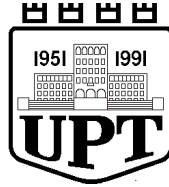


BULETINI I TËRMETEVE TË RRJETIT SIZMOLOGJIK SHQIPTAR

Shkurt 2014

PARAMETRIC DATA
AND ALBANIAN'S EARTHQUAKE ANALYSIS
February 2014



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

BULETINI MUJOR I RRJETIT SIZMOLOGJIK
TË SHQIPERISË

Shkurt 2014

MONTHLY BULLETIN OF THE ALBANIAN
SEISMOLOGICAL NETWORK

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Tiranë, 2014

INFORMACION I PERGJITSEM**Prezantim**

The Albanian Seismological Network 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: 39.0° - 43.0° N and 18.5° - 21.5° 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 macro-seismic 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

Parametrat e vlerësuar i referohen kuadrantit gjeografik të kufizuar nga koordinatat: 39.0° - 43.0° V dhe 18.5° - 21.5° 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 secilen 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**

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

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 përbërë nga punonjësit kërkues shkencor **Rrapo Ormeni dhe Edmond Dushi** si edhe ata ndihmës shkencor **Ardian Minarolli, Ervin Kasa dhe Olgert Gjuzi**.

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 & Olgert Gjuzi**.

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)
Nr	Numuri i stacioneve (station's number)	Nr. Stacioneve te perdorur ne lokalizim (No. Of used stations)
STAT	Kodi i stacionit (station code)	Kodi nderkombetar qe perdoret per te identifikuar stacionin perkates sizmologjik (tre karaktere) (international stn code)
SP	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
IPHASW	Faza valore sizmike (seismic wave phase)	tipi i valës P (P_g / P_n) ose S (S_g / S_n) (wave phase type)
D	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)
HRMM SECON	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
AZIMU	Kendi azimutal (station-source azimuth angle)	Azimuti stacion- vater termeti Station-focus azimuthal angle
RES	Diferenca kohore (time residual)	Ndryshimi ndërmjet kohës teorike të llogaritur nga modeli dhe kohës faktike, nga regjistrimi Time residuals between calculated and observed times
DIS	Largesia epiqendrore (epicentral distance)	Largesia horizontale epiqender-stacion Distance from epicenter to the station
DUR	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 TËAFËRTA (NEAR EARTHQUAKE)

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	01	1415	13.75	41.12	20.14	12	ASN	5	0.1	2.3	ELBASAN
GAP=132					hor.err=1km			ver.err=1KM		-ALBANIA		
STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md		
TIR	SZ	IPG		1415	20.28	319	-0.2	34	14	2.2		
TIR	SE	ISG		1415	25.58	319	0.1	34				
PHP	SZ	IPG		1415	21.11	21	0.0	68	19	2.5		

PHP	SE	ISG	1415	35.24	21	-0.1	68
TPE	SZ	IPG	1415	30.68	187	0.5	92
TPE	SE	ISG	1415	42.48	187	-0.1	92
PUK	SZ	IPG	1415	32.49	349	0.1	105
PUK	SE	ISG	1415	46.30	349	0.1	105
FNA	SZ	IPG	1415	33.65	109	0.2	111
FNA	SE	ISG	1415	48.18	109	0.1	111

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	02	0539	18.40				ASN				TIR
GAP=					hor.err=km			ver.err=KM				
STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md		
TIR	SZ	IPG		0539	18.40							
TIR	SE	ISG		0539	24.01							

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	02	0857	03.02				ASN				PHP
GAP=					hor.err=km			ver.err=KM				
STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md		
PHP	SZ	IPG		0857	03.02							
PHP	SE	ISG		0857	05.07							

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	02	1938	22.42				ASN				TIR
GAP=					hor.err=km			ver.err=KM				
STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md		
TIR	SZ	IPG		1938	22.42							
TIR	SE	ISG		1938	23.86							

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	03	0308	35.90	37.87	20.53	7	ASN	7	0.9	5.7	GREECE
GAP=313					hor.err=8km			ver.err=5KM				
STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md		
SRN	SZ	IPN		0309	14.87	349	-0.4	227	560	5.7		
SRN	SE	ISN		0309	44.88	349	0.2	227				
TPE	SZ	IPN		0309	21.75	351	-0.7	272	561	5.7		
TPE	SE	ISN		0309	55.38	351	0.8	272				
VLO	SZ	IPN		0309	25.45	344	0.2	301				

VLO	SE	ISN	0310	03.11	344	0.5	301		
TIR	SZ	IPN	0309	35.91	352	-0.4	390	561	5.7
TIR	SE	ISN	0310	18.92	352	-0.6	390		
PHP	SZ	IPN	0309	40.07	359	-0.4	423		
PHP	SE	ISN	0310	29.62	359	-1.3	423		
PUK	SZ	IPN	0309	45.09	354	-0.4	466		
PUK	SE	ISN	0310	38.91	354	-0.9	466		
BCI	SZ	IPN	0309	50.03	356	-1.1	500		
BCI	SE	ISN	0310	41.68	356	-2.2	500		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	06	0205	02.39	41.12	20.12	14	ASN	6	0.1	2.8	ELBASAN-ALBANIA
					hor.err=1km							ver.err=4KM
GAP=134												

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		0205	08.49	319	-0.2	33	14	2.2
TIR	SE	ISG		0205	14.70	319	0.4	33		
PHP	SZ	IPG		0205	14.48	22	-0.2	68	19	2.5
PHP	SE	ISG		0205	23.43	22	-0.5	68		
PUK	SZ	IPG		0205	20.14	350	0.1	103		
PUK	SE	ISG		0205	35.20	350	0.1	103		
FNA	SZ	IPG		0205	22.25	109	0.2	113		
FNA	SE	ISG		0205	37.61	109	0.5	113		
BCI	SZ	IPN		0205	26.32	358	0.1	138		
BCI	SE	ISN		0205	43.96	358	-0.2	138		
SRN	SZ	IPN		0205	27.02	185	0.6	139		
SRN	SE	ISN		0205	43.50	185	-0.8	139		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	06	0814	23.96	41.44	20.59	13	ASN	5	0.1	2.8	EAST TUCEP
					hor.err=1km							ver.err=1KM
GAP=160												

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0814	30.04	334	0.1	29	27	2.7
PHP	SE	ISG		0814	34.21	334	0.2	29		
TIR	SZ	IPG		0814	35.30	261	-0.1	62	27	2.7
TIR	SE	ISG		0814	43.99	261	0.0	62		
PUK	SZ	IPG		0814	40.13	319	-0.2	88		
PUK	SE	ISG		0814	51.62	319	0.1	88		
FNA	SZ	IPG		0814	41.76	137	0.1	98		
FNA	SE	ISG		0814	54.57	137	0.2	98		
BCI	SZ	IPN		0814	44.03	337	0.3	111	29	2.8
BCI	SE	ISN		0814	58.41	337	-0.1	111		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2014 02 06 1805 44.31 38.08 20.47 2 ASN 6 0.8 4.4 GREECE
GAP=335 hor.err=4km ver.err=6KM

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
SRN	SZ	IPN		1806	19.14	342	0.3	203	174	4.4
SRN	SE	ISN		1806	44.21	342	0.2	203		
TPE	SZ	IPN		1806	27.78	350	0.3	248	174	4.4
TPE	SE	ISN		1806	59.31	350	0.2	248		
TIR	SZ	IPN		1806	40.38	322	-0.4	365	176	4.4
TIR	SE	ISN		1807	11.02	322	-0.2	365		
PHP	SZ	IPN		1806	44.32	351	-0.3	399		
PHP	SE	ISN		1807	25.06	351	-1.7	399		
PUK	SZ	IPN		1806	45.36	356	0.8	441		
PUK	SE	ISN		1807	27.01	356	-0.8	441		
BCI	SZ	IPN		1806	54.16	359	-1.6	476		
BCI	SE	ISN		1807	50.36	359	0.7	476		

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter
2014 02 06 1920 57.76 38.54 21.49 1 ASN 7 0.7 4.6 GREECE
GAP=305 hor.err=3km ver.err=5KM

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
SRN	SZ	IPN		1921	31.17	291	-0.3	191	216	4.6
SRN	SE	ISN		1921	57.49	291	0.6	191		
TPE	SZ	IPN		1921	37.56	320	-0.3	232	218	4.6
TPE	SE	ISN		1922	10.06	320	0.3	232		
VLO	SZ	IPN		1921	39.28	329	-0.2	274	218	4.6
VLO	SE	ISN		1922	20.17	329	0.8	274		
TIR	SZ	IPN		1921	39.55	322	-0.5	340	218	4.6
TIR	SE	ISN		1922	16.98	322	-0.7	340		
PHP	SZ	IPN		1921	56.79	341	0.6	354		
PHP	SE	ISN		1922	36.39	341	-0.8	354		
PUK	SZ	IPN		1922	01.69	340	0.6	411		
PUK	SE	ISN		1922	46.08	340	0.9	411		
BCI	SZ	IPN		1922	05.69	342	-0.6	441		
BCI	SE	ISN		1922	54.69	342	-1.1	441		

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter
2014 02 07 0121 49.61 38.17 21.71 12 ASN 76 0.9 4.6 GREECE
GAP=323 hor.err=4km ver.err=7KM

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
SRN	SZ	IPN		0122	30.70	308	-0.6	240	216	4.6
SRN	SE	ISN		0122	56.11	308	0.8	240		
TPE	SZ	IPN		0121	31.32	333	-0.6	277	216	4.6

TPE	SE	ISN	0122	24.53	333	0.4	277		
VLO	SZ	IPN	0121	37.69	329	0.6	318	218	4.6
VLO	SE	ISN	0122	26.78	329	0.7	318		
TIR	SZ	IPN	0121	40.42	324	-0.6	386	219	4.6
TIR	SE	ISN	0122	36.89	324	-0.5	386		
PHP	SZ	IPN	0121	51.46	345	0.5	405		
PHP	SE	ISN	0122	44.69	345	0.6	405		
PUK	SZ	IPN	0121	58.79	341	0.7	457		
PUK	SE	ISN	0122	49.60	341	-0.8	457		
BCI	SZ	IPN	0122	01.11	344	-0.9	486		
BCI	SE	ISN	0122	53.16	344	1.6	486		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	07	1342	05.19	38.57	21.31	7	ASN	6	1.1	4.2	GREECE
GAP=315					hor.err=4km		ver.err=7KM					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
SRN	SZ	IPN		1342	33.41	323	-1.5	184	134	4.2
SRN	SE	ISN		1342	59.07	323	-0.8	184		
TPE	SZ	IPN		1342	41.89	331	-0.9	222		
TPE	SE	ISN		1343	14.84	331	2.8	222		
VLO	SZ	IPN		1342	48.92	325	0.7	262		
VLO	SE	ISN		1343	20.17	325	0.2	262		
TIR	SZ	IPN		1342	59.42	339	1.1	332		
TIR	SE	ISN		1343	33.05	339	-3.4	332		
PHP	SZ	IPN		1343	07.87	349	3.3	335		
PUK	SZ	IPN		1343	05.47	344	1.1	404		
BCI	SZ	IPN		1343	09.38	347	-1.2	404		
BCI	SE	ISN		1344	00.80	347	0.7	434		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	07	1618	29.32				ASN				PHP
GAP=					hor.err=km		ver.err=KM					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		1618	29.32					
PHP	SE	ISG		1618	34.29					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	07	0351	01.42				ASN				PHP
GAP=					hor.err=km		ver.err=KM					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0351	01.42					

PHP SE ISG 0351 05.36

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2014 02 07 0357 15.86

GAP=

hor.err=km

ASN

PHP

ver.err=KM

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
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PHP SZ IPG 0357 15.86

PHP SE ISG 0357 19.62

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2014 02 09 0018 02.17

GAP=186

hor.err=1km

19

ASN 7 0.1 3.4

KARDHIQ-GJIROKAS

ver.err=1KM

-ALBANIA

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
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TPE SZ IPG 0018 07.38 342 -0.1 20 27 2.8

TPE SE ISG 0018 10.76 342 0.1 20 29 2.8

SRN SZ IPG 0018 08.19 196 0.0 27 29 2.8

SRN SE ISG 0018 12.76 196 -0.1 27 36 3.1

VLO SZ IPG 0018 13.65 308 0.0 63 60 3.5

VLO SE ISG 0018 22.70 308 0.0 63 55 3.5

TIR SZ IPN 0018 26.58 353 0.5 137 44 3.4

TIR SE ISN 0018 43.19 353 0.8 137 82 3.9

PHP SZ IPN 0018 32.88 9 -0.1 176 249

PHP SE ISN 0018 54.77 9 0.9 176 249

PUK SZ IPN 0018 37.46 356 -0.7 213

PUK SE ISN 0019 04.22 356 0.5 213

BCI SZ IPN 0018 42.38 0 0.3 249

BCI SE ISN 0019 11.71 0 -0.1 249

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2014 02 11 0040 30.08

GAP=252

hor.err=2km

17

ASN 5 0.1 2.8

DARSHE-TIRANE

ver.err=1KM

-ALBANIA

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
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TIR SZ IPG 0040 34.19 290 0.1 20 25 2.6

TIR SE ISG 0040 37.25 290 0.0 20 27 2.8

PHP SZ IPG 0040 40.18 38 0.0 58 28 2.9

PHP SE ISG 0040 47.85 38 0.0 58 90

PUK SZ IPG 0040 45.25 352 0.2 90 90

PUK SE ISG 0040 56.09 352 -0.1 90 90

BCI SZ IPG 0040 50.82 1 0.1 90 90

BCI SE ISG 0041 05.86 1 -0.2 90 90

SRN SZ IPG 0040 56.66 182 -0.3 90

SRN SE ISG 0041 16.13 182 -0.8 90

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter
 2014 02 11 0234 42.33 41.24 20.06 13 ASN 3 0.2 2.4 KRRAB-TIRANE
 GAP=274 hor.err=2km ver.err=1KM -ALBANIA

STAT SP IPHASW D HRMM SECON AZIMU RES DIS DUR Md
 TIR SZ IPG 0234 47.02 306 0.2 20 17 2.3
 TIR SE ISG 0234 50.00 306 0.1 20
 PHP SZ IPG 0234 52.97 32 0.1 58 20 2.5
 PHP SE ISG 0235 01.17 32 0.2 58
 PUK SZ IPG 0234 58.25 351 0.2 90
 PUK SE ISG 0235 10.65 351 -0.1 90

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter
 2014 02 11 0240 44.45 41.18 20.08 14 ASN 3 0.1 2.5 ELBASAN-ALBANIA
 GAP=288 hor.err=1km ver.err=3KM

STAT SP IPHASW D HRMM SECON AZIMU RES DIS DUR Md
 TIR SZ IPG 0240 49.94 316 0.1 26 19 2.4
 TIR SE ISG 0240 53.86 316 -0.1 26
 PHP SZ IPG 0240 56.02 28 0.1 63 23 2.7
 PHP SE ISG 0241 04.80 28 0.1 63
 PUK SZ IPG 0241 01.66 351 -0.2 97
 PUK SE ISG 0241 14.66 351 -0.1 97

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter
 2014 02 11 2145 41.70 ASN PHP
 GAP= hor.err=km ver.err=KM

STAT SP IPHASW D HRMM SECON AZIMU RES DIS DUR Md
 PHP SZ IPG 2145 41.70
 PHP SE ISG 2145 44.03

Y M D HM Sec Lat Long Dep Net Nr Rms Mag Epicenter
 2014 02 12 2020 31.18 40.71 19.76 3 ASN 5 0.1 2.9 KURJAN-FIER
 GAP=144 hor.err=1km ver.err=2KM -ALBANIA

STAT SP IPHASW D HRMM SECON AZIMU RES DIS DUR Md
 VLO SZ IPG 2020 38.78 220 0.1 35 33 2.9
 VLO SE ISG 2020 43.81 220 -0.1 35
 TPE SZ IPG 2020 41.47 155 0.0 51 37 2.9

TPE	SE	ISG	2020	48.73	155	0.0	51		
TIR	SZ	IPG	2020	45.05	7	0.1	71	42	3.1
TIR	SE	ISG	2020	54.73	7	0.0	71		
PHP	SZ	IPN	2020	53.57	27	-0.1	122		
PHP	SE	ISN	2021	10.14	27	0.0	122		
PUK	SZ	IPN	2020	58.12	4	0.0	148		
PUK	SE	ISN	2021	17.99	4	0.1	148		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	14	0338	29.59	38.05	20.32	14	ASN	7	0.5	4.9	GREECE
				GAP=307		hor.err=5km			ver.err=5KM			

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
SRN	SZ	IPN		0339	04.39	353	0.3	205	268	4.9
SRN	SE	ISN		0339	30.35	353	0.4	205		
TPE	SZ	IPN		0339	10.15	354	0.1	250	265	4.9
TPE	SE	ISN		0339	40.91	354	0.3	250		
VLO	SZ	IPN		0339	13.31	346	0.1	275	227	4.8
VLO	SE	ISN		0339	46.30	346	0.1	278		
TIR	SZ	IPN		0339	13.67	355	-0.8	368		
TIR	SE	ISN		0339	47.08	355	0.2	338		
PHP	SZ	IPN		0339	24.93	1	0.2	403		
PHP	SE	ISN		0340	08.02	1	0.9	403		
PUK	SZ	IPN		0339	29.48	356	-1.1	444		
PUK	SE	ISN		0340	13.46	356	-2.2	444		
BCI	SZ	IPN		0339	38.70	358	-1.8	479		
BCI	SE	ISN		0340	31.60	358	-2.1	479		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	14	0312	42.90				ASN				PHP
				GAP=		hor.err=km			ver.err=KM			

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0312	42.90					
PHP	SE	ISG		0312	46.01					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	14	0426	40.34				ASN				PHP
				GAP=		hor.err=km			ver.err=KM			

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0426	40.34					
PHP	SE	ISG		0426	44.69					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	14	0350	56.19	41.33	20.33	7	ASN 3	0.1	2.2		NESHITA-ELBASAN -ALBANIA
					hor.err=1km				ver.err=12KM			

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		0351	03.55	273	-0.1	39	15	2.2
TIR	SE	ISG		0351	09.22	273	0.1	39		
PHP	SZ	IPG		0351	03.92	12	0.2	40	16	2.2
PHP	SE	ISG		0351	09.30	12	-0.1	40		
PUK	SZ	IPG		0351	11.62	336	-0.2	87		
PUK	SE	ISG		0351	23.57	336	0.1	87		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	14	2333	00.14	41.32	20.35	10	ASN 4	0.1	2.4		TIRANE-ALBANIA
					hor.err=1km				ver.err=3KM			

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		2333	07.42	10	0.0	40	16	2.2
PHP	SE	ISG		2333	13.08	10	0.0	40		
TIR	SZ	IPG		2333	07.94	273	0.1	40	14	2.2
TIR	SE	ISG		2333	13.25	273	-0.1	40		
PUK	SZ	IPG		2333	15.19	335	-0.2	87	21	2.5
PUK	SE	ISG		2333	27.66	335	0.1	87		
BCI	SZ	IPG		2333	21.34	349	-0.3	117	36	3
BCI	SE	ISG		2333	36.75	349	0.2	117		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	14	2343	11.38	41.27	20.42	10	ASN 3	0.1	2.0		LLANGE-LIBRAZHD -ALBANIA
					hor.err=2km				ver.err=3KM			

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		2343	20.12	1	0.1	45	12	2.0
PHP	SE	ISG		2343	25.17	1	-0.1	45		
TIR	SZ	IPG		2343	20.57	280	0.1	47	10	1.9
TIR	SE	ISG		2343	26.38	280	0.3	47		
PUK	SZ	IPG		2343	27.92	333	-0.2	95		
PUK	SE	ISG		2343	41.89	333	-0.4	95		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	15	0731	15.36	38.35	21.26	15	ASN 7	0.5	4.8		GREECE
					hor.err=5km				ver.err=5KM			

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
SRN	SZ	IPN		0731	47.19	328	-0.8	201	228	4.8
SRN	SE	ISN		0732	13.51	328	0.9	201		
TPE	SZ	IPN		0731	53.08	334	0.2	240	250	4.9
TPE	SE	ISN		0732	21.47	334	0.2	240		
VLO	SZ	IPN		0731	56.34	318	-1.2	280		
VLO	SE	ISN		0732	30.41	318	-0.3	280		
TIR	SZ	IPN		0732	07.61	341	-0.8	351		
TIR	SE	ISN		0732	46.02	341	-1.6	351		
PHP	SZ	IPN		0732	12.02	350	0.8	376		
PHP	SE	ISN		0732	52.63	350	-0.4	376		
PUK	SZ	IPN		0732	16.53	345	-1.2	424		
PUK	SE	ISN		0733	03.58	345	-0.9	424		
BCI	SZ	IPN		0732	21.39	348	-0.4	456		
BCI	SE	ISN		0733	10.55	348	-1.1	456		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	16	1944	25.00	40.56	19.95	13	ASN	7	0.3	2.8	TERPAN BERAT
				hor.err=1km				ver.err=1KM		-ALBANIA		

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TPE	SZ	IPG		1944	30.97	170	0.1	30	27	2.8
TPE	SE	ISG		1944	35.47	170	-0.1	30		
VLO	SZ	IPG		1944	32.86	255	0.2	40	30	2.8
VLO	SE	ISG		1944	38.39	255	0.0	40		
SRN	SZ	IPG		1944	38.78	176	0.0	76	31	2.9
SRN	SE	ISG		1944	48.99	176	0.0	76		
TIR	SZ	IPG		1944	39.41	356	-0.1	87	29	2.9
TIR	SE	ISG		1944	52.45	356	-0.8	87		
PHP	SZ	IPN		1944	47.86	18	0.1	131		
PHP	SE	ISN		1945	04.75	18	0.0	131		
PUK	SZ	IPN		1944	52.67	359	-0.3	164		
PUK	SE	ISN		1945	14.34	359	-0.4	164		
BCI	SZ	IPN		1944	58.61	2	0.3	200		
BCI	SE	ISN		1945	24.24	2	0.1	200		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	16	2225	17.60	41.93	20.29	7	ASN	4	0.2	2.6	ARREN, KUKES
GAP=175				hor.err=1km				ver.err=1KM		-ALBANIA		

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		2225	23.50	155	0.1	30	25	2.6
PHP	SE	ISG		2225	27.60	155	-0.1	30		
PUK	SZ	IPG		2225	24.32	292	0.1	35	24	2.6
PUK	SE	ISG		2225	29.16	292	-0.1	35		
BCI	SZ	IPG		2225	27.19	340	0.1	52	36	2.9

BCI	SE	ISG	2225	34.29	340	0.0	52
TIR	SZ	IPG	2225	30.86	209	-0.1	74
TIR	SE	ISG	2225	41.00	209	0.2	74

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	17	0045	34.50	40.09	20.83	7	ASN	5	0.3	2.7	GREECE
				hor.err=1km			ver.err=1KM					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TPE	SZ	IPG		0045	47.47	289	0.2	74	24	2.6
TPE	SE	ISG		0045	57.55	289	0.0	74		
SRN	SZ	IPG		0045	48.29	252	0.5	75	27	2.6
SRN	SE	ISG		0045	57.99	252	0.1	75		
IGT	SZ	IPG		0045	48.00	215	0.0	76		
IGT	SE	ISG		0045	58.06	215	0.1	76		
VLO	SZ	IPN		0045	56.04	291	0.3	121		
VLO	SE	ISN		0046	11.67	291	-0.2	121		
PHP	SZ	IPN		0046	05.44	350	0.1	180		
PHP	SE	ISN		0046	29.34	350	0.6	180		
PUK	SZ	IPN		0046	12.85	341	-0.2	230		
PUK	SE	ISN		0046	42.27	341	0.1	230		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	18	1124	27.55	41.64	19.82	18	asn	4	0.4	3.0	LAC-ALBANIA
GAP=190				hor.err=2km			ver.err=1KM					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		1124	34.19	174	0.0	34	29	2.8
TIR	SE	ISG		1124	39.85	174	0.5	34		
PUK	SZ	IPG		1124	36.00	7	0.1	44	33	3.0
PUK	SE	ISG		1124	42.17	7	-0.1	44		
PHP	SZ	IPG		1124	36.72	85	-0.3	52	35	3.0
PHP	SE	ISG		1124	44.49	85	0.2	52		
BCI	SZ	IPG		1124	41.86	14	0.2	82		
BCI	SE	ISG		1124	53.52	14	0.3	82		
SRN	SZ	IPN		1125	00.90	175	0.5	175		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	18	1125	49.26	41.67	19.85	7	ASN	4	0.3	2.2	N-E LAC
GAP=186				hor.err=3km			ver.err=1KM			-ALBANIA		

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		1125	56.48	178	0.3	36	15	2.2
TIR	SE	ISG		1126	00.93	178	-0.3	36		

PUK	SZ	IPG	1125	57.37	4	0.4	41
PUK	SE	ISG	1126	02.26	4	-0.4	41
PHP	SZ	IPG	1125	58.01	88	-0.3	49
PHP	SE	ISG	1126	05.32	88	0.2	49
BCI	SZ	IPG	1126	03.74	13	0.2	79
BCI	SE	ISG	1126	14.04	13	0.1	79

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	19	0921	30.53	41.41	20.00	19	ASN 4	0.1	2.7	DAJT, TIRANE	
GAP=190					hor.err=2km		ver.err=2KM		-ALBANIA			

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		0921	34.83	240	0.1	13	22	2.5
TIR	SE	ISG		0921	37.70	240	-0.1	13		
PHP	SZ	IPG		0921	39.69	50	0.0	48	23	2.7
PHP	SE	ISG		0921	46.62	50	0.0	48		
PUK	SZ	IPG		0921	43.29	353	-0.2	71		
PUK	SE	ISG		0921	53.25	353	-0.1	71		
BCI	SZ	IPG		0921	49.15	3	0.1	107		
BCI	SE	ISG		0922	03.19	3	0.0	107		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	19	2354	50.56	40.69	19.73	10	ASN 7	0.3	2.8	KURJAN-FIER	
GAP=146					hor.err=1km		ver.err=1KM		-ALBANIA			

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
VLO	SZ	IPG		2354	56.57	220	-0.1	32	27	2.7
VLO	SE	ISG		2355	01.46	220	0.1	32		
TPE	SZ	IPG		2354	59.51	251	-0.2	50	25	2.7
TPE	SE	ISG		2355	06.85	251	0.1	50		
TIR	SZ	IPG		2355	04.05	8	-0.1	74		
TIR	SE	ISG		2355	13.80	8	-0.1	74		
SRN	SZ	IPG		2355	06.92	165	0.2	93		
SRN	SE	ISG		2355	19.87	165	0.2	93		
PHP	SZ	IPG		2355	12.95	28	0.2	125		
PHP	SE	ISG		2355	29.29	28	0.0	125		
IGT	SZ	IPN		2355	14.98	158	0.2	138		
IGT	SE	ISN		2355	32.66	158	0.2	138		
PUK	SZ	IPN		2355	16.49	5	-0.2	151		
PUK	SE	ISN		2355	36.48	5	-0.1	151		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	22	1142	26.53	40.82	21.22	6	ASN 6	0.1	3.8	GREECE	
GAP=116					hor.err=1km		ver.err=1KM					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		1142	46.80	327	-0.3	116	78	3.7
PHP	SE	ISG		1143	02.38	327	0.2	116		
TPE	SZ	IPG		1142	46.89	241	-0.6	118	102	3.9
TPE	SE	ISG		1143	02.40	241	-0.1	118		
TIR	SZ	IPG		1142	49.09	298	0.1	128	93	3.8
TIR	SE	ISG		1143	06.08	298	0.1	128		
VLO	SZ	IPN		1142	53.11	256	-0.2	150	79	3.7
VLO	SE	ISN		1143	12.66	256	0.1	150		
PUK	SZ	IPN		1142	56.93	322	-0.1	176		
PUK	SE	ISN		1143	19.57	322	0.1	176		
BCI	SZ	IPN		1143	00.53	332	0.2	179		
BCI	SE	ISN		1143	25.69	332	0.1	179		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	22	1208	37.41	40.76	21.32	2	ASN	6	0.1	3	GREECE
GAP=241					hor.err=1km		ver.err=2KM					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TPE	SZ	IPG		1208	59.33	246	-0.2	122	40	3.1
TPE	SE	ISG		1209	16.22	246	0.2	122		
PHP	SZ	IPN		1208	58.64	325	-1.3	126	35	3.0
PHP	SE	ISN		1209	16.65	328	-0.4	126		
TIR	SZ	IPN		1209	02.24	299	0.0	138		
TIR	SE	ISN		1209	20.70	299	0.0	138		
VLO	SZ	IPN		1209	05.48	259	0.0	158		
VLO	SE	ISN		1209	26.51	259	0.0	158		
PUK	SZ	IPN		1209	09.29	321	-0.6	185		
PUK	SE	ISN		1209	34.58	321	-0.3	185		
BCI	SZ	IPN		1209	13.28	331	0.2	206		
BCI	SE	ISN		1209	40.22	331	0.1	206		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	22	1754	50.74	41.03	20.17	18	ASN	5	0.1	2.7	GJINAR-ELBASAN
GAP=174					hor.err=2km		ver.err=2KM					-ALBANIA

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		1754	58.30	323	-0.1	43	24	2.7
TIR	SE	ISG		1755	05.74	323	0.1	43		
PHP	SZ	IPG		1755	04.24	16	0.2	75	26	2.8
PHP	SE	ISG		1755	14.99	16	-0.1	75		
PUK	SZ	IPG		1755	05.79	190	-0.2	83		
PUK	SE	ISG		1755	17.32	190	0.1	83		
TPE	SZ	IPG		1755	09.87	349	-0.2	114		
TPE	SE	ISG		1755	25.62	349	0.1	114		

BCI	SZ	IPN	1755	15.56	357	-0.2	147
BCI	SE	ISN	1755	35.18	357	0.1	147

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	23	0237	40.60	40.60	19.85	3	ASN	7	0.6	2.9	ARANIT-BALLSH -ALBANIA
				hor.err=1km			ver.err=3KM					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
VLO	SZ	IPG		0237	44.20	245	-0.5	34	13	2.0
VLO	SE	ISG		0237	49.85	245	-0.1	34		
TPE	SZ	IPG		0237	44.85	158	-0.5	37	14	2.1
TPE	SE	ISG		0237	50.13	158	-0.4	37		
TIR	SZ	IPG		0237	52.67	0	-0.6	83	24	2.6
TIR	SE	ISG		0238	05.89	0	-0.9	83		
IGT	SZ	IPG		0238	01.33	160	0.6	126	34	2.8
IGT	SE	ISG		0238	18.54	160	0.7	126		
PHP	SZ	IPG		0238	00.88	22	0.2	130	34	3
PHP	SE	ISG		0238	17.73	22	0.4	130		
PUK	SZ	IPN		0238	05.83	1	-0.6	160		
PUK	SE	ISN		0238	28.28	1	0.2	160		
BCI	SZ	IPN		0238	11.79	5	-0.6	197		
BCI	SE	ISN		0238	38.38	5	0.1	197		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	23	0255	56.66	40.99	21.41	13	ASN	5	0.3	2.8	MACEDONIA
GAP=275				hor.err=3km			ver.err=9KM					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0256	17.17	314	0.2	115	28	2.8
PHP	SE	ISG		0256	32.58	314	0.3	115		
TIR	SZ	IPN		0256	20.34	288	-0.4	139	28	2.8
TIR	SE	ISN		0256	38.31	288	-0.5	139		
TPE	SZ	IPN		0256	21.56	239	0.1	143		
TPE	SE	ISN		0256	40.32	239	0.3	143		
PUK	SZ	IPN		0256	26.29	314	-0.3	175		
PUK	SE	ISN		0256	49.15	314	0.1	175		
BCI	SZ	IPN		0256	30.91	324	1.2	192		
BCI	SE	ISN		0256	54.09	324	0.3	192		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	23	0855	54.32	41.05	20.05	8	ASN	4	0.1	2.5	SOUTH-ELBASAN -ALBANIA
GAP=174				hor.err=2km			ver.err=2KM					

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
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TIR	SZ	IPG	0856	01.49	335	-0.1	36	18	2.3
TIR	SE	ISG	0856	06.99	335	0.1	36		
PHP	SZ	IPG	0856	07.77	24	-0.4	77	21	2.5
PHP	SE	ISG	0856	19.95	24	-0.2	77		
PUK	SZ	IPG	0856	14.28	354	-0.1	110	25	2.6
PUK	SE	ISG	0856	29.12	354	0.3	110		
BCI	SZ	IPN	0856	20.52	0	0.1	145		
BCI	SE	ISN	0856	40.18	0	0.2	145		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	23	0952	15.47	41.95	20.75	8	ASN	3	0.2	2.5	KOSOVO
				GAP=311			hor.err=3km			ver.err=9KM		

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0952	23.34	222	0.4	40	18	2.3
PHP	SE	ISG		0952	28.35	222	-0.1	40		
PUK	SZ	IPG		0952	28.08	279	-0.3	72	21	2.5
PUK	SE	ISG		0952	38.15	279	0.1	72		
BCI	SZ	IPG		0952	28.33	310	-0.3	73	25	2.6
BCI	SE	ISG		0952	38.99	310	0.4	73		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	25	0714	32.59	41.14	20.12	12	ASN	6	0.1	2.9	N-E ELBASAN
				GAP=163			hor.err=1km			ver.err=1KM		-ALBANIA

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TIR	SZ	IPG		0714	38.83	318	0.1	31	34	2.9
TIR	SE	ISG		0714	43.36	318	0.0	31		
PHP	SZ	IPG		0714	44.63	23	0.0	66	33	2.9
PHP	SE	ISG		0714	53.70	23	0.0	66		
VLO	SZ	IPG		0714	48.79	216	-0.1	91	34	3
VLO	SE	ISG		0715	01.17	216	0.0	91		
TPE	SZ	IPG		0714	49.51	186	0.1	94		
TPE	SE	ISG		0715	02.13	186	0.0	94		
PUK	SZ	IPG		0714	50.64	350	-0.1	102		
PUK	SE	ISG		0715	04.35	350	0.1	102		
BCI	SZ	IPN		0714	56.92	359	0.6	136		
BCI	SE	ISN		0715	14.38	359	0.2	136		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	25	2139	23.65	40.59	19.73	10	ASN	5	0.1	2.7	BALLSH-ALBANIA
				GAP=148			hor.err=1km			ver.err=2KM		

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
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VLO	SZ	IPG	2139	28.36	273	-0.1	24	13	2.0
VLO	SE	ISG	2139	32.07	273	0.0	24		
TPE	SZ	IPG	2139	31.31	143	0.1	40	14	2.1
TPE	SE	ISG	2139	36.85	143	-0.1	40		
IGT	SZ	IPG	2139	46.37	156	0.2	128	34	2.8
IGT	SE	ISG	2140	03.02	156	-0.1	128		
PHP	SZ	IPN	2139	47.51	25	0.1	136	34	3
PHP	SE	ISN	2140	05.19	25	-0.1	136		
PUK	SZ	IPN	2139	51.30	4	-0.4	162		
PUK	SE	ISN	2140	12.85	4	0.2	162		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	27	0349	28.17	41.84	20.55	30	ASN	2	0.2	1.6	NORTH-PESHKOPI GAP=311
						hor.err=3km						ver.err=9KM -ALBANIA

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0349	34.63	209	0.2	20	6	1.6
PHP	SE	ISG		0349	39.23	209	-0.1	20		
PUK	SZ	IPG		0349	39.48	292	-0.3	59		
PUK	SE	ISG		0349	48.21	292	0.1	59		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	27	0447	10.52	41.57	20.12	2	ASN	4	0.2	2.5	VINJOLL-BURREL GAP=155
						hor.err=1km						ver.err=2KM -ALBANIA

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0447	16.30	65	-0.2	29	12	2.0
PHP	SE	ISG		0447	20.79	65	-0.1	29		
PUK	SZ	IPG		0447	21.02	340	0.2	55	22	2.5
PUK	SE	ISG		0447	29.53	340	0.2	55		
BCI	SZ	IPG		0447	25.94	357	-0.5	88	30	2.8
BCI	SE	ISG		0447	38.83	357	0.2	88		
TPE	SZ	IPG		0447	35.62	143	-0.5	143		
TPE	SE	ISG		0447	56.18	143	0.4	143		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
2014	02	27	0458	31.33				ASN				PHP
						hor.err=km						ver.err=KM

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0458	39.33					
PHP	SE	ISG		0458	36.02					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2014 02 27 0459 04.74

GAP=

hor.err=km

ASN

PHP

ver.err=KM

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0459	04.74					
PHP	SE	ISG		0459	09.33					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2014 02 27 0459 36.21

GAP=

hor.err=km

ASN

PHP

ver.err=KM

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		0459	36.21					
PHP	SE	ISG		0459	40.82					

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2014 02 27 1856 40.93

GAP=161

hor.err=1km

4

ASN 6

0.1

2.7

BIZHDAR-ELBASAN

ver.err=1KM

-ALBANIA

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
TPE	SZ	IPG		1856	54.68	192	0.0	76	23	2.6
TPE	SE	ISG		1857	05.15	192	0.1	76		
VLO	SZ	IPG		1856	55.43	228	0.1	80	24	2.7
VLO	SE	ISG		1857	06.49	228	-0.1	80		
PHP	SZ	IPG		1856	55.91	14	0.0	83	24	2.7
PHP	SE	ISG		1857	07.33	14	0.1	83		
PUK	SZ	IPG		1857	02.60	349	-0.2	123	29	2.9
PUK	SE	ISG		1857	19.06	349	0.1	123		
BCI	SZ	IPN		1857	09.03	357	0.6	156		
BCI	SE	ISN		1857	29.09	357	0.0	156		
IGT	SZ	IPG		1857	09.21	175	0.3	159		
IGT	SE	ISG		1857	29.67	175	-0.2	159		

Y	M	D	HM	Sec	Lat	Long	Dep	Net	Nr	Rms	Mag	Epicenter
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2014 02 28 1204 38.03

GAP=

hor.err=km

ASN

PHP

ver.err=KM

STAT	SP	IPHASW	D	HRMM	SECON	AZIMU	RES	DIS	DUR	Md
PHP	SZ	IPG		1204	38.03					
PHP	SE	ISG		1204	40.96					

**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 marrë mbi 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

information 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			

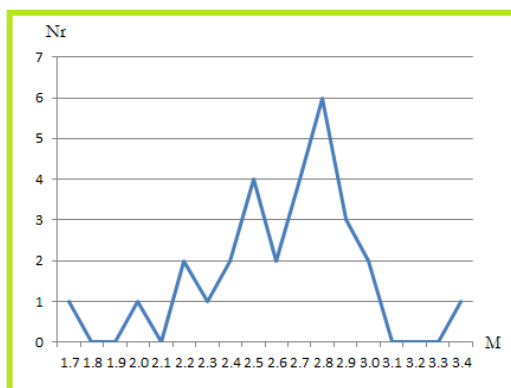
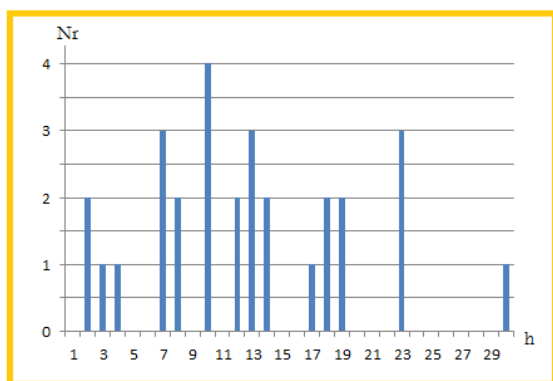
KATALOGU I TËRMEVEVE MUJORE (THE MONTHLY EARTHQUAKE CATALOG)

Data	Koha	Gjer.Gjat	Thell.Nr. St.	Gab	Mag.	Vendndodhja
Date	Time	Lat	Long.Depth	N_0 .St	Rms	Location
vvvv/mm/dd	hh:mm:ss	(km)	(M_D)			
2014 02 01	1415 13.75	41.12	20.14 12	5	0.1 2.3	EAST-ELBASAN
2014 02 03	0308 35.90	37.87	20.53 7	7	0.9 5.7	GREECE
2014 02 06	0205 02.39	41.12	20.12 14	6	0.1 2.8	ELBASAN-ALBANIA
2014 02 06	0814 23.96	41.44	20.59 13	5	0.1 2.8	EAST TUCEP
2014 02 06	1805 44.31	38.08	20.47 2	6	0.8 4.4	GREECE

2014	02	06	1920	07.76	38.54	21.49	1	7	0.7	4.6	GREECE
2014	02	07	0121	49.61	38.17	21.71	12	6	0.9	4.6	GREECE
2014	02	07	1342	05.19	38.57	21.31	7	6	1.1	4.2	GREECE
2014	02	09	0018	02.17	40.12	20.08	19	7	0.1	3.4	KARDHIQ-GJIROKAST
2014	02	11	0040	30.08	41.30	20.03	17	5	0.1	2.8	DARSHE-TIRANE
2014	02	11	0234	42.33	41.24	20.06	13	3	0.2	2.4	KRRAB-TIRANE
2014	02	11	0240	44.45	41.18	20.08	14	3	0.1	2.5	ELBASAN-ALBANIA
2014	02	12	2020	31.18	40.71	19.76	3	5	0.1	2.9	KURJAN-FIER
2014	02	14	0338	29.59	38.05	20.32	14	7	0.5	4.9	GREECE
2014	02	14	0350	56.19	41.33	20.33	7	3	0.1	2.2	NESHTA-ELBASAN
2014	02	14	2333	00.14	41.32	20.35	10	4	0.1	2.4	TIRANE-ALBANIA
2014	02	14	2343	11.38	41.27	20.42	10	3	0.1	2.0	LLANGE-LIBRAZHD
2014	02	15	0731	15.36	38.35	21.26	15	7	0.5	4.8	GREECE
2014	02	16	1944	25.00	40.56	19.95	13	7	0.3	2.8	TERPAN BERAT
2014	02	16	2225	17.60	41.93	20.29	7	4	0.2	2.6	ARREN, KUKES
2014	02	17	0045	34.50	40.09	20.83	7	5	0.3	2.7	GREECE
2014	02	18	1124	27.55	41.64	19.82	18	4	0.4	3.0	LAC-ALBANIA
2014	02	18	1125	49.26	41.67	19.85	7	4	0.3	2.2	NORTH-EAST LAC
2014	02	19	0921	30.53	41.41	20.00	19	4	0.1	2.7	ZALL-DAJT, TIRANE
2014	02	19	2354	50.56	40.69	19.73	10	7	0.3	2.8	KURJAN-FIER
2014	02	22	1142	26.53	40.82	21.22	6	6	0.1	3.8	GREECE
2014	02	22	1208	37.41	40.76	21.32	2	6	0.1	3	GREECE
2014	02	22	1754	50.74	41.03	20.17	18	5	0.1	2.7	GJINAR-ELBASAN
2014	02	23	0237	40.60	40.60	19.85	3	7	0.6	2.9	ARANIAT-BALLSH
2014	02	23	0255	56.66	40.99	21.41	13	5	0.3	2.8	MACEDONIA
2014	02	23	0855	54.32	41.05	20.05	8	4	0.1	2.5	SOUTH-ELBASAN
2014	02	23	0952	15.47	41.95	20.75	8	3	0.2	2.5	KOSOVO
2014	02	25	0714	32.59	41.14	20.12	12	6	0.1	2.9	N-E ELBASAN
2014	02	25	2139	23.65	40.59	19.73	10	5	0.1	2.7	BALLSH-ALBANIA
2014	02	27	0349	28.17	41.84	20.55	30	2	0.2	1.6	NORTH PESHKOPI
2014	02	27	0447	10.52	41.57	20.12	2	4	0.2	2.5	VINJOLL-BURREL
2014	02	27	1856	40.93	40.96	20.19	4	6	0.1	2.7	BIZHDAR-ELBASAN

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)	30
Events occurred within quadrant	
➤ Ngjarje sizmike të ndodhura brenda kufijve shtetërore	25
Events occurred inside state boundaries	
➤ Thellësia mesatare e ngjarjeve sizmike	11
Mean hypocenter depth	
➤ Thellësia maksimale	30
Maximum hypocenter depth	
➤ Magnituda lokale minimale e regjistruar	1.6
Minimum recorded local magnitude	
➤ Magnituda lokale maksimale e regjistruar	3.8
Maximum recorded local magnitude	
➤ Intensiteti sizmik maksimal ne epiqendër	IV
Maximum seismic intensity	



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

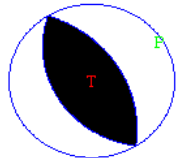
Distribution graphic of monthly seismic event number according to depth (right) magnitude (left)

Zgjidhja e mekanizmit vatorr (ZMV)

Për zgjidhjen e mekanizmit të vates 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 AMPSg/AMPPg, (AMPSn/AMPPn), të cilat janë lexuar mbi komponentet e transformuara nga sistemi koordinativ gjeografik në atë sferik (vertikal, radial dhe transversal). Eshtë 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).

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 AMPSg/AMPPg, (AMPSn/AMPPn), 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.

Focal Mechanism Solution (FMS)

Identifikimi i ngjarjes (Event ID)	Parametrat e burimit (Source parameters)	Magnituda (Magnitude)	Parametrat e Mekanizmit (Focal Mechanism parameters)	Tipi (Focal Type)
2014.02.09-00:18	40.12 (N) 20.08 (E) 19 (km)	3.4	P1: 147.9, 40, 90 P2: 328, 50, 90 T: 238, 85 P: 58, 5	

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Harta e epiqendrave të tërmeteve

