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## **H Y R J E**

Buletini sizmologjik përmban ngjarjet sizmike (tërmetet), e regjistruar, lokalizuar dhe analizuar gjatë periudhës kohore një-mujore. Përpos pasqyrit 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. Në procesin e monitorim-regjistrimit dhe lokalizimit të ngjarjeve sizmike kontribuojnë drejtpërdrejtë punonjësit ndihmës-shkencor (laborant): Ing. Ardian Minarolli, Ing. Olgert Gjuzi, Ing. Irena Dushi, Ing. Suela Hajrullai (Inxhinier Gjeolog, Gjeofizik, Fizik/ Monitorues në Qendrën Kombëtare të Sizmologjisë). Në kontrollin dhe analizën e cilësisë së vlerësimit të të dhënave, në analizën statistikore, analizën e ngjarjeve ( $M > 4.0$ ), katalogimin dhe paraqitjen grafike në hartë si dhe përpilimin e këtij buletini, kontribuojnë punonjësit kërkues sizmolog, Prof.Dr. Rrapo Ormeni dhe Dr. Edmond Dushi. 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*]. 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 përftuara 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. Contributing assistant staff are: Eng. Ardian Minarolli, Eng. Ervin Kasaj, Eng. Olgert Gjuzi (Geologists/Observers) and scientific staff: Prof.Dr. Rrapo Ormeni and Dr. Edmond Dushi (Seismologists). 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

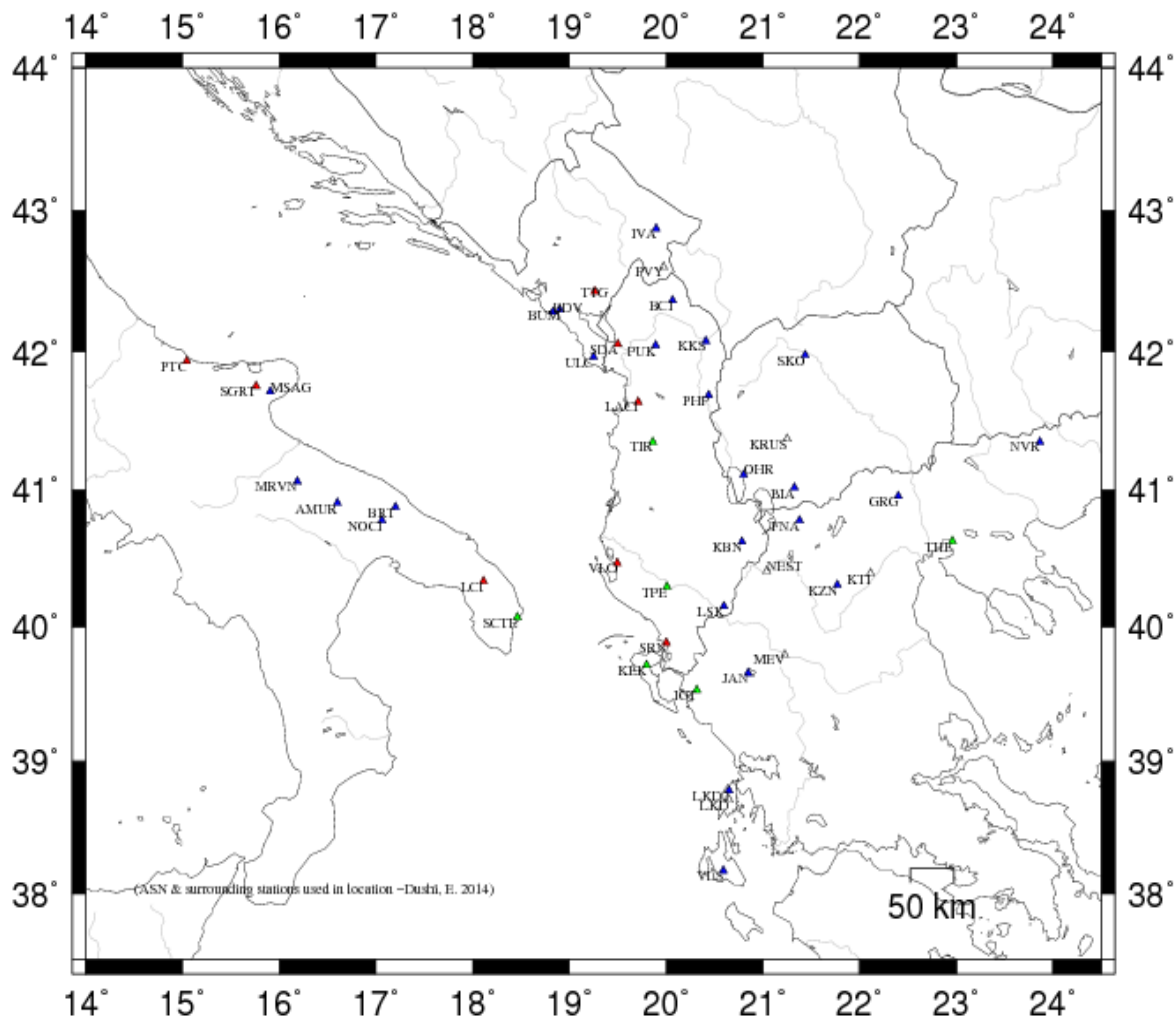
**Tab. 3 – Rrjeti Sizmologjik Ndihmës (MSO, SKO, AUTH, NAO, INGV)**

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	1.0
KTI	Po (Y)	40.39289	22.11650	1329	#	#	#	#	#
GRG	Po (Y)	40.9558	22.4029	600	3C-BB	CMG-3EPS/100	Trident	RT	40
LKD	Po (Y)	38.70722	20.65056	1140	#	#	#	#	#
ULC	Po (Y)	41.9633	19.2497	465	3C-SP	S-13	Smart-24D	RT	1.0
TTG	Po (Y)	42.43020	19.25530	97	#	#	#	#	#
PVY	Po (Y)	42.5950	19.9735	1250	3C-SP	S-13	Smart-24D	RT	1.0
BUM	Po (Y)	42.3008	18.8986	724	3C-SP	S-13	Smart-24D	RT	1.0
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	120
JAN	Po (Y)	39.6561	20.8487	526	3C-BB	CMG-3ESPC/60	DR24-SC	RT	40
KZN	Po (Y)	40.3033	21.7820	791	3C-BB	STS-2	DR24-SC	RT	120
VLS	Po (Y)	38.1768	20.5886	402	3C-BB	Trillium 120	DR24-SC	RT	120
NVR	Po (Y)	41.3484	23.8651	627	3C-BB	CMG-3ESPC/60	DR24-SC	RT	40

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	40
MSAG	Po (Y)	41.712	15.9096	890	3C-BB	Trillium 40T	Libra VSAT	RT satellite	40/120
PTC	Po (Y)	41.7546	15.7437	960	3C-BB	Trillium 40T	Libra VSAT	RT satellite	40
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 përftuar**  
(Output parameter’s description)

**I. 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 (km) [ <i>hypocenter depth in km</i> ]
RMS	Shmangia kuadratike mesatare për diferencat e peshuara të kohë-udhëtimin, për Fazat Sizmike, [ <i>root mean square 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, approximately 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 konvergjimin 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> ].

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

## **II. 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 [ <i>3 –letters component code</i> ]
C	shkurtimi i kodit të rrjetit (1 karakter) [ <i>abbreviation for the station code</i> ]
R	Shënimi për stacionin [ <i>station remark</i> ]
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 vlerësimin 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 i 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 ne amplitude, [ <i>amplitude based magnitude weight code</i> ].
XMAG	Magnituda bazuar në amplitude, 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 1560326360 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 675 2.9 km from Shkinak, Kukës, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
OrigID																	
2019/05/02	07:25:58.46		0.03	41.9067	20.4967				7.0	12.4	4	4	225	0.22	0.56	m	
725																	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.5	0.0	3	725

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
PHP	0.00	0.0	Pg	07:26:02.889	0.0					---				mc_		11069	
PHP	0.23	191.0	Sg	07:26:06.600	0.0					---				m_		11064	
PHP	0.23	191.0	AMl	07:26:06.900						---		0.6	0.34	a_	Ml	1.7	6128
PUK	0.47	288.0	Sg	07:26:15.053	-0.0					---				m_		11066	
PUK	0.47	288.0	Pg	07:26:07.995	0.1					---				md_		11065	
PUK	0.47	288.0	AMl	07:26:17.150						---		0.2	0.26	a_	Ml	1.4	6129
BCI	0.56	326.0	Sg	07:26:17.534	-0.6					---				m_		11068	
BCI	0.56	326.0	Pg	07:26:09.655	-0.0					---				m_		11067	
BCI	0.56	326.0	AMl	07:26:23.450						---		0.2	0.20	a_	Ml	1.5	6130

DATA\_TYPE COMMENT GSE2.1  
Event 675

Official Magnitude:  
Ml 1.54

Error ellipse:

	Azim	Dip	Mag
Max:	195	87	12.4000
Intermediate:	72	1	1.1000
Min:	342	3	0.4200

BEGIN GSE2.1  
MSG\_TYPE DATA



MSG\_ID 1560326360 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 676 0.9 km from Herraaj, Tirana, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/02	22:49:24.17		0.28	41.4288	19.8607				26.4	0.9	19	30	101	0.08	1.91	m	

Magnitude	Err	Nsta	Author	OrigID
Md	2.7	0.0	2	726
Ml	2.7	0.0	5	726

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
TIR	0.09	0.0	Pg	22:49:29.079	0.0									m		11092	
TIR	0.08	177.0	Sg	22:49:32.514	-0.2									m		11070	
TIR	0.08	177.0	AMl	22:49:33.430								9.2	0.22	a	Ml	3.0	6133
PHP	0.50	59.0	Sg	22:49:42.739	0.4									m		11072	
PHP	0.50	59.0	Pg	22:49:34.217	-0.4									m		11071	
PHP	0.50	59.0	AMd	22:50:22.529								0.0	48.31	a	Md	2.7	6131
PHP	0.50	59.0	AMl	22:49:44.700								1.1	0.28	a	Ml	2.4	6134
PUK	0.61	2.0	Sg	22:49:46.057	0.1									m		11074	
PUK	0.61	2.0	Pg	22:49:36.466	-0.1									m		11073	
PUK	0.61	2.0	AMd	22:50:22.477								0.0	46.01	a	Md	2.7	6132
PUK	0.61	2.0	AMl	22:49:48.780								1.8	0.40	a	Ml	2.7	6136
PUK	0.61	2.0	AMl	22:49:49.760								1.3	0.30	a	Ml	2.6	6135
ULC	0.70	320.0	Pg	22:49:38.241	-0.1									m		11075	
DRME	0.91	327.0	Pg	22:49:42.039	0.1									m		11076	
BCI	0.95	9.0	Sg	22:49:56.347	0.1									m		11078	
BCI	0.95	9.0	Pg	22:49:42.210	-0.3									m		11077	
BCI	0.95	9.0	AMl	22:49:59.800								1.1	0.60	a	Ml	2.8	6137
VLO	1.00	197.0	Sg	22:49:57.876	1.1									m		11080	
VLO	1.00	197.0	Pg	22:49:43.366	0.6									m		11079	
BUM	1.13	321.0	P	22:49:45.797	0.0									m		11081	
NEST	1.36	137.0	Sn	22:50:09.025	0.0									m		11083	
NEST	1.36	137.0	Pn	22:49:49.814	0.0									m		11082	
NEST	1.36	137.0	AMl	22:50:10.860								0.3	0.54	a	Ml	2.5	6138
LSK	1.39	156.0	Pg	22:49:50.026	-0.3									m		11084	
BEY	1.44	1.0	P	22:49:51.869	0.6									m		11085	
HCY	1.44	316.0	P	22:49:49.939	-1.4									m		11087	
KOME	1.44	350.0	P	22:49:51.468	0.2									m		11086	
NKME	1.50	334.0	P	22:49:51.340	-0.8									m		11088	
SRN	1.55	176.0	Pn	22:49:51.123	-2.3									m		11089	
SCTE	1.71	219.0	Pn	22:49:55.767	0.1									m		11090	
UPM	1.91	339.0	Pn	22:49:58.134	-0.4									m		11091	

DATA\_TYPE COMMENT GSE2.1  
 Event 676

Official Magnitude:  
M1 2.65

Error ellipse:

	Azim	Dip	Mag
Max:	68	70	0.9300
Intermediate:	260	19	0.7400
Min:	169	4	0.4700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326360 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 677 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/02	20:22:13.60		0.22	39.8312	19.9788				8.6	0.6	11	30	131	0.05	2.21	m	
OrigID 727																	

Magnitude	Err	Nsta	Author	OrigID
Md	2.1	0.0	1	727
M1	2.4	0.0	5	727

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
SRN	0.05	18.0	Sg	20:22:17.464	-0.2									m		11094
SRN	0.05	18.0	Pg	20:22:16.061	0.1									m		11093
SRN	0.05	18.0	AMd	20:22:42.267								0.0	26.21	a	Md	2.1
SRN	0.05	18.0	AM1	20:22:17.490								11.6	0.12	a	M1	2.7
IGT	0.40	137.0	Sg	20:22:28.498	0.3									m		11096
IGT	0.40	137.0	Pg	20:22:22.086	0.1									m		11095
LSK	0.57	0.0	Pg	20:22:24.628	0.0									m		11106
LSK	0.57	56.0	Sg	20:22:33.628	-0.0									m		11097
LSK	0.57	56.0	AM1	20:22:35.190								0.6	0.30	a	M1	2.1
LSK	0.57	56.0	AM1	20:22:39.260								0.6	0.62	a	M1	2.2
NEST	1.01	54.0	Pg	20:22:34.388	0.9									m		11099
NEST	1.01	54.0	Sg	20:22:48.503	0.1									m		11098
LKD2	1.17	152.0	Sn	20:22:53.318	-0.4									m		11101
LKD2	1.17	152.0	Pn	20:22:37.988	1.5									m		11100
LKD2	1.17	152.0	AM1	20:23:03.930								0.4	0.54	a	M1	2.5
SCTE	1.19	283.0	Sg	20:22:54.501	0.2									m		11103
SCTE	1.19	283.0	Pg	20:22:38.105	1.2									m		11102
SCTE	1.19	283.0	AM1	20:22:56.250								0.8	0.42	a	M1	2.8
PUK	2.21	359.0	Sn	20:23:24.474	0.1									m		11105
PUK	2.21	359.0	Pn	20:22:53.693	-0.3									m		11104
PUK	2.21	359.0	AM1	20:23:29.270								0.0	0.36	a	M1	2.3

DATA\_TYPE COMMENT GSE2.1  
 Event 677

Official Magnitude:  
 Ml 2.39

Error ellipse:

	Azim	Dip	Mag
Max:	66	55	0.7500
Intermediate:	238	34	0.5200
Min:	331	4	0.4500

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1560326359 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 678 0.5 km from Ferraj, Tirana, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/03	00:10:58.66		0.18	41.3853	19.8527				13.7	1.5	12	30	103	0.53	1.68	m	
OrigID 728																	

Magnitude	Err	Nsta	Author	OrigID
Md	2.4	0.0	1	728
Ml	1.3	0.0	5	728

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
TIR	0.04	0.0	Pg	00:11:03.866	0.0									m		11120	
TIR	0.04	166.0	Sg	00:11:06.486	3.2									m		11107	
TIR	0.04	166.0	AMl	00:11:07.560								0.4	0.22	a	Ml	1.3	6148
TIR	0.04	166.0	AMl	00:11:08.190								0.7	0.26	a	Ml	1.6	6147
PHP	0.53	55.0	Sg	00:11:17.496	0.2									m		11109	
PHP	0.53	55.0	Pg	00:11:09.023	-0.3									m		11108	
PHP	0.53	55.0	AMl	00:11:20.680								0.1	0.16	a	Ml	1.2	6149
PUK	0.66	2.0	Sg	00:11:21.588	-0.0									m		11111	
PUK	0.66	2.0	Pg	00:11:11.817	0.1									m		11110	
PUK	0.66	2.0	AMd	00:11:46.502								0.0	34.68	a	Md	2.4	6146
PUK	0.66	2.0	AMl	00:11:23.520								0.1	0.32	a	Ml	1.5	6151
PUK	0.66	2.0	AMl	00:11:24.770								0.1	0.20	a	Ml	1.3	6150
ULC	0.73	323.0	Pg	00:11:12.678	-0.6									m		11112	
DRME	0.94	329.0	Pg	00:11:17.202	-0.0									m		11113	
BCI	0.99	9.0	Sg	00:11:32.720	0.1									m		11115	
BCI	0.99	9.0	Pg	00:11:17.938	-0.1									m		11114	
BCI	0.99	9.0	AMl	00:11:39.030								0.1	0.28	a	Ml	1.6	6153
BCI	0.99	9.0	AMl	00:11:37.530								0.0	0.34	a	Ml	1.5	6152
BUM	1.16	323.0	Pn	00:11:21.146	0.1									m		11116	

NEST	1.33	136.0	Sn	00:11:43.094	-0.1	---										m		11118
NEST	1.33	136.0	Pn	00:11:24.872	0.8	---										m		11117
NEST	1.33	136.0	AML	00:11:47.030		---				0.0	0.76	a	M1	1.3				6155
NEST	1.33	136.0	AML	00:11:47.690		---				0.0	0.32	a	M1	1.0				6154
SCTE	1.68	220.0	Pn	00:11:30.497	0.2	---										m		11119

DATA\_TYPE COMMENT GSE2.1  
Event 678

Official Magnitude:  
M1 1.34

Error ellipse:

	Azim	Dip	Mag
Max:	63	78	1.5000
Intermediate:	260	10	0.5600
Min:	169	3	0.4300

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326359 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 679 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/04	08:16:23.88		0.10	40.1317	19.8765				9.6	0.8	13	30	109	0.27	1.91	m	
729																	

Magnitude	Err	Nsta	Author	OrigID
M1	2.2	0.0	8	729

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
SRN	0.27	159.0	Sg	08:16:34.620	-0.1											m	11122
SRN	0.27	159.0	Pg	08:16:29.821	-0.3											m	11121
SRN	0.27	159.0	AML	08:16:35.080								1.5	0.32	a	M1	2.2	6157
SRN	0.27	159.0	AML	08:16:35.670								1.3	0.34	a	M1	2.1	6156
LSK	0.55	87.0	Sg	08:16:43.430	0.1											m	11124
LSK	0.55	87.0	Pg	08:16:34.944	-0.0											m	11123
LSK	0.55	87.0	AML	08:16:47.660								0.7	0.46	a	M1	2.2	6159
LSK	0.55	87.0	AML	08:16:48.140								0.8	0.34	a	M1	2.2	6158
IGT	0.69	149.0	Sg	08:16:48.229	0.0											m	11126
IGT	0.69	149.0	Pg	08:16:37.957	0.2											m	11125
IGT	0.69	149.0	AML	08:16:55.620								0.3	0.28	a	M1	2.0	6160
KBN	0.85	54.0	Pg	08:16:40.259	-0.1											m	11128
KBN	0.85	54.0	Sg	08:16:53.070	0.4											m	11127
KBN	0.85	54.0	AML	08:16:59.580								0.3	0.36	a	M1	2.2	6161

NEST	0.94	72.0	Sg	08:16:56.448	0.0	---										m		11130
NEST	0.94	72.0	Pg	08:16:42.828	0.3	---										m		11129
NEST	0.94	72.0	AM1	08:17:01.510		---				0.3	0.40	a	M1	2.2			6163	
NEST	0.94	72.0	AM1	08:17:01.050		---				0.2	0.28	a	M1	2.0			6162	
SCTE	1.08	0.0	Pn	08:16:46.937	0.0	---										m		11136
SCTE	1.08	268.0	Sn	08:17:01.233	0.1	---										m		11131
SCTE	1.08	268.0	AM1	08:17:05.680		---				0.7	0.44	a	M1	2.7			6165	
SCTE	1.08	268.0	AM1	08:17:08.120		---				0.4	0.20	a	M1	2.5			6164	
LKD2	1.47	155.0	Sn	08:17:13.365	0.1	---										m		11133
LKD2	1.47	155.0	Pn	08:16:51.982	-0.2	---										m		11132
LKD2	1.47	155.0	AM1	08:17:18.210		---				0.4	0.54	a	M1	2.8			6166	
PUK	1.91	0.0	Sn	08:17:26.641	0.1	---										m		11135
PUK	1.91	0.0	Pn	08:16:59.579	-0.1	---										m		11134
PUK	1.91	0.0	AM1	08:17:30.930		---				0.1	0.60	a	M1	2.4			6167	

DATA\_TYPE COMMENT GSE2.1  
Event 679

Official Magnitude:  
M1 2.18

Error ellipse:

	Azim	Dip	Mag
Max:	145	78	0.7900
Intermediate:	249	2	0.3100
Min:	339	12	0.2700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326359 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 680 1.7 km from Solloman, Lezhë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/06	15:00:37.47		0.05	41.9567	20.1190				18.8	0.5	11	19	143	0.19	1.31	m	
730																	

Magnitude	Err	Nsta	Author	OrigID
Md	2.9	0.0	8	730
M1	2.0	0.0	3	730

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
PUK	0.19	298.0	Sg	15:00:46.148	0.0										m	11138	
PUK	0.19	298.0	Pg	15:00:42.341	-0.1										m	11137	
PUK	0.19	298.0	AMd	15:01:15.679								0.0	33.34	a	Md	2.3	6168
PUK	0.19	298.0	AM1	15:00:48.440								1.3	0.40	a	M1	2.1	6176

PHP	0.36	138.0	Sg	15:00:50.870	0.0	---		m				11139
PHP	0.36	138.0	AMl	15:00:51.820		---	0.5	0.18	a	Ml	1.8	6177
BCI	0.41	0.0	Pg	15:00:45.059	0.0	---			m			11148
BCI	0.41	355.0	Sg	15:00:52.700	0.0	---			m			11140
BCI	0.41	355.0	AMl	15:00:55.190		---	0.7	0.24	a	Ml	2.0	6178
ULC	0.65	271.0	Pg	15:00:50.671	0.1	---			m			11141
ULC	0.65	271.0	AMd	15:01:32.438		---	0.0	41.77	a	Md	2.6	6169
DRME	0.73	289.0	Pg	15:00:52.082	0.1	---			m			11142
DRME	0.73	289.0	AMd	15:01:51.886		---	0.0	59.80	a	Md	2.9	6170
BEY	0.93	350.0	Pg	15:00:55.602	0.1	---			m			11143
BEY	0.93	350.0	AMd	15:01:49.817		---	0.0	54.22	a	Md	2.9	6171
KOME	1.00	334.0	Pg	15:00:56.730	-0.1	---			m			11144
KOME	1.00	334.0	AMd	15:01:32.852		---	0.0	36.12	a	Md	2.5	6172
CEME	1.07	304.0	Pg	15:00:58.029	-0.0	---			m			11145
CEME	1.07	304.0	AMd	15:01:57.265		---	0.0	59.24	a	Md	3.0	6173
NKME	1.18	314.0	Pg	15:01:00.013	-0.0	---			m			11146
NKME	1.18	314.0	AMd	15:01:56.024		---	0.0	56.01	a	Md	2.9	6174
HCY	1.31	293.0	Pn	15:01:02.214	-0.1	---			m			11147
HCY	1.31	293.0	AMd	15:01:57.679		---	0.0	55.47	a	Md	2.9	6175

DATA\_TYPE COMMENT GSE2.1  
Event 680

Official Magnitude:  
Ml 2.01

Error ellipse:

	Azim	Dip	Mag
Max:	58	33	0.6200
Intermediate:	217	54	0.5600
Min:	321	10	0.3700

DATA\_TYPE COMMENT GSE2.1  
Event 681

Official Magnitude:  
Ml 3.77

Error ellipse:

	Azim	Dip	Mag
Max:	134	22	2.0800
Intermediate:	272	60	1.5400
Min:	36	18	0.8800

BEGIN GSE2.1  
MSG\_TYPE DATA

MSG\_ID 1560326359 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 682 2.4 km from Kuzhnen, Lezhë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/07	16:27:29.12		0.04	41.9275	19.9373				25.2	0.6	11	18	174	0.12	1.20	m	

Magnitude	Err	Nsta	Author	OrigID
Md	2.8	0.0	9	732
Ml	2.2	0.0	3	732

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
PUK	0.12	344.0	Sg	16:27:37.647	0.0									m__		11168
PUK	0.12	344.0	Pg	16:27:34.023	0.0									m__		11167
PUK	0.12	344.0	AMd	16:28:03.614								0.0	29.59	a__	Md	2.2
PUK	0.12	344.0	AMl	16:27:38.290								11.7	0.28	a__	Ml	3.1
BCI	0.45	0.0	Pg	16:27:38.674	0.0									m__		11179
BCI	0.45	12.0	Sg	16:27:45.906	-0.0									m__		11169
BCI	0.45	12.0	AMl	16:27:47.520								1.0	0.32	a__	Ml	2.2
ULC	0.51	275.0	Pg	16:27:40.002	0.1									m__		11170
ULC	0.51	275.0	AMd	16:28:17.157								0.0	37.15	a__	Md	2.4
TIR	0.58	186.0	Sg	16:27:50.081	-0.0									m__		11172
TIR	0.58	186.0	Pg	16:27:40.863	-0.2									m__		11171
TIR	0.58	186.0	AMd	16:28:22.536								0.0	41.67	a__	Md	2.6
TIR	0.58	186.0	AMl	16:27:52.420								0.4	0.22	a__	Ml	2.0
DRME	0.61	296.0	Pg	16:27:41.584	-0.1									m__		11173
DRME	0.61	296.0	AMd	16:28:37.226								0.0	55.64	a__	Md	2.9
BUM	0.86	297.0	Pn	16:27:45.945	0.0									m__		11174
BUM	0.86	297.0	AMd	16:28:39.709								0.0	53.76	a__	Md	2.9
BEY	0.94	359.0	Pn	16:27:47.453	0.0									m__		11175
BEY	0.94	359.0	AMd	16:28:30.605								0.0	43.15	a__	Md	2.6
CEME	0.98	310.0	Pg	16:27:48.024	-0.0									m__		11176
CEME	0.98	310.0	AMd	16:28:54.605								0.0	66.58	a__	Md	3.1
NKME	1.11	320.0	Pn	16:27:50.415	0.0									m__		11177
NKME	1.11	320.0	AMd	16:28:40.123								0.0	49.71	a__	Md	2.8
HCY	1.20	297.0	Pn	16:27:51.916	0.0									m__		11178
HCY	1.20	297.0	AMd	16:28:48.399								0.0	56.48	a__	Md	2.9

DATA\_TYPE COMMENT GSE2.1  
 Event 682

Official Magnitude:  
 Ml 2.24

Error ellipse:

	Azim	Dip	Mag
Max:	93	43	0.8600

Intermediate: 288 45 0.5300  
 Min: 190 8 0.3400

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1560326359 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 683 0.9 km from Grumas, Shkodër, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/08	01:43:50.28		0.10	42.3770	19.7790				5.1	1.7	12	29	73	0.22	1.04	m	
OrigID 733																	

Magnitude	Err	Nsta	Author	OrigID
M1	1.4	0.0	2	733

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
BCI	0.21	92.0	Sg	01:43:58.468	-0.0					---				m		11181	
BCI	0.21	92.0	Pg	01:43:54.801	-0.2					---				m		11180	
BCI	0.21	92.0	AM1	01:43:58.850						---		0.9	0.26	a	M1	1.8	6207
BCI	0.21	92.0	AM1	01:43:59.140						---		0.8	0.18	a	M1	1.8	6206
PVY	0.26	33.0	Sg	01:44:00.284	0.0					---				m		11183	
PVY	0.26	33.0	Pg	01:43:55.875	-0.1					---				m		11182	
PUK	0.34	165.0	Sg	01:44:02.835	0.0					---				m		11185	
PUK	0.34	165.0	Pg	01:43:57.554	0.1					---				m		11184	
PUK	0.34	165.0	AM1	01:44:05.410						---		0.1	0.22	a	M1	1.0	6209
PUK	0.34	165.0	AM1	01:44:04.470						---		0.1	0.32	a	M1	1.0	6208
DRME	0.48	247.0	Pg	01:44:00.056	-0.1					---				m		11186	
BEY	0.50	10.0	Pg	01:44:00.704	0.2					---				m		11187	
KOME	0.51	338.0	Sg	01:44:08.577	-0.1					---				m		11189	
KOME	0.51	338.0	Pg	01:44:00.893	0.1					---				m		11188	
ULC	0.57	224.0	Sg	01:44:13.634	3.0					---				m		11191	
ULC	0.57	224.0	Pg	01:44:02.250	0.4					---				m		11190	
CEME	0.66	286.0	Pg	01:44:03.476	-0.1					---				m		11192	
UPM	1.04	0.0	Pg	01:44:10.557	0.0					---				m		11193	

DATA\_TYPE COMMENT GSE2.1  
 Event 683

Official Magnitude:  
 M1 1.41

Error ellipse:

	Azim	Dip	Mag
Max:	259	84	1.7000
Intermediate:	74	5	0.3600



Min: 164 1 0.2900

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326358 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 685 2.1 km from Dushaj, Dibër, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/08	23:02:11.45		0.13	41.5557	20.3055				11.0	1.0	11	30	120	0.16	1.43	m	735

Magnitude	Err	Nsta	Author	OrigID
Md	2.2	0.0	1	735
Ml	1.8	0.0	5	735

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
PHP	0.16	0.0	Pg	23:02:15.363	0.0					---				m		11225	
PHP	0.16	38.0	Sg	23:02:17.906	0.0					---				m		11212	
PHP	0.16	38.0	AMl	23:02:19.120						---		1.0	0.14	a	Ml	1.9	6216
TIR	0.39	239.0	Sg	23:02:25.778	0.1					---				m		11214	
TIR	0.39	239.0	Pg	23:02:19.574	-0.0					---				m		11213	
TIR	0.39	239.0	AMl	23:02:25.820						---		0.2	0.40	a	Ml	1.4	6218
TIR	0.39	239.0	AMl	23:02:30.800						---		0.2	0.54	a	Ml	1.4	6217
PUK	0.58	328.0	Sg	23:02:32.326	0.7					---				m		11216	
PUK	0.58	328.0	Pg	23:02:23.120	0.1					---				m		11215	
PUK	0.58	328.0	AMd	23:02:52.202						---		0.0	29.08	a	Md	2.2	6215
PUK	0.58	328.0	AMl	23:02:36.230						---		0.4	0.30	a	Ml	2.0	6219
BCI	0.83	348.0	Sg	23:02:40.036	-0.1					---				m		11218	
BCI	0.83	348.0	Pg	23:02:29.488	1.7					---				m		11217	
BCI	0.83	348.0	AMl	23:02:42.610						---		0.1	0.58	a	Ml	1.8	6220
ULC	0.89	298.0	Pg	23:02:28.669	-0.4					---				m		11219	
KBN	1.00	158.0	Pg	23:02:30.898	0.2					---				m		11221	
KBN	1.00	158.0	Sg	23:02:45.007	-0.2					---				m		11220	
KBN	1.00	158.0	AMl	23:02:47.380						---		0.1	0.60	a	Ml	1.7	6221
DRME	1.05	308.0	Pg	23:02:32.070	0.0					---				m		11222	
BUM	1.29	306.0	Pg	23:02:36.321	0.0					---				m		11223	
CEME	1.43	315.0	Pg	23:02:38.988	0.1					---				m		11224	

DATA\_TYPE COMMENT GSE2.1  
Event 685

Official Magnitude:  
Ml 1.78

Error ellipse:

	Azim	Dip	Mag
Max:	40	81	1.0500
Intermediate:	269	5	0.4400
Min:	178	7	0.3200

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326358 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 686 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/09	00:26:20.97		0.37	41.0988	19.9968				27.6	1.6	23	30	107	0.47	1.79	m	
OrigID 736																	

Magnitude	Err	Nsta	Author	OrigID
Md	2.8	0.0	1	736
Ml	2.8	0.0	12	736

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
TIR	0.27	0.0	Pg	00:26:26.818	0.0									m		11253
TIR	0.27	339.0	Sg	00:26:31.225	-2.1									m		11226
TIR	0.27	339.0	AMl	00:26:34.700								4.9	0.32	a	Ml	2.8
TIR	0.27	339.0	AMl	00:26:33.560								4.7	0.22	a	Ml	2.8
BPA2	0.47	219.0	Sg	00:26:40.914	2.2									m		11228
BPA2	0.47	219.0	Pg	00:26:31.162	0.1									m		11227
BPA2	0.47	219.0	AMl	00:26:43.520								1.8	0.34	a	Ml	2.5
PHP	0.67	29.0	Sg	00:26:43.989	-0.4									m		11230
PHP	0.67	29.0	Pg	00:26:33.092	-1.3									m		11229
PHP	0.67	29.0	AMd	00:27:24.152								0.0	51.06	a	Md	2.8
PHP	0.67	29.0	AMl	00:26:45.320								1.5	0.28	a	Ml	2.7
VLO	0.74	212.0	Pg	00:26:36.739	1.7									m		11231
KBN	0.76	128.0	Sg	00:26:47.272	0.5									m		11233
KBN	0.76	128.0	Pg	00:26:35.574	-0.2									m		11232
KBN	0.76	128.0	AMl	00:26:49.880								2.5	0.48	a	Ml	3.0
PUK	0.95	356.0	Sg	00:26:53.031	0.1									m		11235
PUK	0.95	356.0	Pg	00:26:38.634	-0.6									m		11234
PUK	0.95	356.0	AMl	00:26:58.060								0.8	0.26	a	Ml	2.7
ULC	1.03	328.0	Pn	00:26:40.888	0.0									m		11236
NEST	1.05	130.0	Sn	00:26:56.591	0.1									m		11238
NEST	1.05	130.0	Pn	00:26:40.602	-0.7									m		11237
NEST	1.05	130.0	AMl	00:27:02.330								1.1	0.34	a	Ml	2.9
LSK	1.05	154.0	Sn	00:26:56.678	0.4									m		11240
LSK	1.05	154.0	Pn	00:26:41.297	0.2									m		11239
LSK	1.05	154.0	AMl	00:27:04.420								1.7	0.44	a	Ml	3.1
SRN	1.22	179.0	Sg	00:27:02.579	0.4									m		11242

SRN	1.22	179.0	Pg	00:26:44.554	0.0	---												m		11241
SRN	1.22	179.0	AM1	00:27:10.680		---				0.5	0.54	a	M1	2.7				a		6232
DRME	1.24	332.0	Pn	00:26:44.880	0.3	---												m		11243
BCI	1.27	2.0	Sn	00:27:03.273	0.4	---												m		11245
BCI	1.27	2.0	Pn	00:26:44.900	-0.0	---												m		11244
BCI	1.27	2.0	AM1	00:27:07.330		---				1.4	0.78	a	M1	3.2				a		6233
BUM	1.45	326.0	Pn	00:26:47.994	-0.2	---												m		11246
PVY	1.49	0.0	Pn	00:26:48.749	-0.1	---												m		11247
SCTE	1.55	230.0	Pn	00:26:47.985	-1.7	---												m		11248
SCTE	1.55	230.0	AM1	00:27:18.740		---				0.6	0.32	a	M1	3.0				a		6234
IGT	1.59	170.0	Sn	00:27:11.704	-0.6	---												m		11250
IGT	1.59	170.0	Pn	00:26:49.769	-0.5	---												m		11249
IGT	1.59	170.0	AM1	00:27:21.740		---				0.3	0.40	a	M1	2.8				a		6235
BEY	1.77	358.0	Pn	00:26:53.858	0.7	---												m		11251
KOME	1.79	349.0	Pn	00:26:53.727	0.3	---												m		11252
BPA1			AM1	00:26:47.020		---				2.9	0.58	a	M1	2.7				a		6225

DATA\_TYPE COMMENT GSE2.1  
Event 686

Official Magnitude:  
M1 2.79

Error ellipse:

	Azim	Dip	Mag
Max:	80	65	1.7500
Intermediate:	254	24	0.9900
Min:	345	2	0.4400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326358 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 687 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/08	23:29:11.13		0.08	39.8405	19.9827				6.9	0.8	7	30	144	0.04	1.19	m	737

Magnitude	Err	Nsta	Author	OrigID
Md	2.0	0.0	1	737
M1	1.7	0.0	4	737

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
LSK	0.00	0.0	Pg	23:29:21.203	0.0					---				m		11263
LSK	0.56	56.0	Sg	23:29:30.986	0.1					---				m		11258

LSK	0.56	56.0	AMl	23:29:38.390		---	0.1	0.52	a__	Ml	1.4	6238
SRN	0.04	19.0	Sg	23:29:14.584	-0.1	---			m__			11255
SRN	0.04	19.0	Pg	23:29:13.280	0.1	---			m__			11254
SRN	0.04	19.0	AMd	23:29:37.990		---	0.0	24.71	a__	Md	2.0	6236
SRN	0.04	19.0	AMl	23:29:14.830		---	2.7	0.06	a__	Ml	2.0	6237
IGT	0.41	138.0	Sg	23:29:25.914	0.0	---			m__			11257
IGT	0.41	138.0	Pg	23:29:19.517	-0.1	---			m__			11256
NEST	1.00	54.0	Sg	23:29:47.845	2.2	---			m__			11260
NEST	1.00	54.0	Pg	23:29:30.707	-0.1	---			m__			11259
NEST	1.00	54.0	AMl	23:29:54.530		---	0.0	0.50	a__	Ml	1.3	6239
SCTE	1.19	282.0	Sn	23:29:51.923	0.0	---			m__			11262
SCTE	1.19	282.0	Pn	23:29:35.729	1.3	---			m__			11261
SCTE	1.19	282.0	AMl	23:30:03.610		---	0.2	0.94	a__	Ml	2.2	6240

DATA\_TYPE COMMENT GSE2.1  
Event 687

Official Magnitude:  
Ml 1.70

Error ellipse:

	Azim	Dip	Mag
Max:	5	69	0.9000
Intermediate:	210	18	0.4500
Min:	117	8	0.3800

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326358 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 688 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
2019/05/08	23:59:13.52		0.21	40.1397	19.9602				14.0	2.1	9	30	118	0.26	1.15	m	

Magnitude	Err	Nsta	Author	OrigID
Md	2.0	0.0	1	738
Ml	1.8	0.0	4	738

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
SRN	0.26	173.0	Sg	23:59:24.410	-0.1					---				m__		11265	
SRN	0.26	173.0	Pg	23:59:19.791	0.0					---				m__		11264	
SRN	0.26	173.0	AMd	23:59:43.435						---	0.0	23.64		a__	Md	2.0	6241
SRN	0.26	173.0	AMl	23:59:26.370						---	0.4	0.28		a__	Ml	1.6	6242
VLO	0.48	313.0	Sg	23:59:35.119	5.3					---				m__		11267	

VLO	0.48	313.0	Pg	23:59:22.786	-0.0	---											m		11266			
VLO	0.48	313.0	AM1	23:59:38.740		---											0.5	0.30	a	M1	1.9	6243
LSK	0.51	0.0	Pg	23:59:23.353	0.0	---																11275
LSK	0.49	88.0	Sg	23:59:31.052	0.1	---																11268
LSK	0.49	88.0	AM1	23:59:34.330		---																6244
IGT	0.67	154.0	Sg	23:59:37.078	-0.0	---																11270
IGT	0.67	154.0	Pg	23:59:27.080	0.1	---																11269
NEST	0.88	71.0	Sg	23:59:44.895	1.0	---																11272
NEST	0.88	71.0	Pn	23:59:30.635	-0.2	---																11271
SCTE	1.15	268.0	Sn	23:59:52.087	-0.3	---																11274
SCTE	1.15	268.0	Pn	23:59:36.237	0.5	---																11273
SCTE	1.15	268.0	AM1	23:59:56.310		---																6245

DATA\_TYPE COMMENT GSE2.1  
Event 688

Official Magnitude:  
M1 1.82

Error ellipse:

	Azim	Dip	Mag
Max:	144	77	2.1800
Intermediate:	24	6	0.6100
Min:	293	11	0.4400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326358 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 689 0.6 km from Shebë, Lezhë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/10	14:55:50.13		0.07	41.7642	20.0185				9.6	2.1	8	20	153	0.30	1.56	m	739

Magnitude	Err	Nsta	Author	OrigID
Md	2.6	0.0	7	739
M1	1.9	0.0	4	739

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
PUK	0.29	342.0	Sg	14:56:00.866	-0.0											11277	
PUK	0.29	342.0	Pg	14:55:56.245	-0.0											11276	
PUK	0.29	342.0	AMd	14:56:34.629								0.0	38.38	a	Md	2.5	6246
PUK	0.29	342.0	AM1	14:56:05.240								0.6	0.22	a	M1	1.8	6253
TIR	0.43	196.0	P	14:55:58.177	-0.9											11278	
TIR	0.43	196.0	AMd	14:56:36.283								0.0	38.11	a	Md	2.5	6247

BCI	0.60	0.0	Pg	14:56:00.515	0.0	---	m	---	11286
BCI	0.60	3.0	Sg	14:56:09.572	-1.7	---	m	---	11279
BCI	0.60	3.0	AMl	14:56:11.160		---	0.3	0.26 a	Ml 1.9 6254
ULC	0.61	290.0	Pg	14:56:02.310	-0.1	---	m	---	11280
ULC	0.61	290.0	AMd	14:56:45.587		---	0.0	43.28 a	Md 2.6 6248
DRME	0.75	305.0	Pg	14:56:05.221	0.2	---	m	---	11281
DRME	0.75	305.0	AMd	14:57:02.541		---	0.0	57.32 a	Md 2.9 6249
BEY	1.11	356.0	Pg	14:56:11.975	0.0	---	m	---	11282
BEY	1.11	356.0	AMd	14:56:53.857		---	0.0	41.88 a	Md 2.6 6250
HCY	1.33	302.0	Pn	14:56:15.781	-0.1	---	m	---	11283
HCY	1.33	302.0	AMd	14:57:14.326		---	0.0	58.54 a	Md 3.0 6251
NEST	1.56	149.0	Sn	14:56:42.196	-0.0	---	m	---	11285
NEST	1.56	149.0	Pn	14:56:19.901	0.0	---	m	---	11284
NEST	1.56	149.0	AMd	14:57:17.220		---	0.0	57.32 a	Md 3.0 6252
NEST	1.56	149.0	AMl	14:56:48.130		---	0.0	0.40 a	Ml 1.8 6255
SCTE			AMl	14:56:33.230		---	0.3	1.44 a	Ml 3.0 6256

DATA\_TYPE COMMENT GSE2.1  
Event 689

Official Magnitude:  
Ml 1.85

Error ellipse:

	Azim	Dip	Mag
Max:	338	76	2.1500
Intermediate:	241	1	0.9100
Min:	151	14	0.3200

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326358 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 690 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/11	06:09:03.78		0.08	41.9553	19.9893				18.9	1.2	9	30	144	0.41	1.48	m	740

Magnitude	Err	Nsta	Author	OrigID
Md	1.8	0.0	1	740
Ml	1.5	0.0	3	740

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
PUK	0.11	321.0	Sg	06:09:10.089	-0.6					---				m		11288
PUK	0.11	321.0	Pg	06:09:08.187	0.5					---				m		11287

PUK	0.11	321.0	AMd	06:09:28.199	---	0.0	20.01	a_	Md	1.8	6257
PUK	0.11	321.0	AMl	06:09:11.350	---	2.7	0.12	a_	Ml	2.4	6259
PUK	0.11	321.0	AMl	06:09:11.600	---	2.2	0.12	a_	Ml	2.3	6258
BCI	0.41	8.0	Sg	06:09:19.120	0.0			m_			11290
BCI	0.41	8.0	Pg	06:09:12.500	-0.0			m_			11289
BCI	0.41	8.0	AMl	06:09:19.600		0.2	0.16	a_	Ml	1.4	6261
BCI	0.41	8.0	AMl	06:09:19.620		0.2	0.20	a_	Ml	1.5	6260
PHP	0.43	128.0	Sg	06:09:19.326	-0.0			m_			11292
PHP	0.43	128.0	Pg	06:09:12.666	0.0			m_			11291
PHP	0.43	128.0	AMl	06:09:23.750		0.2	0.14	a_	Ml	1.5	6262
ULC	0.55	272.0	Sg	06:09:23.556	-0.1			m_			11294
ULC	0.55	272.0	Pg	06:09:15.342	0.2			m_			11293
DRME	0.64	292.0	Pg	06:09:16.818	0.1			m_			11295
CEME	0.99	307.0	Pg	06:09:22.988	0.0			m_			11296
HCY	1.22	295.0	Pn	06:09:26.899	-0.1			m_			11297
UPM	1.48	0.0	Pg	06:09:36.213	0.0			m_			11298

DATA\_TYPE COMMENT GSE2.1  
Event 690

Official Magnitude:  
Ml 1.48

Error ellipse:

	Azim	Dip	Mag
Max:	80	77	1.2200
Intermediate:	206	7	0.4900
Min:	297	10	0.3300

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326357 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 691 Region N/A

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/11	20:30:52.21		0.16	41.3575	19.8790				13.0	0.5	14	31	129	0.02	1.86	m	742

Magnitude	Err	Nsta	Author	OrigID
Md	2.6	0.0	1	742
Ml	2.0	0.0	5	742

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
TIR	0.00	0.0	Pg	20:30:55.137	0.0					---				m_		11332
TIR	0.01	228.0	Sg	20:30:56.468	0.0					---				m_		11317

TIR	0.01	228.0	AM1	20:30:56.010								5.3	0.14	a__	M1	2.4	6279
PUK	0.68	0.0	Sg	20:31:16.588	0.5										m__		11319
PUK	0.68	0.0	Pg	20:31:06.318	0.5										m__		11318
PUK	0.68	0.0	AMd	20:31:47.860							0.0	41.54	a__	Md	2.6	6278	
PUK	0.68	0.0	AM1	20:31:20.820							0.3	0.34	a__	M1	2.1	6281	
PUK	0.68	0.0	AM1	20:31:19.310							0.5	0.18	a__	M1	2.2	6280	
ULC	0.77	323.0	Pg	20:31:07.721	0.2										m__		11320
DRME	0.98	329.0	Pg	20:31:11.460	0.0										m__		11321
BCI	1.02	7.0	Sg	20:31:27.134	0.1										m__		11323
BCI	1.02	7.0	Pg	20:31:11.970	-0.1										m__		11322
BCI	1.02	7.0	AM1	20:31:28.820							0.1	0.38	a__	M1	1.9	6282	
BUM	1.19	323.0	Pn	20:31:15.460	0.2										m__		11324
NEST	1.29	136.0	Sn	20:31:35.915	0.2										m__		11326
NEST	1.29	136.0	Pn	20:31:16.852	-0.3										m__		11325
NEST	1.29	136.0	AM1	20:31:42.510							0.0	0.36	a__	M1	1.5	6283	
CEME	1.39	330.0	Pn	20:31:18.555	-0.2										m__		11327
HCY	1.50	317.0	Pn	20:31:20.755	-0.1										m__		11328
KOME	1.52	350.0	Pn	20:31:20.830	-0.2										m__		11329
IGT	1.86	169.0	Sn	20:31:53.160	0.1										m__		11331
IGT	1.86	169.0	Pn	20:31:28.035	1.0										m__		11330
IGT	1.86	169.0	AM1	20:32:00.090							0.0	1.08	a__	M1	2.0	6284	

DATA\_TYPE COMMENT GSE2.1  
Event 691

Official Magnitude:  
M1 2.03

Error ellipse:

	Azim	Dip	Mag
Max:	247	12	0.9300
Intermediate:	41	75	0.5100
Min:	156	6	0.3400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326357 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 692 1.6 km from Mish, Tirana, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/12	00:12:11.35		0.20	41.3520	19.9483				10.8	0.8	12	31	130	0.06	1.53	m	
743																	

Magnitude	Err	Nsta	Author	OrigID
Md	2.3	0.0	3	743



M1 1.7 0.0 4 743

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
TIR	0.06	0.0	Pg	00:12:14.367	0.0									m		11346
TIR	0.06	267.0	Sg	00:12:15.504	-0.1									m		11333
TIR	0.06	267.0	AMl	00:12:16.190								0.9	0.18	a	Ml	1.7
PHP	0.50	47.0	Sg	00:12:28.396	-0.2									m		11335
PHP	0.50	47.0	Pg	00:12:21.418	0.2									m		11334
PHP	0.50	47.0	AMd	00:12:47.365								0.0	25.95	a	Md	2.1
PHP	0.50	47.0	AMl	00:12:31.160								0.4	0.22	a	Ml	1.8
PUK	0.69	357.0	Sg	00:12:35.520	0.1									m		11337
PUK	0.69	357.0	Pg	00:12:25.318	0.2									m		11336
PUK	0.69	357.0	AMd	00:12:56.012								0.0	30.69	a	Md	2.3
PUK	0.69	357.0	AMl	00:12:38.460								0.1	0.20	a	Ml	1.7
ULC	0.80	320.0	Pg	00:12:27.282	-0.1									m		11338
DRME	1.01	326.0	Pg	00:12:30.614	-0.6									m		11339
BCI	1.02	4.0	Sg	00:12:46.265	-0.0									m		11341
BCI	1.02	4.0	Pg	00:12:30.741	-0.6									m		11340
BCI	1.02	4.0	AMd	00:13:11.006								0.0	40.26	a	Md	2.6
NEST	1.25	137.0	Sn	00:12:53.737	-0.2									m		11343
NEST	1.25	137.0	Pn	00:12:35.986	0.3									m		11342
NEST	1.25	137.0	AMl	00:12:59.470								0.0	0.36	a	Ml	1.3
NEST	1.25	137.0	AMl	00:12:56.360								0.0	0.44	a	Ml	1.3
CEME	1.42	328.0	Pn	00:12:38.481	-0.1									m		11344
KOME	1.53	348.0	Pn	00:12:39.594	-1.0									m		11345

DATA\_TYPE COMMENT GSE2.1  
Event 692

Official Magnitude:  
M1 1.65

Error ellipse:

	Azim	Dip	Mag
Max:	265	59	0.9700
Intermediate:	57	27	0.5400
Min:	153	12	0.4200

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326357 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 693 1.6 km from JagodinA«, Fier, Albania

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

2019/05/12 02:07:15.24  
744

0.20 40.7530 19.6845

12.4 0.4 22 31 100 0.04 1.64 m

Magnitude Err Nsta Author OrigID  
M1 2.0 0.0 12 744

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
BPA1	0.04	216.0	Sg	02:07:19.490	-0.0									m		11348
BPA1	0.04	216.0	Pg	02:07:17.501	-0.2									m		11347
BPA1	0.04	216.0	AM1	02:07:19.820								2.4	0.28	a	M1	6293
BPA2	0.05	246.0	Sg	02:07:19.795	0.0									m		11350
BPA2	0.05	246.0	Pg	02:07:17.794	-0.0									m		11349
BPA2	0.05	246.0	AM1	02:07:20.470								3.0	0.12	a	M1	6295
BPA2	0.05	246.0	AM1	02:07:20.540								1.8	0.12	a	M1	6294
VLO	0.32	207.0	Sg	02:07:26.790	0.8									m		11352
VLO	0.32	207.0	Pg	02:07:22.526	1.1									m		11351
VLO	0.32	207.0	AM1	02:07:30.660								2.4	0.42	a	M1	6297
VLO	0.32	207.0	AM1	02:07:30.520								1.9	0.24	a	M1	6296
TIR	0.61	12.0	Sg	02:07:36.808	-0.0									m		11354
TIR	0.61	12.0	Pg	02:07:27.398	-0.2									m		11353
KBN	0.85	98.0	Sg	02:07:43.970	0.1									m		11356
KBN	0.85	98.0	Pg	02:07:31.970	0.3									m		11355
KBN	0.85	98.0	AM1	02:07:47.360								0.1	0.46	a	M1	6299
KBN	0.85	98.0	AM1	02:07:51.070								0.1	0.84	a	M1	6298
SRN	0.90	164.0	Sg	02:07:47.156	-0.1									m		11358
SRN	0.90	164.0	Pg	02:07:34.607	1.1									m		11357
SRN	0.90	164.0	AM1	02:07:49.160								0.1	0.46	a	M1	6300
LSK	0.92	130.0	Sn	02:07:47.593	0.7									m		11360
LSK	0.92	130.0	Pn	02:07:33.638	0.3									m		11359
LSK	0.92	130.0	AM1	02:07:54.150								0.2	0.38	a	M1	6301
PHP	1.09	31.0	Sg	02:07:52.138	0.1									m		11362
PHP	1.09	31.0	Pg	02:07:36.322	0.0									m		11361
PHP	1.09	31.0	AM1	02:07:58.390								0.1	0.26	a	M1	6302
NEST	1.09	107.0	Sn	02:07:52.434	-0.2									m		11364
NEST	1.09	107.0	Pn	02:07:36.397	-0.2									m		11363
NEST	1.09	107.0	AM1	02:07:59.790								0.1	0.38	a	M1	6303
SCTE	1.15	235.0	Sn	02:07:54.361	0.0									m		11366
SCTE	1.15	235.0	Pn	02:07:37.796	0.2									m		11365
SCTE	1.15	235.0	AM1	02:07:56.910								0.2	0.38	a	M1	6304
PUK	1.30	6.0	Sn	02:07:59.723	1.0									m		11368
PUK	1.30	6.0	Pn	02:07:40.984	0.9									m		11367
PUK	1.30	6.0	AM1	02:08:06.110								0.1	0.50	a	M1	6305
IGT	1.32	157.0	Sn	02:07:59.207	-0.4									m		11370
IGT	1.32	157.0	Pn	02:07:40.659	0.1									m		11369
IGT	1.32	157.0	AM1	02:08:06.710								0.1	0.56	a	M1	6306
DRME	1.48	346.0	Pn	02:07:42.905	-0.6									m		11371
BCI	1.63	0.0	Pn	02:07:46.178	0.0									m		11373
BCI	1.64	9.0	Sn	02:08:09.417	0.1									m		11372
BCI	1.64	9.0	AM1	02:08:13.100								0.1	0.36	a	M1	6307

DATA\_TYPE COMMENT GSE2.1  
Event 693

Official Magnitude:  
Ml 1.97

Error ellipse:

	Azim	Dip	Mag
Max:	273	49	0.5100
Intermediate:	120	37	0.3200
Min:	19	14	0.2900

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326357 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 697 0.7 km from Dedaj, Shkodër, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/14	22:18:56.41		0.19	42.3007	19.5368				14.2	2.0	13	30	54	0.28	0.98	m	
748																	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.9	0.0	3	748

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
DRME	0.28	247.0	Pg	22:19:03.018	0.3					---				m		11428
PUK	0.37	134.0	Sg	22:19:10.040	0.1					---				m		11430
PUK	0.37	134.0	Pg	22:19:03.964	-0.2					---				m		11429
PUK	0.37	134.0	AMl	22:19:12.170						---		0.8	0.10	a	Ml 2.0	6341
PUK	0.37	134.0	AMl	22:19:12.200						---		0.7	0.12	a	Ml 1.9	6340
BCI	0.40	0.0	Pg	22:19:04.758	0.0					---				m		11443
BCI	0.40	80.0	Sg	22:19:10.685	-0.3					---				m		11431
BCI	0.40	80.0	AMl	22:19:11.880						---		1.1	0.32	a	Ml 2.2	6343
BCI	0.40	80.0	AMl	22:19:11.970						---		0.6	0.26	a	Ml 1.9	6342
ULC	0.40	213.0	S	22:19:10.461	-0.7					---				m		11433
ULC	0.40	213.0	Pg	22:19:04.591	-0.2					---				m		11432
PVY	0.44	47.0	Pg	22:19:05.679	0.2					---				m		11434
BUM	0.47	271.0	Pg	22:19:06.360	0.2					---				m		11435
CEME	0.52	299.0	Pg	22:19:06.844	-0.2					---				m		11436
KOME	0.55	359.0	Pg	22:19:07.663	0.0					---				m		11437
BEY	0.63	25.0	Pg	22:19:09.432	0.3					---				m		11438
NKME	0.63	318.0	Pg	22:19:09.001	-0.2					---				m		11439
HCY	0.79	282.0	Pg	22:19:11.372	-0.8					---				m		11440
TIR	0.98	165.0	Sg	22:19:30.315	0.1					---				m		11442
TIR	0.98	165.0	Pg	22:19:15.661	-0.1					---				m		11441

TIR 0.98 165.0 AM1 22:19:34.320 \_\_\_\_\_ 0.1 0.28 a\_\_ M1 1.9 6344

DATA\_TYPE COMMENT GSE2.1  
Event 697

Official Magnitude:  
M1 1.93

Error ellipse:

	Azim	Dip	Mag
Max:	24	83	1.9800
Intermediate:	227	5	0.5300
Min:	137	3	0.4400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326357 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 698 0.9 km from Gojani i Vogël, Shkodër, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/15	15:59:12.55		0.05	41.9520	20.0138				34.5	0.5	7	15	147	0.13	1.72	m	

Magnitude	Err	Nsta	Author	OrigID
Md	2.6	0.0	5	749
M1	1.8	0.0	2	749

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
PUK	0.13	316.0	Sg	15:59:23.369	-0.1					___				m__		11445
PUK	0.13	316.0	Pg	15:59:18.863	0.1					___				m__		11444
PUK	0.13	316.0	AMd	15:59:48.371						___		0.0	29.51	a__ Md	2.2	6345
PUK	0.13	316.0	AM1	15:59:25.110						___		0.8	0.16	a__ M1	2.1	6350
BCI	0.41	0.0	Pg	15:59:24.869	0.0					___				m__		11452
BCI	0.42	5.0	Sg	15:59:29.518	0.0					___				m__		11446
BCI	0.42	5.0	AM1	15:59:31.570						___		0.2	0.28	a__ M1	1.6	6351
ULC	0.57	272.0	Pg	15:59:24.739	0.0					___				m__		11447
ULC	0.57	272.0	AMd	16:00:07.957						___		0.0	43.22	a__ Md	2.6	6346
PVY	0.64	358.0	Pg	15:59:25.857	-0.1					___				m__		11448
PVY	0.64	358.0	AMd	16:00:04.270						___		0.0	38.41	a__ Md	2.5	6347
BRY	1.44	312.0	Pn	15:59:37.515	-1.7					___				m__		11449
BRY	1.44	312.0	AMd	16:00:43.210						___		0.0	65.70	a__ Md	3.1	6348
UPM	1.49	328.0	Pn	15:59:39.948	-0.0					___				m__		11450
UPM	1.49	328.0	AMd	16:00:37.450						___		0.0	57.50	a__ Md	3.0	6349
NEST	1.72	152.0	Sn	16:00:06.651	-0.0					___				m__		11451

DATA\_TYPE COMMENT GSE2.1  
Event 698

Official Magnitude:  
Ml 1.82

Error ellipse:

	Azim	Dip	Mag
Max:	271	21	0.9200
Intermediate:	21	40	0.7100
Min:	161	42	0.3700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326357 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 700 0.3 km from Kumbardhë, Tirana, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/15	23:04:53.30		0.37	41.4473	19.8518				11.3	2.7	12	15	306	0.68	1.89	m	
751																	

Magnitude	Err	Nsta	Author	OrigID
Ml	1.9	0.0	2	751

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
PUK	0.60	2.0	Sn	23:05:12.562	-1.6					---					m	11471	
PUK	0.60	2.0	Pn	23:05:03.731	-1.5					---					mce	11470	
PUK	0.60	2.0	AMl	23:05:19.450						---		0.3	0.34	a	Ml	1.9	6356
ULC	0.68	320.0	Pn	23:05:07.004	-0.1					---					mci	11472	
DRME	0.89	327.0	Pn	23:05:10.578	-0.4					---					mce	11473	
BCI	0.93	9.0	Sg	23:05:25.505	0.1					---					m	11475	
BCI	0.93	9.0	Pg	23:05:11.964	0.3					---					mce	11474	
BCI	0.93	9.0	AMl	23:05:35.050						---		0.1	0.46	a	Ml	1.9	6357
BUM	1.11	321.0	Pn	23:05:15.344	0.3					---					mdi	11476	
PVY	1.15	4.0	Pn	23:05:15.446	-0.3					---					mci	11477	
CEME	1.30	328.0	Pn	23:05:18.249	-0.2					---					mdi	11478	
BEY	1.42	1.0	Pn	23:05:20.340	-0.2					---					mdi	11479	
KOME	1.42	350.0	Pn	23:05:21.406	0.8					---					mdi	11480	
HCY	1.43	315.0	Pn	23:05:21.197	0.6					---					mde	11481	
NKME	1.48	334.0	Pn	23:05:20.737	-0.8					---					mce	11482	
BRY	1.75	327.0	Pn	23:05:26.193	-0.2					---					mdi	11483	
UPM	1.89	0.0	Pn	23:05:28.340	0.0					---					m	11484	

DATA\_TYPE COMMENT GSE2.1  
Event 700

Official Magnitude:  
Ml 1.89

Error ellipse:

	Azim	Dip	Mag
Max:	328	27	5.3800
Intermediate:	117	59	3.1000
Min:	231	14	1.5700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326356 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 702 5 km from Qeparo, Vlorë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/17	00:22:45.08		0.67	40.0098	19.8147				31.0	2.2	17	11	182	0.52	2.36	m	
OrigID 753																	

Magnitude	Err	Nsta	Author	OrigID
Md	3.1	0.0	7	753
Ml	3.0	0.0	9	753

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
SRN	0.19	132.0	Pg	00:22:48.943	-3.0									m		11500
SRN	0.19	132.0	AMd	00:24:01.585								0.0	72.64	a	Md	3.1
SRN	0.19	132.0	AMl	00:22:57.460								4.9	0.44	a	Ml	2.8
VLO	0.52	333.0	Sg	00:23:04.344	0.9									m		11502
VLO	0.52	333.0	Pg	00:22:55.059	-0.5									m		11501
VLO	0.52	333.0	AMd	00:23:57.293								0.0	62.23	a	Md	3.0
VLO	0.52	333.0	AMl	00:23:09.410								8.8	0.32	a	Ml	3.3
LSK	0.62	76.0	Sg	00:23:06.557	-0.7									m		11504
LSK	0.62	76.0	Pg	00:22:56.143	-1.6									m		11503
LSK	0.62	76.0	AMd	00:24:19.891								0.0	83.75	a	Md	3.3
LSK	0.62	76.0	AMl	00:23:11.860								3.2	0.42	a	Ml	3.0
IGT	0.62	140.0	Sg	00:23:06.988	-0.6									m		11506
IGT	0.62	140.0	Pg	00:22:56.930	-1.0									m		11505
IGT	0.62	140.0	AMd	00:24:22.900								0.0	85.97	a	Md	2.7
KBN	0.96	50.0	Sg	00:23:17.949	0.9									m		11508
KBN	0.96	50.0	Pg	00:23:03.932	0.6									m		11507
KBN	0.96	50.0	AMd	00:24:06.154								0.0	62.22	a	Md	3.0
KBN	0.96	50.0	AMl	00:23:23.060								1.0	0.42	a	Ml	2.8
NEST	1.03	0.0	Pg	00:23:04.411	0.0									m		11518
NEST	1.03	66.0	Sg	00:23:20.230	0.4									m		11509
NEST	1.03	66.0	AMl	00:23:30.590								1.1	0.36	a	Ml	2.9

LKD2	1.38	151.0	Sn	00:23:31.152	0.7	---											m	11511
LKD2	1.38	151.0	P	00:23:11.585	0.6	---											m	11510
LKD2	1.38	151.0	AMl	00:23:44.010		---				0.9	0.42	a	Ml	3.1				6373
PHP	1.74	15.0	Sn	00:23:39.342	-0.3	---											m	11513
PHP	1.74	15.0	Pn	00:23:17.098	0.9	---											m	11512
PHP	1.74	15.0	AMd	00:24:29.827		---				0.0	72.73	a	Md	3.2				6366
PHP	1.74	15.0	AMl	00:23:49.930		---				0.4	0.62	a	Ml	2.9				6374
PUK	2.03	1.0	Sn	00:23:46.707	-0.7	---											m	11515
PUK	2.03	1.0	Pn	00:23:20.426	-0.3	---											m	11514
PUK	2.03	1.0	AMd	00:24:52.933		---				0.0	92.51	a	Md	3.5				6367
PUK	2.03	1.0	AMl	00:23:59.670		---				0.4	0.44	a	Ml	3.1				6375
BCI	2.36	4.0	Sn	00:23:55.171	-0.8	---											m	11517
BCI	2.36	4.0	Pn	00:23:25.795	0.2	---											m	11516
BCI	2.36	4.0	AMl	00:24:09.600		---				0.4	0.88	a	Ml	3.3				6376

DATA\_TYPE COMMENT GSE2.1  
Event 702

Official Magnitude:  
Ml 3.00

Error ellipse:

	Azim	Dip	Mag
Max:	97	72	2.2500
Intermediate:	244	14	1.7900
Min:	336	9	1.0400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326356 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 703 4.8 km from Sarandë, Vlorë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/18	08:36:53.46		0.03	39.8405	19.9723				8.5	0.6	9	18	236	0.04	1.18	m	
754																	

Magnitude	Err	Nsta	Author	OrigID
Md	2.5	0.0	4	754
Ml	1.7	0.0	4	754

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
SRN	0.04	28.0	Sg	08:36:57.489	0.1											11520	
SRN	0.04	28.0	Pg	08:36:55.683	-0.1											11519	
SRN	0.04	28.0	AMd	08:37:23.650								0.0	27.97	a	Md	2.1	6377
SRN	0.04	28.0	AMl	08:36:58.620								2.7	0.18	a	Ml	2.0	6381

IGT	0.41	138.0	Sg	08:37:08.421	0.0	---										m		11522
IGT	0.41	138.0	Pg	08:37:02.022	0.0	---										m		11521
IGT	0.41	138.0	AMd	08:37:51.619		---				0.0	49.60	a	Md	2.1			6378	
IGT	0.41	138.0	AMl	08:37:12.260		---				0.3	0.16	a	Ml	1.6			6382	
LSK	0.57	0.0	Pn	08:37:04.582	0.0	---										m		11528
LSK	0.57	57.0	Sn	08:37:13.454	-0.0	---										m		11523
NEST	1.00	54.0	Sg	08:37:28.191	0.0	---										m		11525
NEST	1.00	54.0	Pg	08:37:13.344	0.1	---										m		11524
NEST	1.00	54.0	AMd	08:38:11.955		---				0.0	58.61	a	Md	3.0			6379	
NEST	1.00	54.0	AMl	08:37:30.520		---				0.1	0.54	a	Ml	1.6			6383	
LKD2	1.18	152.0	Sn	08:37:33.927	0.0	---										m		11527
LKD2	1.18	152.0	Pn	08:37:16.559	-0.0	---										m		11526
LKD2	1.18	152.0	AMd	08:38:12.590		---				0.0	56.03	a	Md	2.9			6380	
LKD2	1.18	152.0	AMl	08:37:36.720		---				0.1	0.42	a	Ml	1.8			6384	

DATA\_TYPE COMMENT GSE2.1  
Event 703

Official Magnitude:  
Ml 1.68

Error ellipse:

	Azim	Dip	Mag
Max:	290	35	1.0600
Intermediate:	66	45	0.5600
Min:	182	24	0.2900

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326356 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 707 1.1 km from Gocaj, Lezhë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/20	11:39:30.12		0.10	41.8550	19.6372				17.4	1.0	12	17	150	0.27	1.85	m	
758																	

Magnitude	Err	Nsta	Author	OrigID
Md	2.6	0.0	2	758
Ml	2.5	0.0	2	758

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
PUK	0.27	45.0	Sg	11:39:40.684	-0.1										m	11564	
PUK	0.27	45.0	Pg	11:39:35.485	-0.7										mce	11563	
PUK	0.27	45.0	AMd	11:40:14.057								0.0	38.57	a	Md	2.5	6412
PUK	0.27	45.0	AMl	11:39:43.230								2.1	0.18	a	Ml	2.3	6414



ULC	0.31	0.0	Pg	11:39:36.991	0.0	---												mdi	11576
DRME	0.47	315.0	Pg	11:39:39.910	-0.0	---												mde	11565
DRME	0.47	315.0	AMd	11:40:33.356		---					0.0	53.45	a__	Md	2.8				6413
BCI	0.60	31.0	Sg	11:39:51.457	0.1	---												m__	11567
BCI	0.60	31.0	Pg	11:39:41.577	-0.7	---												mde	11566
BCI	0.60	31.0	AMl	11:39:55.420		---					1.3	0.28	a__	Ml	2.6				6415
BUM	0.71	310.0	Pn	11:39:44.318	0.0	---												mde	11568
CEME	0.87	323.0	Pn	11:39:48.281	1.0	---												mde	11569
BEY	1.03	10.0	Pn	11:39:50.097	-0.0	---												mde	11570
HCY	1.04	306.0	Pn	11:39:50.299	0.1	---												mde	11571
NKME	1.04	332.0	Pn	11:39:50.357	0.1	---												mci	11572
PLE	1.48	354.0	Pn	11:39:57.907	-0.2	---												mce	11573
LSK	1.85	156.0	S	11:40:29.994	0.0	---												m__	11575
LSK	1.85	156.0	P	11:40:04.285	-0.0	---												m__	11574

DATA\_TYPE COMMENT GSE2.1  
Event 707

Official Magnitude:  
Ml 2.45

Error ellipse:

	Azim	Dip	Mag
Max:	15	64	1.0700
Intermediate:	286	0	0.4100
Min:	196	26	0.3400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326355 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 709 1.4 km from Çepë, Elbasan, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/20	23:49:51.24		0.27	40.9503	19.8477				15.0	1.2	20	15	115	0.28	2.25	m	
760																	

Magnitude	Err	Nsta	Author	OrigID
Ml	3.2	0.0	6	760

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
BPA2	0.28	219.0	Sg	23:50:02.393	0.2									m__		11594	
BPA2	0.28	219.0	Pg	23:49:56.967	-0.5									m__		11593	
VLO	0.55	210.0	Sg	23:50:09.810	0.1									m__		11596	
VLO	0.55	210.0	Pg	23:50:02.246	0.5									m__		11595	
VLO	0.55	210.0	AMl	23:50:14.610								18.1	0.48	a__	Ml	3.6	6421

KBN	0.78	114.0	Sn	23:50:18.054	0.3	---	m	---	11598
KBN	0.78	114.0	Pn	23:50:05.958	-0.4	---	m	---	11597
KBN	0.78	114.0	AM1	23:50:23.090		---	2.6	0.44 a M1	3.0 6422
LSK	0.98	144.0	Sn	23:50:24.582	-0.2	---	m	---	11600
LSK	0.98	144.0	Pn	23:50:09.688	-0.7	---	m	---	11599
LSK	0.98	144.0	AM1	23:50:30.490		---	2.0	0.44 a M1	3.1 6423
NEST	1.06	119.0	Sn	23:50:27.555	0.3	---	m	---	11602
NEST	1.06	119.0	Pn	23:50:10.697	-1.1	---	m	---	11601
SRN	1.08	173.0	Sn	23:50:28.628	0.2	---	m	---	11604
SRN	1.08	173.0	Pn	23:50:12.373	-0.1	---	m	---	11603
SRN	1.08	173.0	AM1	23:50:28.820		---	0.8	0.60 a M1	2.7 6424
PUK	1.09	1.0	Sn	23:50:28.260	0.2	---	m	---	11606
PUK	1.09	1.0	Pn	23:50:12.483	0.2	---	m	---	11605
PUK	1.09	1.0	AM1	23:50:33.580		---	2.4	0.52 a M1	3.2 6425
ULC	1.11	0.0	Pn	23:50:12.658	0.0	---	m	---	11616
BCI	1.42	6.0	Sn	23:50:38.589	0.1	---	m	---	11608
BCI	1.42	6.0	Pn	23:50:18.304	0.1	---	m	---	11607
BCI	1.42	6.0	AM1	23:50:45.840		---	1.6	0.70 a M1	3.3 6426
IGT	1.46	165.0	Sn	23:50:39.908	0.0	---	m	---	11610
IGT	1.46	165.0	Pn	23:50:19.078	0.0	---	m	---	11609
BUM	1.52	333.0	Pn	23:50:18.816	-1.3	---	m	---	11611
BEY	1.92	1.0	Pn	23:50:26.425	-0.4	---	m	---	11612
BRY	2.18	334.0	Pn	23:50:30.550	-0.1	---	m	---	11613
LKD2	2.25	163.0	Sn	23:51:01.974	0.0	---	m	---	11615
LKD2	2.25	163.0	Pn	23:50:28.479	-3.2	---	m	---	11614

DATA\_TYPE COMMENT GSE2.1  
Event 709

Official Magnitude:  
M1 3.15

Error ellipse:

	Azim	Dip	Mag
Max:	252	73	1.2300
Intermediate:	88	16	0.5700
Min:	357	4	0.3600

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326356 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 710 1.1 km from Beqiraj, Elbasan, Albania

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

2019/05/20 23:31:48.30 0.34 40.9498 19.8370 12.1 1.2 21 17 115 0.28 2.25 m  
761

Magnitude Err Nsta Author OrigID  
Md 3.1 0.0 1 761  
Ml 3.0 0.0 6 761

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
BPA2	0.28	218.0	Sg	23:31:59.019	0.2									m__		11618
BPA2	0.28	218.0	Pg	23:31:53.919	-0.4									m__		11617
VLO	0.55	209.0	Sn	23:32:06.542	-0.0									m__		11620
VLO	0.55	209.0	Pn	23:31:58.886	0.2									m__		11619
VLO	0.55	209.0	AMl	23:32:11.890								14.2	0.52	a__	Ml 3.5	6428
KBN	0.79	113.0	Sn	23:32:15.563	0.5									m__		11622
KBN	0.79	113.0	Pn	23:32:03.095	-0.5									m__		11621
KBN	0.79	113.0	AMl	23:32:21.180								1.2	0.52	a__	Ml 2.7	6429
LSK	0.99	143.0	Sn	23:32:23.730	1.6									m__		11624
LSK	0.99	143.0	Pn	23:32:07.157	-0.5									m__		11623
LSK	0.99	143.0	AMl	23:32:27.780								1.3	0.66	a__	Ml 2.9	6430
NEST	1.06	119.0	Sn	23:32:24.946	0.1									m__		11626
NEST	1.06	119.0	Pn	23:32:08.092	-1.1									m__		11625
SRN	1.08	173.0	Sn	23:32:25.907	0.1									m__		11628
SRN	1.08	173.0	Pn	23:32:09.916	0.2									m__		11627
SRN	1.08	173.0	AMl	23:32:26.120								0.4	0.42	a__	Ml 2.5	6431
PUK	1.09	2.0	Sn	23:32:25.649	0.2									m__		11630
PUK	1.09	2.0	Pn	23:32:09.935	0.4									m__		11629
PUK	1.09	2.0	AMl	23:32:30.330								1.6	0.42	a__	Ml 3.1	6432
ULC	1.10	0.0	Pn	23:32:09.810	0.0									mde		11641
BCI	1.43	6.0	Sn	23:32:35.668	-0.2									m__		11632
BCI	1.43	6.0	Pn	23:32:15.596	0.1									m__		11631
BCI	1.43	6.0	AMl	23:32:43.070								1.1	0.68	a__	Ml 3.2	6433
IGT	1.47	164.0	Sn	23:32:37.204	-0.1									m__		11634
IGT	1.47	164.0	Pn	23:32:17.173	0.9									m__		11633
BUM	1.52	333.0	Pn	23:32:15.840	-1.4									m__		11635
HCY	1.80	327.0	Pn	23:32:18.994	-3.3									m__		11636
HCY	1.80	327.0	AMd	23:33:24.880								0.0	65.89	a__	Md 3.1	6427
BEY	1.92	1.0	Pn	23:32:24.087	-0.1									m__		11637
BRY	2.18	335.0	Pn	23:32:27.743	-0.2									m__		11638
LKD2	2.25	163.0	Sn	23:32:59.482	-0.1									m__		11640
LKD2	2.25	163.0	Pn	23:32:26.075	-3.0									m__		11639

DATA\_TYPE COMMENT GSE2.1  
Event 710

Official Magnitude:  
Ml 2.99

Error ellipse:

Max: Azim Dip Mag  
246 72 1.2300

Intermediate: 92 15 0.6400  
 Min: 359 8 0.4100

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1560326355 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 715 0.0 km from Kéntali, Epirus, Greece

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/23	16:43:25.67		0.08	39.3408	20.4397				35.5	0.7	10	13	166	0.58	3.00	m	
OrigID 766																	

Magnitude	Err	Nsta	Author	OrigID
Md	3.2	0.0	7	766
ML	3.2	0.0	4	766

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
IGT	0.21	336.0	Sg	16:43:36.151	-2.1									m		11729	
IGT	0.21	336.0	Pg	16:43:32.268	-0.6									m		11728	
IGT	0.21	336.0	AMd	16:44:21.194								0.0	48.93	a	Md	2.1	6461
LKD2	0.58	162.0	Sg	16:43:47.177	-0.1									m		11731	
LKD2	0.58	162.0	Pg	16:43:38.147	0.1									m		11730	
LKD2	0.58	162.0	AMd	16:44:46.843								0.0	68.70	a	Md	3.1	6462
LKD2	0.58	162.0	AMl	16:43:48.948								3.5	0.24	a	ML	3.0	6468
SRN	0.64	328.0	Sg	16:43:49.610	-0.0									m		11733	
SRN	0.64	328.0	Pg	16:43:39.337	-0.0									m		11732	
SRN	0.64	328.0	AMd	16:44:51.934								0.0	72.60	a	Md	3.1	6463
SRN	0.64	328.0	AMl	16:43:56.608								0.9	0.32	a	ML	2.5	6469
LSK	0.81	0.0	Pg	16:43:42.029	0.0									m		11740	
LSK	0.82	8.0	Sg	16:43:54.051	0.0									m		11734	
LSK	0.82	8.0	AMl	16:44:00.558								4.8	0.56	a	ML	3.4	6470
NEST	1.17	23.0	Pg	16:43:47.760	-0.2									m		11735	
NEST	1.17	23.0	AMd	16:45:01.725								0.0	73.97	a	Md	3.2	6464
FNA	1.61	26.0	Sn	16:44:16.756	-0.0									m		11737	
FNA	1.61	26.0	Pn	16:43:54.973	0.1									m		11736	
FNA	1.61	26.0	AMd	16:45:17.591								0.0	82.62	a	Md	3.3	6465
FNA	1.61	26.0	AMl	16:44:21.008								1.2	0.68	a	ML	3.4	6471
ULC	2.77	342.0	Pn	16:44:11.939	0.0									m		11738	
ULC	2.77	342.0	AMd	16:45:48.134								0.0	96.19	a	Md	3.6	6466
DRME	3.00	342.0	Pn	16:44:15.241	0.0									m		11739	
DRME	3.00	342.0	AMd	16:45:58.512								0.0	103.27	a	Md	3.7	6467

DATA\_TYPE COMMENT GSE2.1  
 Event 715

Official Magnitude:  
Ml 3.17

Error ellipse:

	Azim	Dip	Mag
Max:	249	38	1.1200
Intermediate:	97	48	0.6100
Min:	351	14	0.3500

\*\*\*\*  
 BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1560326355 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 718 Region N/A 12km south Leskoviku

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/25	22:35:25.39		0.41	40.0312	20.6065				35.0	0.7	18	10	163	0.12	2.37	m	777

Magnitude	Err	Nsta	Author	OrigID
Ml	4.3	0.0	10	777
Md	3.5	0.0	7	777

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
LSK	0.12	358.0	Pg	22:35:30.995	-0.6					---				m		11926
LSK	0.12	358.0	Sg	22:35:36.017	-0.3					---				m		11925
LSK	0.12	358.0	AMl	22:35:39.260						---		300.9	0.54	a	Ml	4.6
LSK	0.12	358.0	AMd	22:38:20.694						---		0.0	169.70	a	Md	4.0
SRN	0.49	253.0	Pg	22:35:35.337	-1.4					---				m		11924
SRN	0.49	253.0	Sg	22:35:44.166	-1.0					---				m		11923
SRN	0.49	253.0	AMl	22:35:47.090						---		75.1	0.46	a	Ml	4.2
SRN	0.49	253.0	AMd	22:37:23.642						---		0.0	108.30	a	Md	3.5
NEST	0.51	41.0	Sg	22:35:45.510	0.4					---				m		11922
NEST	0.51	0.0	Pg	22:35:37.005	0.0					---				m		11907
NEST	0.51	0.0	AMl	22:35:50.680						---		25.3	0.52	a	Ml	3.8
IGT	0.54	204.0	Pg	22:35:36.741	-0.4					---				m		11921
IGT	0.54	204.0	Sg	22:35:46.297	0.3					---				m		11920
IGT	0.54	204.0	AMl	22:35:51.000						---		50.6	0.54	a	Ml	4.1
IGT	0.54	204.0	AMd	22:36:52.976						---		0.0	76.23	a	Md	2.6
KBN	0.61	13.0	Pg	22:35:37.928	0.2					---				m		11919
KBN	0.61	13.0	S	22:35:46.657	-0.3					---				m		11918
KBN	0.61	13.0	AMl	22:35:48.090						---		51.3	0.56	a	Ml	4.2
KBN	0.61	13.0	AMd	22:37:26.560						---		0.0	108.63	a	Md	3.5
VLO	0.96	298.0	Pg	22:35:44.385	1.0					---				m		11917
VLO	0.96	298.0	Sg	22:35:57.403	0.6					---				m		11916

VLO	0.96	298.0	AMl	22:36:04.310	---	143.2	0.38	a_	Ml	5.0	6565
VLO	0.96	298.0	AMd	22:36:43.236	---	0.0	58.85	a_	Md	2.9	6573
FNA	0.96	38.0	Pg	22:35:44.425	0.4	---	---	m_	---	---	11915
FNA	0.96	38.0	Sg	22:35:58.308	0.3	---	---	m_	---	---	11914
FNA	0.96	38.0	AMl	22:36:01.870	---	28.2	0.46	a_	Ml	4.2	6564
FNA	0.96	38.0	AMd	22:37:02.763	---	0.0	78.34	a_	Md	3.2	6572
PHP	1.66	356.0	Pg	22:35:55.458	0.5	---	---	m_	---	---	11913
PHP	1.66	356.0	Sg	22:36:16.973	-0.2	---	---	m_	---	---	11912
PHP	1.66	356.0	AMl	22:36:24.800	---	10.9	0.78	a_	Ml	4.3	6563
PHP	1.66	356.0	AMd	22:37:42.400	---	0.0	106.94	a_	Md	3.6	6571
PUK	2.08	346.0	Pn	22:36:00.501	-0.9	---	---	m_	---	---	11911
PUK	2.08	346.0	Sn	22:36:28.630	0.2	---	---	m_	---	---	11910
PUK	2.08	346.0	AMl	22:36:37.690	---	6.6	0.60	a_	Ml	4.4	6562
BCI	2.37	351.0	Pn	22:36:05.362	-0.3	---	---	m_	---	---	11909
BCI	2.37	351.0	Sn	22:36:35.337	-0.5	---	---	m_	---	---	11908
BCI	2.37	351.0	AMl	22:36:52.200	---	8.2	1.12	a_	Ml	4.6	6561

DATA\_TYPE COMMENT GSE2.1  
Event 718

Official Magnitude:  
Ml 4.28

Error ellipse:

	Azim	Dip	Mag
Max:	127	31	1.4100
Intermediate:	255	45	0.8400
Min:	18	29	0.6400

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326355 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 722 2.6 km from Sumaj, Kukës, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/26	17:51:39.08		0.18	41.9663	20.2850				8.3	2.1	9	10	165	0.31	1.83	m	774

Magnitude	Err	Nsta	Author	OrigID
Md	2.0	0.0	1	774
Ml	2.4	0.0	3	774

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
PUK	0.30	285.0	Sg	17:51:50.032	-0.1					---				m_		11852
PUK	0.30	285.0	P	17:51:45.423	0.1					---				m_		11851

PUK	0.30	285.0	AMd	17:52:10.136	___	0.0	24.71	a__	Md	2.0	6535
PUK	0.30	285.0	AMl	17:51:51.180	___	2.4	0.14	a__	Ml	2.4	6536
PHP	0.30	157.0	Pg	17:51:45.243	-0.0	___	___	m__	___	___	11853
BCI	0.41	0.0	Pg	17:51:47.358	0.0	___	___	m__	___	___	11862
BCI	0.43	339.0	Sg	17:51:54.359	-0.1	___	___	m__	___	___	11854
BCI	0.43	339.0	AMl	17:51:58.110	___	1.5	0.22	a__	Ml	2.3	6537
ULC	0.77	271.0	Pg	17:51:54.603	0.1	___	___	m__	___	___	11855
BEY	0.95	343.0	P	17:51:56.856	-1.0	___	___	m__	___	___	11856
BUM	1.08	289.0	P	17:52:00.209	-0.2	___	___	m__	___	___	11857
FNA	1.44	144.0	Sn	17:52:27.555	-0.3	___	___	m__	___	___	11859
FNA	1.44	144.0	Pn	17:52:07.538	0.6	___	___	m__	___	___	11858
FNA	1.44	144.0	AMl	17:52:28.940	___	0.3	0.44	a__	Ml	2.6	6538
UPM	1.60	322.0	P	17:52:09.784	0.1	___	___	m__	___	___	11860
LSK	1.83	172.0	Pn	17:52:15.126	1.5	___	___	m__	___	___	11861

DATA\_TYPE COMMENT GSE2.1  
Event 722

Official Magnitude:  
Ml 2.39

Error ellipse:

	Azim	Dip	Mag
Max:	265	74	2.1400
Intermediate:	45	11	0.8900
Min:	137	10	0.3700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326354 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 723 0.8 km from Mabë, Lezhë, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/26	19:44:28.97		0.42	41.9300	19.5698				4.9	2.8	19	15	96	0.24	2.07	m	
775																	

Magnitude	Err	Nsta	Author	OrigID
Md	2.8	0.0	5	775
Ml	3.1	0.0	7	775

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
ULC	0.24	279.0	Pg	19:44:34.389	0.1	___	___	___	___	___	___	___	___	m__	___	11863	
PUK	0.27	64.0	Sg	19:44:38.464	-0.4	___	___	___	___	___	___	___	___	m__	___	11865	
PUK	0.27	64.0	Pg	19:44:34.507	-0.1	___	___	___	___	___	___	___	___	m__	___	11864	
PUK	0.27	64.0	AMd	19:45:26.552	___	___	___	___	___	___	___	0.0	52.04	a__	Md	2.8	6539

PUK	0.27	64.0	AMl	19:44:41.480		---	8.8	0.26	a_	Ml	2.9	6544
BCI	0.58	0.0	Pg	19:44:39.942	0.0	---			m_			11883
BCI	0.57	40.0	Sg	19:44:49.893	0.7	---			m_			11866
BCI	0.57	40.0	AMl	19:44:55.310		---	5.1	0.58	a_	Ml	3.1	6545
PHP	0.70	110.0	Sg	19:44:53.080	0.1	---			m_			11868
PHP	0.70	110.0	Pg	19:44:42.718	0.0	---			m_			11867
PHP	0.70	110.0	AMd	19:45:32.527		---	0.0	49.81	a_	Md	2.8	6540
PHP	0.70	110.0	AMl	19:44:56.710		---	3.6	0.14	a_	Ml	3.1	6546
PVY	0.73	24.0	Pg	19:44:43.265	-0.4	---			m_			11869
BEY	0.97	14.0	Pg	19:44:47.845	-0.4	---			m_			11870
BRY	1.23	323.0	Pg	19:44:52.733	-0.5	---			m_			11871
UPM	1.36	340.0	Pg	19:44:56.289	0.7	---			m_			11872
VLO	1.46	183.0	S	19:45:17.305	-0.2	---			m_			11874
VLO	1.46	183.0	Pg	19:44:56.975	0.3	---			m_			11873
VLO	1.46	183.0	AMd	19:45:47.932		---	0.0	50.96	a_	Md	2.8	6541
VLO	1.46	183.0	AMl	19:45:21.700		---	1.4	0.20	a_	Ml	3.3	6547
KBN	1.60	144.0	Sn	19:45:22.408	0.4	---			m_			11876
KBN	1.60	144.0	Pn	19:45:00.621	1.3	---			m_			11875
KBN	1.60	144.0	AMd	19:46:00.025		---	0.0	59.40	a_	Md	3.0	6542
KBN	1.60	144.0	AMl	19:45:26.770		---	0.8	0.80	a_	Ml	3.1	6548
FNA	1.78	129.0	Sn	19:45:28.203	-0.5	---			m_			11878
FNA	1.78	129.0	P	19:45:02.291	-0.8	---			m_			11877
FNA	1.78	129.0	AMl	19:45:29.560		---	1.2	0.46	a_	Ml	3.4	6549
LSK	1.94	156.0	Sn	19:45:33.699	0.3	---			m_			11880
LSK	1.94	156.0	Pn	19:45:04.447	-1.3	---			m_			11879
LSK	1.94	156.0	AMd	19:46:26.331		---	0.0	81.88	a_	Md	3.4	6543
LSK	1.94	156.0	AMl	19:45:43.890		---	0.8	0.58	a_	Ml	3.3	6550
SRN	2.07	170.0	Sn	19:45:37.527	-0.3	---			m_			11882
SRN	2.07	170.0	Pn	19:45:05.345	-3.0	---			m_			11881

DATA\_TYPE COMMENT GSE2.1  
Event 723

Official Magnitude:  
Ml 3.13

Error ellipse:

	Azim	Dip	Mag
Max:	329	77	2.9100
Intermediate:	80	4	0.7900
Min:	171	12	0.5700

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326354 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 724 0.7 km from Zhitomi i Vogël, Berat, Albania



Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/28	15:47:50.60		0.19	40.6458	19.9825				11.6	1.2	19	19	109	0.26	2.50	m	

Magnitude	Err	Nsta	Author	OrigID
Md	2.7	0.0	2	776
Ml	2.7	0.0	8	776

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
BPA1	0.26	0.0	Pg	15:47:50.197	0.0									m__		11906	
BPA1	0.26	288.0	Sg	15:48:00.668	0.0									m__		11884	
BPA1	0.26	288.0	AMl	15:48:06.560								4.2	0.40	a__	Ml	2.6	6553
BPA2	0.29	288.0	Sg	15:48:01.599	0.0									m__		11886	
BPA2	0.29	288.0	Pg	15:47:57.035	0.2									mci		11885	
BPA2	0.29	288.0	AMd	15:48:45.133								0.0	48.10	a__	Md	2.7	6551
BPA2	0.29	288.0	AMl	15:48:03.230								14.2	0.28	a__	Ml	3.2	6554
VLO	0.41	245.0	Sg	15:48:04.128	-0.2									m__		11888	
VLO	0.41	245.0	Pg	15:47:58.727	0.3									mce		11887	
VLO	0.41	245.0	AMd	15:48:43.396								0.0	44.67	a__	Md	2.6	6552
VLO	0.41	245.0	AMl	15:48:07.940								11.9	0.22	a__	Ml	3.2	6555
KBN	0.61	91.0	Sg	15:48:11.434	0.0									m__		11890	
KBN	0.61	91.0	Pg	15:48:03.045	0.5									mde		11889	
KBN	0.61	91.0	AMl	15:48:19.000								1.0	0.48	a__	Ml	2.4	6556
LSK	0.68	136.0	Sg	15:48:14.611	0.2									m__		11892	
LSK	0.68	136.0	Pg	15:48:03.849	-0.3									mde		11891	
LSK	0.68	136.0	AMl	15:48:29.260								2.0	0.82	a__	Ml	2.8	6557
SRN	0.76	178.0	Sg	15:48:19.518	1.5									m__		11894	
SRN	0.76	178.0	Pg	15:48:04.763	-1.5									mce		11893	
SRN	0.76	178.0	AMl	15:48:24.670								0.9	0.36	a__	Ml	2.5	6558
NEST	0.84	105.0	Pn	15:48:07.156	-0.2									mde		11895	
FNA	1.07	82.0	Sn	15:48:27.534	0.1									m__		11897	
FNA	1.07	82.0	Pn	15:48:11.707	0.0									mde		11896	
FNA	1.07	82.0	AMl	15:48:34.500								0.4	0.54	a__	Ml	2.5	6559
PUK	1.40	358.0	Sn	15:48:37.170	-0.1									m__		11899	
PUK	1.40	358.0	Pn	15:48:17.286	0.0									mde		11898	
PUK	1.40	358.0	AMl	15:48:43.890								0.9	0.38	a__	Ml	3.0	6560
ULC	1.43	338.0	P	15:48:18.234	0.3									m__		11900	
BUM	1.84	335.0	P	15:48:25.051	-0.3									m__		11901	
CEME	2.06	338.0	P	15:48:28.416	-0.2									m__		11902	
HCY	2.12	329.0	P	15:48:31.039	1.5									m__		11903	
BEY	2.22	359.0	P	15:48:31.232	0.2									m__		11904	
BRY	2.50	335.0	P	15:48:35.100	0.1									m__		11905	

DATA\_TYPE COMMENT GSE2.1  
Event 724

Official Magnitude:  
Ml 2.71

Error ellipse:

	Azim	Dip	Mag
Max:	204	62	1.2900
Intermediate:	13	26	0.4200
Min:	105	5	0.2900

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1560326354 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 725 1.9 km from Zall-Gjoçaj, Dibër, Albania

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
OrigID																	
2019/05/31	04:53:31.96		0.05	41.7505	20.1733				26.6	1.4	7	25	194	0.21	1.43	m	
778																	

Magnitude	Err	Nsta	Author	OrigID
M1	1.5	0.0	2	778

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
PHP	0.21	108.0	Sg	04:53:42.203	-0.1					---				m		11928
PHP	0.21	108.0	Pg	04:53:37.919	0.1					---				m		11927
PHP	0.21	108.0	AM1	04:53:42.390						---		0.5	0.38	a	M1	1.8
PUK	0.36	325.0	Sg	04:53:46.323	0.0					---				m		11930
PUK	0.36	325.0	Pg	04:53:40.199	0.1					---				m		11929
PUK	0.36	325.0	AM1	04:53:47.010						---		0.2	0.36	a	M1	1.5
PUK	0.36	325.0	AM1	04:53:47.270						---		0.2	0.20	a	M1	1.4
BCI	0.62	353.0	Sg	04:53:53.972	-0.0					---				m		11932
BCI	0.62	353.0	Pg	04:53:43.419	-1.1					---				m		11931
ULC	0.72	0.0	Pg	04:53:46.415	0.0					---				m		11936
DRME	0.85	302.0	Pg	04:53:48.649	-0.1					---				m		11933
CEME	1.23	311.0	Pn	04:53:55.352	0.0					---				m		11934
HCY	1.43	300.0	Pn	04:53:58.277	-0.7					---				m		11935

DATA\_TYPE COMMENT GSE2.1  
 Event 725

Official Magnitude:  
 M1 1.47

Error ellipse:

	Azim	Dip	Mag
Max:	70	59	1.6700
Intermediate:	212	24	0.9000
Min:	310	17	0.3800

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

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1560326359 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 681 0.3 km from Klimatia, Epirus, Greece

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/06	23:20:18.72		0.44	39.7062	20.6790				28.4	1.4	14	9	217	0.32	2.70	m	741

Magnitude	Err	Nsta	Author	OrigID
Ml	3.8	0.0	8	741
Md	3.4	0.0	7	741

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
IGT	0.32	238.0	Pg	23:20:26.960	0.4									m		11316	
IGT	0.32	238.0	S	23:20:32.819	0.3									m		11315	
IGT	0.32	238.0	AMd	23:21:56.989								0.0	90.03	a	Md	2.7	6277
LSK	0.45	353.0	Pg	23:20:28.179	-0.3									m		11314	
LSK	0.45	353.0	Sg	23:20:35.796	0.1									m		11313	
LSK	0.45	353.0	AMl	23:20:42.720								41.5	0.58	a	Ml	3.9	6270
LSK	0.45	353.0	AMd	23:21:58.847								0.0	90.67	a	Md	3.3	6276
SRN	0.55	289.0	Pg	23:20:30.106	-0.6									m		11312	
SRN	0.55	289.0	Sg	23:20:38.780	-0.9									m		11311	
SRN	0.55	289.0	AMl	23:20:39.300								10.5	0.46	a	Ml	3.4	6269
SRN	0.55	289.0	AMd	23:22:02.564								0.0	92.46	a	Md	3.4	6275
NEST	0.76	21.0	Pg	23:20:33.979	0.0									m		11310	
NEST	0.76	21.0	Sg	23:20:45.062	-0.3									m		11309	
NEST	0.76	21.0	AMl	23:20:47.290								13.5	0.60	a	Ml	3.8	6268
NEST	0.76	21.0	AMd	23:22:17.860								0.0	103.88	a	Md	3.5	6274
KBN	0.92	5.0	Pg	23:20:36.585	0.4									m		11308	
KBN	0.92	5.0	Sg	23:20:49.793	0.4									m		11307	
KBN	0.92	5.0	AMl	23:21:00.110								8.8	0.62	a	Ml	3.7	6267
KBN	0.92	5.0	AMd	23:22:10.813								0.0	94.23	a	Md	3.4	6273
VLO	1.18	311.0	Pg	23:20:43.296	2.7									m		11306	

VLO	1.18	311.0	Sg	23:20:58.148	1.1	---											m		11305
VLO	1.18	311.0	AMl	23:21:07.090		---											a	Ml	6266
VLO	1.18	311.0	AMd	23:22:07.460		---											a	Md	6272
TIR	1.75	340.0	Sg	23:21:14.517	0.0	---											m		11304
TIR	1.78	0.0	Pn	23:20:50.769	0.0	---											m		11299
TIR	1.78	0.0	AMl	23:21:27.320		---											a	Ml	6265
PUK	2.41	346.0	Pn	23:20:59.521	-0.6	---											m		11303
PUK	2.41	346.0	Sn	23:21:29.007	-2.1	---											m		11302
PUK	2.41	346.0	AMl	23:21:40.310		---											a	Ml	6264
PUK	2.41	346.0	AMd	23:22:26.299		---											a	Md	6271
BCI	2.70	351.0	Pn	23:21:04.443	0.1	---											m		11301
BCI	2.70	351.0	Sn	23:21:36.679	-1.9	---											m		11300
BCI	2.70	351.0	AMl	23:21:59.960		---											a	Ml	6263

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326356 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 704 1.0 km from Šake, Opština Nikšić, Montenegro

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/18	12:43:50.59		0.06	42.8682	18.6055				16.9	0.8	14	16	112	0.05	1.80	m	
755																	

Magnitude	Err	Nsta	Author	OrigID
Md	2.8	0.0	12	755
Ml	2.5	0.0	3	755

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID
BRY	0.06	304.0	Pg	12:43:53.914	0.0										m	11529
BRY	0.06	304.0	AMd	12:44:33.535								0.0	39.62	a	Md	6385
NKME	0.28	111.0	Pg	12:43:56.967	0.0										m	11530
NKME	0.28	111.0	AMd	12:44:29.078								0.0	32.11	a	Md	6386
CEME	0.39	144.0	Pg	12:43:59.001	-0.0										m	11531
CEME	0.39	144.0	AMd	12:44:42.354								0.0	43.35	a	Md	6387
UPM	0.40	33.0	Pg	12:43:59.001	-0.1										m	11532
UPM	0.40	33.0	AMd	12:44:44.764								0.0	45.76	a	Md	6388
HCY	0.43	192.0	Pg	12:43:59.623	-0.0										m	11533
HCY	0.43	192.0	AMd	12:44:35.320								0.0	35.70	a	Md	6389
BUM	0.61	158.0	Pg	12:44:02.808	-0.1										m	11534
BUM	0.61	158.0	AMd	12:45:06.798								0.0	63.99	a	Md	6390
KOME	0.67	91.0	Pg	12:44:04.067	0.0										m	11535
KOME	0.67	91.0	AMd	12:45:00.140								0.0	56.07	a	Md	6391
DRME	0.81	147.0	Pg	12:44:06.654	0.0										m	11536
DRME	0.81	147.0	AMd	12:45:18.450								0.0	71.80	a	Md	6392
BEY	0.95	89.0	Pg	12:44:09.226	0.0										m	11537

BEY	0.95	89.0	AMd	12:45:00.442	_____	0.0	51.22	a__	Md	2.8	6393
ULC	1.02	151.0	Pg	12:44:10.456	0.0	_____	_____	m__	_____	_____	11538
ULC	1.02	151.0	AMd	12:45:04.255	_____	0.0	53.80	a__	Md	2.9	6394
BCI	1.18	0.0	Pg	12:44:10.654	0.0	_____	_____	m__	_____	_____	11544
BCI	1.19	114.0	Sg	12:44:30.913	0.6	_____	_____	m__	_____	_____	11539
BCI	1.19	114.0	AMl	12:44:36.110	_____	0.4	0.06	a__	Ml	2.5	6397
PUK	1.26	130.0	Sg	12:44:32.705	0.2	_____	_____	m__	_____	_____	11541
PUK	1.26	130.0	Pg	12:44:14.513	-0.0	_____	_____	m__	_____	_____	11540
PUK	1.26	130.0	AMd	12:45:25.654	_____	0.0	71.14	a__	Md	3.2	6395
PUK	1.26	130.0	AMl	12:44:39.100	_____	0.3	0.38	a__	Ml	2.5	6398
PHP	1.80	130.0	Sn	12:44:48.851	-0.1	_____	_____	m__	_____	_____	11543
PHP	1.80	130.0	Pn	12:44:23.997	0.1	_____	_____	m__	_____	_____	11542
PHP	1.80	130.0	AMd	12:45:32.857	_____	0.0	68.86	a__	Md	3.2	6396
PHP	1.80	130.0	AMl	12:45:01.020	_____	0.1	0.60	a__	Ml	2.4	6399

DATA\_TYPE COMMENT GSE2.1  
Event 704

Official Magnitude:  
Ml 2.48

Error ellipse:

	Azim	Dip	Mag
Max:	298	42	1.1800
Intermediate:	40	11	0.5400
Min:	141	46	0.4100

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1560326355 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 713 1.3 km from Eksochi, Epirus, Greece

Date	Time	Err	RMS	Latitude	Longitude	Smaj	Smin	Az	Depth	Err	Ndef	Nsta	Gap	mdist	Mdist	Qual	Author
2019/05/22	04:26:21.93		0.39	40.0873	20.7445				0.0	1.8	7	6	216	0.13	0.64	m	
764																	

Magnitude	Err	Nsta	Author	OrigID
Md	2.7	0.0	1	764
Ml	1.2	0.0	4	764

Sta	Dist	EvAz	Phase	Time	Tres	Azim	AzRes	Slow	SRes	Def	SNR	Amp	Per	Qual	Magnitude	ArrID	
NEST	0.00	0.0	Pg	04:26:30.624	0.0					_____				mdi		11718	
NEST	0.40	35.0	Sg	04:26:37.657	0.1					_____				m__		11711	
NEST	0.40	35.0	AMl	04:26:40.110						_____		0.1	0.38	a__	Ml	1.1	6451
LSK	0.13	300.0	Sg	04:26:26.666	-0.5					_____				m__		11710	

LSK	0.13	300.0	Pg	04:26:24.653	-0.3
LSK	0.13	300.0	AMd	04:27:15.383	
LSK	0.13	300.0	AMl	04:26:32.220	
KBN	0.54	3.0	Sn	04:26:41.724	0.5
KBN	0.54	3.0	Pn	04:26:32.331	-0.6
KBN	0.54	3.0	AMl	04:26:42.160	
SRN	0.61	251.0	Sn	04:26:45.303	0.2
SRN	0.61	251.0	Pn	04:26:34.920	-0.3
SRN	0.61	251.0	AMl	04:26:46.470	
IGT	0.64	211.0	Sn	04:26:48.143	2.6
IGT	0.64	211.0	Pn	04:26:31.258	-4.2

---						mci		11709
---	0.0	50.73	a__	Md	2.7			6449
---	3.9	0.72	a__	Ml	2.3			6450
---						m__		11713
---						mdi		11712
---	0.1	0.26	a__	Ml	1.3			6452
---						m__		11715
---						mdi		11714
---	0.0	0.34	a__	Ml	0.9			6453
---						m__		11717
---						mde		11716

DATA\_TYPE COMMENT GSE2.1  
Event 713

Official Magnitude:  
Ml 1.22

Error ellipse:

	Azim	Dip	Mag
Max:	310	47	2.4000
Intermediate:	160	39	1.1700
Min:	57	15	0.6900

Ngjerje te largeta (Long distance srismic event)

Y	M	D	HM	Sec	Lat	Long	Dep	Net Nr	Rms	Mag	Epicenter
2019-05-10			1925	39.2					590		5.8
GAP=					hor.err=		ver.err=				

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR		AC	iP		0904 21.22					
ULC		AC	iP		0904 20.86					
PEL		AC	iP		0904 19.49					
BEY		AC	iP		0904 17.86					
MRVN		AC	iP		0904 26.29					
SRN		AC	iP		0904 22.55					
PUK		AC	iP		0904 19.86					
LSK		AC	iP		0904 21.98					
BCI		AC	iP		0904 18.21					

Y	M	D	HM	Sec	Lat	Long	Dep	Net Nr	Rms	Mag	Epicenter
2019-05-26			0741	13.60					112		8.0 NORTHERN PERU
GAP=					hor.err=		ver.err=				

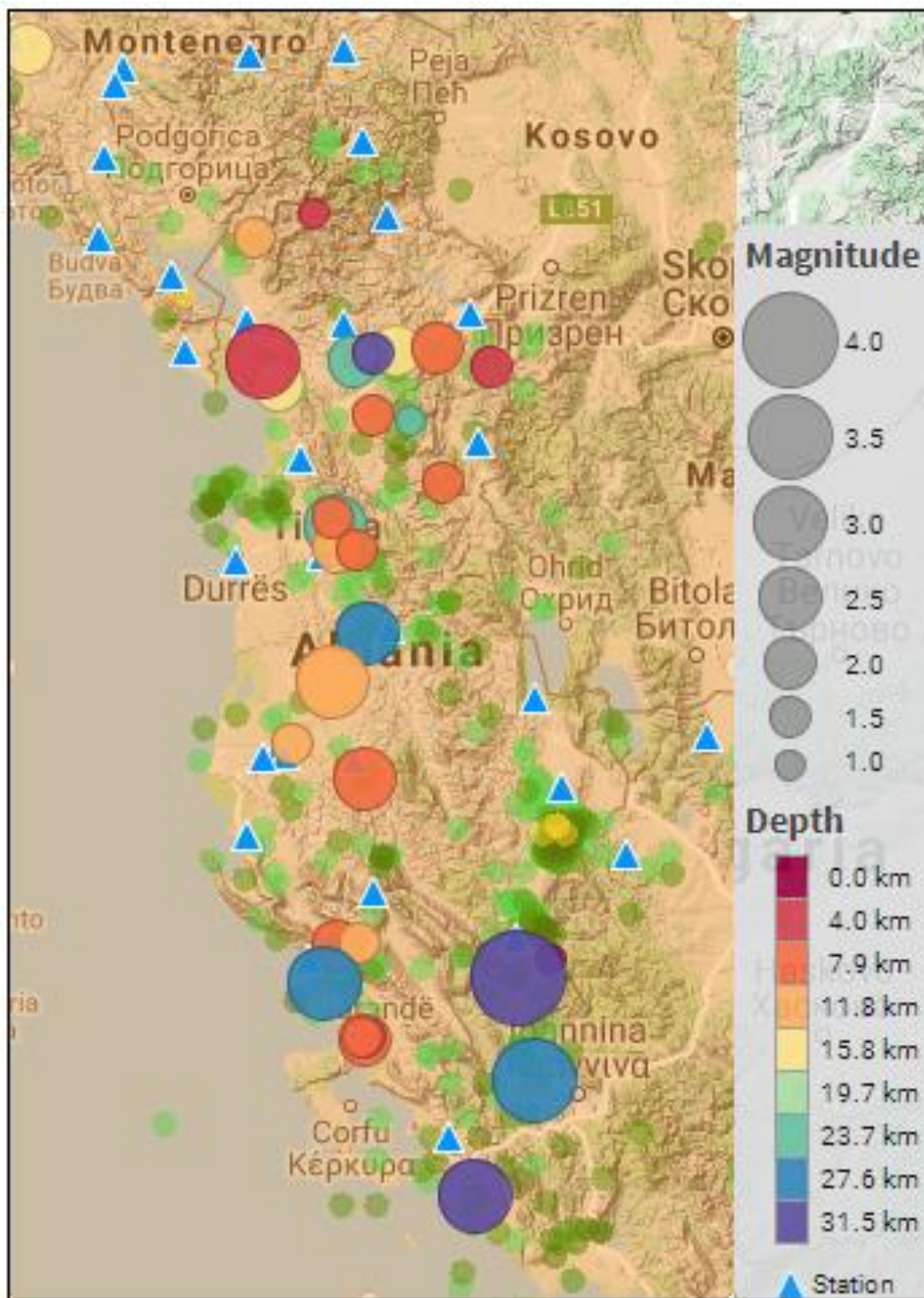
STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
FNA		AC	iP		0754 25.38					
KBN		AC	iP		0754 28.16					
NEST		AC	iP		0754 30.48					
PHP		AC	iP		0754 30.90					
LSK		AC	iP		0754 33.48					
KOME		AC	iP		0754 33.58					
PUK		AC	iP		0754 37.37					
SRN		AC	iP		0754 39.41					
BCI		AC	iP		0754 40.15					
IGT		AC	iP		0754 42.06					
THE		AC	iP		0754 42.58					
LKD2		AC	iP		0754 46.25					

### Katalogu i termeteve

Date	Origin time	Time rms	Latitude	Longitude	Mag	Depth (km)	Depth Error	No. Stations	No. Phases	Azimuth Gap
2019-05-02T07:25:58Z		0.03	41.907	20.497	1.5	7	12.4	4	4	225
2019-05-02T20:22:13Z		0.22	39.831	19.979	2.4	8.6	0.6	30	11	131
2019-05-02T22:49:24Z		0.28	41.429	19.861	2.7	26.4	0.9	30	19	101
2019-05-03T00:10:58Z		0.18	41.385	19.853	1.3	13.7	1.5	30	12	103
2019-05-04T08:16:23Z		0.1	40.132	19.877	2.2	9.6	0.8	30	13	109
2019-05-06T15:00:37Z		0.05	41.957	20.119	2	18.8	0.5	19	11	143
2019-05-06T23:20:18Z		0.44	39.706	20.679	3.8	28.4	1.4	9	14	217
2019-05-07T16:27:29Z		0.04	41.928	19.937	2.2	25.2	0.6	18	11	174
2019-05-08T01:43:50Z		0.1	42.377	19.779	1.4	5.1	1.7	29	12	73
2019-05-08T23:02:11Z		0.13	41.556	20.306	1.8	11	1	30	11	120
2019-05-08T23:29:11Z		0.08	39.841	19.983	1.7	6.9	0.8	30	7	144
2019-05-08T23:59:13Z		0.21	40.140	19.960	1.8	14	2.1	30	9	118
2019-05-09T00:26:20Z		0.37	41.099	19.997	2.8	27.6	1.6	30	23	107
2019-05-10T14:55:50Z		0.07	41.764	20.019	1.9	9.6	2.1	20	8	153
2019-05-11T06:09:03Z		0.08	41.955	19.989	1.5	18.9	1.2	30	9	144
2019-05-11T20:30:52Z		0.16	41.358	19.879	2	13	0.5	31	14	129
2019-05-12T00:12:11Z		0.2	41.352	19.948	1.7	10.8	0.8	31	12	130
2019-05-12T02:07:15Z		0.2	40.753	19.685	2	12.4	0.4	31	22	100
2019-05-14T22:18:56Z		0.19	42.301	19.537	1.9	14.2	2	30	13	54
2019-05-15T15:59:12Z		0.05	41.952	20.014	1.8	34.5	0.5	15	7	147
2019-05-15T23:04:53Z		0.37	41.447	19.852	1.9	11.3	2.7	15	12	306
2019-05-17T00:22:45Z		0.67	40.010	19.815	3	31	2.2	11	17	182
2019-05-18T08:36:53Z		0.03	39.841	19.972	1.7	8.5	0.6	18	9	236
2019-05-18T12:43:50Z		0.06	42.868	18.606	2.5	16.9	0.8	16	14	112
2019-05-20T11:39:30Z		0.1	41.855	19.637	2.5	17.4	1	17	12	150
2019-05-20T23:31:48Z		0.34	40.950	19.837	3	12.1	1.2	17	21	115
2019-05-20T23:49:51Z		0.27	40.950	19.848	3.2	15	1.2	15	20	115



2019-05-22T04:26:21Z	0.39	40.087	20.745	1.2	####	1.8	6	7	216
2019-05-23T16:43:25Z	0.08	39.341	20.440	3.2	35.5	0.7	13	10	166
2019-05-25T22:35:25Z	0.41	40.031	20.607	4.3	35	0.7	10	18	163
2019-05-26T17:51:39Z	0.18	41.966	20.285	2.4	8.3	2.1	10	9	165
2019-05-26T19:44:28Z	0.42	41.930	19.570	3.1	4.9	2.8	15	19	96
2019-05-28T15:47:50Z	0.19	40.646	19.983	2.7	11.6	1.2	19	19	109
2019-05-31T04:53:31Z	0.05	41.751	20.173	1.5	26.6	1.4	25	7	194



**-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 Maj 2019, bazuar në regjistrimet e ASN dhe stacioneve sizmologjike në rajon.  
*(Epicentral map for located seismicity within Albania and surrounding during May 2019)*

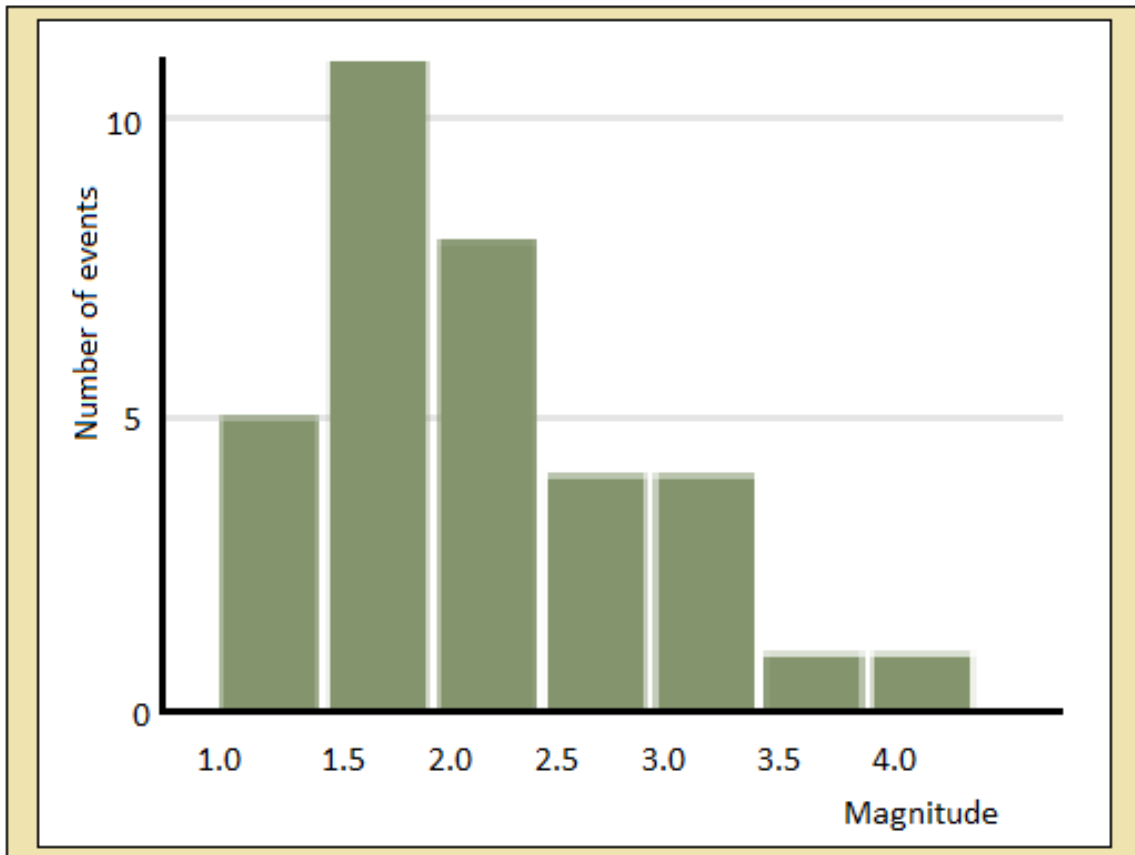
## 1. Statistika e ngjarjeve (Events Statistics)

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

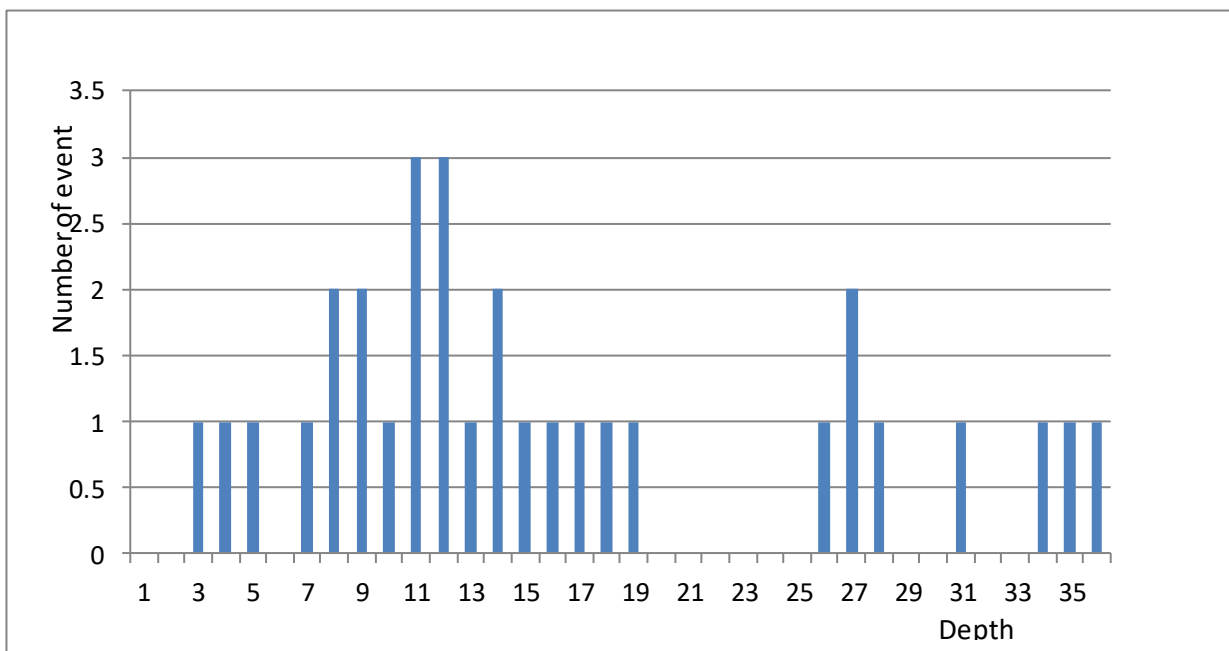
Të dhënat përfaqësuese	Representative Parameters	Vlerat (observed values)
Numuri i përgjithshëm i ngjarjeve të regjistruara (kuadrati 39o-43o V; 18.5o-21.5oL)	[total recorded number of seismic events]	33
Numuri i ngjarjeve sizmike brenda kufirit shtetëror	[earthquakes occurred within state border]	29
Thellësia mesatare e vrojtuar (km)	[mean observed depth]	16
Thellësia maksimale e vrojtuar (km)	[maximum observed depth]	35
Magnituda lokale minimale e vrojtuar ( $M_{Ld}$ )	[minimum observed local magnitude]	1.3
Magnituda lokale maksimale e vrojtuar ( $M_{Ld}$ )	[maximum observed local magnitude]	4.3
Intensiteti maksimal i vrojtuar (MSK-64)	[maximum observed intensity]	V-VI

## 2. Karakteristikat kryesore të sizmicitetit për muajin

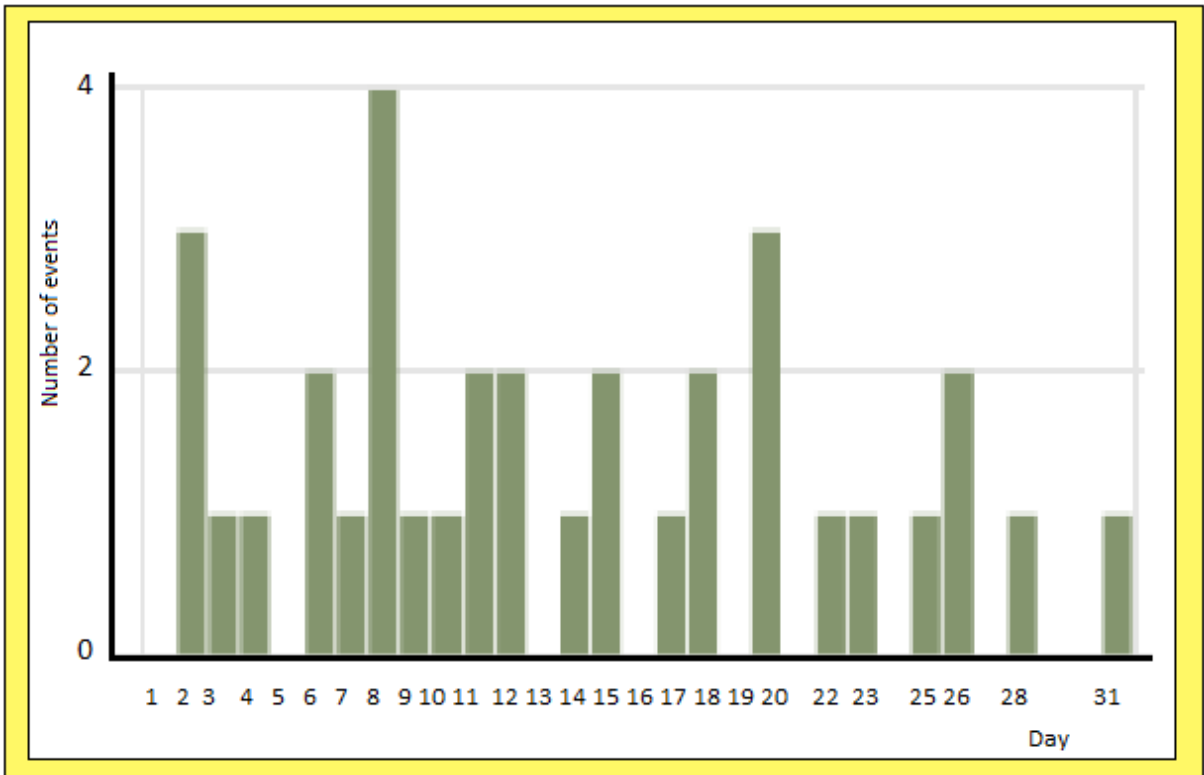
Sizmiciteti i muajit Maj 2019 është percaktuar si aktivitet sizmik shumë i ulët, me dallueshem kemi regjistrimin e ngjarjes së datës 25 Maj 2019, ora 22:35(UTM), me  $M_L = 4.3$  (Rihter) në Greqi pranë me kufirin me Shqipërinë 12 km në jug të Leskovikut.



Grafiku i numurit te ngjarjeve per nivelin e magnitudave



Grafiku i frekuences se termeteve ne lidhje me thellesin.



Grafiku ishperndarjes se numurit te ngjarjeve per dite

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

##### Ngjarja 1:

Datë 25.05.2019, në orën 22:35:25.39(UTC); (23:35:25.39ora lokale); lokalizuar 40.031V; 20.606L, 12km ne jug te Leskovikut; Intensiteti i tërmetit në epiqendër  $I_0 = V$  ballë (EMS-98); Ndjerë: IV ballë në qytetin e Leskovikut; III ballë në Ersek, Permet.

(Event 1):

(Intensity  $I_0 = V$  degree EMS-98, felt IV degree at Leskoviku town; III at Dhermi, Gjirokaster, Sarande dhe Tepelene towns; IV-V at Permeti, Kelcyra, Memaliaj and Vlora towns; IV at Ersek, Permet towns).

**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  $I_0 = (\text{Mag} (ML/d) - 1)/0.6$

## REFERENCA (References)

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