të qytetit të Korçës, pranë fshatit Floq. Nga analiza sizmotektonike zona e thyerjeve sizmoaktive Peshkopi-Korçë mund të gjenerojë tërmete me magnitudë maksimale  $M_S=7.0$ . (Kociaj 1989; Aliaj et al, 2010).

Zona e Korçës pjesë e zonës së thyerjes gjatësore Korçë-Ohër-Peshkopi ka qënë aktive në të shkuarën, vazhdon të jetë aktive edhe sot, dhe pritet të jetë aktive edhe në të ardhmen.

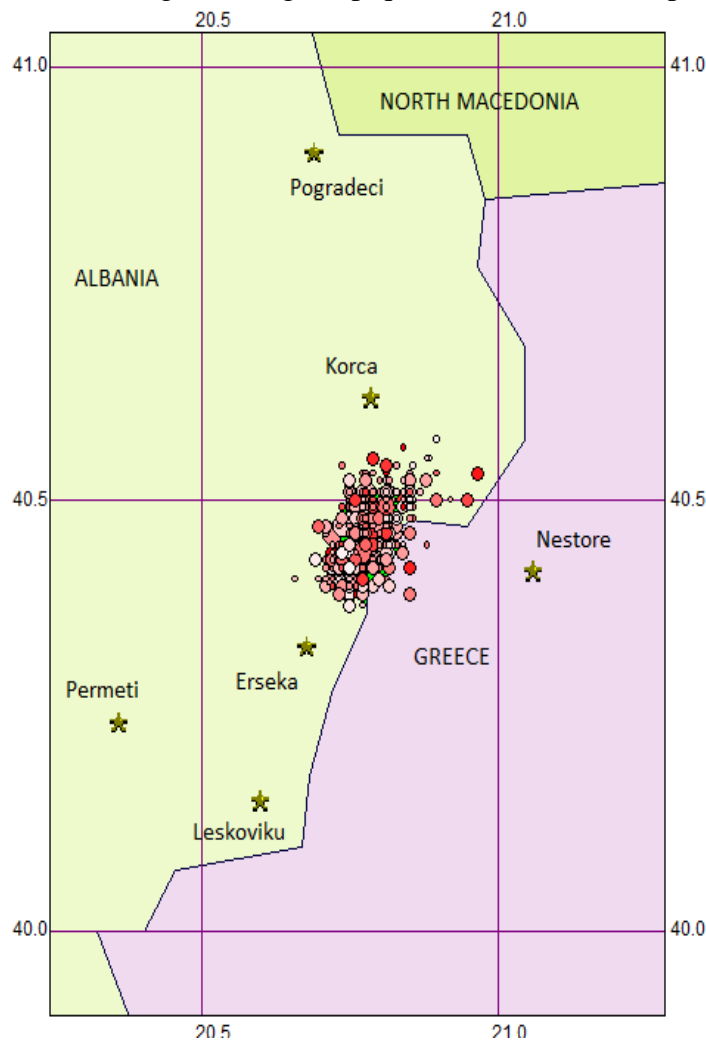
### III. Kushtet gjeologjike të rajonit të Korçës

Rajoni Korçës shtrihet në pjesën juglindore të teritorit shqiptar. Kjo pjesë e Shqipërisë përfaqësohet nga terrene kryesisht malor me kuota të rendit 1500-1800 m. Në këtë pjesë nuk mungojnë dhe terrenet e ulta në formën e grabeneve. Ultesira (grabeni) më e madhe në rajonin në fjalë është ai i Korçës, i cili ka një kuota mesatare rreth 850m. Grabeni i Korçës ka shtrirje VL-JP, ai në jug ngushtohet deri në mbyllje pranë Qafës së Qarrit, ndërsa në veri ai zgjerohet dhe ndahet nga grabeni i Ohrit nëpërmjet Qafës së Plloçës. Grabeni i Korçës në anën lindore kontakton kryesisht me shkëmbinj të ultrabazik, ndërsa në anën perëndimore, në jug, kontakton persëri me shkëmbinj të ultrabazik dhe në drejtim të veriut kontakton me serinë e shkëmbinjve Jurasiko-Kretak-Oligocenik dhe ata Neogjenik. Grabeni i Korçës në pjesën qendrore mbulohet nga depozitimet aluviale ( $Q_{4al}$ ) që përfaqësohen nga argjila, argjila humusore dhe në disa pjesë të veçanta nga depozitimet torfike, ndërsa në sektorët periferik, pranë terreneve të larta takohen depozitimet proluviale ( $Q_{4pl}$ ). Marrdhenjet e grabenit me strukturat e ngritura për rreth janë tektonike. Në anën lindore depozitimet e grabenit ndahen nga shkëmbinj të ultrabazik nëpërmjet një thyerje tektonike me shtrirje VL-JP me moshe Pleistocen i mesëm-Holocen. Kjo thyerje është ekspozuar në sipërfaqe me plane të pastra rreshqitje dhe me kënd rënie  $65-70^{\circ}$ . Në pjesën jugore paralel me thyerjen kryesore trasohen dhe disa thyerje të tjera me të njëjten shtrirje por me përhapje më të kufizuar. Dhe në pjesën perëndimore grabeni kontaktone me strukturat e ngritura nëpërmjet një thyerje tektonike me shtrirje VP-JL me rënie në drejtim të lindjes me kënde  $40-45^{\circ}$ . Kjo thyerje ndërpritet me thyerjen e krahut lindore në afërsi të fshatit Floq. Gjurmët e kësaj thyerjeje janë me të dukshme në pjesën jugore, ku grabeni kontakton me shkëmbinj të ultrabazik, ndërsa në

veri ku grabeni kontakton me shkëmbinjet terrigjen dhe gjyrma saj ne sipërfaqe fshihen për shkak të mbullimit nga produktet e erozionit, ajo mund të dallohet vetëm nga morfologjia në formë shkalle e terrenit (Aliaj 1995). Tektonika që kufizon grabenin e Korçës me mjedisin gjeologjik për rreth paraqitet shumë aktive, këtë e deshmojne planet e ekspozuara në sipërfaqe në anën lindore dhe pjesërisht në atë perëndimore. Zona e Korçës si edhe gjithë njësia gjeologjike ku ajo bën pjesë i nënshtrohet një regjimi tektonik në zgjerim (Francois et al, 2012). Ky rezultat është konfirmuar nga shumë studime të ndërmarra edhe më parë (Sulstarova 1986; Muço, 1994, 2007). Drejtimi kryesor i këtij zgjerimi përputhet me atë VP-JL.

#### IV. Te dhënat dhe metodat

Të dhënat e përdorura në këtë studim janë përpiluar nga regjistrimet në stacionet sizmologjike të Shqiptarisë, AUTH (Greqi), INGV (Itali) dhe MEDNET. Katalogu i pasgoditjeve është nxjerr për tërmetin me magnitud  $M_L=5.3$ , ndodhur në 1 Qershor 2019 koha ne origjin 04:26:49.6 (UTC). Sekuenca e mbasgoditjeve të tërmetit ka ndodhur në një interval kohor prej dy muajsh, prej kohës së ndodhjes së goditjes kryesore 1 Qershor 2019 deri më 15 Korrik 2019. Gjithsej 465 pasgoditje me magnitudë  $M_L \geq 1.0$  pra që zgjasin në një periudhë kohore prej 45 ditësh (IGEW 2019, www.geo.edu.al). Figura 1 tregon epiqendrat e sekuencës së pasgoditjeve të këtij tërmeti.



*Fig 1. Harta e shpërndarjes epiqendrave të pasgoditjeve  $M_L > 2.0$*

Procedura standarde e përdorur për lokalizimin e tërmeteve është programi Hypoinvers [Klein, F.W. 2002.] në paketën e analizës së të dhënave sizmike Atlas, dhe modeli i shpejtësisë i përhapjes së valeve sizmike [Ormeni, 2011]. Magnituda vlerësohet bazuar në amplitudën maksimale të valeve dytësore volumore bazuar në modelin parametrik Rihter (1958). Zgjidhjen e mekanizmit të vatrës përdoret metoda e polariteteve të hyrjeve të para me algoritmin FOCMEC (Snook, 2003)

## V. Analiza e zgjidhjes së mekanizmit të vatrës (FM) dhe përcaktimi paraprak i karakteristikave spektrale të goditjes dhe pasgoditjes kryesore të serisë së 1 Qershorit 2019, në rajonin Korçë –Ersekë.

Për zgjidhjen e mekanizmit të vatrës dhe përcaktimin e gjeometrisë, për goditjen kryesore të datës 1 Qershor ora 04:26 UTC ( $M_w$ 5.1) dhe pasgoditjen kryesore të po kësaj date në orën 07:00 UTC ( $M_w$ 4.8), u përdorën regjistrimet valore nga një numër stacionesh të rrjetit kombëtar si dhe rrjeteve sizmologjike fqinjë, homologe. Përpunimi dhe analiza parametrike e regjistrimeve valore u realizua me algoritmin FOCMEC (pjesë e sistemit SEISAN, versioni 11.0, 2019). Të dhënat hyrëse në analizë janë format valore në formatin miniSEED si dhe një model lokal 1D, i mesatarizuar për shpejtësinë e përhapjes së valëve sizmike (Ormeni 2011), që gjerësisht përdoret në rutinën e përpunimit dhe lokalizimit të tërmeteve nga Rrjeti Sizmologjik Kombëtar (AC sipas kodit të FDSN dhe IRIS). Përpunimi konsiston në tre hapa: përcaktimi fazor-lokalizimi, analiza spektrale, zgjidhja e mekanizmit të vatrës. Procedura dhe parametrat që vlerësohen në hapat 1 dhe 3 janë të ndërvarur ndërmjet tyre. Për këtë qëllim përcaktimi fazor dhe lokalizimi i është kushtuar vëmendja e duhur, brenda tolerancës që lejon modelin lokal për shpejtësinë e përhapjes valore. Rezultati i analizës valore është vlerësimi i parametrave dinamik dhe madhësisë së tërmeteve të analizuara. Analiza, respektivisht për goditjen kryesore dhe mandej për pasgoditjen kryesore, vijon si më poshtë:

### V.1. Goditja kryesore 1 Qershor 2019, 04:26 UTC, $M_w = 5.1$

Për goditjen kryesore, ri-lokalizimi mundësoi vlerësimin e parametrave vatrës, përkatësisht: koha në origjinë 04:26:18.4 (+/- 2.46 sek); gjerësia gjeografike e epiqendrës  $40.442^\circ$  V (+/-  $0.03^\circ$  ose 3.1 km); gjatësia gjeografike  $20.770^\circ$  V (+/-  $0.05^\circ$  ose 4.6 km); thellësia 11.5 km e fiksuar (\*) në vlerën përkatëse të përcaktuar nga USGS. Gabimi i përgjithshëm në përcaktimin e parametrave vatrës u vlerësua rms = 1.0 sek.

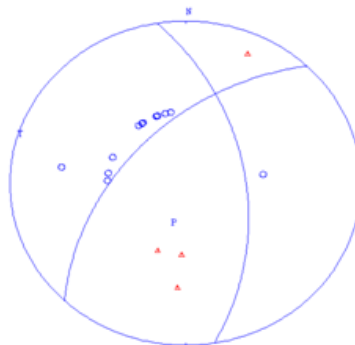
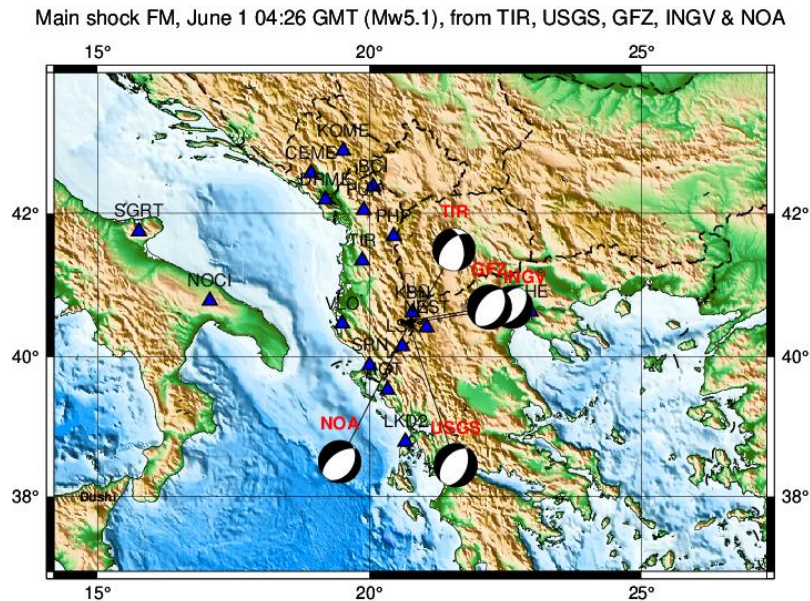


Fig. 2- diagrama "beach ball", për gjeometrinë vatrës të tërmetit të 1 Qershorit, ora 04:26 UTC,  $M_w$ 5.1.

Me anë të analizës spektrale u përcaktua momenti sizmik mesatar  $M_0 = 0.5 \times 10^{17}$  Nm (+/- 2.5 Nm); magnituda e momentit  $M_w = 5.1$  (+/- 0.3). Përmasa rrezore e zonës aktive të shkëputjes, duke e konsideruar atë radiale në përputhje me përafrimin e përdorur në analizë, është  $r = 2.2$  km (+/- 1.5 km). Rënia mesatare e sforcimit në vatër është 66.6 bar. Përcaktimi i gjeometrisë së vatrës për këtë tërmet u krye nëpërmjet metodës së përcaktimit të polaritetit të hyrjeve të para, të fazave  $P_g$  dhe  $P_n$ , të valëve volumore primare, dhe përcaktimit të karakteristikës së shpërndarjes së tyre mbi sferën fokale. Për këtë u përdor algoritmi FOCMEC (Snook, 2003), pjesë e SEISAN v-11.0 (Earthquake Analysis Software- Ottemöller, Voss, Havskov 2019). Zgjidhja e përfutur për këtë tërmet (Fig. 2), rezulton për planin nodal kryesor (plani aktiv i shkëputjes): këndi azimutal i shtrirjes 223.710°, këndi i rënies 52.240° në VP, dhe këndi i zhvendosjes (drejtimi i vektorit të zhvendosjes mbi planin aktiv) -50.770° në JL. Plani ndihmës ka parametrat si më sipër, përkatësisht: 350.60, 52.20, -129.20. Akset kryesore të sforcimit ngjeshës, maksimal dhe minimal, kanë përkatësisht P (shtrirje 197.140 dhe zhytje 600), T (shtrirje 107.140 dhe zhytje 00) dhe B (shtrirje 281.740, zhytje 15.000, pjerrje 30.000). Nisur nga diagrama në figurën 1, numri i polariteteve të përdorura, shpërndarja e mirë e stacioneve me një boshllëk këndor  $86^\circ$ , ndarja e mirë ndërmjet lobeve nën regjimin ngjeshës dhe zgjerues, zgjidhja e përfutur konsiderohet e pranueshme. Zgjidhja është krahasuar edhe me ato të përfutura me anë të inversionit valor ose zgjidhjes së tenzorit të momentit, të dhëna nga USGS, GFZ, INGV dhe NOA (Fig. 3).



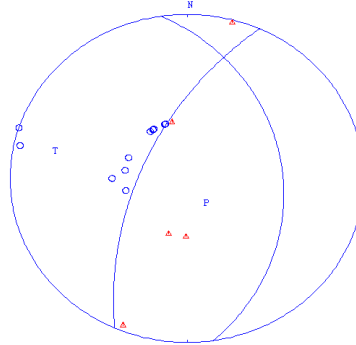
**Fig. 3-** Zgjidhja e mekanizmit të vatrës së tërmetit të 1 Qershorit 2019, ora 04:26 UTC Mw5.1, nga TIR, USGS, GFZ, INGV dhe NOA.

## V.2. Pasgoditja kryesore 1 Qershor 2019, 07:00 UTC, $M_w = 4.8$

Bazuar në statistikën e serisë sizmike, pasgoditja kryesore rezulton të jetë tërmeti i datës 1 Qershor 2019, i orës 07:00 UTC Mw4.8. Për këtë goditje u vlerësuan parametrat vatrës si më poshtë: koha në origjinë 07:00:26.6 (+/- 2.96 sek), gjerësia gjeografike  $40.470^\circ$  V (+/-  $0.04^\circ$  ose +/- 3.8 km), gjatësia gjeografike e epiqendrës  $20.708^\circ$  L (+/-  $0.08^\circ$  ose +/- 7.8 km), thellësia 6.8 km dhe gabimi i përgjithshëm në përcaktim rms = 1.1 sek. Momenti sizmik i vlerësuar nga analiza spektrale u përcaktua  $M_0 = 0.2 \times 10^{17}$  Nm (+/- 0.3 Nm), dhe  $M_w = 4.8$  (+/- 0.2). Gjithashtu, përmasa rrezore e zonës aktive të shkëputjes, duke e konsideruar atë edhe në këtë rast radiale, në përputhje me



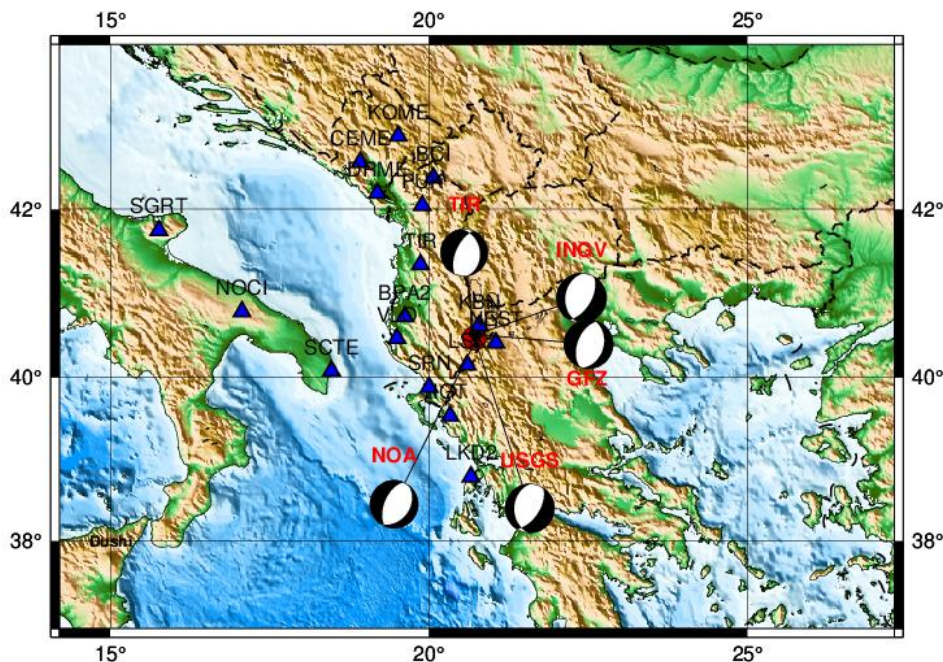
përafrimin e përdorur në analizë, është  $r = 1.5 \text{ km}$  ( $\pm 0.7 \text{ km}$ ), ndërsa zvogëlimi mesatar i sforcimit në vatër është  $96.5 \text{ bar}$ . Zgjidhja e mekanizmit të vatrës (Fig. 4, 5), për këtë goditje sekondare, na jep gjeometrinë e përcaktuar nga parametrat e mëposhtëm: plani kryesor (aktiv) i shkëputjes (shtrirja  $204.15^\circ$ , rënia  $61.12^\circ$  dhe zhvendosja  $-72.81^\circ$ ); plani ndihmës (shtrirja  $351.51^\circ$ , rënia  $33.23^\circ$  dhe zhvendosja  $-118.19^\circ$ ). Akset kryesore të sforcimit mesatar ngjeshës, maksimal dhe minimal, kanë përkatësisht orientimin: P (shtrirje azimutale  $149.66^\circ$ /zhytje  $68.91^\circ$ ), T (shtrirje azimutale  $281.69^\circ$ /zhytje  $14.48^\circ$ ), B (shtrirje  $15.65^\circ$ , zhytje  $15.00^\circ$ , pjerrje  $120.00^\circ$ ). Nisur nga numri i polariteteve të përdorura (diagrama në Fig. 4), boshllëku i vogël azimutal  $80^\circ$  (shpërndarja e mirë e vrojtimeve mbi sferën fokale), dhe ndarja e qartë e lobeve me regjim të ndryshëm sforcimi nga planet nodal, mbështet zgjidhjen e mekanizmit të vatrës për këtë tërmet.



**Fig. 4-** diagrama “*beach ball*”, për gjeometrine vatrore të tërmetit të 1 Qershorit, ora 07:00 UTC, Mw4.8.

Zgjidhja e përfutur është krahasuar edhe me zgjidhjet e mekanizmit vatrore, me anë të analizës së inversionit valor, pra zgjidhjes së tenzorit të sforcimit, nga USGS, GFZ, INGV dhe NOA (Fig. 5).

Main aftershock, June 1 07:00 GMT (Mw4.8) FM from TIR, USGS, GFZ, INGV & NOA



*Fig. 5- Zgjidhja e mekanizmit të vatrës së termetit të 1 Qershorit 2019, ora 07:00 UTC Mw4.8, nga TIR, USGS, GFZ, INGV dhe NOA.*

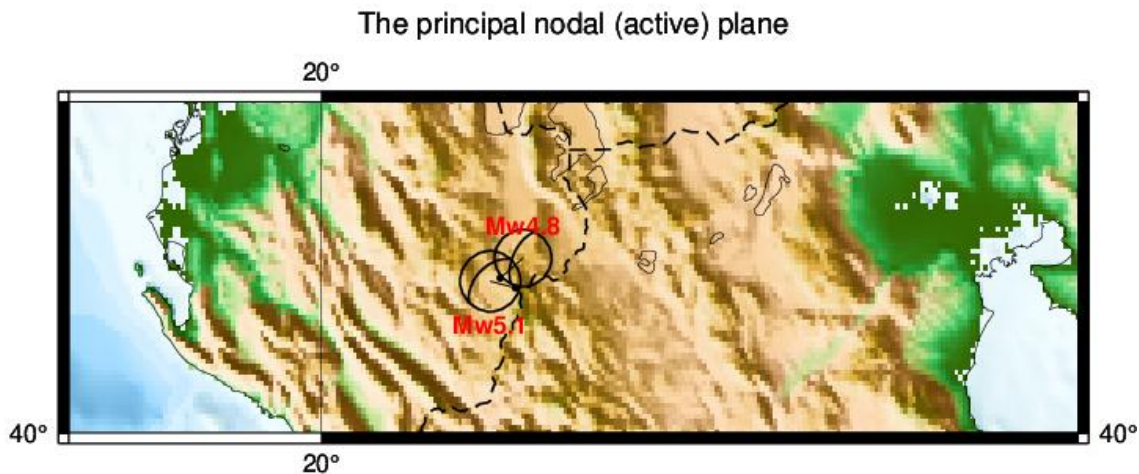
### V.3. Analiza e zgjidhjes së mekanizmit vator

Ndonëse metoda e polariteteve të hyrjeve të para për zgjidhjen e mekanizmit të vatrës (FM), është tepër e qëndrueshme, ajo nuk na jep një zgjidhje të vetme. Për këtë arsye, në analizë janë marrë në konsiderate edhe zgjidhjet e raportuara nga GFZ, USGS, INGV dhe NOA pranë EMSC, me qëllim aplikimin e një metodologjie krahasuese për përcaktimin sa më të mirë të një modeli gjeometrik të mesatarizuar. Në tabelën 1, janë paraqitur vlerat përkatëse për këndin e shtrirjes, rënies dhe zhvendosjes, për planin kryesor (NP1), të përcaktuar si me ana të metodës së polariteteve FM (TIR-AC), ashtu edhe me anë të inversionit valor dhe zgjidhjes së plotë të tenzorit të momentit MT (GFZ, USGS, INGV dhe NOA). Nga analiza krahasuese vërrehet se këndi i shtrirjes, si për goditjen kryesore ashtu edhe për pasgoditjen kryesore, është i përafërt, duke pohuar faktin që projekcioni në sipërfaqe i planit të shkëputjes aktive ka shtrirje VL. Po ashtu, edhe këndi i rënies ndjek të njëjtin trend, duke bazuar faktin që plani i shkëputjes aktive bie në drejtim të VP. Këndi i zhvendosjes, përpos variacionit që e karakterizon, si në lidhje me tipin e goditjes së analizuar ashtu edhe të agjencisë që e raporton, tregon për një shkëputje aktive të tipit oblik, ku mbizotëron komponentja normale dhe ku është e pranishme edhe një komponente e zhvendosjes horizontale të djathtë. Nga ana tjetër, diferenca e vogël këndore midis goditjes dhe pasgoditjes kryesore (Tab. 1), mbështet idenë që këto dy tërmete janë të lidhura me të njëjtën shkëputje tektonike aktive dhe të shkaktuara nga aktivizimi i saj në mënyrë segmentare.

*Tabela 1: Plani kryesor i shkëputjes aktive, për goditjen kryesore dhe pasgoditjen kryesore, sipas agjensive të ndryshme.*

Agjensia raportuese	Tërmeti	Shtrirja ( <sup>0</sup> )	Rënia ( <sup>0</sup> )	Zhvendosja ( <sup>0</sup> )
<b>TIR (AC)</b>	<i>Goditja kryesore</i>	223.71	52.24	-50.77
	<i>Pasgoditja kryesore</i>	204.15	61.12	-72.81
<b>GFZ</b>	<i>Goditja kryesore</i>	216	52	-88
	<i>Pasgoditja kryesore</i>	201	53	-86
<b>USGS</b>	<i>Goditja kryesore</i>	222	45	-75
	<i>Pasgoditja kryesore</i>	182	36	-116
<b>INGV</b>	<i>Goditja kryesore</i>	204	43	-102
	<i>Pasgoditja kryesore</i>	185	35	-111
<b>NOA</b>	<i>Goditja kryesore</i>	32	36	-108
	<i>Pasgoditja kryesore</i>	36	34	-79

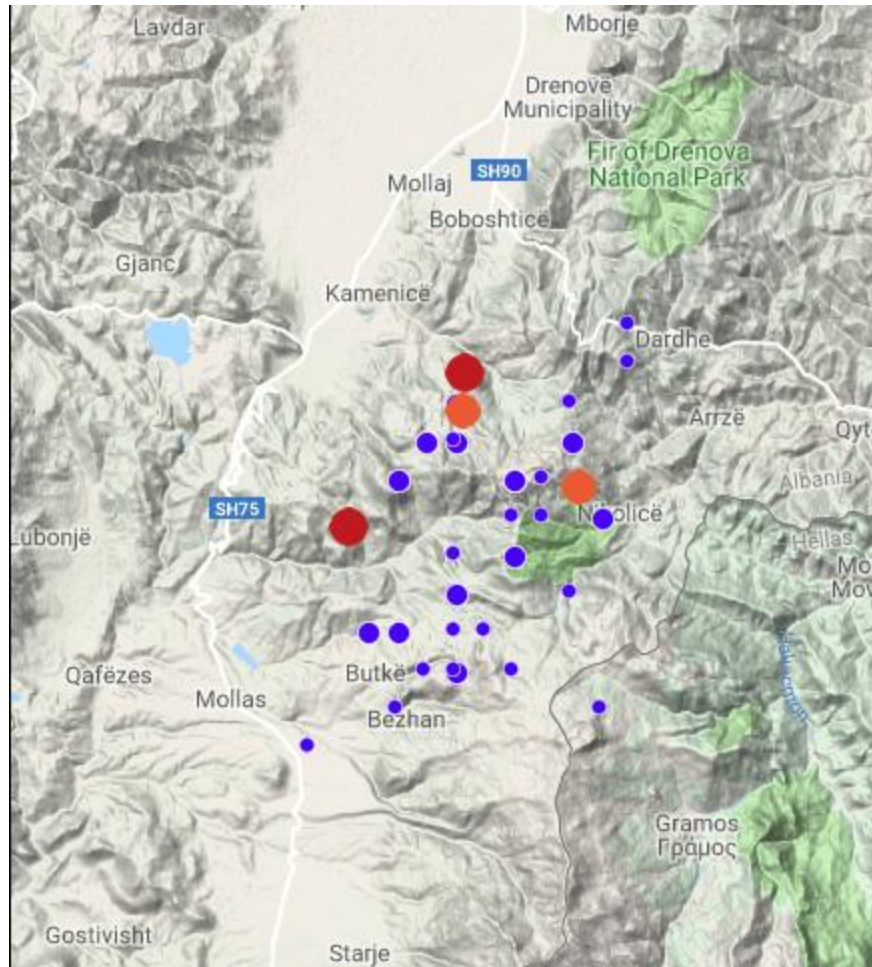
Sa më sipër mund të vrojtohet lehtësisht edhe në paraqitjen grafike të planit nodal kryesor, të goditjes dhe pasgoditjes kryesore, në hartën e figurës 6.



**Fig. 6-** Plani nodal kryesor për tërmetet e 1 Qershorit 2019, ora 04:26 UTC dhe 07:00 UTC, përkatësisht Mw5.1 dhe Mw4.8, bazuar në zgjidhjen e mekanizmit të vatrës FM dhënë nga TIR-AC.

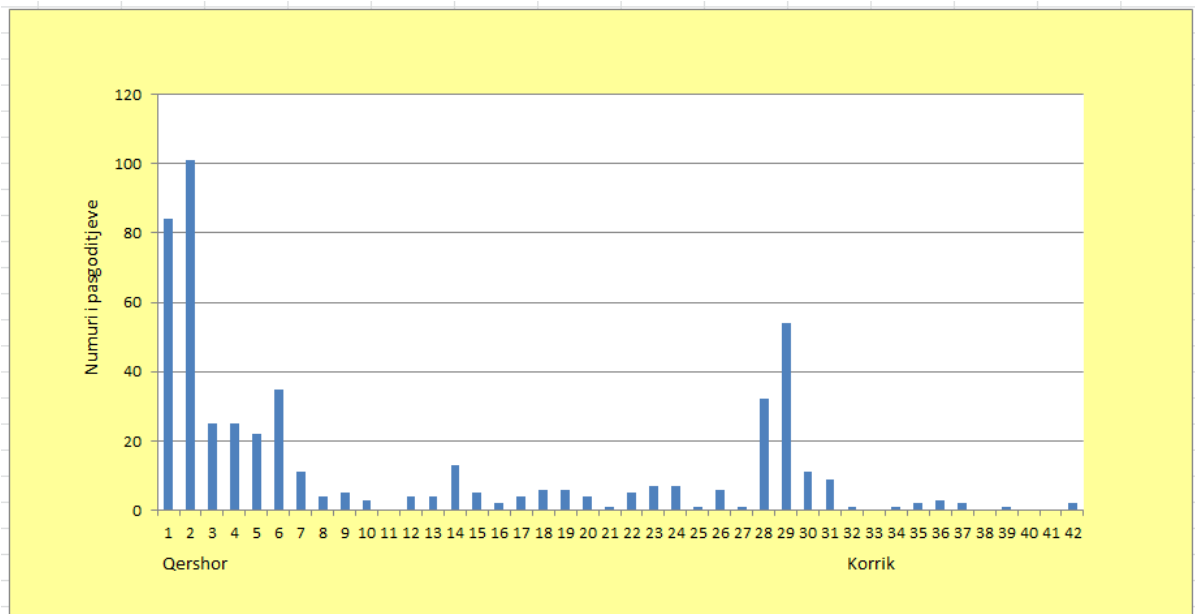
## VI. Sekuencat e pasgoditjeve

Seria tërmetore e 1 Qershorit 2019, e cila preku kryesisht zonën e Korçës, u karakterizua nga një numër prej 465 pasgoditjesh të lokalizuara me magnitudë në intervalin 1.0 – 5.3. Epiqendrat e tyre, trahsohen pothuaj në brez relativisht të ngushte me drejtim VVL, e cila përputhet plotësisht edhe me drejtimin e planeve të shkëputjeve gjeneruese, të përcaktuar nga zgjidhja e mekanizmit vatorrë (Fig 1). Kjo seri zgjati nga 1 Qershori deri më 15 Korrik 2019, por përqendrimin më të lartë të numrit të pasgoditjeve e pati prej datave 1 – 2 dhe 28 - 29 Qershor 2019. Pasgoditjet shtrihen nga fshati Leshnja deri në parkun kombëtar të Drenovës me gjatësi 21 km dhe gjerësi 12 km. Nga shpërndarja e epiqendrave vihat re se ato janë lokalizuar në drejtimin JL-VL dhe L të goditjes më të fortë me magnitudë  $M_L=5.3$ . Duhet të theksojmë se pasgoditjet e oreve të para si dhe pasgoditjet më të fuqishme shtrihen në dy lineamente kryesore paralel ndërmjet tyre me drejtim shtrirje V-VL (Fig 7). Kjo mund të shpjegohet me drejtimin e zhvillimit të thyerjeve me shtrirje V-VL. Lineamenti i parë fillon me goditjen kryesore në afërsi në verilindje të Mollasit dhe vazhdon deri në afërsi të Kamenicës. Goditja më e madhe pas goditjes kryesore me  $M_L=5.0$  ndodhet në të njëjtin lineament, ndodhë 2 ore e 34 minuta më vonë. Goditja më e afërt në kohë ka ndodhur 7 minuta më vonë me magnitudë  $M_L=4.9$  ndodhë në të njëjtin lineament me goditjen kryesore dhe vendoset në VVL të saj. Lineamenti i dytë fillon më në afërsi të Bezhanit dhe vazhdon në Nikolice deri në Dardhë. Goditja e tretë e madhe me magnitudë  $M_L=4.7$  ndodhi 8 minuta pas goditjes kryesore dhe epiqender në lindje të saj në lineamentin e dytë. Këto goditje më të fortat pas goditjes së parë  $M_L=5.3$  ndodhin në kohë të afërta, në hapsira të afërta dhe me masa të përafërta. Në këtë zonë kemi tërmete me thujtë të njëjtën madhësi dhe të ndodhura pranë në kohë, të shkaktuar nga thyerje të trasuara pranë njera-tjetrës, të ngjashëm me tërmetet e perberë.



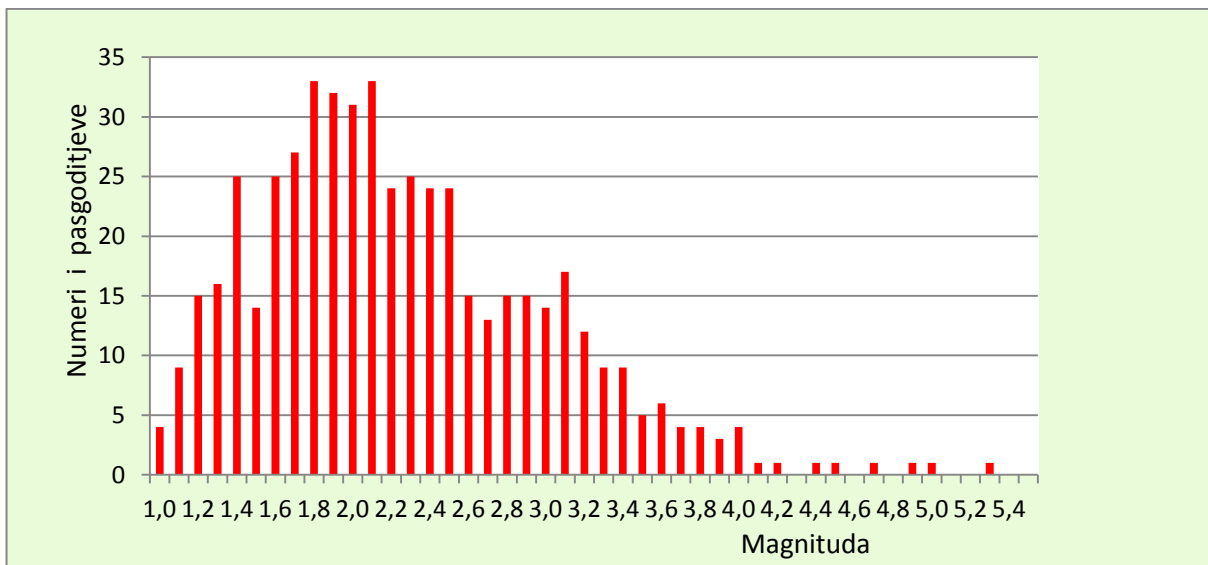
**Fig 7.** Harta e shpërndarjes epiqendrave të pasgoditjeve të 8 oreve pas goditjes kryesore (me të kuqe paraqiten goditjet e forta me  $M_L=4,5$ )

Këto tërmete kanë ndodhur në periudhë kohore 2 orë e 34 minuta duke migruar nga goditja më e fortë në drejtim të VVL dhe në Lindje. Sic shihet aktiviteti kryesor u zhvillua në pjesën e sipërme të kores së tokës, deri në thellësin 13 km, ku u cilrua pjesa më e madhe e energjisë së pasgoditjeve. Aktivitet ka patur deri në thellësin 25 km. Pra i gjithë aktiviteti është kryer deri në thellësin 25 km në perputhje dhe me sudimet e kryera se shtresat sizmoaktive në vendin tonë shtrihen në koren e sipërme dhe të mesme (Ormeni, 2011). Figura 8, tregon numurin e pasgoditjeve në funksion të ditëve për muajin qershor dhe korrik. Nga grafiku i figurës 8, vihet re se numuri i pasgoditjeve zvogëlohet me kalimin e kohës deri sa më 28 Qershor ndodhi një ngjarje e dytë. Nga ky grafik duket qartë se seria e pasgoditjeve të termetit të 1 Qershorit nuk paraqet një seri normale. Duket qarte se aktiviteti i pasgoditjeve mund të ndahet në dy faza. Faza e parë përfshin periudhën 1 Qershor deri me 28 në të cilën u regjistruan 350 pasgoditje me  $M_L > 1.0$  frekuenca e tyre bie me kalimin e kohës. Faza e dytë fillon me 28 Qershor ora 14 e 36 me një termet me magnitudë  $M_L=4.2$  i pasuar më datë 29 ora 13 e 01 me një goditje me  $M_L=4.5$  dhe u vijua nga pasgoditjet deri me 15 Korrik.



**Fig 8.** Numuri i pasgoditjeve si një funksion i kohës për tërmetin e Korcës të 1 Qershorit 2019.

Numuri i pasgoditjeve të lokalizuara kap vlerën 115 pasgoditje me  $M_L > 1.0$  dhe frekuenca e tyre bie me kalimin e kohës. Magnitudat e pasgoditjeve të lokalizuara varjojnë nga vlera 1.1 deri në vlerën 5.0 dhe tregojnë një zvogelim të numurit të tyre nga vlerat e magnitudave më të vogla në vlerat me të mëdha. Sic tregohet në grafikun e figurës 9, magnituda e shumicës së pasgoditjeve varion nga vlera 1.0 në vlerën 4.0 dhe maksimumi është vrojtuar për magnitudat  $M_L = 1.8$ . Numeri i pasgoditjeve me  $1.0 \leq M_L < 1.8$  është 137. Numeri i pasgoditjeve me  $1.8 \leq M_L < 3.5$  është 294, dhe kemi 34 pasgoditje me  $M_L \geq 3.5$  nga të cilat 12 me magnitudë  $M_L \geq 4.0$ . Pasgoditjet me magnitudat që varjojnë nga 1.8 në 2.1 janë më dominantet në spektrin frekuencës së tyre (Fig 9).



**Fig 9.** Grafiku i numurit të pasgoditjeve për nivelin e magnitudave

## VI. Fusha Makrosizmike

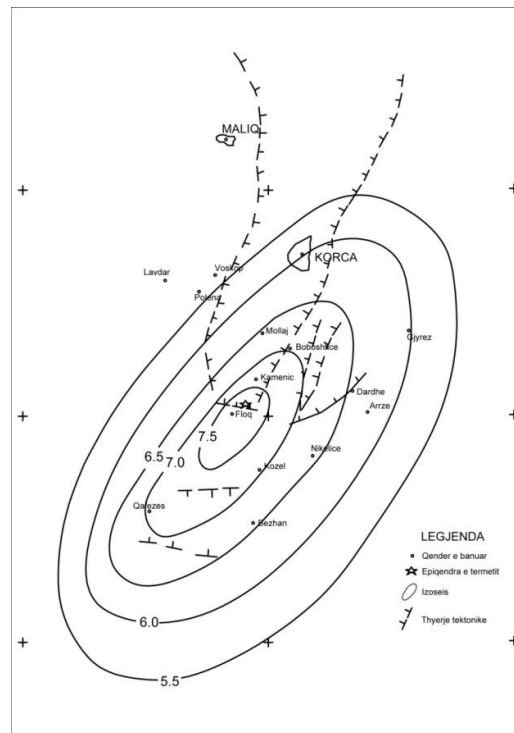
Nga tërmeti i datës 01.06.2019 u plagosen tre persona, gjithashtu ky tërmet u shoqërua dhe me dëme të konsiderueshme material në rajonin e Korçës. Në të gjithë rajonin, që përfshin bashkitë Korçë, Kolonjë dhe Devoll u dëmtuan gjithësej 688 shtëpi banimi, nga këto 130 rezultojnë të pabanueshme, 248 me dëmtime të rënda dhe 310 me dëmtime të lehtë





**Fig 10.** Pamje nga shtëpit e rrënuara në fshatrat Floq dhe Dvoran si dhe fshatrat rreth tyre

Nga vërtetimet në terren rezulton se dëmtime të rënda kanë patur ndërtesat e vjetra, të ndërtuara pa marrë asnjë masë antisizmike. Kategoria e ndërtesave të dëmtuara më rëndë kanë qenë të ndërtuara me mur guri me lidhje Ilaçi dhe baltë me breza druri (shih fotot, fig 10), të cilët për shkak të vjetërsisë shpesh brezat e drurit janë të kalbur dhe të amortizuar plotësisht. Të gjitha banesat e ndërtuara me brez betonarmeje në themel dhe mure dhe me kollona antisizmike nuk kanë pësuar dëmtime ose rrallë janë vërejtur dëmtime të lehta, si çarje suvaje apo plasaritje të mureve. Intensiteti i tërmetit vlerësohet 7.5 ballë (EMS-98) rreth zonës epiqendrore me koordinatë 40.440N; 20.770E. Intensiteti i tërmetit në epiqendër  $I_0$  është përcaktuar nga relacioni  $I_0 = (M_L - 1)/0.6$ , dhe është marrë në konsideratë reagimin e godinave dhe objekteve të tjera që janë ndodhur në troje më të këqija në zonën epiqendrore. Fusha makroizemike e tërmetit Korces (Figura 11) tregon respektivisht se shuarja është më e vogël në zonat verilindje, lindje dhe juglindje të epiqendres e cila lidhet edhe me direktivitetin e thyerjes. Izosejstet 7.5 dhe 7.0 deri në 6 ballë kanë shtrirje VVL dhe përputhen me drejtimin e shtrirjes së sistemit të prishjeve tektonike.



**Fig 11.** Harta e izoseistëve të tërmetit të 1 Qershorit 2019

Ketu ka ndikuar dhe drejtimi i shtrirjes së vatrës së tërmetit të 1 Qershorit (drejtimi VVL). Zona e intensitetit të lekundjeve 5.5 është e zgjeruar edhe në drejtimin juglindor. Në zgjerimin e kësaj zone kanë ndikuar lineamente tërthore me shtrirje JL që përshkojnë këto zone. Kjo tendencë e shkallës me të ulet të shuarjes vihet re edhe në zonën nga Qafzësi në Gostivisht me izosejstet që ndan shkallën e intensitetit 7.0 nga shkalla e intensitetit 6.5. E dallueshme është edhe nga izosejstja që ndan shkallën e intensitetit 6.0 nga shkalla e intensitetit 5.5. Tendencë e shuarjes më të vogël në zonën në verilindje vrehet për izosejstet që ndajnë shkallën e intensitetit 7.0 nga shkalla e intensitetit 6.5 që shtrihet në zonën nga Boboshtica në fshatin Drenovë. Kjo tendencë e shuarjes me të vogël vihet re edhe në zonën nga Drenova në Dishnic dhe Gjyrez me izosejstet që ndan shkallën e intensitetit 6.5 nga shkalla e intensitetit 6.0. Shuarja në zonën në lindje të vatrës nga Floqi drejt Nikolic, Arrez, Miras është më e lartë se në zonën në perëndim të saj nga Floqi drejt Lubonjës, Vithkuqit dhe Panarit. Pamja jo simetrike e izosejsteve në sipërfaqen e tokës është i kushtëzuar nga ndërtimi i strukturës gjeologjike dhe vecorit tektonike në territorin e lëkundur. Vihet re izosejstet në drejtimin VL zgjerohen pak më shumë se në drejtimin JP. Mendojmë se kjo ka të bëjë me drejtimin e procesit të zhvillimit të carjes e cila ka filluar në jug të Floqit dhe është zhvilluar në drejtimin VVL. Kjo duket disi edhe në karakterin e dëmtimeve të cilat janë më të dukshme në drejtimin VL.

## VII. Përfundime

- Seria e tërmetit të 1 Qershorit 2019 me epiqentër pranë fshatit Floq në rrethin e Korçës, shprehin rritjen e aktivitetit sizmik të zonës lindore me shtrirje Korçë-Oher-Peshkopi.
- Aktiviteti i datës 1 Qershor 2019, i spikatur me goditjen kryesore të orës 04:26 UTC dhe pasgoditjen e orës 07:00 UTC, është i lidhur me aktivizimin segmentar të thyerjes me shtrirje V-VL që përvijon në krahun perëndimor të masivit të Moravës.
- Thyerja tektonike në fjalë është e tipit kryesisht normal, me një komponente të lehtë të shtytjes së djathtë, mbi planin aktiv të së cilës mbizotëron sforcimi në terheqje i karakterizuar nga orientimi horizontal i boshtit të sforcimit minimal ngjeshës T, me orientim V-VL (287°). Ky regjim është tipik për gjeologjinë horst-grabenore të rajonit.
- Sforcimi maksimal ngjeshës, i karakterizuar nga boshti P, ka orientim gati verior (197°), dhe zhytje 60°, duke ekuilibruar zforcimin në zgjerim. Nga sa më sipër, është e qartë se ndikimi i komponentes së shtytjes së djathtë ka luajtur rol primar në aktivizimin e kësaj thyerjeje.
- Nga shpërndarja e epiqendrave të serisë tërmetore të Korçës vihet re se ato trahsohen pothuaj në brez relativisht të ngushtë me drejtim VVL, i cili përputhet plotësisht edhe me drejtimin e planeve të thyerjeve gjeneruese, të përcaktuar nga zgjidhja e mekanizmit vatrorë.
- Nga analiza e fushës makrosizmike bazuar në vrojtimet pas goditjes kryesore pasqyruar në hartën e izosejsteve dallohet shuarje më e ulet e intensitetit sizmik sipas drejtimit V-VL.
- Nga studimi i zgjidhjes së mekanizmave vatrorë i goditjeve më të forta, i fushës makrosizmike nëpërmjet ndërtimit të hartës së izosejsteve si dhe nga drejtimi i boshtit më të madh të shpërndarjes së pasgoditjeve konkludohet se shtrirja e thyerjes shkaktare të kësaj serie tërmetore është sipas drejtimit VVL.
- Aktiviteti i serisë së goditjeve sizmike është kryer deri në thellësinë 25 km, pra në koren e sipërme dhe të mesme që përputhet me studimet e mëparshme si shtresa më sizmoaktive e kores së tokës në vendin tonë.



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