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**Universiteti Politeknik i Tiranës**  
**Instituti i Gjeoshkencave, Energjisë, Ujit dhe Mjedisit**  
(Polytechnic University of Tirana  
Institute of Geosciences, Energy, Water and Environment)

Rr. "Don Bosko", Nr. 60  
Kodi postar: 1024; Kutia postare: 219  
Tirane  
www.geo.edu.al  
alert\_tir@geo.edu.al  
Tel. 042 250 601  
Fax. 042 259 540

**Përliluar nga:**

Punonjësit kërkues-shkencor  
Prof. Dr. Rrapo ORMËNI  
Dr. Edmond DUSHI

Punonjësit ndihmës-shkencor  
Msc. Ardian MINAROLLI  
Msc. Olgert GJUZI  
Msc. Irena DUSHI  
Msc. Suela HAJRULLAI

**Redaktor përgjegjës:**

Prof. Dr. Rrapo ORMËNI

**Përgjegjësi i Departamentit**

Prof. Asoc. Dr. Rrexhep KOCI

## **H Y R J E**

Buletini sizmologjik përmban ngjarjet sizmike (tërmetet), e regjistruar, lokalizuar dhe analizuar gjatë periudhës kohore një-mujore. Përpos pasqyrimin kronologjik të aktivitetit sizmik të regjistruar, në territorin Shqipëtar dhe rreth tij, me anë të stacioneve të rrjetit sizmologjik shqipëtar, por edhe të rrjeteve fqinjë, periodiku përmban një analizë të gjithanëshme të parametrave të vlerësuar në drejtim të cilësisë së vlerësimit të tyre dhe statistikës së aktivitetit sizmik në vend. Përmbajtja e buletinit konsiston në terminologjinë përkatëse, në karakteristikat e stacioneve sizmologjik, të dhënat parametrike të vlerësuara nga analiza e çdo tërmeti, në analizën e cilësisë së vlerësimit të këtyre parametrave, në analizën e ngjarjeve të veçanta ( $M > 4.0$ ), nëse ka të tilla, si dhe në përpilimin e katalogut mujor dhe paraqitjen grafike në hartë, të epiqendrave të tërmeteve të lokalizuar. 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 përfutuara 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. Olgert Gjuzi, Eng. Irena Dushi and Eng. Suela Hajrullai (Geologists, Geophysicist, Physicist /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)

$T_0$  – 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.

| Kodi         | Regjistruar (Po/Jo) | Gjer. Gjeo.       | Gjat. Gjeo.        | Lartësia  | Tipi i stacionit | Sensori      | Terheqja e Informacionit  | Komunikimi    | $T_0$            |
|--------------|---------------------|-------------------|--------------------|-----------|------------------|--------------|---------------------------|---------------|------------------|
| 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<br>(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. 1** – Rrjeti Sizmologjik Shqipëtar (Albanian Seismological Network, ASN, Rrjeti Sizmologjik Virtual (Virtual Seismological Network)

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

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

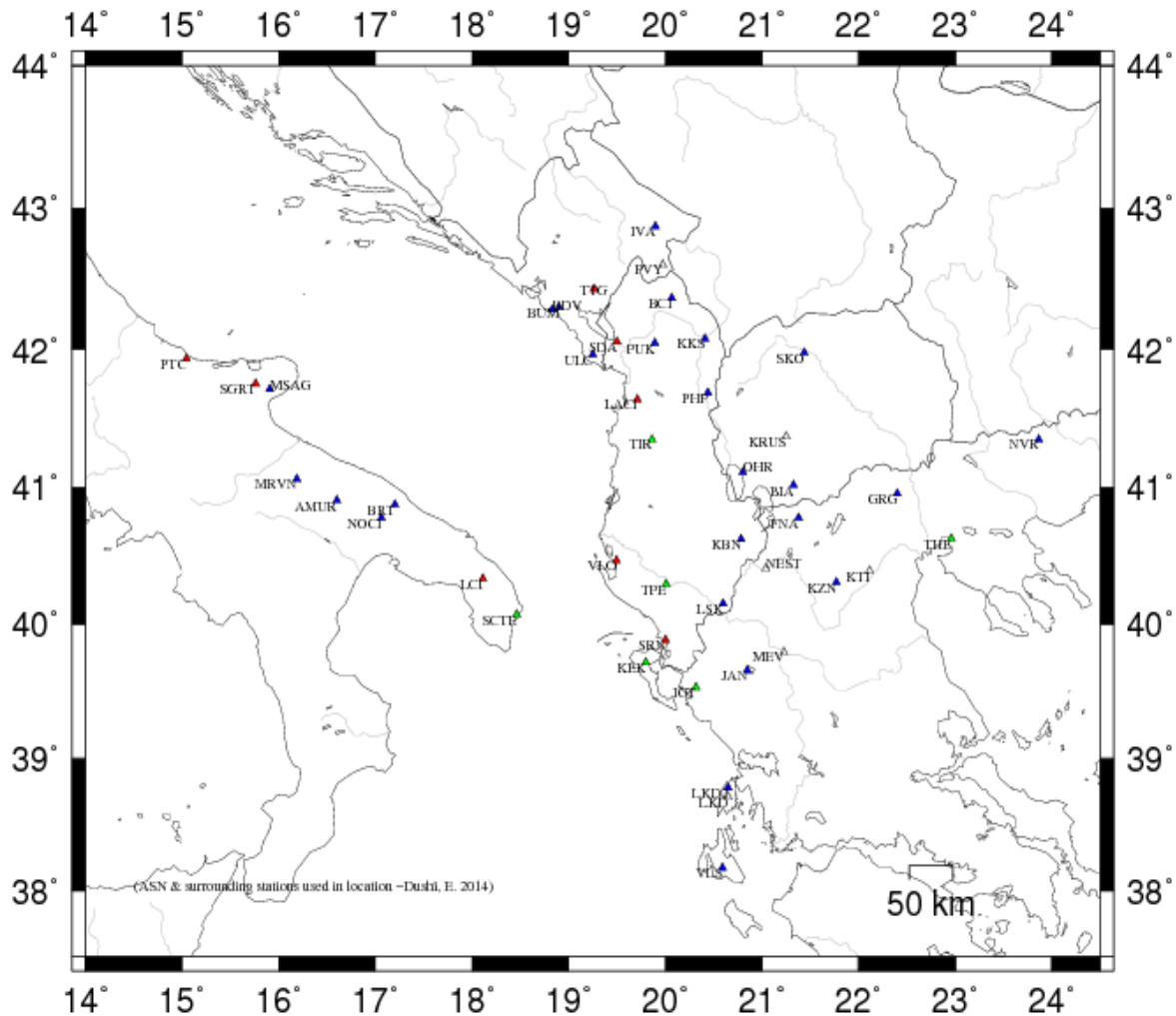
| Kodi         | Regjistruar (Po/Jo) | Gjer. Gjeo.       | Gjat. Gjeo.        | Lartesia  | Tipi i stacionit | Sensori      | Terheqja e Informacionit | Komunikimi    | T <sub>0</sub>   |
|--------------|---------------------|-------------------|--------------------|-----------|------------------|--------------|--------------------------|---------------|------------------|
| 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        | 3C-BB            | #            | Libra VSA1               | #             | 40/120           |
| OHR          | Po (Y)              | 41.1114           | 20.7989            | 739       | #                | #            | #                        | #             | #                |
| BIA          | Po (Y)              | 41.0194           | 21.3239            | 720       | 3C-BB            | #            | Trident                  | #             | 40               |
| KRUS         | Po (Y)              | 41.3689           | 21.2488            | 1015      | #                | #            | #                        | #             | #                |
| SKO          | Po (Y)              | 41.9721           | 21.4396            | 346       | 3C-BB            | #            | Jaurus                   | #             | 120              |
| FINA         | 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               |

**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 Malazezë (PDG) dhe atij Maqedonas (SKO).  
[Seismological station distribution map for ASN, THE, ATH, INGV, PDG & SKO]

**Përshkrimi i terminlogjisë 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) [ <i>Date</i> ]  |
| ORIGIN     | Koha (ora, minuta, sekonda) [ <i>Origine Time</i> ]   |
| LAT N      | Gjerësia gjeografike (gradë, minuta) [ <i>latitude in degree and minute</i> ]   |
| LON W      | Gjatësia gjeografike (gradë, minuta) [ <i>longitude in degree and minutes</i> ]   |
| 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 në gjeometrinë e rrjetit sizmologjik [Quality rating based on station geometry]  |
| QLOC       | Cilesia e katalogut bazuar në 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 konvergimin e zgjidhjes së përftuar 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 në amplitudë, [ <i>amplitude based magnitude weight code</i> ]. |
| XMAG | Magnituda bazuar në amplitudë, për stacionin, [ <i>amplitude magnitude for that station</i> ].              |
| T    | Kodi për llojin e magnitudës [ <i>the magnitude type code assigned by XC1 &amp; XC2 commands</i> ].         |



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

2019\450.gse  
 BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556180012 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 450 2.2 km from Grabova e Sipërme, Elbasan, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/01 | 05:26:16.25 |     | 0.04 | 40.7972  | 20.4347   |      |      |    | 0.1   | 0.7 | 13   | 9    | 122 | 0.31  | 2.01  | m    | 489    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.2 | 0.0  | 5      | 489    |
| Md        | 2.6 | 0.0  | 3      | 489    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual   | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|--------|-----------|-------|
| KBN  | 0.32 | 122.0 | Sg    | 05:26:28.191 | 0.0  |      |       |      |      |     |     |     |       | m__    |           | 7340  |
| KBN  | 0.32 | 122.0 | Pg    | 05:26:23.071 | 0.0  |      |       |      |      |     |     |     |       | mci    |           | 7339  |
| KBN  | 0.32 | 122.0 | AMl   | 05:26:29.270 |      |      |       |      |      |     |     | 3.3 | 0.28  | a__ Ml | 2.5       | 4227  |
| KBN  | 0.32 | 122.0 | AMd   | 05:26:51.295 |      |      |       |      |      |     |     | 0.0 | 28.22 | a__ Md | 2.1       | 4224  |
| BPA1 | 0.60 | 264.0 | Sg    | 05:26:38.359 | 0.0  |      |       |      |      |     |     |     |       | m__    |           | 7342  |
| BPA1 | 0.60 | 264.0 | Pg    | 05:26:28.880 | 0.0  |      |       |      |      |     |     |     |       | m__    |           | 7341  |
| NEST | 0.60 | 0.0   | Pg    | 05:26:28.089 | 0.0  |      |       |      |      |     |     |     |       | mdi    |           | 7354  |
| NEST | 0.60 | 129.0 | Sg    | 05:26:38.563 | -0.1 |      |       |      |      |     |     |     |       | m__    |           | 7343  |
| NEST | 0.60 | 129.0 | AMl   | 05:26:40.620 |      |      |       |      |      |     |     | 0.3 | 0.40  | a__ Ml | 1.8       | 4228  |
| LSK  | 0.66 | 168.0 | Sg    | 05:26:40.294 | 0.1  |      |       |      |      |     |     |     |       | m__    |           | 7345  |
| LSK  | 0.66 | 168.0 | Pg    | 05:26:29.937 | 0.0  |      |       |      |      |     |     |     |       | mdi    |           | 7344  |
| LSK  | 0.66 | 168.0 | AMl   | 05:26:42.050 |      |      |       |      |      |     |     | 1.0 | 0.60  | a__ Ml | 2.5       | 4229  |
| LSK  | 0.66 | 168.0 | AMd   | 05:27:10.780 |      |      |       |      |      |     |     | 0.0 | 40.84 | a__ Md | 2.6       | 4225  |
| TIR  | 0.70 | 323.0 | S     | 05:26:41.780 | 0.0  |      |       |      |      |     |     |     |       | m__    |           | 7347  |
| TIR  | 0.70 | 323.0 | P     | 05:26:30.806 | -0.0 |      |       |      |      |     |     |     |       | m__    |           | 7346  |
| PHP  | 0.89 | 0.0   | Sg    | 05:26:47.559 | 0.0  |      |       |      |      |     |     |     |       | m__    |           | 7349  |
| PHP  | 0.89 | 0.0   | Pg    | 05:26:33.864 | -0.3 |      |       |      |      |     |     |     |       | mdi    |           | 7348  |
| PHP  | 0.89 | 0.0   | AMl   | 05:26:53.820 |      |      |       |      |      |     |     | 0.2 | 0.56  | a__ Ml | 1.9       | 4230  |
| PHP  | 0.89 | 0.0   | AMd   | 05:27:13.664 |      |      |       |      |      |     |     | 0.0 | 39.80 | a__ Md | 2.6       | 4226  |
| IGT  | 1.27 | 184.0 | Sn    | 05:27:00.677 | -0.1 |      |       |      |      |     |     |     |       | m__    |           | 7351  |
| IGT  | 1.27 | 184.0 | Pn    | 05:26:41.449 | -0.2 |      |       |      |      |     |     |     |       | m__    |           | 7350  |
| IGT  | 1.27 | 184.0 | AMl   | 05:27:07.540 |      |      |       |      |      |     |     | 0.2 | 0.54  | a__ Ml | 2.2       | 4231  |
| LKD2 | 2.01 | 175.0 | S     | 05:27:24.130 | 0.0  |      |       |      |      |     |     |     |       | m__    |           | 7353  |

LKD2 2.01 175.0 P 05:26:55.031 -0.0 \_\_\_\_\_ m\_\_ 7352

DATA\_TYPE COMMENT GSE2.1  
Event 450

Official Magnitude:  
Ml 2.19

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 52   | 83  | 0.7300 |
| Intermediate: | 235  | 6   | 0.3200 |
| Min:          | 325  | 0   | 0.1900 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180012 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 452 2.0 km from Ndërshenë, Lezhë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/01 | 06:57:05.79 |     | 0.01 | 41.8317  | 20.1105   |      |      |    | 13.6  | 4.5 | 4    | 4    | 157 | 0.27  | 0.52  | m    |        |
| 491        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.2 | 0.0  | 2      | 491    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual   | Magnitude | ArrID |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|--------|-----------|-------|
| PUK | 0.27 | 0.0   | Pg    | 06:57:10.893 | 0.0  |      |       |      |      |     |     |     |      | mce    |           | 7376  |
| PUK | 0.27 | 323.0 | Sg    | 06:57:15.960 | -0.0 |      |       |      |      |     |     |     |      | m__    |           | 7371  |
| PUK | 0.27 | 323.0 | AM1   | 06:57:18.250 |      |      |       |      |      |     |     | 0.3 | 0.20 | a__ Ml | 1.5       | 4239  |
| PHP | 0.29 | 120.0 | Sg    | 06:57:16.354 | 0.0  |      |       |      |      |     |     |     |      | m__    |           | 7373  |
| PHP | 0.29 | 120.0 | Pg    | 06:57:10.997 | -0.8 |      |       |      |      |     |     |     |      | mdi    |           | 7372  |
| PHP | 0.29 | 120.0 | AM1   | 06:57:18.300 |      |      |       |      |      |     |     | 0.1 | 0.32 | a__ Ml | 0.9       | 4240  |
| TIR | 0.52 | 201.0 | P     | 06:57:16.398 | 0.0  |      |       |      |      |     |     |     |      | m__    |           | 7375  |
| TIR | 0.52 | 201.0 | S     | 06:57:24.354 | 0.0  |      |       |      |      |     |     |     |      | m__    |           | 7374  |

DATA\_TYPE COMMENT GSE2.1  
Event 452

Official Magnitude:  
Ml 1.19

Error ellipse:

|      | Azim | Dip | Mag    |
|------|------|-----|--------|
| Max: | 38   | 79  | 4.5400 |

Intermediate: 238 9 0.5400  
 Min: 147 4 0.3600

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556180012 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 454 1.5 km from Lavdari i Korcës, Korçë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/01 | 10:32:13.42 |     | 0.22 | 40.6130  | 20.6462   |      |      |    | 24.0  | 1.2 | 21   | 22   | 198 | 0.47  | 2.89  | m    |        |
| OrigID 493 |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 3.0 | 0.0  | 6      | 493    |
| Md        | 3.0 | 0.0  | 2      | 493    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp   | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-------|-------|------|-----------|-------|
| KBN  | 0.11 | 0.0   | Pg    | 10:32:14.884 | 0.0  |      |       |      |      |     |     |       |       | m    |           | 7421  |
| KBN  | 0.11 | 84.0  | Sg    | 10:32:17.006 | -1.7 |      |       |      |      |     |     |       |       | m    |           | 7398  |
| KBN  | 0.11 | 84.0  | AMl   | 10:32:17.330 |      |      |       |      |      |     |     | 138.3 | 0.28  | a    | Ml        | 4.2   |
| LSK  | 0.46 | 185.0 | Sg    | 10:32:30.432 | 0.1  |      |       |      |      |     |     |       |       | m    |           | 7400  |
| LSK  | 0.46 | 185.0 | Pg    | 10:32:23.001 | -0.1 |      |       |      |      |     |     |       |       | m    |           | 7399  |
| LSK  | 0.46 | 185.0 | AMl   | 10:32:38.400 |      |      |       |      |      |     |     | 4.5   | 0.50  | a    | Ml        | 2.9   |
| LSK  | 0.46 | 185.0 | AMd   | 10:33:19.596 |      |      |       |      |      |     |     | 0.0   | 56.59 | a    | Md        | 2.9   |
| SRN  | 0.88 | 215.0 | Sg    | 10:32:44.333 | 0.1  |      |       |      |      |     |     |       |       | m    |           | 7402  |
| SRN  | 0.88 | 215.0 | Pg    | 10:32:31.014 | -0.0 |      |       |      |      |     |     |       |       | m    |           | 7401  |
| SRN  | 0.88 | 215.0 | AMl   | 10:32:53.410 |      |      |       |      |      |     |     | 0.7   | 0.68  | a    | Ml        | 2.5   |
| SRN  | 0.88 | 215.0 | AMd   | 10:33:40.471 |      |      |       |      |      |     |     | 0.0   | 69.46 | a    | Md        | 3.1   |
| TIR  | 0.94 | 322.0 | S     | 10:32:45.508 | 0.1  |      |       |      |      |     |     |       |       | m    |           | 7404  |
| TIR  | 0.94 | 322.0 | P     | 10:32:31.399 | -0.3 |      |       |      |      |     |     |       |       | m    |           | 7403  |
| TIR  | 0.94 | 322.0 | AMl   | 10:32:52.150 |      |      |       |      |      |     |     | 0.6   | 0.58  | a    | Ml        | 2.5   |
| PUK  | 1.54 | 339.0 | Sn    | 10:33:04.368 | 0.7  |      |       |      |      |     |     |       |       | m    |           | 7406  |
| PUK  | 1.54 | 339.0 | Pn    | 10:32:42.408 | 0.3  |      |       |      |      |     |     |       |       | m    |           | 7405  |
| PUK  | 1.54 | 339.0 | AMl   | 10:33:13.030 |      |      |       |      |      |     |     | 0.9   | 0.78  | a    | Ml        | 3.1   |
| ULC  | 1.71 | 323.0 | P     | 10:32:45.278 | 0.3  |      |       |      |      |     |     |       |       | m    |           | 7407  |
| BCI  | 1.80 | 347.0 | S     | 10:33:11.016 | -0.0 |      |       |      |      |     |     |       |       | m    |           | 7409  |
| BCI  | 1.80 | 347.0 | P     | 10:32:46.351 | 0.0  |      |       |      |      |     |     |       |       | m    |           | 7408  |
| BCI  | 1.80 | 347.0 | AMl   | 10:33:16.820 |      |      |       |      |      |     |     | 1.6   | 0.86  | a    | Ml        | 3.6   |
| DRME | 1.92 | 326.0 | P     | 10:32:48.163 | 0.1  |      |       |      |      |     |     |       |       | m    |           | 7410  |
| PVY  | 2.04 | 346.0 | P     | 10:32:49.905 | -0.0 |      |       |      |      |     |     |       |       | m    |           | 7411  |
| BUM  | 2.14 | 323.0 | P     | 10:32:50.516 | -0.8 |      |       |      |      |     |     |       |       | m    |           | 7412  |
| BEY  | 2.32 | 347.0 | P     | 10:32:53.995 | -0.1 |      |       |      |      |     |     |       |       | m    |           | 7413  |
| CEME | 2.33 | 327.0 | P     | 10:32:53.004 | -1.1 |      |       |      |      |     |     |       |       | m    |           | 7414  |
| KOME | 2.39 | 340.0 | P     | 10:32:55.398 | 0.4  |      |       |      |      |     |     |       |       | m    |           | 7415  |
| NKME | 2.49 | 331.0 | P     | 10:32:56.191 | -0.4 |      |       |      |      |     |     |       |       | m    |           | 7416  |

|      |      |       |   |              |      |     |   |      |
|------|------|-------|---|--------------|------|-----|---|------|
| NOCI | 2.73 | 275.0 | S | 10:33:35.032 | 0.0  | --- | m | 7418 |
| NOCI | 2.73 | 275.0 | P | 10:32:59.720 | -0.3 | --- | m | 7417 |
| BRY  | 2.78 | 327.0 | P | 10:33:00.936 | 0.2  | --- | m | 7419 |
| UPM  | 2.89 | 334.0 | P | 10:33:01.967 | -0.5 | --- | m | 7420 |

DATA\_TYPE COMMENT GSE2.1  
Event 454

Official Magnitude:  
Ml 3.02

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 135  | 74  | 1.2700 |
| Intermediate: | 268  | 11  | 1.0000 |
| Min:          | 0    | 11  | 0.3900 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180012 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 457 1.6 km from Qazim Pali, Vlorë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/03 | 00:16:15.64 |     | 0.54 | 40.0277  | 19.8823   |      |      |    | 28.9  | 1.6 | 15   | 11   | 126 | 0.17  | 2.34  | m    |        |
| 496        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.6 | 0.0  | 8      | 496    |
| Md        | 2.8 | 0.0  | 4      | 496    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| SRN | 0.17 | 148.0 | Sg    | 00:16:25.879 | -0.9 |      |       |      |      |     |     |     |       | m    |           | 7435  |      |
| SRN | 0.17 | 148.0 | P     | 00:16:21.714 | -0.3 |      |       |      |      |     |     |     |       | m    |           | 7434  |      |
| SRN | 0.17 | 148.0 | AMl   | 00:16:28.730 |      |      |       |      |      |     |     | 1.9 | 0.28  | a    | Ml        | 2.4   | 4269 |
| SRN | 0.17 | 148.0 | AMd   | 00:17:08.391 |      |      |       |      |      |     |     | 0.0 | 46.68 | a    | Md        | 2.7   | 4265 |
| VLO | 0.53 | 327.0 | Sg    | 00:16:33.666 | -0.5 |      |       |      |      |     |     |     |       | m    |           | 7437  |      |
| VLO | 0.53 | 327.0 | P     | 00:16:24.529 | -1.7 |      |       |      |      |     |     |     |       | m    |           | 7436  |      |
| VLO | 0.53 | 327.0 | AMl   | 00:16:37.440 |      |      |       |      |      |     |     | 6.0 | 0.30  | a    | Ml        | 3.1   | 4270 |
| VLO | 0.53 | 327.0 | AMd   | 00:17:03.765 |      |      |       |      |      |     |     | 0.0 | 39.24 | a    | Md        | 2.5   | 4266 |
| LSK | 0.56 | 77.0  | Sg    | 00:16:35.816 | -0.3 |      |       |      |      |     |     |     |       | m    |           | 7439  |      |
| LSK | 0.56 | 77.0  | Pg    | 00:16:27.469 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 7438  |      |
| LSK | 0.56 | 77.0  | AMl   | 00:16:41.840 |      |      |       |      |      |     |     | 2.0 | 0.52  | a    | Ml        | 2.7   | 4271 |
| LSK | 0.56 | 77.0  | AMd   | 00:17:32.049 |      |      |       |      |      |     |     | 0.0 | 64.58 | a    | Md        | 3.0   | 4267 |
| KBN | 0.91 | 48.0  | Sg    | 00:16:46.851 | 0.8  |      |       |      |      |     |     |     |       | m    |           | 7441  |      |
| KBN | 0.91 | 48.0  | P     | 00:16:33.396 | 0.4  |      |       |      |      |     |     |     |       | m    |           | 7440  |      |

|      |      |       |     |              |      |     |       |     |     |     |      |
|------|------|-------|-----|--------------|------|-----|-------|-----|-----|-----|------|
| KBN  | 0.91 | 48.0  | AMl | 00:16:50.730 | ---  | 0.6 | 0.50  | a__ | Ml  | 2.6 | 4272 |
| KBN  | 0.91 | 48.0  | AMd | 00:17:27.836 | ---  | 0.0 | 54.44 | a__ | Md  | 2.9 | 4268 |
| SCTE | 1.09 | 274.0 | Sg  | 00:16:52.536 | 0.3  | --- | ---   | m__ | --- | --- | 7443 |
| SCTE | 1.09 | 274.0 | P   | 00:16:37.196 | 0.7  | --- | ---   | m__ | --- | --- | 7442 |
| SCTE | 1.09 | 274.0 | AMl | 00:16:55.190 | ---  | 1.8 | 0.34  | a__ | Ml  | 3.1 | 4273 |
| TIR  | 1.37 | 0.0   | P   | 00:16:40.599 | 0.0  | --- | ---   | m__ | --- | --- | 7451 |
| TIR  | 1.32 | 0.0   | Sg  | 00:16:59.685 | 0.5  | --- | ---   | m__ | --- | --- | 7444 |
| TIR  | 1.32 | 0.0   | AMl | 00:17:05.570 | ---  | 0.3 | 0.74  | a__ | Ml  | 2.5 | 4274 |
| PHP  | 1.71 | 14.0  | Sn  | 00:17:11.434 | 1.8  | --- | ---   | m__ | --- | --- | 7446 |
| PHP  | 1.71 | 14.0  | Pn  | 00:16:46.735 | 0.2  | --- | ---   | m__ | --- | --- | 7445 |
| PHP  | 1.71 | 14.0  | AMl | 00:17:21.380 | ---  | 0.1 | 1.26  | a__ | Ml  | 2.4 | 4275 |
| PUK  | 2.01 | 0.0   | Sn  | 00:17:18.018 | 0.2  | --- | ---   | m__ | --- | --- | 7448 |
| PUK  | 2.01 | 0.0   | Pn  | 00:16:50.201 | -1.0 | --- | ---   | m__ | --- | --- | 7447 |
| PUK  | 2.01 | 0.0   | AMl | 00:17:22.640 | ---  | 0.2 | 0.78  | a__ | Ml  | 2.9 | 4276 |
| BCI  | 2.34 | 3.0   | Sn  | 00:17:25.500 | -0.8 | --- | ---   | m__ | --- | --- | 7450 |
| BCI  | 2.34 | 3.0   | Pn  | 00:16:55.345 | -0.7 | --- | ---   | m__ | --- | --- | 7449 |

DATA\_TYPE COMMENT GSE2.1  
Event 457

Official Magnitude:  
Ml 2.63

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 159  | 50  | 2.1200 |
| Intermediate: | 44   | 19  | 1.0200 |
| Min:          | 301  | 33  | 0.8400 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180011 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 465 1.1 km from Lapoj, Kukës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/04 | 22:47:52.56 |     | 0.05 | 41.8975  | 20.4262   |      |      |    | 7.2   | 1.7 | 7    | 11   | 198 | 0.22  | 1.54  | m    | 504    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.6 | 0.0  | 3      | 504    |
| Md        | 2.7 | 0.0  | 3      | 504    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per | Qual | Magnitude | ArrID |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-----|------|-----------|-------|
| PHP | 0.21 | 177.0 | Sg    | 22:48:00.347 | 0.1  |      |       |      |      | --- |     |     |     | m__  |           | 7548  |
| PHP | 0.21 | 177.0 | Pg    | 22:47:56.891 | -0.1 |      |       |      |      | --- |     |     |     | mci  |           | 7547  |

|      |      |       |     |              |      |     |       |     |     |     |      |
|------|------|-------|-----|--------------|------|-----|-------|-----|-----|-----|------|
| PHP  | 0.21 | 177.0 | AMl | 22:48:00.520 | ---  | 0.4 | 0.12  | a__ | Ml  | 1.5 | 4341 |
| PHP  | 0.21 | 177.0 | AMd | 22:48:44.059 | ---  | 0.0 | 47.17 | a__ | Md  | 2.7 | 4338 |
| PUK  | 0.42 | 291.0 | Sg  | 22:48:07.588 | 0.0  | --- | ---   | m__ | --- | --- | 7550 |
| PUK  | 0.42 | 291.0 | Pg  | 22:48:00.817 | -0.3 | --- | ---   | mdi | --- | --- | 7549 |
| PUK  | 0.42 | 291.0 | AMl | 22:48:11.590 | ---  | 0.3 | 0.16  | a__ | Ml  | 1.6 | 4342 |
| PUK  | 0.42 | 291.0 | AMd | 22:48:50.843 | ---  | 0.0 | 50.03 | a__ | Md  | 2.7 | 4339 |
| BCI  | 0.54 | 331.0 | Sg  | 22:48:12.083 | 0.6  | --- | ---   | m__ | --- | --- | 7552 |
| BCI  | 0.54 | 331.0 | Pg  | 22:48:03.376 | -0.0 | --- | ---   | mce | --- | --- | 7551 |
| BCI  | 0.54 | 331.0 | AMl | 22:48:13.630 | ---  | 0.3 | 0.14  | a__ | Ml  | 1.7 | 4343 |
| BCI  | 0.54 | 331.0 | AMd | 22:48:42.938 | ---  | 0.0 | 39.56 | a__ | Md  | 2.5 | 4340 |
| ULC  | 0.88 | 0.0   | P   | 22:48:10.036 | 0.0  | --- | ---   | m__ | --- | --- | 7556 |
| BEY  | 1.05 | 339.0 | P   | 22:48:13.235 | 0.1  | --- | ---   | m__ | --- | --- | 7553 |
| CEME | 1.29 | 301.0 | P   | 22:48:17.894 | 0.1  | --- | ---   | m__ | --- | --- | 7554 |
| HCY  | 1.54 | 292.0 | P   | 22:48:22.155 | -0.1 | --- | ---   | m__ | --- | --- | 7555 |

DATA\_TYPE COMMENT GSE2.1  
Event 465

Official Magnitude:  
Ml 1.55

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 135  | 84  | 1.6900 |
| Intermediate: | 246  | 1   | 0.7800 |
| Min:          | 336  | 6   | 0.3000 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180011 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 466 1.7 km from Kudahës, Vlorë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/05 | 01:07:21.92 |     | 0.08 | 40.1150  | 19.8140   |      |      |    | 0.1   | 1.0 | 11   | 32   | 116 | 0.28  | 1.48  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.9 | 0.0  | 7      | 505    |
| Md        | 2.5 | 0.0  | 2      | 505    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |      |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|------|
| SRN | 0.27 | 0.0   | Pg    | 01:07:28.628 | 0.0  |      |       |      |      | --- |     |     |      | m__  |           | 7571  |      |
| SRN | 0.28 | 148.0 | Sg    | 01:07:33.566 | -0.1 |      |       |      |      | --- |     |     |      | m__  |           | 7557  |      |
| SRN | 0.28 | 148.0 | AMl   | 01:07:36.628 |      |      |       |      |      | --- |     | 0.7 | 0.32 | a__  | Ml        | 1.8   | 4346 |
| VLO | 0.43 | 326.0 | Sg    | 01:07:37.327 | 0.1  |      |       |      |      | --- |     |     |      | m__  |           | 7559  |      |

|      |      |       |     |              |      |     |  |  |  |  |     |       |   |    |     |  |  |   |  |  |  |      |
|------|------|-------|-----|--------------|------|-----|--|--|--|--|-----|-------|---|----|-----|--|--|---|--|--|--|------|
| VLO  | 0.43 | 326.0 | Pg  | 01:07:31.313 | 0.6  | --- |  |  |  |  |     |       |   |    |     |  |  | m |  |  |  | 7558 |
| VLO  | 0.43 | 326.0 | AMl | 01:07:43.948 |      | --- |  |  |  |  | 0.8 | 0.24  | a | Ml | 2.1 |  |  |   |  |  |  | 4347 |
| VLO  | 0.43 | 326.0 | AMd | 01:08:08.065 |      | --- |  |  |  |  | 0.0 | 36.75 | a | Md | 2.4 |  |  |   |  |  |  | 4344 |
| LSK  | 0.60 | 86.0  | Sg  | 01:07:43.962 | -0.1 | --- |  |  |  |  |     |       |   |    |     |  |  |   |  |  |  | 7561 |
| LSK  | 0.60 | 86.0  | Pg  | 01:07:34.565 | 0.0  | --- |  |  |  |  |     |       |   |    |     |  |  |   |  |  |  | 7560 |
| LSK  | 0.60 | 86.0  | AMl | 01:07:51.758 |      | --- |  |  |  |  | 0.3 | 0.70  | a | Ml | 1.8 |  |  |   |  |  |  | 4348 |
| LSK  | 0.60 | 86.0  | AMd | 01:08:18.633 |      | --- |  |  |  |  | 0.0 | 44.07 | a | Md | 2.6 |  |  |   |  |  |  | 4345 |
| IGT  | 0.71 | 145.0 | Sg  | 01:07:47.620 | -0.1 | --- |  |  |  |  |     |       |   |    |     |  |  |   |  |  |  | 7563 |
| IGT  | 0.71 | 145.0 | Pg  | 01:07:36.670 | 0.0  | --- |  |  |  |  |     |       |   |    |     |  |  |   |  |  |  | 7562 |
| IGT  | 0.71 | 145.0 | AMl | 01:07:50.238 |      | --- |  |  |  |  | 0.1 | 0.24  | a | Ml | 1.4 |  |  |   |  |  |  | 4349 |
| KBN  | 0.90 | 55.0  | P   | 01:07:39.069 | -0.8 | --- |  |  |  |  |     |       |   |    |     |  |  |   |  |  |  | 7564 |
| NEST | 0.99 | 72.0  | Sg  | 01:07:57.197 | -0.1 | --- |  |  |  |  |     |       |   |    |     |  |  |   |  |  |  | 7566 |
| NEST | 0.99 | 72.0  | Pg  | 01:07:41.979 | -0.1 | --- |  |  |  |  |     |       |   |    |     |  |  |   |  |  |  | 7565 |
| NEST | 0.99 | 72.0  | AMl | 01:07:59.978 |      | --- |  |  |  |  | 0.0 | 0.66  | a | Ml | 1.4 |  |  |   |  |  |  | 4350 |
| SCTE | 1.03 | 269.0 | S   | 01:07:57.692 | -1.0 | --- |  |  |  |  |     |       |   |    |     |  |  |   |  |  |  | 7568 |
| SCTE | 1.03 | 269.0 | P   | 01:07:42.824 | -0.1 | --- |  |  |  |  |     |       |   |    |     |  |  |   |  |  |  | 7567 |
| SCTE | 1.03 | 269.0 | AMl | 01:07:59.338 |      | --- |  |  |  |  | 0.3 | 0.32  | a | Ml | 2.3 |  |  |   |  |  |  | 4352 |
| SCTE | 1.03 | 269.0 | AMl | 01:08:00.258 |      | --- |  |  |  |  | 0.2 | 0.28  | a | Ml | 2.2 |  |  |   |  |  |  | 4351 |
| LKD2 | 1.48 | 153.0 | Sn  | 01:08:13.318 | 0.1  | --- |  |  |  |  |     |       |   |    |     |  |  |   |  |  |  | 7570 |
| LKD2 | 1.48 | 153.0 | Pn  | 01:07:51.239 | 0.0  | --- |  |  |  |  |     |       |   |    |     |  |  |   |  |  |  | 7569 |
| LKD2 | 1.48 | 153.0 | AMl | 01:08:15.628 |      | --- |  |  |  |  | 0.1 | 0.26  | a | Ml | 1.9 |  |  |   |  |  |  | 4353 |

DATA\_TYPE COMMENT GSE2.1  
Event 466

Official Magnitude:  
Ml 1.87

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 253  | 84  | 1.0300 |
| Intermediate: | 52   | 5   | 0.3900 |
| Min:          | 142  | 2   | 0.2900 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180011 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 467 1.2 km from Demaj, Lezhë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/06 | 05:46:52.59 |     | 0.16 | 41.8395  | 19.5887   |      |      |    | 22.3  | 1.5 | 19   | 31   | 140 | 0.28  | 1.85  | m    |        |
| 506        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.8 | 0.0  | 5      | 506    |

Md 2.4 0.0 3 506

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|
| ULC  | 0.28 | 297.0 | Pg    | 05:46:59.293 | 0.1  |      |       |      |      |     |     |     |       | mc_  |           | 7572  |
| PUK  | 0.30 | 48.0  | Sg    | 05:47:04.662 | 0.1  |      |       |      |      |     |     |     |       | m_   |           | 7574  |
| PUK  | 0.30 | 48.0  | Pg    | 05:46:59.488 | 0.1  |      |       |      |      |     |     |     |       | md_  |           | 7573  |
| PUK  | 0.30 | 48.0  | AMl   | 05:47:07.290 |      |      |       |      |      |     |     | 5.4 | 0.12  | a_   | Ml        | 2.8   |
| PUK  | 0.30 | 48.0  | AMd   | 05:47:35.213 |      |      |       |      |      |     |     | 0.0 | 35.73 | a_   | Md        | 2.4   |
| DRME | 0.46 | 320.0 | Pg    | 05:47:02.038 | -0.2 |      |       |      |      |     |     |     |       | md_  |           | 7575  |
| TIR  | 0.53 | 157.0 | Sg    | 05:47:11.865 | -0.0 |      |       |      |      |     |     |     |       | m_   |           | 7577  |
| TIR  | 0.53 | 157.0 | Pn    | 05:47:03.506 | -0.1 |      |       |      |      |     |     |     |       | mc_  |           | 7576  |
| TIR  | 0.53 | 157.0 | AMl   | 05:47:11.740 |      |      |       |      |      |     |     | 1.2 | 0.34  | a_   | Ml        | 2.4   |
| TIR  | 0.53 | 157.0 | AMd   | 05:47:40.057 |      |      |       |      |      |     |     | 0.0 | 36.55 | a_   | Md        | 2.4   |
| BCI  | 0.64 | 0.0   | Pg    | 05:47:04.903 | 0.0  |      |       |      |      |     |     |     |       | mc_  |           | 7592  |
| BCI  | 0.64 | 33.0  | Sg    | 05:47:14.740 | -0.1 |      |       |      |      |     |     |     |       | m_   |           | 7578  |
| BCI  | 0.64 | 33.0  | AMl   | 05:47:15.500 |      |      |       |      |      |     |     | 2.7 | 0.28  | a_   | Ml        | 2.9   |
| BCI  | 0.64 | 33.0  | AMl   | 05:47:16.490 |      |      |       |      |      |     |     | 2.2 | 0.42  | a_   | Ml        | 2.8   |
| PHP  | 0.66 | 103.0 | Sn    | 05:47:15.327 | 0.2  |      |       |      |      |     |     |     |       | m_   |           | 7580  |
| PHP  | 0.66 | 103.0 | Pg    | 05:47:05.208 | -0.3 |      |       |      |      |     |     |     |       | md_  |           | 7579  |
| PHP  | 0.66 | 103.0 | AMl   | 05:47:17.140 |      |      |       |      |      |     |     | 1.8 | 0.16  | a_   | Ml        | 2.8   |
| PHP  | 0.66 | 103.0 | AMd   | 05:47:53.974 |      |      |       |      |      |     |     | 0.0 | 48.77 | a_   | Md        | 2.7   |
| BUM  | 0.69 | 313.0 | Pg    | 05:47:06.614 | 0.2  |      |       |      |      |     |     |     |       | m_   |           | 7581  |
| PVY  | 0.81 | 20.0  | Pn    | 05:47:07.828 | -0.6 |      |       |      |      |     |     |     |       | md_  |           | 7582  |
| CEME | 0.86 | 326.0 | P     | 05:47:09.225 | -0.3 |      |       |      |      |     |     |     |       | m_   |           | 7583  |
| NKME | 1.04 | 334.0 | P     | 05:47:12.456 | -0.1 |      |       |      |      |     |     |     |       | m_   |           | 7584  |
| BEY  | 1.05 | 12.0  | Pg    | 05:47:12.809 | -0.1 |      |       |      |      |     |     |     |       | m_   |           | 7585  |
| BRY  | 1.31 | 325.0 | P     | 05:47:17.540 | 0.1  |      |       |      |      |     |     |     |       | m_   |           | 7586  |
| UPM  | 1.45 | 341.0 | Pn    | 05:47:20.200 | 0.3  |      |       |      |      |     |     |     |       | mc_  |           | 7587  |
| FNA  | 1.72 | 127.0 | Sn    | 05:47:48.083 | -0.1 |      |       |      |      |     |     |     |       | m_   |           | 7589  |
| FNA  | 1.72 | 127.0 | Pn    | 05:47:24.776 | 0.4  |      |       |      |      |     |     |     |       | m_   |           | 7588  |
| FNA  | 1.72 | 127.0 | AMl   | 05:47:51.300 |      |      |       |      |      |     |     | 0.5 | 0.42  | a_   | Ml        | 3.0   |
| NEST | 1.80 | 141.0 | Pn    | 05:47:25.936 | 0.2  |      |       |      |      |     |     |     |       | m_   |           | 7590  |
| LSK  | 1.85 | 155.0 | Pn    | 05:47:26.299 | -0.0 |      |       |      |      |     |     |     |       | m_   |           | 7591  |

DATA\_TYPE COMMENT GSE2.1  
Event 467

Official Magnitude:  
Ml 2.83

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 345  | 81  | 1.4700 |
| Intermediate: | 235  | 2   | 0.4600 |
| Min:          | 145  | 8   | 0.3100 |

BEGIN GSE2.1  
MSG\_TYPE DATA



MSG\_ID 1556180011 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 468 1.0 km from Tërshenë, Kukës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/07 | 15:08:10.02 |     | 0.07 | 41.9843  | 20.4672   |      |      |    | 1.2   | 1.4 | 10   | 17   | 174 | 0.30  | 1.38  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.9 | 0.0  | 3      | 507    |
| Md        | 2.5 | 0.0  | 3      | 507    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual   | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|--------|-----------|-------|
| PHP  | 0.30 | 184.0 | Sg    | 15:08:21.325 | 0.0  |      |       |      |      |     |     |     |       | m__    |           | 7594  |
| PHP  | 0.30 | 184.0 | Pg    | 15:08:16.238 | -0.2 |      |       |      |      |     |     |     |       | mci    |           | 7593  |
| PHP  | 0.30 | 184.0 | AMl   | 15:08:23.210 |      |      |       |      |      |     |     | 0.4 | 0.12  | a__ Ml | 1.6       | 4366  |
| PHP  | 0.30 | 184.0 | AMd   | 15:08:49.003 |      |      |       |      |      |     |     | 0.0 | 32.76 | a__ Md | 2.3       | 4363  |
| PUK  | 0.43 | 278.0 | Sg    | 15:08:26.157 | 0.0  |      |       |      |      |     |     |     |       | m__    |           | 7596  |
| PUK  | 0.43 | 278.0 | Pg    | 15:08:19.003 | -0.2 |      |       |      |      |     |     |     |       | mce    |           | 7595  |
| PUK  | 0.43 | 278.0 | AMl   | 15:08:30.060 |      |      |       |      |      |     |     | 0.5 | 0.22  | a__ Ml | 1.9       | 4367  |
| PUK  | 0.43 | 278.0 | AMd   | 15:09:04.420 |      |      |       |      |      |     |     | 0.0 | 45.42 | a__ Md | 2.6       | 4364  |
| BCI  | 0.48 | 323.0 | Sg    | 15:08:27.886 | -0.0 |      |       |      |      |     |     |     |       | m__    |           | 7598  |
| BCI  | 0.48 | 323.0 | Pg    | 15:08:20.183 | -0.1 |      |       |      |      |     |     |     |       | mdi    |           | 7597  |
| BCI  | 0.48 | 323.0 | AMl   | 15:08:30.750 |      |      |       |      |      |     |     | 0.5 | 0.14  | a__ Ml | 1.9       | 4368  |
| BCI  | 0.48 | 323.0 | AMd   | 15:09:00.227 |      |      |       |      |      |     |     | 0.0 | 40.04 | a__ Md | 2.5       | 4365  |
| DRME | 0.98 | 0.0   | Pn    | 15:08:29.578 | 0.0  |      |       |      |      |     |     |     |       | mci    |           | 7604  |
| BEY  | 0.98 | 335.0 | Pn    | 15:08:29.872 | 0.1  |      |       |      |      |     |     |     |       | mci    |           | 7599  |
| BUM  | 1.21 | 286.0 | Pn    | 15:08:34.225 | 0.1  |      |       |      |      |     |     |     |       | mde    |           | 7600  |
| CEME | 1.28 | 297.0 | Pn    | 15:08:35.637 | 0.1  |      |       |      |      |     |     |     |       | mci    |           | 7601  |
| FNA  | 1.38 | 149.0 | Sn    | 15:08:55.999 | -2.2 |      |       |      |      |     |     |     |       | m__    |           | 7603  |
| FNA  | 1.38 | 149.0 | Pn    | 15:08:37.572 | 0.0  |      |       |      |      |     |     |     |       | mci    |           | 7602  |

DATA\_TYPE COMMENT GSE2.1  
 Event 468

Official Magnitude:  
 Ml 1.87

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 76   | 71  | 1.4600 |
| Intermediate: | 245  | 17  | 0.5900 |
| Min:          | 336  | 3   | 0.2700 |

BEGIN GSE2.1  
 MSG\_TYPE DATA

MSG\_ID 1556180011 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 470 1.0 km from Shtrungaj, Lezhë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/07 | 16:23:15.39 |     | 0.18 | 41.8952  | 20.1058   |      |      |    | 25.0  | 0.8 | 15   | 31   | 132 | 0.22  | 1.64  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.6 | 0.0  | 4      | 509    |
| Md        | 2.4 | 0.0  | 2      | 509    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|
| PUK  | 0.22 | 313.0 | Sg    | 16:23:25.560 | -0.2 |      |       |      |      |     |     |     |       | m__  |           | 7625  |
| PUK  | 0.22 | 313.0 | Pg    | 16:23:21.161 | -0.2 |      |       |      |      |     |     |     |       | mc__ |           | 7624  |
| PUK  | 0.22 | 313.0 | AMl   | 16:23:26.690 |      |      |       |      |      |     |     | 3.6 | 0.24  | a__  | Ml        | 2.6   |
| PUK  | 0.22 | 313.0 | AMd   | 16:23:55.713 |      |      |       |      |      |     |     | 0.0 | 34.55 | a__  | Md        | 2.4   |
| PHP  | 0.33 | 129.0 | Sg    | 16:23:28.234 | -0.1 |      |       |      |      |     |     |     |       | m__  |           | 7627  |
| PHP  | 0.33 | 129.0 | Pg    | 16:23:22.514 | -0.3 |      |       |      |      |     |     |     |       | mc__ |           | 7626  |
| PHP  | 0.33 | 129.0 | AMl   | 16:23:28.940 |      |      |       |      |      |     |     | 3.0 | 0.22  | a__  | Ml        | 2.6   |
| PHP  | 0.33 | 129.0 | AMd   | 16:23:58.840 |      |      |       |      |      |     |     | 0.0 | 36.33 | a__  | Md        | 2.4   |
| BCI  | 0.47 | 0.0   | Pg    | 16:23:24.071 | 0.0  |      |       |      |      |     |     |     |       | m__  |           | 7640  |
| BCI  | 0.47 | 357.0 | Sg    | 16:23:32.752 | -0.1 |      |       |      |      |     |     |     |       | m__  |           | 7628  |
| BCI  | 0.47 | 357.0 | AMl   | 16:23:34.250 |      |      |       |      |      |     |     | 0.8 | 0.32  | a__  | Ml        | 2.1   |
| BCI  | 0.47 | 357.0 | AMl   | 16:23:34.300 |      |      |       |      |      |     |     | 0.8 | 0.50  | a__  | Ml        | 2.2   |
| TIR  | 0.58 | 199.0 | Sg    | 16:23:35.995 | -0.2 |      |       |      |      |     |     |     |       | m__  |           | 7629  |
| ULC  | 0.64 | 277.0 | P     | 16:23:28.581 | 0.2  |      |       |      |      |     |     |     |       | m__  |           | 7630  |
| DRME | 0.74 | 294.0 | Pg    | 16:23:29.985 | -0.2 |      |       |      |      |     |     |     |       | md__ |           | 7631  |
| BUM  | 0.98 | 295.0 | Pg    | 16:23:34.901 | 0.5  |      |       |      |      |     |     |     |       | md__ |           | 7632  |
| KOME | 1.05 | 336.0 | P     | 16:23:34.998 | -0.6 |      |       |      |      |     |     |     |       | m__  |           | 7633  |
| CEME | 1.10 | 307.0 | P     | 16:23:36.183 | -0.2 |      |       |      |      |     |     |     |       | m__  |           | 7634  |
| NKME | 1.22 | 317.0 | Pn    | 16:23:38.584 | 0.0  |      |       |      |      |     |     |     |       | m__  |           | 7635  |
| FNA  | 1.47 | 138.0 | Sn    | 16:24:03.676 | -0.1 |      |       |      |      |     |     |     |       | m__  |           | 7637  |
| FNA  | 1.47 | 138.0 | Pn    | 16:23:43.934 | 0.9  |      |       |      |      |     |     |     |       | m__  |           | 7636  |
| FNA  | 1.47 | 138.0 | AMl   | 16:24:09.300 |      |      |       |      |      |     |     | 0.3 | 0.32  | a__  | Ml        | 2.6   |
| NEST | 1.64 | 153.0 | Sn    | 16:24:08.325 | -0.3 |      |       |      |      |     |     |     |       | m__  |           | 7639  |
| NEST | 1.64 | 153.0 | Pn    | 16:23:45.887 | 0.1  |      |       |      |      |     |     |     |       | m__  |           | 7638  |

DATA\_TYPE COMMENT GSE2.1  
 Event 470

Official Magnitude:  
 Ml 2.60

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 32   | 65  | 0.8400 |
| Intermediate: | 240  | 22  | 0.6700 |

Min: 146 11 0.3200

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180010 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 471 0.9 km from Gorskova e Poshtme, Korçë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/08 | 10:25:26.94 |     | 0.05 | 40.6330  | 20.7072   |      |      |    | 17.1  | 0.6 | 10   | 32   | 217 | 0.06  | 1.14  | m    | 511    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| M1        | 2.0 | 0.0  | 5      | 511    |
| Md        | 2.2 | 0.0  | 2      | 511    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp  | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|------|-------|------|-----------|-------|
| KBN  | 0.06 | 0.0   | Pg    | 10:25:30.014 | 0.0  |      |       |      |      | --- |     |      |       | mc_  |           | 7666  |
| KBN  | 0.06 | 98.0  | Sg    | 10:25:32.007 | 0.0  |      |       |      |      | --- |     |      |       | m_   |           | 7654  |
| KBN  | 0.06 | 98.0  | AM1   | 10:25:32.680 |      |      |       |      |      | --- |     | 15.7 | 0.34  | a_   | M1        | 3.1   |
| KBN  | 0.06 | 98.0  | AM1   | 10:25:32.780 |      |      |       |      |      | --- |     | 12.3 | 0.30  | a_   | M1        | 2.9   |
| NEST | 0.34 | 129.0 | Sg    | 10:25:39.965 | 0.0  |      |       |      |      | --- |     |      |       | m_   |           | 7656  |
| NEST | 0.34 | 129.0 | Pg    | 10:25:34.338 | -0.0 |      |       |      |      | --- |     |      |       | mc_  |           | 7655  |
| NEST | 0.34 | 129.0 | AM1   | 10:25:43.430 |      |      |       |      |      | --- |     | 0.5  | 0.20  | a_   | M1        | 1.8   |
| NEST | 0.34 | 129.0 | AM1   | 10:25:41.110 |      |      |       |      |      | --- |     | 0.5  | 0.32  | a_   | M1        | 1.8   |
| NEST | 0.34 | 129.0 | AMd   | 10:26:00.261 |      |      |       |      |      | --- |     | 0.0  | 25.92 | a_   | Md        | 2.1   |
| LSK  | 0.49 | 190.0 | Sg    | 10:25:44.493 | 0.0  |      |       |      |      | --- |     |      |       | m_   |           | 7658  |
| LSK  | 0.49 | 190.0 | Pg    | 10:25:36.916 | -0.1 |      |       |      |      | --- |     |      |       | mc_  |           | 7657  |
| LSK  | 0.49 | 190.0 | AM1   | 10:25:46.180 |      |      |       |      |      | --- |     | 0.6  | 0.20  | a_   | M1        | 2.0   |
| LSK  | 0.49 | 190.0 | AM1   | 10:25:46.570 |      |      |       |      |      | --- |     | 0.9  | 0.42  | a_   | M1        | 2.2   |
| LSK  | 0.49 | 190.0 | AMd   | 10:26:11.288 |      |      |       |      |      | --- |     | 0.0  | 34.37 | a_   | Md        | 2.4   |
| FNA  | 0.54 | 73.0  | Sg    | 10:25:46.271 | 0.1  |      |       |      |      | --- |     |      |       | m_   |           | 7660  |
| FNA  | 0.54 | 73.0  | Pg    | 10:25:37.865 | -0.1 |      |       |      |      | --- |     |      |       | m_   |           | 7659  |
| FNA  | 0.54 | 73.0  | AM1   | 10:25:48.880 |      |      |       |      |      | --- |     | 0.9  | 0.20  | a_   | M1        | 2.3   |
| FNA  | 0.54 | 73.0  | AM1   | 10:25:50.960 |      |      |       |      |      | --- |     | 0.3  | 0.32  | a_   | M1        | 1.9   |
| SRN  | 0.93 | 216.0 | S     | 10:25:59.507 | 0.2  |      |       |      |      | --- |     |      |       | m_   |           | 7662  |
| SRN  | 0.93 | 216.0 | P     | 10:25:45.471 | 0.0  |      |       |      |      | --- |     |      |       | m_   |           | 7661  |
| SRN  | 0.93 | 216.0 | AM1   | 10:26:01.530 |      |      |       |      |      | --- |     | 0.1  | 0.40  | a_   | M1        | 1.6   |
| PHP  | 1.07 | 350.0 | P     | 10:25:47.925 | 0.6  |      |       |      |      | --- |     |      |       | m_   |           | 7663  |
| IGT  | 1.14 | 195.0 | Sn    | 10:26:05.262 | 0.0  |      |       |      |      | --- |     |      |       | m_   |           | 7665  |
| IGT  | 1.14 | 195.0 | Pn    | 10:25:49.651 | 0.8  |      |       |      |      | --- |     |      |       | m_   |           | 7664  |

DATA\_TYPE COMMENT GSE2.1  
Event 471

Official Magnitude:

M1 2.02

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 133  | 9   | 0.7900 |
| Intermediate: | 18   | 69  | 0.5900 |
| Min:          | 226  | 19  | 0.2800 |

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556180010 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 472 0.9 km from Plovisht-Bos, Korçë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/08 | 10:31:22.26 |     | 0.28 | 40.7085  | 20.6388   |      |      |    | 11.9  | 1.8 | 11   | 32   | 141 | 0.14  | 1.20  | m    |        |
| OrigID 512 |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| M1        | 2.4 | 0.0  | 4      | 512    |
| Md        | 2.6 | 0.0  | 2      | 512    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp  | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|------|-------|------|-----------|-------|------|
| KBN  | 0.13 | 0.0   | Pg    | 10:31:26.434 | 0.0  |      |       |      |      | ___ |     |      |       | mc_  |           | 7680  |      |
| KBN  | 0.14 | 126.0 | Sg    | 10:31:28.191 | 0.4  |      |       |      |      | ___ |     |      |       | m_   |           | 7667  |      |
| KBN  | 0.14 | 126.0 | AMl   | 10:31:29.128 |      |      |       |      |      | ___ |     | 9.7  | 0.36  | a_   | Ml        | 2.8   | 4412 |
| KBN  | 0.14 | 126.0 | AMl   | 10:31:29.238 |      |      |       |      |      | ___ |     | 11.5 | 0.34  | a_   | Ml        | 2.9   | 4411 |
| NEST | 0.43 | 133.0 | Sg    | 10:31:36.305 | -1.5 |      |       |      |      | ___ |     |      |       | m_   |           | 7669  |      |
| NEST | 0.43 | 133.0 | Pg    | 10:31:30.834 | -0.3 |      |       |      |      | ___ |     |      |       | mc_  |           | 7668  |      |
| NEST | 0.43 | 133.0 | AMl   | 10:31:37.468 |      |      |       |      |      | ___ |     | 0.5  | 0.16  | a_   | Ml        | 1.8   | 4413 |
| NEST | 0.43 | 133.0 | AMd   | 10:32:12.311 |      |      |       |      |      | ___ |     | 0.0  | 41.48 | a_   | Md        | 2.5   | 4409 |
| LSK  | 0.56 | 184.0 | Sg    | 10:31:41.824 | -0.1 |      |       |      |      | ___ |     |      |       | m_   |           | 7671  |      |
| LSK  | 0.56 | 184.0 | Pg    | 10:31:33.192 | -0.3 |      |       |      |      | ___ |     |      |       | m_   |           | 7670  |      |
| LSK  | 0.56 | 184.0 | AMl   | 10:31:43.078 |      |      |       |      |      | ___ |     | 1.6  | 0.56  | a_   | Ml        | 2.6   | 4415 |
| LSK  | 0.56 | 184.0 | AMl   | 10:31:43.598 |      |      |       |      |      | ___ |     | 0.8  | 0.30  | a_   | Ml        | 2.3   | 4414 |
| LSK  | 0.56 | 184.0 | AMd   | 10:32:19.559 |      |      |       |      |      | ___ |     | 0.0  | 46.37 | a_   | Md        | 2.7   | 4410 |
| FNA  | 0.57 | 82.0  | Sg    | 10:31:42.370 | -0.2 |      |       |      |      | ___ |     |      |       | m_   |           | 7673  |      |
| FNA  | 0.57 | 82.0  | Pg    | 10:31:33.909 | 0.1  |      |       |      |      | ___ |     |      |       | mc_  |           | 7672  |      |
| FNA  | 0.57 | 82.0  | AMl   | 10:31:44.858 |      |      |       |      |      | ___ |     | 0.4  | 0.44  | a_   | Ml        | 2.0   | 4416 |
| SRN  | 0.96 | 211.0 | Sg    | 10:31:55.716 | -0.4 |      |       |      |      | ___ |     |      |       | m_   |           | 7675  |      |
| SRN  | 0.96 | 211.0 | Pg    | 10:31:42.234 | 0.6  |      |       |      |      | ___ |     |      |       | m_   |           | 7674  |      |
| PHP  | 0.99 | 352.0 | Sg    | 10:31:55.863 | 0.1  |      |       |      |      | ___ |     |      |       | m_   |           | 7677  |      |
| PHP  | 0.99 | 352.0 | Pg    | 10:31:42.227 | 0.8  |      |       |      |      | ___ |     |      |       | m_   |           | 7676  |      |
| IGT  | 1.20 | 192.0 | Sn    | 10:32:03.352 | 0.4  |      |       |      |      | ___ |     |      |       | m_   |           | 7679  |      |
| IGT  | 1.20 | 192.0 | Pn    | 10:31:46.627 | 1.1  |      |       |      |      | ___ |     |      |       | m_   |           | 7678  |      |

DATA\_TYPE COMMENT GSE2.1  
Event 472

Official Magnitude:  
Ml 2.41

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 106  | 63  | 1.9800 |
| Intermediate: | 296  | 26  | 0.6600 |
| Min:          | 204  | 4   | 0.4900 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180010 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 473 1.4 km from Zagradishtë, Korçë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/08 | 11:18:01.34 |     | 0.25 | 40.6147  | 20.7068   |      |      |    | 14.9  | 1.0 | 10   | 32   | 142 | 0.06  | 1.55  | m    |        |
| 513        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.9 | 0.0  | 4      | 513    |
| Md        | 2.4 | 0.0  | 1      | 513    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| KBN  | 0.05 | 0.0   | Pg    | 11:18:03.728 | 0.0  |      |       |      |      | ___ |     |     |       | mc_  |           | 7692  |      |
| KBN  | 0.06 | 81.0  | Sg    | 11:18:05.961 | 0.2  |      |       |      |      | ___ |     |     |       | m_   |           | 7681  |      |
| KBN  | 0.06 | 81.0  | AMl   | 11:18:06.418 |      |      |       |      |      | ___ |     | 9.4 | 0.30  | a_   | Ml        | 2.8   | 4418 |
| NEST | 0.33 | 127.0 | Sg    | 11:18:13.806 | -0.0 |      |       |      |      | ___ |     |     |       | m_   |           | 7683  |      |
| NEST | 0.33 | 127.0 | Pg    | 11:18:08.066 | -0.4 |      |       |      |      | ___ |     |     |       | mc_  |           | 7682  |      |
| NEST | 0.33 | 127.0 | AMl   | 11:18:16.028 |      |      |       |      |      | ___ |     | 0.3 | 0.16  | a_   | Ml        | 1.6   | 4419 |
| LSK  | 0.47 | 191.0 | Sg    | 11:18:18.257 | 0.1  |      |       |      |      | ___ |     |     |       | m_   |           | 7685  |      |
| LSK  | 0.47 | 191.0 | Pg    | 11:18:10.533 | -0.5 |      |       |      |      | ___ |     |     |       | m_   |           | 7684  |      |
| LSK  | 0.47 | 191.0 | AMl   | 11:18:20.888 |      |      |       |      |      | ___ |     | 0.6 | 0.26  | a_   | Ml        | 2.0   | 4420 |
| LSK  | 0.47 | 191.0 | AMd   | 11:18:44.220 |      |      |       |      |      | ___ |     | 0.0 | 33.69 | a_   | Md        | 2.4   | 4417 |
| FNA  | 0.54 | 71.0  | Sg    | 11:18:20.839 | 0.2  |      |       |      |      | ___ |     |     |       | m_   |           | 7687  |      |
| FNA  | 0.54 | 71.0  | Pg    | 11:18:12.475 | 0.1  |      |       |      |      | ___ |     |     |       | m_   |           | 7686  |      |
| FNA  | 0.54 | 71.0  | AMl   | 11:18:23.138 |      |      |       |      |      | ___ |     | 0.2 | 0.26  | a_   | Ml        | 1.7   | 4421 |
| PHP  | 1.09 | 350.0 | P     | 11:18:21.548 | -0.6 |      |       |      |      | ___ |     |     |       | m_   |           | 7688  |      |
| IGT  | 1.12 | 196.0 | Sn    | 11:18:39.631 | 0.3  |      |       |      |      | ___ |     |     |       | m_   |           | 7690  |      |
| IGT  | 1.12 | 196.0 | Pn    | 11:18:25.700 | 2.7  |      |       |      |      | ___ |     |     |       | m_   |           | 7689  |      |
| PUK  | 1.55 | 338.0 | P     | 11:18:30.700 | 0.1  |      |       |      |      | ___ |     |     |       | m_   |           | 7691  |      |

DATA\_TYPE COMMENT GSE2.1

Event 473

Official Magnitude:

Ml 1.86

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 103  | 57  | 1.2000 |
| Intermediate: | 310  | 29  | 0.7600 |
| Min:          | 213  | 12  | 0.5400 |

BEGIN GSE2.1

MSG\_TYPE DATA

MSG\_ID 1556180010 athena

DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 474 0.9 km from Damjanec, Korçë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/08 | 11:42:03.81 |     | 0.07 | 40.6555  | 20.6738   |      |      |    | 16.5  | 0.8 | 6    | 32   | 249 | 0.09  | 0.55  | m    | 514    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.6 | 0.0  | 4      | 514    |
| Md        | 2.5 | 0.0  | 1      | 514    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|
| KBN  | 0.10 | 0.0   | Pg    | 11:42:07.094 | 0.0  |      |       |      |      |     |     |     |       |      |           | 7700  |
| KBN  | 0.09 | 110.0 | Sg    | 11:42:09.166 | -0.0 |      |       |      |      |     |     |     |       |      |           | 7693  |
| KBN  | 0.09 | 110.0 | AMl   | 11:42:09.800 |      |      |       |      |      |     |     | 4.9 | 0.42  | a__  | Ml        | 2.6   |
| NEST | 0.37 | 129.0 | Sg    | 11:42:17.907 | 0.1  |      |       |      |      |     |     |     |       |      |           | 7695  |
| NEST | 0.37 | 129.0 | Pg    | 11:42:11.539 | -0.3 |      |       |      |      |     |     |     |       |      |           | 7694  |
| NEST | 0.37 | 129.0 | AMl   | 11:42:20.630 |      |      |       |      |      |     |     | 0.2 | 0.32  | a__  | Ml        | 1.4   |
| LSK  | 0.51 | 187.0 | Sg    | 11:42:21.872 | -0.1 |      |       |      |      |     |     |     |       |      |           | 7697  |
| LSK  | 0.51 | 187.0 | Pg    | 11:42:14.176 | 0.0  |      |       |      |      |     |     |     |       |      |           | 7696  |
| LSK  | 0.51 | 187.0 | AMl   | 11:42:25.500 |      |      |       |      |      |     |     | 0.2 | 0.20  | a__  | Ml        | 1.5   |
| LSK  | 0.51 | 187.0 | AMd   | 11:42:52.137 |      |      |       |      |      |     |     | 0.0 | 37.96 | a__  | Md        | 2.5   |
| FNA  | 0.55 | 76.0  | Sg    | 11:42:23.527 | -0.1 |      |       |      |      |     |     |     |       |      |           | 7699  |
| FNA  | 0.55 | 76.0  | Pg    | 11:42:15.242 | 0.1  |      |       |      |      |     |     |     |       |      |           | 7698  |
| FNA  | 0.55 | 76.0  | AMl   | 11:42:26.720 |      |      |       |      |      |     |     | 0.2 | 0.20  | a__  | Ml        | 1.7   |

DATA\_TYPE COMMENT GSE2.1

Event 474

Official Magnitude:

Ml 1.61

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 130  | 21  | 1.1100 |
| Intermediate: | 323  | 68  | 0.8500 |
| Min:          | 222  | 5   | 0.4200 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180010 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 475 0.6 km from Vinçan, Korçë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/08 | 11:48:06.26 |     | 0.14 | 40.6412  | 20.6945   |      |      |    | 18.5  | 0.9 | 7    | 6    | 245 | 0.07  | 0.54  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.6 | 0.0  | 4      | 515    |
| Md        | 2.2 | 0.0  | 3      | 515    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| KBN  | 0.07 | 103.0 | Sg    | 11:48:11.731 | -0.1 |      |       |      |      | --- |     |     |       | m_   |           | 7702  |      |
| KBN  | 0.07 | 103.0 | Pg    | 11:48:09.592 | 0.2  |      |       |      |      | --- |     |     |       | m_   |           | 7701  |      |
| KBN  | 0.07 | 103.0 | AMl   | 11:48:12.280 |      |      |       |      |      | --- |     | 4.9 | 0.32  | a_   | Ml        | 2.6   | 4431 |
| KBN  | 0.07 | 103.0 | AMl   | 11:48:12.390 |      |      |       |      |      | --- |     | 2.4 | 0.30  | a_   | Ml        | 2.3   | 4430 |
| KBN  | 0.07 | 103.0 | AMd   | 11:48:23.198 |      |      |       |      |      | --- |     | 0.0 | 13.61 | a_   | Md        | 1.4   | 4427 |
| NEST | 0.35 | 0.0   | Pg    | 11:48:13.990 | 0.0  |      |       |      |      | --- |     |     |       | m_   |           | 7708  |      |
| NEST | 0.35 | 129.0 | Sg    | 11:48:19.725 | -0.1 |      |       |      |      | --- |     |     |       | m_   |           | 7703  |      |
| NEST | 0.35 | 129.0 | AMl   | 11:48:23.010 |      |      |       |      |      | --- |     | 0.2 | 0.26  | a_   | Ml        | 1.3   | 4433 |
| NEST | 0.35 | 129.0 | AMl   | 11:48:20.710 |      |      |       |      |      | --- |     | 0.2 | 0.36  | a_   | Ml        | 1.4   | 4432 |
| LSK  | 0.50 | 189.0 | Sg    | 11:48:24.277 | 0.2  |      |       |      |      | --- |     |     |       | m_   |           | 7705  |      |
| LSK  | 0.50 | 189.0 | Pg    | 11:48:16.239 | -0.2 |      |       |      |      | --- |     |     |       | m_   |           | 7704  |      |
| LSK  | 0.50 | 189.0 | AMl   | 11:48:25.630 |      |      |       |      |      | --- |     | 0.2 | 0.28  | a_   | Ml        | 1.6   | 4434 |
| LSK  | 0.50 | 189.0 | AMd   | 11:48:47.454 |      |      |       |      |      | --- |     | 0.0 | 31.21 | a_   | Md        | 2.3   | 4428 |
| FNA  | 0.54 | 74.0  | Sg    | 11:48:25.946 | 0.1  |      |       |      |      | --- |     |     |       | m_   |           | 7707  |      |
| FNA  | 0.54 | 74.0  | Pg    | 11:48:17.308 | -0.1 |      |       |      |      | --- |     |     |       | m_   |           | 7706  |      |
| FNA  | 0.54 | 74.0  | AMl   | 11:48:28.520 |      |      |       |      |      | --- |     | 0.2 | 0.22  | a_   | Ml        | 1.7   | 4435 |
| FNA  | 0.54 | 74.0  | AMd   | 11:48:46.944 |      |      |       |      |      | --- |     | 0.0 | 29.64 | a_   | Md        | 2.2   | 4429 |

DATA\_TYPE COMMENT GSE2.1  
Event 475

Official Magnitude:  
Ml 1.62

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 309  | 20  | 1.1600 |
| Intermediate: | 124  | 69  | 0.9600 |
| Min:          | 218  | 2   | 0.5300 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180010 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 476 1.3 km from Radanj, Korçë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/08 | 19:46:43.27 |     | 0.06 | 40.2073  | 20.6322   |      |      |    | 4.2   | 0.5 | 7    | 7    | 167 | 0.06  | 0.81  | m    |        |
| OrigID 516 |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Md        | 2.3 | 0.0  | 1      | 516    |
| Ml        | 1.6 | 0.0  | 3      | 516    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| LSK  | 0.06 | 205.0 | Sg    | 19:46:46.063 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 7710  |      |
| LSK  | 0.06 | 205.0 | Pg    | 19:46:44.702 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 7709  |      |
| LSK  | 0.06 | 205.0 | AMd   | 19:47:16.569 |      |      |       |      |      |     |     | 0.0 | 31.87 | a    | Md        | 2.3   | 4436 |
| LSK  | 0.06 | 205.0 | AMl   | 19:46:46.610 |      |      |       |      |      |     |     | 4.6 | 0.20  | a    | Ml        | 2.2   | 4438 |
| LSK  | 0.06 | 205.0 | AMl   | 19:46:46.360 |      |      |       |      |      |     |     | 2.6 | 0.18  | a    | Ml        | 1.9   | 4437 |
| NEST | 0.36 | 0.0   | Pg    | 19:46:51.150 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 7717  |      |
| NEST | 0.38 | 56.0  | Sg    | 19:46:56.954 | -0.4 |      |       |      |      |     |     |     |       | m    |           | 7711  |      |
| NEST | 0.38 | 56.0  | AMl   | 19:46:59.660 |      |      |       |      |      |     |     | 0.1 | 0.20  | a    | Ml        | 0.8   | 4439 |
| SRN  | 0.58 | 237.0 | Sg    | 19:47:04.852 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 7712  |      |
| IGT  | 0.71 | 200.0 | Sg    | 19:47:08.512 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 7714  |      |
| IGT  | 0.71 | 200.0 | Pg    | 19:46:57.681 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 7713  |      |
| FNA  | 0.81 | 44.0  | Sg    | 19:47:11.782 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 7716  |      |
| FNA  | 0.81 | 44.0  | Pg    | 19:46:59.525 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 7715  |      |
| FNA  | 0.81 | 44.0  | AMl   | 19:47:14.810 |      |      |       |      |      |     |     | 0.0 | 0.34  | a    | Ml        | 1.2   | 4440 |

DATA\_TYPE COMMENT GSE2.1  
Event 476

Official Magnitude:  
Ml 1.59

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 130  | 12  | 1.1500 |
| Intermediate: | 264  | 71  | 0.5400 |
| Min:          | 37   | 13  | 0.2600 |



BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556180010 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 477 1.5 km from Letovisht, Gjirokastër, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/09 | 02:19:56.44 |     | 0.14 | 40.0600  | 20.2152   |      |      |    | 7.8   | 1.6 | 10   | 31   | 187 | 0.24  | 2.00  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.5 | 0.0  | 3      | 517    |
| Md        | 2.2 | 0.0  | 2      | 517    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|
| SRN  | 0.24 | 223.0 | Sg    | 02:20:06.391 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 7719  |
| SRN  | 0.24 | 223.0 | Pg    | 02:20:02.022 | -0.1 |      |       |      |      |     |     |     |       | mc   |           | 7718  |
| SRN  | 0.24 | 223.0 | AMl   | 02:20:07.590 |      |      |       |      |      |     |     | 0.3 | 0.36  | a    | Ml        | 1.5   |
| SRN  | 0.24 | 223.0 | AMl   | 02:20:09.180 |      |      |       |      |      |     |     | 0.2 | 0.46  | a    | Ml        | 1.3   |
| SRN  | 0.24 | 223.0 | AMd   | 02:20:24.982 |      |      |       |      |      |     |     | 0.0 | 22.96 | a    | Md        | 1.9   |
| LSK  | 0.31 | 72.0  | Sg    | 02:20:07.543 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 7721  |
| LSK  | 0.31 | 72.0  | Pg    | 02:20:02.618 | -0.2 |      |       |      |      |     |     |     |       | md   |           | 7720  |
| LSK  | 0.31 | 72.0  | AMl   | 02:20:10.760 |      |      |       |      |      |     |     | 0.4 | 0.46  | a    | Ml        | 1.6   |
| LSK  | 0.31 | 72.0  | AMd   | 02:20:42.492 |      |      |       |      |      |     |     | 0.0 | 39.87 | a    | Md        | 2.5   |
| IGT  | 0.54 | 170.0 | Sg    | 02:20:15.404 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 7723  |
| IGT  | 0.54 | 170.0 | Pg    | 02:20:07.596 | 0.3  |      |       |      |      |     |     |     |       | mc   |           | 7722  |
| NEST | 0.73 | 60.0  | Sg    | 02:20:22.050 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 7725  |
| NEST | 0.73 | 60.0  | Pg    | 02:20:11.377 | 0.4  |      |       |      |      |     |     |     |       | m    |           | 7724  |
| FNA  | 1.15 | 50.0  | Sg    | 02:20:36.513 | 0.6  |      |       |      |      |     |     |     |       | m    |           | 7727  |
| FNA  | 1.15 | 50.0  | Pg    | 02:20:18.995 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 7726  |
| LKD2 | 1.31 | 164.0 | Sn    | 02:20:41.200 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 7729  |
| LKD2 | 1.31 | 164.0 | Pn    | 02:20:22.564 | 0.5  |      |       |      |      |     |     |     |       | m    |           | 7728  |
| LKD2 | 1.31 | 164.0 | AMl   | 02:20:44.090 |      |      |       |      |      |     |     | 0.1 | 0.68  | a    | Ml        | 2.0   |
| PUK  | 2.00 | 0.0   | Pn    | 02:20:37.644 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 7730  |

DATA\_TYPE COMMENT GSE2.1  
 Event 477

Official Magnitude:  
 Ml 1.54

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 317  | 73  | 1.7100 |
| Intermediate: | 130  | 16  | 0.6000 |

Min: 221 2 0.2600

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180009 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 478 1.4 km from Plan, Lezhë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/09 | 05:48:23.38 |     | 0.21 | 41.9802  | 20.1450   |      |      |    | 18.1  | 0.9 | 16   | 31   | 149 | 0.20  | 1.71  | m    |        |
| OrigID 518 |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Md        | 2.4 | 0.0  | 3      | 518    |
| Ml        | 2.3 | 0.0  | 4      | 518    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|
| PUK  | 0.20 | 289.0 | Sg    | 05:48:32.026 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 7732  |
| PUK  | 0.20 | 289.0 | Pg    | 05:48:28.508 | 0.1  |      |       |      |      |     |     |     |       | mc   |           | 7731  |
| PUK  | 0.20 | 289.0 | AMd   | 05:49:03.669 |      |      |       |      |      |     |     | 0.0 | 35.16 | a    | Md        | 2.4   |
| PUK  | 0.20 | 289.0 | AMl   | 05:48:33.440 |      |      |       |      |      |     |     | 2.1 | 0.28  | a    | Ml        | 2.3   |
| PHP  | 0.37 | 143.0 | Sg    | 05:48:36.830 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 7734  |
| PHP  | 0.37 | 143.0 | Pg    | 05:48:30.628 | -0.5 |      |       |      |      |     |     |     |       | md   |           | 7733  |
| PHP  | 0.37 | 143.0 | AMd   | 05:48:57.805 |      |      |       |      |      |     |     | 0.0 | 27.18 | a    | Md        | 2.1   |
| PHP  | 0.37 | 143.0 | AMl   | 05:48:38.000 |      |      |       |      |      |     |     | 0.6 | 0.18  | a    | Ml        | 1.9   |
| BCI  | 0.39 | 352.0 | Sg    | 05:48:37.887 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 7736  |
| BCI  | 0.39 | 352.0 | Pg    | 05:48:31.771 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 7735  |
| BCI  | 0.39 | 352.0 | AMd   | 05:49:09.436 |      |      |       |      |      |     |     | 0.0 | 37.67 | a    | Md        | 2.5   |
| BCI  | 0.39 | 352.0 | AMl   | 05:48:40.600 |      |      |       |      |      |     |     | 1.5 | 0.24  | a    | Ml        | 2.3   |
| PVY  | 0.63 | 349.0 | Pg    | 05:48:36.318 | 0.2  |      |       |      |      |     |     |     |       | md   |           | 7737  |
| TIR  | 0.67 | 199.0 | Sg    | 05:48:47.090 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 7739  |
| TIR  | 0.67 | 199.0 | Pg    | 05:48:35.804 | -1.0 |      |       |      |      |     |     |     |       | m    |           | 7738  |
| ULC  | 0.67 | 0.0   | Pg    | 05:48:36.965 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 7750  |
| DRME | 0.74 | 287.0 | Pg    | 05:48:37.971 | -0.2 |      |       |      |      |     |     |     |       | mc   |           | 7740  |
| BEY  | 0.91 | 349.0 | Pg    | 05:48:41.396 | 0.3  |      |       |      |      |     |     |     |       | m    |           | 7741  |
| BUM  | 0.98 | 290.0 | Pg    | 05:48:42.749 | 0.3  |      |       |      |      |     |     |     |       | mc   |           | 7742  |
| KOME | 0.99 | 333.0 | P     | 05:48:42.245 | -0.3 |      |       |      |      |     |     |     |       | m    |           | 7743  |
| CEME | 1.07 | 303.0 | Pg    | 05:48:43.757 | -0.3 |      |       |      |      |     |     |     |       | mc   |           | 7744  |
| HCY  | 1.32 | 292.0 | P     | 05:48:48.267 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 7745  |
| FNA  | 1.52 | 141.0 | Sg    | 05:49:11.808 | -1.6 |      |       |      |      |     |     |     |       | m    |           | 7747  |
| FNA  | 1.52 | 141.0 | Pg    | 05:48:51.930 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 7746  |
| FNA  | 1.52 | 141.0 | AMl   | 05:49:16.480 |      |      |       |      |      |     |     | 0.1 | 0.42  | a    | Ml        | 2.3   |
| NEST | 1.71 | 156.0 | Sn    | 05:49:19.376 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 7749  |
| NEST | 1.71 | 156.0 | Pn    | 05:48:56.237 | 0.9  |      |       |      |      |     |     |     |       | m    |           | 7748  |

DATA\_TYPE COMMENT GSE2.1

Event 478

Official Magnitude:

Ml 2.30

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 264  | 80  | 0.8800 |
| Intermediate: | 63   | 9   | 0.7300 |
| Min:          | 154  | 4   | 0.3700 |

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556180009 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 480 0.2 km from Zall-Dardhë, Dibër, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err  | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|------|------|------|-----|-------|-------|------|--------|
| 2019/03/09 | 06:51:10.25 |     | 0.10 | 41.8073  | 20.3333   |      |      |    | 6.6   | 13.2 | 5    | 31   | 165 | 0.14  | 0.59  | m    |        |
| OrigID 520 |             |     |      |          |           |      |      |    |       |      |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.3 | 0.0  | 3      | 520    |
| Md        | 1.6 | 0.0  | 2      | 520    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| PHP | 0.15 | 146.0 | Sg    | 06:51:15.808 | 0.1  |      |       |      |      | --- |     |     |       |      | m         | 7764  |      |
| PHP | 0.15 | 146.0 | Pg    | 06:51:13.288 | -0.1 |      |       |      |      | --- |     |     |       |      | m         | 7763  |      |
| PHP | 0.15 | 146.0 | AMl   | 06:51:17.410 |      |      |       |      |      | --- |     | 0.1 | 0.14  | a    | Ml        | 0.8   | 4464 |
| PHP | 0.15 | 146.0 | AMd   | 06:51:26.250 |      |      |       |      |      | --- |     | 0.0 | 12.96 | a    | Md        | 1.4   | 4462 |
| PUK | 0.40 | 0.0   | Pg    | 06:51:18.625 | 0.0  |      |       |      |      | --- |     |     |       |      | m         | 7768  |      |
| PUK | 0.40 | 306.0 | Sg    | 06:51:24.636 | -0.0 |      |       |      |      | --- |     |     |       |      | m         | 7765  |      |
| PUK | 0.40 | 306.0 | AMl   | 06:51:27.460 |      |      |       |      |      | --- |     | 0.1 | 0.16  | a    | Ml        | 1.1   | 4465 |
| BCI | 0.59 | 341.0 | Sg    | 06:51:30.827 | -0.1 |      |       |      |      | --- |     |     |       |      | m         | 7767  |      |
| BCI | 0.59 | 341.0 | Pg    | 06:51:22.254 | 0.2  |      |       |      |      | --- |     |     |       |      | m         | 7766  |      |
| BCI | 0.59 | 341.0 | AMl   | 06:51:32.470 |      |      |       |      |      | --- |     | 0.1 | 0.26  | a    | Ml        | 1.5   | 4467 |
| BCI | 0.59 | 341.0 | AMl   | 06:51:32.840 |      |      |       |      |      | --- |     | 0.1 | 0.24  | a    | Ml        | 1.4   | 4466 |
| BCI | 0.59 | 341.0 | AMd   | 06:51:42.171 |      |      |       |      |      | --- |     | 0.0 | 19.92 | a    | Md        | 1.8   | 4463 |

DATA\_TYPE COMMENT GSE2.1  
 Event 480

Official Magnitude:

Ml 1.25

Error ellipse:

|               |      |     |         |
|---------------|------|-----|---------|
|               | Azim | Dip | Mag     |
| Max:          | 188  | 86  | 13.1700 |
| Intermediate: | 55   | 2   | 1.2900  |
| Min:          | 325  | 3   | 0.3100  |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180009 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 482 1.6 km from Zall-Xhuxhë, Lezhë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/09 | 12:24:19.08 |     | 0.05 | 41.9550  | 20.1797   |      |      |    | 4.3   | 1.0 | 14   | 13   | 152 | 0.23  | 2.42  | m    |        |
| OrigID 522 |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 3.4 | 0.0  | 8      | 522    |
| Md        | 2.6 | 0.0  | 8      | 522    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp  | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|------|-------|------|-----------|-------|------|
| PUK  | 0.23 | 293.0 | S     | 12:24:27.965 | 0.0  |      |       |      |      |     |     |      |       | m    |           | 7776  |      |
| PUK  | 0.23 | 293.0 | P     | 12:24:24.116 | -0.0 |      |       |      |      |     |     |      |       | m    |           | 7775  |      |
| PUK  | 0.23 | 293.0 | AMl   | 12:24:29.080 |      |      |       |      |      |     |     | 73.3 | 0.32  | a    | Ml        | 3.8   | 4481 |
| PUK  | 0.23 | 293.0 | AMd   | 12:24:40.817 |      |      |       |      |      |     |     | 0.0  | 16.70 | a    | Md        | 1.6   | 4473 |
| PHP  | 0.33 | 144.0 | S     | 12:24:31.119 | 0.1  |      |       |      |      |     |     |      |       | m    |           | 7778  |      |
| PHP  | 0.33 | 144.0 | P     | 12:24:25.955 | 0.0  |      |       |      |      |     |     |      |       | m    |           | 7777  |      |
| PHP  | 0.33 | 144.0 | AMl   | 12:24:32.070 |      |      |       |      |      |     |     | 20.9 | 0.36  | a    | Ml        | 3.4   | 4482 |
| PHP  | 0.33 | 144.0 | AMd   | 12:24:56.856 |      |      |       |      |      |     |     | 0.0  | 30.90 | a    | Md        | 2.3   | 4474 |
| BCI  | 0.42 | 349.0 | S     | 12:24:34.284 | 0.0  |      |       |      |      |     |     |      |       | m    |           | 7780  |      |
| BCI  | 0.42 | 349.0 | P     | 12:24:27.367 | -0.4 |      |       |      |      |     |     |      |       | m    |           | 7779  |      |
| BCI  | 0.42 | 349.0 | AMl   | 12:24:36.390 |      |      |       |      |      |     |     | 28.4 | 0.38  | a    | Ml        | 3.6   | 4483 |
| BCI  | 0.42 | 349.0 | AMd   | 12:25:00.898 |      |      |       |      |      |     |     | 0.0  | 33.53 | a    | Md        | 2.4   | 4475 |
| TIR  | 0.65 | 202.0 | S     | 12:24:42.276 | 0.1  |      |       |      |      |     |     |      |       | m    |           | 7782  |      |
| TIR  | 0.65 | 202.0 | P     | 12:24:32.290 | 0.0  |      |       |      |      |     |     |      |       | m    |           | 7781  |      |
| TIR  | 0.65 | 202.0 | AMl   | 12:24:43.130 |      |      |       |      |      |     |     | 1.4  | 0.24  | a    | Ml        | 2.6   | 4484 |
| TIR  | 0.65 | 202.0 | AMd   | 12:25:13.049 |      |      |       |      |      |     |     | 0.0  | 40.76 | a    | Md        | 2.6   | 4476 |
| KBN  | 1.41 | 160.0 | S     | 12:25:06.447 | 0.0  |      |       |      |      |     |     |      |       | m    |           | 7784  |      |
| KBN  | 1.41 | 160.0 | P     | 12:24:46.136 | 0.0  |      |       |      |      |     |     |      |       | m    |           | 7783  |      |
| KBN  | 1.41 | 160.0 | AMl   | 12:25:14.010 |      |      |       |      |      |     |     | 1.2  | 0.56  | a    | Ml        | 3.2   | 4485 |
| KBN  | 1.41 | 160.0 | AMd   | 12:25:37.949 |      |      |       |      |      |     |     | 0.0  | 51.81 | a    | Md        | 2.9   | 4477 |
| FNA  | 1.48 | 0.0   | P     | 12:24:47.062 | 0.0  |      |       |      |      |     |     |      |       | m    |           | 7792  |      |
| FNA  | 1.48 | 141.0 | S     | 12:25:09.596 | 0.0  |      |       |      |      |     |     |      |       | m    |           | 7785  |      |
| FNA  | 1.48 | 141.0 | AMl   | 12:25:15.700 |      |      |       |      |      |     |     | 3.1  | 0.78  | a    | Ml        | 3.6   | 4486 |
| NEST | 1.67 | 156.0 | S     | 12:25:15.516 | 0.0  |      |       |      |      |     |     |      |       | m    |           | 7787  |      |
| NEST | 1.67 | 156.0 | P     | 12:24:49.499 | -1.8 |      |       |      |      |     |     |      |       | m    |           | 7786  |      |
| NEST | 1.67 | 156.0 | AMl   | 12:25:20.500 |      |      |       |      |      |     |     | 1.1  | 0.64  | a    | Ml        | 3.3   | 4487 |

|      |      |       |     |              |      |     |       |   |     |     |      |
|------|------|-------|-----|--------------|------|-----|-------|---|-----|-----|------|
| NEST | 1.67 | 156.0 | AMd | 12:25:44.001 | ---  | 0.0 | 54.50 | a | Md  | 2.9 | 4478 |
| LSK  | 1.83 | 169.0 | S   | 12:25:20.120 | -0.1 | --- | ---   | m | --- | --- | 7789 |
| LSK  | 1.83 | 169.0 | P   | 12:24:53.847 | -0.1 | --- | ---   | m | --- | --- | 7788 |
| LSK  | 1.83 | 169.0 | AMl | 12:25:26.830 | ---  | 1.2 | 0.72  | a | Ml  | 3.5 | 4488 |
| LSK  | 1.83 | 169.0 | AMd | 12:26:05.569 | ---  | 0.0 | 71.72 | a | Md  | 3.2 | 4479 |
| IGT  | 2.42 | 177.0 | S   | 12:25:36.376 | -0.1 | --- | ---   | m | --- | --- | 7791 |
| IGT  | 2.42 | 177.0 | P   | 12:25:01.175 | -2.1 | --- | ---   | m | --- | --- | 7790 |
| IGT  | 2.42 | 177.0 | AMd | 12:26:11.859 | ---  | 0.0 | 70.68 | a | Md  | 2.6 | 4480 |

DATA\_TYPE COMMENT GSE2.1  
Event 482

Official Magnitude:  
Ml 3.41

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 333  | 84  | 0.9600 |
| Intermediate: | 57   | 0   | 0.4800 |
| Min:          | 147  | 6   | 0.2200 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180009 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 484 1.6 km from Mëxixë, Elbasan, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/10 | 06:46:27.42 |     | 0.07 | 41.3303  | 20.2573   |      |      |    | 16.9  | 1.1 | 10   | 32   | 128 | 0.30  | 1.57  | m    |        |
| 524        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.7 | 0.0  | 4      | 524    |
| Md        | 2.2 | 0.0  | 2      | 524    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| TIR | 0.29 | 0.0   | Pg    | 06:46:34.137 | 0.0  | ---  | ---   | ---  | ---  | --- | --- | --- | ---   | m    | ---       | 7820  |      |
| TIR | 0.30 | 274.0 | S     | 06:46:39.033 | -0.0 | ---  | ---   | ---  | ---  | --- | --- | --- | ---   | m    | ---       | 7809  |      |
| TIR | 0.30 | 274.0 | AMl   | 06:46:38.460 | ---  | ---  | ---   | ---  | ---  | --- | --- | 0.4 | 0.18  | a    | Ml        | 1.7   | 4500 |
| PHP | 0.38 | 21.0  | Sn    | 06:46:41.152 | -0.0 | ---  | ---   | ---  | ---  | --- | --- | --- | ---   | m    | ---       | 7811  |      |
| PHP | 0.38 | 21.0  | Pg    | 06:46:35.297 | 0.0  | ---  | ---   | ---  | ---  | --- | --- | --- | ---   | m    | ---       | 7810  |      |
| PHP | 0.38 | 21.0  | AMl   | 06:46:43.510 | ---  | ---  | ---   | ---  | ---  | --- | --- | 0.1 | 0.12  | a    | Ml        | 0.9   | 4502 |
| PHP | 0.38 | 21.0  | AMl   | 06:46:42.410 | ---  | ---  | ---   | ---  | ---  | --- | --- | 0.3 | 0.32  | a    | Ml        | 1.7   | 4501 |
| PHP | 0.38 | 21.0  | AMd   | 06:47:01.021 | ---  | ---  | ---   | ---  | ---  | --- | --- | 0.0 | 25.72 | a    | Md        | 2.1   | 4498 |
| PUK | 0.76 | 340.0 | Sg    | 06:46:53.606 | -0.2 | ---  | ---   | ---  | ---  | --- | --- | --- | ---   | m    | ---       | 7813  |      |
| PUK | 0.76 | 340.0 | Pg    | 06:46:42.619 | 0.1  | ---  | ---   | ---  | ---  | --- | --- | --- | ---   | m    | ---       | 7812  |      |

|      |      |       |     |              |      |     |       |   |     |     |      |
|------|------|-------|-----|--------------|------|-----|-------|---|-----|-----|------|
| PUK  | 0.76 | 340.0 | AMl | 06:46:54.970 | ---  | 0.0 | 0.20  | a | Ml  | 1.2 | 4503 |
| PUK  | 0.76 | 340.0 | AMd | 06:47:17.417 | ---  | 0.0 | 34.80 | a | Md  | 2.4 | 4499 |
| ULC  | 0.98 | 311.0 | Pg  | 06:46:51.003 | 4.4  | --- | ---   | m | --- | --- | 7814 |
| FNA  | 1.01 | 122.0 | Sn  | 06:47:01.829 | -0.1 | --- | ---   | m | --- | --- | 7816 |
| FNA  | 1.01 | 122.0 | P   | 06:46:47.081 | -0.0 | --- | ---   | m | --- | --- | 7815 |
| FNA  | 1.01 | 122.0 | AMl | 06:47:03.710 | ---  | 0.1 | 0.54  | a | Ml  | 1.7 | 4504 |
| NEST | 1.09 | 146.0 | Sn  | 06:47:04.433 | 0.0  | --- | ---   | m | --- | --- | 7817 |
| DRME | 1.17 | 318.0 | P   | 06:46:49.712 | -0.2 | --- | ---   | m | --- | --- | 7818 |
| CEME | 1.57 | 322.0 | P   | 06:46:57.085 | 0.0  | --- | ---   | m | --- | --- | 7819 |

DATA\_TYPE COMMENT GSE2.1  
Event 484

Official Magnitude:  
Ml 1.65

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 322  | 73  | 1.1300 |
| Intermediate: | 49   | 0   | 0.4300 |
| Min:          | 139  | 17  | 0.2600 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180008 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 486 3.6 km from Fterë, Vlorë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/11 | 12:28:25.82 |     | 0.15 | 40.1057  | 19.9348   |      |      |    | 1.2   | 1.1 | 13   | 32   | 103 | 0.23  | 1.93  | m    | 527    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.8 | 0.0  | 5      | 527    |
| Md        | 2.2 | 0.0  | 1      | 527    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| SRN | 0.23 | 167.0 | Sg    | 12:28:35.490 | -0.2 |      |       |      |      | --- |     |     |       | m    |           | 7849  |      |
| SRN | 0.23 | 167.0 | Pg    | 12:28:30.779 | -0.7 |      |       |      |      | --- |     |     |       | m    |           | 7848  |      |
| SRN | 0.23 | 167.0 | AMl   | 12:28:38.450 |      |      |       |      |      | --- |     | 0.8 | 0.38  | a    | Ml        | 1.8   | 4519 |
| SRN | 0.23 | 167.0 | AMd   | 12:29:01.431 |      |      |       |      |      | --- |     | 0.0 | 30.65 | a    | Md        | 2.2   | 4518 |
| LSK | 0.50 | 0.0   | Pg    | 12:28:35.159 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 7864  |      |
| LSK | 0.51 | 84.0  | Sg    | 12:28:44.439 | -0.1 |      |       |      |      | --- |     |     |       | m    |           | 7850  |      |
| IGT | 0.65 | 151.0 | Sg    | 12:28:49.479 | 0.1  |      |       |      |      | --- |     |     |       | m    |           | 7852  |      |
| IGT | 0.65 | 151.0 | Pg    | 12:28:39.397 | 0.1  |      |       |      |      | --- |     |     |       | m    |           | 7851  |      |
| IGT | 0.65 | 151.0 | AMl   | 12:28:53.650 |      |      |       |      |      | --- |     | 0.1 | 0.44  | a    | Ml        | 1.6   | 4520 |

|      |      |       |     |              |      |     |     |     |     |     |     |      |     |     |     |     |      |      |
|------|------|-------|-----|--------------|------|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|
| NEST | 0.91 | 69.0  | Sg  | 12:28:57.972 | -0.1 | --- | --- | --- | --- | --- | --- | ---  | --- | --- | --- | m   | ---  | 7854 |
| NEST | 0.91 | 69.0  | Pg  | 12:28:43.202 | -1.0 | --- | --- | --- | --- | --- | --- | ---  | --- | --- | --- | m   | ---  | 7853 |
| NEST | 0.91 | 69.0  | AMl | 12:29:03.720 |      | --- | --- | --- | --- | --- | 0.1 | 0.46 | a   | Ml  | 1.5 | --- | 4521 |      |
| SCTE | 1.13 | 270.0 | Sg  | 12:29:05.176 | -0.2 | --- | --- | --- | --- | --- | --- | ---  | --- | --- | --- | m   | ---  | 7856 |
| SCTE | 1.13 | 270.0 | Pg  | 12:28:48.430 | 0.0  | --- | --- | --- | --- | --- | --- | ---  | --- | --- | --- | m   | ---  | 7855 |
| FNA  | 1.30 | 58.0  | Sn  | 12:29:10.992 | -0.1 | --- | --- | --- | --- | --- | --- | ---  | --- | --- | --- | m   | ---  | 7858 |
| FNA  | 1.30 | 58.0  | Pn  | 12:28:51.565 | -0.1 | --- | --- | --- | --- | --- | --- | ---  | --- | --- | --- | m   | ---  | 7857 |
| FNA  | 1.30 | 58.0  | AMl | 12:29:16.380 |      | --- | --- | --- | --- | --- | 0.2 | 0.58 | a   | Ml  | 2.2 | --- | 4522 |      |
| LKD2 | 1.43 | 156.0 | Sn  | 12:29:15.430 | 0.1  | --- | --- | --- | --- | --- | --- | ---  | --- | --- | --- | m   | ---  | 7860 |
| LKD2 | 1.43 | 156.0 | Pn  | 12:28:54.417 | 0.3  | --- | --- | --- | --- | --- | --- | ---  | --- | --- | --- | m   | ---  | 7859 |
| LKD2 | 1.43 | 156.0 | AMl | 12:29:19.060 |      | --- | --- | --- | --- | --- | 0.2 | 0.44 | a   | Ml  | 2.3 | --- | 4523 |      |
| PHP  | 1.62 | 13.0  | Sn  | 12:29:21.170 | 0.3  | --- | --- | --- | --- | --- | --- | ---  | --- | --- | --- | m   | ---  | 7862 |
| PHP  | 1.62 | 13.0  | Pn  | 12:28:57.188 | -0.1 | --- | --- | --- | --- | --- | --- | ---  | --- | --- | --- | m   | ---  | 7861 |
| PUK  | 1.93 | 0.0   | Pn  | 12:29:01.887 | -1.1 | --- | --- | --- | --- | --- | --- | ---  | --- | --- | --- | m   | ---  | 7863 |

DATA\_TYPE COMMENT GSE2.1  
Event 486

Official Magnitude:  
Ml 1.84

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 262  | 85  | 1.1300 |
| Intermediate: | 113  | 4   | 0.3400 |
| Min:          | 23   | 3   | 0.3000 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180008 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 489 0.9 km from Krahësi i Sipërm, Gjirokastër, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/12 | 06:41:41.40 |     | 0.35 | 40.4533  | 19.8762   |      |      |    | 1.5   | 1.4 | 24   | 23   | 86  | 0.29  | 2.90  | m    |        |
| 530        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 3.0 | 0.0  | 10     | 530    |
| Md        | 2.9 | 0.0  | 3      | 530    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp  | Per   | Qual | Magnitude | ArrID |      |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|------|-------|------|-----------|-------|------|
| VLO | 0.29 | 274.0 | Sg    | 06:41:51.459 | -0.1 |      |       |      |      | --- |     |      |       | m    |           | 7892  |      |
| VLO | 0.29 | 274.0 | Pg    | 06:41:47.154 | -0.1 |      |       |      |      | --- |     |      |       | mdi  |           | 7891  |      |
| VLO | 0.29 | 274.0 | AMl   | 06:41:55.980 |      |      |       |      |      | --- |     | 27.9 | 0.18  | a    | Ml        | 3.4   | 4543 |
| VLO | 0.29 | 274.0 | AMd   | 06:42:46.136 |      |      |       |      |      | --- |     | 0.0  | 58.98 | a    | Md        | 2.9   | 4540 |

|      |      |       |     |              |      |     |     |         |             |
|------|------|-------|-----|--------------|------|-----|-----|---------|-------------|
| BPA1 | 0.32 | 329.0 | Sg  | 06:41:53.665 | -0.2 | --- | m   | ---     | 7894        |
| BPA1 | 0.32 | 329.0 | Pg  | 06:41:49.174 | 0.7  | --- | mdi | ---     | 7893        |
| BPA1 | 0.32 | 329.0 | AM1 | 06:42:02.840 |      | --- | 7.1 | 0.60 a  | M1 2.9 4544 |
| BPA1 | 0.32 | 329.0 | AMd | 06:42:35.160 |      | --- | 0.0 | 45.99 a | Md 2.7 4541 |
| BPA2 | 0.34 | 325.0 | Sg  | 06:41:54.439 | -0.1 | --- | m   | ---     | 7895        |
| SRN  | 0.58 | 170.0 | Sg  | 06:42:03.292 | -0.0 | --- | m   | ---     | 7897        |
| SRN  | 0.58 | 170.0 | Pg  | 06:41:53.174 | -0.7 | --- | mce | ---     | 7896        |
| SRN  | 0.58 | 170.0 | AM1 | 06:42:03.370 |      | --- | 1.0 | 0.48 a  | M1 2.4 4545 |
| SRN  | 0.58 | 170.0 | AMd | 06:42:56.340 |      | --- | 0.0 | 63.17 a | Md 3.0 4542 |
| TIR  | 0.89 | 0.0   | P   | 06:42:00.857 | 0.0  | --- | m   | ---     | 7918        |
| TIR  | 0.89 | 0.0   | S   | 06:42:13.081 | -0.1 | --- | m   | ---     | 7898        |
| TIR  | 0.89 | 0.0   | AM1 | 06:42:21.800 |      | --- | 1.1 | 0.54 a  | M1 2.8 4546 |
| IGT  | 0.98 | 159.0 | S   | 06:42:16.123 | -0.0 | --- | m   | ---     | 7900        |
| IGT  | 0.98 | 159.0 | P   | 06:42:01.598 | 0.3  | --- | m   | ---     | 7899        |
| IGT  | 0.98 | 159.0 | AM1 | 06:42:24.100 |      | --- | 1.2 | 0.34 a  | M1 2.8 4547 |
| SCTE | 1.14 | 252.0 | S   | 06:42:21.836 | 0.5  | --- | m   | ---     | 7902        |
| SCTE | 1.14 | 252.0 | P   | 06:42:04.164 | -0.1 | --- | m   | ---     | 7901        |
| SCTE | 1.14 | 252.0 | AM1 | 06:42:22.440 |      | --- | 3.1 | 0.34 a  | M1 3.4 4548 |
| FNA  | 1.19 | 73.0  | S   | 06:42:23.310 | 0.2  | --- | m   | ---     | 7904        |
| FNA  | 1.19 | 73.0  | P   | 06:42:05.331 | 0.1  | --- | m   | ---     | 7903        |
| FNA  | 1.19 | 73.0  | AM1 | 06:42:34.380 |      | --- | 0.6 | 0.38 a  | M1 2.7 4549 |
| PUK  | 1.59 | 0.0   | S   | 06:42:35.438 | -0.1 | --- | m   | ---     | 7906        |
| PUK  | 1.59 | 0.0   | P   | 06:42:12.911 | 0.6  | --- | m   | ---     | 7905        |
| PUK  | 1.59 | 0.0   | AM1 | 06:42:41.760 |      | --- | 0.7 | 0.36 a  | M1 3.1 4550 |
| LKD2 | 1.77 | 159.0 | S   | 06:42:41.619 | 0.3  | --- | m   | ---     | 7908        |
| LKD2 | 1.77 | 159.0 | P   | 06:42:15.377 | -0.3 | --- | m   | ---     | 7907        |
| LKD2 | 1.77 | 159.0 | AM1 | 06:42:42.590 |      | --- | 1.1 | 0.60 a  | M1 3.4 4551 |
| DRME | 1.81 | 344.0 | P   | 06:42:14.876 | -1.5 | --- | m   | ---     | 7909        |
| BCI  | 1.92 | 4.0   | S   | 06:42:45.753 | -0.1 | --- | m   | ---     | 7911        |
| BCI  | 1.92 | 4.0   | P   | 06:42:18.190 | -0.0 | --- | m   | ---     | 7910        |
| BCI  | 1.92 | 4.0   | AM1 | 06:42:58.690 |      | --- | 0.9 | 0.68 a  | M1 3.4 4552 |
| BUM  | 1.99 | 339.0 | P   | 06:42:21.236 | 1.7  | --- | m   | ---     | 7912        |
| CEME | 2.21 | 342.0 | P   | 06:42:19.948 | -3.0 | --- | m   | ---     | 7913        |
| KOME | 2.41 | 354.0 | P   | 06:42:24.939 | -0.9 | --- | m   | ---     | 7914        |
| NKME | 2.41 | 344.0 | P   | 06:42:30.454 | 4.6  | --- | m   | ---     | 7915        |
| BEY  | 2.41 | 0.0   | P   | 06:42:25.905 | 0.0  | --- | m   | ---     | 7916        |
| PLE  | 2.90 | 354.0 | P   | 06:42:31.620 | -1.4 | --- | m   | ---     | 7917        |

DATA\_TYPE COMMENT GSE2.1  
Event 489

Official Magnitude:  
M1 2.96

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 253  | 84  | 1.4000 |
| Intermediate: | 73   | 5   | 0.5300 |
| Min:          | 163  | 0   | 0.3800 |



BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556180008 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 491 Region N/A

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/13 | 05:36:26.79 |     | 0.24 | 40.1148  | 19.6555   |      |      |    | 12.5  | 1.5 | 10   | 32   | 131 | 0.35  | 1.48  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.5 | 0.0  | 3      | 532    |
| Md        | 2.4 | 0.0  | 1      | 532    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|
| SRN  | 0.35 | 131.0 | Sg    | 05:36:40.550 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 7930  |
| SRN  | 0.35 | 131.0 | Pg    | 05:36:34.243 | -0.4 |      |       |      |      |     |     |     |       | m    |           | 7929  |
| SRN  | 0.35 | 131.0 | AMl   | 05:36:41.630 |      |      |       |      |      |     |     | 0.2 | 0.24  | a    | Ml        | 1.4   |
| SRN  | 0.35 | 131.0 | AMl   | 05:36:42.560 |      |      |       |      |      |     |     | 0.2 | 0.26  | a    | Ml        | 1.4   |
| SRN  | 0.35 | 131.0 | AMd   | 05:37:10.787 |      |      |       |      |      |     |     | 0.0 | 36.54 | a    | Md        | 2.4   |
| VLO  | 0.37 | 341.0 | Sg    | 05:36:39.627 | 0.3  |      |       |      |      |     |     |     |       | m    |           | 7932  |
| VLO  | 0.37 | 341.0 | Pg    | 05:36:33.752 | -0.2 |      |       |      |      |     |     |     |       | m    |           | 7931  |
| VLO  | 0.37 | 341.0 | AMl   | 05:36:46.970 |      |      |       |      |      |     |     | 1.3 | 0.32  | a    | Ml        | 2.2   |
| LSK  | 0.72 | 86.0  | Sg    | 05:36:50.549 | -1.4 |      |       |      |      |     |     |     |       | m    |           | 7934  |
| LSK  | 0.72 | 86.0  | Pg    | 05:36:40.055 | -1.1 |      |       |      |      |     |     |     |       | m    |           | 7933  |
| IGT  | 0.78 | 138.0 | Sg    | 05:36:54.264 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 7936  |
| IGT  | 0.78 | 138.0 | Pg    | 05:36:42.739 | 0.4  |      |       |      |      |     |     |     |       | m    |           | 7935  |
| IGT  | 0.78 | 138.0 | AMl   | 05:37:02.880 |      |      |       |      |      |     |     | 0.1 | 0.44  | a    | Ml        | 1.5   |
| SCTE | 0.91 | 0.0   | Sn    | 05:37:02.187 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 7941  |
| SCTE | 0.91 | 269.0 | P     | 05:36:44.754 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 7937  |
| NEST | 1.11 | 73.0  | Sg    | 05:37:04.622 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 7939  |
| NEST | 1.11 | 73.0  | Pg    | 05:36:47.133 | -1.3 |      |       |      |      |     |     |     |       | m    |           | 7938  |
| FNA  | 1.48 | 62.0  | Pn    | 05:36:54.897 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 7940  |

DATA\_TYPE COMMENT GSE2.1  
 Event 491

Official Magnitude:  
 Ml 1.47

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 230  | 72  | 1.6000 |
| Intermediate: | 51   | 17  | 0.7400 |
| Min:          | 141  | 0   | 0.4100 |

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556180006 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 498 Region N/A

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/14 | 16:01:23.79 |     | 0.04 | 39.1982  | 20.7763   |      |      |    | 49.1  | 0.6 | 11   | 10   | 184 | 0.42  | 1.99  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 3.0 | 0.0  | 7      | 539    |
| Md        | 3.3 | 0.0  | 6      | 539    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per    | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|--------|------|-----------|-------|------|
| LKD2 | 0.42 | 193.0 | Sg    | 16:01:43.088 | 0.0  |      |       |      |      | --- |     |     |        | m    |           | 8069  |      |
| LKD2 | 0.42 | 193.0 | Pg    | 16:01:34.811 | 0.0  |      |       |      |      | --- |     |     |        | m    |           | 8068  |      |
| LKD2 | 0.42 | 193.0 | AMl   | 16:01:50.848 |      |      |       |      |      | --- |     | 3.7 | 0.56   | a    | Ml        | 2.9   | 4627 |
| LKD2 | 0.42 | 193.0 | AMd   | 16:02:35.717 |      |      |       |      |      | --- |     | 0.0 | 60.91  | a    | Md        | 2.9   | 4621 |
| IGT  | 0.48 | 315.0 | Sg    | 16:01:44.427 | 0.0  |      |       |      |      | --- |     |     |        | m    |           | 8071  |      |
| IGT  | 0.48 | 315.0 | Pg    | 16:01:35.572 | -0.0 |      |       |      |      | --- |     |     |        | m    |           | 8070  |      |
| IGT  | 0.48 | 315.0 | AMl   | 16:01:48.038 |      |      |       |      |      | --- |     | 3.4 | 0.26   | a    | Ml        | 2.9   | 4628 |
| IGT  | 0.48 | 315.0 | AMd   | 16:02:27.809 |      |      |       |      |      | --- |     | 0.0 | 52.24  | a    | Md        | 2.2   | 4622 |
| SRN  | 0.91 | 319.0 | Sg    | 16:01:55.934 | -0.0 |      |       |      |      | --- |     |     |        | m    |           | 8073  |      |
| SRN  | 0.91 | 319.0 | Pg    | 16:01:42.174 | 0.0  |      |       |      |      | --- |     |     |        | m    |           | 8072  |      |
| SRN  | 0.91 | 319.0 | AMl   | 16:02:01.688 |      |      |       |      |      | --- |     | 1.0 | 0.50   | a    | Ml        | 2.8   | 4629 |
| SRN  | 0.91 | 319.0 | AMd   | 16:02:57.014 |      |      |       |      |      | --- |     | 0.0 | 74.84  | a    | Md        | 3.2   | 4623 |
| LSK  | 0.96 | 352.0 | Sg    | 16:01:56.445 | 0.0  |      |       |      |      | --- |     |     |        | m    |           | 8075  |      |
| LSK  | 0.96 | 352.0 | Pg    | 16:01:41.276 | -1.2 |      |       |      |      | --- |     |     |        | m    |           | 8074  |      |
| LSK  | 0.96 | 352.0 | AMl   | 16:02:04.098 |      |      |       |      |      | --- |     | 2.9 | 0.92   | a    | Ml        | 3.3   | 4630 |
| LSK  | 0.96 | 352.0 | AMd   | 16:03:10.604 |      |      |       |      |      | --- |     | 0.0 | 89.33  | a    | Md        | 3.4   | 4624 |
| NEST | 1.23 | 9.0   | Sg    | 16:02:03.749 | 0.1  |      |       |      |      | --- |     |     |        | m    |           | 8077  |      |
| NEST | 1.23 | 9.0   | Pg    | 16:01:46.561 | -0.0 |      |       |      |      | --- |     |     |        | m    |           | 8076  |      |
| NEST | 1.23 | 9.0   | AMl   | 16:02:11.158 |      |      |       |      |      | --- |     | 0.9 | 0.36   | a    | Ml        | 3.0   | 4631 |
| NEST | 1.23 | 9.0   | AMd   | 16:03:14.864 |      |      |       |      |      | --- |     | 0.0 | 88.30  | a    | Md        | 3.4   | 4625 |
| KBN  | 1.37 | 0.0   | Pn    | 16:01:52.921 | 0.0  |      |       |      |      | --- |     |     |        | m    |           | 8081  |      |
| KBN  | 1.42 | 0.0   | Sn    | 16:02:14.066 | 6.3  |      |       |      |      | --- |     |     |        | m    |           | 8078  |      |
| KBN  | 1.42 | 0.0   | AMl   | 16:02:18.128 |      |      |       |      |      | --- |     | 1.3 | 0.68   | a    | Ml        | 3.3   | 4632 |
| SCTE | 1.99 | 297.0 | Sn    | 16:02:23.173 | 0.1  |      |       |      |      | --- |     |     |        | m    |           | 8080  |      |
| SCTE | 1.99 | 297.0 | Pn    | 16:01:57.584 | -0.1 |      |       |      |      | --- |     |     |        | m    |           | 8079  |      |
| SCTE | 1.99 | 297.0 | AMl   | 16:02:39.098 |      |      |       |      |      | --- |     | 0.6 | 0.54   | a    | Ml        | 3.3   | 4633 |
| SCTE | 1.99 | 297.0 | AMd   | 16:03:41.435 |      |      |       |      |      | --- |     | 0.0 | 103.85 | a    | Md        | 3.6   | 4626 |

DATA\_TYPE COMMENT GSE2.1  
 Event 498

Official Magnitude:  
M1 2.95

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 229  | 48  | 0.8100 |
| Intermediate: | 107  | 25  | 0.6100 |
| Min:          | 1    | 31  | 0.3400 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180006 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 500 Region N/A

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/15 | 02:30:09.00 |     | 0.29 | 39.7913  | 20.2387   |      |      |    | 6.4   | 1.9 | 16   | 20   | 119 | 0.21  | 2.26  | m    |        |
| OrigID 541 |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| M1        | 2.2 | 0.0  | 8      | 541    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|------|
| SRN  | 0.20 | 296.0 | Sg    | 02:30:17.488 | -0.1 |      |       |      |      | ___ |     |     |      | m    |           | 8103  |      |
| SRN  | 0.20 | 296.0 | Pg    | 02:30:13.632 | -0.3 |      |       |      |      | ___ |     |     |      | m    |           | 8102  |      |
| SRN  | 0.20 | 296.0 | AM1   | 02:30:19.420 |      |      |       |      |      | ___ |     | 1.6 | 0.20 | a    | M1        | 2.1   | 4653 |
| IGT  | 0.27 | 164.0 | Sg    | 02:30:19.039 | -0.1 |      |       |      |      | ___ |     |     |      | m    |           | 8105  |      |
| IGT  | 0.27 | 164.0 | Pg    | 02:30:14.498 | -0.3 |      |       |      |      | ___ |     |     |      | m    |           | 8104  |      |
| IGT  | 0.27 | 164.0 | AM1   | 02:30:20.440 |      |      |       |      |      | ___ |     | 1.8 | 0.38 | a    | M1        | 2.2   | 4654 |
| LSK  | 0.45 | 37.0  | Sg    | 02:30:24.878 | -0.1 |      |       |      |      | ___ |     |     |      | m    |           | 8107  |      |
| LSK  | 0.45 | 37.0  | Pg    | 02:30:18.172 | 0.0  |      |       |      |      | ___ |     |     |      | m    |           | 8106  |      |
| LSK  | 0.45 | 37.0  | AM1   | 02:30:29.280 |      |      |       |      |      | ___ |     | 0.5 | 0.40 | a    | M1        | 1.8   | 4655 |
| NEST | 0.88 | 44.0  | Sg    | 02:30:35.081 | -4.4 |      |       |      |      | ___ |     |     |      | m    |           | 8109  |      |
| NEST | 0.88 | 44.0  | Pg    | 02:30:26.242 | -0.2 |      |       |      |      | ___ |     |     |      | m    |           | 8108  |      |
| NEST | 0.88 | 44.0  | AM1   | 02:30:44.510 |      |      |       |      |      | ___ |     | 0.1 | 0.36 | a    | M1        | 1.6   | 4656 |
| VLO  | 0.88 | 321.0 | Sg    | 02:30:40.350 | 1.9  |      |       |      |      | ___ |     |     |      | m    |           | 8111  |      |
| VLO  | 0.88 | 321.0 | Pg    | 02:30:28.613 | 2.8  |      |       |      |      | ___ |     |     |      | m    |           | 8110  |      |
| VLO  | 0.88 | 321.0 | AM1   | 02:30:49.690 |      |      |       |      |      | ___ |     | 0.5 | 0.22 | a    | M1        | 2.4   | 4657 |
| KBN  | 0.93 | 26.0  | Sg    | 02:30:40.350 | -0.1 |      |       |      |      | ___ |     |     |      | m    |           | 8113  |      |
| KBN  | 0.93 | 26.0  | Pg    | 02:30:27.503 | 0.6  |      |       |      |      | ___ |     |     |      | m    |           | 8112  |      |
| LKD2 | 1.05 | 161.0 | Sn    | 02:30:45.440 | 0.2  |      |       |      |      | ___ |     |     |      | m    |           | 8115  |      |
| LKD2 | 1.05 | 161.0 | Pn    | 02:30:29.823 | 0.1  |      |       |      |      | ___ |     |     |      | m    |           | 8114  |      |
| LKD2 | 1.05 | 161.0 | AM1   | 02:30:50.250 |      |      |       |      |      | ___ |     | 0.4 | 0.34 | a    | M1        | 2.4   | 4658 |
| FNA  | 1.32 | 41.0  | Sn    | 02:30:53.695 | -0.5 |      |       |      |      | ___ |     |     |      | m    |           | 8117  |      |
| FNA  | 1.32 | 41.0  | Pn    | 02:30:34.744 | -0.1 |      |       |      |      | ___ |     |     |      | m    |           | 8116  |      |
| FNA  | 1.32 | 41.0  | AM1   | 02:31:05.470 |      |      |       |      |      | ___ |     | 0.1 | 0.72 | a    | M1        | 1.9   | 4659 |

|      |      |       |     |              |      |     |  |  |  |  |     |      |   |    |  |   |     |      |
|------|------|-------|-----|--------------|------|-----|--|--|--|--|-----|------|---|----|--|---|-----|------|
| SCTE | 1.38 | 0.0   | Pg  | 02:30:35.122 | 0.0  | --- |  |  |  |  |     |      |   |    |  | m |     | 8121 |
| SCTE | 1.39 | 283.0 | Sg  | 02:30:54.807 | -1.5 | --- |  |  |  |  |     |      |   |    |  | m |     | 8118 |
| SCTE | 1.39 | 283.0 | AM1 | 02:31:03.150 |      | --- |  |  |  |  | 0.7 | 1.22 | a | M1 |  |   | 2.9 | 4660 |
| PHP  | 1.90 | 4.0   | Pn  | 02:30:45.124 | 0.4  | --- |  |  |  |  |     |      |   |    |  | m |     | 8119 |
| PUK  | 2.26 | 354.0 | Pn  | 02:30:50.842 | 0.4  | --- |  |  |  |  |     |      |   |    |  | m |     | 8120 |

DATA\_TYPE COMMENT GSE2.1  
Event 500

Official Magnitude:  
M1 2.16

Error ellipse:

|               |  |      |     |        |
|---------------|--|------|-----|--------|
|               |  | Azim | Dip | Mag    |
| Max:          |  | 208  | 84  | 1.9400 |
| Intermediate: |  | 92   | 2   | 0.6300 |
| Min:          |  | 2    | 5   | 0.4200 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180006 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 501 Region N/A

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/15 | 02:30:09.00 |     | 0.29 | 39.7913  | 20.2387   |      |      |    | 6.4   | 1.9 | 16   | 20   | 119 | 0.21  | 2.26  | m    |        |
| 542        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| M1        | 2.2 | 0.0  | 8      | 542    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|
| SRN  | 0.20 | 296.0 | Sg    | 02:30:17.488 | -0.1 |      |       |      |      |     |     |     |      |      |           | 8123  |
| SRN  | 0.20 | 296.0 | Pg    | 02:30:13.632 | -0.3 |      |       |      |      |     |     |     |      |      |           | 8122  |
| SRN  | 0.20 | 296.0 | AM1   | 02:30:19.420 |      |      |       |      |      |     |     | 1.6 | 0.20 | a    | M1        | 2.1   |
| IGT  | 0.27 | 164.0 | Sg    | 02:30:19.039 | -0.1 |      |       |      |      |     |     |     |      |      |           | 8125  |
| IGT  | 0.27 | 164.0 | Pg    | 02:30:14.498 | -0.3 |      |       |      |      |     |     |     |      |      |           | 8124  |
| IGT  | 0.27 | 164.0 | AM1   | 02:30:20.440 |      |      |       |      |      |     |     | 1.8 | 0.38 | a    | M1        | 2.2   |
| LSK  | 0.45 | 37.0  | Sg    | 02:30:24.878 | -0.1 |      |       |      |      |     |     |     |      |      |           | 8127  |
| LSK  | 0.45 | 37.0  | Pg    | 02:30:18.172 | 0.0  |      |       |      |      |     |     |     |      |      |           | 8126  |
| LSK  | 0.45 | 37.0  | AM1   | 02:30:29.280 |      |      |       |      |      |     |     | 0.5 | 0.40 | a    | M1        | 1.8   |
| NEST | 0.88 | 44.0  | Sg    | 02:30:35.081 | -4.4 |      |       |      |      |     |     |     |      |      |           | 8129  |
| NEST | 0.88 | 44.0  | Pg    | 02:30:26.242 | -0.2 |      |       |      |      |     |     |     |      |      |           | 8128  |
| NEST | 0.88 | 44.0  | AM1   | 02:30:44.510 |      |      |       |      |      |     |     | 0.1 | 0.36 | a    | M1        | 1.6   |
| VLO  | 0.88 | 321.0 | Sg    | 02:30:40.350 | 1.9  |      |       |      |      |     |     |     |      |      |           | 8131  |
| VLO  | 0.88 | 321.0 | Pg    | 02:30:28.613 | 2.8  |      |       |      |      |     |     |     |      |      |           | 8130  |

|      |      |       |     |              |      |     |  |  |  |  |  |     |      |    |    |     |      |
|------|------|-------|-----|--------------|------|-----|--|--|--|--|--|-----|------|----|----|-----|------|
| VLO  | 0.88 | 321.0 | AM1 | 02:30:49.690 |      | --- |  |  |  |  |  | 0.5 | 0.22 | a_ | M1 | 2.4 | 4665 |
| KBN  | 0.93 | 26.0  | Sg  | 02:30:40.350 | -0.1 | --- |  |  |  |  |  |     |      |    | m_ |     | 8133 |
| KBN  | 0.93 | 26.0  | Pg  | 02:30:27.503 | 0.6  | --- |  |  |  |  |  |     |      |    | m_ |     | 8132 |
| LKD2 | 1.05 | 161.0 | Sn  | 02:30:45.440 | 0.2  | --- |  |  |  |  |  |     |      |    | m_ |     | 8135 |
| LKD2 | 1.05 | 161.0 | Pn  | 02:30:29.823 | 0.1  | --- |  |  |  |  |  |     |      |    | m_ |     | 8134 |
| LKD2 | 1.05 | 161.0 | AM1 | 02:30:50.250 |      | --- |  |  |  |  |  | 0.4 | 0.34 | a_ | M1 | 2.4 | 4666 |
| FNA  | 1.32 | 41.0  | Sn  | 02:30:53.695 | -0.5 | --- |  |  |  |  |  |     |      |    | m_ |     | 8137 |
| FNA  | 1.32 | 41.0  | Pn  | 02:30:34.744 | -0.1 | --- |  |  |  |  |  |     |      |    | m_ |     | 8136 |
| FNA  | 1.32 | 41.0  | AM1 | 02:31:05.470 |      | --- |  |  |  |  |  | 0.1 | 0.72 | a_ | M1 | 1.9 | 4667 |
| SCTE | 1.38 | 0.0   | Pg  | 02:30:35.122 | 0.0  | --- |  |  |  |  |  |     |      |    | m_ |     | 8141 |
| SCTE | 1.39 | 283.0 | Sg  | 02:30:54.807 | -1.5 | --- |  |  |  |  |  |     |      |    | m_ |     | 8138 |
| SCTE | 1.39 | 283.0 | AM1 | 02:31:03.150 |      | --- |  |  |  |  |  | 0.7 | 1.22 | a_ | M1 | 2.9 | 4668 |
| PHP  | 1.90 | 4.0   | Pn  | 02:30:45.124 | 0.4  | --- |  |  |  |  |  |     |      |    | m_ |     | 8139 |
| PUK  | 2.26 | 354.0 | Pn  | 02:30:50.842 | 0.4  | --- |  |  |  |  |  |     |      |    | m_ |     | 8140 |

DATA\_TYPE COMMENT GSE2.1  
Event 501

Official Magnitude:  
Ml 2.16

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 208  | 84  | 1.9400 |
| Intermediate: | 92   | 2   | 0.6300 |
| Min:          | 2    | 5   | 0.4200 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180006 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 502 Region N/A

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err  | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|------|------|------|-----|-------|-------|------|--------|
| 2019/03/15 | 04:17:32.23 |     | 0.06 | 39.6672  | 20.3983   |      |      |    | 24.1  | 13.6 | 6    | 20   | 185 | 0.14  | 0.90  | m    |        |
| 543        |             |     |      |          |           |      |      |    |       |      |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.3 | 0.0  | 4      | 543    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|
| NEST | 0.00 | 0.0   | Pg    | 04:17:49.786 | 0.0  |      |       |      |      |     |     |     |      |      |           | 8149  |
| NEST | 0.90 | 33.0  | Sg    | 04:18:02.112 | -0.7 |      |       |      |      |     |     |     |      |      |           | 8148  |
| NEST | 0.90 | 33.0  | AM1   | 04:18:11.830 |      |      |       |      |      |     |     | 0.0 | 0.74 | a_   | M1        | 4672  |
| IGT  | 0.15 | 202.0 | Sg    | 04:17:39.497 | 0.0  |      |       |      |      |     |     |     |      |      |           | 8143  |
| IGT  | 0.15 | 202.0 | Pg    | 04:17:36.332 | -0.1 |      |       |      |      |     |     |     |      |      |           | 8142  |

|     |      |       |     |              |      |     |      |   |     |     |      |
|-----|------|-------|-----|--------------|------|-----|------|---|-----|-----|------|
| IGT | 0.15 | 202.0 | AM1 | 04:17:40.240 | ---  | 1.9 | 0.30 | a | M1  | 2.3 | 4669 |
| SRN | 0.37 | 305.0 | Sg  | 04:17:47.146 | -0.0 | --- | ---  | m | --- | --- | 8145 |
| SRN | 0.37 | 305.0 | Pg  | 04:17:40.845 | 0.1  | --- | ---  | m | --- | --- | 8144 |
| SRN | 0.37 | 305.0 | AM1 | 04:17:48.680 | ---  | 0.1 | 0.32 | a | M1  | 1.1 | 4670 |
| LSK | 0.51 | 17.0  | Sg  | 04:17:50.409 | -0.0 | --- | ---  | m | --- | --- | 8147 |
| LSK | 0.51 | 17.0  | Pg  | 04:17:42.836 | 0.2  | --- | ---  | m | --- | --- | 8146 |
| LSK | 0.51 | 17.0  | AM1 | 04:17:55.880 | ---  | 0.1 | 0.36 | a | M1  | 1.4 | 4671 |

DATA\_TYPE COMMENT GSE2.1  
Event 502

Official Magnitude:  
M1 1.31

Error ellipse:

|               |      |     |         |
|---------------|------|-----|---------|
|               | Azim | Dip | Mag     |
| Max:          | 0    | 90  | 13.5500 |
| Intermediate: | 280  | 0   | 0.6500  |
| Min:          | 10   | 0   | 0.3300  |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180005 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 507 0.3 km from Rrapëz-Fshat, Fier, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err  | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|------|------|------|-----|-------|-------|------|--------|
| 2019/03/17 | 06:08:14.14 |     | 0.19 | 40.8462  | 19.6337   |      |      |    | 20.1  | 20.4 | 17   | 15   | 173 | 0.40  | 1.55  | m    |        |
| 548        |             |     |      |          |           |      |      |    |       |      |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| M1        | 2.1 | 0.0  | 10     | 548    |
| Md        | 2.6 | 0.0  | 6      | 548    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| VLO | 0.39 | 196.0 | Sg    | 06:08:27.875 | 0.1  |      |       |      |      | --- |     |     |       | m    |           | 8197  |      |
| VLO | 0.39 | 196.0 | Pg    | 06:08:22.019 | 0.1  |      |       |      |      | --- |     |     |       | m    |           | 8196  |      |
| VLO | 0.39 | 196.0 | AM1   | 06:08:32.930 |      |      |       |      |      | --- |     | 2.5 | 0.18  | a    | M1        | 2.5   | 4720 |
| VLO | 0.39 | 196.0 | AMd   | 06:08:52.709 |      |      |       |      |      | --- |     | 0.0 | 30.69 | a    | Md        | 2.3   | 4714 |
| TIR | 0.53 | 0.0   | Pg    | 06:08:24.522 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8217  |      |
| TIR | 0.53 | 19.0  | Sg    | 06:08:33.418 | 0.1  |      |       |      |      | --- |     |     |       | m    |           | 8198  |      |
| TIR | 0.53 | 19.0  | AM1   | 06:08:33.920 |      |      |       |      |      | --- |     | 0.3 | 0.44  | a    | M1        | 1.8   | 4721 |
| KBN | 0.90 | 103.0 | Sg    | 06:08:44.207 | 0.1  |      |       |      |      | --- |     |     |       | m    |           | 8200  |      |
| KBN | 0.90 | 103.0 | Pg    | 06:08:30.320 | -1.0 |      |       |      |      | --- |     |     |       | m    |           | 8199  |      |
| KBN | 0.90 | 103.0 | AM1   | 06:08:50.200 |      |      |       |      |      | --- |     | 0.3 | 0.48  | a    | M1        | 2.2   | 4722 |
| KBN | 0.90 | 103.0 | AMd   | 06:09:02.942 |      |      |       |      |      | --- |     | 0.0 | 32.62 | a    | Md        | 2.4   | 4715 |

|      |      |       |     |              |      |     |     |       |   |    |     |      |
|------|------|-------|-----|--------------|------|-----|-----|-------|---|----|-----|------|
| SRN  | 1.00 | 163.0 | Sg  | 06:08:48.369 | -0.3 | --- |     |       | m |    |     | 8202 |
| SRN  | 1.00 | 163.0 | Pg  | 06:08:33.987 | 0.1  | --- |     |       | m |    |     | 8201 |
| SRN  | 1.00 | 163.0 | AMl | 06:08:48.880 |      | --- | 0.2 | 0.34  | a | Ml | 2.0 | 4723 |
| SRN  | 1.00 | 163.0 | AMd | 06:09:15.711 |      | --- | 0.0 | 41.72 | a | Md | 2.6 | 4716 |
| LSK  | 1.01 | 133.0 | S   | 06:08:48.286 | 0.2  | --- |     |       | m |    |     | 8204 |
| LSK  | 1.01 | 133.0 | Pg  | 06:08:33.503 | -0.0 | --- |     |       | m |    |     | 8203 |
| LSK  | 1.01 | 133.0 | AMl | 06:09:02.290 |      | --- | 0.2 | 0.48  | a | Ml | 2.0 | 4724 |
| LSK  | 1.01 | 133.0 | AMd | 06:09:23.528 |      | --- | 0.0 | 50.03 | a | Md | 2.8 | 4717 |
| PHP  | 1.04 | 35.0  | Sg  | 06:08:48.575 | 0.1  | --- |     |       | m |    |     | 8206 |
| PHP  | 1.04 | 35.0  | Pg  | 06:08:32.833 | -0.9 | --- |     |       | m |    |     | 8205 |
| PHP  | 1.04 | 35.0  | AMl | 06:08:52.460 |      | --- | 0.2 | 0.24  | a | Ml | 2.0 | 4725 |
| PHP  | 1.04 | 35.0  | AMd | 06:09:13.624 |      | --- | 0.0 | 40.79 | a | Md | 2.6 | 4718 |
| NEST | 1.16 | 111.0 | Sg  | 06:08:52.919 | 0.0  | --- |     |       | m |    |     | 8208 |
| NEST | 1.16 | 111.0 | P   | 06:08:35.298 | -1.0 | --- |     |       | m |    |     | 8207 |
| NEST | 1.16 | 111.0 | AMl | 06:08:59.310 |      | --- | 0.1 | 0.30  | a | Ml | 1.9 | 4726 |
| PUK  | 1.21 | 9.0   | Sg  | 06:08:54.426 | 0.2  | --- |     |       | m |    |     | 8210 |
| PUK  | 1.21 | 9.0   | Pg  | 06:08:37.028 | -0.0 | --- |     |       | m |    |     | 8209 |
| PUK  | 1.21 | 9.0   | AMl | 06:08:59.050 |      | --- | 0.2 | 0.38  | a | Ml | 2.3 | 4727 |
| FNA  | 1.33 | 92.0  | Sg  | 06:08:57.962 | -0.2 | --- |     |       | m |    |     | 8212 |
| FNA  | 1.33 | 92.0  | P   | 06:08:37.591 | -1.7 | --- |     |       | m |    |     | 8211 |
| FNA  | 1.33 | 92.0  | AMl | 06:08:59.600 |      | --- | 0.5 | 0.46  | a | Ml | 2.7 | 4728 |
| FNA  | 1.33 | 92.0  | AMd | 06:09:18.427 |      | --- | 0.0 | 40.84 | a | Md | 2.6 | 4719 |
| IGT  | 1.42 | 157.0 | Sn  | 06:09:00.581 | -0.3 | --- |     |       | m |    |     | 8214 |
| IGT  | 1.42 | 157.0 | Pn  | 06:08:41.208 | 0.4  | --- |     |       | m |    |     | 8213 |
| BCI  | 1.55 | 11.0  | Sn  | 06:09:04.694 | -0.2 | --- |     |       | m |    |     | 8216 |
| BCI  | 1.55 | 11.0  | Pn  | 06:08:42.819 | -0.3 | --- |     |       | m |    |     | 8215 |
| BCI  | 1.55 | 11.0  | AMl | 06:09:07.600 |      | --- | 0.3 | 0.54  | a | Ml | 2.6 | 4729 |

DATA\_TYPE COMMENT GSE2.1  
Event 507

Official Magnitude:  
Ml 2.12

Error ellipse:

|               | Azim | Dip | Mag     |
|---------------|------|-----|---------|
| Max:          | 0    | 90  | 20.3800 |
| Intermediate: | 270  | 0   | 0.5200  |
| Min:          | 0    | 0   | 0.2700  |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180005 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 509 Region N/A

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/17 | 18:00:06.43 |     | 0.33 | 40.0678  | 20.0285   |      |      |    | 16.6  | 2.5 | 9    | 9    | 218 | 0.19  | 1.26  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.2 | 0.0  | 4      | 550    |
| Md        | 2.7 | 0.0  | 4      | 550    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|
| SRN | 0.19 | 187.0 | Sg    | 18:00:14.473 | -1.1 |      |       |      |      |     |     |     |       | m    |           | 8239  |
| SRN | 0.19 | 187.0 | P     | 18:00:10.332 | -1.3 |      |       |      |      |     |     |     |       | m    |           | 8238  |
| SRN | 0.19 | 187.0 | AMl   | 18:00:16.250 |      |      |       |      |      |     |     | 2.0 | 0.18  | a    | Ml        | 2.3   |
| SRN | 0.19 | 187.0 | AMd   | 18:00:58.600 |      |      |       |      |      |     |     | 0.0 | 48.27 | a    | Md        | 2.7   |
| LSK | 0.45 | 79.0  | Sg    | 18:00:22.740 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 8241  |
| LSK | 0.45 | 79.0  | Pg    | 18:00:15.186 | -0.4 |      |       |      |      |     |     |     |       | m    |           | 8240  |
| LSK | 0.45 | 79.0  | AMl   | 18:00:28.990 |      |      |       |      |      |     |     | 0.7 | 0.48  | a    | Ml        | 2.0   |
| LSK | 0.45 | 79.0  | AMd   | 18:01:12.332 |      |      |       |      |      |     |     | 0.0 | 57.15 | a    | Md        | 2.9   |
| IGT | 0.58 | 156.0 | Sg    | 18:00:27.303 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 8243  |
| IGT | 0.58 | 156.0 | P     | 18:00:18.297 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 8242  |
| IGT | 0.58 | 156.0 | AMd   | 18:01:00.555 |      |      |       |      |      |     |     | 0.0 | 42.26 | a    | Md        | 2.0   |
| KBN | 0.80 | 45.0  | S     | 18:00:33.978 | 0.4  |      |       |      |      |     |     |     |       | m    |           | 8245  |
| KBN | 0.80 | 45.0  | Pn    | 18:00:21.926 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8244  |
| KBN | 0.80 | 45.0  | AMl   | 18:00:45.760 |      |      |       |      |      |     |     | 0.2 | 0.62  | a    | Ml        | 2.0   |
| FNA | 1.26 | 54.0  | Sg    | 18:00:47.854 | -0.6 |      |       |      |      |     |     |     |       | m    |           | 8247  |
| FNA | 1.26 | 54.0  | Pg    | 18:00:30.716 | 0.3  |      |       |      |      |     |     |     |       | m    |           | 8246  |
| FNA | 1.26 | 54.0  | AMl   | 18:00:54.170 |      |      |       |      |      |     |     | 0.2 | 0.56  | a    | Ml        | 2.3   |
| FNA | 1.26 | 54.0  | AMd   | 18:01:18.479 |      |      |       |      |      |     |     | 0.0 | 47.76 | a    | Md        | 2.8   |

DATA\_TYPE COMMENT GSE2.1  
Event 509

Official Magnitude:  
Ml 2.15

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 117  | 62  | 2.8000 |
| Intermediate: | 282  | 26  | 1.7900 |
| Min:          | 15   | 6   | 0.6500 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180005 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 510 3.7 km from Bashaj, Vlorë, Albania



Date Time Err RMS Latitude Longitude Smaj Smin Az Depth Err Ndef Nsta Gap mdist Mdist Qual Author  
 OrigID  
 2019/03/17 18:00:06.43 0.33 40.0678 20.0285 16.6 2.5 9 9 218 0.19 1.26 m  
 551

Magnitude Err Nsta Author OrigID  
 Ml 2.2 0.0 4 551  
 Md 2.7 0.0 4 551

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|
| SRN | 0.19 | 187.0 | Sg    | 18:00:14.473 | -1.1 |      |       |      |      |     |     |     |       |      |           | 8249  |
| SRN | 0.19 | 187.0 | P     | 18:00:10.332 | -1.3 |      |       |      |      |     |     |     |       |      |           | 8248  |
| SRN | 0.19 | 187.0 | AMl   | 18:00:16.250 |      |      |       |      |      |     |     | 2.0 | 0.18  | a__  | Ml        | 2.3   |
| SRN | 0.19 | 187.0 | AMd   | 18:00:58.600 |      |      |       |      |      |     |     | 0.0 | 48.27 | a__  | Md        | 2.7   |
| LSK | 0.45 | 79.0  | Sg    | 18:00:22.740 | 0.2  |      |       |      |      |     |     |     |       |      |           | 8251  |
| LSK | 0.45 | 79.0  | Pg    | 18:00:15.186 | -0.4 |      |       |      |      |     |     |     |       |      |           | 8250  |
| LSK | 0.45 | 79.0  | AMl   | 18:00:28.990 |      |      |       |      |      |     |     | 0.7 | 0.48  | a__  | Ml        | 2.0   |
| LSK | 0.45 | 79.0  | AMd   | 18:01:12.332 |      |      |       |      |      |     |     | 0.0 | 57.15 | a__  | Md        | 2.9   |
| IGT | 0.58 | 156.0 | Sg    | 18:00:27.303 | 0.1  |      |       |      |      |     |     |     |       |      |           | 8253  |
| IGT | 0.58 | 156.0 | P     | 18:00:18.297 | -0.0 |      |       |      |      |     |     |     |       |      |           | 8252  |
| IGT | 0.58 | 156.0 | AMd   | 18:01:00.555 |      |      |       |      |      |     |     | 0.0 | 42.26 | a__  | Md        | 2.0   |
| KBN | 0.80 | 45.0  | S     | 18:00:33.978 | 0.4  |      |       |      |      |     |     |     |       |      |           | 8255  |
| KBN | 0.80 | 45.0  | Pn    | 18:00:21.926 | 0.0  |      |       |      |      |     |     |     |       |      |           | 8254  |
| KBN | 0.80 | 45.0  | AMl   | 18:00:45.760 |      |      |       |      |      |     |     | 0.2 | 0.62  | a__  | Ml        | 2.0   |
| FNA | 1.26 | 54.0  | Sg    | 18:00:47.854 | -0.6 |      |       |      |      |     |     |     |       |      |           | 8257  |
| FNA | 1.26 | 54.0  | Pg    | 18:00:30.716 | 0.3  |      |       |      |      |     |     |     |       |      |           | 8256  |
| FNA | 1.26 | 54.0  | AMl   | 18:00:54.170 |      |      |       |      |      |     |     | 0.2 | 0.56  | a__  | Ml        | 2.3   |
| FNA | 1.26 | 54.0  | AMd   | 18:01:18.479 |      |      |       |      |      |     |     | 0.0 | 47.76 | a__  | Md        | 2.8   |

DATA\_TYPE COMMENT GSE2.1  
 Event 510

Official Magnitude:  
 Ml 2.15

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 117  | 62  | 2.8000 |
| Intermediate: | 282  | 26  | 1.7900 |
| Min:          | 15   | 6   | 0.6500 |

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556180005 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 511 0.5 km from Kolonjë, Fier, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/18 | 00:38:03.17 |     | 0.26 | 40.8225  | 19.6092   |      |      |    | 36.3  | 0.8 | 19   | 14   | 139 | 0.36  | 1.58  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Md        | 2.8 | 0.0  | 7      | 552    |
| Ml        | 2.3 | 0.0  | 9      | 552    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| VLO  | 0.36 | 194.0 | Sg    | 00:38:18.485 | 0.5  |      |       |      |      |     |     |     |       | m    |           | 8259  |      |
| VLO  | 0.36 | 194.0 | Pg    | 00:38:11.461 | -0.2 |      |       |      |      |     |     |     |       | m    |           | 8258  |      |
| VLO  | 0.36 | 194.0 | AMd   | 00:38:59.124 |      |      |       |      |      |     |     | 0.0 | 47.66 | a    | Md        | 2.7   | 4764 |
| VLO  | 0.36 | 194.0 | AMl   | 00:38:24.820 |      |      |       |      |      |     |     | 2.7 | 0.18  | a    | Ml        | 2.6   | 4771 |
| TIR  | 0.56 | 0.0   | Pg    | 00:38:13.180 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8279  |      |
| TIR  | 0.56 | 20.0  | Sg    | 00:38:23.943 | -0.4 |      |       |      |      |     |     |     |       | m    |           | 8260  |      |
| TIR  | 0.56 | 20.0  | AMl   | 00:38:23.710 |      |      |       |      |      |     |     | 0.2 | 0.18  | a    | Ml        | 1.8   | 4772 |
| KBN  | 0.92 | 102.0 | Sg    | 00:38:34.039 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 8262  |      |
| KBN  | 0.92 | 102.0 | Pg    | 00:38:19.989 | -0.8 |      |       |      |      |     |     |     |       | m    |           | 8261  |      |
| KBN  | 0.92 | 102.0 | AMd   | 00:39:01.002 |      |      |       |      |      |     |     | 0.0 | 41.01 | a    | Md        | 2.6   | 4765 |
| KBN  | 0.92 | 102.0 | AMl   | 00:38:37.310 |      |      |       |      |      |     |     | 0.2 | 0.46  | a    | Ml        | 2.0   | 4773 |
| SRN  | 0.99 | 162.0 | Sg    | 00:38:37.264 | -0.2 |      |       |      |      |     |     |     |       | m    |           | 8264  |      |
| SRN  | 0.99 | 162.0 | Pg    | 00:38:22.963 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 8263  |      |
| SRN  | 0.99 | 162.0 | AMd   | 00:39:12.753 |      |      |       |      |      |     |     | 0.0 | 49.79 | a    | Md        | 2.8   | 4766 |
| SRN  | 0.99 | 162.0 | AMl   | 00:38:38.710 |      |      |       |      |      |     |     | 0.2 | 0.66  | a    | Ml        | 2.1   | 4774 |
| LSK  | 1.01 | 131.0 | S     | 00:38:37.465 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 8266  |      |
| LSK  | 1.01 | 131.0 | Pg    | 00:38:22.436 | -0.2 |      |       |      |      |     |     |     |       | m    |           | 8265  |      |
| LSK  | 1.01 | 131.0 | AMd   | 00:39:15.128 |      |      |       |      |      |     |     | 0.0 | 52.69 | a    | Md        | 2.8   | 4767 |
| LSK  | 1.01 | 131.0 | AMl   | 00:38:44.940 |      |      |       |      |      |     |     | 0.3 | 0.54  | a    | Ml        | 2.3   | 4775 |
| SCTE | 1.14 | 230.0 | S     | 00:38:41.192 | -0.2 |      |       |      |      |     |     |     |       | m    |           | 8268  |      |
| SCTE | 1.14 | 230.0 | P     | 00:38:25.053 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 8267  |      |
| NEST | 1.17 | 109.0 | Sg    | 00:38:42.167 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 8270  |      |
| NEST | 1.17 | 109.0 | Pg    | 00:38:24.078 | -1.3 |      |       |      |      |     |     |     |       | m    |           | 8269  |      |
| NEST | 1.17 | 109.0 | AMl   | 00:38:47.540 |      |      |       |      |      |     |     | 0.1 | 0.32  | a    | Ml        | 2.0   | 4776 |
| PUK  | 1.24 | 9.0   | Sg    | 00:38:44.011 | 0.3  |      |       |      |      |     |     |     |       | m    |           | 8272  |      |
| PUK  | 1.24 | 9.0   | Pg    | 00:38:26.178 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 8271  |      |
| PUK  | 1.24 | 9.0   | AMd   | 00:39:13.966 |      |      |       |      |      |     |     | 0.0 | 47.79 | a    | Md        | 2.8   | 4768 |
| PUK  | 1.24 | 9.0   | AMl   | 00:38:48.200 |      |      |       |      |      |     |     | 0.3 | 0.46  | a    | Ml        | 2.5   | 4777 |
| FNA  | 1.35 | 91.0  | Sg    | 00:38:46.312 | -0.6 |      |       |      |      |     |     |     |       | m    |           | 8274  |      |
| FNA  | 1.35 | 91.0  | P     | 00:38:27.012 | -1.2 |      |       |      |      |     |     |     |       | m    |           | 8273  |      |
| FNA  | 1.35 | 91.0  | AMd   | 00:39:14.575 |      |      |       |      |      |     |     | 0.0 | 47.56 | a    | Md        | 2.8   | 4769 |
| FNA  | 1.35 | 91.0  | AMl   | 00:38:48.580 |      |      |       |      |      |     |     | 0.5 | 0.36  | a    | Ml        | 2.8   | 4778 |
| IGT  | 1.40 | 156.0 | Sg    | 00:38:48.098 | -0.4 |      |       |      |      |     |     |     |       | m    |           | 8276  |      |
| IGT  | 1.40 | 156.0 | Pg    | 00:38:29.398 | 0.4  |      |       |      |      |     |     |     |       | m    |           | 8275  |      |
| IGT  | 1.40 | 156.0 | AMd   | 00:39:17.536 |      |      |       |      |      |     |     | 0.0 | 48.14 | a    | Md        | 2.2   | 4770 |
| BCI  | 1.58 | 12.0  | Sn    | 00:38:53.214 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 8278  |      |
| BCI  | 1.58 | 12.0  | P     | 00:38:31.773 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8277  |      |
| BCI  | 1.58 | 12.0  | AMl   | 00:38:56.780 |      |      |       |      |      |     |     | 0.2 | 0.60  | a    | Ml        | 2.5   | 4779 |

DATA\_TYPE COMMENT GSE2.1

Event 511

Official Magnitude:

Ml 2.32

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 144  | 75  | 0.8300 |
| Intermediate: | 267  | 8   | 0.5800 |
| Min:          | 359  | 12  | 0.4000 |

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556180005 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 512 0.6 km from Bërzeshtë, Elbasan, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/18 | 13:50:33.82 |     | 0.28 | 41.0500  | 20.4490   |      |      |    | 11.6  | 1.2 | 16   | 10   | 122 | 0.49  | 2.26  | m    |        |
| OrigID 553 |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 3.2 | 0.0  | 7      | 553    |
| Md        | 3.4 | 0.0  | 2      | 553    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp  | Per    | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|------|--------|------|-----------|-------|
| KBN  | 0.50 | 148.0 | Sg    | 13:50:50.932 | 0.1  |      |       |      |      |     |     |      |        |      |           | 8281  |
| KBN  | 0.50 | 148.0 | Pg    | 13:50:43.799 | 0.3  |      |       |      |      |     |     |      |        |      |           | 8280  |
| KBN  | 0.50 | 148.0 | AMl   | 13:50:53.340 |      |      |       |      |      |     |     | 23.7 | 0.60   | a__  | Ml        | 3.6   |
| KBN  | 0.50 | 148.0 | AMd   | 13:52:14.566 |      |      |       |      |      |     |     | 0.0  | 90.77  | a__  | Md        | 3.4   |
| TIR  | 0.53 | 0.0   | Pg    | 13:50:43.302 | 0.0  |      |       |      |      |     |     |      |        |      |           | 8299  |
| TIR  | 0.53 | 305.0 | Sg    | 13:50:52.871 | 0.1  |      |       |      |      |     |     |      |        |      |           | 8282  |
| TIR  | 0.53 | 305.0 | AMl   | 13:50:56.500 |      |      |       |      |      |     |     | 2.8  | 0.62   | a__  | Ml        | 2.7   |
| FNA  | 0.76 | 110.0 | Sg    | 13:51:00.500 | 0.2  |      |       |      |      |     |     |      |        |      |           | 8284  |
| FNA  | 0.76 | 110.0 | Pg    | 13:50:48.874 | -0.1 |      |       |      |      |     |     |      |        |      |           | 8283  |
| FNA  | 0.76 | 110.0 | AMl   | 13:51:07.780 |      |      |       |      |      |     |     | 6.0  | 0.38   | a__  | Ml        | 3.4   |
| FNA  | 0.76 | 110.0 | AMd   | 13:52:30.633 |      |      |       |      |      |     |     | 0.0  | 101.76 | a__  | Md        | 3.5   |
| NEST | 0.78 | 144.0 | Sn    | 13:51:00.844 | -0.3 |      |       |      |      |     |     |      |        |      |           | 8286  |
| NEST | 0.78 | 144.0 | Pn    | 13:50:48.599 | -0.8 |      |       |      |      |     |     |      |        |      |           | 8285  |
| NEST | 0.78 | 144.0 | AMl   | 13:51:04.130 |      |      |       |      |      |     |     | 3.3  | 0.54   | a__  | Ml        | 3.1   |
| LSK  | 0.91 | 172.0 | Sn    | 13:51:05.099 | 0.1  |      |       |      |      |     |     |      |        |      |           | 8288  |
| LSK  | 0.91 | 172.0 | Pn    | 13:50:49.473 | -2.2 |      |       |      |      |     |     |      |        |      |           | 8287  |
| LSK  | 0.91 | 172.0 | AMl   | 13:51:09.540 |      |      |       |      |      |     |     | 6.2  | 0.46   | a__  | Ml        | 3.5   |
| PUK  | 1.08 | 338.0 | Sn    | 13:51:10.788 | 0.2  |      |       |      |      |     |     |      |        |      |           | 8290  |
| PUK  | 1.08 | 338.0 | Pn    | 13:50:54.165 | -0.6 |      |       |      |      |     |     |      |        |      |           | 8289  |
| PUK  | 1.08 | 338.0 | AMl   | 13:51:18.310 |      |      |       |      |      |     |     | 1.5  | 0.36   | a__  | Ml        | 3.0   |

|      |      |       |     |              |      |     |                   |      |
|------|------|-------|-----|--------------|------|-----|-------------------|------|
| SRN  | 1.22 | 197.0 | Sn  | 13:51:15.728 | -0.1 | --- | m                 | 8292 |
| SRN  | 1.22 | 197.0 | Pn  | 13:50:56.598 | -1.2 | --- | mde               | 8291 |
| BCI  | 1.35 | 348.0 | S   | 13:51:19.230 | 0.3  | --- | m                 | 8294 |
| BCI  | 1.35 | 348.0 | P   | 13:50:59.245 | -0.4 | --- | m                 | 8293 |
| IGT  | 1.52 | 184.0 | S   | 13:51:24.452 | -0.1 | --- | m                 | 8296 |
| IGT  | 1.52 | 184.0 | Pn  | 13:51:03.265 | 0.5  | --- | mce               | 8295 |
| IGT  | 1.52 | 184.0 | AM1 | 13:51:28.350 |      | --- | 1.1 1.04 a Ml 3.2 | 4788 |
| LKD2 | 2.26 | 175.0 | S   | 13:51:45.558 | -0.0 | --- | m                 | 8298 |
| LKD2 | 2.26 | 175.0 | P   | 13:51:13.314 | -1.5 | --- | m                 | 8297 |

DATA\_TYPE COMMENT GSE2.1  
Event 512

Official Magnitude:  
Ml 3.19

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 74   | 66  | 1.3200 |
| Intermediate: | 244  | 22  | 0.6800 |
| Min:          | 335  | 4   | 0.3500 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180005 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 513 Region N/A

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/18 | 22:17:14.93 |     | 0.22 | 41.2987  | 20.0368   |      |      |    | 4.5   | 2.2 | 9    | 10   | 132 | 0.13  | 1.22  | m    | 554    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.2 | 0.0  | 6      | 554    |
| Md        | 2.7 | 0.0  | 5      | 554    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|
| TIR | 0.13 | 0.0   | Pg    | 22:17:17.994 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8311  |
| TIR | 0.14 | 291.0 | Sg    | 22:17:20.437 | -0.1 |      |       |      |      | --- |     |     |       | m    |           | 8300  |
| TIR | 0.14 | 291.0 | AM1   | 22:17:22.250 |      |      |       |      |      | --- |     | 2.7 | 0.44  | a Ml | 2.2       | 4794  |
| PUK | 0.75 | 352.0 | Sg    | 22:17:41.197 | 0.1  |      |       |      |      | --- |     |     |       | m    |           | 8302  |
| PUK | 0.75 | 352.0 | Pg    | 22:17:29.795 | -0.1 |      |       |      |      | --- |     |     |       | m    |           | 8301  |
| PUK | 0.75 | 352.0 | AM1   | 22:17:42.730 |      |      |       |      |      | --- |     | 0.9 | 0.28  | a Ml | 2.5       | 4795  |
| PUK | 0.75 | 352.0 | AMd   | 22:18:11.468 |      |      |       |      |      | --- |     | 0.0 | 41.67 | a Md | 2.6       | 4789  |
| KBN | 0.88 | 139.0 | Sg    | 22:17:44.853 | -0.1 |      |       |      |      | --- |     |     |       | m    |           | 8304  |
| KBN | 0.88 | 139.0 | Pg    | 22:17:32.451 | 0.4  |      |       |      |      | --- |     |     |       | m    |           | 8303  |

|     |      |       |     |              |      |     |       |     |     |     |      |
|-----|------|-------|-----|--------------|------|-----|-------|-----|-----|-----|------|
| KBN | 0.88 | 139.0 | AMl | 22:17:50.280 | ---  | 0.2 | 0.40  | a__ | Ml  | 2.0 | 4796 |
| KBN | 0.88 | 139.0 | AMd | 22:18:12.607 | ---  | 0.0 | 40.16 | a__ | Md  | 2.6 | 4790 |
| BCI | 1.07 | 1.0   | Sg  | 22:17:51.841 | 0.1  | --- | ---   | m__ | --- | --- | 8306 |
| BCI | 1.07 | 1.0   | Pg  | 22:17:35.212 | -0.8 | --- | ---   | m__ | --- | --- | 8305 |
| BCI | 1.07 | 1.0   | AMl | 22:17:53.670 | ---  | 0.5 | 0.42  | a__ | Ml  | 2.6 | 4797 |
| BCI | 1.07 | 1.0   | AMd | 22:18:29.640 | ---  | 0.0 | 54.43 | a__ | Md  | 2.9 | 4791 |
| FNA | 1.14 | 116.0 | Sg  | 22:17:54.156 | -0.3 | --- | ---   | m__ | --- | --- | 8308 |
| FNA | 1.14 | 116.0 | Pg  | 22:17:36.729 | -0.8 | --- | ---   | m__ | --- | --- | 8307 |
| FNA | 1.14 | 116.0 | AMl | 22:17:57.660 | ---  | 0.1 | 0.42  | a__ | Ml  | 1.9 | 4798 |
| FNA | 1.14 | 116.0 | AMd | 22:18:23.119 | ---  | 0.0 | 46.39 | a__ | Md  | 2.7 | 4792 |
| LSK | 1.22 | 159.0 | Sg  | 22:17:56.837 | -0.1 | --- | ---   | m__ | --- | --- | 8310 |
| LSK | 1.22 | 159.0 | Pg  | 22:17:39.440 | 0.5  | --- | ---   | m__ | --- | --- | 8309 |
| LSK | 1.22 | 159.0 | AMl | 22:18:11.220 | ---  | 0.2 | 0.70  | a__ | Ml  | 2.2 | 4799 |
| LSK | 1.22 | 159.0 | AMd | 22:18:28.150 | ---  | 0.0 | 48.71 | a__ | Md  | 2.8 | 4793 |

DATA\_TYPE COMMENT GSE2.1  
Event 513

Official Magnitude:  
Ml 2.22

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 251  | 60  | 2.5100 |
| Intermediate: | 54   | 27  | 0.5800 |
| Min:          | 148  | 7   | 0.3000 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180004 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 514 1.9 km from Çerem, Kukës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/19 | 17:43:00.38 |     | 0.04 | 42.4923  | 19.9840   |      |      |    | 4.1   | 0.8 | 9    | 13   | 318 | 0.14  | 2.22  | m    |        |
| 555        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.4 | 0.0  | 4      | 555    |
| Md        | 2.8 | 0.0  | 5      | 555    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp  | Per  | Qual | Magnitude | ArrID |      |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|------|------|------|-----------|-------|------|
| BCI | 0.14 | 0.0   | Pg    | 17:43:03.362 | 0.0  | ---  | ---   | ---  | ---  | --- | --- | ---  | ---  | m__  | ---       | 8321  |      |
| BCI | 0.14 | 153.0 | Sg    | 17:43:05.869 | -0.0 | ---  | ---   | ---  | ---  | --- | --- | ---  | ---  | m__  | ---       | 8312  |      |
| BCI | 0.14 | 153.0 | AMl   | 17:43:06.310 | ---  | ---  | ---   | ---  | ---  | --- | --- | 18.6 | 0.16 | a__  | Ml        | 3.0   | 4805 |
| PUK | 0.45 | 189.0 | Sg    | 17:43:16.661 | -0.1 | ---  | ---   | ---  | ---  | --- | --- | ---  | ---  | m__  | ---       | 8314  |      |

|      |      |       |     |              |      |     |  |  |  |  |  |  |  |  |  |  |     |       |      |    |     |      |
|------|------|-------|-----|--------------|------|-----|--|--|--|--|--|--|--|--|--|--|-----|-------|------|----|-----|------|
| PUK  | 0.45 | 189.0 | Pg  | 17:43:09.753 | 0.0  | --- |  |  |  |  |  |  |  |  |  |  | m   |       | 8313 |    |     |      |
| PUK  | 0.45 | 189.0 | AMl | 17:43:18.340 |      | --- |  |  |  |  |  |  |  |  |  |  | 1.9 | 0.36  | a    | Ml | 2.5 | 4806 |
| PUK  | 0.45 | 189.0 | AMd | 17:43:49.139 |      | --- |  |  |  |  |  |  |  |  |  |  | 0.0 | 39.39 | a    | Md | 2.5 | 4800 |
| PHP  | 0.88 | 156.0 | Sg  | 17:43:30.561 | 0.0  | --- |  |  |  |  |  |  |  |  |  |  |     |       |      |    |     | 8316 |
| PHP  | 0.88 | 156.0 | Pg  | 17:43:17.557 | -0.1 | --- |  |  |  |  |  |  |  |  |  |  |     |       |      |    |     | 8315 |
| PHP  | 0.88 | 156.0 | AMl | 17:43:34.490 |      | --- |  |  |  |  |  |  |  |  |  |  |     |       |      |    |     | 4807 |
| PHP  | 0.88 | 156.0 | AMd | 17:44:09.841 |      | --- |  |  |  |  |  |  |  |  |  |  |     |       |      |    |     | 4801 |
| TIR  | 1.15 | 185.0 | Sn  | 17:43:40.160 | 0.0  | --- |  |  |  |  |  |  |  |  |  |  |     |       |      |    |     | 8318 |
| TIR  | 1.15 | 185.0 | Pn  | 17:43:23.125 | 0.0  | --- |  |  |  |  |  |  |  |  |  |  |     |       |      |    |     | 8317 |
| TIR  | 1.15 | 185.0 | AMl | 17:43:45.630 |      | --- |  |  |  |  |  |  |  |  |  |  |     |       |      |    |     | 4808 |
| TIR  | 1.15 | 185.0 | AMd | 17:44:14.426 |      | --- |  |  |  |  |  |  |  |  |  |  |     |       |      |    |     | 4802 |
| FNA  | 2.00 | 147.0 | Pn  | 17:43:38.433 | -0.0 | --- |  |  |  |  |  |  |  |  |  |  |     |       |      |    |     | 8319 |
| FNA  | 2.00 | 147.0 | AMd | 17:44:35.468 |      | --- |  |  |  |  |  |  |  |  |  |  |     |       |      |    |     | 4803 |
| NEST | 2.22 | 158.0 | Pn  | 17:43:41.691 | -0.0 | --- |  |  |  |  |  |  |  |  |  |  |     |       |      |    |     | 8320 |
| NEST | 2.22 | 158.0 | AMd | 17:44:42.001 |      | --- |  |  |  |  |  |  |  |  |  |  |     |       |      |    |     | 4804 |

DATA\_TYPE COMMENT GSE2.1  
Event 514

Official Magnitude:  
Ml 2.39

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 100  | 47  | 1.1000 |
| Intermediate: | 200  | 9   | 0.7100 |
| Min:          | 298  | 42  | 0.6300 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180004 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 515 1.7 km from Gorna Belica, Struga, Macedonia

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err  | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|------|------|------|-----|-------|-------|------|--------|
| 2019/03/20 | 10:13:34.52 |     | 0.18 | 41.2345  | 20.5713   |      |      |    | 7.2   | 15.1 | 11   | 20   | 138 | 0.46  | 1.19  | m    | 556    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.0 | 0.0  | 6      | 556    |
| Md        | 2.4 | 0.0  | 1      | 556    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |      |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|------|
| PHP | 0.46 | 348.0 | Sg    | 10:13:50.729 | 0.2  |      |       |      |      |     |     |     |      |      |           | 8323  |      |
| PHP | 0.46 | 348.0 | Pg    | 10:13:43.311 | -0.4 |      |       |      |      |     |     |     |      |      |           | 8322  |      |
| PHP | 0.46 | 348.0 | AMl   | 10:13:55.690 |      |      |       |      |      |     |     | 0.3 | 0.30 | a    | Ml        | 1.7   | 4810 |

|      |      |       |     |              |      |     |     |     |     |     |       |     |     |     |     |     |   |     |      |
|------|------|-------|-----|--------------|------|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|-----|---|-----|------|
| TIR  | 0.55 | 0.0   | Pg  | 10:13:45.084 | 0.0  | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | --- | m | --- | 8335 |
| TIR  | 0.54 | 283.0 | Sg  | 10:13:53.748 | -0.1 | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | --- | m | --- | 8324 |
| TIR  | 0.54 | 283.0 | AMl | 10:13:53.640 | ---  | --- | --- | --- | --- | 0.7 | 0.18  | a   | Ml  | 2.1 | --- | --- | m | --- | 4811 |
| FNA  | 0.76 | 126.0 | Sg  | 10:14:00.812 | -0.4 | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | --- | m | --- | 8326 |
| FNA  | 0.76 | 126.0 | Pg  | 10:13:49.840 | 0.1  | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | --- | m | --- | 8325 |
| FNA  | 0.76 | 126.0 | AMl | 10:14:05.570 | ---  | --- | --- | --- | --- | 0.6 | 0.26  | a   | Ml  | 2.4 | --- | --- | m | --- | 4812 |
| NEST | 0.90 | 155.0 | Sn  | 10:14:05.705 | 0.2  | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | --- | m | --- | 8328 |
| NEST | 0.90 | 155.0 | Pn  | 10:13:52.389 | 0.1  | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | --- | m | --- | 8327 |
| NEST | 0.90 | 155.0 | AMl | 10:14:08.060 | ---  | --- | --- | --- | --- | 0.1 | 0.72  | a   | Ml  | 1.9 | --- | --- | m | --- | 4813 |
| PUK  | 0.95 | 329.0 | Sg  | 10:14:07.270 | -0.0 | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | --- | m | --- | 8330 |
| PUK  | 0.95 | 329.0 | Pg  | 10:13:53.362 | 0.1  | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | --- | m | --- | 8329 |
| PUK  | 0.95 | 329.0 | AMl | 10:14:09.150 | ---  | --- | --- | --- | --- | 0.1 | 0.36  | a   | Ml  | 1.8 | --- | --- | m | --- | 4814 |
| PUK  | 0.95 | 329.0 | AMd | 10:14:27.288 | ---  | --- | --- | --- | --- | 0.0 | 33.93 | a   | Md  | 2.4 | --- | --- | m | --- | 4809 |
| LSK  | 1.08 | 178.0 | Sg  | 10:14:09.901 | -1.7 | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | --- | m | --- | 8332 |
| LSK  | 1.08 | 178.0 | P   | 10:13:55.583 | -0.1 | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | --- | m | --- | 8331 |
| BCI  | 1.19 | 342.0 | Sn  | 10:14:15.172 | -0.1 | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | --- | m | --- | 8334 |
| BCI  | 1.19 | 342.0 | Pn  | 10:13:58.856 | 1.1  | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | --- | m | --- | 8333 |
| BCI  | 1.19 | 342.0 | AMl | 10:14:23.570 | ---  | --- | --- | --- | --- | 0.2 | 0.64  | a   | Ml  | 2.2 | --- | --- | m | --- | 4815 |

DATA\_TYPE COMMENT GSE2.1  
Event 515

Official Magnitude:  
Ml 2.01

Error ellipse:

|               | Azim | Dip | Mag     |
|---------------|------|-----|---------|
| Max:          | 343  | 89  | 15.1200 |
| Intermediate: | 59   | 0   | 0.7800  |
| Min:          | 149  | 1   | 0.3100  |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180004 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 517 2.5 km from Shalë, Vlorë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/20 | 23:10:45.69 |     | 0.29 | 40.2113  | 19.5525   |      |      |    | 8.3   | 1.7 | 14   | 31   | 114 | 0.26  | 1.98  | m    | 558    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.9 | 0.0  | 6      | 558    |

| Sta | Dist | EvAz | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per | Qual | Magnitude | ArrID |
|-----|------|------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-----|------|-----------|-------|
| VLO | 0.26 | 0.0  | Pg    | 23:10:49.250 | 0.0  |      |       |      |      | --- |     |     |     | m    |           | 8373  |

|      |      |       |     |              |      |     |  |  |  |     |      |   |    |  |     |  |   |  |      |
|------|------|-------|-----|--------------|------|-----|--|--|--|-----|------|---|----|--|-----|--|---|--|------|
| VLO  | 0.26 | 351.0 | Sg  | 23:10:54.662 | 0.3  | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8357 |
| VLO  | 0.26 | 351.0 | AM1 | 23:10:56.260 |      | --- |  |  |  | 5.5 | 0.26 | a | M1 |  | 2.7 |  | a |  | 4823 |
| SRN  | 0.48 | 133.0 | Sg  | 23:11:03.519 | 0.1  | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8359 |
| SRN  | 0.48 | 133.0 | Pg  | 23:10:55.315 | -0.5 | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8358 |
| SRN  | 0.48 | 133.0 | AM1 | 23:11:07.310 |      | --- |  |  |  | 0.1 | 0.42 | a | M1 |  | 1.3 |  | a |  | 4825 |
| SRN  | 0.48 | 133.0 | AM1 | 23:11:11.760 |      | --- |  |  |  | 0.1 | 0.36 | a | M1 |  | 1.3 |  | a |  | 4824 |
| LSK  | 0.80 | 94.0  | Sg  | 23:11:13.478 | 0.0  | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8361 |
| LSK  | 0.80 | 94.0  | Pg  | 23:11:00.866 | -0.7 | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8360 |
| LSK  | 0.80 | 94.0  | AM1 | 23:11:17.170 |      | --- |  |  |  | 0.2 | 0.78 | a | M1 |  | 1.9 |  | a |  | 4826 |
| SCTE | 0.84 | 262.0 | Sg  | 23:11:16.809 | 1.9  | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8363 |
| SCTE | 0.84 | 262.0 | Pg  | 23:11:02.380 | -0.0 | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8362 |
| SCTE | 0.84 | 262.0 | AM1 | 23:11:22.500 |      | --- |  |  |  | 0.2 | 0.48 | a | M1 |  | 2.0 |  | a |  | 4827 |
| IGT  | 0.90 | 138.0 | Sg  | 23:11:17.419 | 0.4  | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8365 |
| IGT  | 0.90 | 138.0 | Pg  | 23:11:03.558 | -0.1 | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8364 |
| NEST | 1.16 | 79.0  | Sg  | 23:11:25.515 | -0.2 | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8367 |
| NEST | 1.16 | 79.0  | Pg  | 23:11:08.107 | -0.4 | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8366 |
| NEST | 1.16 | 79.0  | AM1 | 23:11:30.900 |      | --- |  |  |  | 0.1 | 1.04 | a | M1 |  | 1.9 |  | a |  | 4828 |
| FNA  | 1.51 | 67.0  | Sn  | 23:11:36.748 | 0.3  | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8369 |
| FNA  | 1.51 | 67.0  | Pn  | 23:11:14.590 | -0.1 | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8368 |
| FNA  | 1.51 | 67.0  | AM1 | 23:11:42.250 |      | --- |  |  |  | 0.1 | 0.56 | a | M1 |  | 2.2 |  | a |  | 4829 |
| LKD2 | 1.66 | 148.0 | Sn  | 23:11:41.450 | 0.4  | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8371 |
| LKD2 | 1.66 | 148.0 | Pn  | 23:11:17.144 | -0.2 | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8370 |
| NOCI | 1.98 | 288.0 | Pn  | 23:11:21.347 | -1.6 | --- |  |  |  |     |      |   |    |  |     |  | m |  | 8372 |

DATA\_TYPE COMMENT GSE2.1  
Event 517

Official Magnitude:  
M1 1.94

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 256  | 78  | 1.7700 |
| Intermediate: | 63   | 11  | 0.7200 |
| Min:          | 154  | 3   | 0.5600 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180004 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 518 0.7 km from Pashkashesh, Tirana, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |  |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|--|
| 2019/03/20 | 19:31:14.05 |     | 0.09 | 41.2368  | 19.9842   |      |      |    | 11.8  | 0.8 | 6    | 31   | 284 | 0.14  | 1.53  | m    |        |  |
| 559        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |  |



| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.3 | 0.0  | 3      | 559    |
| Md        | 1.9 | 0.0  | 2      | 559    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|
| TIR  | 0.00 | 0.0   | Pg    | 19:31:18.429 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8381  |
| TIR  | 0.14 | 321.0 | Sg    | 19:31:20.456 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 8374  |
| TIR  | 0.14 | 321.0 | AMl   | 19:31:22.260 |      |      |       |      |      |     |     | 0.2 | 0.18  | a    | Ml        | 1.2   |
| TIR  | 0.14 | 321.0 | AMl   | 19:31:21.370 |      |      |       |      |      |     |     | 0.3 | 0.12  | a    | Ml        | 1.3   |
| PHP  | 0.56 | 37.0  | Sg    | 19:31:33.544 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 8376  |
| PHP  | 0.56 | 37.0  | Pg    | 19:31:25.253 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8375  |
| PHP  | 0.56 | 37.0  | AMl   | 19:31:35.380 |      |      |       |      |      |     |     | 0.0 | 0.12  | a    | Ml        | 1.0   |
| PHP  | 0.56 | 37.0  | AMd   | 19:31:44.433 |      |      |       |      |      |     |     | 0.0 | 19.18 | a    | Md        | 1.8   |
| PUK  | 0.81 | 356.0 | Sg    | 19:31:42.021 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8378  |
| PUK  | 0.81 | 356.0 | Pg    | 19:31:30.640 | 0.6  |      |       |      |      |     |     |     |       | m    |           | 8377  |
| PUK  | 0.81 | 356.0 | AMl   | 19:31:43.200 |      |      |       |      |      |     |     | 0.1 | 0.22  | a    | Ml        | 1.6   |
| PUK  | 0.81 | 356.0 | AMl   | 19:31:42.990 |      |      |       |      |      |     |     | 0.1 | 0.24  | a    | Ml        | 1.7   |
| PUK  | 0.81 | 356.0 | AMd   | 19:31:52.676 |      |      |       |      |      |     |     | 0.0 | 22.04 | a    | Md        | 1.9   |
| DRME | 1.12 | 329.0 | Pg    | 19:31:34.803 | -1.1 |      |       |      |      |     |     |     |       | m    |           | 8379  |
| CEME | 1.53 | 330.0 | Pn    | 19:31:43.190 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 8380  |

DATA\_TYPE COMMENT GSE2.1  
Event 518

Official Magnitude:  
Ml 1.28

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 347  | 37  | 1.2800 |
| Intermediate: | 194  | 49  | 0.9200 |
| Min:          | 88   | 14  | 0.5400 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180004 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 519 1.3 km from Rreth-Baz, Dibër, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/21 | 17:03:53.16 |     | 0.02 | 41.6757  | 19.9698   |      |      |    | 22.5  | 1.0 | 15   | 10   | 103 | 0.33  | 2.36  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.7 | 0.0  | 6      | 560    |
| Md        | 3.0 | 0.0  | 7      | 560    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| TIR  | 0.34 | 194.0 | Sg    | 17:04:06.315 | -0.0 |      |       |      |      | --- |     |     |       | m    |           | 8383  |      |
| TIR  | 0.34 | 194.0 | Pg    | 17:04:00.685 | -0.0 |      |       |      |      | --- |     |     |       | m    |           | 8382  |      |
| TIR  | 0.34 | 194.0 | AMl   | 17:04:08.160 |      |      |       |      |      | --- |     | 0.6 | 0.32  | a    | Ml        | 1.9   | 4844 |
| TIR  | 0.34 | 194.0 | AMd   | 17:04:41.795 |      |      |       |      |      | --- |     | 0.0 | 41.11 | a    | Md        | 2.5   | 4837 |
| PHP  | 0.35 | 88.0  | Sg    | 17:04:06.320 | -0.0 |      |       |      |      | --- |     |     |       | m    |           | 8385  |      |
| PHP  | 0.35 | 88.0  | Pg    | 17:04:00.700 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8384  |      |
| PHP  | 0.35 | 88.0  | AMl   | 17:04:08.020 |      |      |       |      |      | --- |     | 4.3 | 0.18  | a    | Ml        | 2.8   | 4845 |
| PHP  | 0.35 | 88.0  | AMd   | 17:04:35.706 |      |      |       |      |      | --- |     | 0.0 | 35.01 | a    | Md        | 2.4   | 4838 |
| PUK  | 0.37 | 352.0 | Sg    | 17:04:07.194 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8387  |      |
| PUK  | 0.37 | 352.0 | Pg    | 17:04:01.183 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8386  |      |
| PUK  | 0.37 | 352.0 | AMl   | 17:04:08.800 |      |      |       |      |      | --- |     | 6.1 | 0.24  | a    | Ml        | 2.9   | 4846 |
| PUK  | 0.37 | 352.0 | AMd   | 17:04:37.540 |      |      |       |      |      | --- |     | 0.0 | 36.36 | a    | Md        | 2.4   | 4839 |
| BCI  | 0.69 | 0.0   | Pg    | 17:04:05.864 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8397  |      |
| BCI  | 0.69 | 5.0   | Sg    | 17:04:17.262 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8388  |      |
| BCI  | 0.69 | 5.0   | AMl   | 17:04:18.830 |      |      |       |      |      | --- |     | 1.2 | 0.42  | a    | Ml        | 2.6   | 4847 |
| FNA  | 1.39 | 129.0 | Sg    | 17:04:39.056 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8390  |      |
| FNA  | 1.39 | 129.0 | Pg    | 17:04:19.346 | -0.0 |      |       |      |      | --- |     |     |       | m    |           | 8389  |      |
| FNA  | 1.39 | 129.0 | AMl   | 17:04:43.250 |      |      |       |      |      | --- |     | 0.2 | 0.38  | a    | Ml        | 2.5   | 4848 |
| FNA  | 1.39 | 129.0 | AMd   | 17:05:24.656 |      |      |       |      |      | --- |     | 0.0 | 65.31 | a    | Md        | 3.1   | 4840 |
| NEST | 1.50 | 146.0 | Pn    | 17:04:21.333 | -0.0 |      |       |      |      | --- |     |     |       | m    |           | 8391  |      |
| NEST | 1.50 | 146.0 | AMd   | 17:05:27.250 |      |      |       |      |      | --- |     | 0.0 | 65.92 | a    | Md        | 3.1   | 4841 |
| LSK  | 1.60 | 162.0 | Sn    | 17:04:45.285 | 0.1  |      |       |      |      | --- |     |     |       | m    |           | 8393  |      |
| LSK  | 1.60 | 162.0 | Pn    | 17:04:22.936 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8392  |      |
| LSK  | 1.60 | 162.0 | AMd   | 17:05:49.760 |      |      |       |      |      | --- |     | 0.0 | 86.82 | a    | Md        | 3.4   | 4842 |
| SCTE | 1.96 | 216.0 | Sn    | 17:04:55.197 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8395  |      |
| SCTE | 1.96 | 216.0 | Pn    | 17:04:28.611 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8394  |      |
| SCTE | 1.96 | 216.0 | AMl   | 17:05:12.800 |      |      |       |      |      | --- |     | 0.6 | 1.60  | a    | Ml        | 3.2   | 4849 |
| SCTE | 1.96 | 216.0 | AMd   | 17:05:28.115 |      |      |       |      |      | --- |     | 0.0 | 59.50 | a    | Md        | 3.0   | 4843 |
| NOCI | 2.36 | 249.0 | Sn    | 17:05:05.575 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8396  |      |

DATA\_TYPE COMMENT GSE2.1  
Event 519

Official Magnitude:  
Ml 2.70

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 79   | 72  | 1.0500 |
| Intermediate: | 276  | 17  | 0.2900 |
| Min:          | 184  | 5   | 0.2300 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180003 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 521 1.4 km from Ishëm, Durrës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/23 | 12:41:47.72 |     | 0.30 | 41.5457  | 19.6163   |      |      |    | 25.0  | 3.6 | 15   | 32   | 182 | 0.27  | 1.57  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| M1        | 1.7 | 0.0  | 4      | 562    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|------|
| TIR  | 0.27 | 0.0   | Pg    | 12:41:53.607 | 0.0  |      |       |      |      |     |     |     |      | m    |           | 8435  |      |
| TIR  | 0.27 | 136.0 | Sg    | 12:41:58.689 | -1.0 |      |       |      |      |     |     |     |      | m    |           | 8419  |      |
| TIR  | 0.27 | 136.0 | AM1   | 12:41:57.800 |      |      |       |      |      |     |     | 1.3 | 0.24 | a    | M1        | 2.2   | 4870 |
| ULC  | 0.50 | 327.0 | Pg    | 12:41:58.190 | 0.1  |      |       |      |      |     |     |     |      | m    |           | 8420  |      |
| PUK  | 0.54 | 22.0  | Sg    | 12:42:06.715 | -0.2 |      |       |      |      |     |     |     |      | m    |           | 8422  |      |
| PUK  | 0.54 | 22.0  | Pg    | 12:41:59.016 | 0.3  |      |       |      |      |     |     |     |      | m    |           | 8421  |      |
| PUK  | 0.54 | 22.0  | AM1   | 12:42:18.360 |      |      |       |      |      |     |     | 0.2 | 0.38 | a    | M1        | 1.7   | 4872 |
| PUK  | 0.54 | 22.0  | AM1   | 12:42:11.630 |      |      |       |      |      |     |     | 0.2 | 0.30 | a    | M1        | 1.7   | 4871 |
| PHP  | 0.63 | 77.0  | Sg    | 12:42:10.024 | 0.4  |      |       |      |      |     |     |     |      | m    |           | 8424  |      |
| PHP  | 0.63 | 77.0  | Pg    | 12:42:00.095 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 8423  |      |
| DRME | 0.71 | 334.0 | Pn    | 12:42:02.068 | 0.1  |      |       |      |      |     |     |     |      | m    |           | 8425  |      |
| BCI  | 0.89 | 22.0  | Sg    | 12:42:17.607 | -0.2 |      |       |      |      |     |     |     |      | m    |           | 8427  |      |
| BCI  | 0.89 | 22.0  | Pg    | 12:42:04.130 | -0.8 |      |       |      |      |     |     |     |      | m    |           | 8426  |      |
| BCI  | 0.89 | 22.0  | AM1   | 12:42:20.880 |      |      |       |      |      |     |     | 0.2 | 0.06 | a    | M1        | 1.9   | 4873 |
| BUM  | 0.92 | 325.0 | Sn    | 12:42:19.166 | 0.0  |      |       |      |      |     |     |     |      | m    |           | 8429  |      |
| BUM  | 0.92 | 325.0 | Pg    | 12:42:06.606 | 0.9  |      |       |      |      |     |     |     |      | m    |           | 8428  |      |
| CEME | 1.13 | 333.0 | Pn    | 12:42:10.021 | 0.7  |      |       |      |      |     |     |     |      | m    |           | 8430  |      |
| HCY  | 1.23 | 318.0 | Sn    | 12:42:28.724 | 0.0  |      |       |      |      |     |     |     |      | m    |           | 8432  |      |
| HCY  | 1.23 | 318.0 | Pn    | 12:42:09.628 | -1.5 |      |       |      |      |     |     |     |      | m    |           | 8431  |      |
| NEST | 1.57 | 135.0 | Sn    | 12:42:38.714 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 8434  |      |
| NEST | 1.57 | 135.0 | Pn    | 12:42:17.125 | 0.2  |      |       |      |      |     |     |     |      | m    |           | 8433  |      |
| NEST | 1.57 | 135.0 | AM1   | 12:42:40.620 |      |      |       |      |      |     |     | 0.0 | 0.64 | a    | M1        | 1.7   | 4874 |

DATA\_TYPE COMMENT GSE2.1  
Event 521

Official Magnitude:  
M1 1.69

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 7    | 74  | 3.6800 |
| Intermediate: | 225  | 11  | 0.8400 |
| Min:          | 133  | 10  | 0.5000 |

BEGIN GSE2.1

MSG\_TYPE DATA  
 MSG\_ID 1556180003 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 522 0.5 km from Ukth, Shkodër, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/23 | 23:35:57.71 |     | 0.16 | 42.0895  | 19.8778   |      |      |    | 5.0   | 0.4 | 20   | 32   | 107 | 0.04  | 2.01  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.6 | 0.0  | 6      | 563    |
| Md        | 2.8 | 0.0  | 2      | 563    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp   | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-------|-------|------|-----------|-------|------|
| PUK  | 0.05 | 0.0   | Pg    | 23:35:59.300 | 0.0  |      |       |      |      |     |     |       |       | m    |           | 8461  |      |
| PUK  | 0.05 | 166.0 | Sg    | 23:36:00.054 | -0.0 |      |       |      |      |     |     |       |       | m    |           | 8436  |      |
| PUK  | 0.05 | 166.0 | AMl   | 23:36:00.350 |      |      |       |      |      |     |     | 176.5 | 0.12  | a    | Ml        | 3.7   | 4878 |
| PUK  | 0.05 | 166.0 | AMl   | 23:36:00.430 |      |      |       |      |      |     |     | 59.4  | 0.08  | a    | Ml        | 3.3   | 4877 |
| BCI  | 0.31 | 26.0  | Sg    | 23:36:09.862 | 0.7  |      |       |      |      |     |     |       |       | m    |           | 8438  |      |
| BCI  | 0.31 | 26.0  | Pg    | 23:36:04.472 | 0.2  |      |       |      |      |     |     |       |       | mc   |           | 8437  |      |
| BCI  | 0.31 | 26.0  | AMl   | 23:36:13.120 |      |      |       |      |      |     |     | 1.2   | 0.26  | a    | Ml        | 2.1   | 4879 |
| BCI  | 0.31 | 26.0  | AMd   | 23:36:50.619 |      |      |       |      |      |     |     | 0.0   | 46.15 | a    | Md        | 2.7   | 4875 |
| ULC  | 0.48 | 256.0 | Pg    | 23:36:07.916 | 0.2  |      |       |      |      |     |     |       |       | m    |           | 8439  |      |
| PVY  | 0.51 | 7.0   | Pg    | 23:36:08.211 | 0.0  |      |       |      |      |     |     |       |       | m    |           | 8440  |      |
| DRME | 0.52 | 281.0 | Pg    | 23:36:08.358 | -0.0 |      |       |      |      |     |     |       |       | m    |           | 8441  |      |
| PHP  | 0.58 | 133.0 | Sg    | 23:36:18.025 | 0.1  |      |       |      |      |     |     |       |       | m    |           | 8443  |      |
| PHP  | 0.58 | 133.0 | Pg    | 23:36:08.006 | -1.3 |      |       |      |      |     |     |       |       | m    |           | 8442  |      |
| PHP  | 0.58 | 133.0 | AMl   | 23:36:19.490 |      |      |       |      |      |     |     | 1.1   | 0.34  | a    | Ml        | 2.4   | 4880 |
| PHP  | 0.58 | 133.0 | AMd   | 23:37:07.323 |      |      |       |      |      |     |     | 0.0   | 59.32 | a    | Md        | 2.9   | 4876 |
| TIR  | 0.74 | 181.0 | Sg    | 23:36:23.732 | -0.0 |      |       |      |      |     |     |       |       | m    |           | 8445  |      |
| TIR  | 0.74 | 181.0 | Pg    | 23:36:12.552 | -0.0 |      |       |      |      |     |     |       |       | m    |           | 8444  |      |
| BUM  | 0.76 | 287.0 | Pg    | 23:36:13.657 | 0.8  |      |       |      |      |     |     |       |       | m    |           | 8446  |      |
| BEY  | 0.78 | 1.0   | Pg    | 23:36:13.347 | 0.0  |      |       |      |      |     |     |       |       | m    |           | 8447  |      |
| KOME | 0.81 | 341.0 | Pg    | 23:36:13.642 | -0.2 |      |       |      |      |     |     |       |       | mc   |           | 8448  |      |
| CEME | 0.85 | 304.0 | Pg    | 23:36:14.574 | -0.0 |      |       |      |      |     |     |       |       | m    |           | 8449  |      |
| NKME | 0.96 | 316.0 | Pg    | 23:36:16.858 | 0.1  |      |       |      |      |     |     |       |       | m    |           | 8450  |      |
| HCY  | 1.09 | 290.0 | Pg    | 23:36:19.040 | -0.2 |      |       |      |      |     |     |       |       | mc   |           | 8451  |      |
| BRY  | 1.28 | 310.0 | Pg    | 23:36:22.848 | 0.0  |      |       |      |      |     |     |       |       | m    |           | 8452  |      |
| UPM  | 1.32 | 328.0 | Pg    | 23:36:23.487 | -0.2 |      |       |      |      |     |     |       |       | m    |           | 8453  |      |
| KBN  | 1.62 | 154.0 | Sn    | 23:36:51.509 | 0.1  |      |       |      |      |     |     |       |       | m    |           | 8455  |      |
| KBN  | 1.62 | 154.0 | Pn    | 23:36:27.212 | -1.2 |      |       |      |      |     |     |       |       | m    |           | 8454  |      |
| KBN  | 1.62 | 154.0 | AMl   | 23:36:58.220 |      |      |       |      |      |     |     | 0.1   | 0.74  | a    | Ml        | 2.4   | 4881 |
| FNA  | 1.73 | 138.0 | Sn    | 23:36:55.425 | -0.3 |      |       |      |      |     |     |       |       | m    |           | 8457  |      |
| FNA  | 1.73 | 138.0 | Pn    | 23:36:29.381 | -1.5 |      |       |      |      |     |     |       |       | m    |           | 8456  |      |
| FNA  | 1.73 | 138.0 | AMl   | 23:36:59.310 |      |      |       |      |      |     |     | 0.3   | 0.40  | a    | Ml        | 2.7   | 4883 |
| FNA  | 1.73 | 138.0 | AMl   | 23:37:01.430 |      |      |       |      |      |     |     | 0.1   | 0.58  | a    | Ml        | 2.4   | 4882 |
| NEST | 1.89 | 151.0 | Pn    | 23:36:33.615 | -0.1 |      |       |      |      |     |     |       |       | m    |           | 8458  |      |
| LSK  | 2.01 | 164.0 | Sn    | 23:37:04.170 | 0.1  |      |       |      |      |     |     |       |       | m    |           | 8460  |      |

LSK 2.01 164.0 Pn 23:36:36.093 0.4 \_\_\_\_\_ m\_\_\_\_ 8459  
 LSK 2.01 164.0 AM1 23:37:08.950 \_\_\_\_\_ 0.2 0.80 a\_\_\_\_ M1 2.9 4884

DATA\_TYPE COMMENT GSE2.1  
 Event 522

Official Magnitude:  
 M1 2.58

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 249  | 49  | 0.5600 |
| Intermediate: | 59   | 39  | 0.4900 |
| Min:          | 153  | 5   | 0.2400 |

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556180003 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 523 2.6 km from Kthella e Epërme, Lezhë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/24 | 03:39:53.63 |     | 0.05 | 41.7960  | 20.0357   |      |      |    | 19.6  | 0.5 | 9    | 32   | 167 | 0.27  | 1.43  | m    | 564    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| M1        | 1.3 | 0.0  | 3      | 564    |
| Md        | 1.9 | 0.0  | 1      | 564    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def   | SNR | Amp | Per   | Qual     | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-------|-----|-----|-------|----------|-----------|-------|
| PUK  | 0.27 | 0.0   | Pg    | 03:40:00.160 | 0.0  |      |       |      |      | _____ |     |     |       | m____    |           | 8472  |
| PUK  | 0.27 | 337.0 | Sg    | 03:40:04.534 | -0.0 |      |       |      |      | _____ |     |     |       | m____    |           | 8462  |
| PUK  | 0.27 | 337.0 | AM1   | 03:40:05.390 |      |      |       |      |      | _____ |     | 0.2 | 0.34  | a____ M1 | 1.4       | 4887  |
| PUK  | 0.27 | 337.0 | AM1   | 03:40:06.130 |      |      |       |      |      | _____ |     | 0.2 | 0.32  | a____ M1 | 1.3       | 4886  |
| PHP  | 0.32 | 110.0 | Sg    | 03:40:05.900 | 0.0  |      |       |      |      | _____ |     |     |       | m____    |           | 8464  |
| PHP  | 0.32 | 110.0 | Pg    | 03:40:00.669 | 0.0  |      |       |      |      | _____ |     |     |       | m____    |           | 8463  |
| PHP  | 0.32 | 110.0 | AM1   | 03:40:06.670 |      |      |       |      |      | _____ |     | 0.1 | 0.22  | a____ M1 | 1.1       | 4888  |
| PHP  | 0.32 | 110.0 | AMd   | 03:40:21.852 |      |      |       |      |      | _____ |     | 0.0 | 21.18 | a____ Md | 1.9       | 4885  |
| BCI  | 0.57 | 2.0   | Sg    | 03:40:13.927 | 0.0  |      |       |      |      | _____ |     |     |       | m____    |           | 8466  |
| BCI  | 0.57 | 2.0   | Pg    | 03:40:05.225 | 0.0  |      |       |      |      | _____ |     |     |       | m____    |           | 8465  |
| BCI  | 0.57 | 2.0   | AM1   | 03:40:14.900 |      |      |       |      |      | _____ |     | 0.1 | 0.30  | a____ M1 | 1.3       | 4889  |
| DRME | 0.74 | 303.0 | Pg    | 03:40:08.311 | -0.1 |      |       |      |      | _____ |     |     |       | m____    |           | 8467  |
| CEME | 1.12 | 313.0 | Pn    | 03:40:15.255 | 0.2  |      |       |      |      | _____ |     |     |       | m____    |           | 8468  |
| HCY  | 1.32 | 301.0 | Pn    | 03:40:18.733 | 0.1  |      |       |      |      | _____ |     |     |       | m____    |           | 8469  |
| FNA  | 1.43 | 134.0 | Sn    | 03:40:41.583 | 0.7  |      |       |      |      | _____ |     |     |       | m____    |           | 8471  |
| FNA  | 1.43 | 134.0 | Pn    | 03:40:20.594 | -0.1 |      |       |      |      | _____ |     |     |       | m____    |           | 8470  |

DATA\_TYPE COMMENT GSE2.1  
 Event 523

Official Magnitude:  
 Ml 1.31

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 56   | 41  | 0.7300 |
| Intermediate: | 215  | 45  | 0.6000 |
| Min:          | 316  | 11  | 0.2900 |

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556180003 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 524 0.3 km from Kthella e Epërme, Lezhë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/24 | 04:01:15.49 |     | 0.09 | 41.8140  | 20.0607   |      |      |    | 18.6  | 1.0 | 8    | 32   | 171 | 0.26  | 1.33  | m    |        |
| OrigID 565 |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.4 | 0.0  | 3      | 565    |
| Md        | 1.6 | 0.0  | 1      | 565    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| PUK  | 0.26 | 332.0 | Sg    | 04:01:25.950 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 8474  |      |
| PUK  | 0.26 | 332.0 | Pg    | 04:01:21.632 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 8473  |      |
| PUK  | 0.26 | 332.0 | AMl   | 04:01:27.020 |      |      |       |      |      |     |     | 0.3 | 0.34  | a    | Ml        | 1.5   | 4892 |
| PUK  | 0.26 | 332.0 | AMl   | 04:01:27.850 |      |      |       |      |      |     |     | 0.2 | 0.50  | a    | Ml        | 1.4   | 4891 |
| PUK  | 0.26 | 332.0 | AMd   | 04:01:38.308 |      |      |       |      |      |     |     | 0.0 | 16.68 | a    | Md        | 1.6   | 4890 |
| PHP  | 0.31 | 114.0 | Sg    | 04:01:27.324 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8476  |      |
| PHP  | 0.31 | 114.0 | Pg    | 04:01:22.068 | -0.2 |      |       |      |      |     |     |     |       | m    |           | 8475  |      |
| PHP  | 0.31 | 114.0 | AMl   | 04:01:28.100 |      |      |       |      |      |     |     | 0.1 | 0.34  | a    | Ml        | 0.8   | 4893 |
| BCI  | 0.55 | 0.0   | Pg    | 04:01:26.840 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 8478  |      |
| BCI  | 0.55 | 0.0   | Sg    | 04:01:34.554 | -0.6 |      |       |      |      |     |     |     |       | m    |           | 8477  |      |
| BCI  | 0.55 | 0.0   | AMl   | 04:01:36.510 |      |      |       |      |      |     |     | 0.1 | 0.36  | a    | Ml        | 1.4   | 4894 |
| ULC  | 0.62 | 285.0 | Pg    | 04:01:28.250 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 8479  |      |
| DRME | 0.75 | 301.0 | Pg    | 04:01:30.365 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 8480  |      |
| CEME | 1.12 | 312.0 | Pn    | 04:01:36.929 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 8481  |      |
| HCY  | 1.33 | 0.0   | Pn    | 04:01:40.593 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8482  |      |

DATA\_TYPE COMMENT GSE2.1  
 Event 524

Official Magnitude:  
Ml 1.37

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 44   | 43  | 1.4800 |
| Intermediate: | 203  | 45  | 0.8000 |
| Min:          | 304  | 11  | 0.3800 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180003 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 525 1.2 km from Kadiaj, Fier, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/24 | 13:53:32.09 |     | 0.26 | 40.8838  | 19.7212   |      |      |    | 17.0  | 1.0 | 21   | 22   | 134 | 0.17  | 2.39  | m    |        |
| OrigID 566 |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.5 | 0.0  | 9      | 566    |
| Md        | 2.7 | 0.0  | 4      | 566    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual   | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|--------|-----------|-------|
| BPA1 | 0.17 | 198.0 | Sg    | 13:53:39.988 | -0.1 |      |       |      |      |     |     |     |       | m__    |           | 8484  |
| BPA1 | 0.17 | 198.0 | Pg    | 13:53:36.101 | -0.6 |      |       |      |      |     |     |     |       | m__    |           | 8483  |
| BPA1 | 0.17 | 198.0 | AMl   | 13:53:40.110 |      |      |       |      |      |     |     | 2.8 | 0.58  | a__ Ml | 2.4       | 4899  |
| VLO  | 0.45 | 203.0 | Sg    | 13:53:48.166 | 0.9  |      |       |      |      |     |     |     |       | m__    |           | 8486  |
| VLO  | 0.45 | 203.0 | Pg    | 13:53:41.104 | 0.3  |      |       |      |      |     |     |     |       | mde    |           | 8485  |
| VLO  | 0.45 | 203.0 | AMl   | 13:53:52.390 |      |      |       |      |      |     |     | 3.9 | 0.42  | a__ Ml | 2.8       | 4900  |
| VLO  | 0.45 | 203.0 | AMd   | 13:54:23.919 |      |      |       |      |      |     |     | 0.0 | 42.82 | a__ Md | 2.6       | 4895  |
| TIR  | 0.48 | 0.0   | Pg    | 13:53:42.876 | 0.0  |      |       |      |      |     |     |     |       | mdi    |           | 8507  |
| TIR  | 0.48 | 13.0  | Sg    | 13:53:49.727 | 0.3  |      |       |      |      |     |     |     |       | m__    |           | 8487  |
| TIR  | 0.48 | 13.0  | AMl   | 13:53:55.550 |      |      |       |      |      |     |     | 0.8 | 0.36  | a__ Ml | 2.1       | 4901  |
| KBN  | 0.85 | 107.0 | Sg    | 13:54:00.729 | 0.0  |      |       |      |      |     |     |     |       | m__    |           | 8489  |
| KBN  | 0.85 | 107.0 | Pg    | 13:53:48.288 | -0.1 |      |       |      |      |     |     |     |       | mde    |           | 8488  |
| KBN  | 0.85 | 107.0 | AMl   | 13:54:06.450 |      |      |       |      |      |     |     | 0.9 | 0.44  | a__ Ml | 2.6       | 4902  |
| KBN  | 0.85 | 107.0 | AMd   | 13:54:28.529 |      |      |       |      |      |     |     | 0.0 | 40.24 | a__ Md | 2.5       | 4896  |
| PHP  | 0.97 | 33.0  | Sg    | 13:54:04.635 | 0.1  |      |       |      |      |     |     |     |       | m__    |           | 8491  |
| PHP  | 0.97 | 33.0  | Pg    | 13:53:50.212 | -0.5 |      |       |      |      |     |     |     |       | mce    |           | 8490  |
| PHP  | 0.97 | 33.0  | AMl   | 13:54:11.390 |      |      |       |      |      |     |     | 0.2 | 0.36  | a__ Ml | 2.1       | 4903  |
| PHP  | 0.97 | 33.0  | AMd   | 13:54:57.133 |      |      |       |      |      |     |     | 0.0 | 66.92 | a__ Md | 3.1       | 4897  |
| LSK  | 0.99 | 137.0 | Sn    | 13:54:05.756 | 0.1  |      |       |      |      |     |     |     |       | m__    |           | 8493  |
| LSK  | 0.99 | 137.0 | Pn    | 13:53:51.512 | 0.2  |      |       |      |      |     |     |     |       | mce    |           | 8492  |
| LSK  | 0.99 | 137.0 | AMl   | 13:54:11.340 |      |      |       |      |      |     |     | 0.5 | 0.48  | a__ Ml | 2.5       | 4904  |

|      |      |       |     |              |      |     |             |        |      |
|------|------|-------|-----|--------------|------|-----|-------------|--------|------|
| SRN  | 1.03 | 167.0 | Sg  | 13:54:07.295 | -0.3 | --- | m           | ---    | 8495 |
| SRN  | 1.03 | 167.0 | Pg  | 13:53:52.596 | 0.2  | --- | mci         | ---    | 8494 |
| SRN  | 1.03 | 167.0 | AMl | 13:54:07.920 |      | --- | 0.2 0.42 a  | Ml 2.1 | 4905 |
| SRN  | 1.03 | 167.0 | AMd | 13:54:43.321 |      | --- | 0.0 50.73 a | Md 2.8 | 4898 |
| ULC  | 1.13 | 342.0 | P   | 13:53:54.209 | 0.3  | --- | m           | ---    | 8496 |
| PUK  | 1.16 | 6.0   | Sn  | 13:54:10.928 | -0.1 | --- | m           | ---    | 8498 |
| PUK  | 1.16 | 6.0   | Pn  | 13:53:55.101 | 0.8  | --- | mdi         | ---    | 8497 |
| PUK  | 1.16 | 6.0   | AMl | 13:54:17.040 |      | --- | 0.6 0.40 a  | Ml 2.7 | 4906 |
| DRME | 1.36 | 344.0 | P   | 13:53:57.774 | -0.2 | --- | m           | ---    | 8499 |
| BCI  | 1.50 | 9.0   | Sn  | 13:54:21.438 | -0.1 | --- | m           | ---    | 8501 |
| BCI  | 1.50 | 9.0   | Pn  | 13:54:00.463 | 0.1  | --- | mce         | ---    | 8500 |
| BCI  | 1.50 | 9.0   | AMl | 13:54:25.720 |      | --- | 0.5 0.64 a  | Ml 2.9 | 4907 |
| BUM  | 1.54 | 337.0 | P   | 13:54:01.037 | -0.1 | --- | m           | ---    | 8502 |
| CEME | 1.77 | 341.0 | P   | 13:54:02.702 | -2.4 | --- | m           | ---    | 8503 |
| KOME | 1.97 | 356.0 | P   | 13:54:07.189 | -1.0 | --- | m           | ---    | 8504 |
| BEY  | 1.99 | 3.0   | P   | 13:54:08.471 | -0.0 | --- | m           | ---    | 8505 |
| UPM  | 2.39 | 346.0 | P   | 13:54:16.163 | 1.7  | --- | m           | ---    | 8506 |

DATA\_TYPE COMMENT GSE2.1  
Event 525

Official Magnitude:  
Ml 2.52

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 256  | 57  | 1.1900 |
| Intermediate: | 92   | 31  | 0.5900 |
| Min:          | 357  | 7   | 0.3300 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180002 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 527 1.4 km from Koplik, Shkodër, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/24 | 19:28:45.84 |     | 0.09 | 42.2192  | 19.4513   |      |      |    | 19.7  | 0.7 | 14   | 17   | 101 | 0.20  | 1.06  | m    | 568    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.1 | 0.0  | 4      | 568    |
| Md        | 2.1 | 0.0  | 2      | 568    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-----|------|-----------|-------|
| DRME | 0.20 | 261.0 | P     | 19:28:51.195 | 0.1  |      |       |      |      | --- |     |     |     | m    |           | 8521  |



|      |      |       |     |              |      |  |  |  |  |     |       |     |    |     |      |
|------|------|-------|-----|--------------|------|--|--|--|--|-----|-------|-----|----|-----|------|
| DRME | 0.20 | 261.0 | AMd | 19:29:17.928 |      |  |  |  |  | 0.0 | 26.73 | a__ | Md | 2.1 | 4916 |
| ULC  | 0.30 | 211.0 | P   | 19:28:52.033 | -0.7 |  |  |  |  |     |       | m__ |    |     | 8522 |
| ULC  | 0.30 | 211.0 | AMd | 19:29:18.491 |      |  |  |  |  | 0.0 | 26.46 | a__ | Md | 2.1 | 4917 |
| PUK  | 0.37 | 118.0 | Sg  | 19:28:59.851 | -0.0 |  |  |  |  |     |       | m__ |    |     | 8524 |
| PUK  | 0.37 | 118.0 | Pg  | 19:28:53.774 | -0.1 |  |  |  |  |     |       | mci |    |     | 8523 |
| PUK  | 0.37 | 118.0 | AMl | 19:29:01.670 |      |  |  |  |  | 0.6 | 0.16  | a__ | Ml | 1.9 | 4918 |
| BUM  | 0.42 | 282.0 | P   | 19:28:54.903 | 0.1  |  |  |  |  |     |       | m__ |    |     | 8525 |
| BCI  | 0.48 | 71.0  | Sg  | 19:29:03.347 | 0.1  |  |  |  |  |     |       | m__ |    |     | 8527 |
| BCI  | 0.48 | 71.0  | Pg  | 19:28:55.676 | -0.1 |  |  |  |  |     |       | mdi |    |     | 8526 |
| BCI  | 0.48 | 71.0  | AMl | 19:29:04.940 |      |  |  |  |  | 0.7 | 0.30  | a__ | Ml | 2.1 | 4919 |
| CEME | 0.51 | 310.0 | P   | 19:28:56.375 | -0.1 |  |  |  |  |     |       | m__ |    |     | 8528 |
| PVY  | 0.54 | 45.0  | P   | 19:28:57.061 | 0.1  |  |  |  |  |     |       | m__ |    |     | 8529 |
| KOME | 0.63 | 4.0   | P   | 19:28:58.661 | 0.0  |  |  |  |  |     |       | m__ |    |     | 8530 |
| NKME | 0.66 | 327.0 | P   | 19:28:58.915 | -0.2 |  |  |  |  |     |       | m__ |    |     | 8531 |
| BEY  | 0.73 | 26.0  | P   | 19:29:00.819 | 0.5  |  |  |  |  |     |       | m__ |    |     | 8532 |
| PHP  | 0.91 | 125.0 | Sg  | 19:29:16.377 | 0.0  |  |  |  |  |     |       | m__ |    |     | 8534 |
| PHP  | 0.91 | 125.0 | Pg  | 19:29:03.452 | 0.2  |  |  |  |  |     |       | mde |    |     | 8533 |
| PHP  | 0.91 | 125.0 | AMl | 19:29:23.890 |      |  |  |  |  | 0.2 | 0.36  | a__ | Ml | 2.1 | 4920 |
| TIR  | 0.92 | 160.0 | Sg  | 19:29:17.229 | -0.1 |  |  |  |  |     |       | m__ |    |     | 8535 |
| TIR  | 0.92 | 160.0 | AMl | 19:29:20.630 |      |  |  |  |  | 0.2 | 0.32  | a__ | Ml | 2.1 | 4921 |
| BRY  | 0.96 | 316.0 | P   | 19:29:04.422 | 0.0  |  |  |  |  |     |       | m__ |    |     | 8536 |
| UPM  | 1.06 | 0.0   | P   | 19:29:06.151 | 0.0  |  |  |  |  |     |       | m__ |    |     | 8537 |

DATA\_TYPE COMMENT GSE2.1  
Event 527

Official Magnitude:  
Ml 2.07

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 22   | 83  | 0.6800 |
| Intermediate: | 214  | 6   | 0.4600 |
| Min:          | 124  | 1   | 0.2900 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180002 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 528 0.7 km from Ballsh, Fier, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |  |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|--|
| 2019/03/24 | 19:32:55.41 |     | 0.24 | 40.5973  | 19.7265   |      |      |    | 0.0   | 1.1 | 12   | 8    | 111 | 0.13  | 1.45  | m    |        |  |
| 569        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |  |

Magnitude Err Nsta Author OrigID

Ml 2.1 0.0 5 569  
Md 2.2 0.0 2 569

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual   | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|--------|-----------|-------|
| BPA1 | 0.14 | 337.0 | Sg    | 19:33:01.182 | -0.1 |      |       |      |      | --- |     |     |       | m__    |           | 8539  |
| BPA1 | 0.14 | 337.0 | Pg    | 19:32:58.084 | -0.7 |      |       |      |      | --- |     |     |       | mde    |           | 8538  |
| BPA1 | 0.14 | 337.0 | AMl   | 19:33:06.620 |      |      |       |      |      | --- |     | 2.3 | 0.48  | a__ Ml | 2.1       | 4924  |
| BPA1 | 0.14 | 337.0 | AMd   | 19:33:24.025 |      |      |       |      |      | --- |     | 0.0 | 25.94 | a__ Md | 2.1       | 4922  |
| BPA2 | 0.16 | 329.0 | Sg    | 19:33:02.079 | 0.1  |      |       |      |      | --- |     |     |       | m__    |           | 8541  |
| BPA2 | 0.16 | 329.0 | Pg    | 19:32:58.362 | -0.8 |      |       |      |      | --- |     |     |       | mce    |           | 8540  |
| BPA2 | 0.16 | 329.0 | AMl   | 19:33:02.480 |      |      |       |      |      | --- |     | 2.4 | 0.20  | a__ Ml | 2.2       | 4925  |
| BPA2 | 0.16 | 329.0 | AMd   | 19:33:35.168 |      |      |       |      |      | --- |     | 0.0 | 36.81 | a__ Md | 2.4       | 4923  |
| VLO  | 0.21 | 0.0   | Pg    | 19:32:59.033 | 0.0  |      |       |      |      | --- |     |     |       | mci    |           | 8551  |
| VLO  | 0.22 | 234.0 | Sg    | 19:33:03.462 | 0.4  |      |       |      |      | --- |     |     |       | m__    |           | 8542  |
| VLO  | 0.22 | 234.0 | AMl   | 19:33:05.760 |      |      |       |      |      | --- |     | 8.5 | 0.32  | a__ Ml | 2.8       | 4926  |
| LSK  | 0.80 | 123.0 | S     | 19:33:24.101 | -0.1 |      |       |      |      | --- |     |     |       | m__    |           | 8544  |
| LSK  | 0.80 | 123.0 | P     | 19:33:09.767 | -2.1 |      |       |      |      | --- |     |     |       | m__    |           | 8543  |
| LSK  | 0.80 | 123.0 | AMl   | 19:33:33.900 |      |      |       |      |      | --- |     | 0.2 | 0.58  | a__ Ml | 2.0       | 4927  |
| KBN  | 0.81 | 87.0  | Sg    | 19:33:23.825 | 0.0  |      |       |      |      | --- |     |     |       | m__    |           | 8546  |
| KBN  | 0.81 | 87.0  | Pg    | 19:33:11.638 | 0.0  |      |       |      |      | --- |     |     |       | mce    |           | 8545  |
| PHP  | 1.21 | 26.0  | P     | 19:33:19.612 | 0.1  |      |       |      |      | --- |     |     |       | m__    |           | 8548  |
| PHP  | 1.21 | 26.0  | S     | 19:33:37.666 | 0.0  |      |       |      |      | --- |     |     |       | m__    |           | 8547  |
| PUK  | 1.45 | 4.0   | S     | 19:33:45.524 | -0.1 |      |       |      |      | --- |     |     |       | m__    |           | 8550  |
| PUK  | 1.45 | 4.0   | P     | 19:33:23.558 | -0.6 |      |       |      |      | --- |     |     |       | m__    |           | 8549  |
| PUK  | 1.45 | 4.0   | AMl   | 19:33:50.980 |      |      |       |      |      | --- |     | 0.0 | 0.32  | a__ Ml | 1.8       | 4928  |

DATA\_TYPE COMMENT GSE2.1  
Event 528

Official Magnitude:  
Ml 2.10

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 296  | 76  | 1.1600 |
| Intermediate: | 45   | 4   | 0.5000 |
| Min:          | 136  | 13  | 0.3900 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180001 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 536 0.1 km from Zezë Maja e, Kukës, Albania

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

2019/03/25 21:45:16.62 0.04 42.5122 20.0850 5.5 0.6 9 17 206 0.14 1.20 m  
577

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.8 | 0.0  | 2      | 577    |
| Md        | 2.1 | 0.0  | 5      | 577    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|
| PVY  | 0.12 | 0.0   | Pg    | 21:45:20.498 | 0.0  |      |       |      |      |     |     |     |       |      | mci       | 8640  |
| BCI  | 0.15 | 186.0 | Sg    | 21:45:22.449 | 0.0  |      |       |      |      |     |     |     |       |      | m         | 8630  |
| BCI  | 0.15 | 186.0 | Pg    | 21:45:19.948 | 0.0  |      |       |      |      |     |     |     |       |      | mci       | 8629  |
| BCI  | 0.15 | 186.0 | AMl   | 21:45:22.900 |      |      |       |      |      |     |     | 2.4 | 0.10  | a    | Ml        | 2.2   |
| BCI  | 0.15 | 186.0 | AMd   | 21:45:48.106 |      |      |       |      |      |     |     | 0.0 | 28.16 | a    | Md        | 2.1   |
| BEY  | 0.38 | 340.0 | Pg    | 21:45:24.629 | 0.0  |      |       |      |      |     |     |     |       |      | mce       | 8631  |
| BEY  | 0.38 | 340.0 | AMd   | 21:45:49.459 |      |      |       |      |      |     |     | 0.0 | 24.83 | a    | Md        | 2.0   |
| PUK  | 0.49 | 197.0 | Sg    | 21:45:33.973 | 0.0  |      |       |      |      |     |     |     |       |      | m         | 8633  |
| PUK  | 0.49 | 197.0 | Pg    | 21:45:26.526 | 0.0  |      |       |      |      |     |     |     |       |      | mci       | 8632  |
| PUK  | 0.49 | 197.0 | AMl   | 21:45:34.790 |      |      |       |      |      |     |     | 0.1 | 0.22  | a    | Ml        | 1.4   |
| PUK  | 0.49 | 197.0 | AMd   | 21:46:01.929 |      |      |       |      |      |     |     | 0.0 | 35.40 | a    | Md        | 2.4   |
| KOME | 0.54 | 310.0 | Pg    | 21:45:27.561 | -0.0 |      |       |      |      |     |     |     |       |      | mce       | 8634  |
| KOME | 0.54 | 310.0 | AMd   | 21:45:53.753 |      |      |       |      |      |     |     | 0.0 | 26.19 | a    | Md        | 2.1   |
| DRME | 0.74 | 245.0 | Pg    | 21:45:31.500 | 0.1  |      |       |      |      |     |     |     |       |      | mce       | 8635  |
| DRME | 0.74 | 245.0 | AMd   | 21:46:06.256 |      |      |       |      |      |     |     | 0.0 | 34.76 | a    | Md        | 2.4   |
| ULC  | 0.83 | 229.0 | P     | 21:45:33.054 | -0.1 |      |       |      |      |     |     |     |       |      | m         | 8636  |
| CEME | 0.86 | 273.0 | Pn    | 21:45:32.844 | -1.0 |      |       |      |      |     |     |     |       |      | mce       | 8637  |
| BUM  | 0.90 | 257.0 | Pn    | 21:45:34.537 | 0.0  |      |       |      |      |     |     |     |       |      | mde       | 8638  |
| BRY  | 1.20 | 290.0 | Pn    | 21:45:40.029 | -0.2 |      |       |      |      |     |     |     |       |      | mce       | 8639  |

DATA\_TYPE COMMENT GSE2.1  
Event 536

Official Magnitude:  
Ml 1.78

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 88   | 27  | 1.2400 |
| Intermediate: | 238  | 59  | 0.6500 |
| Min:          | 351  | 13  | 0.2900 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180001 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 539 0.9 km from Deshat, Dibër, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/26 | 10:29:32.17 |     | 0.23 | 41.7123  | 20.4258   |      |      |    | 15.4  | 0.7 | 16   | 32   | 159 | 0.03  | 1.62  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| ML        | 2.9 | 0.0  | 5      | 580    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp  | Per  | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|------|------|------|-----------|-------|------|
| PHP  | 0.03 | 158.0 | Sg    | 10:29:36.596 | -0.1 |      |       |      |      | --- |     |      |      | m    |           | 8662  |      |
| PHP  | 0.03 | 158.0 | Pg    | 10:29:35.333 | 0.6  |      |       |      |      | --- |     |      |      | m    |           | 8661  |      |
| PHP  | 0.03 | 158.0 | AMl   | 10:29:36.770 |      |      |       |      |      | --- |     | 28.4 | 0.10 | a    | Ml        | 3.2   | 4998 |
| PHP  | 0.03 | 158.0 | AMl   | 10:29:37.160 |      |      |       |      |      | --- |     | 34.6 | 0.12 | a    | Ml        | 3.3   | 4997 |
| PUK  | 0.52 | 310.0 | Sg    | 10:29:50.541 | -0.0 |      |       |      |      | --- |     |      |      | m    |           | 8664  |      |
| PUK  | 0.52 | 310.0 | Pg    | 10:29:42.598 | -0.1 |      |       |      |      | --- |     |      |      | m    |           | 8663  |      |
| PUK  | 0.52 | 310.0 | AMl   | 10:29:53.570 |      |      |       |      |      | --- |     | 3.1  | 0.24 | a    | Ml        | 2.8   | 4999 |
| TIR  | 0.56 | 230.0 | Sg    | 10:29:52.206 | 0.1  |      |       |      |      | --- |     |      |      | m    |           | 8666  |      |
| TIR  | 0.56 | 230.0 | Pg    | 10:29:43.467 | -0.1 |      |       |      |      | --- |     |      |      | m    |           | 8665  |      |
| BCI  | 0.71 | 0.0   | Pg    | 10:29:46.132 | 0.0  |      |       |      |      | --- |     |      |      | m    |           | 8679  |      |
| BCI  | 0.71 | 338.0 | Sg    | 10:29:56.931 | 0.2  |      |       |      |      | --- |     |      |      | m    |           | 8667  |      |
| BCI  | 0.71 | 338.0 | AMl   | 10:30:03.270 |      |      |       |      |      | --- |     | 1.0  | 0.44 | a    | Ml        | 2.5   | 5000 |
| ULC  | 0.91 | 287.0 | Pg    | 10:29:50.358 | 0.2  |      |       |      |      | --- |     |      |      | m    |           | 8668  |      |
| DRME | 1.04 | 298.0 | Pg    | 10:29:52.164 | -0.2 |      |       |      |      | --- |     |      |      | m    |           | 8669  |      |
| FNA  | 1.18 | 141.0 | Sg    | 10:30:11.865 | 0.0  |      |       |      |      | --- |     |      |      | m    |           | 8671  |      |
| FNA  | 1.18 | 141.0 | Pg    | 10:29:54.868 | 0.0  |      |       |      |      | --- |     |      |      | m    |           | 8670  |      |
| FNA  | 1.18 | 141.0 | AMl   | 10:30:15.620 |      |      |       |      |      | --- |     | 1.1  | 0.44 | a    | Ml        | 3.0   | 5001 |
| BEY  | 1.22 | 342.0 | P     | 10:29:56.017 | 0.4  |      |       |      |      | --- |     |      |      | m    |           | 8672  |      |
| BUM  | 1.28 | 298.0 | Pn    | 10:29:57.020 | 0.4  |      |       |      |      | --- |     |      |      | m    |           | 8673  |      |
| KOME | 1.32 | 330.0 | Pg    | 10:29:57.050 | -0.4 |      |       |      |      | --- |     |      |      | m    |           | 8674  |      |
| NEST | 1.38 | 159.0 | Sn    | 10:30:19.288 | 1.2  |      |       |      |      | --- |     |      |      | m    |           | 8676  |      |
| NEST | 1.38 | 159.0 | Pn    | 10:29:59.416 | 1.0  |      |       |      |      | --- |     |      |      | m    |           | 8675  |      |
| NEST | 1.38 | 159.0 | AMl   | 10:30:24.970 |      |      |       |      |      | --- |     | 0.3  | 0.54 | a    | Ml        | 2.6   | 5002 |
| CEME | 1.40 | 308.0 | Pn    | 10:29:58.345 | -0.4 |      |       |      |      | --- |     |      |      | m    |           | 8677  |      |
| HCY  | 1.62 | 298.0 | Pn    | 10:30:02.451 | -0.2 |      |       |      |      | --- |     |      |      | m    |           | 8678  |      |

DATA\_TYPE COMMENT GSE2.1  
Event 539

Official Magnitude:  
ML 2.89

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 236  | 27  | 0.7800 |
| Intermediate: | 66   | 61  | 0.7300 |
| Min:          | 328  | 4   | 0.4300 |

BEGIN GSE2.1

MSG\_TYPE DATA  
 MSG\_ID 1556180001 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 540 0.7 km from Perpan, Gjirokastër, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/27 | 23:17:33.85 |     | 0.48 | 40.3938  | 19.8282   |      |      |    | 22.2  | 2.7 | 16   | 12   | 89  | 0.26  | 1.98  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.1 | 0.0  | 7      | 581    |
| Md        | 2.7 | 0.0  | 5      | 581    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|
| VLO  | 0.26 | 287.0 | Sg    | 23:17:43.624 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8681  |
| VLO  | 0.26 | 287.0 | Pg    | 23:17:38.790 | -0.6 |      |       |      |      |     |     |     |       | m    |           | 8680  |
| VLO  | 0.26 | 287.0 | AMl   | 23:17:45.440 |      |      |       |      |      |     |     | 5.1 | 0.26  | a    | Ml        | 2.8   |
| VLO  | 0.26 | 287.0 | AMd   | 23:18:11.062 |      |      |       |      |      |     |     | 0.0 | 32.27 | a    | Md        | 2.3   |
| SRN  | 0.53 | 165.0 | Sg    | 23:17:53.993 | 0.3  |      |       |      |      |     |     |     |       | m    |           | 8683  |
| SRN  | 0.53 | 165.0 | Pg    | 23:17:43.776 | -1.4 |      |       |      |      |     |     |     |       | m    |           | 8682  |
| SRN  | 0.53 | 165.0 | AMl   | 23:17:55.290 |      |      |       |      |      |     |     | 0.2 | 0.34  | a    | Ml        | 1.7   |
| SRN  | 0.53 | 165.0 | AMd   | 23:18:25.752 |      |      |       |      |      |     |     | 0.0 | 41.98 | a    | Md        | 2.6   |
| LSK  | 0.64 | 112.0 | Sg    | 23:17:56.346 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 8685  |
| LSK  | 0.64 | 112.0 | Pg    | 23:17:44.510 | -2.1 |      |       |      |      |     |     |     |       | m    |           | 8684  |
| LSK  | 0.64 | 112.0 | AMl   | 23:18:12.250 |      |      |       |      |      |     |     | 0.3 | 0.32  | a    | Ml        | 2.0   |
| LSK  | 0.64 | 112.0 | AMd   | 23:18:47.654 |      |      |       |      |      |     |     | 0.0 | 63.14 | a    | Md        | 3.0   |
| KBN  | 0.77 | 72.0  | Sg    | 23:17:59.772 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 8687  |
| KBN  | 0.77 | 72.0  | Pg    | 23:17:47.783 | -0.8 |      |       |      |      |     |     |     |       | m    |           | 8686  |
| KBN  | 0.77 | 72.0  | AMl   | 23:18:05.250 |      |      |       |      |      |     |     | 0.3 | 0.58  | a    | Ml        | 2.1   |
| KBN  | 0.77 | 72.0  | AMd   | 23:18:35.638 |      |      |       |      |      |     |     | 0.0 | 47.85 | a    | Md        | 2.7   |
| TIR  | 0.95 | 0.0   | P     | 23:17:51.387 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8697  |
| TIR  | 0.95 | 1.0   | Sg    | 23:18:07.167 | 1.0  |      |       |      |      |     |     |     |       | m    |           | 8688  |
| TIR  | 0.95 | 1.0   | AMl   | 23:18:13.250 |      |      |       |      |      |     |     | 0.2 | 0.44  | a    | Ml        | 1.9   |
| SCTE | 1.09 | 254.0 | Sg    | 23:18:10.596 | 0.3  |      |       |      |      |     |     |     |       | m    |           | 8690  |
| SCTE | 1.09 | 254.0 | Pg    | 23:17:54.939 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 8689  |
| SCTE | 1.09 | 254.0 | AMl   | 23:18:45.190 |      |      |       |      |      |     |     | 0.5 | 1.38  | a    | Ml        | 2.5   |
| PHP  | 1.37 | 19.0  | Sg    | 23:18:18.797 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 8692  |
| PHP  | 1.37 | 19.0  | P     | 23:17:59.056 | -0.4 |      |       |      |      |     |     |     |       | m    |           | 8691  |
| PHP  | 1.37 | 19.0  | AMd   | 23:18:42.295 |      |      |       |      |      |     |     | 0.0 | 43.24 | a    | Md        | 2.7   |
| PUK  | 1.65 | 1.0   | Sn    | 23:18:27.720 | 0.4  |      |       |      |      |     |     |     |       | m    |           | 8694  |
| PUK  | 1.65 | 1.0   | Pn    | 23:18:03.334 | -1.1 |      |       |      |      |     |     |     |       | m    |           | 8693  |
| PUK  | 1.65 | 1.0   | AMl   | 23:18:31.990 |      |      |       |      |      |     |     | 0.1 | 0.60  | a    | Ml        | 2.4   |
| BCI  | 1.98 | 5.0   | Sn    | 23:18:36.338 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 8696  |
| BCI  | 1.98 | 5.0   | Pn    | 23:18:08.382 | -1.1 |      |       |      |      |     |     |     |       | m    |           | 8695  |

DATA\_TYPE COMMENT GSE2.1  
 Event 540

Official Magnitude:  
Ml 2.14

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 179  | 79  | 2.7000 |
| Intermediate: | 342  | 9   | 0.7900 |
| Min:          | 73   | 3   | 0.7300 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180001 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 542 0.9 km from Çirsë, Vlorë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/30 | 12:07:46.39 |     | 0.20 | 40.0842  | 19.8667   |      |      |    | 7.5   | 0.9 | 21   | 12   | 117 | 0.22  | 2.25  | m    | 583    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 3.2 | 0.0  | 8      | 583    |
| Md        | 3.2 | 0.0  | 1      | 583    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp  | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|------|-------|------|-----------|-------|
| SRN  | 0.23 | 153.0 | Sg    | 12:07:55.863 | 0.1  |      |       |      |      |     |     |      |       | m    |           | 8720  |
| SRN  | 0.23 | 153.0 | Pg    | 12:07:51.816 | 0.1  |      |       |      |      |     |     |      |       | mci  |           | 8719  |
| SRN  | 0.23 | 153.0 | AMl   | 12:07:57.520 |      |      |       |      |      |     |     | 16.2 | 0.36  | a    | Ml        | 3.1   |
| SRN  | 0.23 | 153.0 | AMd   | 12:09:10.672 |      |      |       |      |      |     |     | 0.0  | 78.86 | a    | Md        | 3.2   |
| VLO  | 0.48 | 324.0 | Sg    | 12:08:02.123 | -0.1 |      |       |      |      |     |     |      |       | m    |           | 8722  |
| VLO  | 0.48 | 324.0 | Pg    | 12:07:55.973 | 0.5  |      |       |      |      |     |     |      |       | m    |           | 8721  |
| VLO  | 0.48 | 324.0 | AMl   | 12:08:10.240 |      |      |       |      |      |     |     | 24.4 | 0.46  | a    | Ml        | 3.6   |
| LSK  | 0.56 | 83.0  | S     | 12:08:06.409 | 0.2  |      |       |      |      |     |     |      |       | m    |           | 8724  |
| LSK  | 0.56 | 83.0  | Pg    | 12:07:57.397 | -0.3 |      |       |      |      |     |     |      |       | m    |           | 8723  |
| LSK  | 0.56 | 83.0  | AMl   | 12:08:19.660 |      |      |       |      |      |     |     | 6.4  | 0.80  | a    | Ml        | 3.2   |
| IGT  | 0.66 | 146.0 | Sg    | 12:08:09.324 | -0.2 |      |       |      |      |     |     |      |       | m    |           | 8726  |
| IGT  | 0.66 | 146.0 | Pg    | 12:07:59.801 | 0.2  |      |       |      |      |     |     |      |       | m    |           | 8725  |
| IGT  | 0.66 | 146.0 | AMl   | 12:08:19.860 |      |      |       |      |      |     |     | 2.5  | 0.46  | a    | Ml        | 2.9   |
| BPA1 | 0.66 | 346.0 | S     | 12:08:09.515 | 0.0  |      |       |      |      |     |     |      |       | m    |           | 8728  |
| BPA1 | 0.66 | 346.0 | P     | 12:07:59.620 | 0.0  |      |       |      |      |     |     |      |       | m    |           | 8727  |
| NEST | 0.96 | 69.0  | S     | 12:08:19.207 | -0.5 |      |       |      |      |     |     |      |       | m    |           | 8730  |
| NEST | 0.96 | 69.0  | P     | 12:08:04.525 | -0.9 |      |       |      |      |     |     |      |       | m    |           | 8729  |
| NEST | 0.96 | 69.0  | AMl   | 12:08:24.130 |      |      |       |      |      |     |     | 1.4  | 0.36  | a    | Ml        | 2.9   |
| SCTE | 1.07 | 271.0 | S     | 12:08:23.229 | -0.1 |      |       |      |      |     |     |      |       | m    |           | 8732  |
| SCTE | 1.07 | 271.0 | P     | 12:08:07.614 | 0.1  |      |       |      |      |     |     |      |       | m    |           | 8731  |
| SCTE | 1.07 | 271.0 | AMl   | 12:08:25.300 |      |      |       |      |      |     |     | 5.4  | 0.26  | a    | Ml        | 3.6   |
| TIR  | 1.26 | 0.0   | P     | 12:08:12.226 | 0.0  |      |       |      |      |     |     |      |       | m    |           | 8742  |

|      |      |       |     |              |      |     |     |     |     |     |     |   |     |     |     |     |     |      |
|------|------|-------|-----|--------------|------|-----|-----|-----|-----|-----|-----|---|-----|-----|-----|-----|-----|------|
| TIR  | 1.26 | 0.0   | S   | 12:08:29.619 | 0.0  | --- | --- | --- | --- | --- | --- | m | --- | --- | --- | --- | --- | 8733 |
| TIR  | 1.26 | 0.0   | AM1 | 12:08:38.000 | ---  | --- | --- | --- | --- | --- | --- | a | M1  | 3.2 | --- | --- | --- | 5031 |
| FNA  | 1.35 | 58.0  | S   | 12:08:32.492 | 0.1  | --- | --- | --- | --- | --- | --- | m | --- | --- | --- | --- | --- | 8735 |
| FNA  | 1.35 | 58.0  | P   | 12:08:12.029 | -0.6 | --- | --- | --- | --- | --- | --- | m | --- | --- | --- | --- | --- | 8734 |
| LKD2 | 1.43 | 154.0 | S   | 12:08:34.969 | 0.1  | --- | --- | --- | --- | --- | --- | m | --- | --- | --- | --- | --- | 8737 |
| LKD2 | 1.43 | 154.0 | P   | 12:08:13.905 | -0.2 | --- | --- | --- | --- | --- | --- | m | --- | --- | --- | --- | --- | 8736 |
| LKD2 | 1.43 | 154.0 | AM1 | 12:08:45.210 | ---  | --- | --- | --- | --- | --- | --- | a | M1  | 3.5 | --- | --- | --- | 5032 |
| PHP  | 1.66 | 15.0  | S   | 12:08:41.473 | 0.2  | --- | --- | --- | --- | --- | --- | m | --- | --- | --- | --- | --- | 8739 |
| PHP  | 1.66 | 15.0  | P   | 12:08:17.750 | -0.0 | --- | --- | --- | --- | --- | --- | m | --- | --- | --- | --- | --- | 8738 |
| NOCI | 2.25 | 290.0 | S   | 12:08:58.524 | -0.1 | --- | --- | --- | --- | --- | --- | m | --- | --- | --- | --- | --- | 8741 |
| NOCI | 2.25 | 290.0 | P   | 12:08:23.624 | -4.1 | --- | --- | --- | --- | --- | --- | m | --- | --- | --- | --- | --- | 8740 |

DATA\_TYPE COMMENT GSE2.1  
Event 542

Official Magnitude:  
M1 3.19

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 181  | 84  | 0.8700 |
| Intermediate: | 57   | 2   | 0.3700 |
| Min:          | 327  | 5   | 0.2600 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180000 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 544 1.6 km from Çorraj, Vlorë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/30 | 13:13:40.76 |     | 0.06 | 40.1265  | 19.8537   |      |      |    | 1.0   | 0.9 | 11   | 32   | 152 | 0.27  | 1.47  | m    | 585    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| M1        | 2.2 | 0.0  | 7      | 585    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |      |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|------|
| SRN | 0.27 | 155.0 | Sg    | 13:13:52.108 | -0.0 | ---  | ---   | ---  | ---  | --- | --- | --- | ---  | m    | ---       | 8756  |      |
| SRN | 0.27 | 155.0 | Pg    | 13:13:47.184 | -0.1 | ---  | ---   | ---  | ---  | --- | --- | --- | ---  | m    | ---       | 8755  |      |
| SRN | 0.27 | 155.0 | AM1   | 13:13:53.080 | ---  | ---  | ---   | ---  | ---  | --- | --- | 0.6 | 0.22 | a    | M1        | 1.8   | 5039 |
| LSK | 0.57 | 0.0   | Pg    | 13:13:51.826 | 0.0  | ---  | ---   | ---  | ---  | --- | --- | --- | ---  | m    | ---       | 8768  |      |
| LSK | 0.57 | 87.0  | Sg    | 13:14:01.299 | -0.3 | ---  | ---   | ---  | ---  | --- | --- | --- | ---  | m    | ---       | 8757  |      |
| LSK | 0.57 | 87.0  | AM1   | 13:14:05.670 | ---  | ---  | ---   | ---  | ---  | --- | --- | 1.0 | 0.64 | a    | M1        | 2.4   | 5041 |
| LSK | 0.57 | 87.0  | AM1   | 13:14:07.370 | ---  | ---  | ---   | ---  | ---  | --- | --- | 0.6 | 0.52 | a    | M1        | 2.1   | 5040 |
| IGT | 0.70 | 148.0 | Sg    | 13:14:06.166 | 0.1  | ---  | ---   | ---  | ---  | --- | --- | --- | ---  | m    | ---       | 8759  |      |

|      |      |       |     |              |      |     |  |  |  |  |  |  |  |  |  |   |    |      |
|------|------|-------|-----|--------------|------|-----|--|--|--|--|--|--|--|--|--|---|----|------|
| IGT  | 0.70 | 148.0 | Pg  | 13:13:55.273 | 0.0  | --- |  |  |  |  |  |  |  |  |  | m |    | 8758 |
| IGT  | 0.70 | 148.0 | AM1 | 13:14:14.580 |      | --- |  |  |  |  |  |  |  |  |  | a | M1 | 5042 |
| NEST | 0.96 | 72.0  | Sg  | 13:14:14.696 | -0.1 | --- |  |  |  |  |  |  |  |  |  | m |    | 8761 |
| NEST | 0.96 | 72.0  | Pg  | 13:13:59.606 | -0.6 | --- |  |  |  |  |  |  |  |  |  | m |    | 8760 |
| NEST | 0.96 | 72.0  | AM1 | 13:14:18.200 |      | --- |  |  |  |  |  |  |  |  |  | a | M1 | 5043 |
| SCTE | 1.06 | 268.0 | Sg  | 13:14:18.269 | -0.0 | --- |  |  |  |  |  |  |  |  |  | m |    | 8763 |
| SCTE | 1.06 | 268.0 | Pg  | 13:14:02.173 | -0.0 | --- |  |  |  |  |  |  |  |  |  | m |    | 8762 |
| SCTE | 1.06 | 268.0 | AM1 | 13:14:19.190 |      | --- |  |  |  |  |  |  |  |  |  | a | M1 | 5044 |
| FNA  | 1.34 | 60.0  | Sn  | 13:14:27.509 | 0.0  | --- |  |  |  |  |  |  |  |  |  | m |    | 8765 |
| FNA  | 1.34 | 60.0  | Pn  | 13:14:07.472 | 0.0  | --- |  |  |  |  |  |  |  |  |  | m |    | 8764 |
| FNA  | 1.34 | 60.0  | AM1 | 13:14:31.440 |      | --- |  |  |  |  |  |  |  |  |  | a | M1 | 5045 |
| LKD2 | 1.47 | 154.0 | Sn  | 13:14:31.659 | -0.1 | --- |  |  |  |  |  |  |  |  |  | m |    | 8767 |
| LKD2 | 1.47 | 154.0 | Pn  | 13:14:09.946 | 0.1  | --- |  |  |  |  |  |  |  |  |  | m |    | 8766 |
| LKD2 | 1.47 | 154.0 | AM1 | 13:14:35.780 |      | --- |  |  |  |  |  |  |  |  |  | a | M1 | 5046 |

DATA\_TYPE COMMENT GSE2.1  
Event 544

Official Magnitude:  
M1 2.23

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 250  | 86  | 0.8900 |
| Intermediate: | 352  | 0   | 0.3200 |
| Min:          | 82   | 4   | 0.2900 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180000 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 543 2.7 km from Çirësë, Vlorë, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/30 | 16:47:11.92 |     | 0.14 | 40.0907  | 19.8477   |      |      |    | 13.5  | 1.2 | 10   | 32   | 149 | 0.24  | 1.44  | m    | 584    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| M1        | 1.8 | 0.0  | 4      | 584    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|
| SRN | 0.24 | 150.0 | Sg    | 16:47:22.407 | 0.2  |      |       |      |      |     |     |     |      | m    |           | 8744  |
| SRN | 0.24 | 150.0 | Pg    | 16:47:17.522 | -0.3 |      |       |      |      |     |     |     |      | m    |           | 8743  |
| SRN | 0.24 | 150.0 | AM1   | 16:47:25.098 |      |      |       |      |      |     |     | 0.3 | 0.18 | a    | M1        | 5034  |
| SRN | 0.24 | 150.0 | AM1   | 16:47:23.978 |      |      |       |      |      |     |     | 0.3 | 0.16 | a    | M1        | 5033  |



|      |      |       |     |              |      |     |  |  |  |     |      |   |    |     |  |  |   |      |
|------|------|-------|-----|--------------|------|-----|--|--|--|-----|------|---|----|-----|--|--|---|------|
| LSK  | 0.58 | 83.0  | Sg  | 16:47:32.298 | 0.0  | --- |  |  |  |     |      |   |    |     |  |  | m | 8746 |
| LSK  | 0.58 | 83.0  | Pg  | 16:47:22.807 | -0.8 | --- |  |  |  |     |      |   |    |     |  |  | m | 8745 |
| LSK  | 0.58 | 83.0  | AM1 | 16:47:36.918 |      | --- |  |  |  | 0.4 | 0.46 | a | M1 | 2.0 |  |  |   | 5035 |
| IGT  | 0.67 | 146.0 | Sg  | 16:47:36.406 | 0.9  | --- |  |  |  |     |      |   |    |     |  |  | m | 8748 |
| IGT  | 0.67 | 146.0 | Pg  | 16:47:25.427 | 0.0  | --- |  |  |  |     |      |   |    |     |  |  | m | 8747 |
| NEST | 0.97 | 70.0  | Sg  | 16:47:45.495 | 0.0  | --- |  |  |  |     |      |   |    |     |  |  | m | 8750 |
| NEST | 0.97 | 70.0  | Pg  | 16:47:30.397 | -0.7 | --- |  |  |  |     |      |   |    |     |  |  | m | 8749 |
| NEST | 0.97 | 70.0  | AM1 | 16:47:48.898 |      | --- |  |  |  | 0.1 | 0.70 | a | M1 | 1.7 |  |  |   | 5036 |
| SCTE | 1.05 | 0.0   | Pn  | 16:47:33.563 | 0.0  | --- |  |  |  |     |      |   |    |     |  |  | m | 8754 |
| SCTE | 1.06 | 270.0 | Sg  | 16:47:48.177 | 0.1  | --- |  |  |  |     |      |   |    |     |  |  | m | 8751 |
| SCTE | 1.06 | 270.0 | AM1 | 16:47:49.848 |      | --- |  |  |  | 0.3 | 0.32 | a | M1 | 2.3 |  |  |   | 5038 |
| SCTE | 1.06 | 270.0 | AM1 | 16:47:49.728 |      | --- |  |  |  | 0.4 | 0.58 | a | M1 | 2.4 |  |  |   | 5037 |
| FNA  | 1.36 | 59.0  | S   | 16:47:57.563 | 0.1  | --- |  |  |  |     |      |   |    |     |  |  | m | 8752 |
| LKD2 | 1.44 | 153.0 | Pn  | 16:47:39.338 | -0.1 | --- |  |  |  |     |      |   |    |     |  |  | m | 8753 |

DATA\_TYPE COMMENT GSE2.1  
Event 543

Official Magnitude:  
M1 1.82

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 154  | 59  | 1.3400 |
| Intermediate: | 342  | 30  | 0.4100 |
| Min:          | 250  | 4   | 0.3100 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556784699 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 546 Region N/A

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/31 | 07:51:40.22 |     | 0.20 | 41.5473  | 19.3987   |      |      |    | 13.9  | 1.0 | 26   | 31   | 118 | 0.40  | 2.13  | m    |        |
| 587        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| M1        | 3.2 | 0.0  | 10     | 587    |
| Md        | 3.0 | 0.0  | 9      | 587    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |      |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|------|
| TIR | 0.40 | 0.0   | Pg    | 07:51:48.362 | 0.0  |      |       |      |      | --- |     |     |      |      |           | 8811  |      |
| TIR | 0.40 | 119.0 | Sg    | 07:51:55.013 | -0.1 |      |       |      |      | --- |     |     |      |      |           | 8782  |      |
| TIR | 0.40 | 119.0 | AM1   | 07:51:56.500 |      |      |       |      |      | --- |     | 7.1 | 0.34 | a    | M1        | 3.0   | 5063 |
| TIR | 0.40 | 119.0 | AM1   | 07:51:56.190 |      |      |       |      |      | --- |     | 6.6 | 0.54 | a    | M1        | 3.0   | 5062 |

|      |      |       |     |              |      |  |  |     |       |    |    |     |      |
|------|------|-------|-----|--------------|------|--|--|-----|-------|----|----|-----|------|
| ULC  | 0.43 | 346.0 | Pg  | 07:51:49.176 | -0.0 |  |  |     | m     |    |    |     | 8783 |
| ULC  | 0.43 | 346.0 | AMd | 07:52:32.813 |      |  |  | 0.0 | 43.64 | a  | Md | 2.6 | 5053 |
| PUK  | 0.62 | 36.0  | Sg  | 07:52:02.066 | 0.2  |  |  |     |       | m  |    |     | 8785 |
| PUK  | 0.62 | 36.0  | Pg  | 07:51:52.641 | 0.1  |  |  |     |       | mc |    |     | 8784 |
| PUK  | 0.62 | 36.0  | AM1 | 07:52:05.470 |      |  |  | 3.8 | 0.38  | a  | M1 | 3.0 | 5065 |
| PUK  | 0.62 | 36.0  | AM1 | 07:52:08.650 |      |  |  | 3.4 | 0.32  | a  | M1 | 3.0 | 5064 |
| PUK  | 0.62 | 36.0  | AMd | 07:52:52.760 |      |  |  | 0.0 | 60.12 | a  | Md | 2.9 | 5054 |
| DRME | 0.66 | 347.0 | Pg  | 07:51:53.228 | -0.2 |  |  |     |       | md |    |     | 8786 |
| PHP  | 0.79 | 79.0  | Sg  | 07:52:07.166 | -0.2 |  |  |     |       | m  |    |     | 8788 |
| PHP  | 0.79 | 79.0  | Pg  | 07:51:55.607 | -0.1 |  |  |     |       | m  |    |     | 8787 |
| PHP  | 0.79 | 79.0  | AM1 | 07:52:13.600 |      |  |  | 2.5 | 0.40  | a  | M1 | 3.0 | 5066 |
| PHP  | 0.79 | 79.0  | AMd | 07:52:44.384 |      |  |  | 0.0 | 48.78 | a  | Md | 2.8 | 5055 |
| BPA2 | 0.83 | 168.0 | Pg  | 07:51:57.548 | 0.8  |  |  |     |       | m  |    |     | 8789 |
| BCI  | 0.96 | 31.0  | Sg  | 07:52:12.343 | -0.7 |  |  |     |       | m  |    |     | 8791 |
| BCI  | 0.96 | 31.0  | Pg  | 07:51:58.240 | -0.7 |  |  |     |       | md |    |     | 8790 |
| BCI  | 0.96 | 31.0  | AM1 | 07:52:21.020 |      |  |  | 2.5 | 0.62  | a  | M1 | 3.2 | 5068 |
| BCI  | 0.96 | 31.0  | AM1 | 07:52:17.380 |      |  |  | 1.7 | 0.28  | a  | M1 | 3.0 | 5067 |
| BCI  | 0.96 | 31.0  | AMd | 07:53:05.618 |      |  |  | 0.0 | 67.38 | a  | Md | 3.1 | 5056 |
| CEME | 1.06 | 341.0 | Pn  | 07:52:00.609 | -0.3 |  |  |     |       | m  |    |     | 8792 |
| HCY  | 1.13 | 324.0 | Pg  | 07:52:02.601 | 0.5  |  |  |     |       | md |    |     | 8793 |
| PVY  | 1.13 | 22.0  | Pg  | 07:52:01.984 | -0.2 |  |  |     |       | m  |    |     | 8794 |
| PVY  | 1.13 | 22.0  | AMd | 07:53:07.005 |      |  |  | 0.0 | 65.02 | a  | Md | 3.1 | 5057 |
| NKME | 1.26 | 346.0 | Pn  | 07:52:04.658 | 0.2  |  |  |     |       | m  |    |     | 8795 |
| NKME | 1.26 | 346.0 | AMd | 07:53:03.423 |      |  |  | 0.0 | 58.77 | a  | Md | 3.0 | 5058 |
| KOME | 1.30 | 3.0   | Pn  | 07:52:05.354 | 0.1  |  |  |     |       | m  |    |     | 8796 |
| KOME | 1.30 | 3.0   | AMd | 07:53:10.913 |      |  |  | 0.0 | 65.56 | a  | Md | 3.1 | 5059 |
| BEY  | 1.37 | 15.0  | Pg  | 07:52:06.313 | -0.2 |  |  |     |       | md |    |     | 8797 |
| KBN  | 1.40 | 130.0 | Pn  | 07:52:06.551 | 0.1  |  |  |     |       | m  |    |     | 8798 |
| KBN  | 1.40 | 130.0 | AM1 | 07:52:31.480 |      |  |  | 1.7 | 0.44  | a  | M1 | 3.3 | 5069 |
| SCTE | 1.63 | 206.0 | Sn  | 07:52:33.519 | -0.6 |  |  |     |       | m  |    |     | 8800 |
| SCTE | 1.63 | 206.0 | Pn  | 07:52:10.923 | -0.1 |  |  |     |       | m  |    |     | 8799 |
| SCTE | 1.63 | 206.0 | AM1 | 07:52:35.950 |      |  |  | 2.4 | 0.36  | a  | M1 | 3.6 | 5070 |
| LSK  | 1.67 | 146.0 | Pn  | 07:52:11.796 | 0.3  |  |  |     |       | m  |    |     | 8801 |
| LSK  | 1.67 | 146.0 | AM1 | 07:52:49.590 |      |  |  | 2.2 | 0.62  | a  | M1 | 3.6 | 5071 |
| FNA  | 1.68 | 116.0 | Sn  | 07:52:35.617 | -0.1 |  |  |     |       | m  |    |     | 8803 |
| FNA  | 1.68 | 116.0 | Pn  | 07:52:12.188 | 0.2  |  |  |     |       | m  |    |     | 8802 |
| FNA  | 1.68 | 116.0 | AM1 | 07:52:36.930 |      |  |  | 0.8 | 0.38  | a  | M1 | 3.2 | 5073 |
| FNA  | 1.68 | 116.0 | AM1 | 07:52:36.740 |      |  |  | 1.4 | 0.60  | a  | M1 | 3.5 | 5072 |
| NEST | 1.69 | 131.0 | Sn  | 07:52:35.655 | -0.2 |  |  |     |       | m  |    |     | 8805 |
| NEST | 1.69 | 131.0 | Pn  | 07:52:12.529 | 0.5  |  |  |     |       | m  |    |     | 8804 |
| NEST | 1.69 | 131.0 | AM1 | 07:52:38.880 |      |  |  | 0.8 | 0.54  | a  | M1 | 3.2 | 5074 |
| UPM  | 1.69 | 348.0 | Pn  | 07:52:12.134 | 0.0  |  |  |     |       | m  |    |     | 8806 |
| UPM  | 1.69 | 348.0 | AMd | 07:53:22.473 |      |  |  | 0.0 | 70.34 | a  | Md | 3.2 | 5060 |
| SRN  | 1.73 | 164.0 | Pn  | 07:52:13.115 | 0.0  |  |  |     |       | m  |    |     | 8807 |
| SRN  | 1.73 | 164.0 | AM1 | 07:52:40.750 |      |  |  | 0.8 | 0.62  | a  | M1 | 3.2 | 5075 |
| PLE  | 1.78 | 0.0   | Pn  | 07:52:14.251 | 0.6  |  |  |     |       | m  |    |     | 8808 |
| PLE  | 1.78 | 0.0   | AMd | 07:53:10.425 |      |  |  | 0.0 | 56.17 | a  | Md | 3.0 | 5061 |
| IGT  | 2.13 | 160.0 | Sn  | 07:52:48.246 | 0.0  |  |  |     |       | m  |    |     | 8810 |
| IGT  | 2.13 | 160.0 | Pn  | 07:52:18.092 | -1.0 |  |  |     |       | m  |    |     | 8809 |

DATA\_TYPE COMMENT GSE2.1  
Event 546

Official Magnitude:  
Ml 3.18

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 29   | 81  | 0.9900 |
| Intermediate: | 245  | 6   | 0.4500 |
| Min:          | 154  | 5   | 0.2800 |

STOP

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556784697 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 547 8 km from Shetaj, Durrës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/31 | 17:59:10.46 |     | 0.26 | 41.5412  | 19.4002   |      |      |    | 15.5  | 1.3 | 27   | 32   | 117 | 0.40  | 2.13  | m    |        |
| 588        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 3.1 | 0.0  | 9      | 588    |
| Md        | 3.0 | 0.0  | 3      | 588    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| TIR  | 0.40 | 0.0   | Pg    | 17:59:19.296 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8840  |      |
| TIR  | 0.40 | 118.0 | Sg    | 17:59:24.978 | -0.3 |      |       |      |      | --- |     |     |       | m    |           | 8812  |      |
| TIR  | 0.40 | 118.0 | AMl   | 17:59:25.720 |      |      |       |      |      | --- |     | 3.9 | 0.54  | a    | Ml        | 2.7   | 5079 |
| ULC  | 0.44 | 346.0 | Pg    | 17:59:19.724 | 0.1  |      |       |      |      | --- |     |     |       | mc   |           | 8813  |      |
| PUK  | 0.62 | 36.0  | Sg    | 17:59:32.120 | -0.1 |      |       |      |      | --- |     |     |       | m    |           | 8815  |      |
| PUK  | 0.62 | 36.0  | Pg    | 17:59:23.030 | 0.1  |      |       |      |      | --- |     |     |       | m    |           | 8814  |      |
| PUK  | 0.62 | 36.0  | AMl   | 17:59:35.710 |      |      |       |      |      | --- |     | 2.9 | 0.38  | a    | Ml        | 2.9   | 5081 |
| PUK  | 0.62 | 36.0  | AMl   | 17:59:40.240 |      |      |       |      |      | --- |     | 2.4 | 0.34  | a    | Ml        | 2.8   | 5080 |
| PUK  | 0.62 | 36.0  | AMd   | 18:00:23.140 |      |      |       |      |      | --- |     | 0.0 | 60.11 | a    | Md        | 2.9   | 5076 |
| DRME | 0.66 | 347.0 | Pg    | 17:59:23.422 | -0.4 |      |       |      |      | --- |     |     |       | m    |           | 8816  |      |
| PHP  | 0.79 | 79.0  | Sg    | 17:59:37.816 | 0.3  |      |       |      |      | --- |     |     |       | m    |           | 8818  |      |
| PHP  | 0.79 | 79.0  | Pg    | 17:59:25.816 | -0.1 |      |       |      |      | --- |     |     |       | m    |           | 8817  |      |
| PHP  | 0.79 | 79.0  | AMd   | 18:00:28.338 |      |      |       |      |      | --- |     | 0.0 | 62.52 | a    | Md        | 3.0   | 5077 |
| BUM  | 0.84 | 334.0 | Pg    | 17:59:27.229 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8819  |      |
| BCI  | 0.96 | 30.0  | Sg    | 17:59:43.134 | -0.2 |      |       |      |      | --- |     |     |       | m    |           | 8821  |      |
| BCI  | 0.96 | 30.0  | Pg    | 17:59:28.512 | -0.7 |      |       |      |      | --- |     |     |       | m    |           | 8820  |      |
| BCI  | 0.96 | 30.0  | AMl   | 17:59:51.260 |      |      |       |      |      | --- |     | 1.9 | 0.60  | a    | Ml        | 3.0   | 5083 |

|      |      |       |     |              |       |     |       |     |    |     |      |
|------|------|-------|-----|--------------|-------|-----|-------|-----|----|-----|------|
| BCI  | 0.96 | 30.0  | AMl | 17:59:47.610 | _____ | 1.5 | 0.32  | a__ | Ml | 2.9 | 5082 |
| BCI  | 0.96 | 30.0  | AMd | 18:00:39.102 | _____ | 0.0 | 70.59 | a__ | Md | 3.1 | 5078 |
| HCY  | 1.13 | 324.0 | Pg  | 17:59:33.022 | _____ |     |       | mc_ |    |     | 8822 |
| PVY  | 1.14 | 21.0  | Pg  | 17:59:31.796 | -0.6  |     |       | m__ |    |     | 8823 |
| NKME | 1.27 | 346.0 | Pg  | 17:59:34.962 | 0.2   |     |       | m__ |    |     | 8824 |
| KOME | 1.31 | 3.0   | Pg  | 17:59:35.247 | -0.3  |     |       | m__ |    |     | 8825 |
| BEY  | 1.38 | 15.0  | Pn  | 17:59:36.601 | -0.1  |     |       | m__ |    |     | 8826 |
| BRY  | 1.50 | 336.0 | Pn  | 17:59:39.210 | 0.3   |     |       | m__ |    |     | 8827 |
| SCTE | 1.62 | 207.0 | Sn  | 18:00:03.543 | -0.5  |     |       | m__ |    |     | 8829 |
| SCTE | 1.62 | 207.0 | Pn  | 17:59:41.220 | 0.2   |     |       | m__ |    |     | 8828 |
| SCTE | 1.62 | 207.0 | AMl | 18:00:06.200 |       | 1.6 | 0.36  | a__ | Ml | 3.4 | 5085 |
| LSK  | 1.66 | 146.0 | Sn  | 18:00:04.930 | 0.0   |     |       | m__ |    |     | 8831 |
| LSK  | 1.66 | 146.0 | Pn  | 17:59:41.893 | 0.3   |     |       | m__ |    |     | 8830 |
| LSK  | 1.66 | 146.0 | AMl | 18:00:13.350 |       | 1.7 | 0.74  | a__ | Ml | 3.5 | 5086 |
| FNA  | 1.68 | 116.0 | Sn  | 18:00:05.196 | -0.5  |     |       | m__ |    |     | 8833 |
| FNA  | 1.68 | 116.0 | Pn  | 17:59:42.195 | 0.2   |     |       | m__ |    |     | 8832 |
| FNA  | 1.68 | 116.0 | AMl | 18:00:07.550 |       | 0.6 | 0.48  | a__ | Ml | 3.1 | 5088 |
| FNA  | 1.68 | 116.0 | AMl | 18:00:12.030 |       | 1.0 | 0.38  | a__ | Ml | 3.3 | 5087 |
| NEST | 1.68 | 131.0 | Sn  | 18:00:06.033 | 0.3   |     |       | m__ |    |     | 8835 |
| NEST | 1.68 | 131.0 | Pn  | 17:59:42.466 | 0.4   |     |       | mc_ |    |     | 8834 |
| NEST | 1.68 | 131.0 | AMl | 18:00:09.090 |       | 0.6 | 0.50  | a__ | Ml | 3.1 | 5089 |
| UPM  | 1.70 | 348.0 | Pn  | 17:59:43.012 | 0.6   |     |       | m__ |    |     | 8836 |
| SRN  | 1.72 | 164.0 | Sn  | 18:00:07.451 | -0.2  |     |       | m__ |    |     | 8838 |
| SRN  | 1.72 | 164.0 | Pn  | 17:59:42.386 | -0.8  |     |       | m__ |    |     | 8837 |
| SRN  | 1.72 | 164.0 | AMl | 18:00:15.890 |       | 0.4 | 0.80  | a__ | Ml | 2.9 | 5090 |
| IGT  | 2.13 | 160.0 | Pn  | 17:59:48.948 | -0.1  |     |       | m__ |    |     | 8839 |
| KBN  |      |       | AMl | 18:00:01.730 |       | 1.1 | 0.46  | a__ | Ml | 3.1 | 5084 |

DATA\_TYPE COMMENT GSE2.1  
Event 547

Official Magnitude:  
Ml 3.05

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 37   | 79  | 1.3500 |
| Intermediate: | 256  | 8   | 0.4900 |
| Min:          | 165  | 7   | 0.3100 |

STOP

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556784699 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 548 12 km from Shetaj, Durrës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| OrigID     |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |
| 2019/03/31 | 07:59:15.53 |     | 0.20 | 41.5035  | 19.3663   |      |      |    | 6.2   | 2.5 | 16   | 32   | 131 | 0.40  | 1.69  | m    |        |
| 589        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| M1        | 2.0 | 0.0  | 4      | 589    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|------|
| TIR  | 0.40 | 0.0   | Pg    | 07:59:24.368 | 0.0  |      |       |      |      |     |     |     |      | m    |           | 8860  |      |
| TIR  | 0.41 | 112.0 | Sg    | 07:59:30.130 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 8841  |      |
| TIR  | 0.41 | 112.0 | AM1   | 07:59:31.520 |      |      |       |      |      |     |     | 0.5 | 0.32 | a    | M1        | 1.8   | 5091 |
| ULC  | 0.47 | 350.0 | Pg    | 07:59:24.823 | -0.3 |      |       |      |      |     |     |     |      | m    |           | 8842  |      |
| PUK  | 0.67 | 35.0  | Sg    | 07:59:38.601 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 8844  |      |
| PUK  | 0.67 | 35.0  | Pg    | 07:59:28.611 | -0.2 |      |       |      |      |     |     |     |      | m    |           | 8843  |      |
| PUK  | 0.67 | 35.0  | AM1   | 07:59:40.810 |      |      |       |      |      |     |     | 0.4 | 0.40 | a    | M1        | 2.1   | 5092 |
| DRME | 0.70 | 350.0 | Pg    | 07:59:29.448 | 0.0  |      |       |      |      |     |     |     |      | m    |           | 8845  |      |
| PHP  | 0.83 | 76.0  | Sg    | 07:59:43.661 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 8847  |      |
| PHP  | 0.83 | 76.0  | Pg    | 07:59:30.967 | -0.7 |      |       |      |      |     |     |     |      | m    |           | 8846  |      |
| PHP  | 0.83 | 76.0  | AM1   | 07:59:48.910 |      |      |       |      |      |     |     | 0.2 | 0.36 | a    | M1        | 1.9   | 5093 |
| BUM  | 0.87 | 337.0 | Pg    | 07:59:32.968 | 0.2  |      |       |      |      |     |     |     |      | m    |           | 8848  |      |
| BCI  | 1.01 | 31.0  | Sg    | 07:59:48.489 | -1.7 |      |       |      |      |     |     |     |      | m    |           | 8850  |      |
| BCI  | 1.01 | 31.0  | Pg    | 07:59:33.453 | -1.9 |      |       |      |      |     |     |     |      | m    |           | 8849  |      |
| BCI  | 1.01 | 31.0  | AM1   | 07:59:53.940 |      |      |       |      |      |     |     | 0.2 | 0.42 | a    | M1        | 2.0   | 5094 |
| CEME | 1.09 | 343.0 | Pn    | 07:59:37.215 | 0.2  |      |       |      |      |     |     |     |      | m    |           | 8851  |      |
| HCY  | 1.15 | 326.0 | Pn    | 07:59:36.513 | -1.6 |      |       |      |      |     |     |     |      | m    |           | 8852  |      |
| NKME | 1.30 | 347.0 | Pn    | 07:59:40.740 | -0.2 |      |       |      |      |     |     |     |      | m    |           | 8853  |      |
| KOME | 1.35 | 4.0   | Pn    | 07:59:42.201 | 0.3  |      |       |      |      |     |     |     |      | m    |           | 8854  |      |
| BRY  | 1.52 | 337.0 | Pn    | 07:59:44.748 | -0.2 |      |       |      |      |     |     |     |      | m    |           | 8855  |      |
| SCTE | 1.58 | 206.0 | Pn    | 07:59:45.946 | 0.0  |      |       |      |      |     |     |     |      | m    |           | 8857  |      |
| SCTE | 1.58 | 206.0 | Sn    | 08:00:08.501 | -0.2 |      |       |      |      |     |     |     |      | m    |           | 8856  |      |
| NEST | 1.68 | 129.0 | Pn    | 07:59:48.002 | 0.4  |      |       |      |      |     |     |     |      | m    |           | 8858  |      |
| FNA  | 1.69 | 114.0 | Pn    | 07:59:47.727 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 8859  |      |

DATA\_TYPE COMMENT GSE2.1

Event 548

Official Magnitude:

M1 1.97

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 40   | 78  | 2.5000 |
| Intermediate: | 263  | 8   | 0.4800 |
| Min:          | 172  | 8   | 0.4200 |

STOP

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556784698 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 549 9 km from Shetaj, Durrës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/31 | 08:03:20.25 |     | 0.28 | 41.5262  | 19.3980   |      |      |    | 8.6   | 2.5 | 18   | 32   | 117 | 0.40  | 1.67  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.7 | 0.0  | 4      | 590    |
| Md        | 2.5 | 0.0  | 2      | 590    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| TIR  | 0.38 | 0.0   | Pg    | 08:03:29.135 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8881  |      |
| TIR  | 0.39 | 116.0 | Sg    | 08:03:34.619 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 8861  |      |
| TIR  | 0.39 | 116.0 | AMl   | 08:03:36.370 |      |      |       |      |      |     |     | 0.4 | 0.36  | a    | Ml        | 1.7   | 5098 |
| TIR  | 0.39 | 116.0 | AMl   | 08:03:36.040 |      |      |       |      |      |     |     | 0.3 | 0.28  | a    | Ml        | 1.5   | 5097 |
| ULC  | 0.45 | 346.0 | Pg    | 08:03:29.438 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 8862  |      |
| PUK  | 0.63 | 35.0  | Sg    | 08:03:42.743 | 0.4  |      |       |      |      |     |     |     |       | m    |           | 8864  |      |
| PUK  | 0.63 | 35.0  | Pg    | 08:03:32.924 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8863  |      |
| PUK  | 0.63 | 35.0  | AMl   | 08:03:48.490 |      |      |       |      |      |     |     | 0.2 | 0.28  | a    | Ml        | 1.7   | 5099 |
| PUK  | 0.63 | 35.0  | AMd   | 08:04:16.192 |      |      |       |      |      |     |     | 0.0 | 43.27 | a    | Md        | 2.6   | 5095 |
| DRME | 0.68 | 347.0 | Pg    | 08:03:33.567 | -0.3 |      |       |      |      |     |     |     |       | m    |           | 8865  |      |
| PHP  | 0.80 | 78.0  | Sg    | 08:03:47.208 | -0.3 |      |       |      |      |     |     |     |       | m    |           | 8867  |      |
| PHP  | 0.80 | 78.0  | Pg    | 08:03:35.702 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 8866  |      |
| PHP  | 0.80 | 78.0  | AMl   | 08:03:49.440 |      |      |       |      |      |     |     | 0.2 | 0.32  | a    | Ml        | 1.8   | 5100 |
| PHP  | 0.80 | 78.0  | AMd   | 08:04:08.323 |      |      |       |      |      |     |     | 0.0 | 32.62 | a    | Md        | 2.4   | 5096 |
| BUM  | 0.86 | 335.0 | Pn    | 08:03:37.832 | 0.6  |      |       |      |      |     |     |     |       | m    |           | 8868  |      |
| BCI  | 0.98 | 30.0  | Pg    | 08:03:38.714 | -0.7 |      |       |      |      |     |     |     |       | m    |           | 8870  |      |
| BCI  | 0.98 | 30.0  | Sg    | 08:03:53.871 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8869  |      |
| CEME | 1.08 | 341.0 | Pn    | 08:03:41.354 | -0.2 |      |       |      |      |     |     |     |       | m    |           | 8871  |      |
| HCY  | 1.14 | 324.0 | Pn    | 08:03:43.028 | 0.3  |      |       |      |      |     |     |     |       | m    |           | 8872  |      |
| NKME | 1.28 | 346.0 | Pn    | 08:03:45.189 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 8873  |      |
| KOME | 1.33 | 3.0   | Pn    | 08:03:46.744 | 0.8  |      |       |      |      |     |     |     |       | m    |           | 8874  |      |
| BEY  | 1.39 | 15.0  | Pn    | 08:03:46.707 | -0.5 |      |       |      |      |     |     |     |       | m    |           | 8875  |      |
| SCTE | 1.61 | 207.0 | Sn    | 08:04:12.902 | -1.2 |      |       |      |      |     |     |     |       | m    |           | 8877  |      |
| SCTE | 1.61 | 207.0 | Pn    | 08:03:50.781 | -0.2 |      |       |      |      |     |     |     |       | m    |           | 8876  |      |
| NEST | 1.67 | 131.0 | Pn    | 08:03:52.407 | 0.3  |      |       |      |      |     |     |     |       | m    |           | 8878  |      |
| FNA  | 1.67 | 115.0 | Sn    | 08:04:14.687 | -1.4 |      |       |      |      |     |     |     |       | m    |           | 8880  |      |
| FNA  | 1.67 | 115.0 | Pn    | 08:03:52.362 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 8879  |      |
| FNA  | 1.67 | 115.0 | AMl   | 08:04:16.810 |      |      |       |      |      |     |     | 0.0 | 0.42  | a    | Ml        | 1.9   | 5101 |

DATA\_TYPE COMMENT GSE2.1  
 Event 549

Official Magnitude:

Ml 1.74

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 37   | 79  | 2.5600 |
| Intermediate: | 229  | 9   | 0.6600 |
| Min:          | 139  | 2   | 0.5200 |

STOP

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556784696 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 550 9 km from Shetaj, Durrës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/31 | 19:09:46.05 |     | 0.30 | 41.5272  | 19.3965   |      |      |    | 14.5  | 1.6 | 31   | 32   | 75  | 0.40  | 2.46  | m    | 591    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 3.2 | 0.0  | 10     | 591    |
| Md        | 2.7 | 0.0  | 2      | 591    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp  | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|------|-------|------|-----------|-------|
| TIR  | 0.40 | 0.0   | Pg    | 19:09:54.863 | 0.0  |      |       |      |      |     |     |      |       | mc_  |           | 8916  |
| TIR  | 0.39 | 116.0 | Sg    | 19:10:00.575 | -0.1 |      |       |      |      |     |     |      |       | m_   |           | 8882  |
| TIR  | 0.39 | 116.0 | AMl   | 19:10:01.950 |      |      |       |      |      |     |     | 11.8 | 0.42  | a_   | Ml        | 5105  |
| TIR  | 0.39 | 116.0 | AMl   | 19:10:03.010 |      |      |       |      |      |     |     | 7.3  | 0.44  | a_   | Ml        | 5104  |
| ULC  | 0.45 | 346.0 | Pg    | 19:09:55.362 | -0.1 |      |       |      |      |     |     |      |       | mc_  |           | 8883  |
| PUK  | 0.63 | 35.0  | Sg    | 19:10:08.491 | 0.2  |      |       |      |      |     |     |      |       | m_   |           | 8885  |
| PUK  | 0.63 | 35.0  | Pg    | 19:09:58.606 | -0.1 |      |       |      |      |     |     |      |       | mc_  |           | 8884  |
| PUK  | 0.63 | 35.0  | AMl   | 19:10:15.090 |      |      |       |      |      |     |     | 3.1  | 0.30  | a_   | Ml        | 5107  |
| PUK  | 0.63 | 35.0  | AMl   | 19:10:16.670 |      |      |       |      |      |     |     | 3.0  | 0.32  | a_   | Ml        | 5106  |
| PUK  | 0.63 | 35.0  | AMd   | 19:10:40.549 |      |      |       |      |      |     |     | 0.0  | 41.94 | a_   | Md        | 5102  |
| DRME | 0.68 | 347.0 | Pg    | 19:09:59.179 | -0.5 |      |       |      |      |     |     |      |       | mc_  |           | 8886  |
| PHP  | 0.80 | 78.0  | Sg    | 19:10:13.310 | -0.0 |      |       |      |      |     |     |      |       | m_   |           | 8888  |
| PHP  | 0.80 | 78.0  | Pg    | 19:10:01.524 | -0.1 |      |       |      |      |     |     |      |       | m_   |           | 8887  |
| PHP  | 0.80 | 78.0  | AMl   | 19:10:19.550 |      |      |       |      |      |     |     | 3.7  | 0.54  | a_   | Ml        | 5108  |
| PHP  | 0.80 | 78.0  | AMd   | 19:10:58.611 |      |      |       |      |      |     |     | 0.0  | 57.09 | a_   | Md        | 5103  |
| BPA1 | 0.83 | 166.0 | Sg    | 19:10:15.005 | 0.3  |      |       |      |      |     |     |      |       | m_   |           | 8889  |
| BUM  | 0.86 | 335.0 | Pg    | 19:10:02.848 | -0.2 |      |       |      |      |     |     |      |       | m_   |           | 8890  |
| BCI  | 0.98 | 30.0  | Sg    | 19:10:19.555 | 0.1  |      |       |      |      |     |     |      |       | m_   |           | 8892  |
| BCI  | 0.98 | 30.0  | Pg    | 19:10:04.464 | -0.7 |      |       |      |      |     |     |      |       | md_  |           | 8891  |
| BCI  | 0.98 | 30.0  | AMl   | 19:10:26.100 |      |      |       |      |      |     |     | 2.9  | 0.62  | a_   | Ml        | 5109  |

|      |      |       |     |              |      |     |                |      |
|------|------|-------|-----|--------------|------|-----|----------------|------|
| CEME | 1.08 | 341.0 | Pn  | 19:10:06.103 | -1.0 | --- | m_             | 8893 |
| HCY  | 1.14 | 324.0 | Pn  | 19:10:08.303 | 0.1  | --- | m_             | 8894 |
| PVY  | 1.15 | 21.0  | Pn  | 19:10:07.532 | -0.8 | --- | m_             | 8895 |
| NKME | 1.28 | 346.0 | Pn  | 19:10:10.820 | 0.2  | --- | m_             | 8896 |
| KOME | 1.32 | 3.0   | Pn  | 19:10:11.580 | 0.2  | --- | m_             | 8897 |
| KBN  | 1.38 | 130.0 | Sg  | 19:10:31.376 | -0.1 | --- | m_             | 8899 |
| KBN  | 1.38 | 130.0 | Pg  | 19:10:12.324 | 0.3  | --- | m_             | 8898 |
| KBN  | 1.38 | 130.0 | AM1 | 19:10:37.290 |      | 2.1 | 0.48 a_ M1 3.4 | 5110 |
| BEY  | 1.39 | 15.0  | Pn  | 19:10:12.289 | -0.3 | --- | m_             | 8900 |
| BRY  | 1.51 | 336.0 | Pn  | 19:10:15.068 | 0.4  | --- | md_            | 8901 |
| SCTE | 1.61 | 207.0 | Sn  | 19:10:39.112 | -0.2 | --- | m_             | 8903 |
| SCTE | 1.61 | 207.0 | Pn  | 19:10:16.286 | -0.2 | --- | mc_            | 8902 |
| SCTE | 1.61 | 207.0 | AM1 | 19:10:42.420 |      | 2.6 | 0.18 a_ M1 3.7 | 5111 |
| LSK  | 1.65 | 146.0 | Sn  | 19:10:40.204 | -0.1 | --- | m_             | 8905 |
| LSK  | 1.65 | 146.0 | Pn  | 19:10:17.408 | 0.4  | --- | m_             | 8904 |
| LSK  | 1.65 | 146.0 | AM1 | 19:10:52.540 |      | 1.8 | 0.84 a_ M1 3.5 | 5112 |
| NEST | 1.67 | 131.0 | Pn  | 19:10:18.237 | 0.7  | --- | m_             | 8906 |
| NEST | 1.67 | 131.0 | AM1 | 19:10:44.750 |      | 1.1 | 0.50 a_ M1 3.3 | 5113 |
| FNA  | 1.67 | 115.0 | Sn  | 19:10:40.925 | -0.4 | --- | m_             | 8908 |
| FNA  | 1.67 | 115.0 | Pn  | 19:10:17.792 | 0.2  | --- | m_             | 8907 |
| FNA  | 1.67 | 115.0 | AM1 | 19:10:42.530 |      | 2.7 | 0.64 a_ M1 3.7 | 5114 |
| SRN  | 1.71 | 164.0 | Sn  | 19:10:41.301 | -1.6 | --- | m_             | 8910 |
| SRN  | 1.71 | 164.0 | Pn  | 19:10:17.068 | -1.5 | --- | m_             | 8909 |
| SRN  | 1.71 | 164.0 | AM1 | 19:10:52.890 |      | 0.5 | 0.40 a_ M1 3.0 | 5115 |
| UPM  | 1.71 | 349.0 | Pn  | 19:10:18.376 | 0.1  | --- | m_             | 8911 |
| PLE  | 1.80 | 0.0   | Pn  | 19:10:20.250 | 0.4  | --- | m_             | 8912 |
| NOCI | 1.91 | 249.0 | Pn  | 19:10:21.446 | -0.1 | --- | m_             | 8913 |
| IGT  | 2.12 | 160.0 | Pn  | 19:10:23.855 | -0.7 | --- | m_             | 8914 |
| MRVN | 2.46 | 261.0 | Pn  | 19:10:26.222 | -3.4 | --- | mc_            | 8915 |

DATA\_TYPE COMMENT GSE2.1  
Event 550

Official Magnitude:  
M1 3.21

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 50   | 82  | 1.5800 |
| Intermediate: | 252  | 6   | 0.5200 |
| Min:          | 162  | 3   | 0.3600 |

STOP

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556784695 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT



Event 551 7 km from Shetaj, Durrës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/31 | 19:43:20.06 |     | 0.21 | 41.5422  | 19.4120   |      |      |    | 11.7  | 1.1 | 23   | 32   | 76  | 0.40  | 1.93  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.5 | 0.0  | 6      | 592    |
| Md        | 2.4 | 0.0  | 1      | 592    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| TIR  | 0.39 | 0.0   | Pg    | 19:43:28.517 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8943  |      |
| TIR  | 0.39 | 119.0 | Sg    | 19:43:34.425 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8917  |      |
| TIR  | 0.39 | 119.0 | AMl   | 19:43:34.930 |      |      |       |      |      |     |     | 1.6 | 0.52  | a    | Ml        | 2.3   | 5117 |
| ULC  | 0.44 | 344.0 | Pg    | 19:43:29.000 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 8918  |      |
| PUK  | 0.62 | 35.0  | Sn    | 19:43:41.890 | 0.3  |      |       |      |      |     |     |     |       | m    |           | 8920  |      |
| PUK  | 0.62 | 35.0  | Pg    | 19:43:32.299 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 8919  |      |
| PUK  | 0.62 | 35.0  | AMl   | 19:43:44.640 |      |      |       |      |      |     |     | 0.7 | 0.32  | a    | Ml        | 2.3   | 5118 |
| PUK  | 0.62 | 35.0  | AMd   | 19:44:05.879 |      |      |       |      |      |     |     | 0.0 | 33.58 | a    | Md        | 2.4   | 5116 |
| DRME | 0.66 | 346.0 | Pg    | 19:43:33.332 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 8921  |      |
| PHP  | 0.78 | 79.0  | Sg    | 19:43:46.886 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 8923  |      |
| PHP  | 0.78 | 79.0  | Pg    | 19:43:35.090 | -0.3 |      |       |      |      |     |     |     |       | m    |           | 8922  |      |
| PHP  | 0.78 | 79.0  | AMl   | 19:43:51.950 |      |      |       |      |      |     |     | 0.8 | 0.44  | a    | Ml        | 2.5   | 5119 |
| BUM  | 0.85 | 334.0 | Pg    | 19:43:37.119 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 8924  |      |
| BCI  | 0.96 | 30.0  | Sg    | 19:43:53.087 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 8926  |      |
| BCI  | 0.96 | 30.0  | Pg    | 19:43:38.121 | -0.8 |      |       |      |      |     |     |     |       | m    |           | 8925  |      |
| BCI  | 0.96 | 30.0  | AMl   | 19:43:58.590 |      |      |       |      |      |     |     | 0.6 | 0.78  | a    | Ml        | 2.5   | 5120 |
| CEME | 1.07 | 341.0 | Pn    | 19:43:41.715 | 0.7  |      |       |      |      |     |     |     |       | m    |           | 8927  |      |
| PVY  | 1.13 | 21.0  | Pn    | 19:43:41.435 | -0.7 |      |       |      |      |     |     |     |       | m    |           | 8928  |      |
| HCY  | 1.14 | 324.0 | Pn    | 19:43:42.359 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 8929  |      |
| NKME | 1.27 | 345.0 | Pn    | 19:43:44.956 | 0.4  |      |       |      |      |     |     |     |       | m    |           | 8930  |      |
| KOME | 1.31 | 3.0   | Pn    | 19:43:45.054 | -0.3 |      |       |      |      |     |     |     |       | m    |           | 8931  |      |
| BEY  | 1.38 | 15.0  | Pn    | 19:43:45.773 | -0.7 |      |       |      |      |     |     |     |       | m    |           | 8932  |      |
| KBN  | 1.39 | 130.0 | Sg    | 19:44:06.024 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 8934  |      |
| KBN  | 1.39 | 130.0 | Pg    | 19:43:45.279 | -0.9 |      |       |      |      |     |     |     |       | m    |           | 8933  |      |
| KBN  | 1.39 | 130.0 | AMl   | 19:44:11.260 |      |      |       |      |      |     |     | 0.4 | 0.56  | a    | Ml        | 2.7   | 5121 |
| BRY  | 1.50 | 335.0 | Pn    | 19:43:48.894 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 8935  |      |
| SCTE | 1.63 | 207.0 | Pn    | 19:43:50.962 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 8936  |      |
| FNA  | 1.67 | 116.0 | Sn    | 19:44:14.976 | -0.5 |      |       |      |      |     |     |     |       | m    |           | 8938  |      |
| FNA  | 1.67 | 116.0 | Pn    | 19:43:51.847 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 8937  |      |
| FNA  | 1.67 | 116.0 | AMl   | 19:44:16.830 |      |      |       |      |      |     |     | 0.2 | 0.44  | a    | Ml        | 2.6   | 5122 |
| NEST | 1.67 | 131.0 | Pn    | 19:43:52.097 | 0.3  |      |       |      |      |     |     |     |       | m    |           | 8939  |      |
| UPM  | 1.70 | 348.0 | Pn    | 19:43:52.138 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 8940  |      |
| PLE  | 1.79 | 0.0   | Pn    | 19:43:53.418 | -0.4 |      |       |      |      |     |     |     |       | m    |           | 8941  |      |
| NOCI | 1.93 | 248.0 | Pn    | 19:43:55.949 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 8942  |      |

DATA\_TYPE COMMENT GSE2.1  
Event 551

Official Magnitude:  
Ml 2.52

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 46   | 75  | 1.1600 |
| Intermediate: | 229  | 14  | 0.4400 |
| Min:          | 139  | 1   | 0.3200 |

STOP

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556784695 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 552 1.2 km from Kepi i Rodonit, Durrës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/31 | 20:04:34.93 |     | 0.26 | 41.5742  | 19.4458   |      |      |    | 12.4  | 1.3 | 22   | 32   | 174 | 0.39  | 1.75  | m    |        |
| OrigID     | 593         |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 3.1 | 0.0  | 5      | 593    |
| Md        | 2.9 | 0.0  | 3      | 593    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| TIR  | 0.38 | 0.0   | Pg    | 20:04:43.211 | 0.0  |      |       |      |      | ___ |     |     |       | mc_  |           | 8969  |      |
| TIR  | 0.39 | 125.0 | Sg    | 20:04:49.115 | -0.1 |      |       |      |      | ___ |     |     |       | m_   |           | 8944  |      |
| ULC  | 0.42 | 340.0 | Pg    | 20:04:43.823 | 0.2  |      |       |      |      | ___ |     |     |       | mc_  |           | 8945  |      |
| PUK  | 0.57 | 35.0  | Sg    | 20:04:57.194 | 2.1  |      |       |      |      | ___ |     |     |       | m_   |           | 8947  |      |
| PUK  | 0.57 | 35.0  | Pg    | 20:04:46.872 | 0.4  |      |       |      |      | ___ |     |     |       | mc_  |           | 8946  |      |
| PUK  | 0.57 | 35.0  | AMl   | 20:05:00.880 |      |      |       |      |      | ___ |     | 2.8 | 0.30  | a_   | Ml        | 2.8   | 5127 |
| PUK  | 0.57 | 35.0  | AMl   | 20:05:04.600 |      |      |       |      |      | ___ |     | 3.3 | 0.22  | a_   | Ml        | 2.9   | 5126 |
| PUK  | 0.57 | 35.0  | AMd   | 20:05:45.248 |      |      |       |      |      | ___ |     | 0.0 | 58.38 | a_   | Md        | 2.9   | 5123 |
| DRME | 0.64 | 343.0 | Pg    | 20:04:47.560 | -0.3 |      |       |      |      | ___ |     |     |       | m_   |           | 8948  |      |
| PHP  | 0.75 | 81.0  | Sg    | 20:05:00.593 | -0.2 |      |       |      |      | ___ |     |     |       | m_   |           | 8950  |      |
| PHP  | 0.75 | 81.0  | Pg    | 20:04:49.803 | 0.1  |      |       |      |      | ___ |     |     |       | m_   |           | 8949  |      |
| PHP  | 0.75 | 81.0  | AMl   | 20:05:06.680 |      |      |       |      |      | ___ |     | 3.5 | 0.44  | a_   | Ml        | 3.1   | 5128 |
| PHP  | 0.75 | 81.0  | AMd   | 20:05:47.821 |      |      |       |      |      | ___ |     | 0.0 | 58.02 | a_   | Md        | 2.9   | 5124 |
| BUM  | 0.83 | 331.0 | Pg    | 20:04:51.521 | 0.0  |      |       |      |      | ___ |     |     |       | m_   |           | 8951  |      |
| BCI  | 0.92 | 30.0  | Sg    | 20:05:06.815 | 0.3  |      |       |      |      | ___ |     |     |       | m_   |           | 8953  |      |
| BCI  | 0.92 | 30.0  | Pg    | 20:04:52.691 | -0.3 |      |       |      |      | ___ |     |     |       | m_   |           | 8952  |      |
| BCI  | 0.92 | 30.0  | AMl   | 20:05:15.550 |      |      |       |      |      | ___ |     | 2.4 | 0.58  | a_   | Ml        | 3.1   | 5129 |
| BCI  | 0.92 | 30.0  | AMd   | 20:05:45.620 |      |      |       |      |      | ___ |     | 0.0 | 52.93 | a_   | Md        | 2.8   | 5125 |
| CEME | 1.05 | 339.0 | Pn    | 20:04:55.023 | -0.5 |      |       |      |      | ___ |     |     |       | m_   |           | 8954  |      |
| PVY  | 1.09 | 20.0  | Pn    | 20:04:55.753 | -0.6 |      |       |      |      | ___ |     |     |       | m_   |           | 8955  |      |
| HCY  | 1.13 | 322.0 | Pn    | 20:04:57.116 | 0.2  |      |       |      |      | ___ |     |     |       | m_   |           | 8956  |      |

|      |      |       |     |              |      |     |  |  |  |     |      |   |    |     |  |   |      |
|------|------|-------|-----|--------------|------|-----|--|--|--|-----|------|---|----|-----|--|---|------|
| NKME | 1.25 | 344.0 | Pn  | 20:04:59.054 | 0.1  | --- |  |  |  |     |      |   |    |     |  | m | 8957 |
| KOME | 1.28 | 2.0   | Pn  | 20:04:59.727 | 0.2  | --- |  |  |  |     |      |   |    |     |  | m | 8958 |
| BEY  | 1.34 | 14.0  | Pn  | 20:05:00.543 | -0.1 | --- |  |  |  |     |      |   |    |     |  | m | 8959 |
| KBN  | 1.39 | 132.0 | Sn  | 20:05:20.804 | 0.1  | --- |  |  |  |     |      |   |    |     |  | m | 8961 |
| KBN  | 1.39 | 132.0 | Pn  | 20:05:01.668 | 0.6  | --- |  |  |  |     |      |   |    |     |  | m | 8960 |
| KBN  | 1.39 | 132.0 | AMl | 20:05:24.310 |      | --- |  |  |  | 1.5 | 0.52 | a | Ml | 3.3 |  |   | 5130 |
| BRY  | 1.49 | 334.0 | Pn  | 20:05:02.967 | -0.3 | --- |  |  |  |     |      |   |    |     |  | m | 8962 |
| FNA  | 1.66 | 117.0 | Sn  | 20:05:29.981 | -0.0 | --- |  |  |  |     |      |   |    |     |  | m | 8964 |
| FNA  | 1.66 | 117.0 | Pn  | 20:05:06.118 | -0.3 | --- |  |  |  |     |      |   |    |     |  | m | 8963 |
| FNA  | 1.66 | 117.0 | AMl | 20:05:31.530 |      | --- |  |  |  | 0.8 | 0.52 | a | Ml | 3.2 |  |   | 5131 |
| SCTE | 1.67 | 207.0 | Pn  | 20:05:05.113 | -1.4 | --- |  |  |  |     |      |   |    |     |  | m | 8965 |
| LSK  | 1.67 | 148.0 | Pn  | 20:05:06.492 | 0.1  | --- |  |  |  |     |      |   |    |     |  | m | 8966 |
| UPM  | 1.67 | 347.0 | Pn  | 20:05:06.841 | 0.2  | --- |  |  |  |     |      |   |    |     |  | m | 8967 |
| PLE  | 1.75 | 359.0 | Pn  | 20:05:09.004 | 1.0  | --- |  |  |  |     |      |   |    |     |  | m | 8968 |

DATA\_TYPE COMMENT GSE2.1  
Event 552

Official Magnitude:  
Ml 3.12

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 48   | 75  | 1.3700 |
| Intermediate: | 229  | 14  | 0.8000 |
| Min:          | 319  | 0   | 0.3700 |

STOP

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556784694 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 553 7 km from Shetaj, Durrës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/31 | 20:20:34.83 |     | 0.15 | 41.5292  | 19.4162   |      |      |    | 3.7   | 2.6 | 15   | 32   | 117 | 0.39  | 1.66  | m    | 594    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.2 | 0.0  | 4      | 594    |
| Md        | 2.6 | 0.0  | 1      | 594    |

| Sta | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |      |
|-----|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|------|
| TIR | 0.38 | 0.0   | Pg    | 20:20:43.330 | 0.0  |      |       |      |      | --- |     |     |      | m    |           | 8987  |      |
| TIR | 0.38 | 118.0 | Sg    | 20:20:49.108 | 0.0  |      |       |      |      | --- |     |     |      | m    |           | 8970  |      |
| TIR | 0.38 | 118.0 | AMl   | 20:20:49.900 |      |      |       |      |      | --- |     | 1.0 | 0.54 | a    | Ml        | 2.1   | 5133 |

|      |      |       |     |              |      |     |     |     |     |     |     |       |     |     |     |     |     |      |
|------|------|-------|-----|--------------|------|-----|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|-----|------|
| ULC  | 0.45 | 345.0 | Pg  | 20:20:44.234 | -0.1 | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | mc_ | 8971 |
| PUK  | 0.62 | 34.0  | Sg  | 20:20:57.331 | 0.4  | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | m_  | 8973 |
| PUK  | 0.62 | 34.0  | Pg  | 20:20:47.463 | -0.0 | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | m_  | 8972 |
| PUK  | 0.62 | 34.0  | AMl | 20:21:01.250 |      | --- | --- | --- | --- | --- | 0.4 | 0.30  | a_  | Ml  | 2.0 | --- | --- | 5134 |
| PUK  | 0.62 | 34.0  | AMd | 20:21:28.968 |      | --- | --- | --- | --- | --- | 0.0 | 41.51 | a_  | Md  | 2.6 | --- | --- | 5132 |
| DRME | 0.68 | 346.0 | Pg  | 20:20:48.450 | -0.2 | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | m_  | 8974 |
| PHP  | 0.78 | 78.0  | Sg  | 20:21:02.011 | 0.0  | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | m_  | 8976 |
| PHP  | 0.78 | 78.0  | Pg  | 20:20:50.199 | -0.2 | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | m_  | 8975 |
| PHP  | 0.78 | 78.0  | AMl | 20:21:07.040 |      | --- | --- | --- | --- | --- | 0.5 | 0.52  | a_  | Ml  | 2.3 | --- | --- | 5135 |
| BCI  | 0.97 | 29.0  | Sg  | 20:21:08.235 | -0.2 | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | m_  | 8978 |
| BCI  | 0.97 | 29.0  | Pg  | 20:20:53.044 | -1.0 | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | m_  | 8977 |
| BCI  | 0.97 | 29.0  | AMl | 20:21:13.670 |      | --- | --- | --- | --- | --- | 0.3 | 0.70  | a_  | Ml  | 2.3 | --- | --- | 5136 |
| CEME | 1.08 | 341.0 | Pn  | 20:20:56.826 | 0.5  | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | m_  | 8979 |
| HCY  | 1.15 | 324.0 | Pn  | 20:20:57.691 | 0.1  | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | m_  | 8980 |
| NKME | 1.28 | 345.0 | Pn  | 20:21:00.482 | 0.3  | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | m_  | 8981 |
| KOME | 1.32 | 3.0   | Pn  | 20:21:00.345 | -0.6 | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | m_  | 8982 |
| BRY  | 1.52 | 335.0 | Pn  | 20:21:04.299 | -0.1 | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | md_ | 8983 |
| SCTE | 1.62 | 207.0 | Pn  | 20:21:06.075 | -0.1 | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | m_  | 8984 |
| FNA  | 1.66 | 116.0 | Pn  | 20:21:06.951 | -0.0 | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | m_  | 8985 |
| NEST | 1.66 | 131.0 | Pn  | 20:21:07.082 | 0.1  | --- | --- | --- | --- | --- | --- | ---   | --- | --- | --- | --- | m_  | 8986 |

DATA\_TYPE COMMENT GSE2.1  
Event 553

Official Magnitude:  
Ml 2.18

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 263  | 80  | 2.6100 |
| Intermediate: | 46   | 7   | 0.4500 |
| Min:          | 137  | 6   | 0.3400 |

STOP

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556784693 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 554 12 km from Bishtkamzë, Durrës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/31 | 20:38:45.36 |     | 0.36 | 41.4890  | 19.3592   |      |      |    | 25.3  | 1.6 | 32   | 32   | 66  | 0.40  | 2.87  | m    |        |
| 595        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 3.6 | 0.0  | 8      | 595    |

Md 3.4 0.0 2 595

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp  | Per    | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|------|--------|------|-----------|-------|
| TIR  | 0.41 | 0.0   | Pg    | 20:38:55.119 | 0.0  |      |       |      |      |     |     |      |        |      |           | 9024  |
| TIR  | 0.41 | 110.0 | Sg    | 20:39:00.999 | -0.1 |      |       |      |      |     |     |      |        |      |           | 8988  |
| TIR  | 0.41 | 110.0 | AMl   | 20:39:01.530 |      |      |       |      |      |     |     | 10.8 | 0.52   | a__  | Ml        | 5139  |
| ULC  | 0.48 | 351.0 | Pg    | 20:38:55.808 | 0.2  |      |       |      |      |     |     |      |        |      |           | 8989  |
| ULC  | 0.48 | 351.0 | AMd   | 20:40:24.123 |      |      |       |      |      |     |     | 0.0  | 88.32  | a__  | Md        | 5137  |
| PUK  | 0.68 | 35.0  | Sg    | 20:39:08.959 | -0.2 |      |       |      |      |     |     |      |        |      |           | 8991  |
| PUK  | 0.68 | 35.0  | Pg    | 20:38:58.081 | -0.9 |      |       |      |      |     |     |      |        |      |           | 8990  |
| PUK  | 0.68 | 35.0  | AMl   | 20:39:16.280 |      |      |       |      |      |     |     | 8.0  | 0.32   | a__  | Ml        | 5140  |
| DRME | 0.71 | 350.0 | P     | 20:38:59.443 | -0.1 |      |       |      |      |     |     |      |        |      |           | 8992  |
| PHP  | 0.83 | 76.0  | Sg    | 20:39:13.637 | 0.1  |      |       |      |      |     |     |      |        |      |           | 8994  |
| PHP  | 0.83 | 76.0  | Pg    | 20:39:01.480 | 0.0  |      |       |      |      |     |     |      |        |      |           | 8993  |
| PHP  | 0.83 | 76.0  | AMl   | 20:39:18.650 |      |      |       |      |      |     |     | 7.8  | 0.48   | a__  | Ml        | 5141  |
| PHP  | 0.83 | 76.0  | AMd   | 20:40:47.562 |      |      |       |      |      |     |     | 0.0  | 106.08 | a__  | Md        | 5138  |
| BUM  | 0.88 | 338.0 | P     | 20:39:03.180 | 0.6  |      |       |      |      |     |     |      |        |      |           | 8995  |
| BCI  | 1.02 | 30.0  | Sg    | 20:39:20.068 | 0.3  |      |       |      |      |     |     |      |        |      |           | 8997  |
| BCI  | 1.02 | 30.0  | Pg    | 20:39:04.724 | -0.3 |      |       |      |      |     |     |      |        |      |           | 8996  |
| BCI  | 1.02 | 30.0  | AMl   | 20:39:25.260 |      |      |       |      |      |     |     | 6.3  | 0.70   | a__  | Ml        | 5142  |
| VLO  | 1.02 | 174.0 | Pg    | 20:39:09.003 | 4.6  |      |       |      |      |     |     |      |        |      |           | 8998  |
| CEME | 1.11 | 343.0 | P     | 20:39:06.593 | 0.0  |      |       |      |      |     |     |      |        |      |           | 8999  |
| HCY  | 1.16 | 327.0 | P     | 20:39:07.779 | 0.3  |      |       |      |      |     |     |      |        |      |           | 9000  |
| PVY  | 1.20 | 22.0  | Pn    | 20:39:07.740 | -0.4 |      |       |      |      |     |     |      |        |      |           | 9001  |
| NKME | 1.31 | 347.0 | P     | 20:39:10.469 | 0.3  |      |       |      |      |     |     |      |        |      |           | 9002  |
| KOME | 1.37 | 4.0   | P     | 20:39:10.826 | -0.3 |      |       |      |      |     |     |      |        |      |           | 9003  |
| KBN  | 1.38 | 128.0 | Sg    | 20:39:30.822 | 0.6  |      |       |      |      |     |     |      |        |      |           | 9005  |
| KBN  | 1.38 | 128.0 | Pg    | 20:39:14.302 | 3.3  |      |       |      |      |     |     |      |        |      |           | 9004  |
| KBN  | 1.38 | 128.0 | AMl   | 20:39:38.200 |      |      |       |      |      |     |     | 3.4  | 0.68   | a__  | Ml        | 5143  |
| BEY  | 1.44 | 16.0  | P     | 20:39:11.726 | -0.7 |      |       |      |      |     |     |      |        |      |           | 9006  |
| BRY  | 1.54 | 337.0 | P     | 20:39:14.552 | 0.5  |      |       |      |      |     |     |      |        |      |           | 9007  |
| SCTE | 1.56 | 206.0 | Sn    | 20:39:36.150 | -0.2 |      |       |      |      |     |     |      |        |      |           | 9009  |
| SCTE | 1.56 | 206.0 | Pn    | 20:39:14.673 | 0.2  |      |       |      |      |     |     |      |        |      |           | 9008  |
| SCTE | 1.56 | 206.0 | AMl   | 20:39:39.360 |      |      |       |      |      |     |     | 3.8  | 0.46   | a__  | Ml        | 5144  |
| LSK  | 1.63 | 144.0 | Sn    | 20:39:38.128 | -0.0 |      |       |      |      |     |     |      |        |      |           | 9011  |
| LSK  | 1.63 | 144.0 | Pn    | 20:39:15.540 | 0.0  |      |       |      |      |     |     |      |        |      |           | 9010  |
| LSK  | 1.63 | 144.0 | AMl   | 20:39:52.570 |      |      |       |      |      |     |     | 3.7  | 0.68   | a__  | Ml        | 5145  |
| NEST | 1.67 | 129.0 | S     | 20:39:39.428 | 0.1  |      |       |      |      |     |     |      |        |      |           | 9013  |
| NEST | 1.67 | 129.0 | P     | 20:39:16.293 | 0.1  |      |       |      |      |     |     |      |        |      |           | 9012  |
| NEST | 1.67 | 129.0 | AMl   | 20:39:44.970 |      |      |       |      |      |     |     | 1.8  | 0.70   | a__  | Ml        | 5146  |
| SRN  | 1.68 | 162.0 | Sn    | 20:39:40.318 | 0.1  |      |       |      |      |     |     |      |        |      |           | 9015  |
| SRN  | 1.68 | 162.0 | P     | 20:39:17.478 | 0.8  |      |       |      |      |     |     |      |        |      |           | 9014  |
| UPM  | 1.74 | 350.0 | P     | 20:39:17.931 | 0.6  |      |       |      |      |     |     |      |        |      |           | 9016  |
| PLE  | 1.84 | 0.0   | Pn    | 20:39:18.850 | 0.1  |      |       |      |      |     |     |      |        |      |           | 9017  |
| NOCI | 1.87 | 249.0 | Sn    | 20:39:46.290 | 1.7  |      |       |      |      |     |     |      |        |      |           | 9019  |
| NOCI | 1.87 | 249.0 | Pn    | 20:39:18.969 | -0.2 |      |       |      |      |     |     |      |        |      |           | 9018  |
| MRVN | 2.42 | 261.0 | P     | 20:39:26.716 | -0.6 |      |       |      |      |     |     |      |        |      |           | 9020  |
| SGRT | 2.71 | 277.0 | P     | 20:39:30.058 | -1.5 |      |       |      |      |     |     |      |        |      |           | 9021  |
| THE  | 2.86 | 106.0 | P     | 20:39:33.322 | -0.4 |      |       |      |      |     |     |      |        |      |           | 9022  |
| LKD2 | 2.87 | 159.0 | P     | 20:39:33.564 | -0.4 |      |       |      |      |     |     |      |        |      |           | 9023  |

DATA\_TYPE COMMENT GSE2.1  
 Event 554

Official Magnitude:  
 Ml 3.60

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 39   | 66  | 1.7700 |
| Intermediate: | 263  | 17  | 0.6300 |
| Min:          | 168  | 16  | 0.4500 |

STOP

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556784692 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 555 6 km from Shetaj, Durrës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/31 | 22:01:47.70 |     | 0.43 | 41.5678  | 19.4183   |      |      |    | 14.5  | 3.7 | 19   | 17   | 129 | 0.40  | 2.48  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.0 | 0.0  | 5      | 596    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|------|
| TIR  | 0.40 | 0.0   | Pg    | 22:01:56.025 | 0.0  |      |       |      |      |     |     |     |      | m    |           | 9046  |      |
| TIR  | 0.40 | 123.0 | Sg    | 22:02:02.543 | 0.0  |      |       |      |      |     |     |     |      | m    |           | 9025  |      |
| TIR  | 0.40 | 123.0 | AMl   | 22:02:05.750 |      |      |       |      |      |     |     | 0.5 | 0.36 | a    | Ml        | 1.8   | 5147 |
| ULC  | 0.41 | 343.0 | Pg    | 22:01:56.273 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 9026  |      |
| PUK  | 0.59 | 36.0  | Sg    | 22:02:08.382 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 9028  |      |
| PUK  | 0.59 | 36.0  | Pg    | 22:01:59.308 | -0.3 |      |       |      |      |     |     |     |      | m    |           | 9027  |      |
| PUK  | 0.59 | 36.0  | AMl   | 22:02:17.570 |      |      |       |      |      |     |     | 0.3 | 0.52 | a    | Ml        | 1.8   | 5148 |
| DRME | 0.64 | 345.0 | Pn    | 22:02:00.466 | -0.2 |      |       |      |      |     |     |     |      | m    |           | 9029  |      |
| PHP  | 0.78 | 81.0  | S     | 22:02:14.545 | 0.3  |      |       |      |      |     |     |     |      | m    |           | 9031  |      |
| PHP  | 0.78 | 81.0  | P     | 22:02:02.352 | -0.5 |      |       |      |      |     |     |     |      | m    |           | 9030  |      |
| PHP  | 0.78 | 81.0  | AMl   | 22:02:23.290 |      |      |       |      |      |     |     | 0.3 | 0.28 | a    | Ml        | 2.1   | 5149 |
| BUM  | 0.83 | 333.0 | Pn    | 22:02:04.539 | 0.4  |      |       |      |      |     |     |     |      | m    |           | 9032  |      |
| BCI  | 0.93 | 31.0  | S     | 22:02:19.966 | 0.3  |      |       |      |      |     |     |     |      | m    |           | 9034  |      |
| BCI  | 0.93 | 31.0  | Pn    | 22:02:05.135 | -0.8 |      |       |      |      |     |     |     |      | m    |           | 9033  |      |
| BCI  | 0.93 | 31.0  | AMl   | 22:02:30.730 |      |      |       |      |      |     |     | 0.2 | 0.36 | a    | Ml        | 2.0   | 5150 |
| CEME | 1.05 | 340.0 | Pn    | 22:02:07.533 | -0.6 |      |       |      |      |     |     |     |      | m    |           | 9035  |      |
| PVY  | 1.11 | 21.0  | P     | 22:02:09.045 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 9036  |      |
| HCY  | 1.12 | 323.0 | Pn    | 22:02:09.899 | 0.5  |      |       |      |      |     |     |     |      | m    |           | 9037  |      |

|      |      |       |     |              |      |     |                   |      |
|------|------|-------|-----|--------------|------|-----|-------------------|------|
| NKME | 1.25 | 345.0 | Pn  | 22:02:11.930 | 0.3  | --- | m                 | 9038 |
| BEY  | 1.35 | 15.0  | Pn  | 22:02:13.770 | 0.3  | --- | m                 | 9039 |
| KBN  | 1.40 | 131.0 | S   | 22:02:35.353 | 1.8  | --- | m                 | 9041 |
| KBN  | 1.40 | 131.0 | Pn  | 22:02:14.847 | 0.9  | --- | m                 | 9040 |
| KBN  | 1.40 | 131.0 | AM1 | 22:02:42.400 |      | --- | 0.2 0.58 a M1 2.3 | 5151 |
| BRY  | 1.48 | 335.0 | Pn  | 22:02:16.291 | 0.5  | --- | m                 | 9042 |
| UPM  | 1.68 | 348.0 | Pn  | 22:02:19.627 | 0.3  | --- | m                 | 9043 |
| MRVN | 2.48 | 260.0 | S   | 22:02:57.944 | -6.5 | --- | m                 | 9045 |
| MRVN | 2.48 | 260.0 | P   | 22:02:30.953 | -0.6 | --- | m                 | 9044 |

DATA\_TYPE COMMENT GSE2.1  
Event 555

Official Magnitude:  
Ml 1.97

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 70   | 77  | 3.7800 |
| Intermediate: | 205  | 9   | 1.1400 |
| Min:          | 296  | 9   | 0.8000 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556784692 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 556 12 km from Bishtkamzë, Durrës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/31 | 22:14:27.78 |     | 0.36 | 41.4932  | 19.3572   |      |      |    | 25.5  | 1.9 | 24   | 32   | 55  | 0.40  | 2.71  | m    | 597    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 3.8 | 0.0  | 6      | 597    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp  | Per  | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|------|------|------|-----------|-------|
| TIR  | 0.41 | 0.0   | Pg    | 22:14:37.263 | 0.0  |      |       |      |      | --- |     |      |      | m    |           | 9074  |
| TIR  | 0.41 | 110.0 | Sg    | 22:14:43.728 | 0.1  |      |       |      |      | --- |     |      |      | m    |           | 9047  |
| TIR  | 0.41 | 110.0 | AM1   | 22:14:44.400 |      |      |       |      |      | --- |     | 20.4 | 0.46 | a M1 | 3.5       | 5152  |
| ULC  | 0.48 | 351.0 | Pg    | 22:14:38.061 | 0.1  |      |       |      |      | --- |     |      |      | m    |           | 9048  |
| PUK  | 0.68 | 35.0  | Sg    | 22:14:51.307 | -0.2 |      |       |      |      | --- |     |      |      | m    |           | 9050  |
| PUK  | 0.68 | 35.0  | Pg    | 22:14:40.838 | -0.5 |      |       |      |      | --- |     |      |      | mci  |           | 9049  |
| PUK  | 0.68 | 35.0  | AM1   | 22:14:58.470 |      |      |       |      |      | --- |     | 12.4 | 0.36 | a M1 | 3.6       | 5153  |
| DRME | 0.70 | 350.0 | P     | 22:14:41.719 | -0.2 |      |       |      |      | --- |     |      |      | m    |           | 9051  |
| PHP  | 0.83 | 76.0  | S     | 22:14:56.362 | 0.3  |      |       |      |      | --- |     |      |      | m    |           | 9053  |
| PHP  | 0.83 | 76.0  | P     | 22:14:43.581 | -0.3 |      |       |      |      | --- |     |      |      | m    |           | 9052  |

|      |      |       |     |              |      |      |      |   |     |     |      |
|------|------|-------|-----|--------------|------|------|------|---|-----|-----|------|
| PHP  | 0.83 | 76.0  | AM1 | 22:15:00.870 | ---  | 14.5 | 0.44 | a | M1  | 3.8 | 5154 |
| BCI  | 1.02 | 31.0  | S   | 22:15:02.118 | 0.0  | ---  | ---  | m | --- | --- | 9055 |
| BCI  | 1.02 | 31.0  | P   | 22:14:46.677 | -0.7 | ---  | ---  | m | --- | --- | 9054 |
| BCI  | 1.02 | 31.0  | AM1 | 22:15:09.720 | ---  | ---  | ---  | a | M1  | 3.9 | 5155 |
| HCY  | 1.15 | 327.0 | P   | 22:14:50.204 | 0.4  | ---  | ---  | m | --- | --- | 9056 |
| PVY  | 1.19 | 22.0  | P   | 22:14:49.831 | -0.7 | ---  | ---  | m | --- | --- | 9057 |
| NKME | 1.31 | 347.0 | P   | 22:14:52.722 | 0.2  | ---  | ---  | m | --- | --- | 9058 |
| KBN  | 1.39 | 128.0 | S   | 22:15:12.804 | 0.0  | ---  | ---  | m | --- | --- | 9060 |
| KBN  | 1.39 | 128.0 | P   | 22:14:55.178 | 1.7  | ---  | ---  | m | --- | --- | 9059 |
| KBN  | 1.39 | 128.0 | AM1 | 22:15:18.410 | ---  | ---  | ---  | a | M1  | 3.8 | 5156 |
| BEY  | 1.43 | 16.0  | P   | 22:14:54.680 | -0.1 | ---  | ---  | m | --- | --- | 9061 |
| BRY  | 1.53 | 337.0 | P   | 22:14:57.050 | 0.6  | ---  | ---  | m | --- | --- | 9062 |
| SCTE | 1.57 | 206.0 | S   | 22:15:18.755 | -0.1 | ---  | ---  | m | --- | --- | 9064 |
| SCTE | 1.57 | 206.0 | P   | 22:14:57.109 | 0.1  | ---  | ---  | m | --- | --- | 9063 |
| LSK  | 1.64 | 144.0 | S   | 22:15:20.807 | 0.2  | ---  | ---  | m | --- | --- | 9066 |
| LSK  | 1.64 | 144.0 | P   | 22:15:00.126 | 2.1  | ---  | ---  | m | --- | --- | 9065 |
| LSK  | 1.64 | 144.0 | AM1 | 22:15:36.290 | ---  | ---  | ---  | a | M1  | 4.2 | 5157 |
| SRN  | 1.68 | 162.0 | S   | 22:15:22.406 | -0.3 | ---  | ---  | m | --- | --- | 9068 |
| SRN  | 1.68 | 162.0 | P   | 22:14:59.519 | 0.3  | ---  | ---  | m | --- | --- | 9067 |
| UPM  | 1.74 | 350.0 | P   | 22:15:00.824 | 1.1  | ---  | ---  | m | --- | --- | 9069 |
| PLE  | 1.83 | 0.0   | P   | 22:15:02.711 | 1.6  | ---  | ---  | m | --- | --- | 9070 |
| MRVN | 2.42 | 261.0 | P   | 22:15:08.857 | -0.9 | ---  | ---  | m | --- | --- | 9071 |
| SGRT | 2.71 | 277.0 | P   | 22:15:12.727 | -1.2 | ---  | ---  | m | --- | --- | 9073 |
| SGRT | 2.71 | 277.0 | S   | 22:15:48.538 | -0.1 | ---  | ---  | m | --- | --- | 9072 |

DATA\_TYPE COMMENT GSE2.1  
Event 556

Official Magnitude:  
M1 3.83

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 51   | 65  | 2.0500 |
| Intermediate: | 279  | 16  | 0.5800 |
| Min:          | 184  | 18  | 0.4900 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556784691 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 557 0.5 km from Shetaj, Durrës, Albania

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/31 | 22:17:09.59 |     | 0.30 | 41.5552  | 19.4962   |      |      |    | 26.6  | 2.3 | 14   | 16   | 121 | 0.34  | 1.67  | m    | 598    |



Magnitude Err Nsta Author OrigID  
M1 2.3 0.0 3 598

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|
| TIR  | 0.35 | 0.0   | Pg    | 22:17:17.310 | 0.0  |      |       |      |      |     |     |     |      | mci  |           | 9092  |
| TIR  | 0.35 | 126.0 | Sg    | 22:17:23.789 | -0.0 |      |       |      |      |     |     |     |      | m    |           | 9075  |
| TIR  | 0.35 | 126.0 | AM1   | 22:17:23.390 |      |      |       |      |      |     |     | 1.6 | 0.54 | a    | M1        | 2.3   |
| DRME | 0.67 | 341.0 | P     | 22:17:22.045 | -1.1 |      |       |      |      |     |     |     |      | m    |           | 9076  |
| PHP  | 0.72 | 79.0  | Sg    | 22:17:34.397 | 0.1  |      |       |      |      |     |     |     |      | m    |           | 9078  |
| PHP  | 0.72 | 79.0  | Pg    | 22:17:23.971 | 0.2  |      |       |      |      |     |     |     |      | mdi  |           | 9077  |
| PHP  | 0.72 | 79.0  | AM1   | 22:17:41.040 |      |      |       |      |      |     |     | 0.5 | 0.30 | a    | M1        | 2.3   |
| BUM  | 0.87 | 330.0 | P     | 22:17:26.280 | -0.3 |      |       |      |      |     |     |     |      | m    |           | 9079  |
| BCI  | 0.92 | 27.0  | Sg    | 22:17:40.471 | -0.2 |      |       |      |      |     |     |     |      | m    |           | 9081  |
| BCI  | 0.92 | 27.0  | Pg    | 22:17:26.938 | -0.4 |      |       |      |      |     |     |     |      | m    |           | 9080  |
| BCI  | 0.92 | 27.0  | AM1   | 22:17:45.530 |      |      |       |      |      |     |     | 0.5 | 0.46 | a    | M1        | 2.5   |
| CEME | 1.08 | 337.0 | P     | 22:17:30.375 | 0.0  |      |       |      |      |     |     |     |      | m    |           | 9082  |
| VLO  | 1.09 | 181.0 | Sg    | 22:17:44.858 | -0.0 |      |       |      |      |     |     |     |      | m    |           | 9084  |
| VLO  | 1.09 | 181.0 | Pg    | 22:17:31.525 | 1.8  |      |       |      |      |     |     |     |      | mci  |           | 9083  |
| PVY  | 1.10 | 18.0  | P     | 22:17:30.234 | -0.4 |      |       |      |      |     |     |     |      | m    |           | 9085  |
| NKME | 1.27 | 342.0 | P     | 22:17:34.308 | 0.5  |      |       |      |      |     |     |     |      | m    |           | 9086  |
| KOME | 1.29 | 0.0   | P     | 22:17:34.792 | 0.7  |      |       |      |      |     |     |     |      | m    |           | 9087  |
| BEY  | 1.35 | 12.0  | P     | 22:17:35.397 | 0.3  |      |       |      |      |     |     |     |      | m    |           | 9088  |
| BRY  | 1.52 | 333.0 | P     | 22:17:37.940 | -0.0 |      |       |      |      |     |     |     |      | m    |           | 9089  |
| SCTE | 1.67 | 209.0 | Sn    | 22:18:01.216 | -2.2 |      |       |      |      |     |     |     |      | m    |           | 9091  |
| SCTE | 1.67 | 209.0 | Pn    | 22:17:40.180 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 9090  |

DATA\_TYPE COMMENT GSE2.1  
Event 557

Official Magnitude:  
M1 2.34

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 98   | 71  | 2.4000 |
| Intermediate: | 257  | 17  | 0.7600 |
| Min:          | 349  | 6   | 0.5800 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556784690 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 558 12 km from Shetaj, Durrës, Albania

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

2019/03/31 22:19:17.96 0.68 41.5020 19.3718 22.0 2.5 36 28 65 0.40 2.88 m  
599

Magnitude Err Nsta Author OrigID  
Ml 2.4 0.0 8 599  
Md 2.6 0.0 1 599

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| TIR  | 0.41 | 0.0   | Pg    | 22:19:26.712 | 0.0  |      |       |      |      |     |     |     |       |      |           | 9133  |      |
| TIR  | 0.40 | 112.0 | Sg    | 22:19:33.379 | 0.2  |      |       |      |      |     |     |     |       |      |           | 9093  |      |
| TIR  | 0.40 | 112.0 | AMl   | 22:19:33.950 |      |      |       |      |      |     |     | 1.2 | 0.40  | a__  | Ml        | 2.3   | 5162 |
| ULC  | 0.47 | 349.0 | Pg    | 22:19:27.194 | -0.7 |      |       |      |      |     |     |     |       |      |           | 9094  |      |
| ULC  | 0.47 | 349.0 | AMd   | 22:20:09.965 |      |      |       |      |      |     |     | 0.0 | 42.77 | a__  | Md        | 2.6   | 5161 |
| PUK  | 0.67 | 35.0  | Sg    | 22:19:41.129 | 0.0  |      |       |      |      |     |     |     |       |      |           | 9096  |      |
| PUK  | 0.67 | 35.0  | Pg    | 22:19:30.088 | -1.1 |      |       |      |      |     |     |     |       |      |           | 9095  |      |
| PUK  | 0.67 | 35.0  | AMl   | 22:19:47.820 |      |      |       |      |      |     |     | 0.6 | 0.50  | a__  | Ml        | 2.3   | 5163 |
| DRME | 0.70 | 349.0 | Pn    | 22:19:31.615 | -0.3 |      |       |      |      |     |     |     |       |      |           | 9097  |      |
| PHP  | 0.82 | 76.0  | Sg    | 22:19:45.687 | -0.0 |      |       |      |      |     |     |     |       |      |           | 9099  |      |
| PHP  | 0.82 | 76.0  | Pg    | 22:19:33.470 | -0.4 |      |       |      |      |     |     |     |       |      |           | 9098  |      |
| PHP  | 0.82 | 76.0  | AMl   | 22:19:49.510 |      |      |       |      |      |     |     | 0.6 | 0.30  | a__  | Ml        | 2.5   | 5164 |
| BUM  | 0.87 | 337.0 | Pn    | 22:19:35.585 | 0.6  |      |       |      |      |     |     |     |       |      |           | 9100  |      |
| BCI  | 1.01 | 30.0  | Sg    | 22:19:51.292 | -0.5 |      |       |      |      |     |     |     |       |      |           | 9102  |      |
| BCI  | 1.01 | 30.0  | Pg    | 22:19:35.695 | -1.6 |      |       |      |      |     |     |     |       |      |           | 9101  |      |
| BCI  | 1.01 | 30.0  | AMl   | 22:20:02.180 |      |      |       |      |      |     |     | 0.4 | 0.38  | a__  | Ml        | 2.4   | 5165 |
| CEME | 1.10 | 343.0 | Pn    | 22:19:39.089 | 0.1  |      |       |      |      |     |     |     |       |      |           | 9103  |      |
| HCY  | 1.15 | 326.0 | Pn    | 22:19:40.161 | 0.2  |      |       |      |      |     |     |     |       |      |           | 9104  |      |
| PVY  | 1.18 | 22.0  | Pn    | 22:19:39.602 | -0.9 |      |       |      |      |     |     |     |       |      |           | 9105  |      |
| NKME | 1.30 | 347.0 | Pn    | 22:19:43.577 | 1.0  |      |       |      |      |     |     |     |       |      |           | 9106  |      |
| KOME | 1.35 | 4.0   | Pn    | 22:19:44.789 | 1.3  |      |       |      |      |     |     |     |       |      |           | 9107  |      |
| KBN  | 1.38 | 128.0 | Sn    | 22:20:03.014 | 0.2  |      |       |      |      |     |     |     |       |      |           | 9109  |      |
| KBN  | 1.38 | 128.0 | Pn    | 22:19:45.613 | 2.0  |      |       |      |      |     |     |     |       |      |           | 9108  |      |
| BEY  | 1.42 | 15.0  | Pn    | 22:19:44.132 | -0.6 |      |       |      |      |     |     |     |       |      |           | 9110  |      |
| BRY  | 1.53 | 337.0 | Pn    | 22:19:47.398 | 0.8  |      |       |      |      |     |     |     |       |      |           | 9111  |      |
| SCTE | 1.58 | 207.0 | Sn    | 22:20:09.676 | -0.0 |      |       |      |      |     |     |     |       |      |           | 9113  |      |
| SCTE | 1.58 | 207.0 | Pn    | 22:19:46.519 | -1.0 |      |       |      |      |     |     |     |       |      |           | 9112  |      |
| SCTE | 1.58 | 207.0 | AMl   | 22:20:17.520 |      |      |       |      |      |     |     | 0.4 | 0.28  | a__  | Ml        | 2.8   | 5166 |
| LSK  | 1.64 | 145.0 | Sn    | 22:20:10.082 | -1.2 |      |       |      |      |     |     |     |       |      |           | 9115  |      |
| LSK  | 1.64 | 145.0 | Pn    | 22:19:49.464 | 1.0  |      |       |      |      |     |     |     |       |      |           | 9114  |      |
| NEST | 1.67 | 129.0 | Sn    | 22:20:12.348 | -0.0 |      |       |      |      |     |     |     |       |      |           | 9117  |      |
| NEST | 1.67 | 129.0 | Pn    | 22:19:49.954 | 0.9  |      |       |      |      |     |     |     |       |      |           | 9116  |      |
| NEST | 1.67 | 129.0 | AMl   | 22:20:21.570 |      |      |       |      |      |     |     | 0.1 | 0.54  | a__  | Ml        | 2.4   | 5167 |
| FNA  | 1.68 | 114.0 | Sn    | 22:20:12.495 | -0.2 |      |       |      |      |     |     |     |       |      |           | 9119  |      |
| FNA  | 1.68 | 114.0 | Pn    | 22:19:49.740 | 0.5  |      |       |      |      |     |     |     |       |      |           | 9118  |      |
| SRN  | 1.69 | 163.0 | Sn    | 22:20:13.008 | -0.5 |      |       |      |      |     |     |     |       |      |           | 9121  |      |
| SRN  | 1.69 | 163.0 | Pn    | 22:19:50.402 | 0.7  |      |       |      |      |     |     |     |       |      |           | 9120  |      |
| SRN  | 1.69 | 163.0 | AMl   | 22:20:21.310 |      |      |       |      |      |     |     | 0.1 | 0.58  | a__  | Ml        | 2.4   | 5168 |
| UPM  | 1.73 | 349.0 | Pn    | 22:19:50.737 | 0.7  |      |       |      |      |     |     |     |       |      |           | 9122  |      |
| NOCI | 1.88 | 249.0 | Sn    | 22:20:17.612 | -0.5 |      |       |      |      |     |     |     |       |      |           | 9124  |      |
| NOCI | 1.88 | 249.0 | Pn    | 22:19:51.682 | -0.6 |      |       |      |      |     |     |     |       |      |           | 9123  |      |
| IGT  | 2.10 | 159.0 | Sn    | 22:20:23.681 | 0.0  |      |       |      |      |     |     |     |       |      |           | 9126  |      |

|      |      |       |     |              |      |     |  |  |  |     |      |     |    |     |     |      |
|------|------|-------|-----|--------------|------|-----|--|--|--|-----|------|-----|----|-----|-----|------|
| IGT  | 2.10 | 159.0 | Pn  | 22:19:56.491 | 1.0  | --- |  |  |  |     |      |     |    |     | mce | 9125 |
| MRVN | 2.43 | 261.0 | Sn  | 22:20:32.186 | -0.1 | --- |  |  |  |     |      |     |    |     | m__ | 9128 |
| MRVN | 2.43 | 261.0 | Pn  | 22:19:57.884 | -2.5 | --- |  |  |  |     |      |     |    |     | mce | 9127 |
| SGRT | 2.72 | 277.0 | Sn  | 22:20:35.653 | -3.9 | --- |  |  |  |     |      |     |    |     | m__ | 9130 |
| SGRT | 2.72 | 277.0 | Pn  | 22:20:01.905 | -2.7 | --- |  |  |  |     |      |     |    |     | mci | 9129 |
| SGRT | 2.72 | 277.0 | AM1 | 22:20:39.570 |      | --- |  |  |  | 0.1 | 0.34 | a__ | M1 | 2.5 |     | 5169 |
| LKD2 | 2.88 | 159.0 | Sn  | 22:20:39.527 | -4.3 | --- |  |  |  |     |      |     |    |     | m__ | 9132 |
| LKD2 | 2.88 | 159.0 | Pn  | 22:20:05.073 | -2.0 | --- |  |  |  |     |      |     |    |     | mci | 9131 |

DATA\_TYPE COMMENT GSE2.1  
Event 558

Official Magnitude:  
M1 2.42

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 20   | 74  | 2.5800 |
| Intermediate: | 258  | 8   | 0.8800 |
| Min:          | 166  | 13  | 0.7000 |

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

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180011 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 458 2.5 km from Vatatades, Epirus, Greece

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/03 | 01:00:34.48 |     | 0.25 | 39.7925  | 20.6397   |      |      |    | 20.7  | 1.7 | 11   | 7    | 197 | 0.35  | 1.90  | m    |        |
| 497        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.0 | 0.0  | 4      | 497    |
| Md        | 2.7 | 0.0  | 3      | 497    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| IGT  | 0.35 | 223.0 | Sg    | 01:00:48.500 | 0.3  |      |       |      |      |     |     |     |       | m    |           | 7453  |      |
| IGT  | 0.35 | 223.0 | P     | 01:00:42.121 | -0.2 |      |       |      |      |     |     |     |       | m    |           | 7452  |      |
| IGT  | 0.35 | 223.0 | AMd   | 01:01:27.503 |      |      |       |      |      |     |     | 0.0 | 45.38 | a    | Md        | 2.0   | 4277 |
| LSK  | 0.36 | 355.0 | S     | 01:00:48.693 | 0.6  |      |       |      |      |     |     |     |       | m    |           | 7455  |      |
| LSK  | 0.36 | 355.0 | Pg    | 01:00:42.162 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 7454  |      |
| LSK  | 0.36 | 355.0 | AMl   | 01:00:51.960 |      |      |       |      |      |     |     | 1.8 | 0.48  | a    | Ml        | 2.4   | 4280 |
| LSK  | 0.36 | 355.0 | AMd   | 01:01:38.445 |      |      |       |      |      |     |     | 0.0 | 56.28 | a    | Md        | 2.9   | 4278 |
| SRN  | 0.50 | 281.0 | Sg    | 01:00:53.318 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 7457  |      |
| SRN  | 0.50 | 281.0 | Pg    | 01:00:44.829 | -0.5 |      |       |      |      |     |     |     |       | m    |           | 7456  |      |
| SRN  | 0.50 | 281.0 | AMl   | 01:00:56.820 |      |      |       |      |      |     |     | 0.7 | 0.36  | a    | Ml        | 2.1   | 4281 |
| SRN  | 0.50 | 281.0 | AMd   | 01:01:31.099 |      |      |       |      |      |     |     | 0.0 | 46.27 | a    | Md        | 2.7   | 4279 |
| NEST | 0.70 | 0.0   | P     | 01:00:47.825 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 7463  |      |
| NEST | 0.70 | 26.0  | Sg    | 01:00:58.583 | -0.2 |      |       |      |      |     |     |     |       | m    |           | 7458  |      |
| NEST | 0.70 | 26.0  | AMl   | 01:01:00.690 |      |      |       |      |      |     |     | 0.2 | 0.32  | a    | Ml        | 1.9   | 4282 |
| KBN  | 0.84 | 7.0   | Sg    | 01:01:02.677 | 0.3  |      |       |      |      |     |     |     |       | m    |           | 7460  |      |
| KBN  | 0.84 | 7.0   | Pg    | 01:00:51.113 | 0.7  |      |       |      |      |     |     |     |       | m    |           | 7459  |      |
| KBN  | 0.84 | 7.0   | AMl   | 01:01:07.420 |      |      |       |      |      |     |     | 0.1 | 0.34  | a    | Ml        | 1.8   | 4283 |
| PHP  | 1.90 | 356.0 | Sn    | 01:01:34.474 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 7462  |      |
| PHP  | 1.90 | 356.0 | P     | 01:01:09.074 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 7461  |      |

DATA\_TYPE COMMENT GSE2.1  
Event 458

Official Magnitude:  
Ml 2.01

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 155  | 79  | 1.6700 |
| Intermediate: | 302  | 8   | 1.2200 |
| Min:          | 33   | 6   | 0.4500 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180010 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 479 13 km from EreikoÅ°ssa, Ionian Islands, Greece

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/09 | 00:36:18.42 |     | 0.22 | 39.9613  | 19.7083   |      |      |    | 6.8   | 2.2 | 10   | 31   | 147 | 0.24  | 1.52  | m    |        |

519

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.4 | 0.0  | 4      | 519    |
| Md        | 2.3 | 0.0  | 3      | 519    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| SRN  | 0.24 | 109.0 | Sg    | 00:36:27.044 | -1.1 |      |       |      |      |     |     |     |       | m    |           | 7752  |      |
| SRN  | 0.24 | 109.0 | Pg    | 00:36:22.995 | -1.0 |      |       |      |      |     |     |     |       | m    |           | 7751  |      |
| SRN  | 0.24 | 109.0 | AMl   | 00:36:29.510 |      |      |       |      |      |     |     | 0.1 | 0.20  | a    | Ml        | 1.1   | 4458 |
| SRN  | 0.24 | 109.0 | AMl   | 00:36:28.170 |      |      |       |      |      |     |     | 0.2 | 0.22  | a    | Ml        | 1.3   | 4457 |
| SRN  | 0.24 | 109.0 | AMd   | 00:36:54.748 |      |      |       |      |      |     |     | 0.0 | 31.75 | a    | Md        | 2.3   | 4454 |
| IGT  | 0.64 | 131.0 | Sg    | 00:36:41.099 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 7754  |      |
| IGT  | 0.64 | 131.0 | Pg    | 00:36:31.225 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 7753  |      |
| IGT  | 0.64 | 131.0 | AMl   | 00:36:48.310 |      |      |       |      |      |     |     | 0.1 | 0.30  | a    | Ml        | 1.4   | 4459 |
| IGT  | 0.64 | 131.0 | AMd   | 00:37:12.185 |      |      |       |      |      |     |     | 0.0 | 40.96 | a    | Md        | 2.0   | 4455 |
| LSK  | 0.71 | 74.0  | Sg    | 00:36:42.925 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 7756  |      |
| LSK  | 0.71 | 74.0  | Pg    | 00:36:32.210 | -0.3 |      |       |      |      |     |     |     |       | m    |           | 7755  |      |
| LSK  | 0.71 | 74.0  | AMl   | 00:36:51.050 |      |      |       |      |      |     |     | 0.1 | 0.34  | a    | Ml        | 1.5   | 4460 |
| LSK  | 0.71 | 74.0  | AMd   | 00:37:10.511 |      |      |       |      |      |     |     | 0.0 | 38.30 | a    | Md        | 2.5   | 4456 |
| SCTE | 0.95 | 0.0   | Pg    | 00:36:37.364 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 7762  |      |
| SCTE | 0.96 | 278.0 | Sg    | 00:36:51.506 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 7757  |      |
| NEST | 1.12 | 65.0  | Sg    | 00:36:58.019 | 1.0  |      |       |      |      |     |     |     |       | m    |           | 7759  |      |
| NEST | 1.12 | 65.0  | Pg    | 00:36:40.722 | 0.2  |      |       |      |      |     |     |     |       | m    |           | 7758  |      |
| FNA  | 1.52 | 56.0  | Sg    | 00:37:09.455 | -0.2 |      |       |      |      |     |     |     |       | m    |           | 7761  |      |
| FNA  | 1.52 | 56.0  | Pg    | 00:36:48.098 | 0.4  |      |       |      |      |     |     |     |       | m    |           | 7760  |      |
| FNA  | 1.52 | 56.0  | AMl   | 00:37:14.710 |      |      |       |      |      |     |     | 0.0 | 0.32  | a    | Ml        | 1.7   | 4461 |

DATA\_TYPE COMMENT GSE2.1  
Event 479

Official Magnitude:  
Ml 1.37

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 195  | 77  | 2.2800 |
| Intermediate: | 0    | 12  | 0.6400 |
| Min:          | 91   | 3   | 0.4200 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180009 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 483 1.0 km from K<sup>3</sup>niaris, Epirus, Greece

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

2019/03/09 22:21:40.45            0.54 39.4007 20.9612            5.0 3.7 14 10 189 0.50 2.31 m  
523

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.8 | 0.0  | 6      | 523    |
| Md        | 2.6 | 0.0  | 3      | 523    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|
| IGT  | 0.51 | 286.0 | Sg    | 22:21:58.429 | -0.2 |      |       |      |      | --- |     |     |       | m    |           | 7794  |
| IGT  | 0.51 | 286.0 | Pg    | 22:21:50.061 | -0.8 |      |       |      |      | --- |     |     |       | m    |           | 7793  |
| IGT  | 0.51 | 286.0 | AMd   | 22:22:30.211 |      |      |       |      |      | --- |     | 0.0 | 40.15 | a    | Md        | 1.9   |
| LKD2 | 0.65 | 202.0 | S     | 22:22:04.159 | 0.6  |      |       |      |      | --- |     |     |       | m    |           | 7796  |
| LKD2 | 0.65 | 202.0 | Pg    | 22:21:52.888 | -0.8 |      |       |      |      | --- |     |     |       | m    |           | 7795  |
| LKD2 | 0.65 | 202.0 | AMl   | 22:22:07.820 |      |      |       |      |      | --- |     | 1.8 | 0.58  | a    | Ml        | 2.7   |
| LSK  | 0.80 | 340.0 | Sg    | 22:22:08.431 | 0.3  |      |       |      |      | --- |     |     |       | m    |           | 7798  |
| LSK  | 0.80 | 340.0 | P     | 22:21:55.246 | -1.0 |      |       |      |      | --- |     |     |       | m    |           | 7797  |
| LSK  | 0.80 | 340.0 | AMl   | 22:22:11.750 |      |      |       |      |      | --- |     | 2.4 | 0.84  | a    | Ml        | 3.0   |
| LSK  | 0.80 | 340.0 | AMd   | 22:22:57.431 |      |      |       |      |      | --- |     | 0.0 | 62.18 | a    | Md        | 3.0   |
| SRN  | 0.88 | 304.0 | S     | 22:22:12.301 | 0.4  |      |       |      |      | --- |     |     |       | m    |           | 7800  |
| SRN  | 0.88 | 304.0 | Pg    | 22:21:56.594 | -1.8 |      |       |      |      | --- |     |     |       | m    |           | 7799  |
| SRN  | 0.88 | 304.0 | AMl   | 22:22:16.970 |      |      |       |      |      | --- |     | 0.3 | 0.34  | a    | Ml        | 2.1   |
| SRN  | 0.88 | 304.0 | AMd   | 22:22:40.853 |      |      |       |      |      | --- |     | 0.0 | 44.26 | a    | Md        | 2.6   |
| NEST | 1.02 | 0.0   | P     | 22:21:59.409 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 7808  |
| NEST | 1.01 | 3.0   | Sg    | 22:22:15.152 | -0.5 |      |       |      |      | --- |     |     |       | m    |           | 7801  |
| NEST | 1.01 | 3.0   | AMl   | 22:22:20.060 |      |      |       |      |      | --- |     | 0.5 | 0.32  | a    | Ml        | 2.5   |
| KBN  | 1.23 | 354.0 | Sg    | 22:22:22.307 | 0.4  |      |       |      |      | --- |     |     |       | m    |           | 7803  |
| KBN  | 1.23 | 354.0 | Pg    | 22:22:04.905 | 0.7  |      |       |      |      | --- |     |     |       | m    |           | 7802  |
| KBN  | 1.23 | 354.0 | AMl   | 22:22:30.730 |      |      |       |      |      | --- |     | 0.6 | 0.66  | a    | Ml        | 2.8   |
| FNA  | 1.42 | 13.0  | S     | 22:22:28.313 | -0.5 |      |       |      |      | --- |     |     |       | m    |           | 7805  |
| FNA  | 1.42 | 13.0  | P     | 22:22:08.830 | 0.8  |      |       |      |      | --- |     |     |       | m    |           | 7804  |
| PHP  | 2.31 | 351.0 | Sn    | 22:22:54.135 | -0.2 |      |       |      |      | --- |     |     |       | m    |           | 7807  |
| PHP  | 2.31 | 351.0 | Pn    | 22:22:22.928 | 0.2  |      |       |      |      | --- |     |     |       | m    |           | 7806  |
| PHP  | 2.31 | 351.0 | AMl   | 22:23:02.120 |      |      |       |      |      | --- |     | 0.2 | 1.08  | a    | Ml        | 2.9   |

DATA\_TYPE COMMENT GSE2.1  
Event 483

Official Magnitude:  
Ml 2.75

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 164  | 84  | 3.6800 |
| Intermediate: | 286  | 3   | 1.5700 |
| Min:          | 16   | 5   | 0.8600 |

BEGIN GSE2.1  
MSG\_TYPE DATA

MSG\_ID 1556180009 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 485 0.9 km from Ovsine, Kotor, Montenegro

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/10 | 18:54:48.31 |     | 0.06 | 42.5742  | 18.6098   |      |      |    | 4.1   | 1.0 | 8    | 14   | 136 | 0.15  | 1.09  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.7 | 0.0  | 1      | 525    |
| Md        | 2.6 | 0.0  | 5      | 525    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| H CY | 0.16 | 216.0 | P     | 18:54:51.827 | -0.1 |      |       |      |      | --- |     |     |       | m    |           | 7821  |      |
| H CY | 0.16 | 216.0 | AMd   | 18:55:28.054 |      |      |       |      |      | --- |     | 0.0 | 36.23 | a    | Md        | 2.4   | 4505 |
| CEME | 0.23 | 96.0  | P     | 18:54:53.518 | 0.1  |      |       |      |      | --- |     |     |       | m    |           | 7822  |      |
| CEME | 0.23 | 96.0  | AMd   | 18:55:44.454 |      |      |       |      |      | --- |     | 0.0 | 50.94 | a    | Md        | 2.7   | 4506 |
| NKME | 0.32 | 53.0  | P     | 18:54:55.136 | -0.1 |      |       |      |      | --- |     |     |       | m    |           | 7823  |      |
| NKME | 0.32 | 53.0  | AMd   | 18:55:34.009 |      |      |       |      |      | --- |     | 0.0 | 38.87 | a    | Md        | 2.5   | 4507 |
| BRY  | 0.33 | 352.0 | P     | 18:54:55.418 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 7824  |      |
| BRY  | 0.33 | 352.0 | AMd   | 18:55:38.413 |      |      |       |      |      | --- |     | 0.0 | 42.99 | a    | Md        | 2.6   | 4508 |
| BUM  | 0.35 | 141.0 | P     | 18:54:55.841 | 0.1  |      |       |      |      | --- |     |     |       | m    |           | 7825  |      |
| BUM  | 0.35 | 141.0 | AMd   | 18:55:41.596 |      |      |       |      |      | --- |     | 0.0 | 45.76 | a    | Md        | 2.7   | 4509 |
| DRME | 0.58 | 131.0 | P     | 18:54:59.888 | -0.3 |      |       |      |      | --- |     |     |       | m    |           | 7826  |      |
| KOME | 0.72 | 67.0  | P     | 18:55:02.934 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 7827  |      |
| ULC  | 0.78 | 0.0   | P     | 18:55:02.763 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 7830  |      |
| PUK  | 1.09 | 118.0 | S     | 18:55:25.827 | -0.1 |      |       |      |      | --- |     |     |       | m    |           | 7829  |      |
| PUK  | 1.09 | 118.0 | P     | 18:55:09.816 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 7828  |      |
| PUK  | 1.09 | 118.0 | AM1   | 18:55:31.780 |      |      |       |      |      | --- |     | 0.1 | 0.24  | a    | Ml        | 1.7   | 4511 |
| PUK  | 1.09 | 118.0 | AM1   | 18:55:31.970 |      |      |       |      |      | --- |     | 0.1 | 0.24  | a    | Ml        | 1.7   | 4510 |

DATA\_TYPE COMMENT GSE2.1  
Event 485

Official Magnitude:  
Ml 1.70

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 252  | 70  | 1.1000 |
| Intermediate: | 35   | 16  | 0.4400 |
| Min:          | 128  | 11  | 0.4200 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180008 athena

DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 487 2.4 km from Molos, Ionian Islands, Greece

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/12 | 00:56:20.06 |     | 0.19 | 39.4560  | 20.0328   |      |      |    | 0.0   | 1.5 | 9    | 6    | 155 | 0.24  | 1.36  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.5 | 0.0  | 4      | 528    |
| Md        | 3.2 | 0.0  | 4      | 528    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per    | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|--------|------|-----------|-------|
| IGT  | 0.24 | 71.0  | Sg    | 00:56:30.063 | 0.2  |      |       |      |      | --- |     |     |        | m    |           | 7866  |
| IGT  | 0.24 | 71.0  | Pg    | 00:56:24.519 | -1.2 |      |       |      |      | --- |     |     |        | mdi  |           | 7865  |
| IGT  | 0.24 | 71.0  | AMd   | 00:57:46.888 |      |      |       |      |      | --- |     | 0.0 | 82.37  | a    | Md        | 2.6   |
| SRN  | 0.42 | 357.0 | Sg    | 00:56:37.206 | 0.1  |      |       |      |      | --- |     |     |        | m    |           | 7868  |
| SRN  | 0.42 | 357.0 | Pg    | 00:56:29.472 | -0.3 |      |       |      |      | --- |     |     |        | mde  |           | 7867  |
| SRN  | 0.42 | 357.0 | AMl   | 00:56:37.760 |      |      |       |      |      | --- |     | 1.1 | 0.42   | a    | Ml        | 2.2   |
| SRN  | 0.42 | 357.0 | AMd   | 00:57:52.643 |      |      |       |      |      | --- |     | 0.0 | 83.17  | a    | Md        | 3.3   |
| LSK  | 0.82 | 31.0  | Sn    | 00:56:49.399 | 0.0  |      |       |      |      | --- |     |     |        | m    |           | 7870  |
| LSK  | 0.82 | 31.0  | Pn    | 00:56:35.949 | -0.9 |      |       |      |      | --- |     |     |        | mce  |           | 7869  |
| LSK  | 0.82 | 31.0  | AMl   | 00:57:02.540 |      |      |       |      |      | --- |     | 0.8 | 0.46   | a    | Ml        | 2.6   |
| LSK  | 0.82 | 31.0  | AMd   | 00:58:18.266 |      |      |       |      |      | --- |     | 0.0 | 102.32 | a    | Md        | 3.5   |
| LKD2 | 0.82 | 143.0 | Sg    | 00:56:49.945 | 0.1  |      |       |      |      | --- |     |     |        | m    |           | 7872  |
| LKD2 | 0.82 | 143.0 | Pg    | 00:56:36.878 | -0.2 |      |       |      |      | --- |     |     |        | mce  |           | 7871  |
| LKD2 | 0.82 | 143.0 | AMl   | 00:56:55.050 |      |      |       |      |      | --- |     | 1.2 | 0.28   | a    | Ml        | 2.7   |
| LKD2 | 0.82 | 143.0 | AMd   | 00:57:53.883 |      |      |       |      |      | --- |     | 0.0 | 77.00  | a    | Md        | 3.2   |
| NEST | 1.24 | 38.0  | Sn    | 00:57:03.731 | 0.2  |      |       |      |      | --- |     |     |        | m    |           | 7874  |
| NEST | 1.24 | 38.0  | Pn    | 00:56:43.762 | -1.2 |      |       |      |      | --- |     |     |        | m    |           | 7873  |
| NEST | 1.24 | 38.0  | AMl   | 00:57:13.560 |      |      |       |      |      | --- |     | 0.3 | 0.38   | a    | Ml        | 2.4   |
| SCTE | 1.35 | 0.0   | Pn    | 00:56:46.519 | 0.0  |      |       |      |      | --- |     |     |        | mde  |           | 7876  |
| SCTE | 1.36 | 298.0 | Sn    | 00:57:07.613 | 0.0  |      |       |      |      | --- |     |     |        | m    |           | 7875  |

DATA\_TYPE COMMENT GSE2.1

Event 487

Official Magnitude:

Ml 2.47

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 166  | 86  | 1.4800 |
| Intermediate: | 57   | 1   | 0.4200 |
| Min:          | 327  | 4   | 0.3300 |



BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556180007 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 492 2.6 km from ThesprotikÃ³, Epirus, Greece

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/14 | 04:12:52.60 |     | 0.32 | 39.2302  | 20.7995   |      |      |    | 38.0  | 1.0 | 18   | 32   | 180 | 0.45  | 3.20  | m    |        |

533

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| M1        | 3.1 | 0.0  | 9      | 533    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|------|
| LKD2 | 0.45 | 195.0 | Sg    | 04:13:11.561 | 0.4  |      |       |      |      |     |     |     |      | m    |           | 7943  |      |
| LKD2 | 0.45 | 195.0 | Pg    | 04:13:02.750 | -0.5 |      |       |      |      |     |     |     |      | m    |           | 7942  |      |
| LKD2 | 0.45 | 195.0 | AM1   | 04:13:14.270 |      |      |       |      |      |     |     | 6.4 | 0.38 | a    | M1        | 3.1   | 4564 |
| IGT  | 0.47 | 310.0 | Sg    | 04:13:11.814 | 0.1  |      |       |      |      |     |     |     |      | m    |           | 7945  |      |
| IGT  | 0.47 | 310.0 | Pg    | 04:13:03.203 | -0.3 |      |       |      |      |     |     |     |      | mc   |           | 7944  |      |
| IGT  | 0.47 | 310.0 | AM1   | 04:13:14.160 |      |      |       |      |      |     |     | 3.4 | 0.24 | a    | M1        | 2.9   | 4565 |
| SRN  | 0.90 | 317.0 | Sg    | 04:13:24.211 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 7947  |      |
| SRN  | 0.90 | 317.0 | Pg    | 04:13:10.426 | -0.3 |      |       |      |      |     |     |     |      | m    |           | 7946  |      |
| SRN  | 0.90 | 317.0 | AM1   | 04:13:29.350 |      |      |       |      |      |     |     | 1.5 | 0.54 | a    | M1        | 2.9   | 4566 |
| LSK  | 0.93 | 351.0 | Sg    | 04:13:24.516 | 0.1  |      |       |      |      |     |     |     |      | m    |           | 7949  |      |
| LSK  | 0.93 | 351.0 | Pg    | 04:13:11.021 | 0.2  |      |       |      |      |     |     |     |      | m    |           | 7948  |      |
| LSK  | 0.93 | 351.0 | AM1   | 04:13:32.700 |      |      |       |      |      |     |     | 3.4 | 0.78 | a    | M1        | 3.3   | 4568 |
| LSK  | 0.93 | 351.0 | AM1   | 04:13:38.080 |      |      |       |      |      |     |     | 2.7 | 0.90 | a    | M1        | 3.2   | 4567 |
| NEST | 1.20 | 9.0   | Sg    | 04:13:32.174 | 0.1  |      |       |      |      |     |     |     |      | m    |           | 7951  |      |
| NEST | 1.20 | 9.0   | Pg    | 04:13:14.855 | -0.3 |      |       |      |      |     |     |     |      | mc   |           | 7950  |      |
| NEST | 1.20 | 9.0   | AM1   | 04:13:38.450 |      |      |       |      |      |     |     | 0.6 | 0.38 | a    | M1        | 2.7   | 4569 |
| KBN  | 1.39 | 0.0   | Sg    | 04:13:38.128 | 1.6  |      |       |      |      |     |     |     |      | m    |           | 7953  |      |
| KBN  | 1.39 | 0.0   | Pg    | 04:13:18.224 | 0.5  |      |       |      |      |     |     |     |      | m    |           | 7952  |      |
| KBN  | 1.39 | 0.0   | AM1   | 04:13:45.110 |      |      |       |      |      |     |     | 1.1 | 0.66 | a    | M1        | 3.2   | 4570 |
| FNA  | 1.61 | 15.0  | Sn    | 04:13:43.159 | -0.2 |      |       |      |      |     |     |     |      | m    |           | 7955  |      |
| FNA  | 1.61 | 15.0  | Pn    | 04:13:21.297 | -0.3 |      |       |      |      |     |     |     |      | m    |           | 7954  |      |
| FNA  | 1.61 | 15.0  | AM1   | 04:13:49.190 |      |      |       |      |      |     |     | 0.6 | 0.66 | a    | M1        | 3.1   | 4571 |
| SCTE | 1.99 | 296.0 | Sn    | 04:13:52.500 | -0.5 |      |       |      |      |     |     |     |      | m    |           | 7957  |      |
| SCTE | 1.99 | 296.0 | Pn    | 04:13:27.252 | 0.1  |      |       |      |      |     |     |     |      | m    |           | 7956  |      |
| SCTE | 1.99 | 296.0 | AM1   | 04:13:54.610 |      |      |       |      |      |     |     | 0.7 | 0.26 | a    | M1        | 3.4   | 4572 |
| TIR  | 2.24 | 0.0   | Pn    | 04:13:34.079 | 0.0  |      |       |      |      |     |     |     |      | m    |           | 7962  |      |
| PHP  | 2.47 | 354.0 | Pn    | 04:13:35.304 | 1.4  |      |       |      |      |     |     |     |      | m    |           | 7958  |      |
| PUK  | 2.89 | 347.0 | Pn    | 04:13:40.682 | 0.4  |      |       |      |      |     |     |     |      | m    |           | 7959  |      |
| BCI  | 3.18 | 351.0 | Pn    | 04:13:45.048 | 0.5  |      |       |      |      |     |     |     |      | m    |           | 7960  |      |
| BCI  | 3.18 | 351.0 | AM1   | 04:14:26.460 |      |      |       |      |      |     |     | 0.4 | 0.44 | a    | M1        | 3.5   | 4573 |
| DRME | 3.20 | 339.0 | Pn    | 04:13:44.396 | -0.5 |      |       |      |      |     |     |     |      | mc   |           | 7961  |      |

DATA\_TYPE COMMENT GSE2.1  
 Event 492

Official Magnitude:  
Ml 3.13

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 255  | 40  | 1.4600 |
| Intermediate: | 130  | 33  | 0.9600 |
| Min:          | 16   | 32  | 0.6400 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180007 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 493 2.2 km from Káto Kotsanópoulo, Epirus, Greece

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/14 | 00:14:59.33 |     | 0.46 | 39.2067  | 20.7467   |      |      |    | 36.9  | 1.1 | 19   | 32   | 173 | 0.42  | 3.20  | m    | 534    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.8 | 0.0  | 10     | 534    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|------|
| LKD2 | 0.42 | 190.0 | Sg    | 00:15:17.246 | 0.3  |      |       |      |      | --- |     |     |      | m    |           | 7964  |      |
| LKD2 | 0.42 | 190.0 | Pg    | 00:15:08.109 | -1.3 |      |       |      |      | --- |     |     |      | m    |           | 7963  |      |
| LKD2 | 0.42 | 190.0 | AM1   | 00:15:21.690 |      |      |       |      |      | --- |     | 4.5 | 0.34 | a    | M1        | 2.9   | 4575 |
| LKD2 | 0.42 | 190.0 | AM1   | 00:15:24.880 |      |      |       |      |      | --- |     | 5.4 | 0.30 | a    | M1        | 3.0   | 4574 |
| IGT  | 0.46 | 316.0 | Sg    | 00:15:18.021 | 0.1  |      |       |      |      | --- |     |     |      | m    |           | 7966  |      |
| IGT  | 0.46 | 316.0 | Pg    | 00:15:09.341 | -0.6 |      |       |      |      | --- |     |     |      | m    |           | 7965  |      |
| IGT  | 0.46 | 316.0 | AM1   | 00:15:20.520 |      |      |       |      |      | --- |     | 2.0 | 0.24 | a    | M1        | 2.6   | 4576 |
| SRN  | 0.89 | 320.0 | Sg    | 00:15:31.478 | 0.8  |      |       |      |      | --- |     |     |      | m    |           | 7968  |      |
| SRN  | 0.89 | 320.0 | Pg    | 00:15:16.610 | -0.6 |      |       |      |      | --- |     |     |      | m    |           | 7967  |      |
| SRN  | 0.89 | 320.0 | AM1   | 00:15:37.870 |      |      |       |      |      | --- |     | 0.5 | 0.52 | a    | M1        | 2.5   | 4577 |
| LSK  | 0.95 | 354.0 | Sg    | 00:15:31.744 | 0.1  |      |       |      |      | --- |     |     |      | m    |           | 7970  |      |
| LSK  | 0.95 | 354.0 | Pg    | 00:15:17.081 | -0.7 |      |       |      |      | --- |     |     |      | m    |           | 7969  |      |
| LSK  | 0.95 | 354.0 | AM1   | 00:15:38.120 |      |      |       |      |      | --- |     | 1.2 | 0.56 | a    | M1        | 2.9   | 4578 |
| NEST | 1.23 | 10.0  | Sg    | 00:15:39.780 | 0.0  |      |       |      |      | --- |     |     |      | m    |           | 7972  |      |
| NEST | 1.23 | 10.0  | Pg    | 00:15:20.013 | -2.4 |      |       |      |      | --- |     |     |      | m    |           | 7971  |      |
| NEST | 1.23 | 10.0  | AM1   | 00:15:44.470 |      |      |       |      |      | --- |     | 0.3 | 0.38 | a    | M1        | 2.5   | 4579 |
| KBN  | 1.42 | 1.0   | Sn    | 00:15:44.759 | 0.7  |      |       |      |      | --- |     |     |      | m    |           | 7974  |      |
| KBN  | 1.42 | 1.0   | Pn    | 00:15:25.213 | 0.3  |      |       |      |      | --- |     |     |      | m    |           | 7973  |      |
| KBN  | 1.42 | 1.0   | AM1   | 00:15:52.230 |      |      |       |      |      | --- |     | 0.6 | 0.78 | a    | M1        | 2.9   | 4581 |
| KBN  | 1.42 | 1.0   | AM1   | 00:15:50.510 |      |      |       |      |      | --- |     | 0.3 | 0.88 | a    | M1        | 2.7   | 4580 |
| FNA  | 1.65 | 17.0  | Sg    | 00:15:50.500 | -0.7 |      |       |      |      | --- |     |     |      | m    |           | 7976  |      |
| FNA  | 1.65 | 17.0  | Pn    | 00:15:29.449 | 0.5  |      |       |      |      | --- |     |     |      | m    |           | 7975  |      |

|      |      |       |     |              |      |     |      |   |     |     |      |
|------|------|-------|-----|--------------|------|-----|------|---|-----|-----|------|
| FNA  | 1.65 | 17.0  | AM1 | 00:15:55.610 | ---  | 0.3 | 0.36 | a | M1  | 2.8 | 4582 |
| SCTE | 1.96 | 298.0 | Sn  | 00:15:58.928 | -0.3 | --- | ---  | m | --- | --- | 7978 |
| SCTE | 1.96 | 298.0 | Pn  | 00:15:33.947 | 0.4  | --- | ---  | m | --- | --- | 7977 |
| SCTE | 1.96 | 298.0 | AM1 | 00:15:59.370 | ---  | 0.5 | 0.46 | a | M1  | 3.1 | 4583 |
| PHP  | 2.49 | 355.0 | Pn  | 00:15:41.214 | 0.2  | --- | ---  | m | --- | --- | 7979 |
| PHP  | 2.49 | 355.0 | AM1 | 00:16:26.520 | ---  | 0.1 | 0.58 | a | M1  | 2.8 | 4584 |
| PUK  | 2.91 | 348.0 | Pn  | 00:15:47.291 | -0.0 | --- | ---  | m | --- | --- | 7980 |
| ULC  | 3.00 | 0.0   | Pn  | 00:15:47.132 | 0.0  | --- | ---  | m | --- | --- | 7983 |
| BCI  | 3.20 | 351.0 | Pn  | 00:15:51.572 | -0.1 | --- | ---  | m | --- | --- | 7981 |
| BCI  | 3.20 | 351.0 | AM1 | 00:16:32.290 | ---  | 0.2 | 0.66 | a | M1  | 3.2 | 4585 |
| DRME | 3.20 | 339.0 | Pn  | 00:15:50.780 | -1.1 | --- | ---  | m | --- | --- | 7982 |

DATA\_TYPE COMMENT GSE2.1  
Event 493

Official Magnitude:  
M1 2.84

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 258  | 37  | 1.7200 |
| Intermediate: | 137  | 33  | 1.3600 |
| Min:          | 20   | 35  | 0.8900 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180007 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 494 1.6 km from Louros, Epirus, Greece

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/14 | 04:57:11.13 |     | 0.81 | 39.1525  | 20.7625   |      |      |    | 39.2  | 3.1 | 18   | 32   | 177 | 0.37  | 3.25  | m    | 535    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| M1        | 3.5 | 0.0  | 8      | 535    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp  | Per  | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|------|------|------|-----------|-------|------|
| LKD2 | 0.37 | 193.0 | Sg    | 04:57:28.766 | 0.9  |      |       |      | ---  | --- |     |      |      | m    |           | 7985  |      |
| LKD2 | 0.37 | 193.0 | Pg    | 04:57:20.323 | -0.4 |      |       |      | ---  | --- |     |      |      | m    |           | 7984  |      |
| LKD2 | 0.37 | 193.0 | AM1   | 04:57:34.210 |      |      |       |      | ---  | --- |     | 18.9 | 0.46 | a    | M1        | 3.5   | 4587 |
| LKD2 | 0.37 | 193.0 | AM1   | 04:57:37.100 |      |      |       |      | ---  | --- |     | 18.1 | 0.36 | a    | M1        | 3.5   | 4586 |
| IGT  | 0.51 | 319.0 | Sg    | 04:57:31.022 | -0.2 |      |       |      | ---  | --- |     |      |      | m    |           | 7987  |      |
| IGT  | 0.51 | 319.0 | Pg    | 04:57:20.881 | -1.7 |      |       |      | ---  | --- |     |      |      | m    |           | 7986  |      |
| IGT  | 0.51 | 319.0 | AM1   | 04:57:36.050 |      |      |       |      | ---  | --- |     | 5.1  | 0.64 | a    | M1        | 3.1   | 4588 |
| SRN  | 0.94 | 322.0 | Sg    | 04:57:44.280 | 0.4  |      |       |      | ---  | --- |     |      |      | m    |           | 7989  |      |

|      |      |       |     |              |      |     |  |  |  |  |  |  |  |  |  |  |  |   |    |    |      |      |
|------|------|-------|-----|--------------|------|-----|--|--|--|--|--|--|--|--|--|--|--|---|----|----|------|------|
| SRN  | 0.94 | 322.0 | Pg  | 04:57:27.714 | -2.1 | --- |  |  |  |  |  |  |  |  |  |  |  | m |    |    | 7988 |      |
| SRN  | 0.94 | 322.0 | AM1 | 04:57:49.250 |      | --- |  |  |  |  |  |  |  |  |  |  |  |   | a  | M1 | 3.3  | 4590 |
| SRN  | 0.94 | 322.0 | AM1 | 04:57:54.120 |      | --- |  |  |  |  |  |  |  |  |  |  |  |   | a  | M1 | 1.6  | 4589 |
| LSK  | 1.04 | 0.0   | Pg  | 04:57:28.014 | 0.0  | --- |  |  |  |  |  |  |  |  |  |  |  |   | mc |    |      | 8003 |
| LSK  | 1.00 | 353.0 | Sg  | 04:57:45.111 | 0.2  | --- |  |  |  |  |  |  |  |  |  |  |  |   | m  |    |      | 7990 |
| LSK  | 1.00 | 353.0 | AM1 | 04:57:49.070 |      | --- |  |  |  |  |  |  |  |  |  |  |  |   | a  | M1 | 5.9  | 4591 |
| NEST | 1.28 | 9.0   | Sn  | 04:57:52.974 | 0.3  | --- |  |  |  |  |  |  |  |  |  |  |  |   | m  |    |      | 7992 |
| NEST | 1.28 | 9.0   | Pn  | 04:57:34.434 | -0.5 | --- |  |  |  |  |  |  |  |  |  |  |  |   | m  |    |      | 7991 |
| NEST | 1.28 | 9.0   | AM1 | 04:58:04.810 |      | --- |  |  |  |  |  |  |  |  |  |  |  |   | a  | M1 | 1.4  | 4592 |
| KBN  | 1.47 | 0.0   | Sg  | 04:57:58.383 | 1.3  | --- |  |  |  |  |  |  |  |  |  |  |  |   | m  |    |      | 7994 |
| KBN  | 1.47 | 0.0   | Pg  | 04:57:38.163 | 0.8  | --- |  |  |  |  |  |  |  |  |  |  |  |   | m  |    |      | 7993 |
| KBN  | 1.47 | 0.0   | AM1 | 04:58:05.030 |      | --- |  |  |  |  |  |  |  |  |  |  |  |   | a  | M1 | 3.1  | 4593 |
| VLO  | 1.64 | 324.0 | Pn  | 04:57:45.010 | 5.3  | --- |  |  |  |  |  |  |  |  |  |  |  |   | m  |    |      | 7995 |
| FNA  | 1.70 | 16.0  | Sn  | 04:58:03.211 | -0.7 | --- |  |  |  |  |  |  |  |  |  |  |  |   | m  |    |      | 7997 |
| FNA  | 1.70 | 16.0  | Pn  | 04:57:39.853 | -1.4 | --- |  |  |  |  |  |  |  |  |  |  |  |   | m  |    |      | 7996 |
| FNA  | 1.70 | 16.0  | AM1 | 04:58:09.100 |      | --- |  |  |  |  |  |  |  |  |  |  |  |   | a  | M1 | 1.7  | 4594 |
| SCTE | 2.00 | 299.0 | Pn  | 04:57:45.003 | -0.7 | --- |  |  |  |  |  |  |  |  |  |  |  |   | m  |    |      | 7998 |
| TIR  | 2.30 | 343.0 | Pn  | 04:57:49.586 | -0.5 | --- |  |  |  |  |  |  |  |  |  |  |  |   | m  |    |      | 7999 |
| PHP  | 2.54 | 355.0 | Pn  | 04:57:54.499 | 1.1  | --- |  |  |  |  |  |  |  |  |  |  |  |   | m  |    |      | 8000 |
| PUK  | 2.96 | 348.0 | Pn  | 04:58:00.783 | 1.0  | --- |  |  |  |  |  |  |  |  |  |  |  |   | m  |    |      | 8001 |
| BCI  | 3.25 | 351.0 | Pn  | 04:58:03.338 | -0.7 | --- |  |  |  |  |  |  |  |  |  |  |  |   | m  |    |      | 8002 |
| BCI  | 3.25 | 351.0 | AM1 | 04:58:45.830 |      | --- |  |  |  |  |  |  |  |  |  |  |  |   | a  | M1 | 0.8  | 4595 |

DATA\_TYPE COMMENT GSE2.1  
Event 494

Official Magnitude:  
M1 3.51

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 235  | 44  | 4.4200 |
| Intermediate: | 118  | 24  | 2.8700 |
| Min:          | 9    | 36  | 1.3300 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180007 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 495 1.4 km from Ampelia, Epirus, Greece

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/14 | 02:22:45.96 |     | 0.58 | 39.2325  | 20.9428   |      |      |    | 19.4  | 3.6 | 16   | 32   | 195 | 0.49  | 3.24  | m    | 536    |

Magnitude Err Nsta Author OrigID

M1 2.8 0.0 7 536

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|
| LKD2 | 0.53 | 0.0   | Pg    | 02:22:56.582 | 0.0  |      |       |      |      |     |     |     |      | m    |           | 8023  |
| LKD2 | 0.50 | 207.0 | Sg    | 02:23:04.748 | 0.7  |      |       |      |      |     |     |     |      | m    |           | 8004  |
| LKD2 | 0.50 | 207.0 | AM1   | 02:23:10.730 |      |      |       |      |      |     |     | 4.1 | 0.26 | a    | M1        | 2.9   |
| IGT  | 0.56 | 303.0 | Sg    | 02:23:05.880 | -0.3 |      |       |      |      |     |     |     |      | m    |           | 8006  |
| IGT  | 0.56 | 303.0 | Pg    | 02:22:56.789 | -0.7 |      |       |      |      |     |     |     |      | mc   |           | 8005  |
| IGT  | 0.56 | 303.0 | AM1   | 02:23:08.120 |      |      |       |      |      |     |     | 1.6 | 0.26 | a    | M1        | 2.6   |
| LSK  | 0.95 | 344.0 | Sg    | 02:23:18.163 | 0.0  |      |       |      |      |     |     |     |      | m    |           | 8008  |
| LSK  | 0.95 | 344.0 | Pg    | 02:23:04.204 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 8007  |
| LSK  | 0.95 | 344.0 | AM1   | 02:23:25.270 |      |      |       |      |      |     |     | 1.2 | 0.50 | a    | M1        | 2.8   |
| SRN  | 0.97 | 312.0 | Sg    | 02:23:19.864 | 0.2  |      |       |      |      |     |     |     |      | m    |           | 8010  |
| SRN  | 0.97 | 312.0 | Pg    | 02:23:03.802 | -1.4 |      |       |      |      |     |     |     |      | m    |           | 8009  |
| SRN  | 0.97 | 312.0 | AM1   | 02:23:22.830 |      |      |       |      |      |     |     | 0.6 | 0.52 | a    | M1        | 2.6   |
| NEST | 1.18 | 3.0   | Sg    | 02:23:25.674 | 0.2  |      |       |      |      |     |     |     |      | m    |           | 8012  |
| NEST | 1.18 | 3.0   | Pg    | 02:23:08.418 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 8011  |
| KBN  | 1.39 | 356.0 | Sg    | 02:23:32.039 | 0.8  |      |       |      |      |     |     |     |      | m    |           | 8014  |
| KBN  | 1.39 | 356.0 | Pg    | 02:23:11.664 | -0.2 |      |       |      |      |     |     |     |      | m    |           | 8013  |
| KBN  | 1.39 | 356.0 | AM1   | 02:23:39.360 |      |      |       |      |      |     |     | 0.6 | 0.76 | a    | M1        | 2.8   |
| FNA  | 1.58 | 12.0  | Pn    | 02:23:16.100 | 0.5  |      |       |      |      |     |     |     |      | m    |           | 8015  |
| VLO  | 1.66 | 319.0 | Sn    | 02:23:40.009 | 0.9  |      |       |      |      |     |     |     |      | m    |           | 8017  |
| VLO  | 1.66 | 319.0 | Pn    | 02:23:16.847 | 0.5  |      |       |      |      |     |     |     |      | m    |           | 8016  |
| VLO  | 1.66 | 319.0 | AM1   | 02:23:45.430 |      |      |       |      |      |     |     | 0.9 | 0.92 | a    | M1        | 3.2   |
| SCTE | 2.09 | 295.0 | Sn    | 02:23:46.443 | -5.3 |      |       |      |      |     |     |     |      | m    |           | 8019  |
| SCTE | 2.09 | 295.0 | Pn    | 02:23:20.923 | -2.7 |      |       |      |      |     |     |     |      | m    |           | 8018  |
| SCTE | 2.09 | 295.0 | AM1   | 02:23:48.100 |      |      |       |      |      |     |     | 0.4 | 0.26 | a    | M1        | 3.1   |
| PHP  | 2.48 | 352.0 | Pn    | 02:23:28.626 | -0.4 |      |       |      |      |     |     |     |      | m    |           | 8020  |
| BCI  | 3.20 | 349.0 | Pn    | 02:23:38.971 | -0.8 |      |       |      |      |     |     |     |      | m    |           | 8021  |
| DRME | 3.24 | 337.0 | Pn    | 02:23:37.777 | -2.7 |      |       |      |      |     |     |     |      | m    |           | 8022  |

DATA\_TYPE COMMENT GSE2.1  
Event 495

Official Magnitude:  
M1 2.84

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 220  | 68  | 3.8900 |
| Intermediate: | 110  | 7   | 1.6700 |
| Min:          | 17   | 20  | 1.0300 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180007 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 496 1.3 km from Agía Eleoúsa, Epirus, Greece

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/14 | 02:26:18.55 |     | 0.41 | 39.2345  | 20.8438   |      |      |    | 30.3  | 1.4 | 20   | 32   | 185 | 0.47  | 3.21  | m    |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| M1        | 2.9 | 0.0  | 9      | 537    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per  | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|------|------|-----------|-------|
| LKD2 | 0.47 | 199.0 | Sg    | 02:26:36.996 | 0.4  |      |       |      |      |     |     |     |      | m    |           | 8025  |
| LKD2 | 0.47 | 199.0 | Pg    | 02:26:28.922 | 0.1  |      |       |      |      |     |     |     |      | m    |           | 8024  |
| LKD2 | 0.47 | 199.0 | AM1   | 02:26:43.040 |      |      |       |      |      |     |     | 7.2 | 0.26 | a    | M1        | 4604  |
| LKD2 | 0.47 | 199.0 | AM1   | 02:26:40.930 |      |      |       |      |      |     |     | 8.7 | 0.22 | a    | M1        | 4603  |
| IGT  | 0.50 | 307.0 | Sg    | 02:26:37.587 | 0.2  |      |       |      |      |     |     |     |      | m    |           | 8027  |
| IGT  | 0.50 | 307.0 | P     | 02:26:28.854 | -0.5 |      |       |      |      |     |     |     |      | md   |           | 8026  |
| IGT  | 0.50 | 307.0 | AM1   | 02:26:39.940 |      |      |       |      |      |     |     | 2.6 | 0.28 | a    | M1        | 4605  |
| SRN  | 0.92 | 315.0 | Sg    | 02:26:50.972 | 0.4  |      |       |      |      |     |     |     |      | m    |           | 8029  |
| SRN  | 0.92 | 315.0 | Pg    | 02:26:35.984 | -0.9 |      |       |      |      |     |     |     |      | m    |           | 8028  |
| SRN  | 0.92 | 315.0 | AM1   | 02:26:57.240 |      |      |       |      |      |     |     | 0.9 | 0.42 | a    | M1        | 4606  |
| LSK  | 0.93 | 349.0 | Sg    | 02:26:50.894 | 0.7  |      |       |      |      |     |     |     |      | m    |           | 8031  |
| LSK  | 0.93 | 349.0 | Pg    | 02:26:36.181 | -0.5 |      |       |      |      |     |     |     |      | m    |           | 8030  |
| LSK  | 0.93 | 349.0 | AM1   | 02:26:58.540 |      |      |       |      |      |     |     | 2.7 | 0.84 | a    | M1        | 4607  |
| NEST | 1.19 | 7.0   | Sg    | 02:26:58.070 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 8033  |
| NEST | 1.19 | 7.0   | Pg    | 02:26:40.367 | -0.8 |      |       |      |      |     |     |     |      | m    |           | 8032  |
| NEST | 1.19 | 7.0   | AM1   | 02:27:03.930 |      |      |       |      |      |     |     | 0.6 | 0.38 | a    | M1        | 4608  |
| KBN  | 1.39 | 359.0 | Sn    | 02:27:03.520 | 0.3  |      |       |      |      |     |     |     |      | m    |           | 8035  |
| KBN  | 1.39 | 359.0 | Pn    | 02:26:44.171 | 0.1  |      |       |      |      |     |     |     |      | m    |           | 8034  |
| KBN  | 1.39 | 359.0 | AM1   | 02:27:09.750 |      |      |       |      |      |     |     | 0.6 | 0.54 | a    | M1        | 4609  |
| FNA  | 1.60 | 14.0  | Sn    | 02:27:09.801 | -0.2 |      |       |      |      |     |     |     |      | m    |           | 8037  |
| FNA  | 1.60 | 14.0  | Pn    | 02:26:48.411 | 0.5  |      |       |      |      |     |     |     |      | m    |           | 8036  |
| FNA  | 1.60 | 14.0  | AM1   | 02:27:13.700 |      |      |       |      |      |     |     | 0.6 | 0.62 | a    | M1        | 4610  |
| VLO  | 1.61 | 321.0 | Sn    | 02:27:11.991 | 3.0  |      |       |      |      |     |     |     |      | m    |           | 8039  |
| VLO  | 1.61 | 321.0 | Pn    | 02:26:48.790 | 1.4  |      |       |      |      |     |     |     |      | m    |           | 8038  |
| VLO  | 1.61 | 321.0 | AM1   | 02:27:16.820 |      |      |       |      |      |     |     | 1.2 | 0.50 | a    | M1        | 4611  |
| SCTE | 2.02 | 296.0 | Sn    | 02:27:20.733 | -0.1 |      |       |      |      |     |     |     |      | m    |           | 8041  |
| SCTE | 2.02 | 296.0 | Pn    | 02:26:53.869 | -0.3 |      |       |      |      |     |     |     |      | m    |           | 8040  |
| PHP  | 2.47 | 353.0 | Sg    | 02:27:31.988 | 0.1  |      |       |      |      |     |     |     |      | m    |           | 8043  |
| PHP  | 2.47 | 353.0 | Pn    | 02:27:00.956 | 0.5  |      |       |      |      |     |     |     |      | m    |           | 8042  |
| PHP  | 2.47 | 353.0 | AM1   | 02:27:48.150 |      |      |       |      |      |     |     | 0.1 | 1.08 | a    | M1        | 4612  |
| PUK  | 2.90 | 346.0 | Pn    | 02:27:06.507 | -0.4 |      |       |      |      |     |     |     |      | m    |           | 8044  |
| BCI  | 3.19 | 0.0   | Pn    | 02:27:11.295 | 0.0  |      |       |      |      |     |     |     |      | mc   |           | 8046  |
| DRME | 3.21 | 338.0 | Pn    | 02:27:10.241 | -1.4 |      |       |      |      |     |     |     |      | md   |           | 8045  |

DATA\_TYPE COMMENT GSE2.1  
Event 496

Official Magnitude:  
M1 2.94

Error ellipse:

|               |      |     |        |
|---------------|------|-----|--------|
|               | Azim | Dip | Mag    |
| Max:          | 226  | 67  | 1.5600 |
| Intermediate: | 109  | 10  | 1.1800 |
| Min:          | 15   | 20  | 0.6700 |

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556180006 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 503 0.4 km from Ágios Nikólaos, Epirus, Greece

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/16 | 10:34:25.25 |     | 0.09 | 39.6983  | 20.3273   |      |      |    | 17.3  | 0.7 | 9    | 12   | 127 | 0.17  | 1.48  | m    |        |
| OrigID     | 544         |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.3 | 0.0  | 6      | 544    |
| Md        | 3.2 | 0.0  | 5      | 544    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp  | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|------|-------|------|-----------|-------|
| IGT  | 0.17 | 179.0 | Sg    | 10:34:33.245 | -0.0 |      |       |      |      |     |     |      |       | m    |           | 8151  |
| IGT  | 0.17 | 179.0 | Pg    | 10:34:29.904 | 0.1  |      |       |      |      |     |     |      |       | m    |           | 8150  |
| IGT  | 0.17 | 179.0 | AMl   | 10:34:34.008 |      |      |       |      |      |     |     | 11.8 | 0.22  | a    | Ml        | 3.0   |
| IGT  | 0.17 | 179.0 | AMd   | 10:35:05.292 |      |      |       |      |      |     |     | 0.0  | 35.39 | a    | Md        | 1.8   |
| SRN  | 0.31 | 306.0 | Sg    | 10:34:38.137 | 0.1  |      |       |      |      |     |     |      |       | m    |           | 8153  |
| SRN  | 0.31 | 306.0 | Pg    | 10:34:32.412 | -0.1 |      |       |      |      |     |     |      |       | m    |           | 8152  |
| SRN  | 0.31 | 306.0 | AMl   | 10:34:41.988 |      |      |       |      |      |     |     | 0.6  | 0.32  | a    | Ml        | 1.8   |
| SRN  | 0.31 | 306.0 | AMd   | 10:35:26.850 |      |      |       |      |      |     |     | 0.0  | 54.44 | a    | Md        | 2.8   |
| LSK  | 0.50 | 0.0   | Pg    | 10:34:35.107 | 0.0  |      |       |      |      |     |     |      |       | m    |           | 8161  |
| LSK  | 0.50 | 24.0  | Sg    | 10:34:42.978 | -0.1 |      |       |      |      |     |     |      |       | m    |           | 8154  |
| LSK  | 0.50 | 24.0  | AMl   | 10:34:46.218 |      |      |       |      |      |     |     | 0.9  | 0.50  | a    | Ml        | 2.2   |
| NEST | 0.90 | 37.0  | Sg    | 10:34:56.352 | 0.0  |      |       |      |      |     |     |      |       | m    |           | 8156  |
| NEST | 0.90 | 37.0  | Pg    | 10:34:43.064 | 0.1  |      |       |      |      |     |     |      |       | m    |           | 8155  |
| NEST | 0.90 | 37.0  | AMl   | 10:35:05.668 |      |      |       |      |      |     |     | 0.3  | 0.42  | a    | Ml        | 2.2   |
| NEST | 0.90 | 37.0  | AMd   | 10:36:03.194 |      |      |       |      |      |     |     | 0.0  | 80.13 | a    | Md        | 3.3   |
| LKD2 | 0.94 | 164.0 | Sn    | 10:34:58.226 | 0.7  |      |       |      |      |     |     |      |       | m    |           | 8158  |
| LKD2 | 0.94 | 164.0 | Pn    | 10:34:43.679 | -0.0 |      |       |      |      |     |     |      |       | m    |           | 8157  |
| LKD2 | 0.94 | 164.0 | AMl   | 10:35:05.438 |      |      |       |      |      |     |     | 0.5  | 0.44  | a    | Ml        | 2.5   |
| LKD2 | 0.94 | 164.0 | AMd   | 10:35:56.212 |      |      |       |      |      |     |     | 0.0  | 72.53 | a    | Md        | 3.2   |
| SCTE | 1.48 | 286.0 | Sn    | 10:35:13.590 | -0.6 |      |       |      |      |     |     |      |       | m    |           | 8160  |
| SCTE | 1.48 | 286.0 | Pn    | 10:34:52.735 | -0.5 |      |       |      |      |     |     |      |       | m    |           | 8159  |
| SCTE | 1.48 | 286.0 | AMl   | 10:35:20.788 |      |      |       |      |      |     |     | 0.3  | 0.38  | a    | Ml        | 2.5   |
| SCTE | 1.48 | 286.0 | AMd   | 10:36:06.479 |      |      |       |      |      |     |     | 0.0  | 73.74 | a    | Md        | 3.2   |

DATA\_TYPE COMMENT GSE2.1  
 Event 503

Official Magnitude:  
 Ml 2.33

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 249  | 61  | 0.8200 |
| Intermediate: | 111  | 21  | 0.4000 |
| Min:          | 14   | 18  | 0.2800 |

BEGIN GSE2.1  
 MSG\_TYPE DATA  
 MSG\_ID 1556180006 athena  
 DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 505 0.8 km from AidoniΆ;, Epirus, Greece

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/16 | 14:12:22.15 |     | 0.06 | 39.2065  | 20.6058   |      |      |    | 33.4  | 0.5 | 8    | 11   | 174 | 0.39  | 1.87  | m    |        |
| OrigID 546 |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.5 | 0.0  | 4      | 546    |
| Md        | 2.9 | 0.0  | 5      | 546    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| IGT  | 0.39 | 327.0 | Sg    | 14:12:38.408 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 8175  |      |
| IGT  | 0.39 | 327.0 | Pg    | 14:12:31.448 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8174  |      |
| IGT  | 0.39 | 327.0 | AMd   | 14:13:31.107 |      |      |       |      |      |     |     | 0.0 | 59.66 | a    | Md        | 2.3   | 4695 |
| LKD2 | 0.42 | 174.0 | Sg    | 14:12:39.237 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8177  |      |
| LKD2 | 0.42 | 174.0 | Pg    | 14:12:31.478 | -0.4 |      |       |      |      |     |     |     |       | m    |           | 8176  |      |
| LKD2 | 0.42 | 174.0 | AMl   | 14:12:43.340 |      |      |       |      |      |     |     | 1.7 | 0.26  | a    | Ml        | 2.5   | 4700 |
| LKD2 | 0.42 | 174.0 | AMd   | 14:13:24.806 |      |      |       |      |      |     |     | 0.0 | 53.33 | a    | Md        | 2.8   | 4696 |
| SRN  | 0.82 | 326.0 | Sg    | 14:12:51.390 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 8179  |      |
| SRN  | 0.82 | 326.0 | Pg    | 14:12:38.699 | -0.1 |      |       |      |      |     |     |     |       | m    |           | 8178  |      |
| SRN  | 0.82 | 326.0 | AMl   | 14:12:57.460 |      |      |       |      |      |     |     | 0.3 | 0.50  | a    | Ml        | 2.2   | 4701 |
| SRN  | 0.82 | 326.0 | AMd   | 14:13:33.674 |      |      |       |      |      |     |     | 0.0 | 54.97 | a    | Md        | 2.9   | 4697 |
| LSK  | 0.94 | 0.0   | Pg    | 14:12:39.339 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8184  |      |
| LSK  | 0.94 | 0.0   | Sg    | 14:12:54.171 | 0.1  |      |       |      |      |     |     |     |       | m    |           | 8180  |      |
| LSK  | 0.94 | 0.0   | AMl   | 14:13:03.450 |      |      |       |      |      |     |     | 0.5 | 0.70  | a    | Ml        | 2.5   | 4702 |
| NEST | 1.25 | 15.0  | Pn    | 14:12:44.322 | -1.6 |      |       |      |      |     |     |     |       | m    |           | 8181  |      |
| NEST | 1.25 | 15.0  | AMd   | 14:13:40.010 |      |      |       |      |      |     |     | 0.0 | 55.69 | a    | Md        | 2.9   | 4698 |
| SCTE | 1.87 | 299.0 | Sn    | 14:13:20.120 | 0.0  |      |       |      |      |     |     |     |       | m    |           | 8183  |      |
| SCTE | 1.87 | 299.0 | Pn    | 14:12:55.220 | -0.0 |      |       |      |      |     |     |     |       | m    |           | 8182  |      |
| SCTE | 1.87 | 299.0 | AMl   | 14:13:39.450 |      |      |       |      |      |     |     | 0.2 | 0.62  | a    | Ml        | 2.8   | 4703 |



SCTE 1.87 299.0 AMd 14:14:18.619 \_\_\_\_\_ 0.0 83.40 a\_\_ Md 3.4 4699

DATA\_TYPE COMMENT GSE2.1  
Event 505

Official Magnitude:  
Ml 2.48

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 82   | 28  | 1.0600 |
| Intermediate: | 231  | 58  | 0.5300 |
| Min:          | 344  | 14  | 0.3300 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180004 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 520 1.4 km from Ampelia, Epirus, Greece

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/23 | 07:56:21.11 |     | 0.19 | 39.2295  | 20.9445   |      |      |    | 29.9  | 1.4 | 18   | 11   | 161 | 0.49  | 2.27  | m    |        |

OrigID 561

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 3.7 | 0.0  | 10     | 561    |
| Md        | 3.1 | 0.0  | 10     | 561    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp  | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|------|-------|------|-----------|-------|------|
| LKD2 | 0.49 | 208.0 | Sg    | 07:56:39.943 | 0.1  |      |       |      |      | ___ |     |      |       | m__  |           | 8399  |      |
| LKD2 | 0.49 | 208.0 | Pg    | 07:56:31.850 | 0.0  |      |       |      |      | ___ |     |      |       | m__  |           | 8398  |      |
| LKD2 | 0.49 | 208.0 | AMl   | 07:56:43.880 |      |      |       |      |      | ___ |     | 22.6 | 0.48  | a__  | Ml        | 3.7   | 4860 |
| LKD2 | 0.49 | 208.0 | AMd   | 07:57:20.894 |      |      |       |      |      | ___ |     | 0.0  | 49.04 | a__  | Md        | 2.7   | 4850 |
| IGT  | 0.56 | 303.0 | Sg    | 07:56:41.167 | -0.7 |      |       |      |      | ___ |     |      |       | m__  |           | 8401  |      |
| IGT  | 0.56 | 303.0 | Pg    | 07:56:33.000 | 0.0  |      |       |      |      | ___ |     |      |       | m__  |           | 8400  |      |
| IGT  | 0.56 | 303.0 | AMl   | 07:56:45.650 |      |      |       |      |      | ___ |     | 7.5  | 0.56  | a__  | Ml        | 3.3   | 4861 |
| IGT  | 0.56 | 303.0 | AMd   | 07:57:24.528 |      |      |       |      |      | ___ |     | 0.0  | 51.53 | a__  | Md        | 2.2   | 4851 |
| LSK  | 0.96 | 344.0 | Sg    | 07:56:53.446 | -0.0 |      |       |      |      | ___ |     |      |       | m__  |           | 8403  |      |
| LSK  | 0.96 | 344.0 | Pg    | 07:56:39.628 | 0.0  |      |       |      |      | ___ |     |      |       | m__  |           | 8402  |      |
| LSK  | 0.96 | 344.0 | AMl   | 07:57:07.650 |      |      |       |      |      | ___ |     | 9.8  | 0.58  | a__  | Ml        | 3.8   | 4862 |
| LSK  | 0.96 | 344.0 | AMd   | 07:57:50.064 |      |      |       |      |      | ___ |     | 0.0  | 70.44 | a__  | Md        | 3.1   | 4852 |
| SRN  | 0.98 | 312.0 | Sg    | 07:56:54.825 | -0.1 |      |       |      |      | ___ |     |      |       | m__  |           | 8405  |      |
| SRN  | 0.98 | 312.0 | Pg    | 07:56:39.981 | -0.5 |      |       |      |      | ___ |     |      |       | m__  |           | 8404  |      |
| SRN  | 0.98 | 312.0 | AMl   | 07:57:01.030 |      |      |       |      |      | ___ |     | 3.4  | 0.46  | a__  | Ml        | 3.3   | 4863 |
| SRN  | 0.98 | 312.0 | AMd   | 07:57:41.851 |      |      |       |      |      | ___ |     | 0.0  | 61.87 | a__  | Md        | 3.0   | 4853 |
| NEST | 1.19 | 3.0   | Sg    | 07:57:00.575 | -0.1 |      |       |      |      | ___ |     |      |       | m__  |           | 8407  |      |

|      |      |       |     |              |      |  |  |  |  |     |       |   |    |     |  |  |   |  |      |
|------|------|-------|-----|--------------|------|--|--|--|--|-----|-------|---|----|-----|--|--|---|--|------|
| NEST | 1.19 | 3.0   | Pg  | 07:56:43.673 | -0.0 |  |  |  |  |     |       |   |    |     |  |  | m |  | 8406 |
| NEST | 1.19 | 3.0   | AMl | 07:57:09.480 |      |  |  |  |  | 2.3 | 0.64  | a | Ml | 3.3 |  |  |   |  | 4864 |
| NEST | 1.19 | 3.0   | AMd | 07:57:50.090 |      |  |  |  |  | 0.0 | 66.42 | a | Md | 3.1 |  |  |   |  | 4854 |
| KBN  | 1.40 | 0.0   | Pn  | 07:56:50.583 | 0.0  |  |  |  |  |     |       |   |    |     |  |  |   |  | 8418 |
| KBN  | 1.40 | 356.0 | Sn  | 07:57:06.459 | 0.3  |  |  |  |  |     |       |   |    |     |  |  |   |  | 8408 |
| KBN  | 1.40 | 356.0 | AMl | 07:57:15.400 |      |  |  |  |  | 5.0 | 0.78  | a | Ml | 3.8 |  |  |   |  | 4865 |
| FNA  | 1.59 | 12.0  | Sn  | 07:57:12.201 | 0.0  |  |  |  |  |     |       |   |    |     |  |  |   |  | 8410 |
| FNA  | 1.59 | 12.0  | Pn  | 07:56:50.240 | -0.1 |  |  |  |  |     |       |   |    |     |  |  |   |  | 8409 |
| FNA  | 1.59 | 12.0  | AMl | 07:57:18.750 |      |  |  |  |  | 2.8 | 0.66  | a | Ml | 3.7 |  |  |   |  | 4866 |
| FNA  | 1.59 | 12.0  | AMd | 07:58:04.194 |      |  |  |  |  | 0.0 | 73.95 | a | Md | 3.2 |  |  |   |  | 4855 |
| VLO  | 1.67 | 319.0 | Sn  | 07:57:13.676 | 0.5  |  |  |  |  |     |       |   |    |     |  |  |   |  | 8412 |
| VLO  | 1.67 | 319.0 | Pn  | 07:56:51.106 | 0.3  |  |  |  |  |     |       |   |    |     |  |  |   |  | 8411 |
| VLO  | 1.67 | 319.0 | AMl | 07:57:23.490 |      |  |  |  |  | 6.9 | 0.42  | a | Ml | 4.1 |  |  |   |  | 4867 |
| VLO  | 1.67 | 319.0 | AMd | 07:57:58.544 |      |  |  |  |  | 0.0 | 67.44 | a | Md | 3.1 |  |  |   |  | 4856 |
| THE  | 2.09 | 47.0  | Sn  | 07:57:25.215 | -0.1 |  |  |  |  |     |       |   |    |     |  |  |   |  | 8414 |
| THE  | 2.09 | 47.0  | Pn  | 07:56:57.751 | -0.1 |  |  |  |  |     |       |   |    |     |  |  |   |  | 8413 |
| THE  | 2.09 | 47.0  | AMl | 07:57:30.100 |      |  |  |  |  | 0.4 | 0.50  | a | Ml | 3.2 |  |  |   |  | 4868 |
| THE  | 2.09 | 47.0  | AMd | 07:58:10.897 |      |  |  |  |  | 0.0 | 73.15 | a | Md | 3.2 |  |  |   |  | 4857 |
| SCTE | 2.09 | 295.0 | Sn  | 07:57:22.021 | -3.3 |  |  |  |  |     |       |   |    |     |  |  |   |  | 8416 |
| SCTE | 2.09 | 295.0 | Pn  | 07:56:57.463 | -0.4 |  |  |  |  |     |       |   |    |     |  |  |   |  | 8415 |
| SCTE | 2.09 | 295.0 | AMl | 07:57:24.140 |      |  |  |  |  | 2.0 | 0.60  | a | Ml | 3.8 |  |  |   |  | 4869 |
| SCTE | 2.09 | 295.0 | AMd | 07:58:18.422 |      |  |  |  |  | 0.0 | 80.96 | a | Md | 3.4 |  |  |   |  | 4858 |
| TIR  | 2.27 | 340.0 | Pn  | 07:57:00.732 | 0.3  |  |  |  |  |     |       |   |    |     |  |  |   |  | 8417 |
| TIR  | 2.27 | 340.0 | AMd | 07:58:13.396 |      |  |  |  |  | 0.0 | 72.66 | a | Md | 3.3 |  |  |   |  | 4859 |

DATA\_TYPE COMMENT GSE2.1  
Event 520

Official Magnitude:  
Ml 3.67

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 215  | 64  | 1.5200 |
| Intermediate: | 114  | 4   | 0.6300 |
| Min:          | 22   | 25  | 0.3700 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180002 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 526 0.2 km from Spuž, Danilovgrad, Montenegro

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |  |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|--|
| 2019/03/24 | 15:19:20.06 |     | 0.05 | 42.5147  | 19.1932   |      |      |    | 14.3  | 2.7 | 11   | 14   | 89  | 0.21  | 0.72  | m    |        |  |
| 567        |             |     |      |          |           |      |      |    |       |     |      |      |     |       |       |      |        |  |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 1.5 | 0.0  | 2      | 567    |
| Md        | 2.4 | 0.0  | 6      | 567    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|
| CEME | 0.21 | 280.0 | Sg    | 15:19:28.728 | 0.0  |      |       |      |      |     |     |     |       |      |           | 8509  |
| CEME | 0.21 | 280.0 | Pg    | 15:19:24.938 | -0.1 |      |       |      |      |     |     |     |       |      |           | 8508  |
| CEME | 0.21 | 280.0 | AMd   | 15:20:03.519 |      |      |       |      |      |     |     | 0.0 | 38.58 | a__  | Md        | 2.5   |
| BUM  | 0.30 | 226.0 | Pg    | 15:19:26.749 | 0.0  |      |       |      |      |     |     |     |       |      |           | 8510  |
| BUM  | 0.30 | 226.0 | AMd   | 15:20:02.736 |      |      |       |      |      |     |     | 0.0 | 35.99 | a__  | Md        | 2.4   |
| NKME | 0.31 | 326.0 | Pg    | 15:19:26.806 | 0.1  |      |       |      |      |     |     |     |       |      |           | 8511  |
| NKME | 0.31 | 326.0 | AMd   | 15:19:47.925 |      |      |       |      |      |     |     | 0.0 | 21.12 | a__  | Md        | 1.9   |
| DRME | 0.33 | 181.0 | Sg    | 15:19:32.453 | -0.0 |      |       |      |      |     |     |     |       |      |           | 8513  |
| DRME | 0.33 | 181.0 | Pg    | 15:19:27.217 | 0.1  |      |       |      |      |     |     |     |       |      |           | 8512  |
| DRME | 0.33 | 181.0 | AMd   | 15:20:20.147 |      |      |       |      |      |     |     | 0.0 | 52.93 | a__  | Md        | 2.8   |
| HCY  | 0.53 | 263.0 | Pg    | 15:19:30.542 | -0.3 |      |       |      |      |     |     |     |       |      |           | 8514  |
| HCY  | 0.53 | 263.0 | AMd   | 15:20:03.880 |      |      |       |      |      |     |     | 0.0 | 33.34 | a__  | Md        | 2.3   |
| ULC  | 0.55 | 175.0 | Pg    | 15:19:31.128 | -0.2 |      |       |      |      |     |     |     |       |      |           | 8515  |
| ULC  | 0.55 | 175.0 | AMd   | 15:19:56.040 |      |      |       |      |      |     |     | 0.0 | 24.91 | a__  | Md        | 2.1   |
| BEY  | 0.63 | 55.0  | P     | 15:19:32.707 | -0.1 |      |       |      |      |     |     |     |       |      |           | 8516  |
| BCI  | 0.66 | 102.0 | S     | 15:19:43.284 | 0.1  |      |       |      |      |     |     |     |       |      |           | 8517  |
| BCI  | 0.66 | 102.0 | AMl   | 15:19:46.520 |      |      |       |      |      |     |     | 0.1 | 0.20  | a__  | Ml        | 1.5   |
| PUK  | 0.70 | 132.0 | Sn    | 15:19:44.369 | -0.1 |      |       |      |      |     |     |     |       |      |           | 8519  |
| PUK  | 0.70 | 132.0 | Pn    | 15:19:34.027 | 0.1  |      |       |      |      |     |     |     |       |      |           | 8518  |
| PUK  | 0.70 | 132.0 | AMl   | 15:19:47.110 |      |      |       |      |      |     |     | 0.1 | 0.28  | a__  | Ml        | 1.4   |
| UPM  | 0.72 | 0.0   | Pg    | 15:19:33.681 | 0.0  |      |       |      |      |     |     |     |       |      |           | 8520  |

DATA\_TYPE COMMENT GSE2.1  
Event 526

Official Magnitude:  
Ml 1.47

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 262  | 77  | 2.7300 |
| Intermediate: | 23   | 6   | 0.3900 |
| Min:          | 114  | 11  | 0.2600 |

BEGIN GSE2.1  
MSG\_TYPE DATA  
MSG\_ID 1556180002 athena  
DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 534 1.8 km from Skorča Gora, Opština Nikšić, Montenegro

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

OrigID  
 2019/03/25 16:37:14.00            0.15 42.7398 18.5430            32.3 1.0 16 25 114 0.16 2.89 m  
 575

Magnitude Err Nsta Author            OrigID  
 Ml        3.3 0.0     5                            575  
 Md        2.9 0.0    14                            575

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per    | Qual   | Magnitude | ArrID |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|--------|--------|-----------|-------|
| BRY  | 0.16 | 0.0   | Pg    | 16:37:20.438 | 0.1  |      |       |      |      |     |     |     |        | m__    |           | 8591  |
| BRY  | 0.16 | 0.0   | AMd   | 16:37:50.165 |      |      |       |      |      |     |     | 0.0 | 29.73  | a__ Md | 2.2       | 4948  |
| HCY  | 0.29 | 188.0 | Pg    | 16:37:22.828 | 1.0  |      |       |      |      |     |     |     |        | m__    |           | 8592  |
| HCY  | 0.29 | 188.0 | AMd   | 16:38:16.451 |      |      |       |      |      |     |     | 0.0 | 53.62  | a__ Md | 2.8       | 4949  |
| NKME | 0.31 | 84.0  | Pg    | 16:37:21.340 | -0.7 |      |       |      |      |     |     |     |        | m__    |           | 8593  |
| NKME | 0.31 | 84.0  | AMd   | 16:37:48.588 |      |      |       |      |      |     |     | 0.0 | 27.25  | a__ Md | 2.1       | 4950  |
| CEME | 0.34 | 124.0 | Pg    | 16:37:22.192 | -0.3 |      |       |      |      |     |     |     |        | m__    |           | 8594  |
| CEME | 0.34 | 124.0 | AMd   | 16:38:07.163 |      |      |       |      |      |     |     | 0.0 | 44.97  | a__ Md | 2.6       | 4951  |
| UPM  | 0.54 | 30.0  | Pg    | 16:37:25.631 | 0.1  |      |       |      |      |     |     |     |        | m__    |           | 8595  |
| UPM  | 0.54 | 30.0  | AMd   | 16:38:09.091 |      |      |       |      |      |     |     | 0.0 | 43.46  | a__ Md | 2.6       | 4952  |
| KOME | 0.72 | 80.0  | Pg    | 16:37:28.141 | -0.5 |      |       |      |      |     |     |     |        | m__    |           | 8596  |
| KOME | 0.72 | 80.0  | AMd   | 16:38:20.832 |      |      |       |      |      |     |     | 0.0 | 52.69  | a__ Md | 2.8       | 4953  |
| DRME | 0.73 | 138.0 | Pg    | 16:37:29.311 | 0.5  |      |       |      |      |     |     |     |        | m__    |           | 8597  |
| DRME | 0.73 | 138.0 | AMd   | 16:38:34.851 |      |      |       |      |      |     |     | 0.0 | 65.54  | a__ Md | 3.0       | 4954  |
| PLE  | 0.86 | 46.0  | Pg    | 16:37:31.035 | 0.1  |      |       |      |      |     |     |     |        | m__    |           | 8598  |
| PLE  | 0.86 | 46.0  | AMd   | 16:38:21.883 |      |      |       |      |      |     |     | 0.0 | 50.85  | a__ Md | 2.8       | 4955  |
| BEY  | 1.01 | 82.0  | Pg    | 16:37:33.213 | -0.3 |      |       |      |      |     |     |     |        | m__    |           | 8599  |
| BEY  | 1.01 | 82.0  | AMd   | 16:38:35.201 |      |      |       |      |      |     |     | 0.0 | 61.99  | a__ Md | 3.0       | 4956  |
| BCI  | 1.18 | 0.0   | Pg    | 16:37:37.177 | 0.0  |      |       |      |      |     |     |     |        | m__    |           | 8610  |
| BCI  | 1.19 | 107.0 | Sg    | 16:37:53.483 | 0.1  |      |       |      |      |     |     |     |        | m__    |           | 8600  |
| BCI  | 1.19 | 107.0 | AMl   | 16:38:02.130 |      |      |       |      |      |     |     | 2.0 | 0.50   | a__ Ml | 3.3       | 4962  |
| PUK  | 1.22 | 124.0 | Sg    | 16:37:54.301 | 0.0  |      |       |      |      |     |     |     |        | m__    |           | 8602  |
| PUK  | 1.22 | 124.0 | Pg    | 16:37:37.091 | 0.1  |      |       |      |      |     |     |     |        | m__    |           | 8601  |
| PUK  | 1.22 | 124.0 | AMl   | 16:38:03.050 |      |      |       |      |      |     |     | 0.9 | 0.46   | a__ Ml | 3.0       | 4963  |
| PUK  | 1.22 | 124.0 | AMd   | 16:39:00.119 |      |      |       |      |      |     |     | 0.0 | 83.03  | a__ Md | 3.3       | 4957  |
| NOCI | 2.24 | 211.0 | Sn    | 16:38:21.836 | 0.1  |      |       |      |      |     |     |     |        | m__    |           | 8604  |
| NOCI | 2.24 | 211.0 | Pn    | 16:37:52.767 | 0.1  |      |       |      |      |     |     |     |        | m__    |           | 8603  |
| NOCI | 2.24 | 211.0 | AMl   | 16:38:33.520 |      |      |       |      |      |     |     | 0.7 | 0.28   | a__ Ml | 3.4       | 4964  |
| NOCI | 2.24 | 211.0 | AMd   | 16:39:30.935 |      |      |       |      |      |     |     | 0.0 | 98.17  | a__ Md | 3.6       | 4958  |
| SGRT | 2.29 | 246.0 | Sn    | 16:38:22.913 | -0.1 |      |       |      |      |     |     |     |        | m__    |           | 8606  |
| SGRT | 2.29 | 246.0 | Pn    | 16:37:53.418 | -0.0 |      |       |      |      |     |     |     |        | m__    |           | 8605  |
| SGRT | 2.29 | 246.0 | AMl   | 16:38:40.890 |      |      |       |      |      |     |     | 0.6 | 0.44   | a__ Ml | 3.4       | 4965  |
| SGRT | 2.29 | 246.0 | AMd   | 16:39:43.859 |      |      |       |      |      |     |     | 0.0 | 110.44 | a__ Md | 3.7       | 4959  |
| SCTE | 2.66 | 182.0 | Sn    | 16:38:32.573 | 0.0  |      |       |      |      |     |     |     |        | m__    |           | 8608  |
| SCTE | 2.66 | 182.0 | Pn    | 16:37:58.160 | -0.7 |      |       |      |      |     |     |     |        | m__    |           | 8607  |
| SCTE | 2.66 | 182.0 | AMl   | 16:38:56.980 |      |      |       |      |      |     |     | 0.3 | 0.32   | a__ Ml | 3.3       | 4966  |
| SCTE | 2.66 | 182.0 | AMd   | 16:39:48.704 |      |      |       |      |      |     |     | 0.0 | 110.54 | a__ Md | 3.7       | 4960  |
| FNA  | 2.89 | 131.0 | Pn    | 16:38:02.196 | -0.0 |      |       |      |      |     |     |     |        | m__    |           | 8609  |
| FNA  | 2.89 | 131.0 | AMd   | 16:39:47.676 |      |      |       |      |      |     |     | 0.0 | 105.48 | a__ Md | 3.7       | 4961  |

DATA\_TYPE COMMENT GSE2.1

Event 534

Official Magnitude:

Ml 3.31

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 31   | 57  | 1.1500 |
| Intermediate: | 145  | 14  | 0.4500 |
| Min:          | 243  | 29  | 0.3100 |

BEGIN GSE2.1

MSG\_TYPE DATA

MSG\_ID 1556180001 athena

DATA\_TYPE BULLETIN GSE2.1:SHORT

Event 535 0.6 km from Radovizi, Epirus, Greece

| Date       | Time        | Err | RMS  | Latitude | Longitude | Smaj | Smin | Az | Depth | Err | Ndef | Nsta | Gap | mdist | Mdist | Qual | Author |
|------------|-------------|-----|------|----------|-----------|------|------|----|-------|-----|------|------|-----|-------|-------|------|--------|
| 2019/03/25 | 20:29:05.52 |     | 0.02 | 39.5933  | 20.5828   |      |      |    | 27.0  | 0.5 | 15   | 11   | 148 | 0.21  | 2.95  | m    | 576    |

| Magnitude | Err | Nsta | Author | OrigID |
|-----------|-----|------|--------|--------|
| Ml        | 2.8 | 0.0  | 7      | 576    |
| Md        | 3.3 | 0.0  | 9      | 576    |

| Sta  | Dist | EvAz  | Phase | Time         | Tres | Azim | AzRes | Slow | SRes | Def | SNR | Amp | Per   | Qual | Magnitude | ArrID |      |
|------|------|-------|-------|--------------|------|------|-------|------|------|-----|-----|-----|-------|------|-----------|-------|------|
| IGT  | 0.21 | 253.0 | Sg    | 20:29:16.252 | -0.0 |      |       |      |      | --- |     |     |       | m    |           | 8612  |      |
| IGT  | 0.21 | 253.0 | Pg    | 20:29:11.652 | -0.0 |      |       |      |      | --- |     |     |       | m    |           | 8611  |      |
| IGT  | 0.21 | 253.0 | AMd   | 20:29:53.925 |      |      |       |      |      | --- |     | 0.0 | 42.27 | a    | Md        | 2.0   | 4967 |
| SRN  | 0.53 | 303.0 | Sg    | 20:29:25.745 | -0.0 |      |       |      |      | --- |     |     |       | m    |           | 8614  |      |
| SRN  | 0.53 | 303.0 | Pg    | 20:29:17.163 | 0.1  |      |       |      |      | --- |     |     |       | m    |           | 8613  |      |
| SRN  | 0.53 | 303.0 | AMl   | 20:29:32.598 |      |      |       |      |      | --- |     | 1.1 | 0.44  | a    | Ml        | 2.4   | 4976 |
| SRN  | 0.53 | 303.0 | AMd   | 20:30:28.147 |      |      |       |      |      | --- |     | 0.0 | 70.98 | a    | Md        | 3.1   | 4968 |
| LSK  | 0.56 | 1.0   | Sg    | 20:29:25.604 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8616  |      |
| LSK  | 0.56 | 1.0   | Pg    | 20:29:16.984 | -0.0 |      |       |      |      | --- |     |     |       | m    |           | 8615  |      |
| LSK  | 0.56 | 1.0   | AMl   | 20:29:34.478 |      |      |       |      |      | --- |     | 5.9 | 0.54  | a    | Ml        | 3.2   | 4977 |
| LSK  | 0.56 | 1.0   | AMd   | 20:30:39.344 |      |      |       |      |      | --- |     | 0.0 | 82.36 | a    | Md        | 3.3   | 4969 |
| LKD2 | 0.80 | 175.0 | Sg    | 20:29:33.402 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8618  |      |
| LKD2 | 0.80 | 175.0 | Pg    | 20:29:21.455 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8617  |      |
| LKD2 | 0.80 | 175.0 | AMl   | 20:29:44.378 |      |      |       |      |      | --- |     | 1.5 | 0.70  | a    | Ml        | 2.8   | 4978 |
| LKD2 | 0.80 | 175.0 | AMd   | 20:30:42.724 |      |      |       |      |      | --- |     | 0.0 | 81.27 | a    | Md        | 3.3   | 4970 |
| NEST | 0.89 | 23.0  | Sg    | 20:29:36.151 | -0.0 |      |       |      |      | --- |     |     |       | m    |           | 8620  |      |
| NEST | 0.89 | 23.0  | Pg    | 20:29:22.996 | -0.0 |      |       |      |      | --- |     |     |       | m    |           | 8619  |      |
| NEST | 0.89 | 23.0  | AMl   | 20:29:41.458 |      |      |       |      |      | --- |     | 0.6 | 0.60  | a    | Ml        | 2.5   | 4979 |
| NEST | 0.89 | 23.0  | AMd   | 20:30:42.513 |      |      |       |      |      | --- |     | 0.0 | 79.52 | a    | Md        | 3.3   | 4971 |
| KBN  | 1.04 | 0.0   | Pg    | 20:29:25.404 | 0.0  |      |       |      |      | --- |     |     |       | m    |           | 8628  |      |



|      |      |       |     |              |      |     |     |      |     |    |      |      |
|------|------|-------|-----|--------------|------|-----|-----|------|-----|----|------|------|
| LSK  | 0.55 | 357.0 | Sn  | 02:49:28.748 | 4.1  | --- |     |      | m   |    | 8655 |      |
| LSK  | 0.55 | 357.0 | Pn  | 02:49:16.125 | 0.1  | --- |     |      | mde |    | 8654 |      |
| LSK  | 0.55 | 357.0 | AML | 02:49:34.168 |      | --- | 2.3 | 0.64 | a   | Ml | 2.7  | 4996 |
| LKD2 | 0.81 | 179.0 | P   | 02:49:21.293 | 0.0  | --- |     |      | m   |    | 8656 |      |
| NEST | 0.87 | 0.0   | P   | 02:49:21.980 | 0.0  | --- |     |      | m   |    | 8660 |      |
| KBN  | 1.03 | 5.0   | P   | 02:49:24.983 | 0.1  | --- |     |      | m   |    | 8657 |      |
| FNA  | 1.31 | 25.0  | S   | 02:49:50.168 | -0.1 | --- |     |      | m   |    | 8659 |      |
| FNA  | 1.31 | 25.0  | P   | 02:49:29.991 | -0.7 | --- |     |      | m   |    | 8658 |      |

DATA\_TYPE COMMENT GSE2.1  
Event 538

Official Magnitude:  
Ml 2.55

Error ellipse:

|               | Azim | Dip | Mag    |
|---------------|------|-----|--------|
| Max:          | 175  | 82  | 1.8200 |
| Intermediate: | 311  | 5   | 0.7500 |
| Min:          | 41   | 6   | 0.3500 |

**Ngjerje te largeta (Long distance srismic event)**

| Y          | M  | D      | HM   | Sec   | Lat      | Long | Dep | Net      | Nr  | Rms | Mag | Epicenter      |
|------------|----|--------|------|-------|----------|------|-----|----------|-----|-----|-----|----------------|
| 2019-03-20 |    |        | 0635 | 29.39 |          |      |     |          |     |     | 5.7 | Western Turkey |
| GAP=       |    |        |      |       | hor.err= |      |     | ver.err= |     |     |     |                |
| STAT       | SP | IPHASW | D    | HRMM  | SECON    |      |     | AZIMU    | RES | DIS | DUR | Md             |
| THE        | AC | iP     |      | 0635  | 59.08    |      |     |          |     |     |     |                |
| FNA        | AC | iP     |      | 0636  | 15.23    |      |     |          |     |     |     |                |
| NEST       | AC | iP     |      | 0636  | 16.22    |      |     |          |     |     |     |                |
| LKD2       | AC | iP     |      | 0636  | 19.30    |      |     |          |     |     |     |                |
| KBN        | AC | iP     |      | 0636  | 19.64    |      |     |          |     |     |     |                |
| LSK        | AC | iP     |      | 0636  | 19.78    |      |     |          |     |     |     |                |
| IGT        | AC | iP     |      | 0636  | 21.81    |      |     |          |     |     |     |                |
| SRN        | AC | iP     |      | 0636  | 26.25    |      |     |          |     |     |     |                |
| PHP        | AC | iP     |      | 0636  | 31.08    |      |     |          |     |     |     |                |
| BPA1       | AC | iP     |      | 0636  | 32.45    |      |     |          |     |     |     |                |
| TIR        | AC | iP     |      | 0636  | 34.05    |      |     |          |     |     |     |                |

|      |    |    |      |       |
|------|----|----|------|-------|
| BCI  | AC | iP | 0636 | 37.29 |
| PUK  | AC | iP | 0636 | 39.23 |
| SCTE | AC | iP | 0636 | 43.46 |

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

| Y          | M    | D      | HM | Sec      | Lat      | Long  | Dep | Net | Nr  | Rms | Mag | Epicenter |
|------------|------|--------|----|----------|----------|-------|-----|-----|-----|-----|-----|-----------|
| 2019-03-04 | 2002 | 084916 |    |          |          |       |     |     |     |     |     | LSK       |
| GAP=       |      |        |    | hor.err= | ver.err= |       |     |     |     |     |     |           |
| STAT       | SP   | IPHASW | D  | HRMM     | SECON    | AZIMU |     | RES | DIS | DUR | Md  |           |
| LSK        | SZ   | IPG    |    | 2002     | 08.49    |       |     |     |     |     |     |           |
| LSK        | SE   | ISG    |    | 2002     | 09.65    |       |     |     |     |     |     |           |

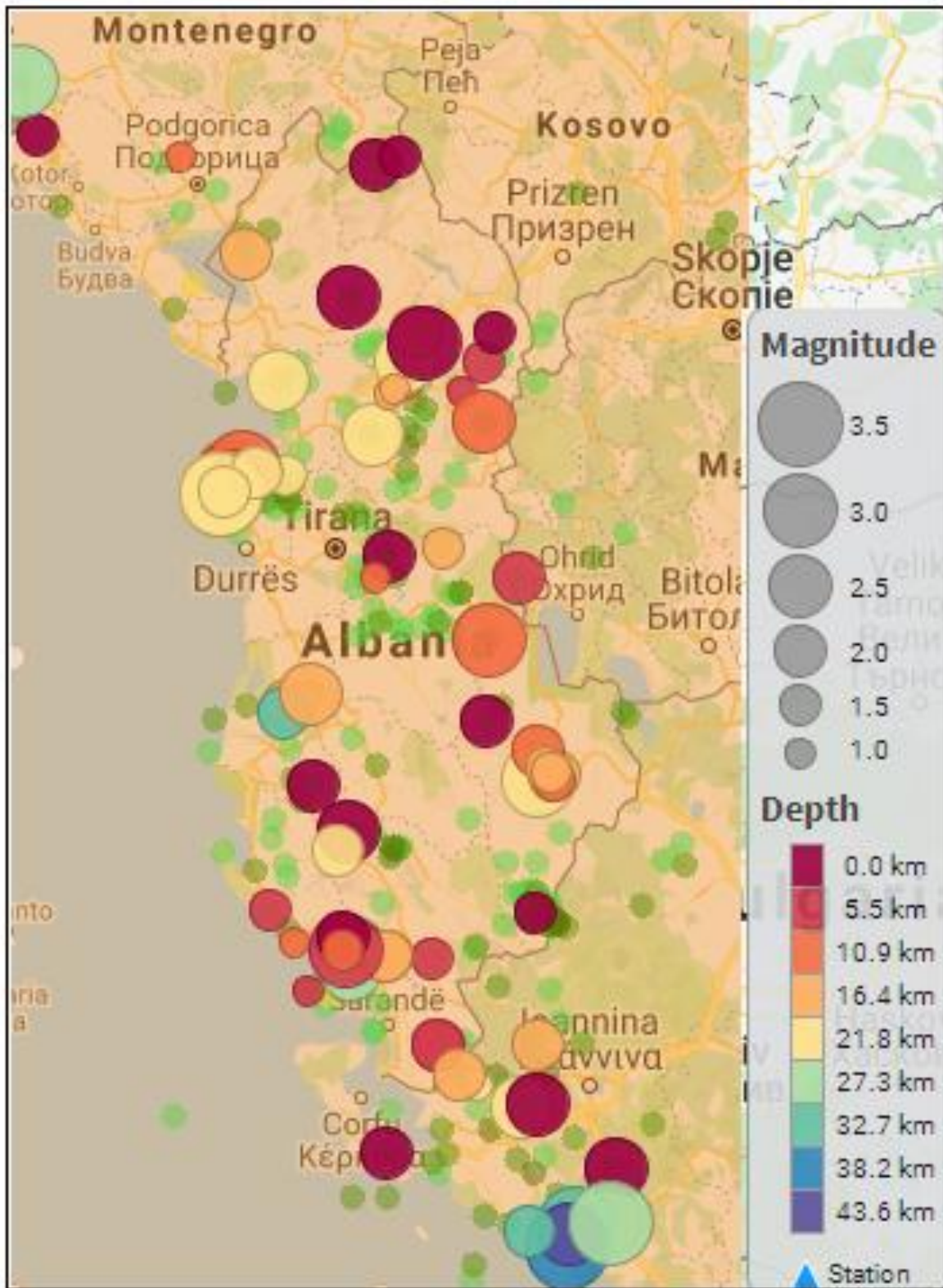
| Y          | M    | D       | HM | Sec      | Lat      | Long  | Dep | Net | Nr  | Rms | Mag | Epicenter |
|------------|------|---------|----|----------|----------|-------|-----|-----|-----|-----|-----|-----------|
| 2019-03-20 | 1456 | 25.4686 |    |          |          |       |     |     |     |     |     | LSK       |
| GAP=       |      |         |    | hor.err= | ver.err= |       |     |     |     |     |     |           |
| STAT       | SP   | IPHASW  | D  | HRMM     | SECON    | AZIMU |     | RES | DIS | DUR | Md  |           |
| LSK        | SZ   | IPG     |    | 1456     | 25.46    |       |     |     |     |     |     |           |
| LSK        | SE   | ISG     |    | 1456     | 26.92    |       |     |     |     |     |     |           |



### Katalogu i termeteve

| Date       | Time  | Rms  | Lat    | Long   | Mag | Depth | D-Err | No.Stat | No.Ph | Azimuth-Gap |
|------------|-------|------|--------|--------|-----|-------|-------|---------|-------|-------------|
| 2019-03-01 | 05:26 | 0.04 | 40.797 | 20.435 | 2.2 | 0.1   | 0.7   | 9       | 13    | 122         |
| 2019-03-01 | 06:57 | 0.01 | 41.832 | 20.111 | 1.2 | 13.6  | 4.5   | 4       | 4     | 157         |
| 2019-03-01 | 10:32 | 0.22 | 40.613 | 20.646 | 3   | 24    | 1.2   | 22      | 21    | 198         |
| 2019-03-03 | 00:16 | 0.54 | 40.028 | 19.882 | 2.6 | 28.9  | 1.6   | 11      | 15    | 126         |
| 2019-03-03 | 01:00 | 0.25 | 39.793 | 20.640 | 2   | 20.7  | 1.7   | 7       | 11    | 197         |
| 2019-03-04 | 22:47 | 0.05 | 41.898 | 20.426 | 1.6 | 7.2   | 1.7   | 11      | 7     | 198         |
| 2019-03-05 | 01:07 | 0.08 | 40.115 | 19.814 | 1.9 | 6.0   | 1     | 32      | 11    | 116         |
| 2019-03-06 | 05:46 | 0.16 | 41.840 | 19.589 | 2.8 | 22.3  | 1.5   | 31      | 19    | 140         |
| 2019-03-07 | 15:08 | 0.07 | 41.984 | 20.467 | 1.9 | 1.2   | 1.4   | 17      | 10    | 174         |
| 2019-03-07 | 16:23 | 0.18 | 41.895 | 20.106 | 2.6 | 25    | 0.8   | 31      | 15    | 132         |
| 2019-03-08 | 10:25 | 0.05 | 40.633 | 20.707 | 2   | 17.1  | 0.6   | 32      | 10    | 217         |
| 2019-03-08 | 10:31 | 0.28 | 40.709 | 20.639 | 2.4 | 11.9  | 1.8   | 32      | 11    | 141         |
| 2019-03-08 | 11:18 | 0.25 | 40.615 | 20.707 | 1.9 | 14.9  | 1     | 32      | 10    | 142         |
| 2019-03-08 | 11:42 | 0.07 | 40.656 | 20.674 | 1.6 | 16.5  | 0.8   | 32      | 6     | 249         |
| 2019-03-08 | 11:48 | 0.14 | 40.641 | 20.695 | 1.6 | 18.5  | 0.9   | 6       | 7     | 245         |
| 2019-03-08 | 19:46 | 0.06 | 40.207 | 20.632 | 1.6 | 4.2   | 0.5   | 7       | 7     | 167         |
| 2019-03-09 | 00:36 | 0.22 | 39.961 | 19.708 | 1.4 | 6.8   | 2.2   | 31      | 10    | 147         |
| 2019-03-09 | 02:19 | 0.14 | 40.060 | 20.215 | 1.5 | 7.8   | 1.6   | 31      | 10    | 187         |
| 2019-03-09 | 05:48 | 0.21 | 41.980 | 20.145 | 2.3 | 18.1  | 0.9   | 31      | 16    | 149         |
| 2019-03-09 | 06:51 | 0.1  | 41.807 | 20.333 | 1.3 | 6.6   | 13.2  | 31      | 5     | 165         |
| 2019-03-09 | 12:24 | 0.05 | 41.955 | 20.180 | 3.4 | 4.3   | 1     | 13      | 14    | 152         |
| 2019-03-09 | 22:21 | 0.54 | 39.401 | 20.961 | 2.8 | 5     | 3.7   | 10      | 14    | 189         |
| 2019-03-10 | 06:46 | 0.07 | 41.330 | 20.257 | 1.7 | 16.9  | 1.1   | 32      | 10    | 128         |
| 2019-03-10 | 18:54 | 0.06 | 42.574 | 18.610 | 1.7 | 4.1   | 1     | 14      | 8     | 136         |
| 2019-03-11 | 12:28 | 0.15 | 40.106 | 19.935 | 1.8 | 1.2   | 1.1   | 32      | 13    | 103         |
| 2019-03-12 | 00:56 | 0.19 | 39.456 | 20.033 | 2.5 | 3.0   | 1.5   | 6       | 9     | 155         |
| 2019-03-12 | 06:41 | 0.35 | 40.453 | 19.876 | 3   | 1.5   | 1.4   | 23      | 24    | 86          |
| 2019-03-13 | 05:36 | 0.24 | 40.115 | 19.656 | 1.5 | 12.5  | 1.5   | 32      | 10    | 131         |
| 2019-03-14 | 00:14 | 0.46 | 39.207 | 20.747 | 2.8 | 36.9  | 1.1   | 32      | 19    | 173         |
| 2019-03-14 | 02:22 | 0.58 | 39.233 | 20.943 | 2.8 | 19.4  | 3.6   | 32      | 16    | 195         |
| 2019-03-14 | 02:26 | 0.41 | 39.235 | 20.844 | 2.9 | 30.3  | 1.4   | 32      | 20    | 185         |
| 2019-03-14 | 04:12 | 0.32 | 39.230 | 20.800 | 3.1 | 38    | 1     | 32      | 18    | 180         |
| 2019-03-14 | 04:57 | 0.81 | 39.153 | 20.763 | 3.5 | 39.2  | 3.1   | 32      | 18    | 177         |
| 2019-03-14 | 16:01 | 0.04 | 39.198 | 20.776 | 3   | 49.1  | 0.6   | 10      | 11    | 184         |
| 2019-03-15 | 02:30 | 0.29 | 39.791 | 20.239 | 2.2 | 6.4   | 1.9   | 20      | 16    | 119         |
| 2019-03-15 | 02:30 | 0.29 | 39.791 | 20.239 | 2.2 | 6.4   | 1.9   | 20      | 16    | 119         |
| 2019-03-15 | 04:17 | 0.06 | 39.667 | 20.398 | 1.3 | 24.1  | 13.6  | 20      | 6     | 185         |
| 2019-03-16 | 10:34 | 0.09 | 39.698 | 20.327 | 2.3 | 17.3  | 0.7   | 12      | 9     | 127         |
| 2019-03-16 | 14:12 | 0.06 | 39.207 | 20.606 | 2.5 | 33.4  | 0.5   | 11      | 8     | 174         |
| 2019-03-17 | 06:08 | 0.19 | 40.846 | 19.634 | 2.1 | 20.1  | 20.4  | 15      | 17    | 173         |
| 2019-03-17 | 18:00 | 0.33 | 40.068 | 20.029 | 2.2 | 16.6  | 2.5   | 9       | 9     | 218         |
| 2019-03-17 | 18:00 | 0.33 | 40.068 | 20.029 | 2.2 | 16.6  | 2.5   | 9       | 9     | 218         |
| 2019-03-18 | 00:38 | 0.26 | 40.823 | 19.609 | 2.3 | 36.3  | 0.8   | 14      | 19    | 139         |
| 2019-03-18 | 13:50 | 0.28 | 41.050 | 20.449 | 3.2 | 11.6  | 1.2   | 10      | 16    | 122         |
| 2019-03-18 | 22:17 | 0.22 | 41.299 | 20.037 | 2.2 | 4.5   | 2.2   | 10      | 9     | 132         |

|                  |      |        |        |     |      |      |    |    |     |
|------------------|------|--------|--------|-----|------|------|----|----|-----|
| 2019-03-19 17:43 | 0.04 | 42.492 | 19.984 | 2.4 | 4.1  | 0.8  | 13 | 9  | 318 |
| 2019-03-20 10:13 | 0.18 | 41.235 | 20.571 | 2   | 7.2  | 15.1 | 20 | 11 | 138 |
| 2019-03-20 19:31 | 0.09 | 41.237 | 19.984 | 1.3 | 11.8 | 0.8  | 31 | 6  | 284 |
| 2019-03-20 23:10 | 0.29 | 40.211 | 19.553 | 1.9 | 8.3  | 1.7  | 31 | 14 | 114 |
| 2019-03-21 17:03 | 0.02 | 41.676 | 19.970 | 2.7 | 22.5 | 1    | 10 | 15 | 103 |
| 2019-03-23 07:56 | 0.19 | 39.230 | 20.945 | 3.7 | 29.9 | 1.4  | 11 | 18 | 161 |
| 2019-03-23 12:41 | 0.3  | 41.546 | 19.616 | 1.7 | 25   | 3.6  | 32 | 15 | 182 |
| 2019-03-23 23:35 | 0.16 | 42.090 | 19.878 | 2.6 | 5    | 0.4  | 32 | 20 | 107 |
| 2019-03-24 03:39 | 0.05 | 41.796 | 20.036 | 1.3 | 19.6 | 0.5  | 32 | 9  | 167 |
| 2019-03-24 04:01 | 0.09 | 41.814 | 20.061 | 1.4 | 18.6 | 1    | 32 | 8  | 171 |
| 2019-03-24 13:53 | 0.26 | 40.884 | 19.721 | 2.5 | 17   | 1    | 22 | 21 | 134 |
| 2019-03-24 15:19 | 0.05 | 42.515 | 19.193 | 1.5 | 14.3 | 2.7  | 14 | 11 | 89  |
| 2019-03-24 19:28 | 0.09 | 42.219 | 19.451 | 2.1 | 19.7 | 0.7  | 17 | 14 | 101 |
| 2019-03-24 19:32 | 0.24 | 40.597 | 19.727 | 2.1 | 3.0  | 1.1  | 8  | 12 | 111 |
| 2019-03-25 16:37 | 0.15 | 42.740 | 18.543 | 3.3 | 32.3 | 1    | 25 | 16 | 114 |
| 2019-03-25 20:29 | 0.02 | 39.593 | 20.583 | 2.8 | 27   | 0.5  | 11 | 15 | 148 |
| 2019-03-25 21:45 | 0.04 | 42.512 | 20.085 | 1.8 | 5.5  | 0.6  | 17 | 9  | 206 |
| 2019-03-26 02:49 | 0.12 | 39.603 | 20.648 | 2.6 | 0.6  | 1.8  | 6  | 7  | 154 |
| 2019-03-26 10:29 | 0.23 | 41.712 | 20.426 | 2.9 | 15.4 | 0.7  | 32 | 16 | 159 |
| 2019-03-27 23:17 | 0.48 | 40.394 | 19.828 | 2.1 | 22.2 | 2.7  | 12 | 16 | 89  |
| 2019-03-30 12:07 | 0.2  | 40.084 | 19.867 | 3.2 | 7.5  | 0.9  | 12 | 21 | 117 |
| 2019-03-30 13:13 | 0.06 | 40.127 | 19.854 | 2.2 | 1    | 0.9  | 32 | 11 | 152 |
| 2019-03-30 16:47 | 0.14 | 40.091 | 19.848 | 1.8 | 13.5 | 1.2  | 32 | 10 | 149 |
| 2019-03-31 07:51 | 0.2  | 41.547 | 19.399 | 3.2 | 13.9 | 1    | 31 | 26 | 118 |
| 2019-03-31 07:59 | 0.2  | 41.504 | 19.366 | 2   | 6.2  | 2.5  | 32 | 16 | 131 |
| 2019-03-31 08:03 | 0.28 | 41.526 | 19.398 | 1.7 | 8.6  | 2.5  | 32 | 18 | 117 |
| 2019-03-31 17:59 | 0.26 | 41.541 | 19.400 | 3.1 | 15.5 | 1.3  | 32 | 27 | 117 |
| 2019-03-31 19:09 | 0.3  | 41.527 | 19.397 | 3.2 | 14.5 | 1.6  | 32 | 31 | 75  |
| 2019-03-31 19:43 | 0.21 | 41.542 | 19.412 | 2.5 | 11.7 | 1.1  | 32 | 23 | 76  |
| 2019-03-31 20:04 | 0.26 | 41.574 | 19.446 | 3.1 | 12.4 | 1.3  | 32 | 22 | 174 |
| 2019-03-31 20:20 | 0.15 | 41.529 | 19.416 | 2.2 | 3.7  | 2.6  | 32 | 15 | 117 |
| 2019-03-31 20:38 | 0.36 | 41.489 | 19.359 | 3.6 | 25.3 | 1.6  | 32 | 32 | 66  |
| 2019-03-31 22:01 | 0.43 | 41.568 | 19.418 | 2   | 14.5 | 3.7  | 17 | 19 | 129 |
| 2019-03-31 22:14 | 0.36 | 41.493 | 19.357 | 3.8 | 25.5 | 1.9  | 32 | 24 | 55  |
| 2019-03-31 22:17 | 0.3  | 41.555 | 19.496 | 2.3 | 26.6 | 2.3  | 16 | 14 | 121 |
| 2019-03-31 22:19 | 0.68 | 41.502 | 19.372 | 2.4 | 22   | 2.5  | 28 | 36 | 65  |



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

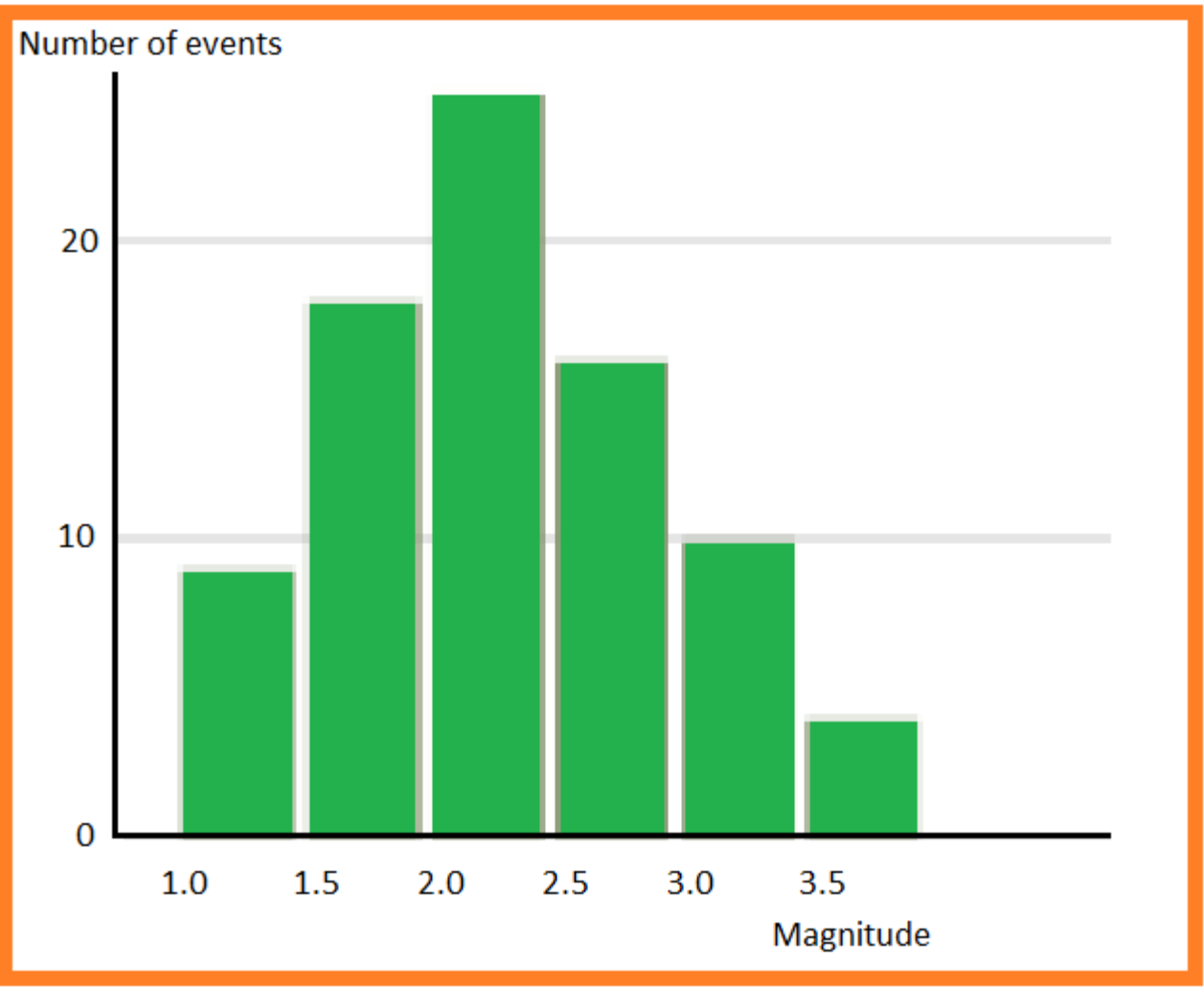
## 1. Statistika e ngjarjeve (Events Statistics)

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

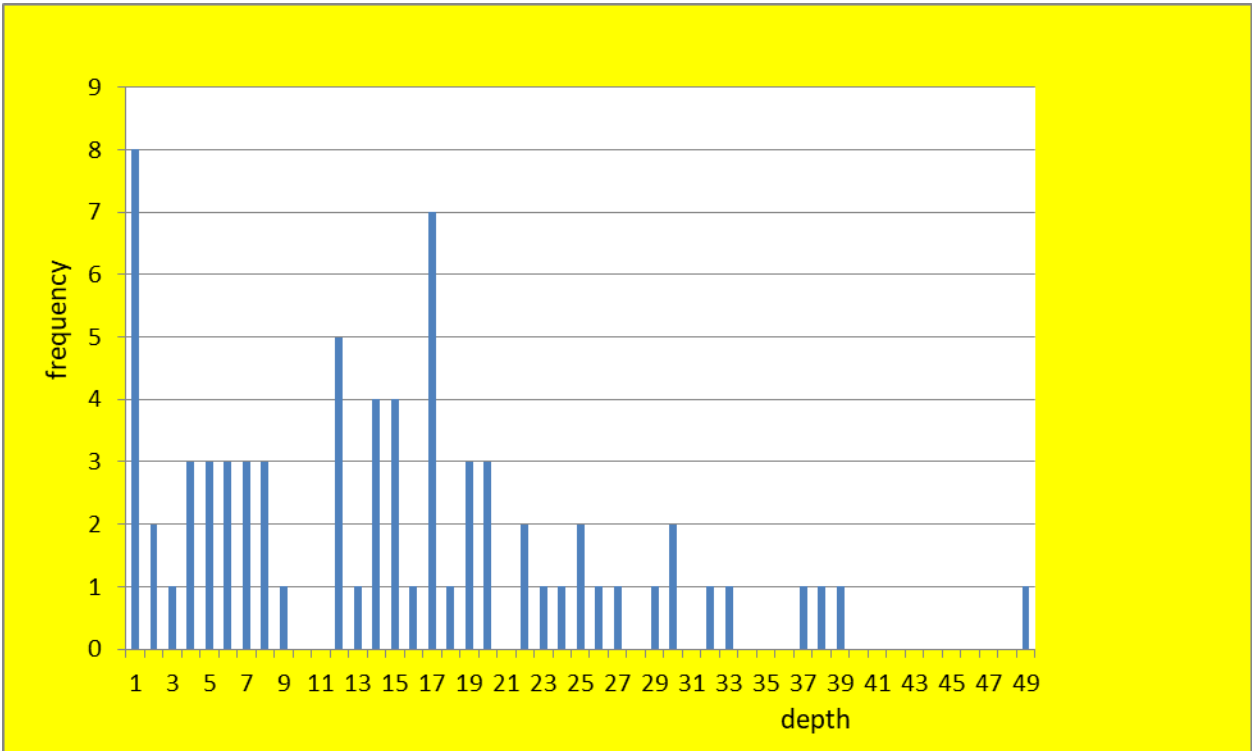
| Të dhënat përfaqësuese   | Representative Parameters                  | Vlerat (observed values) |
|--|--|--------------------------|
| Numuri i përgjithshëm i ngjarjeve të regjistruara<br>(kuadrati 39 <sup>o</sup> -43 <sup>o</sup> V; 18.5 <sup>o</sup> -21.5 <sup>o</sup> L) | [total recorded number of seismic events]  | 81                       |
| Numuri i ngjarjeve sismike brenda kufirit shtetëror  | [earthquakes occurred within state border] | 64                       |
| Thellësia mesatare e vrojtuar (km)   | [mean observed depth]                      | 16                       |
| Thellësia maksimale e vrojtuar (km)  | [maximum observed depth]                   | 49                       |
| Magnituda lokale minimale e vrojtuar ( $M_{Ld}$ )  | [minimum observed local magnitude]         | 1.2                      |
| Magnituda lokale maksimale e vrojtuar ( $M_{Ld}$ )   | [maximum observed local magnitude]         | 3.8                      |
| Intensiteti maksimal i vrojtuar (MSK-64)   | [maximum observed intensity]               | IV-V                     |

## 2. Karakteristikat kryesore të sizmitetit për muajin

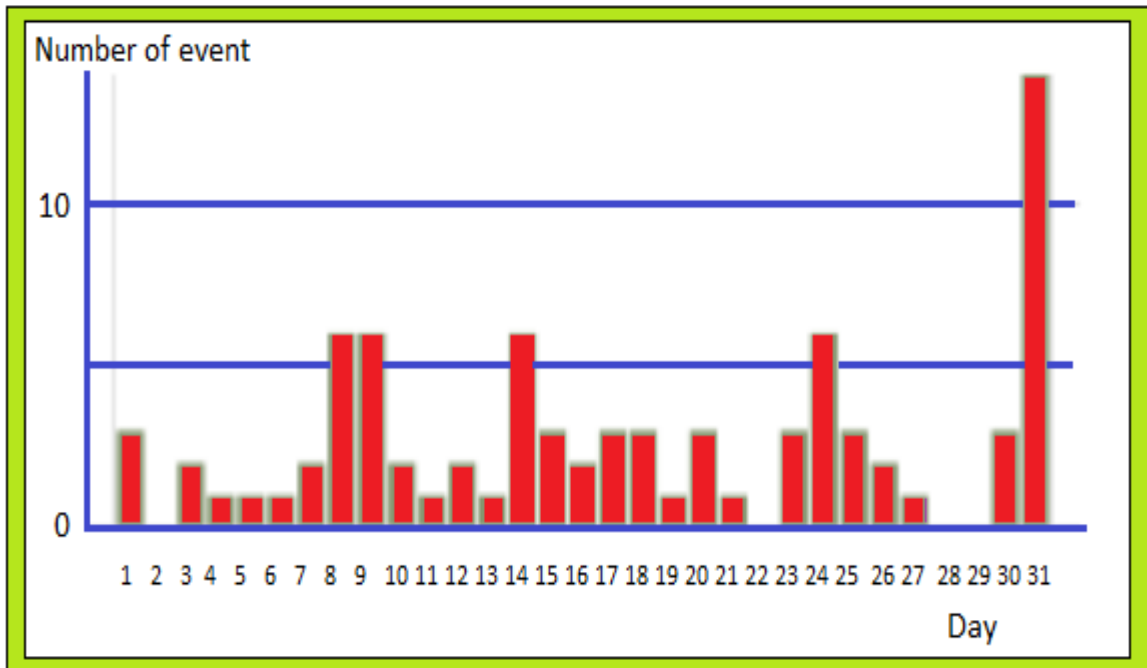
Sizimiteti i muajit Mars 2019 është percaktuar si aktivitet sizmik i ulet, me dallueshem kemi regjistrimin e ngjarjes së dates 31 Mars 2019, ora 22:14(UTM), me  $M_L = 3.8$  (Rihter) prane Bishtkamez ne VP te qytetit te Durrësit. Ne kete zone me daten 31 Mars kemi nje grumbull termetesh nga te cilat jane lokalizuar 14 ngjarje me magnituda qe varjon nga 1.7 - 3.8 Rihter. Thellesia mesatare eshte 16 km dhe thellesia max 26 km. Epiqendrat shperndahen kryesisht ne det me shtrirje JP-VL.



Grafiku i numurit te ngjarjeve per nivelin e magnitudave



Grafiku i frekuences se temeteve ne lidhje me thellesin.



Grafiku ishperndarjes se numurit te ngjarjeve per dite

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