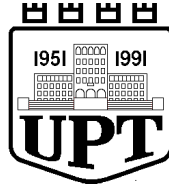


## BULETINI I TËRMETEVE TË RRJETIT SIZMOLOGJIK SHQIPTAR

**TETOR 2012**

PARAMETRIC DATA  
AND ALBANIAN'S EARTHQUAKE ANALYSIS  
OCTOBER 2012



**UNIVERSITETI POLITEKNIK I TIRANËS**  
**INSTITUTI I GJEOSHKENCAVE, ENERGJISË, UJIT DHE MJEDISIT**  
*Departamenti i Sizmologjisë*

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**BULETINI MUJOR I RRJETIT SIZMOLOGJIK**  
**TË SHQIPERISË**

**TETOR 2012**

***MONTHLY BULLETIN OF THE ALBANIAN***  
***SEISMOLOGICAL NETWORK***

***OCTOBER 2012***

**Perliluar nga:**  
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**Tiranë, 2012**

**INFORMACION I PERGJITSEM****Prezantim**

T Buletini i Rrjetit Sizmologjik Shqiptar është një publikim periodik i parametrave valore, parametrave vatrore dhe madhësisë së tërmeteve brenda territorit të Shqipërisë dhe rrotull saj, përpiluar nga Departamenti i Sizmologjisë i Institutit të Gjeoshkencave, Energjisë, Ujit dhe Mjedisit pranë Universitetit Politeknik të Tiranës.

Parametrat e vlerësuar i referohen kuadrantit gjeografik të kufizuar nga koordinatat:  $39.0^{\circ}$ - $43.0^{\circ}$  V dhe  $18.5^{\circ}$ - $21.5^{\circ}$  L.

Buletini përmban pjesën shpjeguese të përbërë nga informacioni i përgjithshëm, simbolet e përdorura për parametrat e vlerësuar, të dhënat fazore valore për secilin nga tërmetet e regjistruar dhe përpunuar, katalogu mujor i tërmeteve, informacionin makrosimik, statistikor, mekanizmin vatrore dhe hartën e shpërndarjes së epiqendrave. Në të përfshihen disa kategori tërmetesh, bazuar në informacionin e regjistruar dhe përpunuar për secilin prej tyre. Ato janë: **1-** tërmetet e lokalizuar; **2-** tërmetet e regjistruar nga më shumë se një stacion lokal, por jo të lokalizuar dhe **3-** tërmete të regjistruar të paktën nga një stacion lokal, por me më shumë se një fazë valore.

Të dhënat parametrike, si më sipër, vlerësohen në mënyrë të pandërprerë nëpërmjet monitorimit sizmologjik dhe bazohen në analizën sasiore të regjistrimit instrumental valor. Llogaritja e vlerave të tyre është produkt i aplikimit të metodave analitike të njohura, në mënyrë

**GENERAL INFORMATION****Introduction**

The Albanian Seismologic Network's bulletin is a periodic publication of earthquake wave data, source parameters and their magnitudes, for every seismic event occurring inside the Albanian territory and its surroundings. This publication is compiled in the Department of Seismology of the Institute of Geosciences, Energy, Water and Environment under the Polytechnic University of Tirana. All the estimated values, of the parameters, refer to the geographic quadrant confined by the coordinates:  $39^{\circ}$ - $43^{\circ}$ N and  $18.5^{\circ}$ - $21.5^{\circ}$  E. Bulletin comprises a description section, containing the most general information, the section of the used symbols corresponding to all the evaluated parameters, phases data for each of the recorded and located earthquakes. It contains also the event catalogue, the macroseismic information, the statistical information, the focal mechanism solutions and an aerial epicenter distribution map.

Different earthquake information categories are included, depending on their recorded and elaborated information, for each of them. They are: **1-** localized earthquakes; **2-** earthquakes recorded from more than one local station, but not located and **3-** earthquakes recorded at least by one station, but having more than one seismic phase.

The parametric data, as above, are permanently evaluated throughout the seismological monitoring routine, based upon quantitative analyze of instrumental waveform recordings. Their computed values are the direct application

iterative dhe interaktive, të aplikuara në programe llogarites të çertifikuar dhe të njohur globalisht. Kështu, për përcaktimin e të dhënave kohore valore hyrëse përdoret programi Atlas, ndërsa lokalizimi i tërmeteve kryhet nëpërmjet programit Hypoinverse.

Në këtë analizë merret në konsideratë modeli lokal për strukturën e shpejtësisë së përhapjes së valëve sizmike (Ormëni 2007) (kryesisht atyre volumore, primare dhe sekondare, P dhe S). Vlerësimi i magnitudës realizohet duke aplikuar modele të njohur parametrik si ai Richter & Gutenberg (1956) dhe Eaton (1992).

Analiza e të dhënave të publikuara realizohet nga grupi i punës i përbere nga punonjësit kërkues shkencor Rrapo Ormeni dhe Edmond Dushi si edhe ata ndihmës shkencor Ardian Minarolli dhe Ervin Kasa.

Informacioni instrumental valor përftohet nëpërmjet një rrjeti stacionesh lokal, ku përfshihen: stacioni sizmologjik qëndror i Tiranës (TIR), B. Currit (BCI), Pukës (PUK), Peshkopisë (PHP), Vlorës (VLO), Tepelenës (TPE), Sarandës (SRN) dhe Korçës (KBN), të cilët janë të paisur me sensor me bandë të gjerë regjistrimi. Gjithashtu, rrjeti lokal përmban edhe një numër stacionesh me regjistrim me period të shkurtër, ku përfshihen: Shkodra (SDA), Laçi (LACI) dhe Leskoviku (LSK).

Në analizë përfshihen edhe të dhënat valore të regjistruara e përcaktuara nga një numër stacionesh sizmologjik të rajonit dhe Mesdheut, të cilët i përkasin rrjetit sizmologjik të Universitetit "Aristotel" të Selanikut (AUTH), rrjetit sizmologjik Italian të menaxhuar nga Instituti Kombëtar i Gjeofizikës dhe Vullkanologjisë (INGV), si edhe stacione të rrjetit sizmologjik të Observatorit Sizmologjik të Malit të Zi (MSO).

result of known analytical methods, iteratively and interactively, within certified and globally known computational programs.

Hence, for the onset time data determination, the Atlas program is used, whereas the earthquake location is done by mean of Hypoinverse program. For this analyze, a local velocity model accounting for the local and accurate seismic wave paths, is used (Ormëni, 2007). Mainly body seismic waves are concerned, primary P-phases and secondary S-phases, within computation and location process. Magnitude determination is achieved through known parametric models as the one of Richter (1956) and Eaton (1992).

Analyzes of the published data is undertaken from a dedicated working group, comprising by scientific staff Rrapo Ormeni & Edmond Dushi and technical staff Ardian Minarolli & Ervin Kasa.

Instrumental information is achieved through a network of local seismological stations, as listed: Tirana central station (TIR), B. Curri (BCI), Puka (PUK), Peshkopia (PHP), Vlora (VLO), Tepelena (TPE), Saranda (SRN) and Korça (KBN), which are equipped with broad band seismic sensors.

Also, the local network enumerates some short period recording stations, situated at Shkodra (SDA), Laçi (LACI) and Leskoviku (LSK).

In this analyze, data from a number of regional stations, are included as well. They are distributed along the Mediterranean coast and belong to the AUTH network of the "Aristotle" university of Thessaloniki, Italian National Seismological Network managed from National Institute of Geophysics and Volcanoes (INGV) as well as seismological stations of the Seismological Observatory of Montenegro (MSO).

## STACIONET E RRJETIT SIZMOLOGJIK ( SEISMOLOGICAL NETWORK STATION)

Kodi Stacionit (Stn. Code)	Regjistrimi (po/jo) (Registered)	Koordinatat (Coordinates)		Lartesia (Elevation)	Tipi Stacionit (Stn. Type)	Sizometri (Sensor Type)	Sistemi regjistrimit (Recording system)	Sistemi i komunikimit (Communication system)	Perioda natyrore e sensorit (Natural Sensor period)
		V-J (N-S)	L-P (E-W)						
TIR	Po (y)	41.3477	19.8650	198	3C-VBB	STS-2	Quantera	VSAT	120 s
BCI	Po	42.3666	20.0675	500	3C-BB	CMG-40T	Trident	VSAT	40 s
KKS	Po	42.0756	20.4113	300	3C-BB	SM-4 (B)	GBD-x16	Dial Up	0.2 s
PHP	Po	41.6847	20.4408	670	3C-BB	Trillium-40	Trident	VSAT	40 s
PUK	Po	42.0426	19.8926	900	3C-BB	Trillium-40	Trident	VSAT	40 s
SDA	Po	42.0519	19.4986	80	3C-SP	SM-4 (B)	GBD-x16	Dial Up	0.2 s
LACI	Po	41.6363	19.7094	40	3C-SP	SM-4 (B)	GBD-x16	Dial Up	0.2 s
KBN	Po	40.6236	20.7874	800	3C-BB	Trillium-40	Trident	VSAT	40 s
LSK	Po	40.1500	20.6000	920	3C-SP	SM-4 (B)	GBD-x16	Dial Up	0.2 s
TPE	Po	40.2952	20.0109	240	3C-BB	CMG-40T	Trident	VSAT	40 s
VLO	Po	40.4686	19.4955	80	3C-BB	Trillium-40	Trident	VSAT	40 s
SRN	Po	39.8800	20.0005	20	3C-BB	Trillium-40	Trident	VSAT	40 s

SIMBOLIKA E PERDORUR NE PERMBAJTJEN E BULETINIT SIZMOLOGJIK  
SYMBOLIC USED IN SEISMOLOGICAL BULLETIN CONTAIN

Simboli (Symbol)	Parametri korrespondues (Corresponding parameter)	Pershkrimi (Description)
<i>Y</i>	Viti (year)	Viti ndodhjes se ngjarjes (year of occurrence)
<i>M</i>	Muaji (month)	Muaji i ndodhjes së ngjarjes (month of occurrence)
<i>D</i>	Dita (day)	Data e ndodhjes së ngjarjes (date of occurrence)
<i>H</i>	Ora (hour)	Ora ne origjine (UTC) (origine time universal)
<i>M</i>	Minuta (minute)	Minuta (origine time minute)
<i>Sec</i>	Sekonda (second)	Sekonda (origine time second)
<i>Lat</i>	Gjerësia gjeografike (latitude)	Gjeresia gjeografike e epiqendrës Veri-Jug(°) Geographical latitude N-S direction
<i>Lon</i>	Gjatësia gjeografike (longitude)	Gjatesia gjeografike e epiqendrës Lindje-Perendim(°) Geographical longitude E-W direction
<i>Dep</i>	Thellësia (depth)	Thellësia vatrore (focal depth)-km
<i>Hor. err</i>	Gabimi horizontal (horizontal error)	Gabimi ibërë në vlerësimin e epiqendres (km) Estimation error of epicentre
<i>Ver. err</i>	Gabimi vertikal (vertical error)	Gabimi i bërë në vlerësimin e thellësisë (km) Depth estimation error
<i>Gap</i>	Mosmbulimi me stacione minitorimi (azimutal gap)	Zona e sferës fokale (imagjinare), e pa mbuluar me stacione regjistruar Azimutal station gap
<i>Rms</i>	Gabimi mesatar kuadratik (Root mean square)	Gabimi i pergjithshem (Total estimation error-sec)
<i>Mag</i>	Magnituda (magnitude)	Madhesia e termetit sipas shkalles lokale te kalibruar (local calibrated measure of the earthquake size)
<i>Net</i>	Emërtimi i rrjetit sizmologjik (network code)	Kodi nderkombetar i identifikimit te rrjetit ne FDSN (Federation of Digital seismologies network) eshte AC

		(International code of Network identification on FDSN is AC)
<b>Nr</b>	Numuri i stacioneve (station's number)	Nr. Stacioneve te perdorur ne lokalizim (No. Of used stations)
<b>STAT</b>	Kodi i stacionit (station code)	Kodi nderkombetar qe perdoret per te identifikuar stacionin perkates sizmologjik (tre karaktere) (international stn code)
<b>SP</b>	Komponentja e regjistrimit (recording component)	Kodimi i komponenteve te regjistrimit ne perputhje e orientimin gjeografik 3D (Z, N ose E) Component code according to recording direction
<b>IPHASW</b>	Faza valore sizmike (seismic wave phase)	tipi i valës P ( $P_g / P_n$ ) ose S ( $S_g / S_n$ ) (wave phase type)
<b>D</b>	Polariteti i hyrjes së parë në komponenten vertikale (first vertical onset polarity)	Polariteti i vales renese ne statcion, ne komponenten Z (first onset polarity on Z)
<b>HRMM SECON</b>	Ora, minuta dhe sekonda (time onsets for each phase)	Te dhenat kohore per mbritjen e seciles faze ne regjistrim Time data for each phases on recording
<b>AZIMU</b>	Kendi azimutal (station-source azimuth angle)	Azimuti stacion- vater termeti Station-focus azimuthal angle
<b>RES</b>	Diferenca kohore (time residual)	Ndryshimi ndërmjet kohës teorike të llogaritur nga modeli dhe kohës faktike, nga regjistrimi Time residuals between calculated and observed times
<b>DIS</b>	Largesia epiqendrore (epicentral distance)	Largesia horizontale epiqender-stacion Distance from epicenter to the station
<b>DUR</b>	Zgjatshmeria e sinjalit sizmik (signal time duration)	Shpreh zgjatshmerinë e plotë të sinjalit sizmik ne sizmogram Total Signal Duration

## INFORMACIONI PARAMETRIK FAZOR DHE LOKALIZIMI (PARAMETRIC PHASES INFORMATION AND LOCATION)

### TËRMETE TË AFËRTA (NEAR EARTHQUAKE)

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	1	1758	01.49	42.16	21.55	1	ASN	4	0.1	3.0	MAQEDONI
					hor.err=4km						ver.err=5km	
STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md		
PHP	SZ	IPG		1758	20.39	241	0.1	106	38	3.0		
PHP	SE	ISG		1758	35.15	241	-0.1	106				
BCI	SZ	IPG		1758	24.13	282	0.1	124				
BCI	SE	ISG		1758	41.93	282	0.2	124				
PUK	SZ	IPN		1758	25.73	266	-0.2	137	48	3.2		
PUK	SE	ISN		1758	44.89	266	0.3	137				

FNA	SZ	IPN	1758	29.18	186	0.2	154
FNA	SE	ISN	1758	50.24	186	0.2	154

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	2	2224	48.68	41.90	19.41	7	ASN	4	0.1	2.7	VELIPOJË
				GAP=258	hor.err=1.30km							ver.err=1km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PUK	SZ	IPG		2224	56.74	69	-0.1	42	25	2.6
PUK	SE	ISG		2225	03.88	69	0.1	42		
TIR	SZ	IPG		2225	01.71	148	0.1	73	22	2.5
TIR	SE	ISG		2225	11.78	148	0.2	73		
BCI	SZ	IPG		2225	02.38	46	0.1	75	27	2.7
BCI	SE	ISG		2225	12.21	46	0.0	75		
PHP	SZ	IPG		2225	04.40	105	0.1	89	32	2.9
PHP	SE	ISG		2225	16.68	105	-0.1	89		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	3	0404	56.38	42.13	20.26	7	ASN	3	0.1	2.5	KUKËS
				GAP=195	hor.err=0.63km							ver.err=12km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PUK	SZ	IPG		0405	02.00	328	0.1	29	22	2.5
PUK	SE	ISG		0405	06.39	328	0.0	29		
BCI	SZ	IPG		0405	02.67	250	-0.1	32	24	2.4
BCI	SE	ISG		0405	07.21	250	-0.1	32		
PHP	SZ	IPG		0405	06.11	163	-0.1	53	22	2.5
PHP	SE	ISG		0405	13.53	163	0.0	53		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	3	0608	50.46	41.55	20.14	7	ASN	4	0.1	2.3	KLOS-Burrel
				GAP=171	hor.err=0.81km							ver.err=11km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0608	55.69	59	0.1	29	18	2.2
PHP	SE	ISG		0609	00.24	59	0.0	29		
TIR	SZ	IPG		0608	56.76	226	-0.1	32	18	2.2
TIR	SE	ISG		0609	00.94	226	-0.1	32		
PUK	SZ	IPG		0609	00.88	340	-0.1	58	25	2.6
PUK	SE	ISG		0609	09.11	340	0.1	58		
BCI	SZ	IPG		0609	06.16	357	0.0	96		
BCI	SE	ISG		0609	23.12	357	-0.1	96		

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Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	3	1845	32.21	40.10	19.81	9	ASN	10	0.1	3.8	HIMARË
					hor.err=2.2km				ver.err=0.59km			

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
SRN	SZ	IPG		1845	38.71	147	0.1	29	115	3.9
SRN	SE	ISG		1845	43.12	147	0.3	29		
VLO	SZ	IPG		1845	43.25	327	-0.2	48	94	3.8
VLO	SE	ISG		1845	48.32	327	-0.1	48		
IGT	SZ	IPG		1845	48.08	144	-0.2	77		
IGT	SE	ISG		1845	59.16	144	0.1	77		
KBN	SZ	IPG		1845	48.28	54	0.2	100	81	3.7
KBN	SE	ISG		1845	59.69	54	-0.1	100		
SCTE	SZ	IPG		1845	57.01	269	0.2	114		
SCTE	SE	ISG		1846	14.36	269	0.2	114		
TIR	SZ	IPN		1845	57.15	1	-0.1	138		
TIR	SE	ISN		1846	15.15	1	-0.2	138		
FNA	SZ	IPN		1845	00.04	60	0.1	153		
FNA	SE	ISN		1846	20.01	60	0.1	153		
PHP	SZ	IPN		1845	02.96	68	0.2	183		
PHP	SE	ISN		1846	26.03	68	0.2	183		
PUK	SZ	IPN		1845	06.08	55	-0.4	215		
PUK	SE	ISN		1846	28.36	55	0.1	215		
BCI	SZ	IPN		1845	11.37	4	0.3	252		
BCI	SE	ISN		1846	41.24	4	-0.2	252		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	4	0153	25.41	41.36	19.47	7	ASN	4	0.1	2.7	VRINAS-DURRËS
					hor.err=12km				ver.err=1km			

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		0153	32.15	96	-0.1	35		
TIR	SE	ISG		0153	37.25	96	-0.2	35		
PUK	SZ	IPG		0153	40.12	26	-0.1	82		
PUK	SE	ISG		0153	51.59	26	0.1	82		
PHP	SZ	IPG		0153	41.56	67	0.2	89		
PHP	SE	ISG		0153	53.69	67	0.2	89		
BCI	SZ	IPG		0153	46.53	24	0.3	120		
BCI	SE	ISG		0154	02.70	24	-0.1	120		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	4	0155	37.16	41.37	19.47	25	ASN	6	0.3	3.1	VRINAS-DURRËS
					hor.err=12km				ver.err=1km			



STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		0155	43.25	94	0.1	32	30	3
TIR	SE	ISG		0155	48.93	94	0.1	32		
PUK	SZ	IPG		0155	51.12	24	0.2	82	39	3.3
PUK	SE	ISG		0156	03.12	24	0.1	82		
PHP	SZ	IPG		0155	51.81	66	-0.1	88		
PHP	SE	ISG		0156	04.32	66	0.2	88		
VLO	SZ	IPG		0155	54.22	179	-0.3	100		
VLO	SE	ISG		0156	07.08	179	-0.2	100		
BCI	SZ	IPG		0155	57.03	23	0.3	120		
BCI	SE	ISG		0156	13.12	23	0.1	120		
FNA	SZ	IPN		0156	05.12	111	0.2	173		
FNA	SE	ISN		0156	25.36	111	-0.2	173		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	3	2341	33.12	41.14	20.18	7	ASN	5	0.3	2.5	ELBASAN
GAP=199					hor.err=10km		ver.err=0.59km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		2341	40.01	310	0.1	34	16	2.2
TIR	SE	ISG		2341	44.92	310	-0.3	34		
PHP	SZ	IPG		2341	44.93	19	0.4	63	25	2.7
PHP	SE	ISG		2341	53.72	19	0.3	63		
PUK	SZ	IPG		2341	51.16	347	0.4	102	25	2.7
PUK	SE	ISG		2342	05.23	347	0.3	102		
FNA	SZ	IPG		2341	52.73	111	0.2	109		
FNA	SE	ISG		2342	07.23	111	-0.3	109		
BCI	SZ	IPN		2341	57.69	356	-0.2	135		
BCI	SE	ISN		2342	15.12	356	-0.3	135		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	3	2346	02.05	41.87	19.51	29	ASN	3	0.2	2.6	SHENGJIN
GAP=294					hor.err=1km		ver.err=2km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PUK	SZ	IPG		2246	11.00	59	0.2	36	23	2.6
PUK	SE	ISG		2246	17.60	59	0.1	36		
BCI	SZ	IPG		2246	16.60	39	-0.3	71	22	2.6
BCI	SE	ISG		2246	26.50	39	0.1	71		
PHP	SZ	IPG		2246	18.10	105	0.2	79		
PHP	SE	ISG		2246	28.70	105	-0.3	79		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2012 10 4 0033 19.60 41.76 20.37 14 ASN 3 0.1 2.4 PESHKOPI  
GAP=167 hor.err=2km ver.err=4km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0033	22.80	147	0.2	12	17	2.3
PHP	SE	ISG		0033	25.90	147	0.3	12		
PUK	SZ	IPG		0033	29.10	308	0.1	48	19	2.4
PUK	SE	ISG		0033	35.40	308	0.2	48		
BCI	SZ	IPG		0033	30.90	340	-0.3	69		
BCI	SE	ISG		0033	41.80	340	0.1	69		

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter  
2012 10 4 2219 02.11 40.97 19.91 8 ASN 5 0.2 2.8 BELSH  
GAP=179 hor.err=1km ver.err=3km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		2219	09.99	355	0.1	41	21	2.5
TIR	SE	ISG		2219	15.65	355	-0.2	41		
PHP	SZ	IPG		2219	18.11	29	0.3	90	30	2.8
PHP	SE	ISG		2219	30.30	29	0.2	90		
PUK	SZ	IPG		2219	23.02	0	0.1	118	28	2.8
PUK	SE	ISG		2219	38.01	0	0.2	118		
SRN	SZ	IPN		2219	23.68	176	0.2	121	38	3.1
SRN	SE	ISN		2219	41.68	176	-0.2	121		
BCI	SZ	IPN		2219	28.31	4	0.3	155		
BCI	SE	ISN		2219	49.66	4	-0.6	155		

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter  
2012 10 5 1417 27.99 39.87 19.99 14 ASN 2 0.2 1.5 SARANDA  
GAP=359 hor.err=1km ver.err=6km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
SRN	SZ	IPG		1417	31.07	162	0.3	6	7	1.5
SRN	SE	ISG		1417	32.94	162	0.2	6		
IGT	SZ	IPG		1417	37.81	143	0.2	54		
IGT	SE	ISG		1417	45.64	143	0.4	54		

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter  
2012 10 5 1429 32.59 SARANDA  
GAP= hor.err=km ver.err=km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
SRN	SZ	IPG		1429	32.59					

SRN SE ISG 1429 34.50

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

2012 10 5 2114 16.13 SARANDE  
GAP= hor.err=km ver.err=kmSTAT SP IPHASW D HRMM SECON AZIMU RES DIS DUR Md  
SRN SZ IPG 2114 16.13  
SRN SE ISG 2114 18.02

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

2012 10 5 1348 24.79 TIRANE  
GAP= hor.err=km ver.err=kmSTAT SP IPHASW D HRMM SECON AZIMU RES DIS DUR Md  
TIR SZ IPG 1348 24.78  
TIR SE ISG 1348 28.47

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

2012 10 6 0001 50.22 41.09 19.28 7 ASN 2 0.2 2.0 DETI ADRIATIK  
GAP=325 hor.err=1km ver.err=10kmSTAT SP IPHASW D HRMM SECON AZIMU RES DIS DUR Md  
TIR SZ IPG 0002 00.94 56 0.2 55 15 2.0  
TIR SE ISG 0002 09.80 56 0.3 55  
PUK SZ IPG 0002 10.93 25 0.4 110  
PUK SE ISG 0002 26.49 25 0.6 110

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

2012 10 6 1347 46.46 TIRANË  
GAP= hor.err=km ver.err=kmSTAT SP IPHASW D HRMM SECON AZIMU RES DIS DUR Md  
TIR SZ IPG 1347 46.46  
TIR SE ISG 1347 52.48

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

2012 10 6 1352 44.26 TIRANË  
GAP= hor.err=km ver.err=km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		1352	44.26					
TIR	SE	ISG		1347	48.33					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	6	2037	29.58								DETI EGJE
GAP=					hor.err=km			ver.err=km				

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
KBN	SZ	IPN		2038	07.06					
PHP	SZ	IPN		2038	10.94					
SRN	SZ	IPN		2038	13.66					
TIR	SZ	IPN		2038	17.86					
PUK	SZ	IPN		2038	18.36					
BCI	SZ	IPN		2038	18.54					
VLO	SZ	IPN		2038	19.95					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	6	2303	25.52	41.83	21.00	7	ASN	3	0.2	2.2	GOSTIVAR
GAP=216					hor.err=3km			ver.err=1km				

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		2303	34.88	252	-0.2	48	12	2.0
PHP	SE	ISG		2303	41.26	252	0.3	48		
PUK	SZ	IPG		2303	42.00	285	0.1	94	19	2.4
PUK	SE	ISG		2303	55.60	285	0.3	94		
BCI	SZ	IPG		2303	42.92	308	-0.4	97		
BCI	SE	ISG		2303	57.70	308	0.2	97		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	7	0559	25.26								PUK
GAP=					hor.er=3km			ver.err=km				

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PUK	SZ	IPG		0559	25.26					
PUK	SE	ISG		0559	29.12					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	7	1352	44.26								TIRANË
GAP=					hor.er=3km			ver.err=km				

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
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TIR SZ IPG 1352 44.26  
TIR SE ISG 1352 48.34

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter  
2012 10 7 1433 39.48 40.91 19.70 7 ASN 7 0.3 2.3 LUSHNJE  
GAP=331 hor.err=1km ver.err=10km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		1433	48.30	15	0.2	51	17	2.3
TIR	SE	ISG		1433	55.70	15	0.3	51		
PHP	SZ	IPG		1433	58.49	35	-0.2	106	18	2.3
PHP	SE	ISG		1434	12.35	35	0.1	106		
PUK	SZ	IPN		1434	01.87	6	0.2	127		
PUK	SE	ISN		1434	19.14	6	0.1	127		

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter  
0 7 1906 14.17 PESHKOPI  
GAP= hor.er=km ver.err=km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		1906	14.17					
PHP	SE	ISG		1906	17.32					

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter  
2012 10 7 1916 23.95 41.55 20.62 2 ASN 2 0.3 1.4 DIBËR  
GAP=184 hor.err=13km ver.err=2km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		1916	28.28	313	0.2	20	6	1.4
PHP	SE	ISG		1916	31.66	313	0.2	20		
PUK	SZ	IPG		1916	38.56	312	0.1	81		
PUK	SE	ISG		1916	50.95	312	0.2	81		
FNA	SZ	IPG		1916	44.00	143	0.1	107		
FNA	SE	ISG		1916	58.27	143	0.1	107		

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter  
2012 10 7 2030 07.29 41.40 19.98 2 ASN 4 0.4 2.3 TIRANA  
GAP=189 hor.err=6km ver.err=3km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		2030	09.40	239	0.2	11	12	1.8
TIR	SE	ISG		2030	11.69	239	-0.3	11		

PHP	SZ	IPG	2030	16.09	50	0.2	50	19	2.4
PHP	SE	ISG	2030	23.83	50	0.1	50		
PUK	SZ	IPG	2030	20.62	354	0.4	71	16	2.3
PUK	SE	ISG	2030	31.18	354	-0.3	71		
BCI	SZ	IPG	2030	27.82	3	0.2	107		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	7	2201	59.02								TIR
GAP=					hor.er=km		ver.err=km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		2201	59.02					
TIR	SE	ISG		2202	03.00					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	7	2203	21.49	41.17	19.28	4	ASN	4	0.3	2.4	DETI ADRIATIK
GAP=317					hor.er=9km		ver.err=15km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		2203	31.68	68	-0.2	52	20	2.4
TIR	SE	ISG		2203	37.92	68	0.3	52		
PUK	SZ	IPG		2203	41.84	27	0.2	109	20	2.4
PUK	SE	ISG		2203	54.98	27	0.1	109		
PHP	SZ	IPG		2203	41.24	59	0.4	112		
PHP	SE	ISG		2203	57.58	59	-0.1	112		
BCI	SZ	IPN		2203	48.92	35	0.2	147		
BCI	SE	ISN		2204	07.84	35	0.1	147		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	7	2206	19.35	41.25	19.40	4	ASN	3	0.2	2.6	DURRËS
GAP=171					hor.er=5km		ver.err=3km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		2206	26.58	76	0.3	50	26	2.6
TIR	SE	ISG		2206	33.41	76	0.2	50		
PUK	SZ	IPG		2206	35.38	30	0.4	101	25	2.6
PUK	SE	ISG		2206	48.90	30	0.1	101		
PHP	SZ	IPG		2206	35.72	63	-0.3	110	26	2.6
PHP	SE	ISG		2206	51.67	63	0.2	110		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	7	2208	52.24	41.27	19.36	4	ASN	4	0.3	2.7	DURRËS

GAP=175                      hor.er=2km                      ver.err=4km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		2209	00.57	79	0.2	42	27	2.8
TIR	SE	ISG		2209	06.44	79	0.2	42		
PUK	SZ	IPG		2209	09.07	27	0.3	95	28	2.7
PUK	SE	ISG		2209	22.31	27	0.1	95		
PHP	SZ	IPG		2209	09.49	62	0.2	113	27	2.7
PHP	SE	ISG		2209	25.64	62	0.3	113		
BCI	SZ	IPN		2209	16.56	25	-0.1	133		
BCI	SE	ISN		2209	35.45	25	-0.3	133		

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

2012 10 9 0453 23.01 39.07 20.77 8 ASN 4 0.3 3 GREQI

GAP=309                      hor.err=7.8km                      ver.err=13km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
IGT	SZ	IPG		0453	34.79	324	-0.2	62		
IGT	SE	ISG		0453	42.69	324	0.1	62		
SRN	SZ	IPG		0453	42.42	234	0.1	110	33	3
SRN	SE	ISG		0453	58.11	234	0.2	110		
KBN	SZ	IPN		0453	52.40	0	0.7	171	35	3.1
KBN	SE	ISN		0453	15.07	0	-0.4	171		
FNA	SZ	IPN		0453	57.07	15	0.6	196		
FNA	SE	ISN		0453	21.63	15	0.5	196		

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

2012 10 9 0625 23.35 38.92 21.88 13 ASN 8 0.5 3.7 GREQI

GAP=116                      hor.err=2km                      ver.err=0.59km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
IGT	SZ	IPN		0625	09.43	298	-0.5	150		
IGT	SE	ISN		0626	48.36	298	0.6	150		
SRN	SZ	IPN		0625	20.50	305	0.1	194	83	3.7
SRN	SE	ISN		0626	56.48	305	-0.4	194		
FNA	SZ	IPN		0625	22.15	349	-0.6	211		
FNA	SE	ISN		0626	58.31	349	0.4	211		
KBN	SZ	IPN		0625	25.58	335	0.3	214	92	3.8
KBN	SE	ISN		0626	59.09	335	-0.5	214		
TIR	SZ	IPN		0625	15.64	329	-0.4	320	115	3.9
TIR	SE	ISN		0626	59.91	329	-0.2	320		
SCTE	SZ	IPN		0625	10.91	295	0.5	331		
PHP	SZ	IPN		0626	14.71	339	0.6	386		
PHP	SE	ISN		0627	04.32	339	-0.3	386		
PUK	SZ	IPN		0626	15.62	335	-0.4	413		
PUK	SE	ISN		0627	15.12	335	0.5	413		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	9	1822	26.99	41.09	19.27	7	ASN	4	0.4	2.6	DETI ADRIATIK
					hor.er=18km				ver.err=2km			

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		1822	38.62	59	-0.3	57	17	2.4
TIR	SE	ISG		1822	45.64	59	0.1	57		
PUK	SZ	IPG		1822	47.14	25	0.3	117	22	2.6
PUK	SE	ISG		1823	04.59	25	0.2	117		
PHP	SZ	IPG		1822	47.94	55	0.2	117	24	2.6
PHP	SE	ISG		1823	04.39	55	0.4	117		
BCI	SZ	IPN		1822	55.25	24	0.2	134		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	9	2232	27.93	41.25	19.36	6	ASN	4	0.3	2.4	DETI ADRIATIK
					hor.er=1km				ver.err=7km			

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		2232	36.29	75	0.2	43	14	2.1
TIR	SE	ISG		2232	41.77	75	0.1	43		
PUK	SZ	IPG		2232	45.22	26	0.3	98	24	2.6
PUK	SE	ISG		2232	58.32	26	-0.1	98		
PHP	SZ	IPG		2232	45.73	61	0.2	101		
PHP	SE	ISG		2233	00.04	61	0.1	101		
BCI	SZ	IPN		2232	52.63	25	0.2	136		
BCI	SE	ISN		2233	11.92	25	0.3	136		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	10	0019	54.61	41.31	19.34	3	ASN	6	0.2	2.9	DETI ADRIATIK
					hor.er=1km				ver.err=2km			

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		0020	03.33	85	0.2	43	39	3.0
TIR	SE	ISG		0020	10.12	85	0.1	43		
PUK	SZ	IPG		0020	12.03	29	-0.3	92	32	2.9
PUK	SE	ISG		0020	25.04	29	0.1	92		
PHP	SZ	IPG		0020	12.45	65	0.3	100	31	2.9
PHP	SE	ISG		0020	26.39	65	0.1	100		
BCI	SZ	IPN		0020	17.59	115	-0.6	141		
KBN	SZ	IPN		0020	20.71	121	-0.2	143		
KBN	SE	ISN		0020	39.76	121	0.3	143		
SRN	SZ	IPN		0020	24.63	160	-0.6	168		
SRN	SE	ISN		0020	44.94	160	-0.6	168		



Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	10	1722	06.42	41.91	20.11	7	ASN	2	0.2	1.4	KLOS
GAP=184					hor.er=8km			ver.err=12km				

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PUK	SZ	IPG		1722	10.90	309	0.2	24	8	1.4
PUK	SE	ISG		1722	14.99	309	0.1	24		
PHP	SZ	IPG		1722	12.86	133	0.2	36		
PHP	SE	ISG		1722	19.01	133	0.3	36		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	10	2159	05.47								PUK
GAP=					hor.er=km			ver.err= km				

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PUK	SZ	IPG		2159	05.47					
PUK	SE	ISG		2159	09.93					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	11	0412	46.63	42.01	20.42	7	ASN	3	0.3	2.0	NANGE-KUKËS
GAP=213					hor.er=22km			ver.err=1km				

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0412	53.41	177	-0.1	36	13	2.0
PHP	SE	ISG		0412	58.93	177	0.2	36		
PUK	SZ	IPG		0412	54.61	275	0.3	44	11	1.9
PUK	SE	ISG		0413	00.19	275	0.2	44		
BCI	SZ	IPG		0412	55.41	324	0.1	49	16	2.2
BCI	SE	ISG		0413	02.93	324	0.2	49		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	11	2327	22.45	39.44	21.96	23	ASN	6	0.5	3.3	GREQI
GAP=116					hor.err=1.81km			ver.err=12.31km				

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
IGT	SZ	IPN		2327	43.10	275	-0.5	141		
IGT	SE	ISN		2328	05.15	275	0.4	141		
SRN	SZ	IPN		2327	52.55	323	0.2	165	37	3.3
SRN	SE	ISN		2328	20.11	323	-0.1	165		
KBN	SZ	IPN		2327	52.28	287	0.2	175	38	3.3

KBN	SE	ISN	2328	22.35	287	-0.3	175					
TIR	SZ	IPN	2328	07.34	321	-0.4	276	40	3.4			
TIR	SE	ISN	2328	35.51	321	-0.3	276					
PHP	SZ	IPN	2328	09.56	334	-0.2	280					
PHP	SE	ISN	2328	40.35	334	-0.1	280					
PUK	SZ	IPN	2328	14.25	330	0.2	337					
PUK	SE	ISN	2328	46.34	330	0.3	337					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2012	10	12	0248	38.37								PUKË
GAP=					hor.er=km		ver.err=km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PUK	SZ	IPG		0248	38.37					
PUK	SE	ISG		0248	39.51					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2012	10	12	0601	47.81	41.94	19.83	26	ASN	4	0.1	2.8	VRITH-PUKES
GAP=206					hor.err=0.57km		ver.err=0.31km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PUK	SZ	IPG		0601	52.58	21	0.1	12	25	2.8
PUK	SE	ISG		0601	56.78	21	0.0	12		
BCI	SZ	IPG		0601	57.89	21	-0.1	51	27	2.9
BCI	SE	ISG		0602	05.26	21	0.0	51		
PHP	SZ	IPG		0601	58.69	119	0.0	57	27	2.9
PHP	SE	ISG		0602	06.93	119	0.1	57		
TIR	SZ	IPG		0602	00.09	178	-0.1	65	25	2.8
TIR	SE	ISG		0602	10.29	178	-0.1	65		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2012	10	13	1442	44.19	42.03	20.44	7	ASN	3	0.1	2.5	SHTIQEN-KUKES
GAP=226					hor.err=0.98km		ver.err=1km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		1442	51.51	184	0.0	39	20	2.5
PHP	SE	ISG		1442	57.05	184	0.1	39		
PUK	SZ	IPG		1442	53.19	272	0.1	48	21	2.5
PUK	SE	ISG		1442	59.71	272	0.0	48		
BCI	SZ	IPG		1442	53.33	318	-0.1	50	21	2.5
BCI	SE	ISG		1443	02.11	318	0.0	50		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2012 10 15 0116 39.52 40.72 19.67 5 ASN 7 0.0 3 FIER  
 GAP=131 hor.err=0.81km ver.err=1.14km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
VLO	SZ	IPG		0116	45.67	209	0.0	31	30	2.9
VLO	SE	ISG		0116	50.26	209	0.0	31		
TIR	SZ	IPG		0116	52.26	13	0.0	72	31	2.9
TIR	SE	ISG		0117	02.47	13	0.1	72		
KBN	SZ	IPG		0116	56.58	95	0.1	95	32	2.9
KBN	SE	ISG		0117	09.42	95	0.0	95		
SRN	SZ	IPG		0116	59.96	163	0.0	97	35	3.1
SRN	SE	ISG		0117	10.05	163	0.1	97		
SCTE	SZ	IPG		0117	01.65	236	0.0	124		
SCTE	SE	ISG		0117	18.31	236	0.1	124		
PHP	SZ	IPG		0117	01.83	30	0.1	125	32	3
PHP	SE	ISG		0117	18.55	30	0.0	125		
PUK	SZ	IPN		0117	05.74	7	0.1	148	32	3
PUK	SE	ISN		0117	25.40	7	0.0	148		

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter  
 2012 10 16 1511 15.47 4.8 ITALI  
 GAP= hor.err=km ver.err=km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
VLO	SZ	IPN		1511	54.47					
TIR	SZ	IPN		1512	00.38					
SRN	SZ	IPN		1511	56.93					
PUK	SZ	IPN		1512	04.34					
PHP	SZ	IPN		1512	07.25					
KBN	SZ	IPN		1512	06.60					
BCI	SZ	IPN		1512	08.26					

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter  
 2012 10 17 0405 20.94 41.86 20.05 6 ASN 3 0.2 1.7 SPAC  
 GAP=106 hor.err=13km ver.err=3km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PUK	SZ	IPG		0405	25.65	327	0.2	24	7	1.5
PUK	SE	ISG		0405	29.65	327	0.1	24		
PHP	SZ	IPG		0405	27.65	121	-0.3	34	11	1.9
PHP	SE	ISG		0405	33.94	121	0.2	34		
BCI	SZ	IPG		0405	30.43	55	0.3	37		
BCI	SE	ISG		0405	39.05	55	0.2	37		

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

2012 10 17 2305 09.64 39.69 20.79 10 ASN 7 0.5 3.0 GREQI  
GAP=225 hor.err=0.81km ver.err=1.31km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
IGT	SZ	IPG		2305	17.57	247	-0.5	44		
IGT	SE	ISG		2305	31.15	247	0.5	44		
SRN	SZ	IPG		2305	23.31	288	0.8	71	30	2.9
SRN	SE	ISG		2305	31.49	288	-0.4	71		
KBN	SZ	IPN		2305	27.49	0	0.6	103	33	3.1
KBN	SE	ISN		2305	48.69	0	0.4	103		
FNA	SZ	IPN		2305	34.11	22	-0.3	131	43	3.4
FNA	SE	ISN		2305	50.36	22	-0.1	131		
VLO	SZ	IPN		2305	35.12	309	-0.3	140		
VLO	SE	ISN		2305	51.69	309	-0.4	140		
PHP	SZ	IPN		2305	33.84	353	0.2	223		
PHP	SE	ISN		2306	10.20	353	0.1	223		
PUK	SZ	IPN		2305	53.77	343	0.2	272		
PUK	SE	ISN		2306	13.68	343	0.3	272		

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter  
2012 10 17 2307 06.52 39.92 20.65 30 ASN 6 0.3 3.2 GREQI (JANINE)  
GAP=140 hor.err=1.4km ver.err=2.1km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
IGT	SZ	IPG		2307	15.92	205	0.2	48		
IGT	SE	ISG		2307	23.81	205	0.3	48		
SRN	SZ	IPG		2307	18.87	265	-0.1	49	29	2.9
SRN	SE	ISG		2307	24.35	265	0.2	49		
KBN	SZ	IPG		2307	20.91	13	0.2	80	40	3.3
KBN	SE	ISG		2307	32.14	13	0.2	80		
FNA	SZ	IPG		2307	26.39	67	0.1	118	40	3.3
FNA	SE	ISG		2307	42.11	67	-0.1	118		
PHP	SZ	IPN		2307	38.78	358	0.3	195		
PHP	SE	ISN		2307	57.26	358	0.1	195		
PUK	SZ	IPN		2307	42.18	347	-0.2	242		

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter  
2012 10 18 0252 03.51 40.15 16.69 8 ASN 6 0.2 3.5 ITALIA E JUGUT  
GAP=315 hor.err=11.26km ver.err=32.11km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
VLO	SZ	IPN		0252	44.56	80	0.3	240		
VLO	SE	ISN		0253	18.44	80	-0.4	240		
SRN	SZ	IPN		0252	47.75	95	0.5	283	47	3.6
SRN	SE	ISN		0253	22.74	95	-0.4	283		

TIR	SZ	IPN	0252	51.13	62	0.6	298	46	3.6
TIR	SE	ISN	0253	30.54	62	0.4	298		
PUK	SZ	IPN	0252	55.85	50	0.2	340		
PUK	SE	ISN	0253	35.81	50	0.3	340		
KBN	SZ	IPN	0252	58.17	80	-0.3	351	47	3.6
KBN	SE	ISN	0253	38.09	80	-0.1	351		
PHP	SZ	IPN	0252	58.44	80	0.2	358		
PHP	SE	ISN	0253	45.12	80	0.4	358		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	19	0440	29.75	40.03	19.86	18	ASN	5	0.2	3.2	BORSH
GAP=127					hor.err=1km		ver.err=2km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
SRN	SZ	IPG		0440	33.98	146	0.2	21	19	2.4
SRN	SE	ISG		0440	38.84	146	0.1	21		
VLO	SZ	IPG		0440	39.71	327	-0.3	57	43	3.2
VLO	SE	ISG		0440	49.11	327	0.2	57		
KBN	SZ	IPG		0440	47.22	50	-0.5	102	40	2.2
KBN	SE	ISG		0441	01.49	50	0.4	102		
TIR	SZ	IPN		0440	54.89	0	0.2	145	50	2.4
TIR	SE	ISN		0441	14.84	0	0.3	145		
PHP	SZ	IPN		0441	01.23	14	-0.4	184		
PHP	SE	ISN		0441	25.83	14	0.1	184		
PUK	SZ	IPN		0441	06.01	0	0.2	222		
PUK	SE	ISN		0441	33.44	0	-0.3	222		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	19	1111	37.14	41.63	19.57	8	ASN	4	0.3	2.2	GJIRI PATOKUT
GAP=244					hor.err=2km		ver.err=12km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		1111	44.43	142	-0.3	39	13	2.0
TIR	SE	ISG		1111	50.82	142	0.2	39		
PUK	SZ	IPG		1111	46.69	29	0.1	52	16	2.2
PUK	SE	ISG		1111	54.66	29	0.2	52		
PHP	SZ	IPG		1111	49.39	85	0.1	72	16	2.2
PHP	SE	ISG		1111	59.70	85	-0.3	72		
BCI	SZ	IPG		1111	53.09	26	0.4	91		
BCI	SE	ISG		1112	05.97	26	0.2	91		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	19	1335	44.05								
GAP=					hor.err=km		ver.err=km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
SRN	SZ	IPG		1335	44.05					
SRN	SE	ISG		1335	55.42					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	19	2136	09.20	41.98	20.52	20	ASN	2	0.2	2.1	TOPOJAN-KUKES
GAP=274					hor.err=2km		ver.err=1km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		2136	16.31	192	0.2	33	11	2.0
PHP	SE	ISG		2136	21.33	192	0.1	33		
PUK	SZ	IPG		2136	19.03	278	-0.1	52	12	2.2
PUK	SE	ISG		2136	26.66	278	0.3	52		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	19	2152	05.12	41.98	20.53	23	ASN	2	0.1	1.9	TOPOJAN-KUKËS
GAP=277					hor.err=2km		ver.err=15km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		2152	12.37	194	0.2	34	8	1.8
PHP	SE	ISG		2152	17.49	194	-0.3	34		
PUK	SZ	IPG		2152	15.13	277	0.1	53	11	2.1
PUK	SE	ISG		2152	22.96	277	0.3	53		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	20	0015	25.87	41.76	20.48	27	ASN	2	0.3	1.5	VERI PESHKOPI
GAP=262					hor.err=17km		ver.err=2km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0015	31.20	204	0.2	10	6	1.5
PHP	SE	ISG		0015	34.74	204	0.1	10		
PUK	SZ	IPG		0015	36.74	302	-0.2	58		
PUK	SE	ISG		0015	45.38	302	0.3	58		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	20	2142	21.58	41.41	20.62	7	ASN	4	0.4	2.6	MAQEDONI
GAP=183					hor.err=1km		ver.err=1km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		2142	27.87	333	0.1	34	19	2.4
PHP	SE	ISG		2142	32.58	333	0.1	34		

PUK	SZ	IPG	2142	38.81	320	0.1	93	28	2.8
PUK	SE	ISG	2142	50.91	320	0.2	93		
FNA	SZ	IPG	2142	38.58	137	-0.1	94	28	2.8
FNA	SE	ISG	2142	50.97	137	0.1	94		
BCI	SZ	IPG	2142	43.21	337	0.1	116		
BCI	SE	ISG	2142	58.13	337	-0.1	116		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	21	0443	35.11	40.72	23.01	25	ASN	7	0.5	3.7	GREQI
GAP=258					hor.err=3km		ver.err=5km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
KBN	SZ	IPN		0444	05.77	268	0.1	189	47	3.5
KBN	SE	ISN		0444	28.29	268	0.2	189		
PHP	SZ	IPN		0444	10.31	298	0.1	241	47	3.5
PHP	SE	ISN		0444	37.45	298	0.2	241		
IGT	SZ	IPN		0444	15.82	241	-0.1	264		
IGT	SE	ISN		0444	41.31	241	0.2	264		
SRN	SZ	IPN		0444	15.54	251	0.3	273	58	3.8
SRN	SE	ISN		0444	45.31	251	-0.1	273		
PUK	SZ	IPN		0444	17.98	301	0.4	299		
BCI	SZ	IPN		0444	18.62	301	0.2	306		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	21	0638	45.18	41.89	19.16	7	ASN	3	0.4	2.8	DETI ADRIATIK
GAP=313					hor.err=1km		ver.err=0km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PUK	SZ	IPG		0638	56.36	74	0.2	62	26	2.6
PUK	SE	ISG		0639	04.11	74	-0.3	62		
BCI	SZ	IPG		0639	01.72	54	0.2	91	26	2.6
BCI	SE	ISG		0639	12.01	54	-0.1	91		
PHP	SZ	IPG		0939	04.55	101	0.3	108	30	2.9
PHP	SE	ISG		0939	13.10	101	0.2	108		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	22	1713	19.26	42.13	20.50	7	ASN	3	0.4	2.1	BARDHOC KUKËS
GAP=241					hor.err=0km		ver.err=11km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
BCI	SZ	IPG		1713	27.49	306	0.2	44	15	2.2
BCI	SE	ISG		1713	33.74	306	0.1	44		
PHP	SZ	IPG		1713	28.55	187	-0.5	50	14	2.1
PHP	SE	ISG		1713	35.49	187	0.2	50		

PUK	SZ	IPG	1713	28.26	259	-0.4	51	12	2.0
PUK	SE	ISG	1713	35.93	259	0.3	51		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	23	0241	25.94	41.02	19.95	1	ASN	3	0.3	1.8	VIDHAS,ELBASAN
GAP=341					hor.err=14km		ver.err=1km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		0241	32.39	348	-0.1	36	9	1.8
TIR	SE	ISG		0241	38.09	348	0.1	36		
PHP	SZ	IPG		0241	40.92	28	0.2	83	9	1.8
PHP	SE	ISG		0241	52.90	28	0.2	83		
PUK	SZ	IPG		0241	46.20	358	-0.1	113		
PUK	SE	ISG		0242	01.74	358	0.1	113		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	23	0242	51.63	41.04	19.99	7	ASN	3	0.2	2.1	VIDHAS-ELBASAN
GAP=315					hor.err=25km		ver.err=2km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		0242	57.90	342	-0.1	35	12	2.1
TIR	SE	ISG		0243	03.93	342	-0.1	35		
PHP	SZ	IPG		0243	06.00	27	0.1	80	12	2.1
PHP	SE	ISG		0243	17.15	27	0.1	80		
PUK	SZ	IPG		0243	11.84	356	0.2	111		
PUK	SE	ISG		0243	25.90	356	-0.1	111		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	23	1520	39.16	38.98	20.65	14	ASN	7	0.5	4.7	GREQI
GAP=323					hor.err=9km		ver.err=6km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
IGT	SZ	IPG		1520	53.39	354	0.2	76		
IGT	SE	ISG		1521	01.95	354	0.3	76		
SRN	SZ	IPN		1520	58.10	343	-0.3	120		
SRN	SE	ISN		1521	07.31	343	0.1	120		
KBN	SZ	IPN		1521	14.21	8	0.4	200		
KBN	SE	ISN		1521	36.12	8	0.3	200		
TIR	SZ	IPN		1521	24.03	251	-0.6	261		
TIR	SE	ISN		1522	05.11	251	0.3	261		
PHP	SZ	IPN		1521	27.43	0	-0.4	314		
PHP	SE	ISN		1522	17.12	0	0.2	314		
PUK	SZ	IPN		1521	32.11	351	0.5	357		
PUK	SE	ISN		1522	11.31	351	0.1	357		



BCI	SZ	IPN	1521	38.11	356	0.4	391
BCI	SE	ISN	1522	18.31	356	0.2	391

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	24	1834	08.54	40.14	19.98	5	ASN	4	0.2	2.5	GJIROKASTËR
			GAP=135			hor.err=1km		ver.err=2km				

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
SRN	SZ	IPG		1834	13.64	177	-0.2	29	21	2.5
SRN	SE	ISG		1834	19.05	177	0.1	29		
VLO	SZ	IPG		1834	18.72	312	0.2	55	22	2.5
VLO	SE	ISG		1834	27.52	312	0.3	55		
IGT	SZ	IPG		1834	21.87	153	-0.4	73		
IGT	SE	ISG		1834	33.34	153	0.5	73		
FNA	SZ	IPN		1834	33.72	156	0.2	138		
FNA	SE	ISN		1834	52.18	156	0.6	138		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	25	1314	22.00	41.83	20.47	12	ASN	4	0.2	2.5	RADOMIR-KUKËS
			GAP=219			hor.err=2km		ver.err=3km				

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		1314	26.06	110	0.2	17	14	2.1
PHP	SE	ISG		1314	27.77	110	0.1	17		
PUK	SZ	IPG		1314	31.54	296	0.3	53	18	2.3
PUK	SE	ISG		1314	38.39	296	-0.1	53		
BCI	SZ	IPG		1314	35.11	331	0.3	67	26	2.8
BCI	SE	ISG		1314	43.12	331	0.2	67		
TIR	SZ	IPG		1314	35.02	224	0.4	74	25	2.6
TIR	SE	ISG		1314	46.22	224	-0.3	74		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	25	2238	44.45	42.06	20.13	8	ASN	3	0.1	1.9	PUKE
			GAP=158			hor.err=227km		ver.err=1km				

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PUK	SZ	IPG		2238	48.50	263	0.1	20	9	1.9
PUK	SE	ISG		2238	51.96	263	-0.1	20		
BCI	SZ	IPG		2238	50.52	351	0.1	33	15	2.1
BCI	SE	ISG		2238	56.17	351	0.1	33		
PHP	SZ	IPG		2238	57.60	149	0.1	49	14	2.1
PHP	SE	ISG		2239	00.78	149	0.1	49		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	25	2305	14.95	39.73	15.52	5	ASN	8	0.5	5	ITALIA E JUGUT
				hor.err=7km			ver.err=12km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
VLO	SZ	IPN		2306	10.16	75	0.8	349	309	5
VLO	SE	ISN		2306	49.66	75	0.7	349		
SRN	SZ	IPN		2306	14.77	86	-0.8	384	294	5
SRN	SE	ISN		2306	00.57	86	0.6	384		
TPE	SZ	IPN		2307	16.01	79	0.5	388	205	4.8
TPE	SE	ISN		2307	02.90	79	0.8	388		
TIR	SZ	IPN		2306	18.18	62	-0.7	410		
TIR	SE	ISN		2307	08.69	62	0.6	410		
PUK	SZ	IPN		2306	23.39	53	-0.8	449		
KBN	SZ	IPN		2306	25.49	41	0.7	460		
PUK	SE	ISN		2306	25.48	75	0.7	469		
PHP	SZ	IPN		2306	25.87	60	0.9	452		
BCI	SZ	IPN		2306	27.40	51	0.8	469		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	26	1116	55.05	41.76	20.32	5	ASN	2	0.1	2	PESHKOPI
GAP=158				hor.err=2km			ver.err=1km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		1116	58.10	132	0.1	13	13	2.0
PHP	SE	ISG		1117	00.02	132	0.1	13		
PUK	SZ	IPG		1117	03.95	311	0.1	47	13	2.0
PUK	SE	ISG		1117	11.31	311	-0.1	47		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	26	1405	15.54	41.42	20.99	20	ASN	4	0.1	2.9	MAQEDONI
GAP=191				hor.err=2km			ver.err=4km					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		1405	28.82	303	0.0	55	22	2.7
PHP	SE	ISG		1405	33.65	303	0.1	55		
FNA	SZ	IPG		1405	40.04	155	0.2	78		
FNA	SE	ISG		1405	29.70	155	0.1	78		
PUK	SZ	IPG		1405	35.40	308	0.2	114	30	3.0
PUK	SE	ISG		1405	47.05	308	-0.1	114		
BCI	SZ	IPG		1405	38.52	324	0.0	130	30	3.0
BCI	SE	ISG		1405	54.45	324	0.2	130		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2012 10 26 1713 54.69 41.81 20.41 8 ASN 4 0.1 2.6 PESHKOPI  
 GAP=219 hor.err=2km ver.err=3km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		1713	56.25	171	0.0	15	26	2.6
PHP	SE	ISG		1713	59.13	171	0.0	15		
PUK	SZ	IPG		1714	03.89	301	0.1	50	26	2.6
PUK	SE	ISG		1714	11.31	301	-0.1	50		
BCI	SZ	IPG		1714	07.16	335	0.0	67	28	2.7
BCI	SE	ISG		1714	14.01	335	0.1	67		
TIR	SZ	IPG		1714	07.36	222	0.1	69	28	2.7
TIR	SE	ISG		1714	15.69	222	-0.1	69		

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

2012 10 26 2316 40.45 38.89 23.01 4 ASN 7 0.6 4.7 GREQI  
 GAP=319 hor.err=5km ver.err=4km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
KBN	SZ	IPN		2317	24.11	316	-0.4	270	224	4.7
KBN	SE	ISN		2318	00.17	316	0.5	270		
SRN	SZ	IPN		2317	27.34	294	-0.6	281	214	4.6
SRN	SE	ISN		2318	03.71	294	0.5	281		
TPE	SZ	IPN		2317	30.41	302	-0.4	301		
TPE	SE	ISN		2318	04.42	302	0.6	301		
PHP	SZ	IPN		2317	37.68	326	-0.8	379	224	4.7
PHP	SE	ISN		2318	26.35	326	0.7	379		
TIR	SZ	IPN		2317	37.46	317	-0.6	384		
TIR	SE	ISN		2318	28.69	317	0.5	384		
PUK	SZ	IPN		2317	38.69	324	-0.6	438		
PUK	SE	ISN		2318	36.89	324	0.4	438		
BCI	SZ	IPN		2317	48.27	329	-0.5	460		
BCI	SE	ISN		2318	37.32	329	-0.8	460		

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

2012 10 28 2014 10.77  
 GAP= hor.err=km ver.err=km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		2014	10.77					
PHP	SE	ISG		2014	15.08					

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

2012 10 28 2032 14.04

GAP= hor.err=km ver.err=km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TPE	SZ	IPG		2032	14.04					
TPE	SE	ISG		2032	18.59					

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

2012 10 30 0453 20.44

GAP= hor.err=km ver.err=km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0453	20.44					
PHP	SE	ISG		0453	25.01					

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

2012 10 30 1046 17.20 41.40 19.99 26 ASN 4 0.1 3.0 TIRANA

GAP=189 hor.err=2km ver.err=1km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		1046	22.30	239	0.2	13	24	2.7
TIR	SE	ISG		1046	25.90	239	-0.1	13		
PHP	SZ	IPG		1046	26.50	50	0.2	47	23	2.8
PHP	SE	ISG		1046	33.80	50	-0.1	47		
PUK	SZ	IPG		1046	30.20	353	0.1	70	29	3.0
PUK	SE	ISG		1046	39.80	353	0.3	70		
BCI	SZ	IPG		1046	37.40	120	0.2	106	40	3.2
BCI	SE	ISG		1046	50.90	120	0.2	106		

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

2012 10 30 1047 02.10 41.45 20.02 15 ASN 8 0.3 3.5 TIRANA

GAP=179 hor.err=2km ver.err=1km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		1047	06.25	230	0.1	17	38	2.8
TIR	SE	ISG		1047	09.61	230	0.2	17		
PHP	SZ	IPG		1047	10.46	53	-0.3	43	63	3.5
PHP	SE	ISG		1047	16.59	53	0.2	43		
PUK	SZ	IPG		1047	14.17	351	0.1	66		
PUK	SE	ISG		1047	23.36	351	0.1	66		
BCI	SZ	IPG		1047	21.89	2	-0.4	102	57	3.5
BCI	SE	ISG		1047	33.93	2	0.2	102		
KBN	SZ	IPG		1047	22.16	144	0.3	112	64	3.6
KBN	SE	ISG		1047	36.04	144	0.1	112		
VLO	SZ	IPG		1047	22.93	203	-0.2	117		

VLO	SE	ISG	1047	39.54	203	0.4	117		
TPE	SZ	IPG	1047	24.37	181	0.1	128	45	3.3
TPE	SE	ISG	1047	31.87	181	0.2	128		
SRN	SZ	IPN	1047	31.87	181	0.1	174		
SRN	SE	ISN	1047	51.37	181	-0.3	174		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	30	2255	09.20	40.36	19.63	20	ASN	8	0.2	3.2	KOTE-VLORE
GAP=163					hor.err=0km			ver.err=12km				

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
VLO	SZ	IPG		2255	13.93	313	0.2	16	25	2.6
VLO	SE	ISG		2255	17.17	313	0.1	16		
TPE	SZ	IPG		2255	16.50	104	0.1	32	50	3.3
TPE	SE	ISG		2255	21.61	104	0.3	32		
SRN	SZ	IPG		2255	20.85	150	-0.1	62	37	3.1
SRN	SE	ISG		2255	29.99	150	0.3	62		
KBN	SZ	IPG		2255	28.96	73	-0.1	101	38	3.1
KBN	SE	ISG		2255	41.12	73	0.3	101		
TIR	SZ	IPG		2255	30.49	9	-0.4	110	44	3.2
TIR	SE	ISG		2255	43.55	9	0.1	110		
PHP	SZ	IPN		2255	36.97	24	0.3	160	54	3.5
PHP	SE	ISN		2255	59.91	24	0.2	160		
PUK	SZ	IPN		2255	41.02	6	0.6	187		
PUK	SE	ISN		2256	04.42	6	0.4	187		
BCI	SZ	IPN		2255	46.26	9	0.4	224		
BCI	SE	ISN		2256	13.80	9	0.5	224		

**TERMETE TE LARGETA (DISTANT EARTHQUAKE)**

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2012	10	12	0045	20.19	4.92 S	134.05	10	ASN	6		6.7	INDONEZI
GAP=					hor.err=km			ver.err=km				

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
KBN	SZ	IP		0045	50.20					
PHP	SZ	IP		0046	14.44					
TIR	SZ	IP		0046	06.53					
SRN	SZ	IP		0046	10.61					
PUK	SZ	IP		0046	06.52					
BCI	SZ	IP		0045	58.38					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2012 10 14 1017 33.61 42.01 46.57 10 ASN 6 5.5 RUSSIA  
 GAP= hor.err=km ver.err=km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
BCI	SZ	IP		1018	03.82					
PHP	SZ	IP		1018	09.21					
PUK	SZ	IP		1018	16.33					
TIR	SZ	IP		1018	41.63					
KBN	SZ	IP		1018	12.35					
SRN	SZ	IP		1018	44.52					

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter  
 2012 10 24 0059 46.36 10.15 85.28 30 ASN 6 6.3 COSTA RICA  
 GAP= hor.err=km ver.err=km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
BCI	SZ	IP		0059	00.07					
PHP	SZ	IP		0059	58.56					
PUK	SZ	IP		0100	45.85					
TIR	SZ	IP		0101	29.56					
KBN	SZ	IP		0101	56.40					
SRN	SZ	IP		0101	19.90					

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter  
 2012 10 28 0316 26.16 52.62 132.17 10 ASN 6 7.7 KANADA  
 GAP= hor.err=km ver.err=km

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
BCI	SZ	IP		0316	30.26					
PUK	SZ	IP		0316	31.02					
TIR	SZ	IP		0316	32.02					
PHP	SZ	IP		0316	34.89					
KBN	SZ	IP		0316	38.25					
SRN	SZ	IP		0316	38.79					

**PËRSHKRIM MAKROSIZMIK I  
TËRMEVEVE TË NDJESHME NË  
VENDIN TONË**

Intensiteti i tërmetit në epiqendër  $I_0$  është përcaktuar me formulën  $I_0 = \frac{M-1}{6}$ . Intensiteti I në qytete është

përcaktuar nga informacioni i marrëmbi ndjeshmerinë e tërmetit nga emergjencat civile si dhe burime të tjera.

**MACROSEISMIC DESCRIPTION OF  
EARTHQUAKES FELT IN OUR  
COUNTRY**

The epicentral Intensity of earthquake  $I_0$  is determined by the formula  $I_0 = \frac{M-1}{6}$ . The felt

informacion of earthquakes in inhabitation zones provide by civil emergencies and other source is used to determine the Intensity I.

Nr	Data (Date)	Kohëndodhja (Origin time)	Epiqendra dhe të dhëna makrosizmike EMS-98 (Epicenter and macroseismic data EMS-98)
1	11.11.2012	09:20:37.4	Epiqendra: 40.73V; 19.62L në fshatin Verbas 4 km në V-L të qytetit Fierit. Intensiteti i tërmetit në epiqendër $I_0=IV$ balle Ndjerë: III-IV ballë në qytetin e Fierit dhe III ballë në qytetin e Patosit (Epicentre: 40.73N; 19.62E in Verbas village, N-E of Fieri town. Epicentral Intensity $I_0=IV$ Felt: III-IV at Fieri town and III at Patosi town)
2	12.11.2012	23:28:51.2	Epiqendra: 40.70V; 19.68L në fshatin Kurjan 8 km në J-L të qytetit Fierit. Intensiteti i tërmetit në epiqendër $I_0=IV-V$ ballë Ndjerë: IV në qytetin e Fierit dhe III-IV në qytetin e Patosit (Epicentre: 40.70N; 19.68E in Kurjan village, 8 km in S-E of Fieri town. Epicentral Intensity $I_0=IV-V$ Felt: IV at Fieri city and IV at Patosi town)
3	25.11.2012	20:18:15.10	Epiqendra: 40.89V; 21.06L, në fshatin Kallamas Liqeni Prespes. Intensiteti i tërmetit në epiqendër $I_0=IV-V$ ballë Ndjerë: IV fshatrat rrethë Liqenit të Prespës. (Epicentre: 40.89N; 21.06E in Kallamas village, Prespa)

			Lake. Epicentral Intensity $I_0=$ IV-V Felt: IV at villages near Prespa lake)
4	25.11.2012	23:48:19.70	Epiqendra: 40.92V; 21.05L, ne fshatin Kallamas Liqeni Prespes. Intensiteti i tërmetit në epiqender $I_0=$ IV ballë Ndjerë: III-IVfshatrat rreth Liqenit të Prespës. (Epicentre: 40. 92N; 21.05E in Kallamas village, Prespa Lake. Epicentral Intensity $I_0=$ IV Felt: IV at villages near Prespa lake)
5	26.11.2012	22:05:25.40	Epiqendra: 41.66V; 20.11L, ne fshatin Lise 9 km ne V-L të Burrelit. Intensiteti i tërmetit në epiqender $I_0=$ V ballë Ndjerë:IV-V ballene qytetin e Burrelit. III-IV ne qytetin e Bulqizes dhe Peshkopise. (Epicentre: : 41.66N; 20.11 E in Lise village, 9 km in N-E of Fieri town. Epicentral Intensity $I_0=$ V Felt: IV-V at Burreltown and III-IV at Bulqizes and Peshkopi town)
6	27.11.2012	19:06:22.90	Epiqendra: 40.77V; 19.72L, në fshatin Strum, 4 km në Veri tëqytetit tëRroskovecit. Intensiteti i tërmetit në epiqendër $I_0=$ V ballë. Ndjerë: V ballënë qytetin e Rroskovecit. IV-V në qytetin e Fierit. IV në qytetin e Kucovës dhe Lushnjës, III-IV në qytetet Berat dhe Vlorë. (Epicentre: 40.77N; 19.72E in Strum village, 8 km in N of Rroskoveci town. Epicentral Intensity $I_0=$ V Felt: V at Rroskoveci town IV-V at Fieri city and IV at Kucova and Lushnja town and III-IV at Berat and Vlora town)
7	28.11.2012	01:49:27.40	Epiqendra: 42.47V; 20.11L, në kufi me Kosoven, 13 km në Veri të qytetit B.Curri. Intensiteti i tërmetit në epiqendër $I_0=$ V-VI ballë. Ndjerë: V ballënë qytetin e B.Currit. IV-V në qytetin e Kuksit. IV në qytetin e Pukës, III-IV në qytetet Peshkopi dhe Shkodër. (Epicentre: 42.47N; 20.11E in Kosova border, 13 km in N of B.Curri town. Epicentral Intensity $I_0=$ V-VI ballë. Felt: V at B.Curri town, IV-V at Kukesitown, IV at Puka town and III-IV Peshkopi and Shkodra towns)



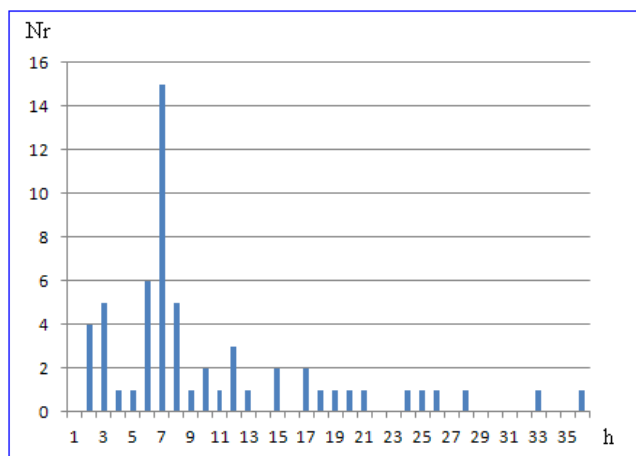
## KATALOGU I TËRMETEVE MUJORE (THE MONTHLY EARTHQUAKE CATALOG)

Data Koha Date vvvv/mm/dd	Gjer. Gjat Time hh:mm:ss	Thell. Nr. St. Gab Lat Long.	Mag. Depth (km)	N <sub>0</sub> . St Rms N <sub>0</sub> . St Rms	Vendndodhja Location ( $M_D$ )	
2012 11 1	1853 07.73	40.68	19.74	7	10 0.1 3.1	KURJAN FIER
2012 11 2	0443 37.49	41.25	20.36	7	6 0.1 2.7	DOREZ LIBRAZHDE
2012 11 2	1536 12.40	41.39	20.04	18	3 0.2 2.4	16 KM V-L TIRANA
2012 11 3	0806 17.37	42.44	18.62	3	4 0.1 3.3	MALI ZI
2012 11 4	2349 46.09	39.23	20.13	36	7 0.1 3.2	KORFUZ GREQI
2012 11 4	2354 20.06	42.27	19.66	7	2 0.1 2.3	GJURAJ-SHKODRES
2012 11 4	2354 54.01	42.28	19.72	7	2 0.1 2.2	KUJE-SHKODRES
2012 11 5	0213 56.12	41.29	20.18	28	6 0.1 3	BALLGJIN-ELBASANIT
2012 11 5	2116 38.45	41.31	19.38	7	5 0.1 2.8	DETI ADRIATIK- DURES
2012 11 6	1821 36.61	39.86	20.58	16	8 0.2 3.0	19 KM J-L KAKAVIJE
2012 11 6	2054 14.66	41.32	19.40	3	6 0.2 2.7	4KM PERENDIM DURES
2012 11 6	2311 47.78	42.09	20.19	6	4 0.2 2.9	LAJTHIZE PUKE
2012 11 7	0211 45.66	42.09	20.18	2	5 0.1 2.7	LAJTHIZE PUKE
2012 11 7	1648 34.38	14.00	92.28	10	7 0.2 7.4	OFFSHORE GUATEMALE
2012 11 7	2253 45.19	38.91	21.28	9	5 0.2 3.4	GREQI
2012 11 8	0347 48.51	39.91	20.73	1	4 0.1 2.8	GREQI-LESKOVIKUT)
2012 11 9	2121 37.51	41.84	20.22	7	2 0.1 2	ARRE MOLLE- PESHKOPIS)
2012 11 10	0321 05.52	41.73	19.50	8	4 0.2 2.9	7 Km PERENDIM KUNJELEZHE
2012 11 10	1325 02.52	42.11	19.07	7	3 0.1 2.8	DETI ADRIATIK
2012 11 10	2130 06.67	37.85	21.83	33	5 0.1 4	GREQI
2012 11 11	0045 59.71	42.09	20.22	7	3 0.1 2.4	SHENMERI-KUKES
2012 11 11	0534 56.11	42.09	20.19	7	3 0.1 2.4	SHENMERI- KUKES
2012 11 11	092037.73	40.73	19.63	19	10 0.1 3.3	VERBAS- FIER
2012 11 11	0925 04.35	38.92	21.89	48	5 0.1 3.6	GREQI
2012 11 11	2240 03.16	39.17	21.70	15	5 0.1 3.9	GREQI
2012 11 12	1529 27.90	41.58	19.78	33	4 0.2 2.9	3 KM VERI MAMURRAS
2012 11 12	2318 40.26	42.59	18.96	10	9 0.1 4.2	MALI I ZI
2012 11 12	2328 51.50	40.70	19.74	12	8 0.1 3.6	KURJAN FIER
2012 11 12	2350 28.21	42.55	19.01	12	4 0.1 3.0	MALI I ZI
2012 11 12	0706 43.98	39.52	16.91	7	4 0.1 4.4	SICILI ITALI
2012 11 13	2324 07.83	42.67	18.96	25	6 0.4 4.5	CEROVE MALI I ZI
2012 11 16	2243 53.77	41.57	20.76	3	4 0.1 2.7	MAQEDONI
2012 11 18	0937 18.97	42.58	19.15	13	3 0.1 3.1	MALI I ZI
2012 11 18	1511 14.23	42.79	19.21	9	3 0.1 2.5	MALI I ZI
2012 11 18	2101 37.70	42.19	20.08	8	5 0.3 2.8	6 KM V-L IBALLE PUKE

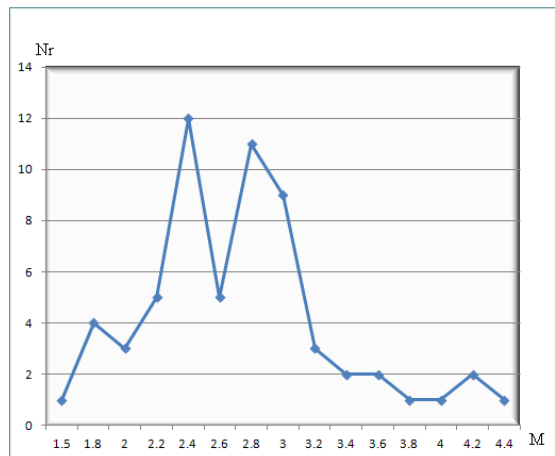
2012 11 19	0413	20.04	41.76	20.32	21	4	0.4	2.3	SHUMAT PESHKOPI
2012 11 19	1741	47.47	41.86	19.31	8	3	0.2	3.2	DETI ADRIATIK- VELIPOJE
2012 11 20	0211	52.28	41.71	20.27	6	4	0.1	2.5	KISHAVEC PESHKOPISE
2012 11 22	0447	28.40	41.88	20.21	12	4	0.1	2.1	5 KM JUG-LINDJE KLOS
2012 11 22	2224	34.87	41.28	20.01	15	8	0.2	2.9	SELBE-TIRANE
2012 11 23	0412	27.54	41.76	20.25	6	3	0.2	2.4	ËIDHEN- PESHKOPISE
2012 11 24	2017	37.86	41.97	20.14	7	3	0.1	2.4	MARESH-PUKE
2012 11 24	2111	45.99	39.71	20.51	7	5	0.1	2.9	KALITHEA GREQI
2012 11 25	2005	56.70	40.86	21.06	6	3	0.1	2.5	LIQENI PRESPA
2012 11 25	2018	43.10	40.89	21.06	3	7	0.5	3.7	LIQENI PRESPE
2012 11 25	2235	11.47	41.90	19.27	6	3	0.1	2.5	ULQIN
2012 11 25	2315	19.94	40.85	21.06	7	3	0.3	2.3	LIQENI PRESPA
2012 11 25	2321	20.79	40.86	21.06	7	3	0.2	2.4	LIQENI PRESPA
2012 11 25	2348	41.67	40.92	21.05	3	8	0.4	3.5	LIQENI PRESPE
2012 11 26	0013	04.53	40.88	21.05	7	2	0.2	1.8	LIQENI PRESPA
2012 11 26	0016	16.73	40.56	21.06	7	3	0.4	2.4	LIQENI PRESPA
2012 11 26	0055	47.05	40.90	21.05	7	2	0.4	1.9	LIQENI PRESPA
2012 11 26	0123	36.86	40.86	21.06	7	3	0.2	2.5	LIQENI PRESPA
2012 11 26	0144	36.88	40.89	21.05	7	2	0.4	2.2	LIQENI PRESPA
2012 11 26	0203	14.66	40.89	21.05	7	2	0.2	1.7	LIQENI PRESPA
2012 11 26	0216	57.88	40.89	21.05	7	2	0.2	1.6	LIQENI PRESPA
2012 11 26	0220	12.35	40.89	21.05	7	2	0.3	1.5	LIQENI PRESPA
2012 11 26	0258	28.26	40.88	21.05	7	2	0.2	1.6	LIQENI PRESPA
2012 11 26	0305	33.53	40.88	21.06	7	2	0.3	1.6	LIQENI PRESPA
2012 11 26	0637	08.10	40.33	19.56	7	8	0.2	3.1	DUKAT VLORE
2012 11 26	1922	25.24	40.93	21.04	10	4	0.1	3.1	LIQENI PRESPE
2012 11 26	2153	15.01	41.66	20.12	7	3	0.2	2.1	9 KM V-L BURREL
2012 11 26	2154	57.65	41.65	20.12	7	3	0.1	2.4	10KM V-L BURREL
2012 11 26	2205	15.12	41.66	20.11	21	9	0.1	4	9 KM V-L BURREL
2012 11 26	2335	43.87	41.66	20.11	24	2	0.1	2.4	9 KM V-L BURREL
2012 11 26	2321	04.37	41.66	20.11	7	4	0.1	2.8	9 KM V-L BURREL
2012 11 27	0017	16.04	41.68	20.16	18	5	0.1	3.2	13KM V-L BURREL
2012 11 27	0200	35.08	41.66	20.11	7	3	0.1	2.6	9 KM V-L BURREL
2012 11 27	0502	36.95	41.63	20.13	20	6	0.1	3	10KM V-L BURREL
2012 11 27	1906	21.83	40.77	19.77	16	8	0.1	3.9	STRUME FIER
2012 11 28	0149	44.42	42.47	20.11	11	8	0.3	4.3	13KM VERI B. CURRI
2012 11 28	0219	04.51	42.49	20.03	6	2	0.1	1.8	B. CURRI
2012 11 29	1218	11.12	42.53	20.18	3	3	0.1	1.9	BELAJ, KOSOVE
2012 11 30	0939	56.04	40.71	19.63	2	7	0.3	3.4	4KM J-L FIER
2012 11 30	1014	53.78	41.44	21.07	2	6	0.1	2.9	MAQEDONI

**STATISTIKA E NGJARJEVE SIZMIKE (STATISTICS OF SEISMIC EVENTS)**

Karakteristikat e pergjithshme (General Characteristics)	Vlerat (Data values)
➤ Ngjarje sizmike të ndodhura në kuadrantin (39-43 V; 18.5-21.5 L)	70
<b>Events occurred within quadrant</b>	
➤ Ngjarje sizmike të ndodhura brenda kufijve shtetërore	37
<b>Events occurred inside state boundaries</b>	
➤ Thellësia mesatare e ngjarjeve sizmike	10
<b>Mean hypocenter depth</b>	
➤ Thellësia maksimale	36
<b>Maximum hypocenter depth</b>	
➤ Magnituda lokale minimale e regjistruar	1.5
<b>Minimum recorded local magnitude</b>	
➤ Magnituda lokale maksimale e regjistruar	4.5
<b>Maximum recorded local magnitude</b>	
➤ Intensiteti sizmik maksimal ne epiqendër	V-VI
<b>Maximum seismic intensity</b>	



Grafiku i shpërndarjes së numurit të ngjarjeve sizmike mujore në vartesi të thellësisë (djathtas) magnitudës (majtas)





Distribution graphic of monthly seismic event number according to depth (right) magnitude (left)

**Zgjidhja e mekanizmit vatror (ZMV)**

Për zgjidhjen e mekanizmit të vatres janë përdorur polaritetet e hyrjeve të para P (Pg/Pn), të përcaktuara mbi format valore që shprehin funksionin kohor të burimit sizmik perkatës, në fushën e shpejtësisë. Janë përdorur regjistrimet në bandë të gjere frekuenciale (0.2 – 30 Hz), të cilat janë modeluar nëpërmjet filtrave band-pass: 1.0-5.0 Hz, 2.0-10 Hz dhe 0.1-3.0 Hz. Për të arritur zgjidhjen optimale janë përdorur edhe raporti i amplitudave të valëve volumore AMPS<sub>g</sub>/AMPP<sub>g</sub>, ( AMPS<sub>n</sub>/AMPP<sub>n</sub>), të cilat janë lexuar mbi komponentet e transformuara nga sistemi koordinativ gjeografik në atë sferik (vertikal, radial dhe transversal). Eshhtë realizuar një kerkim në rrjetin koordinativ me interval 5.0 – 10 grad, duke vendosur kriteret për gabimin në polaritetet e përdorura. Për zgjidhjen përfundimtare është përdorur programi FOCMEC (Snoke. et al., 1984), ndërsa për të optimizuar zgjidhjen është përdorur programi HASH (Hardebeck & Shearer, 2003).

**Focal Mechanism Solution (FMS)**

For focal mechanism solution, the first onset polarity of P (Pg/Pn) are used, picked on the source time function respective waveforms. This is done for the velocity field recordings. Broadband recordings are used within the frequency range 0.2-30 Hz, witch are modeled by band-pass filtering in the ranges: 1.0-5.0 Hz, 2.0-10 Hz and 0.1-3.0Hz. To achieve the optimum solution also the amplitude ratio of the type AMPS<sub>g</sub>/AMPP<sub>g</sub>, ( AMPS<sub>n</sub>/AMPP<sub>n</sub>), are used. These amplitudes are red on rotated and corrected components, from the geographic system to the spherical one (vertical, radial and transversal). A grid search at the 5.0-10 degree cells interval has been applied, setting first the allowed error threshold for polarity readings. For final solution the FOCMEC program has been used (Snoke. et al., 1984). Whereas, to optimize the solution HASHroutine(Hardebeck& Shearer, 2003), has been applied as well.

Identifikimi i ngjarjes (Event ID)	Parametrat e burimit (Source paremeters)	Magnituda (Magnitude)	Parametrat e Mekanizmit (Focal Mechanism parameters)	Tipi (Focal Type)
201210031845	40.10 (V) 19.81 (L) 9 (km)	3.8	P1: 104, 76, 75 P2: 332, 21, 136 T: 355, 57 P: 206, 30	
201210301047	41.45 (V) 20.02 (L) 15 (km)	3.5	P1: 356, 11, -62 P2: 148, 80, -95 T: 242, 35 P: 206, 30	

Harta e epiqendrave të tërmeteve

