Magyarországi földrengések évkönyve
Hungarian Earthquake Bulletin
2013

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GeoRisk
Földrengés Mérnöki Iroda ◆ Earthquake Engineering

Budapest

MAGYARORSZÁGI FÖLDRENGÉSEK ÉVKÖNYVE

HUNGARIAN EARTHQUAKE BULLETIN

2013

TÓTH LÁSZLÓ*, MÓNUS PÉTER*, KISZELY MÁRTA*

Hivatkozás

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Hátsó borító: A 2013. április 22-i, tenki földrengés (22:28 UTC) számított intenzitás eloszlása (4.8 ML)

Back cover page: Instrumental intensity distribution of Tenk earthquake 22nd April 2013, 22:28 UTC (4.8 ML)

TARTALOMJEGYZÉK

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BEVEZETÉS

A Pannon-medencében a földrengés aktivitás a lemezperemi területekhez képest mérsékelt, a rengések epicentrumainak eloszlása pedig első pillantásra rendszertelennek látszik. Nehéz eldönteni, hogy a földrengések izolált területeken, vagy szeizmikusan aktív vonalak mentén keletkeznek. Mindenesetre felismerhető néhány terület, ahol viszonylag gyakran fordult elő a múltban földrengés. Ilyenek pl. Eger és környéke, ahol 70 év alatt legalább 16 földrengés és több mint 50 nagyobb utórengés történt. Komárom és Mór környékén, Jászberény, Kecskemét és Dunaharaszti közelében szintén jelentős volt az aktivitás egy-egy bizonyos időszakban. Az alacsony szeizmicitás nem feltétlenül jelenti a földrengések méretének csekélységét: komoly épületkárokat okozó földrengésekről van szó, néhány esetben talajfolyósodást is okozó gyorsulásokkal (pl. 1763 Komárom, M 6.2; 1911 Kecskemét, M 5.6), esetleg a felszínen is megjelenő töréssel (pl. 1834 Érmellék, M 6.2). Ezek a példák azt mutatják, hogy 6.0-6.5 magnitúdójú rengések lehetségesek, de nem gyakoriak a Pannon-medencében (Tóth et al., 2002a).

A földtudományi kutatás fontos eleme a szeizmicitás vizsgálata, annak megismerése, hogy milyen gyakorisággal, hol és mekkora földrengések keletkeznek, továbbá melyek azok a szeizmotektonikai folyamatok, melyek a földrengéseket létrehozzák.

Az általános ismeretszerzésen túlmenően a földrengés elleni védekezéshez is fontos segítséget nyújt a szeizmicitás pontos ismerete. Egy terület földrengés kockázatát csak komplex szeizmológiai, geofizikai, geológiai ismeretek alapján lehet meghatározni. A legfontosabb információ, mely mennyiségileg meghatározza a földrengéskockázatot, a terület földrengés története, illetve a jelenkori rengések ismerete. Ehhez nyújt kardinális fontosságú segítséget a földrengés monitorozás, a földrengések megfigyelése, mérése és paramétereinek meghatározása.

Magyarországon a földrengésmérő állomások száma és minősége 1995-ben érte el azt a szintet, hogy a lakosság által érzékelt valamennyi rengést a hálózat nagy valószínűséggel detektálja. Ez nagyrészt annak a szeizmikus megfigyelő hálózatnak volt köszönhető, melyet a Paksi Atomerőmű létesített az atomerőmű telephely tágabb környezetében. Ekkor vált lehetővé a lokális földrengések hipocentrumának számítása.

Jelen kiadványunk célja és tartalma pontosan az, amit a címe is jelez: évkönyv, melyben megtalálható minden olyan adat és ismeret, melyet az év során a magyarországi földrengésekkel kapcsolatban összegyűjtöttünk. A célterület a 45.5-49.0É szélesség és 16.0-23.0K hosszúság által határolt földrajzi tartomány. Reméljük, hogy hasznát látják munkánknak mindazok, akik földtudományi kutatásaikban felhasználói a szeizmicitás adatoknak, de azok is, akik csupán egy-egy földrengéssel kapcsolatos kérdésükre keresnek választ kiadványunkban.

INTRODUCTION

Seismicity in the Pannonian basin is relatively low comparing to the peripherals and the distribution of earthquake epicenters shows a rather scattered pattern at the first glance. It is particularly difficult to decide whether the epicenters occur at isolated places or along elongated zones however, at several single places earthquakes occur repeatedly. For example, near to Eger (47.9N; 20.4E) at least sixteen earthquakes with more than fifty greater aftershocks occurred over a time interval of some 70 years. Komárom and Mór area (47.4-47.8N; 18.2E), Jászberény (47.5N; 20.0E), Kecskemét (46.9N; 19.7E) and Dunaharaszti (47.4; 19.0E) also produced significant activity over a certain but limited period of time. Moderate seismicity does not necessarily mean moderate size of earthquakes: reports of major earthquakes often refer to heavy building damage, liquefaction (e.g. 1763 Komárom earthquake, M 6.2; 1911 Kecskemét earthquake, M 5.6) and sometimes the possibility of surface fault rupture (e.g. 1834 Érmellék earthquake, M 6.2). These observations indicate that magnitude 6.0-6.5 earthquakes are possible but not frequent in the Pannonian basin (Tóth et al., 2002b).

The study of the recent seismicity is an important element of seismotectonic research. Earthquakes represent the sudden release of slowly accumulated strain energy and hence provide direct evidence of active tectonic processes. However, low and moderate seismicity at intraplate areas generally precludes reliable statistical correlation between epicenters and geological features.

Moreover, as one of the chief contributor to seismic hazard at a given area, detailed knowledge of seismicity also plays an important role in earthquake risk reduction. To be useful, accurately located earthquakes are required. While good information about larger historical earthquakes exists for about the past few hundred years, these are not well enough located. Only modern seismic monitoring networks, capable of locating small magnitude local earthquakes provide the necessary information to close this knowledge gap. The developing database of well-located earthquakes can be used, in one hand, to resolve the tectonic framework and required on the other hand to refine our understanding of the level of seismic risk.

1995 was a milestone in the history of Hungarian seismological observations as the Paks Nuclear Power Plant Ltd. installed a network of high quality digital seismographs. For the first time, this network made it possible to detect and locate small magnitude local seismic events in most parts of the country.

The present Earthquake Bulletin is a united annual summary report of all Hungarian earthquake monitoring projects. The information in the Bulletin is based on all available earthquake related data provided by different organizations. The geographic region covered is bounded by latitudes 45.5-49.0N and longitudes 16.0-23.0E.

1.

ÖSSZEFOGLALÁS

A 2013. év szeizmikus szempontból kiemelkedően aktív időszaknak tekinthető Magyarországon. Az év folyamán 378 szeizmikus eseményről szereztünk tudomást a 45.5-49.0 N szélességi és 16.0-23.0 E hosszúsági koordináták által határolt területen, amelyek közül 227 volt természetes eredetű földrengés, 151 pedig robbantás.

Az észlelt földrengések mérete a $-0.8 \leq M_L \leq 4.8$ lokális magnitúdó tartományba esett. A fészekmélység jellemzően sekély, csak néhány esetben nagyobb 10 km-nél.

A kőbánya robbantások szeizmikus magnitúdói a $-0.1 \leq M_L < 2.0$ tartományban voltak, a számított fészekmélység pedig minden esetben nulla.

Az évben összesen tizenöt olyan földrengés volt, melyet a lakosság is érzett.

A legnagyobb műszeresen meghatározott magnitúdójú rengés 4.8 M_L, míg a legnagyobb földrengés intenzitás, melyet Magyarország területéről az év folyamán jelentettek 6 EMS fokozatú volt, néhány esetben kisebb épületkárok is keletkeztek.

A rengések mindegyike többé-kevésbé ismert forrászónához köthető. A legnagyobb számú szeizmikus esemény 2013-ban Heves – Tenk – Erdőtelek környékén keletkezett, ahol több mint 40 utórengés követte az április 22-én kipattant 4.8 magnitúdójú főrengést. Az Érsekvadkert környékén keletkezett 4.1 magnitúdójú rengés után is több utórengés volt, melyek némelyike szintén elérte az érezhetőséget.

A Vértes hegységben, a Komárom – Berhida közé eső területen, a Móri-árok forrászónában is számos földrengés keletkezett. Ennek egyik, nem szeizmotektonikai magyarázata az állomáshálózat fokozott érzékenysége ezen a területen.

Az év első érezhető rengését (M_L 3.6) február 16-án este jelezték Heves környékén. A rengés intenzitása 4-5 EMS fokra becsülhető az epicentrum térségében. Mintegy két hónappal később kiderült, hogy ez előrengése volt annak a nagyobb (M_L 4.8) földrengésnek, mely április 22-én Tenk – Heves térségében keletkezett, s több településen jelentősebb épületkárokat is okozott (6 EMS). Elsősorban gyengébb, régebbi épületekben repedések keletkeztek, vakolathullások történtek, illetve kémények és tetők sérültek. A rengést számos utórengés követte, melyek közül több érezhető is volt.

Május 18-án M_L 2.9 magnitúdójú utórengés volt érezhető Erdőteleken (4-5 EMS). Május 24-én és június 3-án szintén Erdőteleken éreztek M_L 1.8 és M_L 2.2 méretű rengést melyek intenzitása 3-4 illetve 5 EMS volt. Július 11-én Heves városban okozott riadalmat egy M_L 1.9 méretű utórengés (4 EMS).

Június 5-én este, Nógrád megyében, Érsekvadkert környékén éreztek földrengést. A 4.1 M_L magnitúdójú rengés az epicentrum kisebb környezetében enyhe épületsérüléseket is okozott. A rengés maximális intenzitása 5-6 EMS. Két utórengés szintén érezhető volt Érsekvadkert környékén június 11-én (M_L 2.3; 4-5 EMS) és július 2-án (M_L 3.4; 5 EMS).

További hat érezhető földrengést jeleztek még az évben Horvátország (M_L 2.8; 4-5 EMS), Ausztria (M_L 3.7; 5 EMS), Letkes (M_L 2.3; 4 EMS), Bana (M_L 3.0; 5 EMS), Máriakéménd (M_L 3.1; 5 EMS) és Iván (M_L 2.3; 4-5 EMS) epicentrummal. Ezek károkat nem, legfeljebb némi riadalmat okoztak.

1.

SUMMARY

2013 was an extremely active year for Hungarian seismicity. Out of the 378 seismic events located within the area bounded by latitudes 45.5-49.0 N and longitudes 16.0-23.0 E, 227 were identified as natural earthquakes and 151 were known as quarry blasts.

The magnitude of the earthquakes was in the range of $-0.8 \leq M_L \leq 4.8$. Each of the earthquakes had shallow focal depth typically less than 10 km.

The seismic magnitude of the quarry blasts was in the range of $-0.1 \leq M_L < 2.0$ with zero focal depth.

During the year, all together fifteen earthquakes were reported as felt.

The highest magnitude assigned to a shock was 4.8 M_L while the highest intensity reported during the year was 6 EMS. Light but significant building damages were also reported during the year.

All detected and located earthquakes can be connected to more or less well-known source zones. In 2013, largest number of events was located in Heves – Tenk – Erdőtelek area where a 4.8 M_L earthquake on 22nd April was followed by more than 40 aftershocks. The 4.1 M_L earthquake at Érsekvadkert was also followed by aftershocks two of which were felt as well.

A number of earthquakes was located in the Komárom – Berhida region, in the well-known source zone of the Mór graben. In addition to the undoubted current activity of this area, the high number of detected low magnitude events is partly due to the increased sensitivity of the network here.

The first felt event of the year was reported from Heves in the evening of February 16th. The M_L 3.6 shock was felt 4-5 EMS. About two months later, it was found that the quake was a foreshock of a larger (M_L 4.8) earthquake on 22nd April in Tenk – Heves region. Moderate but significant damages (fall of chimneys, cracks in walls, and damage of roofs) were reported from the epicentral area mostly at poorer quality older buildings. 6 EMS maximum intensity was estimated. Four of the several aftershocks were reported as felt in the next three months.

M_L 2.9 shock on 18th May was felt at Erdőtelek (4-5 EMS). Furthermore, on 24th May and 3rd June, M_L 1.8 and M_L 2.2 earthquakes were reported 3-4 EMS and 5 EMS also from Erdőtelek. On 11th July, a magnitude M_L 1.9 aftershock alerted people at Heves (4 EMS).

A magnitude 4.1 M_L earthquake alerted people at Érsekvadkert, Nógrád County in the evening of June 5th. The shock was strongly felt (5-6 EMS) at the epicenter and some reports of slight damage were also received. Later, two of the aftershocks were felt as well on 11th June (M_L 2.3; 4-5 EMS) and 2nd July (M_L 3.4; 5 EMS).

Another six earthquakes were reported as felt later in the year from the Hungarian-Croatian border region (M_L 2.8; 4-5 EMS), from the Hungarian-Austrian border region (M_L 3.7; 5 EMS), Letkes (M_L 2.3; 4 EMS), Bana (M_L 3.0; 5 EMS), Máriakéménd (M_L 3.1; 5 EMS) and Iván (M_L 2.3; 4-5 EMS). These events did not cause damage only some alarm at the epicenter region.

2.

FÖLDRENGÉS MEGFIGYELŐ ÁLLOMÁSOK MAGYARORSZÁGON

2013-ban 22 állandó szeizmográf állomás működött Magyarországon. Az állomások közül tízet a GeoRisk Földrengés Mérnöki Iroda Kft., tizenkettőt pedig az MTA CSFK Geodéziai és Geofizikai Intézet (MTA CSFK GGI) üzemeltetett (2.1. Táblázat és 2.1. ábra).

Szélessávú állomások

Az év folyamán 11 szélessávú szeizmológiai állomás működött (AMBH, BEHE, BSZH, BUD, LTVH, MORH, MPLH, PSZ, SOP, TIH, TRPA). Az állomások nagy részénél az érzékelő 3 komponenses szélessávú Streckeisen STS-2, illetve STS-2.5 szeizmométer; az érzékelő jele EarthData PS-6-24 digitalizáló egységen át jut a SeisComp szoftverrel felszerelt adatgyűjtő számítógépre. Az AMBH, LTVH és TIH állomásokon Güralp CMG-3T szeizmométer és Güralp CMG-DM24S3-EAM adatgyűjtő egység található. Mindegyik állomás internet összeköttetéssel rendelkezik, így az adatok közel valós időben, egy erre a célra kifejlesztett protokoll (SeedLink) felhasználásával jutnak el az adatközpontba, ahol a feldolgozás és archiválás történik. Az adatközpontban az adatok átlagos késése a valós időhöz képest 10 másodperc körüli. Az állomáson tárolt adatok bizonyos idő elteltével törlődnek.

Rövidperiódusú állomások

A 11 rövidperiódusú állomás közül tíz teljesen új mérőeszközzel lett felszerelve az év elején. Ezeken Güralp CMG-40T rövidperiódusú, 3 komponenses szeizmométer és Güralp CMG-DM24S3-EAM digitalizáló és adatgyűjtő működik, folyamatos regisztrálással. Egy állomáson (CSKK) az érzékelő három Kinemetrics SS-1 rövidperiódusú szeizmométer, az adatgyűjtő itt is Güralp CMG-DM24S3-EAM, szintén folyamatos regisztrálással. Mindegyik rövidperiódusú állomás internet összeköttetéssel rendelkezik.

GeoRisk adatközpont (www.foldrenges.hu)

Az összes mérőállomáson regisztrált adatot egy felhő alapú adatközpontban gyűjtjük és dolgozzuk fel. Minden állomás digitális adataiból napi szeizmogramok készülnek kép formátumban. A képi szeizmogramok egyrészt az érdeklődők tájékoztatását, másrészt a működés ellenőrzését is szolgálják. Ezek a szeizmogramok közel valós idejűek.

Az események hullámfázisainak körültekintő manuális kimérése alapján állítjuk össze havonta a fázisadatokat (kimérési adatokat) tartalmazó jelentést. A fázisadatok felhasználásával – a saját adatokat kiegészítve a szomszédos országok szeizmológiai intézményeinek hasonló adataival (2.2. ábra) – havonta eseménylista készül (*Havi Jelentés* és *Havi Földrengés Tájékoztató*), mely a helyi és regionális földrengések hipocentrum adatait tartalmazza.

A mérési adatok, szeizmogramok és a kiértékelés további eredményei nagyrészt nyilvánosan elérhetők az interneten is a *www.foldrenges.hu* oldalon.

Átlagos zaj- (talajnyugtalanság) viszonyokat feltételezve a magyarországi szeizmológiai hálózat jelenlegi észlelési képessége M_L=1.0-2.0 magnitúdó körül van. Az ország középső részén kissé alacsonyabb, a határok környékén kissé magasabb az érzékenységi küszöb. Ez azt jelenti, hogy a lakosság által érzékelt valamennyi rengést a hálózat nagy valószínűséggel detektálja.

2.

SEISMOGRAPH STATIONS IN HUNGARY

In 2013, there were 22 permanent seismograph stations running in Hungary. Ten of the permanent stations were operated by GeoRisk Earthquake Engineering Ltd. and twelve of them by Geodetic and Geophysical Institute, Research Centre for Astronomy and Earth Sciences, Hungarian Academy of Sciences (MTA CSFK GGI). (Table 2.1 and Fig. 2.1)

Broadband stations

Eleven broadband stations (AMBH, BEHE, BSZH, BUD, LTVH, MORH, MPLH, PSZ, SOP, TIH, TRPA) were running during the year. Most of these stations have Streckeisen STS-2 or STS-2.5 very broadband seismometers as sensors and EarthData PS-6-24 digitizer. Linux PC's with SeisComP software have been used as data acquisition systems. Three stations (AMBH, LTVH and TIH) are equipped with Güralp CMG-3T seismometer and Güralp CMG-DM24-S3-EAM data acquisition module. All stations are accessible via internet in support of near real time data transfer. The average data latency at these stations is typically less than 10 s. SeedLink protocol is used for data collection and all continuous data is archived in the Data Centre.

Short period stations

Ten of the eleven short period stations were completely refurbished at the beginning of the year. These stations are equipped with Güralp CMG-40T short period seismometers and Güralp CMG-DM24S3-EAM digital acquisition system. One of the stations, CSKK has Kinemetrics short period SS-1 sensors, and Güralp CMG-DM24S3-EAM digital acquisition system for recording and communication with the Data Centre. Continuous data are recorded at each short period station. All stations are accessible via internet.

GeoRisk Data Centre (www.foldrenges.hu)

All recorded data from each station are transmitted to and processed at a cloud based *Data Centre*. Using digitally recorded data, analogue "live seismograms" are calculated for each station. The main purposes of the "live seismograms" are feeding public interests in one hand, and rapid visualization of the operational status and quality check of the stations on the other.

A careful manual offline analysis is used for event identification and picking the phases on each recorded seismogram. Merging the phase data of the Hungarian network and the same kind of available data sets from neighboring countries, preliminary event lists are calculated on monthly schedule. Based on technical and operational statistics of the stations, list of local and regional seismic events and their hypocenter information, *Monthly Reports* are compiled.

Data that are collected by the *Data Centre* are published in a variety of formats on the internet at *www.foldrenges.hu*.

The estimated detection capabilities of the present network with average noise conditions, supposing that at least four stations is needed for origin determination, is typically around 1.0-2.0 M_L, somewhat lower in the middle of the country and a little higher towards the border regions. This means that in most parts of the country it is very unlikely that felt events go undetected.

2.1. Táblázat Magyarországi szeizmológiai állomások, műszerek és alapkőzet

Table 2.1. Seismic stations in Hungary, instrumentation and lithology

Kód Helység Code Location	Szélesség Latitude (N)	Hosszúság Longitude (E)	Magasság Elevation (m)	Alapkőzet Foundation	Állomás típusa Station type (1)	Érzékelő típusa Sensor type (2)	Adatgyűjtő típusa Recording equipment (3)	Szerv. Org. (4)
AMBH* Ambrózfalva	46.3501	20.7258	91	üledék alluvium	3C BB	CMG-3T	CMG-DM24S3-EAM	GGI
BEHE Becsehely	46.4704	16.7757	298	üledék alluvium	3C BB	STS-2	PS-6-24+ SeisComP PC	GGI
BSZH** Besenyszög	47.2996	20.2670	82	üledék alluvium	3C BB	STS-2.5	PS-6-24 + SeisComP PC	GGI
BUD Budapest	47.4836	19.0239	196	dolomit dolomite	3C BB	STS-2	PS-6-24+ SeisComP PC	GGI
CSKK Csókakő	47.3631	18.2605	319	dolomit dolomite	3C SP	SS-1	CMG-DM24S3-EAM	GGI
LTVH Létavértes	47.3849	21.9007	121	homok sand	3C BB	CMG-3T	CMG-DM24S3-EAM	GGI
MPLH*** Magyarpolány	47.1702	17.5395	307	kőzet rock	3C BB	STS-2.5	PS-6-24 + SeisComP PC	GGI
MORH Mórágy	46.2149	18.6435	135	gránit granite	3C BB	STS-2	PS-6-24 + SeisComP PC	GGI
PENC Penc	47.7905	19.2817	250	üledék alluvium	3C SP	CMG-40T	CMG-DM24S3-EAM	GR
PKS2 Kecel	46.4920	19.2131	106	homok sand	3C SP	CMG-40T	CMG-DM24S3-EAM	GR
PKS6 Bócsa	46.5998	19.5645	120	homok sand	3C SP	CMG-40T	CMG-DM24S3-EAM	GR
PKS7 Kunszentmiklós	47.0473	19.1609	95	agyag mud	3C SP	CMG-40T	CMG-DM24S3-EAM	GR
PKS9 Tamási	46.5870	18.2789	240	lösz loess	3C SP	CMG-40T	CMG-DM24S3-EAM	GR
PKSG Gánt	47.3918	18.3907	200	dolomit dolomite	3C SP	CMG-40T	CMG-DM24S3-EAM	GR
PKSM Mórágy	46.2119	18.6413	170	gránit granite	3C SP	CMG-40T	CMG-DM24S3-EAM	GR
PKSN Nyárlőrinc	46.8970	19.8667	110	homok sand	3C SP	CMG-40T	CMG-DM24S3-EAM	GR
PKST Tés	47.2590	18.0343	473	dolomit dolomite	3C SP	CMG-40T	CMG-DM24S3-EAM	GR
PKSV Villány	45.8885	18.2521	420	mészkő limestone	3C SP	CMG-40T	CMG-DM24S3-EAM	GR
PSZ Piszkéstető	47.9184	19.8944	940	andezit andesite	3C BB	STS-2	PS-6-24 + SeisComP PC	GEOFON /GGI
SOP Sopron	47.6833	16.5583	260	gneisz gneiss	3C BB	STS-2	PS-6-24 + SeisComP PC	GGI
TIH**** Tihany	46.9001	17.8877	183	kőzet rock	3C BB	CMG-3T	CMG-DM24S3-EAM	GGI/MFGI
TRPA Tarpa	48.1304	22.5391	113	andezit andesite	3C BB	STS-2	PS-6-24 + SeisComP PC	GGI

(1) 3C – 3 komponenses szeizmométer / three component seismometer
SP – rövid periódusú szeizmométer / short period seismometer;
BB – széles sávú szeizmométer / broad band seismometer

(2) STS-2 / STS-2.5 – Streckeisen széles sávú szeizmométer / Streckeisen broad band seismometer
CMG-40T – Güralp rövidperiódusú szeizmométer / Güralp short period seismometer
CMG-3T – Güralp széles sávú szeizmométer / Güralp broad band seismometer
SS-1 – Kinemetrics SS-1 rövidperiódusú szeizmométer / Kinemetrics SS-1 short period seismometer

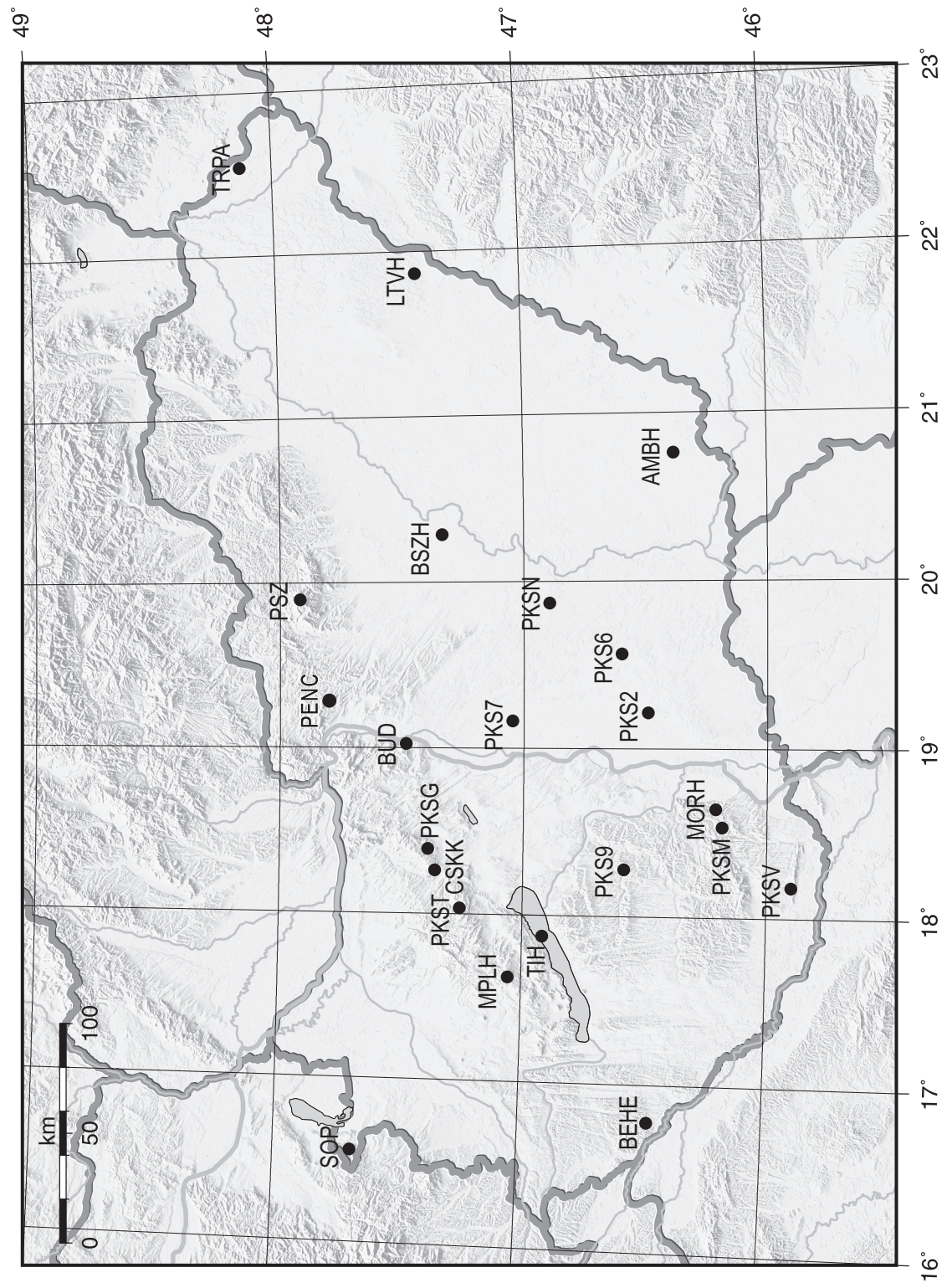
(3) D – digitális / digital; C – folyamatos felvétel / continuous recording; PS-6-24 – Earth Data digitalizáló / Earth Data digitizer
CMG-DM24S3-EAM – Güralp adatgyűjtő / Güralp data acquisition module;
SeisComP – GEOFON Seismological Communication Processor

(4) GGI – MTA CSFK Geodéziai és Geofizikai Intézet / Geodetic and Geophysical Institute, MTA CSFK
GR – GeoRisk Földrengés Mérnöki Iroda Kft. / GeoRisk Earthquake Engineering Ltd.
MFGI – Magyar Földtani és Geofizikai Inzézet / Geological and Geophysical Institute of Hungary

(*) Működés kezdete / Open date: 2013/03/07 (**) Működés kezdete / Open date: 2013/09/11
(***) Működés kezdete / Open date: 2013/10/08 (****) Működés kezdete / Open date: 2012/12/10

Mérőeszközök cseréje a rövidperiódusú állomásokon
Date of installation of new equipment at the SP stations

PENC	2013.04.04.
PKS2	2013.04.30.
PKS6	2013.04.25.
PKS7	2013.05.15.
PKS9	2013.05.16.
PKSG	2013.04.16.
PKSM	2013.04.10.
PKSN	2013.05.02.
PKST	2013.05.16.
PKSV	2013.04.23.



2.1. ábra Szeizmológiai állomások Magyarországon 2013-ban (részletek: 2.1. Táblázat)

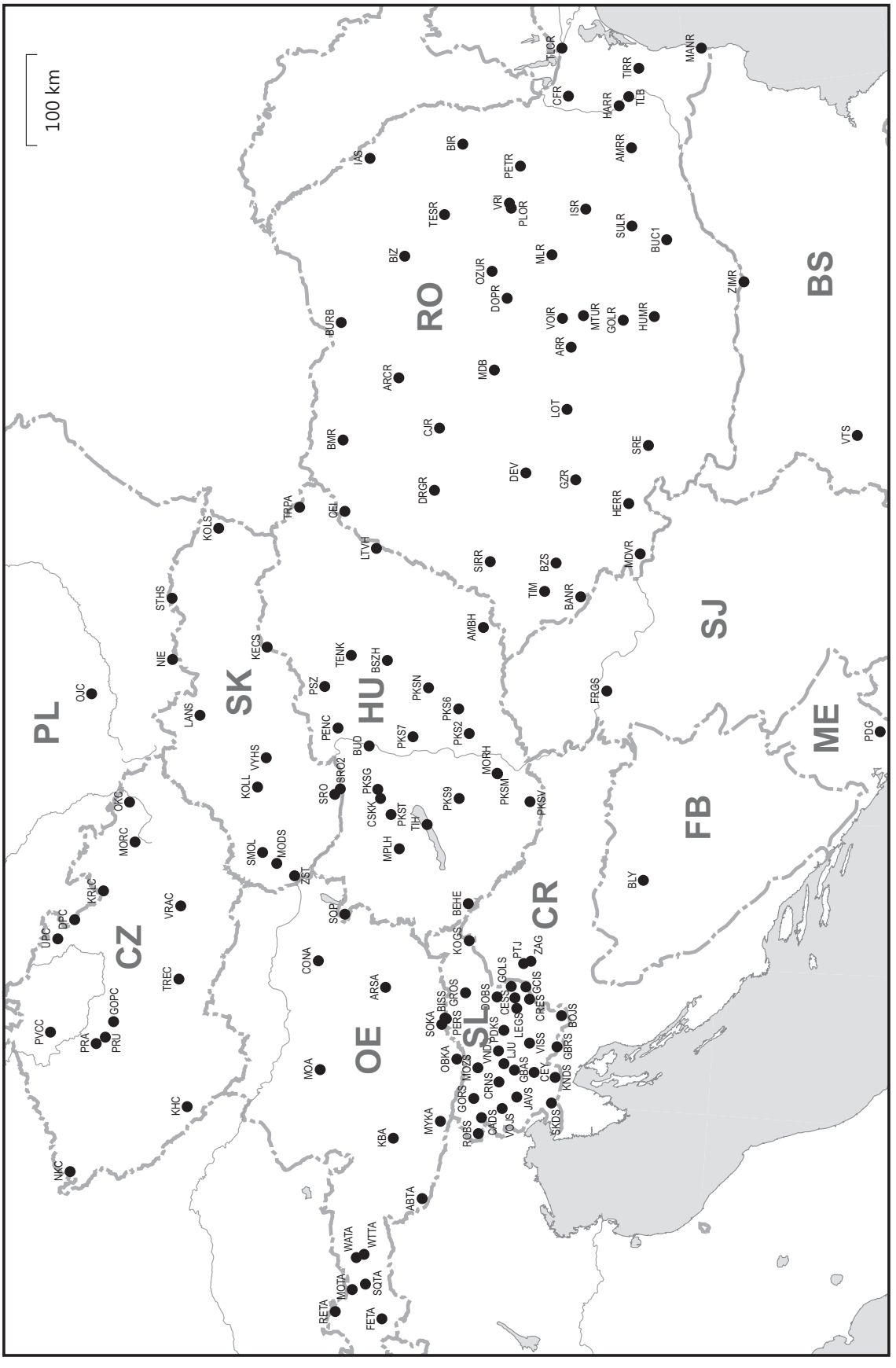
Figure 2.1. Seismograph stations in Hungary in 2013 (See Table 2.1. for details)

HUN-RENG virtuális szeizmológiai hálózat

A kommunikáció fejlődése, a valós idejű adatátvitel és az azonos adatátviteli protokoll (SeedLink) Európa-szerte elterjedt használata lehetővé tette, hogy idegen állomások adatait is fogadjuk közel valós időben ugyanúgy, mint a saját állomásainkét (2.2. Táblázat). Az összes elérhető hazai és külföldi állomások mérési adatainak felhasználásával a földrengések paraméterei még pontosabban, megbízhatóbban számíthatók ki. Ezen kívül a nagyszámú állomás adatához való valós idejű hozzáférés lehetővé tette egy automatikus földrengésjelző rendszer elindítását is. Ez a rendszer automatikusan képes felismerni a földrengéseket, és azok paramétereit néhány percen belül ki is számítja. A térképen és listán automatikusan megjelenített földrengés információ elsősorban gyors tájékoztatásul szolgál.

HUN-RENG Virtual Seismic Network

Development in communication technology and standardized communication protocols, software packages made available to access near real time data of stations beyond the domestic network. SeedLink and SeisComP developed at GEOFON became a kind of standard all over Europe. The larger pool of data provided by an extended, “virtual network” of seismic stations helps to have faster and more accurate earthquake locations and parameter determinations. In addition, near real time access to data from large number of stations makes possible to operate automatic rapid earthquake alarm systems. Automatically generated earthquake lists and epicenter maps are the main product of such systems. The present configuration of the *HUN-RENG* virtual seismic network is shown in Table 2.2.



2.2. ábra A hipocentrum meghatározáshoz használt szeizmológiai állomások

Figure 2.2. Seismograph stations used for hypocenter determination

2.2. Táblázat HUN-REng virtuális szeizmológiai hálózathoz felhasznált fizikai hálózatok
Table 2.2. Physical networks used in HUN-REng virtual seismic network

Hálózat kódja* Network code*	**Az üzembentartó hálózat Operating network**
CU	CariUSGS Caribbean Network USGS, Golden, CO
CZ	Czech Seismic Network Geophysical Institute, Czech Academy of Sciences
GE	GEOFON GEOForschungsNetz (Geo Research Network)
GT	Global Telemetered Southern Hemisphere Network USGS Albuquerque Seismological Laboratory
HU	Hungarian National Seismological Network Institute of Geodesy and Geophysics, Research Centre for Astronomy and Earth Sciences
II	IRIS/IDA Network University of California, Scripps Institute of Oceanography
IU	IRIS/USGS Network USGS Albuquerque Seismological Laboratory
JP	Japan Meteorological Agency Seismic Network Japan Meteorological Agency Seismic, Tokyo Japan
MK	Seismological Observatory Skopje, Republic of Macedonia (MK)
MN	MEDNET Instituto Nazionale di Geofisica, Italy
MY	Malaysian National Seismic Network Malaysian Meteorological Service
NZ	New Zealand National Seismograph Network Institute of Geological & Nuclear Sciences, Wellington, New Zealand
OE	Austrian Seismic Network ZAMG - Central Institute for Meteorology and Geodynamics
PL	Polish Seismological Network Polish Academy of Sciences, Warsaw
RO	Romanian Seismic Network National Institute for Earth Physics, Romania
SJ	Serbian Seismological Network Seismological Survey of Serbia
SK	Slovak National Seismic Network Geophysical Institute, Slovak Academy of Sciences
SL	Slovenia Seismic Network Slovenia Geological Survey, Ljubljana

*FDSN (International Federation of Digital Seismograph Networks) kód

3.

ESEMÉNYLISTA

ÉS

FÖLDRENGÉS FÉSZEKPARAMÉTEREK

A FÖLDRENGÉS FÉSZEKPARAMÉTEREK MEGHATÁROZÁSA

A fészekparaméterek rutinszerű kiszámításához a HYPO71PC programot használtuk (Lee and Lahr, 1975). A kimérés és magnitúdó meghatározás a K. Stammler által készített SeismicHandler program segítségével történt.

A fészekparaméterek meghatározásánál mind a magyarországi, mind a szomszédos országok állomásainak adatait felhasználtuk. A számításnál az egyes állomások kimérési adatait az epicentrumtól való távolsággal fordított arányban súlyoztuk. Néhány esetben, amikor elegendő P fázis adat állt rendelkezésre, az S fázis adatokat nem használtuk fel.

SEBESSÉGMODELL

A számításnál felhasznált 3 rétegű sebességmodell több száz helyi és közeli földrengés kéregfázis adatain alapul (Mónus, 1995).

Sebesség (v_P) [km/s]	*Mélység [km]*	*Vastagság [km]*	v_P/v_S
5,60	0,0	20,0	1,78
6,57	20,0	11,0	
8,02	31,0	∞	

3.

LIST OF ORIGINS

AND

HYPOCENTER PARAMETERS

METHOD FOR HYPOCENTER PARAMETER DETERMINATION

HYPO71PC (Lee and Lahr, 1975) was used for the routine calculation of hypocenter parameters. SeismicHandler software package by K. Stammler has been used for phase picking and magnitude determination.

The hypocenter parameters have been calculated using phase readings of seismological stations from Hungary and from the adjoining countries. However, a distance weighting has been applied, phase data from stations with epicenter distance greater than 450 km have been weighted out. In some cases, when sufficient number of P readings were available, S phase readings were not used in the calculations.

CRUSTAL VELOCITY MODEL

The three-layer crustal velocity model used in the hypocenter calculations has been derived from crustal phase travel times of several hundreds of local earthquakes (Mónus, 1995).

Velocity (v_P) [km/s]	*Depth [km]*	*Thickness [km]*	v_P/v_S
5.60	0.0	20.0	1.78
6.57	20.0	11.0	
8.02	31.0	∞	

ESEMÉNYLISTA / LIST OF EVENTS

Nap	**Kipattanási idő UTC**	**Földrajzi koordináták**		**Mélys. (km)**	**ML**	**I_{MAX} (EMS)**	**Helyszín**
	óó pp mp	**Lat**	**Long**				
Day	**Origin time UTC**	**Geographic coordinates**		**Depth (km)**	**ML**	**I_{MAX} (EMS)**	**Locality or Region**
	hr mn sec	**Lat**	**Long**				
JANUARY, 2013							
02	11:49:26.0	48.601N	20.658E	0	1.6	-	Slovakia (expl.)
04	22:58:16.7	46.112N	16.442E	13	2.2	-	Croatia
17	10:50:38.5	47.904N	17.977E	5	3.2	-	Slovakia
17	19:38:44.4	47.907N	17.998E	9	1.9	-	Slovakia
25	7:14:30.3	47.729N	16.174E	9	3.4	-	Austria
28	15:48:37.2	45.983N	18.423E	2	2.3	-	Belvárdgyula
FEBRUARY, 2013							
01	11:06:13.4	47.714N	18.541E	10	1.9	-	Bajót
05	22:34:31.6	47.275N	19.805E	6	2.1	-	Tápiószőlős
07	11:14:56.1	45.805N	17.654E	19	2.3	-	Croatia
09	1:13:11.8	47.311N	19.465E	10	1.1	-	Monorierdő
11	6:08:20.5	47.270N	19.835E	6	2.2	-	Tápiószőlős
15	9:23:12.2	46.132N	18.328E	13	1.2	-	Hird
16	17:18:42.2	47.643N	20.269E	10	3.6	4-5	Heves
17	13:21:47.7	47.647N	20.300E	1	2.5	-	Tenk
21	8:51:56.1	47.354N	18.438E	0	2.0	-	Gánt (expl.)
MARCH, 2013							
04	10:55:44.8	47.727N	18.471E	10	2.1	-	Süttő
07	10:57:28.3	48.329N	19.837E	0	1.7	-	Slovakia (expl.)
08	6:59:09.5	47.316N	18.309E	0	0.3	-	Söréd (expl.)
08	7:33:55.6	47.311N	18.339E	9	0.3	-	Magyaralmás
08	9:03:46.6	48.364N	19.799E	0	1.7	-	Slovakia (expl.)
12	12:01:39.6	48.382N	21.255E	20	1.8	-	Korlát
19	15:09:26.6	48.342N	19.806E	9	1.6	-	Slovakia
20	8:26:50.6	47.470N	18.360E	0	0.9	-	Oroszlány (expl.)
20	8:27:23.0	47.366N	18.415E	0	0.2	-	Gánt (expl.)
20	23:48:46.3	48.097N	20.820E	10	1.7	-	Szirma
21	11:17:04.0	48.342N	19.795E	0	1.2	-	Slovakia
23	23:02:14.5	45.723N	20.126E	10	2.4	-	Serbia
26	12:07:16.2	45.787N	21.147E	9	2.8	-	Romania
27	11:04:57.3	45.703N	17.387E	17	1.7	-	Croatia
28	19:04:24.7	45.906N	17.178E	17	2.8	-	Croatia
APRIL, 2013							
01	22:04:14.0	46.548N	21.226E	10	2.6	-	Elek
08	8:56:21.1	47.231N	18.321E	0	0.5	-	Moha (expl.)
10	10:11:20.1	47.884N	19.420E	0	0.9	-	Bercel (expl.)
11	8:56:13.8	47.186N	18.312E	0	0.9	-	Székesfehérvár (expl.)
11	10:44:14.7	47.578N	17.808E	0	1.8	-	Pázmándfalu (expl.)
12	6:21:25.7	47.350N	18.445E	0	1.5	-	Gánt (expl.)
12	6:21:41.9	47.435N	18.414E	0	1.5	-	Várgesztes (expl.)
15	9:11:00.5	47.792N	17.543E	10	2.2	-	Dunaszeg
17	21:33:57.3	46.077N	17.604E	10	1.5	-	Kálmáncsa
22	8:01:08.1	47.406N	18.377E	0	1.0	-	Gánt (expl.)
22	22:28:46.8	47.650N	20.302E	10	4.8	6	Tenk

22	22:33:48.0	47.650N	20.187E	10	1.7	-	Boconád
22	22:37:12.5	47.667N	20.188E	17	1.4	-	Tarnazsadány
22	23:01:43.0	47.614N	20.285E	10	2.1	-	Heves
22	23:24:24.3	47.637N	20.304E	5	2.2	-	Heves
23	3:30:41.2	47.667N	20.309E	10	1.6	-	Erdőtelek
23	4:23:49.1	47.667N	20.214E	10	1.5	-	Boconád
23	10:55:09.2	47.484N	18.048E	0	0.5	-	Kisbér (expl.)
23	13:31:03.7	47.667N	20.291E	14	1.8	-	Erdőtelek
24	1:09:25.1	47.667N	20.333E	10	1.4	-	Tenk
24	1:40:07.3	47.667N	20.146E	10	1.1	-	Tarnaméra
24	3:39:37.0	47.636N	20.304E	3	2.5	-	Heves
24	10:05:14.6	48.846N	20.198E	2	2.1	-	Slovakia
24	14:33:28.9	45.833N	18.199E	12	1.6	-	Ipacsfa
24	15:53:58.5	47.667N	20.318E	10	1.9	-	Erdőtelek
24	21:02:37.1	47.595N	20.250E	6	1.3	-	Heves
24	22:39:36.0	47.571N	20.264E	10	1.8	-	Heves
24	23:02:15.8	47.558N	19.956E	0	1.1	-	Jászdózsa
25	9:26:37.0	47.173N	18.316E	0	0.3	-	Székesfehérvár (expl.)
25	13:42:30.5	47.667N	20.324E	10	1.8	-	Tenk
26	9:14:19.4	47.667N	20.323E	10	2.0	-	Tenk
26	18:57:23.5	47.610N	20.267E	6	1.5	-	Heves
27	4:58:49.8	47.564N	20.221E	4	1.3	-	Jászszentandrás
28	0:57:52.6	47.341N	18.290E	0	-0.1	-	Csákberény
28	1:05:55.5	47.402N	18.247E	2	0.2	-	Pusztavám
28	1:12:41.4	47.365N	18.257E	8	1.5	-	Csókakő
28	7:01:37.0	47.721N	20.167E	10	1.5	-	Nagyút
28	18:29:26.0	47.422N	18.245E	4	-0.2	-	Pusztavám
29	13:58:03.9	47.667N	20.304E	10	2.0	-	Erdőtelek

MAY, 2013

02	20:06:53.5	47.723N	20.369E	1	1.0	-	Füzesabony
03	11:05:15.7	48.954N	19.793E	0	1.4	-	Slovakia (expl.)
03	17:52:38.1	47.670N	20.317E	10	1.3	-	Erdőtelek
05	20:58:49.3	47.716N	20.299E	4	1.3	-	Kál
05	23:15:31.6	47.649N	20.251E	4	1.0	-	Boconád
07	10:36:32.2	45.670N	18.118E	17	0.9	-	Croatia
08	20:49:15.0	47.647N	20.347E	13	1.7	-	Tenk
09	1:42:19.1	47.669N	20.327E	10	1.2	-	Tenk
12	7:47:22.8	47.567N	20.222E	1	0.7	-	Jászszentandrás
12	21:10:47.7	47.639N	20.248E	6	1.1	-	Heves
17	4:23:21.3	47.675N	20.298E	16	1.7	-	Erdőtelek
17	6:58:01.5	47.681N	16.123E	7	1.8	-	Austria
18	20:34:20.0	47.654N	20.296E	10	2.9	4-5	Erdőtelek
18	22:25:17.0	48.132N	20.852E	8	1.7	-	Onga
22	4:10:31.8	47.022N	17.928E	4	0.6	-	Felsőörs
22	10:55:43.2	48.374N	19.825E	0	1.8	-	Slovakia (expl.)
24	9:13:50.0	47.435N	18.359E	0	0.6	-	Oroszlány (expl.)
24	9:17:11.8	47.405N	18.369E	0	0.8	-	Gánt (expl.)
24	9:17:41.2	47.432N	18.385E	0	1.1	-	Gánt (expl.)
24	18:54:54.4	47.663N	20.286E	0	1.8	3-4	Erdőtelek
28	10:48:06.5	47.187N	18.302E	0	0.4	-	Székesfehérvár (expl.)
29	7:19:48.0	47.359N	18.397E	0	0.5	-	Gánt (expl.)
29	7:19:59.9	47.442N	18.405E	0	1.1	-	Várgesztes (expl.)
29	11:42:50.3	48.265N	21.219E	1	1.3	-	Abaújszántó
31	9:15:44.8	48.634N	20.768E	0	1.4	-	Slovakia (expl.)

JUNE, 2013

01	2:48:00.9	47.784N	18.015E	5	1.0	-	Komárom
01	8:37:47.6	47.783N	18.026E	10	0.9	-	Komárom
03	9:00:30.4	48.620N	20.566E	0	1.5	-	Slovakia (expl.)

03	12:30:33.4	48.378N	19.834E	0	1.8	-	Slovakia
03	21:23:06.2	47.667N	20.289E	1	2.2	5	Erdőtelek
04	6:34:57.1	47.460N	18.383E	0	0.6	-	Várgesztes (expl.)
04	6:42:06.9	47.472N	18.433E	0	1.2	-	Várgesztes (expl.)
04	7:13:23.1	47.361N	18.285E	8	2.2	-	Csókakő
04	12:08:47.5	47.446N	18.094E	10	0.2	-	Bakonysárkány
05	18:45:46.3	47.993N	19.216E	4	4.1	5-6	Érsekvadkert
05	20:46:37.6	47.980N	19.252E	6	1.7	-	Szente
05	22:00:56.1	47.992N	19.228E	2	1.5	-	Érsekvadkert
06	10:21:15.5	47.986N	19.999E	0	1.6	-	Mátraballa (expl.)
07	3:05:35.8	47.401N	17.973E	9	1.2	-	Ácsteszér
11	5:31:25.6	47.995N	19.226E	5	2.3	4-5	Érsekvadkert
11	6:40:06.0	47.425N	18.381E	0	1.0	-	Gánt (expl.)
11	6:40:18.8	47.440N	18.417E	0	1.0	-	Várgesztes (expl.)
11	7:50:41.1	45.858N	18.409E	0	0.6	-	Nagyharsány (expl.)
11	11:15:37.6	47.174N	18.304E	0	0.4	-	Sárkeszi (expl.)
13	12:01:14.4	47.185N	18.307E	0	0.6	-	Székesfehérvár (expl.)
14	6:35:52.9	48.009N	19.244E	10	1.5	-	Csesztve
14	6:44:23.6	45.872N	18.398E	0	0.9	-	Kisharsány (expl.)
14	11:06:30.7	45.801N	18.624E	0	0.5	-	Croatia (expl.)
16	0:10:31.2	48.115N	22.264E	5	1.8	-	Vásárosnamény
16	15:10:26.4	48.000N	19.236E	5	2.0	-	Csesztve
18	6:50:59.5	47.301N	18.340E	0	0.6	-	Magyaralmás (expl.)
18	7:06:12.6	47.442N	18.389E	0	0.9	-	Várgesztes (expl.)
18	7:06:25.0	47.473N	18.458E	0	1.3	-	Várgesztes (expl.)
18	8:05:48.5	47.432N	18.413E	0	0.8	-	Várgesztes (expl.)
19	5:44:37.3	46.005N	17.540E	1	2.1	-	Darány
19	6:25:48.6	47.865N	18.467E	10	2.1	-	Slovakia
19	11:22:40.2	48.213N	19.775E	4	1.2	-	Slovakia
20	10:37:28.1	47.174N	18.315E	0	0.5	-	Székesfehérvár (expl.)
22	10:09:00.3	48.280N	19.683E	0	1.5	-	Slovakia (expl.)
22	15:32:37.7	47.846N	19.127E	10	1.2	-	Szendehely
23	3:47:20.9	47.989N	19.208E	2	2.3	-	Érsekvadkert
23	15:47:52.6	47.985N	19.242E	5	2.1	-	Csesztve
24	23:06:39.5	47.669N	20.295E	0	1.2	-	Erdőtelek
25	7:24:01.2	47.415N	18.351E	0	1.0	-	Gánt (expl.)
25	7:24:14.7	47.440N	18.395E	0	1.2	-	Várgesztes (expl.)
26	9:31:21.8	48.188N	19.073E	0	1.4	-	Slovakia (expl.)
27	13:27:55.5	47.190N	18.308E	0	0.7	-	Székesfehérvár (expl.)
28	8:37:18.0	47.745N	16.148E	0	1.3	-	Austria

JULY, 2013

01	10:39:17.2	48.104N	20.594E	6	1.2	-	Lillafüred
01	12:28:17.4	47.343N	18.215E	8	0.3	-	Bodajk
01	12:51:25.9	47.360N	18.204E	9	0.7	-	Mór
01	13:10:04.9	47.341N	18.219E	9	0.0	-	Bodajk
01	15:47:40.2	47.340N	18.225E	7	-0.1	-	Bodajk
01	15:53:02.6	47.367N	18.199E	9	-0.3	-	Mór
01	20:31:06.5	47.336N	18.215E	8	0.2	-	Bodajk
01	20:31:53.8	47.334N	18.226E	9	-0.5	-	Bodajk
01	20:33:12.2	47.314N	18.244E	3	-0.5	-	Bodajk
01	20:33:21.4	47.334N	18.231E	9	-0.5	-	Bodajk
01	23:30:20.8	47.315N	18.239E	10	-0.4	-	Bodajk
01	23:30:28.8	47.347N	18.220E	8	-0.4	-	Mór
01	23:30:42.8	47.352N	18.214E	8	-0.6	-	Mór
01	23:31:35.0	47.331N	18.235E	8	-0.8	-	Bodajk
01	23:42:19.3	47.370N	18.198E	9	-0.3	-	Mór
02	0:20:55.6	47.326N	18.229E	10	-0.2	-	Bodajk
02	0:38:56.8	47.358N	18.209E	9	-0.4	-	Mór
02	11:13:07.9	47.176N	18.307E	0	0.5	-	Sárkeszi (expl.)

02	11:45:13.9	47.721N	18.444E	12	1.7	-	Süttő
02	13:15:18.0	47.364N	18.192E	8	0.3	-	Mór
02	13:20:04.9	47.375N	18.189E	8	-0.2	-	Mór
02	17:44:03.3	47.652N	20.274E	1	1.9	-	Erdőtelek
02	19:07:32.1	47.987N	19.204E	4	3.4	5	Érsekvadkert
02	19:47:00.6	47.990N	19.198E	5	2.3	-	Érsekvadkert
03	11:12:24.1	48.360N	19.836E	0	1.7	-	Slovakia (expl.)
04	9:40:08.3	47.183N	18.313E	0	0.2	-	Székesfehérvár (expl.)
05	5:00:44.0	46.107N	16.444E	10	2.2	-	Croatia
05	7:26:22.1	45.844N	18.419E	0	0.9	-	Nagyharsány (expl.)
05	19:34:58.0	47.633N	20.243E	1	1.3	-	Heves
09	9:27:44.9	47.398N	18.220E	1	0.0	-	Mór
10	11:13:36.3	47.383N	18.688E	0	0.9	-	Vál (expl.)
11	6:10:21.2	47.641N	20.254E	1	1.9	4	Heves
11	7:23:45.9	47.319N	18.419E	0	1.2	-	Zámoly (expl.)
12	9:18:56.5	45.885N	18.253E	0	0.6	-	Máriagyüd (expl.)
15	10:17:49.6	47.881N	19.407E	0	1.1	-	Bercel (expl.)
18	9:04:48.8	47.170N	18.319E	0	0.4	-	Sárszentmihály (expl.)
19	9:31:27.8	48.677N	20.684E	0	1.6	-	Slovakia (expl.)
20	20:13:17.6	48.730N	18.269E	1	2.4	-	Slovakia
21	1:12:46.7	46.512N	19.035E	2	1.7	-	Negyvenszállás
23	10:11:16.5	47.192N	18.291E	0	0.5	-	Sárkeszi (expl.)
24	11:00:22.8	48.875N	20.981E	10	2.1	-	Slovakia
24	20:01:16.4	46.214N	16.664E	10	1.4	-	Croatia
25	7:15:03.8	47.358N	18.416E	0	1.3	-	Gánt (expl.)
25	10:01:33.5	47.221N	18.292E	0	0.2	-	Moha (expl.)
26	8:16:58.3	48.613N	20.555E	0	1.5	-	Slovakia (expl.)
29	5:22:37.1	45.993N	18.509E	0	0.8	-	Versend
31	9:24:53.6	47.186N	18.292E	0	0.6	-	Sárkeszi (expl.)

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02	14:01:54.0	47.221N	18.256E	7	0.9	-	Iszkaszentgyörgy
05	0:52:01.3	47.404N	18.230E	9	0.2	-	Pusztavám
05	7:43:22.0	47.463N	18.337E	0	0.6	-	Oroszlány (expl.)
05	7:43:34.6	47.434N	18.364E	0	0.9	-	Oroszlány (expl.)
05	7:47:33.1	47.407N	18.344E	0	0.6	-	Gánt (expl.)
05	7:47:42.5	47.439N	18.382E	0	0.8	-	Várgesztes (expl.)
07	5:44:19.3	47.677N	20.273E	1	1.6	-	Erdőtelek
07	8:01:16.7	47.626N	20.415E	6	2.5	-	Átány
07	11:34:06.9	47.401N	18.239E	0	0.1	-	Pusztavám
07	23:40:15.0	46.032N	18.781E	10	1.5	-	Dunafalva
08	9:04:37.1	47.145N	18.314E	0	0.5	-	Úrhida (expl.)
08	9:13:59.3	48.368N	19.826E	0	1.7	-	Slovakia (expl.)
08	9:27:01.5	48.605N	20.742E	0	1.5	-	Slovakia (expl.)
08	10:43:45.0	47.563N	18.449E	0	0.6	-	Tatabánya (expl.)
09	7:18:24.9	45.828N	18.435E	0	1.0	-	Nagyharsány (expl.)
11	2:31:42.6	47.367N	18.214E	3	-0.2	-	Mór
11	3:17:42.9	47.387N	18.197E	0	-0.2	-	Mór
12	1:14:28.4	46.493N	16.818E	13	2.0	-	Valkonya
12	7:17:00.6	47.456N	18.346E	0	1.0	-	Oroszlány (expl.)
13	11:05:04.7	47.179N	18.287E	0	0.2	-	Sárkeszi (expl.)
14	3:27:22.3	45.736N	18.192E	16	1.3	-	Croatia
14	8:45:17.0	47.869N	19.117E	0	1.5	-	Szendehely (expl.)
15	1:57:32.7	47.407N	18.219E	1	-0.1	-	Pusztavám
15	2:22:42.0	45.847N	17.585E	1	2.8	4-5	Croatia
15	11:46:02.5	48.293N	21.222E	1	1.4	-	Abaújalpár
16	0:55:26.6	47.671N	20.296E	2	0.7	-	Erdőtelek
16	7:11:24.5	47.127N	17.913E	15	1.2	-	Kádárta
16	10:16:17.1	48.376N	19.835E	0	1.9	-	Slovakia (expl.)
19	8:25:11.2	48.702N	20.704E	0	1.5	-	Slovakia (expl.)

19	13:34:09.2	48.989N	20.317E	5	2.1	-	Slovakia
20	9:48:07.6	47.644N	20.268E	0	1.0	-	Heves
20	9:48:38.7	47.560N	20.246E	1	1.5	-	Jászszentandrás
20	19:05:28.8	47.387N	19.093E	12	1.9	-	Dunaharaszti
21	6:00:58.0	47.444N	18.207E	0	0.4	-	Pusztavám (expl.)
21	7:26:44.7	47.390N	18.355E	0	0.8	-	Gánt (expl.)
21	7:26:55.1	47.424N	18.366E	0	1.1	-	Gánt (expl.)
25	10:26:09.6	45.846N	18.556E	10	1.5	-	Lippó
26	7:42:23.4	47.324N	18.390E	0	0.7	-	Zámoly (expl.)
26	7:42:37.2	47.463N	18.375E	0	0.7	-	Várgesztes (expl.)
27	11:35:36.9	48.456N	19.330E	0	1.8	-	Slovakia (expl.)
28	13:26:59.5	47.228N	18.281E	0	0.4	-	Iszkaszentgyörgy (expl.)
29	10:12:16.8	46.134N	18.225E	0	0.7	-	Mánfa (expl.)
29	11:21:35.3	47.209N	18.266E	0	0.3	-	Csór (expl.)
30	8:25:00.6	47.440N	18.352E	0	0.6	-	Oroszlány (expl.)
30	8:25:11.5	47.291N	18.443E	0	0.8	-	Pátka (expl.)
30	8:25:41.7	47.435N	18.386E	0	0.9	-	Várgesztes (expl.)
SEPTEMBER, 2013							
01	2:28:40.0	47.340N	18.230E	7	0.7	-	Bodajk
02	8:07:19.4	47.421N	18.331E	0	0.5	-	Oroszlány (expl.)
02	8:17:18.0	47.459N	18.386E	0	1.1	-	Várgesztes (expl.)
02	10:59:37.5	48.792N	21.163E	0		-	Slovakia (expl.)
03	4:28:51.3	47.665N	20.261E	3	2.1	-	Erdőtelek
05	6:15:19.1	47.985N	19.966E	0	1.6	-	Mátramindszent
05	11:14:20.2	47.331N	18.566E	10	1.3	-	Lovasberény
08	13:00:42.7	45.598N	22.830E	4	4.0	-	Romania
08	13:22:12.7	45.600N	22.846E	5	4.4	-	Romania
09	6:08:53.2	47.980N	20.010E	0	1.5	-	Mátraballa (expl.)
09	8:07:34.8	47.456N	18.380E	0	0.7	-	Várgesztes (expl.)
09	8:15:52.1	47.501N	18.403E	0	0.8	-	Várgesztes (expl.)
09	8:16:17.3	47.486N	18.333E	0	0.8	-	Oroszlány (expl.)
10	2:07:40.5	47.658N	20.348E	10	1.6	-	Tenk
10	9:37:38.5	48.626N	20.685E	0	1.6	-	Slovakia (expl.)
10	11:40:59.3	47.462N	18.042E	0	0.5	-	Vérteskethely (expl.)
11	6:10:29.8	45.853N	18.425E	0	0.8	-	Nagyharsány (expl.)
11	9:03:58.8	47.822N	19.047E	0	1.5	-	Verőce (expl.)
16	7:47:38.5	47.421N	18.346E	0	0.8	-	Gánt (expl.)
18	7:30:59.1	45.856N	18.416E	0	0.6	-	Nagyharsány (expl.)
20	1:41:07.8	47.411N	18.171E	1	-0.2	-	Felsődobos
20	2:06:33.5	47.964N	16.454E	7	3.8	-	Austria
22	11:12:19.8	48.287N	21.322E	2	2.0	-	Sima
23	7:08:42.1	47.415N	18.343E	0	0.9	-	Gánt (expl.)
23	7:08:54.3	47.437N	18.338E	0	0.8	-	Oroszlány (expl.)
24	13:53:17.7	47.966N	16.413E	2	2.1	-	Austria
25	9:44:05.6	47.440N	18.047E	0	0.8	-	Aka (expl.)
25	16:32:19.3	47.359N	18.184E	1	0.1	-	Mór
28	10:36:13.3	47.676N	18.238E	14	0.9	-	Naszály
28	15:12:45.9	46.300N	17.130E	10	1.6	-	Somogycsicsó
30	7:43:12.3	47.439N	18.326E	0	0.7	-	Oroszlány (expl.)
30	7:43:24.9	47.394N	18.338E	0	0.5	-	Gánt (expl.)
30	7:43:54.7	47.397N	18.328E	0	0.4	-	Gánt (expl.)
30	7:50:19.8	47.417N	18.340E	0	0.6	-	Gánt (expl.)
OCTOBER, 2013							
01	10:16:48.0	48.628N	20.756E	0	1.9	-	Slovakia (expl.)
02	4:09:52.7	47.943N	16.414E	4	1.4	-	Austria
02	5:26:54.7	47.939N	16.423E	3	1.5	-	Austria
02	5:33:03.6	47.925N	16.377E	2	1.2	-	Austria
02	17:17:35.9	47.964N	16.430E	5	3.7	5	Austria

02	19:42:43.3	47.955N	16.417E	4	2.3	-	Austria
03	0:18:23.3	47.952N	16.381E	5	1.3	-	Austria
03	4:44:54.3	45.882N	20.705E	10	2.0	-	Romania
03	10:17:10.8	47.583N	16.356E	2	1.3	-	Austria
04	2:23:53.9	47.348N	18.193E	0	-0.2	-	Bodajk
06	10:53:52.8	47.833N	16.205E	3	1.9	-	Austria
06	11:08:21.2	47.923N	18.948E	10	1.2	-	Kóspallag
06	11:43:37.4	47.888N	18.894E	19	1.2	-	Kóspallag
06	19:26:24.7	47.333N	18.227E	10	0.9	-	Bodajk
07	9:13:45.8	47.412N	18.328E	0	1.0	-	Gánt (expl.)
07	9:14:16.9	47.383N	18.337E	0	1.0	-	Gánt (expl.)
07	9:14:39.8	47.451N	18.336E	0	1.0	-	Oroszlány (expl.)
08	7:59:58.7	46.201N	16.607E	10	1.5	-	Croatia
09	7:24:59.0	47.312N	18.044E	1	0.3	-	Szápár
10	2:02:32.0	47.893N	18.822E	7	2.3	4	Letkés
10	2:23:15.1	47.862N	18.853E	3	1.1	-	Márianosztra
10	7:08:12.1	46.552N	17.768E	8	1.5	-	Polány
10	11:01:50.6	48.656N	20.133E	1	2.2	-	Slovakia
10	11:11:45.7	48.375N	19.844E	0	1.8	-	Slovakia
14	2:34:26.3	47.943N	16.416E	1	1.5	-	Austria
14	7:41:54.8	47.431N	18.343E	0	0.9	-	Oroszlány (expl.)
15	18:55:24.8	47.047N	18.098E	6	0.9	-	Balatonkenese
16	2:45:49.0	47.341N	18.295E	10	-0.3	-	Csákberény
16	14:46:00.2	48.126N	16.994E	4	1.8	-	Austria
17	12:34:11.6	47.215N	18.281E	0	0.5	-	Iszkaszentgyörgy (expl.)
18	7:04:36.2	47.108N	17.956E	10	0.8	-	Kádárta
18	10:58:30.9	48.369N	19.840E	0	1.8	-	Slovakia (expl.)
19	2:58:06.0	47.686N	17.984E	10	1.3	-	Ács
19	7:02:44.0	47.680N	17.966E	4	3.0	5	Bana
19	8:58:18.7	47.711N	17.992E	10	1.3	-	Ács
19	15:42:52.2	47.356N	18.118E	1	0.4	-	Nagyveleg
20	6:51:27.3	47.672N	17.958E	13	1.2	-	Bana
20	14:32:56.3	47.687N	16.121E	7	2.8	-	Austria
21	7:21:46.1	47.409N	18.319E	0	1.1	-	Pusztavám (expl.)
21	7:22:11.4	47.412N	18.331E	0	1.0	-	Gánt (expl.)
22	12:20:27.2	47.182N	18.311E	0	0.9	-	Székesfehérvár (expl.)
23	0:06:57.5	47.680N	16.138E	0	1.2	-	Austria
23	19:34:53.2	47.938N	16.424E	8	2.1	-	Austria
24	11:16:23.5	48.649N	20.685E	0	1.7	-	Slovakia (expl.)
25	9:07:10.9	47.147N	18.059E	10	0.4	-	Hajmáskér
28	4:40:35.7	47.355N	18.353E	10	0.4	-	Gánt
28	8:47:09.8	47.476N	18.337E	0	1.1	-	Oroszlány (expl.)
28	8:47:26.6	47.458N	18.351E	0	1.0	-	Oroszlány (expl.)
28	13:00:55.2	47.181N	18.145E	10	0.9	-	Pétfürdő
28	21:56:08.6	47.199N	17.153E	13	1.4	-	Izsákfa
29	12:16:39.6	47.204N	18.291E	0	0.8	-	Székesfehérvár (expl.)
29	16:33:42.4	47.656N	18.337E	0	0.7	-	Tata (expl.)
31	6:10:50.0	45.591N	22.816E	3	3.0	-	Romania
31	19:37:03.5	45.780N	18.461E	4	2.1	-	Beremend

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02	4:36:29.1	47.972N	19.455E	10	1.2	-	Cserhátsurány
04	3:06:52.3	47.683N	17.951E	10	0.7	-	Bana
04	8:23:47.5	47.419N	18.325E	0	0.7	-	Pusztavám (expl.)
04	8:24:29.7	47.459N	18.335E	0	0.9	-	Oroszlány (expl.)
04	9:14:45.3	47.085N	18.072E	0	0.9	-	Papkeszi (expl.)
05	23:49:53.5	47.338N	18.113E	3	0.2	-	Bakonycsernye
08	10:56:31.0	47.124N	17.929E	15	0.9	-	Kádárta
10	5:34:35.8	46.919N	21.208E	10	2.4	-	Vésztő
11	8:59:23.5	47.449N	18.337E	0	0.9	-	Oroszlány (expl.)

Hypocenter Parameters **Földrengés paraméterek**

11	8:59:47.2	47.415N	18.310E	0	0.8	-	Pusztavám (expl.)
11	9:00:23.7	47.410N	18.320E	0	0.8	-	Pusztavám (expl.)
13	23:56:41.5	47.316N	18.013E	0	0.4	-	Szápár
14	8:40:48.8	47.428N	18.343E	0	0.7	-	Oroszlány (expl.)
14	8:49:36.0	47.424N	18.338E	0	1.1	-	Oroszlány (expl.)
14	8:52:24.3	47.471N	18.373E	0	1.0	-	Várgesztes (expl.)
14	10:26:53.3	47.464N	17.981E	0	0.7	-	Bakonyszombathely (expl.)
14	13:31:54.0	47.362N	18.147E	0	0.5	-	Nagyveleg (expl.)
15	7:33:30.8	47.370N	18.067E	0	0.2	-	Súr (expl.)
15	7:37:36.5	47.358N	18.080E	0	-0.1	-	Súr (expl.)
15	7:42:15.6	47.284N	18.174E	0	-0.1	-	Isztimér (expl.)
15	23:06:36.8	46.563N	17.779E	10	1.9	-	Polány
16	9:22:33.3	48.016N	19.567E	3	1.1	-	Nagylóc
16	11:03:19.8	47.021N	18.011E	4	0.9	-	Balatonalmádi
17	3:12:23.6	46.533N	17.664E	6	1.9	-	Osztopán
18	0:20:55.3	45.992N	19.540E	1	1.9	-	Serbia
19	10:43:58.7	48.010N	19.487E	0	1.1	-	Nógrádsipek (expl.)
19	12:48:42.0	47.458N	18.035E	0	0.5	-	Vérteskethely (expl.)
19	14:02:19.7	47.576N	18.388E	0	0.6	-	Tatabánya (expl.)
21	10:37:08.7	48.593N	20.562E	0	1.7	-	Slovakia (expl.)
21	12:30:21.3	47.184N	18.288E	0	0.8	-	Sárkeszi (expl.)
23	18:53:33.0	47.890N	21.021E	2	2.2	-	Tiszapalkonya
25	8:54:03.3	47.421N	18.322E	0	1.1	-	Pusztavám (expl.)
25	8:54:13.0	47.454N	18.316E	0	1.1	-	Oroszlány (expl.)
25	11:03:56.8	48.278N	21.204E	14	1.8	-	Abaújszántó
26	8:13:30.0	47.401N	18.291E	12	0.6	-	Pusztavám
26	9:05:52.5	48.635N	20.739E	0	1.4	-	Slovakia (expl.)
26	11:07:32.1	48.855N	20.457E	7	2.1	-	Slovakia

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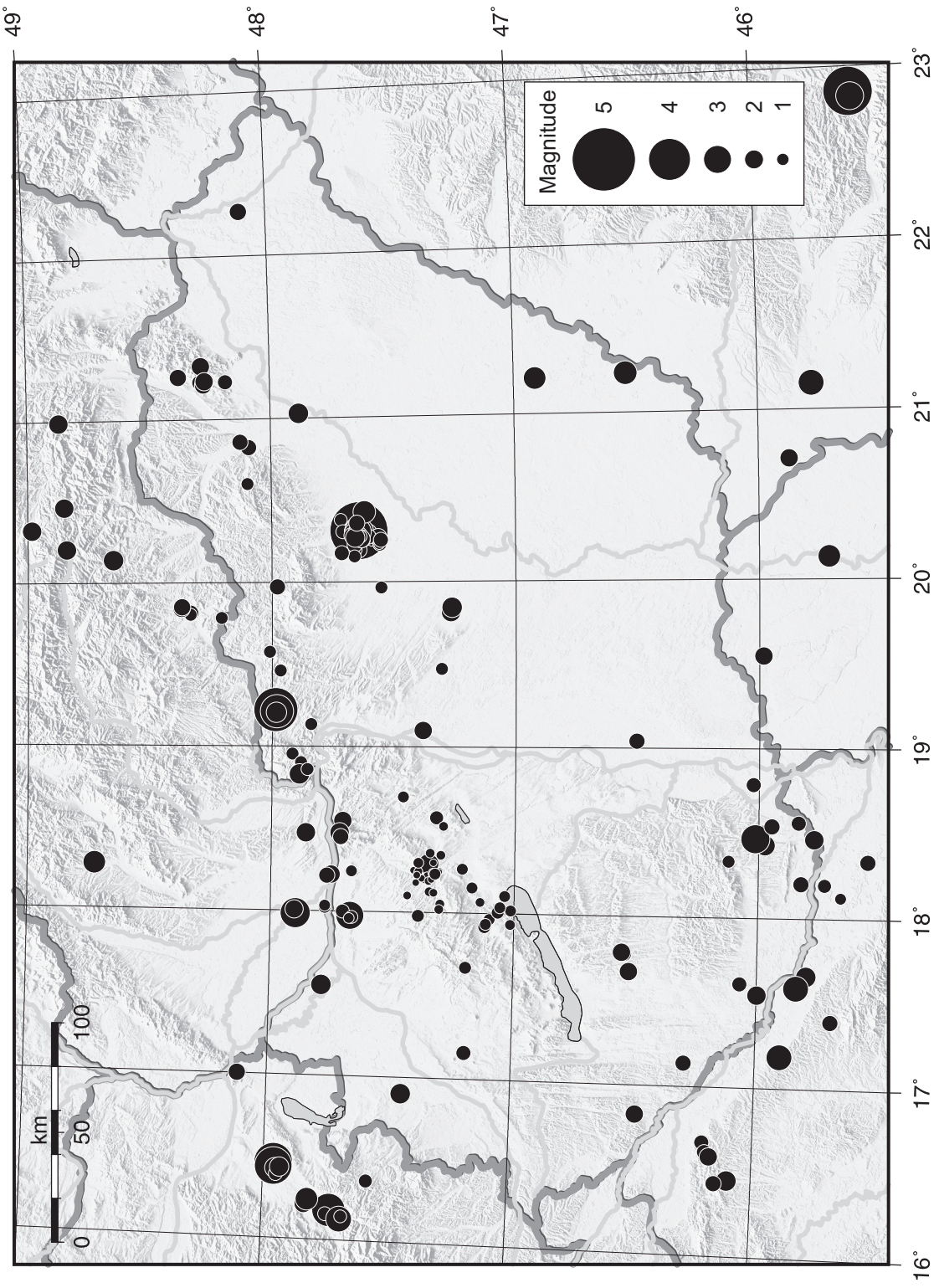
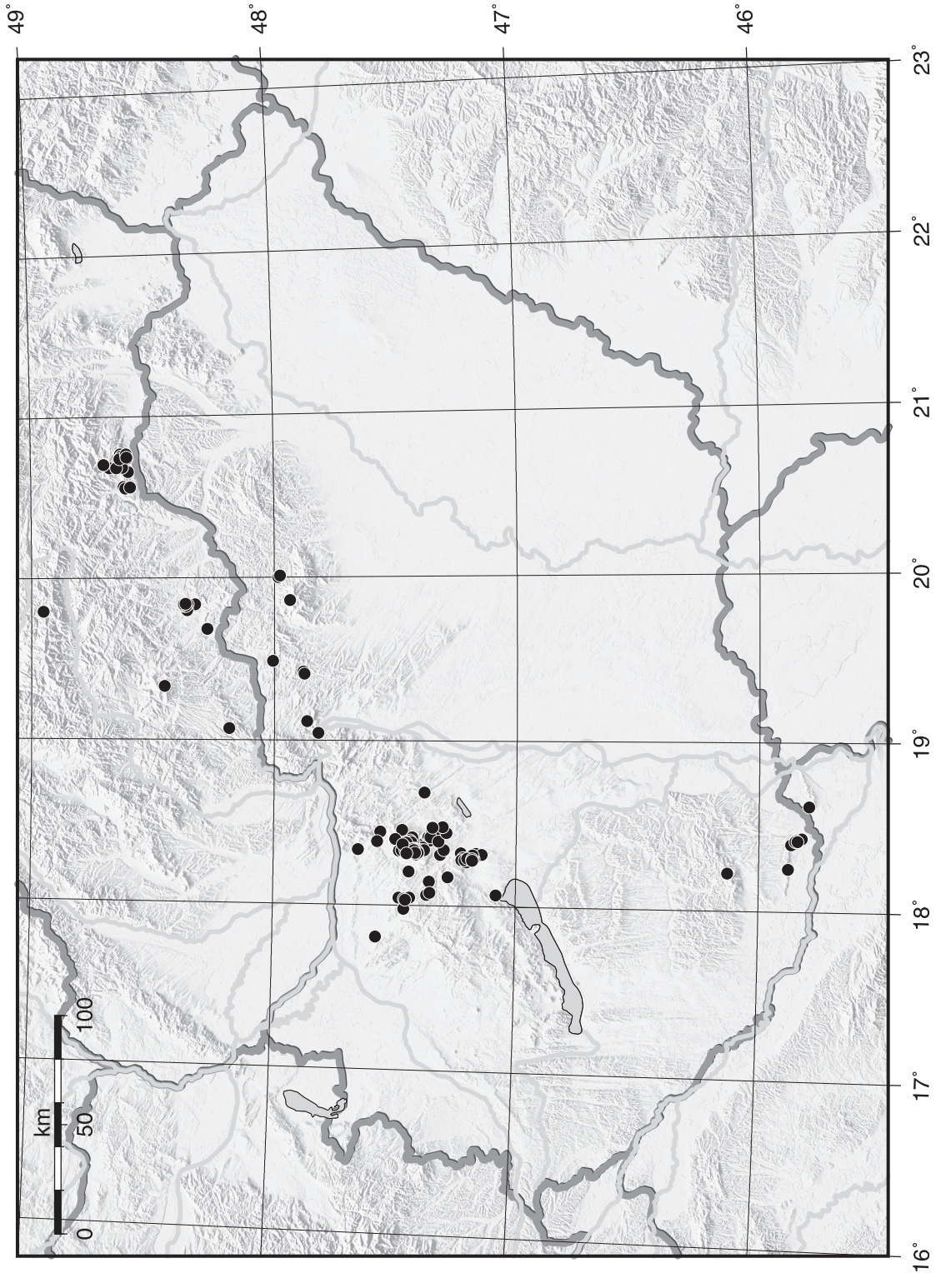
01	6:04:29.6	46.023N	18.461E	10	3.1	5	Máriakéménd
01	6:19:04.3	45.956N	18.536E	10	1.6	-	Bóly
03	12:17:23.5	48.273N	21.228E	7	2.0	-	Abaújszántó
04	8:02:59.1	47.308N	18.479E	0	1.1	-	Pátka (expl.)
04	11:14:34.3	48.608N	20.767E	0	1.6	-	Slovakia (expl.)
05	10:52:37.3	48.189N	21.221E	7	1.5	-	Ond
05	13:13:59.1	47.185N	18.277E	0	0.2	-	Sárkeszi (expl.)
09	7:21:29.7	46.183N	16.580E	10	1.9	-	Croatia
11	8:47:40.0	45.846N	18.419E	0	0.8	-	Nagyharsány (expl.)
11	17:14:10.1	47.821N	16.236E	9	2.5	-	Austria
12	8:08:12.8	47.348N	18.475E	0	1.3	-	Lovasberény (expl.)
12	20:53:09.1	47.203N	17.664E	11	1.0	-	Németbánya
13	12:24:42.8	47.300N	18.513E	10	0.5	-	Pátka
14	19:42:16.4	45.560N	18.330E	3	1.6	-	Croatia
15	19:44:58.2	47.760N	18.216E	7	1.9	-	Komárom
16	9:44:04.8	47.939N	19.861E	0	1.7	-	Mátraszentimre (expl.)
16	11:12:21.1	46.160N	16.424E	10	1.6	-	Croatia
17	2:10:47.4	47.777N	18.210E	8	1.6	-	Komárom
18	10:09:08.2	48.606N	20.747E	0	1.9	-	Slovakia (expl.)
18	13:07:25.4	47.466N	18.688E	10	0.9	-	Herceghalom
20	10:56:09.5	47.073N	18.000E	10	1.0	-	Litér
23	9:33:58.1	47.066N	18.030E	10	0.9	-	Balatonfűzfő
30	22:21:52.8	47.454N	16.893E	1	2.3	4-5	Iván



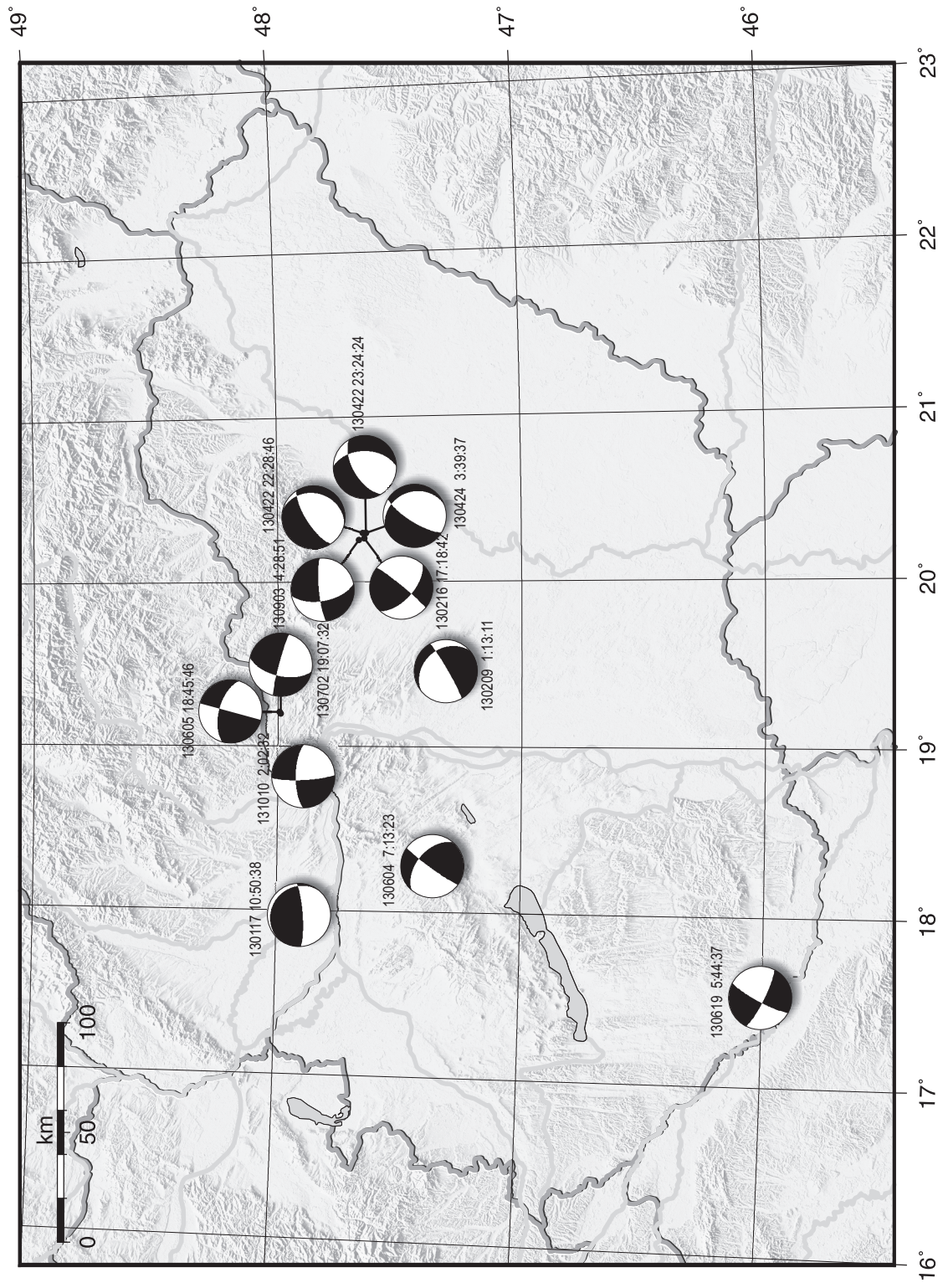
3.1. ábra A 2013-ban regisztrált földrengések epicentrumai

Figure 3.1. Epicenters of 2013 earthquakes



3.2. ábra A 2013-ban regisztrált robbantások epicentrumai

Figure 3.2. Epicenters of 2013 explosions



3.3. ábra A 2013-ban regisztrált földrengések fészekmechanizmusai

Figure 3.3. Fault plane solutions of 2013 earthquakes

A 2013-ban regisztrált földrengések fészekmechanizmusai
Fault plane sulutions of 2013 earthquakes

No	Date	Time	Epicentre		1st nodal plane			P axis		T axis		
			Lat	Lon	Strike	Dip	Rake	Azim.	Plunge	Azim.	Plunge	
1.	2013.01.17	10:50:38	47.90	17.97	85	80	80	184	34	343	54	
2.	2013.02.09	1:13:11	47.31	19.46	60	85	-120	301	42	175	33	
3.	2013.02.16	17:18:42	47.64	20.26	40	85	150	90	17	352	24	
4.	2013.04.22	22:28:46	47.65	20.30	15	25	-130	172	60	315	24	
5.	2013.04.22	23:24:24	47.63	20.30	240	60	-50	203	55	303	7	
6.	2013.04.24	3:39:37	47.63	20.30	340	25	-140	148	56	287	27	
7.	2013.06.04	7:13:23	47.36	18.28	215	85	140	269	23	164	31	
8.	2013.06.05	18:45:46	47.99	19.21	15	90	30	146	21	244	21	
9.	2013.06.19	5:44:37	46.00	17.54	115	80	-10	71	14	341	0	
10.	2013.07.02	19:07:32	47.98	19.20	285	85	-150	153	24	55	17	
11.	2013.09.03	4:28:51	47.66	20.26	265	80	-150	131	28	34	13	
12.	2013.10.10	2:02:32	47.89	18.82	270	70	-170	132	21	225	7	

FÉSZEKPARAMÉTEREK ÉS FÁZISADATOK

A listában alkalmazott jelek és rövidítések magyarázata:

time: Az esemény kipattanásának ideje (óra:perc:másodperc; UTC).
ML: A rengés Richter-féle lokális magnitúdója.
lat: Az esemény földrajzi szélessége (fok).
lon: Az esemény földrajzi hosszúsága (fok).
h: A fészek mélysége (km).
erh: Horizontális hiba km-ben. ($erh = \sqrt{SDX^2 + SDY^2}$, ahol *SDX* és *SDY* az epicentrum földrajzi szélességének és hosszúságának meghatározási hibái.) Ha *erh* = ---, a kevés rendelkezésre álló adat miatt *erh* nem volt meghatározható.
erz: A fészekmélység meghatározásának hibája (km). *erz* = --- azt jelzi, hogy *erz* nem volt meghatározható a kevés rendelkezésre álló adat miatt.
nr: A számításnál felhasznált fázisadatok száma. Azonos állomásról származó P és S beérkezések 2 adatnak számítanak.
gap: Az állomások közötti legnagyobb irányeltérés (fok).
rms: A számított beérkezési idők átlagnégyzetes hibája (mp). ($rms = \sqrt{\sum R_i^2 / nr}$, ahol R_i az *i* –edik állomás időhibája (reziduál).)
Locality: A rengés földrajzi helyének megnevezése, általában a legközelebbi település neve.
Comments: Az eseménnyel kapcsolatos egyéb közlemény (pl. epicentrális intenzitás).
sta: Az állomás neve. (L. 2. fejezet.)
dist: Az állomás távolsága az epicentrumtól (km).
azm: Az állomás irányszöge az epicentrumból az északi iránytól számítva (fok).
phase: Fázis azonosító; az első betű a kezdetet jellemzi: *e* = lassan emelkedő *i* = hirtelen kitérő; a második és harmadik betű a fázis megnevezése pl. Pn, Pg, Sn, Sg; a negyedik a kitérési irányt jelzi: C=kompresszió/fel, D=dilatáció/le.
hr mn sec: A fázis beérkezési ideje (óra, perc, másodperc).
res: Reziduál (másodperc). ($res = T_{obs} - T_{cal}$, ahol T_{obs} a mért, és T_{cal} a számított menetidő.)

Minden rengésnél, ahol elegendő számú első kitérési adat állt rendelkezésre, megkíséreltük a fészekmechanizmus meghatározását. Az ábrákon az alsó félteke sztereografikus képe látható, **P** a maximális, **T** a minimális feszültségtengely iránya. A fészekmechanizmusokat a 3.3. ábra foglalja össze.

PHASE DATA

Key to phase data encoding

time: Time of occurrence of event in hours, mins and secs (UTC).
ML: Richter local magnitude of the earthquake.
lat: Latitude of the event in degrees.
lon: Longitude of the event in degrees.
h: Depth of the hypocenter in km.
erh: Standard error of the epicenter in km. ($erh = \sqrt{SDX^2 + SDY^2}$, where *SDX* and *SDY* are the standard errors in latitude and longitude respectively, of the epicenter.) If *erh* = ---, this means that *erh* could not be computed because of insufficient data.
erz: Standard error of the focal depth in km. If *erz* = ---, this means that *erz* could not be computed either because focal depth is fixed in the solution or because of insufficient data.
nr: Number of station readings used in locating the earthquake. P and S arrivals for the same stations are regarded as 2 readings.
gap: Largest azimuthal separation in degrees between stations.
rms: Root mean square error of time residuals in seconds. ($rms = \sqrt{\sum R_i^2 / nr}$, where R_i is the time residual of the i^{th} station.
Locality: A geographical indication of the epicenter area, usually the nearest settlement.
Comments: Additional comments about the event, eg. maximum EMS intensity
sta: Station name. (For details see Chapter 2.)
dist: Distance from earthquake epicenter to station in km.
azm: Azimuthal angle between epicenter to station measured from North in degrees.
phase: Phase identifier; the first letter characterizes onset *e* = emergent *i* = impulsive, the second and third indicate the phase eg. Pn, Pg, Sn and Sg, the fourth indicates the polarity C=compression/up D=dilatation/down.
hr mn sec: Arrival time of the phase from input data.
res: Residual of the phase in secs. ($res = T_{obs} - T_{cal}$, where T_{obs} is the observed and T_{cal} is the calculated travel time respectively.

Fault plane solutions were attempted for each event where any information for the stress field could be drawn. Stereographic projections of the lower focal hemisphere are shown, **P** and **T** are the main compression and tension axes respectively. Strike, dip and slip values of the nodal planes are also indicated. Calculations were carried out by computer program FPFIT (Reasenberg and Oppenheimer, 1985). The results are summarized in Fig. 3.3.

Földrengés paraméterek **Hypocenter Parameters**

1.

2013-01-02 time: 11:49:26.01 UTC ML= 1.6
lat: 48.601N lon: 20.658E h= 0.0 km
erh= 3.6km erz= 2.0km
nr= 6 gap=272 rms=0.23
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PSZ	94.7	217	ePg	11:49:42.80		-0.13
			eSg	49:56.50		0.37
LANS	106.6	305	ePg	11:49:44.90		-0.15
			eSg	50:00.00		0.10
VYHS	135.0	265	ePn	11:49:49.80		0.25
			eSn	50:07.50		-0.41

2.

2013-01-04 time: 22:58:16.72 UTC ML= 2.2
lat: 46.112N lon: 16.442E h= 12.9 km
erh= 2.2km erz= 1.4km
nr= 22 gap=160 rms=0.62
Locality: Croatia
Comments:

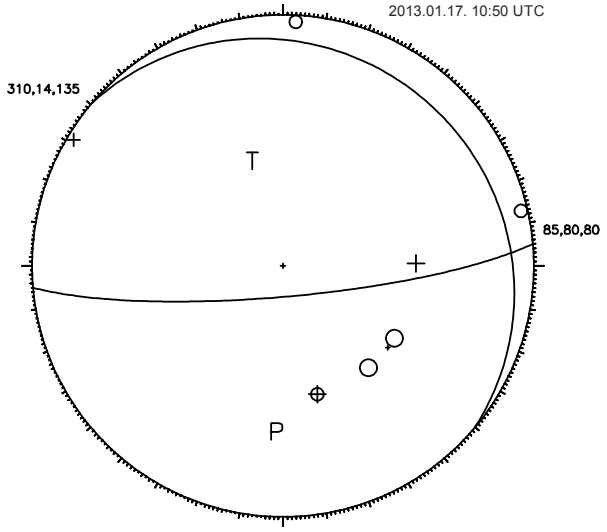
sta	dist	azm	phase	hr mn	sec	res
KOGS	40.2	338	iPg	22:58:24.30		0.04
			iSg	58:29.90		-0.23
BEHE	47.4	33	ePgD	22:58:25.90		0.41
			eSg	58:32.70		0.37
GCIS	68.7	247	iPg	22:58:29.50		0.29
DOBS	75.3	273	iPg	22:58:30.20		-0.16
GROS	82.2	298	iPg	22:58:31.10		-0.48
LEGS	88.9	258	iPg	22:58:32.50		-0.27
PDKS	111.7	268	iPn	22:58:36.30		0.25
BISS	117.4	300	iPn	22:58:36.60		-0.15
SOKA	125.3	300	Pn	22:58:37.80		0.06
			Sn	58:52.30		-1.83
ARSA	144.8	331	Pn	22:58:40.90		0.74
			Sn	58:58.30		-0.14
OBKA	152.4	287	Pn	22:58:42.30		1.19
			Sn	58:59.50		-0.63
PKSM	170.2	86	ePn	22:58:42.90		-0.44
			eSn	59:02.90		-1.20
MORH	170.5	86	ePn	22:58:43.30		-0.07
			eSn	59:03.00		-1.15
PKST	176.3	44	ePn	22:58:44.40		0.30
			eSn	59:10.00		4.55
CONA	206.7	348	Pn	22:58:50.00		2.11
			Sn	59:18.00		5.81

3.

2013-01-17 time: 10:50:38.55 UTC ML= 3.2
lat: 47.904N lon: 17.977E h= 5.3 km
erh= 1.6km erz= 1.7km
nr= 47 gap= 45 rms=0.96
Locality: Slovakia
Comments: felt

sta	dist	azm	phase	hr mn	sec	res
SRO	27.1	112	ePg	10:50:44.00		0.51
			eSg	50:47.30		-0.05
PKSG	64.9	151	ePg	10:50:49.50		-0.69
			eSg	50:58.00		-1.26
ZST	72.8	296	ePg	10:50:51.80		0.21
			eSg	51:01.00		-0.76
MODS	73.7	315	ePg	10:50:53.20		1.45
			eSg	51:02.30		0.26
BUD	91.5	121	ePgC	10:50:54.70		-0.22
			eSg	51:05.80		-1.88
VYHS	91.5	44	ePg	10:50:54.90		-0.03
			eSg	51:05.60		-2.10
SOP	109.1	257	ePgD	10:50:58.30		0.25
			eSg	51:12.20		-1.07
TIH	111.8	183	ePgD	10:50:58.80		0.25
			eSg	51:14.20		0.06
PSZ	143.4	89	ePnC	10:51:02.50		-0.28
			eSn	51:19.60		-2.08
CONA	158.0	271	Pn	10:51:04.60		-0.01
			Sn	51:24.00		-0.93
LANS	177.0	38	ePn	10:51:08.90		1.92
			eSn	51:29.40		0.26
PKSN	181.4	128	ePnC	10:51:11.00		3.48
			eSn	51:33.30		3.18
PKS2	182.9	149	ePn	10:51:10.40		2.70
			eSn	51:32.20		1.76
BEHE	183.6	210	ePn	10:51:09.50		1.70
			eSn	51:36.80		6.19
VRAC	186.5	327	iPn	10:51:08.00		-0.16
MORH	194.4	165	ePnC	10:51:08.60		-0.55
			eSn	51:28.70		-4.31
PKSM	194.8	165	ePnD	10:51:08.60		-0.60
			eSn	51:29.10		-4.00
ARSA	198.4	249	Pn	10:51:09.60		-0.04
			Sn	51:32.60		-1.29
KOGS	208.2	219	iPn	10:51:11.50		0.64
MORC	210.7	351	iPn	10:51:11.20		0.03
OKC	215.3	3	iPn	10:51:11.80		0.05
			eSn	51:37.30		-0.35
KRLC	256.8	340	ePn	10:51:17.90		0.98
SOKA	261.1	239	Pn	10:51:17.70		0.24
			Sn	51:46.00		-1.81
DOBS	272.8	224	iPn	10:51:18.70		-0.21
MOA	277.6	269	Pn	10:51:20.30		0.78
			Sn	51:51.70		0.22
OJC	289.9	27	iPn	10:51:21.10		0.05
LEGS	297.1	223	iPn	10:51:21.60		-0.35
DPC	297.6	336	ePn	10:51:23.10		1.09
CRES	300.5	220	iPn	10:51:22.00		-0.37
OBKA	302.5	239	Pn	10:51:23.20		0.58
			Sn	51:56.20		-0.80
UPC	323.0	334	ePn	10:51:26.00		0.83
GOPC	323.5	314	ePn	10:51:26.00		0.77
SIRR	333.7	123	iPnD	10:51:27.00		0.49
FRGS	339.3	155	iPn	10:51:26.60		-0.61
TRPA	341.3	86	iPn	10:51:26.50		-0.96
PRU	342.1	313	ePn	10:51:29.20		1.64
			eSn	52:03.70		-2.08
BLY	351.8	190	iPn	10:51:29.60		0.83
KHC	352.4	293	ePn	10:51:29.90		1.05
			eSn	52:07.20		-0.88
MYKA	357.4	247	Pn	10:51:30.20		0.74
			Sn	52:07.00		-2.17
BZS	376.8	132	iPn	10:51:33.30		1.41
DRGR	378.5	109	iPn	10:51:31.50		-0.60
ABTA	432.6	253	Pn	10:51:41.50		2.65
MDVR	450.8	140	iPnD	10:51:40.90		-0.22
GZR	461.5	127	iPn	10:51:43.80		1.36
WTTA	482.3	262	Pn	10:51:46.30		1.27
SQTA	515.0	262	Pn	10:51:50.30		1.18
			Sn	52:40.80		-3.36
RETA	543.5	265	Pn	10:51:52.80		0.12
BURB	543.8	93	iPn	10:51:52.40		-0.31
FETA	555.2	260	Pn	10:51:55.20		1.07
			Sn	52:51.00		-2.08
DOPR	604.1	111	iPn	10:52:01.00		0.77
VOIR	606.8	117	iPn	10:52:00.70		0.14

Hypocenter Parameters **Földrengés paraméterek**



4.

2013-01-17 time: 19:38:44.39 UTC ML= 1.9
lat: 47.907N lon: 17.998E h= 8.8 km
erh= 2.1km erz= 2.0km
nr= 22 gap= 90 rms=0.76
Locality: Slovakia
Comments:

sta	dist	azm	phase	hr mn sec	res
SRO	25.8	114	ePg	19:38:49.80	0.55
			eSg	38:52.50	-0.55
PKSG	64.4	153	ePg	19:38:56.70	0.70
			eSg	39:04.10	-0.96
ZST	74.1	296	ePg	19:38:57.40	-0.31
			eSg	39:06.80	-1.30
MODS	74.6	314	ePg	19:38:59.00	1.20
			eSg	39:08.40	0.14
VYHS	90.3	44	ePg	19:39:00.60	0.02
			eSg	39:11.30	-1.91
SOP	110.7	257	ePnC	19:39:03.40	-0.70
			eSn	39:18.10	-1.38
TIH	112.2	184	ePn	19:39:05.00	0.70
			eSn	39:19.60	-0.23
PSZ	141.8	89	ePnD	19:39:08.80	0.82
			eSn	39:26.20	-0.19
CONA	159.6	271	Pn	19:39:10.50	0.30
			Sn	39:30.00	-0.33
MORH	194.3	165	ePnD	19:39:14.40	-0.13
			eSn	39:34.90	-3.14
ARSA	200.0	249	Pn	19:39:16.10	0.87
MOA	279.2	269	Pn	19:39:25.50	0.38
KHC	353.7	293	ePn	19:39:36.20	1.79
			eSn	40:13.90	0.48

5.

2013-01-25 time: 7:14:30.31 UTC ML= 3.4
lat: 47.729N lon: 16.174E h= 8.8 km
erh= 1.6km erz= 1.4km
nr= 49 gap= 81 rms=0.94
Locality: Austria
Comments:

sta	dist	azm	phase	hr mn sec	res
SOP	29.3	100	ePgD	7:14:36.70	0.93
			eSg	14:40.70	0.67
CONA	32.2	314	Pg	7:14:36.20	-0.06
			Sg	14:40.90	-0.01
ARSA	72.4	223	Pg	7:14:42.70	-0.62
			Sg	14:51.20	-2.27
ZST	86.7	53	ePg	7:14:44.60	-1.26
			eSg	14:56.00	-1.99
MODS	109.1	49	ePn	7:14:49.10	-0.73
			eSn	15:03.60	-1.45
SMOL	127.8	47	ePn	7:14:52.70	0.54
			eSn	15:09.10	-0.11
MOA	143.6	275	Pn	7:14:54.20	0.07
			Sn	15:12.50	-0.20
SOKA	145.4	217	Pn	7:14:54.30	-0.05
			Sn	15:11.60	-1.50
PERS	145.6	213	iPn	7:14:54.50	0.13
PKST	149.6	110	ePnC	7:14:55.20	0.32
TIH	159.3	125	ePn	7:14:56.50	0.41
SRO	160.6	87	ePn	7:14:56.00	-0.25
			eSn	15:14.50	-1.99
PKSG	171.0	103	ePnC	7:14:57.70	0.16
VRAC	178.3	10	iPnD	7:14:58.60	0.14
TREC	181.4	344	ePn	7:15:00.00	1.16
			eSn	15:20.70	-0.39
OBKA	183.3	222	Pn	7:14:59.90	0.82
			Sn	15:23.70	2.18
VYHS	215.7	67	ePn	7:15:02.60	-0.52
			eSn	15:27.80	-0.92
BUD	216.0	97	ePn	7:15:04.10	0.94
KBA	225.5	251	Pn	7:15:05.70	1.36
			Sn	15:37.30	6.42
MYKA	227.5	238	Pn	7:15:05.50	0.91
			Sn	15:36.10	4.76
KHC	247.4	309	ePn	7:15:08.00	0.93
			eSn	15:34.50	-1.25
MORC	249.0	24	iPnD	7:15:07.70	0.43
MORH	252.3	132	ePnC	7:15:07.70	0.02
			eSn	15:34.00	-2.82
PKSM	252.4	132	ePnC	7:15:07.70	0.01
			eSn	15:34.00	-2.86
GOPC	263.5	337	ePn	7:15:11.10	2.03
KRLC	264.7	10	ePn	7:15:10.20	0.97
			eSn	15:45.70	6.11
OKC	275.7	32	ePn	7:15:11.60	1.00
PRU	278.3	335	ePn	7:15:12.80	1.87
			eSn	15:48.00	5.39
PSZ	279.4	86	ePnC	7:15:11.30	0.24
			eSn	15:41.30	-1.55
LANS	290.5	57	ePn	7:15:13.20	0.76
			eSn	15:46.20	0.89
DPC	291.7	2	ePn	7:15:12.80	0.21
			eSn	15:51.20	5.62
ABTA	298.0	249	Sn	7:15:57.80	10.83
UPC	309.2	358	ePn	7:15:16.00	1.22
			eSn	15:57.10	7.63
PVCC	332.6	339	eSn	7:16:03.50	8.84
BLY	336.0	167	iPn	7:15:20.10	1.98
WATA	348.9	263	Pn	7:15:21.40	1.67
SQTA	378.5	261	Pn	7:15:25.40	1.98
			Sn	16:19.40	14.55
MOTA	384.1	264	Pn	7:15:25.50	1.38
NKC	389.8	316	ePn	7:15:26.00	1.17
			eSn	16:20.20	12.85
RETA	407.8	266	Pn	7:15:28.50	1.43
			Sn	16:26.80	15.46
FETA	418.7	259	Pn	7:15:30.00	1.57
			Sn	16:31.30	17.54
DAVA	476.7	264	Pn	7:15:36.80	1.14
			Sn	16:46.60	19.97
BZS	478.1	119	iPn	7:15:37.70	1.86
DRGR	505.7	102	iPn	7:15:40.20	0.93
MDVR	538.3	127	iPn	7:15:45.40	2.06
GZR	569.0	117	iPn	7:15:48.90	1.73
BURB	679.3	91	iPn	7:16:02.00	1.08
ARR	699.9	112	iPnD	7:16:04.40	0.90

6.

2013-01-28 time: 15:48:37.17 UTC ML= 2.3
lat: 45.983N lon: 18.423E h= 2.1 km
erh= 3.5km erz=33.8km
nr= 8 gap=291 rms=0.30
Locality: Belvárdgyula
Comments:

sta	dist	azm	phase	hr mn sec	res
PKSM	30.5	34	ePgD	15:48:42.50	-0.14
			eSg	48:46.80	-0.10
MORH	31.0	33	ePgD	15:48:42.60	-0.12
			eSg	48:46.90	-0.15
PKS2	83.2	47	ePgD	15:48:51.90	-0.13
			eSg	49:04.40	0.79
TIH	109.8	338	ePg	15:48:57.20	0.42
			eSg	49:11.60	-0.47
PSZ	242.6	28	ePn	15:49:18.60	4.42
			eSn	49:48.80	5.76

7.

2013-02-01 time: 11:06:13.39 UTC ML= 1.9
lat: 47.714N lon: 18.541E h= 10.0 km
erh= 1.4km erz= 1.3km
nr= 18 gap= 79 rms=0.51
Locality: Bajót
Comments:

sta	dist	azm	phase	hr mn sec	res
SRO2	12.2	296	ePg	11:06:14.80	-1.41
			eSg	06:17.10	-1.31
SRO	20.3	303	ePg	11:06:17.50	0.07
			eSg	06:21.10	0.52
PKSG	37.6	197	ePgC	11:06:20.00	-0.33
			eSg	06:26.60	0.85
BUD	44.5	125	eSg	11:06:27.90	0.03
PKST	63.4	217	ePg	11:06:25.00	0.15
			eSg	06:33.70	-0.08
VYHS	89.4	14	ePg	11:06:29.60	0.14
			eSg	06:41.20	-0.79
PSZ	103.9	77	eS*	11:06:46.50	-0.02
MODS	119.4	308	ePn	11:06:34.50	0.47
			eSn	06:49.50	-0.62
MORH	166.8	177	ePnD	11:06:40.50	0.56
			eSn	06:59.60	-1.04
PKSM	167.2	177	ePnC	11:06:40.40	0.41
			eSn	06:59.60	-1.14

8.

2013-02-05 time: 22:34:31.61 UTC ML= 2.1
lat: 47.275N lon: 19.805E h= 5.6 km
erh= 3.4km erz= 2.8km
nr= 16 gap=168 rms=1.02
Locality: Tápiószőlős
Comments:

sta	dist	azm	phase	hr mn sec	res
PKSN	42.3	174	eSg	22:34:44.80	-0.35
PKS7	55.0	243	eSg	22:34:49.40	0.21
PSZ	71.9	5	ePgC	22:34:44.30	-0.18
			eSg	34:54.00	-0.52
PKSG	107.7	277	ePgD	22:34:51.00	0.13
			eSg	35:05.60	-0.29
PKST	134.0	269	eSn	22:35:12.00	-0.61
PKS9	139.1	237	ePnD	22:34:58.80	3.52
			eSn	35:13.80	0.06
MORH	147.4	217	ePnC	22:34:54.00	-2.31
			eSn	35:15.20	-0.38
PKSM	147.9	217	ePn	22:34:56.30	-0.07
			eSn	35:15.00	-0.69
TIH	151.1	254	eSn	22:35:18.00	1.61
VYHS	153.7	332	ePn	22:34:59.20	2.10
			eSn	35:16.30	-0.68

9.

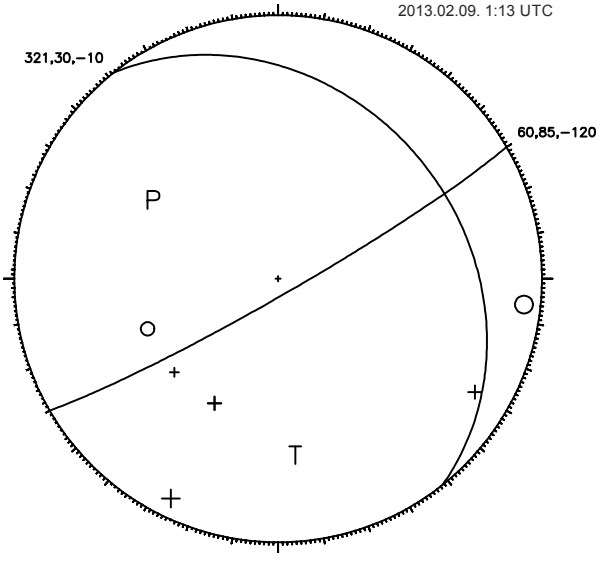
2013-02-07 time: 11:14:56.07 UTC ML= 2.3
lat: 45.805N lon: 17.654E h= 19.2 km
erh= 8.9km erz= 4.8km
nr= 11 gap=239 rms=0.46
Locality: Croatia
Comments:

sta	dist	azm	phase	hr mn sec	res
PKSV	47.4	79	ePgD	11:15:05.80	0.60
			eSg	15:14.10	1.78
PKSM	88.9	59	eP*C	11:15:11.00	-0.54
			eS*	15:23.40	-0.20
MORH	89.3	59	eP*	11:15:11.70	0.10
			eS*	15:23.60	-0.12
PKS9	99.4	29	ePn	11:15:13.50	0.45
			eSn	15:26.90	0.61
BEHE	100.3	317	ePnD	11:15:13.20	0.04
			eSn	15:26.50	0.00
PKST	164.2	10	ePn	11:15:20.30	-0.83

10.

2013-02-09 time: 1:13:11.80 UTC ML= 1.1
lat: 47.311N lon: 19.465E h= 10.0 km
erh= 6.1km erz= 6.3km
nr= 12 gap=182 rms=0.91
Locality: Monorierdő
Comments:

sta	dist	azm	phase	hr mn sec	res
BUD	38.4	300	ePgC	1:13:19.00	0.11
			eSg	13:23.80	-0.61
PSZ	74.8	26	ePgC	1:13:25.50	0.22
			eSg	13:34.00	-1.79
PKSG	81.6	276	ePgD	1:13:27.60	1.11
			eSg	13:36.50	-1.45
PKST	108.4	267	eSn	1:13:45.60	-0.50
PKS9	121.0	228	ePnC	1:13:35.10	2.46
TIH	127.8	249	ePnD	1:13:33.30	-0.19
MORH	137.0	207	ePnC	1:13:34.30	-0.33
			eSn	13:50.10	-2.35
PKSM	137.5	207	ePnC	1:13:34.30	-0.40



11.

2013-02-11 time: 6:08:20.51 UTC ML= 2.2
lat: 47.270N lon: 19.835E h= 6.4 km
erh= 2.7km erz= 2.3km
nr= 14 gap=173 rms=0.70
Locality: Tápiószőlős
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKSN	41.5	177	ePg	6:08	27.40	-0.61
			eSg	08	33.60	-0.26
PKS7	56.8	244	ePg	6:08	30.90	0.18
			eSg	08	38.50	-0.18
PSZ	72.2	4	ePg	6:08	33.40	-0.06
			eSg	08	42.90	-0.67
PKSG	110.0	277	ePg	6:08	42.50	2.31
			eSg	08	54.80	-0.74
PKST	136.3	269	eSn	6:09	01.20	-0.63
PKS9	140.8	237	ePnD	6:08	45.10	0.82
PKSM	148.9	218	ePnD	6:08	45.30	0.01
			eSn	09	03.80	-0.81
VYHS	155.3	331	ePn	6:08	47.00	0.91
			eSn	09	05.80	-0.24

12.

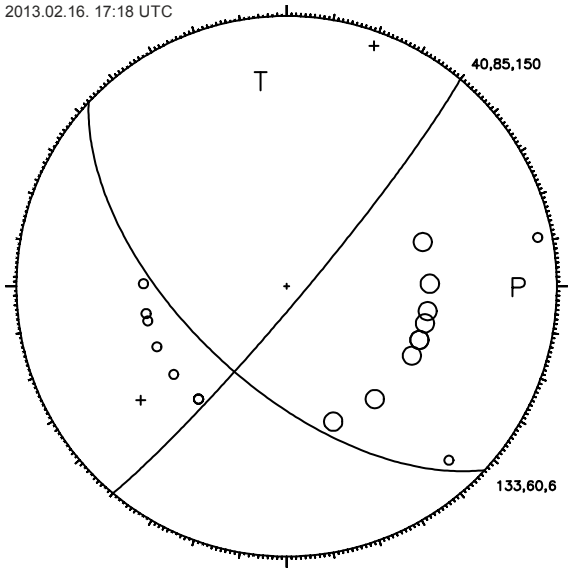
2013-02-15 time: 9:23:12.23 UTC ML= 1.2
lat: 46.132N lon: 18.328E h= 13.4 km
erh= 0.2km erz= 0.7km
nr= 7 gap=163 rms=0.03
Locality: Hird
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKSM	25.8	70	ePgD	9:23	17.40	-0.01
			eSg	23	21.50	0.05
MORH	26.1	69	ePgD	9:23	17.50	0.03
			eSg	23	21.50	-0.06
PKSV	27.7	192	ePg	9:23	17.70	-0.01
			eSg	23	22.00	0.01
PKS9	50.8	356	eSg	9:23	28.90	-0.02

13.

2013-02-16 time: 17:18:42.18 UTC ML= 3.6
lat: 47.643N lon: 20.269E h= 9.8 km
erh= 1.8km erz= 1.7km
nr= 45 gap= 92 rms=0.88
Locality: Heves
Comments: felt 4-5 EMS

sta	dist	azm	phase	hr mn	sec	res
PSZ	41.5	317	ePgD	17:18	50.00	0.20
			eSg	18	55.70	-0.04
PKSN	88.4	200	ePgC	17:18	58.50	0.45
			eSg	19	11.00	0.56
BUD	95.4	259	ePgD	17:18	59.20	-0.10
			eSg	19	11.50	-1.16
PKS7	106.8	232	eP*C	17:19	01.10	-0.16
			eS*	19	15.70	-0.43
LTVH	126.2	103	ePn	17:19	03.10	-0.60
			eSn	19	20.40	-0.09
SRO2	141.4	275	ePn	17:19	05.60	0.01
			eSn	19	22.80	-1.05
VYHS	142.7	312	ePn	17:19	05.60	-0.15
			eSn	19	24.00	-0.14
PKSG	144.2	259	ePnD	17:19	05.80	-0.15
			eSn	19	24.30	-0.18
AMBH	147.9	166	ePn	17:19	06.30	-0.10
			eSn	19	26.70	1.40
SRO	147.9	277	ePn	17:19	07.10	0.69
			eSn	19	25.50	0.20
PKS2	151.1	212	eSn	17:19	29.00	3.00
KOLL	173.6	307	e n	17:19	09.50	-0.11
			eSn	19	30.50	-0.50
PKST	173.9	256	ePnD	17:19	09.60	-0.04
			eSn	19	30.50	-0.56
LANS	177.8	341	e n	17:19	10.80	0.67
			eSn	19	33.00	1.07
TRPA	178.2	72	iPnD	17:19	11.20	1.02
			eSn	19	30.70	-1.33
SIRR	186.0	145	iPn	17:19	10.40	-0.76
PKS9	191.3	232	ePnD	17:19	15.20	3.38
			eSn	19	38.60	3.66
TIH	197.9	245	ePnD	17:19	12.50	-0.14
			eSn	19	41.80	5.41
MORH	201.2	218	ePnD	17:19	11.80	-1.26
			eSn	19	34.40	-2.74
PKSM	201.7	218	ePnD	17:19	11.70	-1.42
			eSn	19	41.50	4.25
DRGR	207.8	117	iPn	17:19	13.00	-0.87
BMR	242.5	89	iPnD	17:19	18.90	0.70
BZS	247.8	155	iPn	17:19	18.20	-0.66
BANR	260.0	165	iPn	17:19	20.70	0.32
CJR	272.7	112	iPn	17:19	21.50	-0.47
SOP	278.8	271	ePnD	17:19	22.80	0.08
DEV	280.7	134	iPn	17:19	22.50	-0.46
OKC	289.7	327	ePn	17:19	24.80	0.72
MORC	310.7	320	iPn	17:19	27.40	0.69
ARCR	314.7	101	iPn	17:19	26.60	-0.61
GZR	315.6	142	iPnD	17:19	27.20	-0.11
VRAC	328.8	304	iPn	17:19	29.00	0.03
CONA	331.7	275	Pn	17:19	29.20	-0.12
			Sn	20	05.60	-0.49
MDVR	337.1	161	iPnD	17:19	29.40	-0.59
ARSA	360.6	263	Pn	17:19	33.30	0.37
			Sn	20	11.20	-1.31
LOT	362.8	132	iPn	17:19	33.70	0.50
BURB	371.9	90	iPn	17:19	33.30	-1.03
KRLC	372.3	317	ePn	17:19	35.30	0.91
			eSn	20	14.10	-1.01
TREC	398.5	297	eSn	17:20	19.20	-1.71
PERS	406.6	254	iPn	17:19	38.40	-0.26
SOKA	411.3	255	Pn	17:19	39.10	-0.15
DPC	417.2	316	ePn	17:19	40.60	0.62
ARR	419.8	127	iPn	17:19	40.00	-0.31
DOPR	432.9	115	iPn	17:19	41.90	-0.05
VOIR	441.2	124	iPn	17:19	43.30	0.33
UPC	445.2	316	ePn	17:19	43.80	0.33
BIZ	448.3	100	iPnD	17:19	44.20	0.34
MOA	450.8	273	Pn	17:19	44.30	0.13
			Sn	20	33.00	0.48
OBKA	452.4	254	Pn	17:19	44.00	-0.37
OZUR	454.5	112	iPnD	17:19	44.60	-0.03
GOPC	475.5	302	ePn	17:19	46.90	-0.35
			eSn	20	35.30	-2.71
PRU	494.9	302	ePn	17:19	49.70	0.03
			eSn	20	39.70	-2.62
MLR	496.6	119	iPnD	17:19	49.60	-0.29
TESR	500.6	105	iPnD	17:19	49.80	-0.58
KHC	522.5	288	ePn	17:19	53.20	0.09
			eSn	20	45.40	-3.03
PVCC	525.7	308	ePn	17:19	53.10	-0.41
PLOR	526.7	112	iPnD	17:19	53.50	-0.14
KBA	526.9	263	Pn	17:19	54.70	1.04
VRI	531.5	112	iPn	17:19	54.00	-0.24
NKC	641.3	297	ePn	17:20	07.30	-0.63



14.

2013-02-17 time: 13:21:47.67 UTC ML= 2.5
lat: 47.647N lon: 20.300E h= 0.6 km
erh= 3.5km erz= 3.7km
nr= 17 gap=117 rms=1.09
Locality: Tenk
Comments:

sta	dist	azm	phase	hr mn	sec	res
PSZ	42.8	315	ePg	13:21:55.60		0.28
			eSg	22:01.50		0.21
PKSN	89.5	201	eSg	13:22:16.50		0.37
PKS7	108.9	232	ePg	13:22:06.60		-0.51
			eSg	22:21.00		-1.27
VYHS	144.1	311	ePn	13:22:12.30		-0.30
			eSn	22:30.20		-1.84
PKSG	146.6	259	ePn	13:22:12.90		0.00
			eSn	22:30.00		-2.58
PKS2	152.6	213	ePn	13:22:14.30		0.65
			eSn	22:34.70		0.78
TRPA	175.9	72	iPnD	13:22:17.40		0.84
PKST	176.2	256	eSn	13:22:40.80		1.64
PKS9	193.4	232	ePn	13:22:20.80		2.06
			eSn	22:44.30		1.33
DRGR	205.9	117	iPn	13:22:19.00		-1.30
BZS	247.2	156	iPnD	13:22:23.30		-2.14
GZR	314.4	143	iPnD	13:22:32.90		-0.93

15.

2013-02-21 time: 8:51:56.14 UTC ML= 2.0
lat: 47.354N lon: 18.438E h= 0.0 km
erh= 3.1km erz= 554km
nr= 6 gap=213 rms=0.33
Locality: Gánt
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSG	5.6	320	ePg	8:51:57.10		-0.04
			eSg	51:57.70		-0.22
PKST	32.3	251	ePg	8:52:02.20		0.29
			eSg	52:05.80		-0.62
PKSM	127.9	173	ePg	8:52:19.10		0.12
			eSg	52:34.60		-2.19

16.

2013-03-04 time: 10:55:44.85 UTC ML= 2.1
lat: 47.727N lon: 18.471E h= 10.0 km
erh= 2.9km erz= 2.0km
nr= 12 gap=172 rms=0.53
Locality: Süttő
Comments:

sta	dist	azm	phase	hr mn	sec	res
SRO	15.2	309	ePg	10:55:48.50		0.39
			eSg	55:52.10		1.45
PKSG	37.7	189	ePg	10:55:52.00		0.18
			eSg	55:57.20		-0.06
PKST	61.5	212	ePg	10:55:55.80		-0.19
			eSg	56:03.60		-1.07
VYHS	89.6	18	ePg	10:56:01.20		0.25
			eSg	56:12.10		-1.40
KOLL	94.9	357	eSg	10:56:14.70		-0.48
MODS	114.4	309	ePn	10:56:05.60		0.72
			eSn	56:20.40		-0.10
ZST	114.8	297	eSn	10:56:20.30		-0.27

17.

2013-03-07 time: 10:57:28.26 UTC ML= 1.7
lat: 48.329N lon: 19.837E h= 0.0 km
erh= 6.3km erz= ***km
nr= 6 gap=191 rms=0.66
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PSZ	45.9	175	ePg	10:57:36.30		-0.15
			eSg	57:42.70		-0.14
VYHS	76.3	284	ePg	10:57:43.00		1.12
			eSg	57:51.50		-1.01
LANS	95.3	343	ePg	10:57:45.60		0.33
			eSg	57:57.40		-1.14

18.

2013-03-08 time: 6:59:09.51 UTC ML= 0.3
lat: 47.316N lon: 18.309E h= 0.0 km
erh= 5.6km erz= 5.0km
nr= 6 gap=217 rms=0.12
Locality: Söréd
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
CSKK	6.4	325	ePgD	6:59:11.40		0.03
			eSg	59:12.90		0.08
PKSG	10.5	36	ePgC	6:59:11.80		-0.09
			eSg	59:13.70		-0.04
PKST	21.7	253	ePgD	6:59:13.80		0.15
			eSg	59:16.60		-0.28

19.

2013-03-08 time: 7:33:55.64 UTC ML= 0.3
lat: 47.311N lon: 18.339E h= 8.6 km
erh= 4.5km erz= 4.4km
nr= 6 gap=233 rms=0.22
Locality: Magyaralmás
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	8.3	314	ePg	7:33:57.60		-0.16
			eSg	33:59.00		-0.43
PKSG	9.8	23	ePgC	7:33:58.00		0.04
			eSg	34:00.10		0.33
PKST	23.8	256	ePgD	7:34:00.10		-0.04
			eSg	34:04.00		0.34

20.

2013-03-08 time: 9:03:46.62 UTC ML= 1.7
lat: 48.364N lon: 19.799E h= 0.0 km
erh= 4.1km erz= 768km
nr= 5 gap=187 rms=0.36
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PSZ	50.1	172	ePgC	9:	03:	55.60	0.04
			eSg		04:	02.40	-0.14
VYHS	72.7	281	ePg	9:	04:	00.20	0.60
			eSg		04:	09.40	-0.32
LANS	90.8	344	eSg	9:	04:	15.00	-0.46

21.

2013-03-12 time: 12:01:39.64 UTC ML= 1.8
lat: 48.382N lon: 21.255E h= 19.7 km
erh= 5.8km erz= 6.2km
nr= 7 gap=192 rms=0.51
Locality: Korlát
Comments:

sta	dist	azm	phase	hr	mn	sec	res
TRPA	99.4	106	ePn	12:	01:	56.00	-0.54
			eSn		02:	10.50	0.77
PSZ	113.6	243	ePnC	12:	01:	58.90	0.58
			eSn		02:	12.70	-0.19
LTVH	120.9	156	ePn	12:	01:	58.80	-0.43
			eSn		02:	14.30	-0.20
VYHS	179.4	274	eSn	12:	02:	27.10	-0.40

22.

2013-03-19 time: 15:09:26.62 UTC ML= 1.6
lat: 48.342N lon: 19.806E h= 9.0 km
erh= 4.4km erz=36.4km
nr= 6 gap=188 rms=0.69
Locality: Slovakia
Comments:

sta	dist	azm	phase	hr	mn	sec	res
PSZ	47.6	172	ePgD	15:	09:	35.10	-0.17
			eSg		09:	41.70	-0.31
VYHS	73.8	283	ePg	15:	09:	40.30	0.41
			eSg		09:	49.80	-0.45
LANS	93.3	345	ePg	15:	09:	44.50	1.15
			eSg		09:	55.20	-1.21

23.

2013-03-20 time: 8:26:50.61 UTC ML= 0.9
lat: 47.470N lon: 18.360E h= 0.0 km
erh= 3.6km erz= 445km
nr= 6 gap=299 rms=0.27
Locality: Oroszlány
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKSG	9.0	165	ePgC	8:	26:	52.30	0.08
			eSg		26:	52.90	-0.57
CSKK	14.1	212	ePg	8:	26:	53.40	0.28
			eSg		26:	55.30	0.22
PKST	34.0	226	ePg	8:	26:	56.40	-0.29
			eSg		27:	01.50	0.08

24.

2013-03-20 time: 8:27:22.95 UTC ML= 0.2
lat: 47.366N lon: 18.415E h= 0.0 km
erh= 1.7km erz= 218km
nr= 6 gap=280 rms=0.13
Locality: Gánt
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKSG	3.4	328	ePgC	8:	27:	23.50	-0.06
			eSg		27:	24.20	0.16
CSKK	11.7	268	ePg	8:	27:	24.90	-0.14
			eSg		27:	26.60	-0.06
PKST	31.1	248	ePg	8:	27:	28.70	0.19
			eSg		27:	32.80	-0.05

25.

2013-03-20 time: 23:48:46.27 UTC ML= 1.7
lat: 48.097N lon: 20.820E h= 10.0 km
erh= 5.3km erz= 4.9km
nr= 12 gap=129 rms=0.92
Locality: Szirma
Comments:

sta	dist	azm	phase	hr	mn	sec	res
PSZ	71.9	254	ePg	23:	48:	58.80	-0.44
			eSg		49:	09.00	-0.34
LTVH	113.3	134	ePn	23:	49:	06.40	0.24
			eSn		49:	21.90	0.23
TRPA	128.0	88	ePnC	23:	49:	08.50	0.50
			eSn		49:	23.00	-1.94
VYHS	153.7	287	ePn	23:	49:	12.90	1.71
			eSn		49:	29.30	-1.33
LANS	153.8	320	ePn	23:	49:	11.90	0.69
			eSn		49:	29.50	-1.16
MORH	266.4	218	ePn	23:	49:	24.60	-0.65
			eSn		49:	53.10	-2.55

26.

2013-03-21 time: 11:17:03.95 UTC ML= 1.2
lat: 48.342N lon: 19.795E h= 0.0 km
erh= 1.6km erz= 277km
nr= 6 gap=186 rms=0.16
Locality: Slovakia
Comments:

sta	dist	azm	phase	hr	mn	sec	res
PSZ	47.7	171	ePgD	11:	17:	12.40	-0.07
			eSg		17:	19.10	-0.02
VYHS	72.9	283	ePg	11:	17:	17.30	0.32
			eSg		17:	26.90	-0.24
LANS	93.1	345	ePg	11:	17:	20.70	0.13
			eSg		17:	33.30	-0.23

27.

2013-03-23 time: 23:02:14.51 UTC ML= 2.4
lat: 45.723N lon: 20.126E h= 10.0 km
erh= 3.3km erz= 3.1km
nr= 14 gap=147 rms=0.56
Locality: Serbia
Comments:

sta	dist	azm	phase	hr	mn	sec	res
AMBH	83.8	34	ePgD	23:	02:	30.10	0.53
			eSg		02:	40.30	-1.02
TIM	85.3	89	iPgD	23:	02:	29.90	0.06
BANR	87.5	116	iPg	23:	02:	29.70	-0.53
BZS	116.8	96	iPn	23:	02:	35.30	0.48
MORH	127.2	296	ePnD	23:	02:	36.70	0.57
			eSn		02:	51.30	-1.69

```
PKSM 127.2 295   ePnD  23:02:36.60    0.47
                 eSn      02:51.30   -1.69
SIRR 133.4  63   iPn   23:02:37.10    0.21
PKSV 146.8 277   eSn   23:02:56.50   -0.83
MDVR 162.7 130   iPnD  23:02:40.60    0.05
PKS9 172.0 304   ePn   23:02:46.00    4.29
GZR  210.2 100   iPn   23:02:46.10   -0.37
DRGR 232.1  59   iPnD  23:02:48.90   -0.30
```

28.

```
 2013-03-26  time: 12:07:16.20 UTC  ML= 2.8
   lat: 45.787N  lon: 21.147E  h=  8.8 km
                 erh= 2.2km    erz= 1.6km
   nr= 20        gap=103       rms=0.59
   Locality: Romania
   Comments:

sta   dist azm  phase  hr mn  sec     res
TIM    8.0 134   iPg   12:07:18.20   -0.12
BZS   41.2 117   iPg   12:07:23.40   -0.31
BANR  44.9 181   iPg   12:07:24.80    0.43
SIRR  66.6  37   iPg   12:07:27.50   -0.69
AMBH  70.6 333   ePgC  12:07:29.40    0.50
                 eSg      07:42.60    3.79
MDVR 120.2 158   iPn   12:07:36.90   -0.20
GZR  134.5 109   iPn   12:07:38.50   -0.38
DRGR 164.3  47   iPn   12:07:42.50   -0.10
MORH 199.7 284   ePnC  12:07:46.50   -0.50
                 eSn      08:14.70    3.67
PKSM 199.8 284   ePnD  12:07:46.50   -0.52
                 eSn      08:08.20   -2.86
SRE  204.3 128   iPn   12:07:48.30    0.72
LOT  208.0 100   iPnD  12:07:49.30    1.26
CJR  215.3  61   iPn   12:07:49.30    0.35
PKS9 238.6 292   ePn   12:07:52.60    0.74
                 eSn      08:27.10    7.42
PSZ  255.5 338   ePnC  12:07:54.00    0.03
ARR  276.1 100   iPnD  12:07:57.50    0.97
TRPA 281.3  22   iPnD  12:07:58.00    0.82
VYHS 348.3 330   ePn   12:08:05.80    0.26
                 eSn      08:08.90  -35.12
```

29.

```
 2013-03-27  time: 11:04:57.35 UTC  ML= 1.7
   lat: 45.703N  lon: 17.387E  h= 17.5 km
                 erh=15.4km    erz=11.3km
   nr=  7        gap=303       rms=0.34
   Locality: Croatia
   Comments:

sta   dist azm  phase  hr mn  sec     res
PKSV  70.4  73   eP*   11:05:09.20   -0.96
                 eS*      05:20.90    0.74
PKSM 112.5  60   ePnC  11:05:16.30    0.12
                 eSn      05:30.60   -0.26
MORH 112.9  60   ePnC  11:05:16.40    0.17
                 eSn      05:30.80   -0.16
TIH  138.7  16   ePn   11:05:19.40   -0.04
                 eSn      05:31.10   -5.57
```

30.

```
 2013-03-28  time: 19:04:24.69 UTC  ML= 2.8
   lat: 45.906N  lon: 17.178E  h= 17.3 km
                 erh= 2.6km    erz= 3.1km
   nr= 25        gap=177       rms=0.65
   Locality: Croatia
   Comments:

sta   dist azm  phase  hr mn  sec     res
BEHE  70.0 334   eP*C  19:04:38.20    0.74
                 eS*      04:47.90    0.48
PKSV  83.4  91   eP*C  19:04:39.80    0.31
                 eS*      04:50.70   -0.34
KOGS  93.6 310   iP*   19:04:41.10    0.04
                 iS*      04:52.80   -1.02
PKS9 113.7  48   ePnD  19:04:43.30   -0.39
                 eSn      05:02.20    3.69
PKSM 118.2  73   ePnD  19:04:44.10   -0.15
                 eSn      04:58.90   -0.60
MORH 118.5  73   ePnD  19:04:44.20   -0.09
                 eSn      04:59.20   -0.38
GCIS 120.5 268   iPn   19:04:44.90    0.37
GOLS 121.0 276   iPn   19:04:44.90    0.30
                 iSn      04:59.90   -0.23
TIH  123.4  26   ePnD  19:04:44.60   -0.29
                 eSn      05:02.30    1.65
PKS2 170.0  67   ePn   19:04:50.20   -0.51
                 eSn      05:15.10    4.09
SOKA 186.3 297    Sn   19:05:15.70    1.09
ARSA 196.0 320    Pn   19:04:54.30    0.35
                  Sn      05:15.20   -1.58
OBKA 213.7 288    Pn   19:04:56.70    0.54
                  Sn      05:27.20    6.50
CONA 246.2 336    Pn   19:05:00.10   -0.10
                  Sn      05:27.70   -0.21
MOA  309.8 314    Pn   19:05:08.70    0.57
                  Sn      05:42.50    0.48
VYHS 313.9  24   ePn   19:05:08.20   -0.45
                 eSn      05:40.50   -2.44
```

31.

```
 2013-04-01  time: 22:04:13.97 UTC  ML= 2.6
   lat: 46.548N  lon: 21.226E  h= 10.0 km
                 erh= 3.1km    erz= 3.3km
   nr= 23        gap= 62       rms=0.90
   Locality: Elek
   Comments:

sta   dist azm  phase  hr mn  sec     res
AMBH  44.3 240   ePgD  22:04:22.80    0.73
                 eSg      04:29.80    1.41
SIRR  45.7 133   iPg   22:04:22.40    0.08
TIM   90.2 180   iPgD  22:04:29.00   -1.17
LTVH 106.3  29   eP*D  22:04:33.30    0.35
                 eS*      04:46.80   -0.95
BZS  107.8 164   iPn   22:04:32.40   -0.77
PKSN 110.9 290   eSn   22:04:48.70   -0.12
DRGR 116.9  77   iPnD  22:04:33.70   -0.60
DEV  149.1 120   iPn   22:04:38.90    0.59
PKS7 167.1 289   eSn   22:05:04.20    2.89
CJR  182.6  84   iPnD  22:04:43.90    1.40
PSZ  182.7 327   ePnD  22:04:41.80   -0.70
MDVR 200.0 169   iPn   22:04:43.90   -0.76
TRPA 202.0  29   iPnD  22:04:44.00   -0.91
PKSM 202.3 259   ePnD  22:04:48.10    3.15
                 eSn      05:12.20    3.08
BMR  213.0  54   iPnD  22:04:47.10    0.82
LOT  231.9 122   iPn   22:04:49.00    0.35
ARCR 246.1  76   iPnD  22:04:50.80    0.39
MDB  247.0 101   iPn   22:04:51.70    1.17
VYHS 281.4 320   ePn   22:04:54.50   -0.32
ARR  295.0 116   iPn   22:04:57.20    0.69
VOIR 321.0 113   iPn   22:05:00.90    1.15
BURB 325.5  69   iPn   22:05:00.00   -0.31
DOPR 327.4 101   iPnD  22:05:01.20    0.65
MLR  383.9 108   iPnD  22:05:08.30    0.71
MORC 451.6 323   iPnD  22:05:14.10   -1.94
VRAC 462.6 312   iPn   22:05:15.00   -2.41
```

32.

2013-04-08 time: 8:56:21.15 UTC ML= 0.5
lat: 47.231N lon: 18.321E h= 0.0 km
erh= 4.4km erz= 588km
nr= 6 gap=262 rms=0.34
Locality: Moha
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
CSKK	15.4	343	ePg	8:	56:	24.20	0.30
			eSg		56:	26.30	0.25
PKSG	18.7	16	ePg	8:	56:	24.30	-0.19
			eSg		56:	26.90	-0.19
PKST	21.9	278	ePg	8:	56:	25.20	0.14
			eSg		56:	27.00	-1.11

33.

2013-04-10 time: 10:11:20.14 UTC ML= 0.9
lat: 47.884N lon: 19.420E h= 0.0 km
erh= 4.5km erz= ***km
nr= 6 gap=141 rms=0.76
Locality: Bercel
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PENC	14.7	225	ePg	10:	11:	22.20	-0.57
			eSg		11:	25.50	0.69
PSZ	35.7	84	ePg	10:	11:	26.50	-0.02
			eSg		11:	31.10	-0.39
VYHS	80.5	327	ePg	10:	11:	35.70	1.18
			eSg		11:	44.60	-1.13

34.

2013-04-11 time: 8:56:13.82 UTC ML= 0.9
lat: 47.186N lon: 18.312E h= 0.0 km
erh= 2.6km erz= 344km
nr= 6 gap=277 rms=0.20
Locality: Székesfehérvár
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
CSKK	20.1	349	ePg	8:	56:	17.20	-0.21
			eSg		56:	20.40	0.20
PKST	22.5	291	ePgD	8:	56:	17.90	0.06
			eSg		56:	20.90	-0.08
PKSG	23.7	15	ePgC	8:	56:	18.30	0.25
			eSg		56:	21.00	-0.34

35.

2013-04-11 time: 10:44:14.67 UTC ML= 1.8
lat: 47.578N lon: 17.808E h= 0.0 km
erh= 2.7km erz= 2.7km
nr= 10 gap=182 rms=0.37
Locality: Pázmándfalu
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKST	39.3	154	ePgC	10:	44:	21.80	0.01
			eSg		44:	26.90	-0.44
CSKK	41.6	125	ePg	10:	44:	22.30	0.11
			eSg		44:	28.00	-0.06
PKSG	48.5	115	ePg	10:	44:	23.70	0.29
			eSg		44:	29.80	-0.43
MODS	97.0	336	ePg	10:	44:	32.40	0.38
			eSg		44:	45.00	-0.56
VYHS	127.5	37	ePn	10:	44:	37.40	0.60
			eSn		44:	53.50	-0.56

36.

2013-04-12 time: 6:21:25.71 UTC ML= 1.5
lat: 47.350N lon: 18.445E h= 0.0 km
erh= 2.6km erz= 338km
nr= 6 gap=294 rms=0.20
Locality: Gánt
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKSG	6.2	318	ePgC	6:	21:	26.90	0.09
			eSg		21:	27.50	-0.17
CSKK	14.0	276	ePgD	6:	21:	28.40	0.18
			eSg		21:	30.10	-0.07
PKST	32.7	252	ePg	6:	21:	31.20	-0.35
			eSg		21:	36.30	0.19

37.

2013-04-12 time: 6:21:41.89 UTC ML= 1.5
lat: 47.435N lon: 18.414E h= 0.0 km
erh= 3.7km erz= 394km
nr= 5 gap=325 rms=0.18
Locality: Várgesztes
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKSG	5.1	200	ePgC	6:	21:	42.90	0.09
			eSg		21:	43.50	-0.02
CSKK	14.1	235	ePgD	6:	21:	44.30	-0.11
			eSg		21:	46.10	-0.27
PKST	34.8	236	eSg	6:	21:	53.30	0.36

38.

2013-04-15 time: 9:11:00.48 UTC ML= 2.2
lat: 47.792N lon: 17.543E h= 10.0 km
erh= 2.2km erz= 2.1km
nr= 32 gap= 82 rms=1.02
Locality: Dunaszeg
Comments:

sta	dist	azm	phase	hr	mn	sec	res
ZST	55.7	324	ePg	9:	11:	10.40	-0.19
			eSg		11:	16.80	-1.68
SRO	57.7	88	ePg	9:	11:	11.40	0.45
			eSg		11:	19.50	0.39
MODS	67.7	343	ePg	9:	11:	12.10	-0.60
			eSg		11:	20.80	-1.43
PKST	69.8	148	ePgD	9:	11:	12.90	-0.18
			eSg		11:	20.50	-2.40
CSKK	72.0	131	ePgD	9:	11:	13.90	0.44
			eSg		11:	22.80	-0.78
SOP	74.9	261	ePg	9:	11:	16.00	2.03
			eSg		11:	23.90	-0.58
PKSG	77.7	125	ePgD	9:	11:	15.10	0.63
			eSg		11:	24.20	-1.18
SMOL	80.8	354	ePg	9:	11:	16.20	1.19
			eSg		11:	27.10	0.75
VYHS	123.9	51	ePn	9:	11:	21.70	0.01
			eSn		11:	36.60	-1.63
CONA	126.7	277	Pn	9:	11:	21.70	-0.33
			Sn		11:	37.20	-1.64
ARSA	163.6	248	Pn	9:	11:	27.90	1.26
			Sn		11:	48.10	1.06
PSZ	176.5	85	ePn	9:	11:	26.10	-2.15
			eSn		11:	50.90	1.00
MORH	194.2	154	ePnC	9:	11:	29.90	-0.55
			eSn		11:	50.70	-3.12
PKSM	194.5	155	ePnC	9:	11:	29.90	-0.58
			eSn		11:	49.90	-3.99
SOKA	226.9	237	Pn	9:	11:	35.30	0.77
MOA	245.5	272	Pn	9:	11:	38.50	1.65
			Sn		12:	05.90	0.68

OBKA	268.2	238	Pn	9:11:41.50	1.83
KBA	326.5	256	Pn	9:11:48.60	1.65
			Sn	12:22.70	-0.50

39.

2013-04-17 time: 21:33:57.32 UTC ML= 1.5
lat: 46.077N lon: 17.604E h= 10.0 km
erh= 4.5km erz= 4.4km
nr= 11 gap=225 rms=0.80
Locality: Kálmáncsa
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKS9	76.9	43	ePg	21:34:14.30		3.13
			eSg	34:23.30		1.32
BEHE	77.4	304	ePgC	21:34:11.40		0.15
			eSg	34:22.00		-0.12
PKSM	81.6	79	ePg	21:34:11.50		-0.49
			eSg	34:23.70		0.26
MORH	81.9	79	ePg	21:34:11.50		-0.54
			eSg	34:23.70		0.17
TIH	94.2	14	ePg	21:34:13.50		-0.73
			eSg	34:26.70		-0.71
PKST	135.5	14	eSn	21:34:38.10		0.47

40.

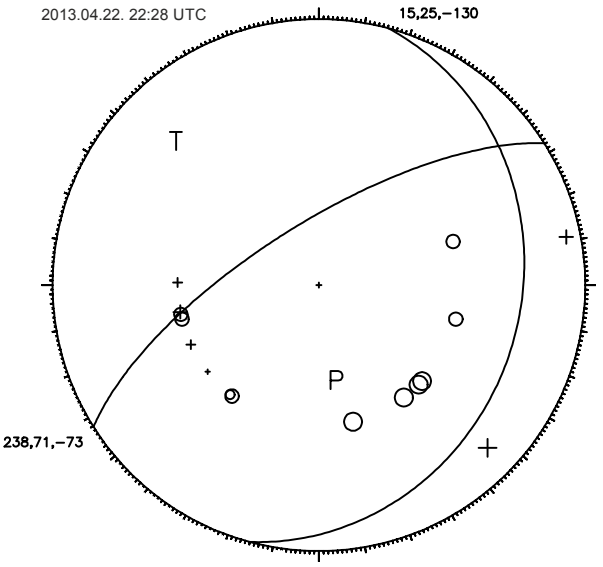
2013-04-22 time: 8:01:08.10 UTC ML= 1.0
lat: 47.406N lon: 18.377E h= 0.0 km
erh= 8.4km erz= 729km
nr= 5 gap=265 rms=0.35
Locality: Gánt
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSG	1.9	147	ePgC	8:01:08.20		-0.24
			eSg	01:08.80		0.10
CSKK	10.0	242	ePgD	8:01:09.50		-0.38
			eSg	01:11.40		0.13
PKST	30.6	238	ePgC	8:01:14.10		0.53

41.

2013-04-22 time: 22:28:46.76 UTC ML= 4.8
lat: 47.650N lon: 20.302E h= 10.0 km
erh= 1.9km erz= 1.8km
nr= 38 gap= 93 rms=0.77
Locality: Tenk
Comments: felt 6 EMS

sta	dist	azm	phase	hr mn	sec	res
PSZ	42.7	314	ePgC	22:28:55.20		0.60
			eSg	29:00.60		-0.11
PENC	78.1	282	ePg	22:29:00.80		-0.03
			eSg	29:11.20		-0.60
PKSN	89.9	201	eSg	22:29:16.00		0.49
BUD	97.9	259	ePgC	22:29:04.00		-0.34
LTVH	124.0	104	ePnD	22:29:07.90		-0.08
			eSn	29:25.40		0.88
VYHS	144.0	311	ePn	22:29:10.50		0.02
			eSn	29:28.40		-0.58
PKSG	146.8	259	ePnC	22:29:10.70		-0.12
			eSn	29:30.10		0.52
CSKK	157.1	258	ePnD	22:29:12.10		0.00
			eSn	29:34.80		2.94
CEI	162.0	89	iPn	22:29:13.60		0.88
TRPA	175.7	72	ePnD	22:29:12.90		-1.52
			eSn	29:37.40		1.41
PKST	176.4	256	ePnD	22:29:14.50		-0.02
			eSn	29:36.80		0.64
LANS	178.0	340	ePn	22:29:15.40		0.69
			eSn	29:36.70		0.20
SIRR	185.2	146	iPn	22:29:15.50		-0.11
PKS9	193.7	232	ePnC	22:29:20.00		3.33
			eSn	29:44.30		4.30
TIH	200.4	245	ePnC	22:29:16.70		-0.81
PKSM	203.8	218	ePnD	22:29:16.80		-1.13
			eSn	29:47.50		5.26
DRGR	205.9	118	iPn	22:29:18.40		0.21
SMOL	234.7	294	ePn	22:29:21.50		-0.28
			eSn	29:55.50		6.41
MODS	239.6	290	ePn	22:29:21.00		-1.39
BMR	240.0	89	iPn	22:29:21.00		-1.45
ZST	246.7	284	ePn	22:29:21.90		-1.38
PKSV	250.7	219	ePnD	22:29:23.00		-0.77
			eSn	30:01.10		8.46
BANR	260.0	166	iPnD	22:29:25.00		0.06
CJR	270.7	113	iPn	22:29:26.20		-0.07
DEV	279.4	135	iPnD	22:29:27.20		-0.15
SOP	281.2	271	ePnC	22:29:27.50		-0.08
			eSn	29:58.20		-1.22
OKC	290.4	327	ePn	22:29:29.30		0.58
BEHE	298.3	244	ePn	22:29:30.30		0.59
MORC	311.8	319	iPn	22:29:31.60		0.21
ARCR	312.4	102	iPn	22:29:31.50		0.03
GZR	314.6	143	iPnD	22:29:31.90		0.16
VRAC	330.4	304	iPn	22:29:33.50		-0.22
CONA	334.1	275	Pn	22:29:34.00		-0.17
			Sn	30:10.50		-0.65
MDVR	336.9	161	iPn	22:29:34.30		-0.22
MDB	353.1	118	iPn	22:29:38.40		1.85
LOT	361.4	133	iPnD	22:29:38.00		0.42
ARSA	363.1	263	Pn	22:29:38.00		0.21
			Sn	30:16.10		-1.50
BURB	369.4	91	iPn	22:29:39.10		0.52
KRLC	373.5	316	ePn	22:29:39.70		0.61
			eSn	30:18.10		-1.80
TREC	400.3	297	ePn	22:29:42.30		-0.13
			eSn	30:23.80		-2.05



42.

2013-04-22 time: 22:33:47.99 UTC ML= 1.7
lat: 47.650N lon: 20.187E h= 10.0 km
erh= ---km erz= ---km
nr= 4 gap=319 rms=0.16
Locality: Boconád
Comments:

sta	dist	azm	phase	hr mn	sec	res
PSZ	37.1	324	ePg	22:33:54.70		-0.14
			eSg	34:00.40		0.21
PENC	69.7	283	ePg	22:34:00.70		0.13
			eSg	34:10.20		-0.18

43.

2013-04-22 time: 22:37:12.53 UTC ML= 1.4
lat: 47.667N lon: 20.188E h= 16.9 km
erh= ---km erz= ---km
nr= 4 gap=320 rms=0.16
Locality: Tarnazsadány
Comments:

sta	dist	azm	phase	hr mn	sec	res
PSZ	35.6	322	ePg	22:37:19.40		-0.16
			eSg	37:25.20		0.16
PENC	69.4	281	eP*	22:37:25.40		0.16
			eS*	37:35.00		-0.16

44.

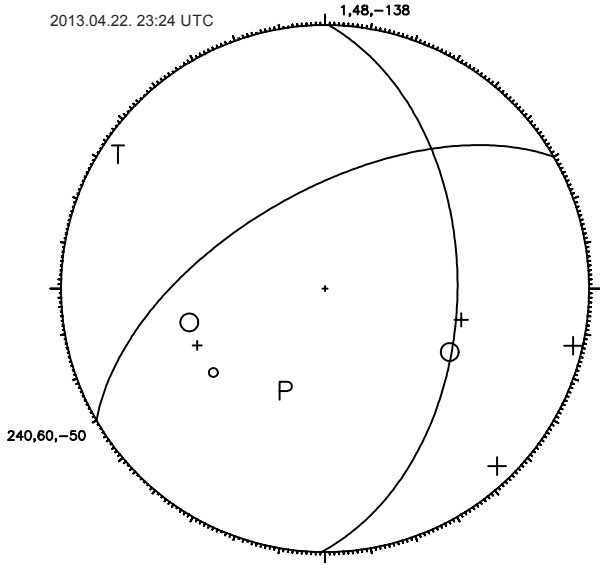
2013-04-22 time: 23:01:42.96 UTC ML= 2.1
lat: 47.614N lon: 20.285E h= 10.0 km
erh= 3.1km erz= 2.6km
nr= 25 gap= 91 rms=1.05
Locality: Heves
Comments:

sta	dist	azm	phase	hr mn	sec	res
PSZ	44.8	319	ePgC	23:01:50.60		-0.55
PENC	77.9	285	ePg	23:01:56.70		-0.28
PKSN	85.8	202	ePg	23:01:58.50		0.12
			eSg	02:11.60		1.19
BUD	96.1	261	ePgD	23:02:00.60		0.39
			eSg	02:12.20		-1.47
LTVH	124.3	102	ePn	23:02:05.10		0.88
			eSn	02:21.60		0.80
PKSG	144.9	260	ePn	23:02:05.90		-0.88
			eSn	02:24.30		-1.06
VYHS	145.8	312	ePn	23:02:06.70		-0.19
			eSn	02:24.50		-1.06
CSKK	155.1	260	ePnD	23:02:08.90		0.84
			eSn	02:27.60		-0.04
PKST	174.4	257	ePnD	23:02:10.10		-0.36
			eSn	02:34.30		2.40
TRPA	178.1	71	ePnD	23:02:11.70		0.78
			eSn	02:33.40		0.66
LANS	181.3	340	ePn	23:02:14.10		2.78
			eSn	02:34.00		0.56
TIH	197.7	246	ePn	23:02:16.60		3.23
			eSn	02:40.50		3.41
PKSM	200.0	219	ePnD	23:02:12.40		-1.25
DRGR	205.3	116	iPnD	23:02:13.40		-0.91
BZS	244.3	155	iPn	23:02:16.50		-2.68
GZR	312.3	142	iPn	23:02:25.80		-1.85

45.

2013-04-22 time: 23:24:24.26 UTC ML= 2.2
lat: 47.637N lon: 20.304E h= 5.4 km
erh= 3.0km erz= 2.8km
nr= 31 gap= 92 rms=1.18
Locality: Heves
Comments:

sta	dist	azm	phase	hr mn	sec	res
PSZ	43.8	316	ePgC	23:24:32.30		0.15
			eSg	24:38.10		-0.20
PENC	78.6	283	ePgC	23:24:38.60		0.27
			eSg	24:47.50		-1.80
PKSN	88.6	202	ePg	23:24:41.10		0.98
			eSg	24:53.30		0.82
BUD	97.8	260	ePg	23:24:42.40		0.64
			eSg	24:54.10		-1.31
LTVH	123.5	103	ePnC	23:24:46.20		0.20
			eSn	25:02.70		-0.26
VYHS	145.1	311	ePn	23:24:48.40		-0.30
			eSn	25:06.10		-1.65
PKSG	146.7	259	ePn	23:24:48.60		-0.29
			eSn	25:06.70		-1.40
CSKK	156.9	259	eSn	23:25:09.60		-0.78
TRPA	176.0	72	ePn	23:24:53.80		1.25
			eSn	25:15.10		0.49
PKST	176.2	256	ePnD	23:24:51.90		-0.68
			eSn	25:17.40		2.73
LANS	179.4	340	ePn	23:24:55.70		2.73
			eSn	25:15.90		0.54
SIRR	183.9	146	iPn	23:24:52.30		-1.24
PKS9	193.0	233	ePnD	23:24:57.30		2.63
			eSn	25:21.30		2.92
TIH	200.0	246	ePnC	23:24:58.10		2.56
			eSn	25:22.80		2.86
PKSM	202.8	219	ePn	23:24:54.10		-1.79
			eSn	25:23.70		3.14
DRGR	205.1	117	iPnD	23:24:55.80		-0.38
BZS	246.0	156	iPn	23:24:58.80		-2.48
DEV	278.3	134	iPn	23:25:04.70		-0.60
GZR	313.4	143	iPn	23:25:09.20		-0.48



46.

2013-04-23 time: 3:30:41.18 UTC ML= 1.6
lat: 47.667N lon: 20.309E h= 10.0 km
erh= ---km erz= ---km
nr= 4 gap=328 rms=0.05
Locality: Erdőtelek
Comments:

sta	dist	azm	phase	hr mn	sec	res
PSZ	41.8	312	ePg	3:30:48.80		-0.05
			eSg	30:54.90		0.07
PENC	78.3	280	ePg	3:30:55.30		0.04
			eSg	31:06.20		-0.05

47.

2013-04-23 time: 4:23:49.08 UTC ML= 1.5
lat: 47.667N lon: 20.214E h= 10.0 km
erh= ---km erz= ---km
nr= 4 gap=322 rms=0.26
Locality: Boconád
Comments:

sta	dist	azm	phase	hr mn	sec	res
PSZ	36.8	319	ePgC	4:23:55.70		-0.19
			eSg	24:01.60		0.40
PENC	71.3	281	ePg	4:24:02.10		0.17
			eSg	24:11.60		-0.35

48.

2013-04-23 time: 10:55:09.17 UTC ML= 0.5
lat: 47.484N lon: 18.048E h= 0.0 km
erh= 4.7km erz= 582km
nr= 6 gap=289 rms=0.34
Locality: Kisbér
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
CSKK	20.9	130	ePgC	10:55:13.20	0.29
			eSg	55:16.40	0.58
PKST	25.0	182	ePgC	10:55:13.70	0.07
			eSg	55:16.60	-0.52
PKSG	27.8	112	ePgC	10:55:14.00	-0.14
			eSg	55:17.50	-0.52

49.

2013-04-23 time: 13:31:03.66 UTC ML= 1.8
lat: 47.667N lon: 20.291E h= 13.9 km
erh= ---km erz= ---km
nr= 4 gap=327 rms=0.17
Locality: Erdőtelek
Comments:

sta	dist	azm	phase	hr mn sec	res
PSZ	40.8	313	ePg	13:31:11.50	0.15
			eSg	31:17.30	-0.06
PENC	76.9	280	ePg	13:31:17.40	-0.22
			eSg	31:28.70	0.19

50.

2013-04-24 time: 1:09:25.11 UTC ML= 1.4
lat: 47.667N lon: 20.333E h= 10.0 km
erh= ---km erz= ---km
nr= 4 gap=329 rms=0.32
Locality: Tenk
Comments:

sta	dist	azm	phase	hr mn sec	res
PSZ	43.2	310	ePgC	1:09:33.30	0.28
			eSg	09:39.10	-0.09
PENC	80.1	280	ePg	1:09:39.10	-0.42
			eSg	09:51.10	0.35

51.

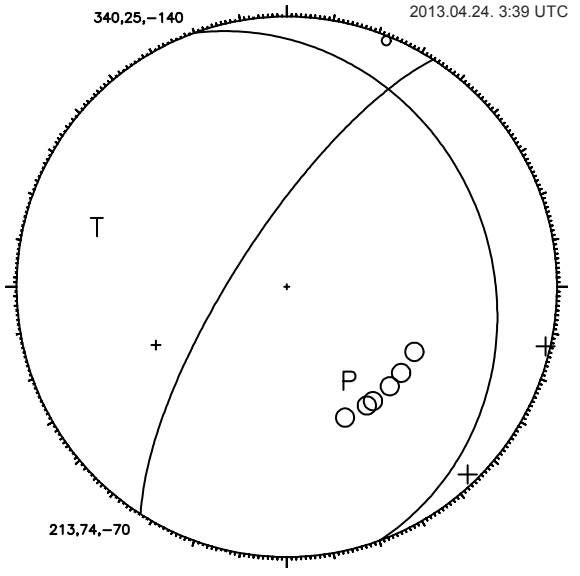
2013-04-24 time: 1:40:07.33 UTC ML= 1.1
lat: 47.667N lon: 20.146E h= 10.0 km
erh= ---km erz= ---km
nr= 4 gap=316 rms=0.23
Locality: Tarnaméra
Comments:

sta	dist	azm	phase	hr mn sec	res
PSZ	33.7	326	ePg	1:40:13.40	-0.21
			eSg	40:18.60	0.09
PENC	66.3	282	ePg	1:40:19.60	0.30
			eSg	40:28.40	-0.24

52.

2013-04-24 time: 3:39:37.03 UTC ML= 2.5
lat: 47.636N lon: 20.304E h= 3.4 km
erh= 2.7km erz= 2.6km
nr= 35 gap= 92 rms=1.20
Locality: Heves
Comments:

sta	dist	azm	phase	hr mn sec	res
PSZ	43.9	316	ePgC	3:39:45.10	0.21
			eSg	39:51.00	-0.03
PENC	78.6	283	ePgC	3:39:51.00	-0.09
			eSg	40:00.70	-1.35
PKSN	88.6	202	ePgD	3:39:53.50	0.64
			eSg	40:05.60	0.39
BUD	97.9	260	ePg	3:39:54.30	-0.22
			eSg	40:06.10	-2.06
LTVH	123.5	103	eSn	3:40:15.00	-1.19
VYHS	145.2	311	ePn	3:40:03.50	1.77
			eSn	40:20.00	-1.00
AMBH	146.5	167	eSn	3:40:22.80	1.49
PKSG	146.7	259	eSn	3:40:19.20	-2.14
SRO	150.7	278	ePn	3:40:02.70	0.28
			eSn	40:20.90	-1.32
CSKK	157.0	259	ePn	3:40:03.90	0.69
			eSn	40:24.40	0.78
TRPA	175.9	72	iPn	3:40:06.20	0.63
TRPA	175.9	72	ePn	3:40:06.50	0.93
			eSn	40:27.50	-0.34
PKST	176.3	256	ePn	3:40:04.80	-0.81
			eSn	40:29.60	1.69
LANS	179.4	340	ePn	3:40:07.70	1.69
			eSn	40:28.40	-0.20
SIRR	183.9	146	iPnD	3:40:05.10	-1.46
PKS9	193.0	233	ePn	3:40:10.00	2.30
			eSn	40:33.50	1.88
TIH	200.0	246	ePnC	3:40:10.90	2.33
			eSn	40:35.80	2.62
PKSM	202.8	219	ePn	3:40:06.90	-2.02
			eSn	40:36.70	2.91
DRGR	205.1	117	iPnD	3:40:08.10	-1.11
MODS	240.3	290	eSn	3:40:40.30	-1.82
BZS	246.0	156	iPnD	3:40:13.20	-1.11
DEV	278.2	134	iPnD	3:40:17.40	-0.93
GZR	313.3	143	iPnD	3:40:22.40	-0.30
MDVR	335.4	161	iPn	3:40:24.50	-0.96
ARR	417.2	127	iPnD	3:40:35.10	-0.55



53.

2013-04-24 time: 10:05:14.55 UTC ML= 2.1
lat: 48.846N lon: 20.198E h= 2.0 km
erh= 1.3km erz=50.9km
nr= 6 gap=250 rms=0.48
Locality: Slovakia
Comments:

sta	dist	azm	phase	hr mn sec	res
LANS	63.3	302	ePg	10:05:25.90	0.05
			eSg	05:33.60	-1.06
PSZ	105.6	192	ePgC	10:05:33.50	0.10

```
                 eSg      05:47.80   -0.30
VYHS 107.7 249   ePg   10:05:34.50    0.73
                 eSg      05:49.00    0.23
```

54.

```
 2013-04-24  time: 14:33:28.90 UTC  ML= 1.6
   lat: 45.833N  lon: 18.199E  h= 11.9 km
                 erh= 2.5km    erz= 1.5km
   nr=  8        gap=325       rms=0.21
   Locality: Ipacsfa
   Comments:

sta   dist azm  phase  hr mn  sec     res
PKSV   7.4  34   ePgD  14:33:31.20   -0.20
                 eSg      33:33.60    0.25
PKSM  54.3  39   ePgD  14:33:38.90    0.08
                 eSg      33:46.40   -0.16
MORH  54.8  39   ePgD  14:33:38.90   -0.01
                 eSg      33:46.70   -0.01
PKS9  84.0   4   ePgD  14:33:45.10    1.04
                 eSg      33:55.80   -0.07
```

55.

```
 2013-04-24  time: 15:53:58.55 UTC  ML= 1.9
   lat: 47.667N  lon: 20.318E  h= 10.0 km
                 erh= ---km    erz= ---km
   nr=  4        gap=190       rms=0.36
   Locality: Erdőtelek
   Comments:

sta   dist azm  phase  hr mn  sec     res
TENK   2.7 121   ePg   15:54:00.00   -0.40
                 eSg      55:02.10    0.26
PSZ   42.3 311   ePg   15:54:06.70    0.39
                 eSg      54:12.10   -0.26
```

56.

```
 2013-04-24  time: 21:02:37.09 UTC  ML= 1.3
   lat: 47.595N  lon: 20.250E  h=  5.8 km
                 erh= ---km    erz= ---km
   nr=  4        gap=275       rms=0.23
   Locality: Heves
   Comments:

sta   dist azm  phase  hr mn  sec     res
TENK   9.9  48   ePgD  21:02:38.90   -0.23
                 eSg      02:40.90    0.18
PSZ   44.8 323   ePg   21:02:45.40    0.25
                 eSg      02:51.20   -0.23
```

57.

```
 2013-04-24  time: 22:39:35.98 UTC  ML= 1.8
   lat: 47.571N  lon: 20.264E  h= 10.0 km
                 erh= 7.4km    erz= 7.6km
   nr= 10        gap=185       rms=0.78
   Locality: Heves
   Comments:

sta   dist azm  phase  hr mn  sec     res
TENK  11.2  34   ePgD  22:39:38.40   -0.26
                 eSg      39:40.50   -0.25
PSZ   47.5 324   ePgD  22:39:44.80    0.15
                 eSg      39:50.50   -0.92
PENC  77.7 288   ePgD  22:39:51.40    1.43
                 eSg      39:59.70   -1.18
MORH 194.8 219   ePnC  22:40:06.10    0.08
                 eSn      40:29.40   -0.06
PKSM 195.3 219   ePn   22:40:08.80    2.72
                 eSn      40:29.00   -0.56
```

58.

```
 2013-04-24  time: 23:02:15.83 UTC  ML= 1.1
   lat: 47.558N  lon: 19.956E  h=  0.2 km
                 erh=16.1km    erz= ***km
   nr=  5        gap=227       rms=0.90
   Locality: Jászdózsa
   Comments:

sta   dist azm  phase  hr mn  sec     res
TENK  31.3  70   ePg   23:02:22.30    0.87
                 eSg      02:24.30   -1.49
PSZ   40.3 353   ePg   23:02:22.60   -0.43
                 eSg      02:29.60    0.95
PENC  56.9 297   eSg   23:02:33.10   -0.81
```

59.

```
 2013-04-25  time:  9:26:36.96 UTC  ML= 0.3
   lat: 47.173N  lon: 18.316E  h=  0.0 km
                 erh= 3.7km    erz= 475km
   nr=  6        gap=281       rms=0.29
   Locality: Székesfehérvár
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
CSKK  21.6 349   ePgC   9:26:41.20    0.39
                 eSg      26:44.10    0.28
PKST  23.4 294   ePgC   9:26:41.10   -0.03
                 eSg      26:43.80   -0.59
PKSG  25.0  13   ePgC   9:26:41.30   -0.13
                 eSg      26:44.70   -0.21
```

60.

```
 2013-04-25  time: 13:42:30.45 UTC  ML= 1.8
   lat: 47.667N  lon: 20.324E  h= 10.0 km
                 erh= 5.0km    erz= 4.2km
   nr=  5        gap=177       rms=0.23
   Locality: Tenk
   Comments:

sta   dist azm  phase  hr mn  sec     res
TENK   2.3 128   ePgD  13:42:32.00   -0.28
                 eSg      42:34.00    0.29
PSZ   42.7 311   ePgC  13:42:38.50    0.23
                 eSg      42:44.30   -0.08
PENC  79.4 280   eSg   13:42:55.80   -0.09
```

61.

```
 2013-04-26  time:  9:14:19.43 UTC  ML= 2.0
   lat: 47.667N  lon: 20.323E  h= 10.0 km
                 erh= 3.2km    erz= 2.6km
   nr=  6        gap=175       rms=0.20
   Locality: Tenk
   Comments:

sta   dist azm  phase  hr mn  sec     res
TENK   2.4 126   ePgC   9:14:21.00   -0.27
                 eSg      14:23.00    0.30
PSZ   42.6 311   ePg    9:14:27.30    0.06
                 eSg      14:33.10   -0.23
PENC  79.3 280   ePgD   9:14:33.90    0.20
                 eSg      14:44.80   -0.04
```

62.

```
 2013-04-26  time: 18:57:23.55 UTC  ML= 1.5
   lat: 47.610N  lon: 20.267E  h=  5.8 km
                 erh= 8.5km    erz=13.7km
   nr=  5        gap=234       rms=0.38
   Locality: Heves
   Comments:
```

sta	dist	azm	phase	hr mn	sec	res
TENK	7.8	51	ePgD	18:57:25.00		-0.28
			eSg		57:26.90	0.26
PSZ	44.2	321	ePg	18:57:32.00		0.49
			eSg		57:37.20	-0.51
PENC	76.6	285	eSg	18:57:47.80		-0.17

63.

2013-04-27 time: 4:58:49.79 UTC ML= 1.3
lat: 47.564N lon: 20.221E h= 4.1 km
erh= ---km erz= ---km
nr= 4 gap=285 rms=0.08
Locality: Jászszentandrás
Comments:

sta	dist	azm	phase	hr mn	sec	res
TENK	13.8	44	ePgD	4:58:52.30		-0.06
			eSg		58:54.40	0.03
PSZ	46.4	328	ePg	4:58:58.20		0.10
			eSg		59:04.50	-0.09

64.

2013-04-28 time: 0:57:52.60 UTC ML=-0.1
lat: 47.341N lon: 18.290E h= 0.3 km
erh= 3.6km erz=39.8km
nr= 6 gap=192 rms=0.07
Locality: Csákberény
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	3.3	319	ePgC	0:57:53.30		0.10
			eSg		57:53.50	-0.17
PKSG	9.5	53	ePgD	0:57:54.30		0.00
			eSg		57:55.60	-0.03
PKST	21.3	245	ePgD	0:57:56.40		-0.01
			eSg		57:59.40	0.01

65.

2013-04-28 time: 1:05:55.52 UTC ML= 0.2
lat: 47.402N lon: 18.247E h= 2.1 km
erh= 7.6km erz=13.7km
nr= 6 gap=231 rms=0.13
Locality: Pusztavám
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	4.4	167	ePgC	1:05:56.60		0.20
			eSg		05:56.80	-0.28
PKSG	10.9	96	ePgD	1:05:57.50		0.00
			eSg		05:59.00	-0.05
PKST	22.6	225	ePgC	1:05:59.50		-0.08
			eSg		06:02.80	0.06

66.

2013-04-28 time: 1:12:41.40 UTC ML= 1.5
lat: 47.365N lon: 18.257E h= 8.4 km
erh= 3.0km erz= 1.9km
nr= 16 gap= 92 rms=0.89
Locality: Csókakő
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	0.3	129	ePgC	1:12:42.60		-0.31
			eSg		12:42.90	-1.18
PKSG	10.5	73	ePgD	1:12:43.50		-0.30
			eSg		12:45.00	-0.68
PKST	20.6	235	ePgD	1:12:45.50		0.13
			eSg		12:48.60	0.13
SRO2	45.4	13	ePg	1:12:51.40		1.75
			eSg		12:56.60	0.52
BUD	59.3	77	eSg	1:13:00.90		0.46
PKS9	86.5	179	ePg	1:12:57.70		0.78
			eSg		13:10.60	1.58
MORH	131.1	167	ePn	1:13:03.60		-0.10
			eSn		13:19.30	-1.80
VYHS	132.8	19	ePn	1:13:05.70		1.79
			eSn		13:20.70	-0.77
MODS	134.0	327	eSn	1:13:20.00		-1.74

67.

2013-04-28 time: 7:01:37.03 UTC ML= 1.5
lat: 47.721N lon: 20.167E h= 10.0 km
erh= 6.6km erz= 4.3km
nr= 12 gap=165 rms=1.03
Locality: Nagyút
Comments:

sta	dist	azm	phase	hr mn	sec	res
PSZ	29.9	317	ePg	7:01:42.20		-0.47
			eSg		01:48.10	1.04
PENC	66.8	277	ePgD	7:01:48.20		-0.90
			eSg		02:00.00	1.50
VYHS	131.2	311	ePn	7:01:57.90		-1.24
			eSn		02:16.80	0.41
PKSG	138.6	255	ePn	7:02:00.90		0.83
			eSn		02:16.60	-1.44
PKSM	204.0	215	ePnD	7:02:08.90		0.67
			eSn		02:34.80	2.24
KOLS	206.3	49	ePn	7:02:10.70		2.19
			eSn		02:33.60	0.53

68.

2013-04-28 time: 18:29:26.02 UTC ML=-0.2
lat: 47.422N lon: 18.245E h= 4.3 km
erh= 4.2km erz= 5.7km
nr= 6 gap=245 rms=0.08
Locality: Pusztavám
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	6.6	170	ePg	18:29:27.30		-0.13
			eSg		29:28.60	0.08
PKSG	11.5	107	ePg	18:29:28.30		0.09
			eSg		29:29.90	-0.02
PKST	24.1	221	ePg	18:29:30.40		0.01
			eSg		29:33.80	0.00

69.

2013-04-29 time: 13:58:03.92 UTC ML= 2.0
lat: 47.667N lon: 20.304E h= 10.0 km
erh= 2.1km erz= 1.4km
nr= 10 gap=105 rms=0.37
Locality: Erdőtelek
Comments:

sta	dist	azm	phase	hr mn	sec	res
TENK	3.6	113	ePg	13:58:05.60		-0.22
			eSg		58:07.70	0.40
PSZ	41.5	312	ePg	13:58:12.00		0.46
			eSg		58:17.50	0.01
PENC	77.9	280	eSg	13:58:28.50		-0.38
KECS	91.8	8	ePg	13:58:20.30		-0.11
			eSg		58:32.80	-0.47
VYHS	142.9	310	ePn	13:58:27.90		0.41
			eSn		58:45.70	-0.18
PKSM	205.4	218	ePn	13:58:33.80		-1.48

70.

2013-05-02 time: 20:06:53.47 UTC ML= 1.0
lat: 47.723N lon: 20.369E h= 1.4 km
erh= 9.9km erz= 5.0km
nr= 6 gap=250 rms=0.55
Locality: Füzesabony
Comments:

sta	dist	azm	phase	hr	mn	sec	res
TENK	7.9	192	ePgD	20:	06:	54.20	-0.69
			iSg		06:	56.30	0.29
PSZ	41.7	301	ePgD	20:	07:	01.40	0.49
			eSg		07:	06.10	-0.61
PKSM	213.4	218	ePnC	20:	07:	27.60	0.67
			eSn		07:	52.90	-0.13

71.

2013-05-03 time: 11:05:15.66 UTC ML= 1.4
lat: 48.954N lon: 19.793E h= 0.0 km
erh= 4.0km erz= ***km
nr= 8 gap=183 rms=0.77
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
LANS	32.3	312	ePg	11:	05:	21.60	0.18
			eSg		05:	25.40	-0.52
KECS	73.1	136	ePg	11:	05:	29.50	0.78
			eSg		05:	38.40	-0.50
VYHS	87.1	234	ePg	11:	05:	32.50	1.29
			eSg		05:	42.00	-1.34
PSZ	115.5	176	ePgD	11:	05:	36.70	0.42
			eSg		05:	51.60	-0.77

72.

2013-05-03 time: 17:52:38.11 UTC ML= 1.3
lat: 47.670N lon: 20.317E h= 10.0 km
erh= 6.6km erz= 6.0km
nr= 5 gap=176 rms=0.30
Locality: Erdőtelek
Comments:

sta	dist	azm	phase	hr	mn	sec	res
TENK	2.9	127	ePg	17:	52:	39.50	-0.47
			iSg		52:	41.50	0.08
PSZ	42.0	311	ePg	17:	52:	46.30	0.47
			eSg		52:	51.60	-0.24
PENC	78.8	280	eSg	17:	53:	03.50	0.13

73.

2013-05-05 time: 20:58:49.26 UTC ML= 1.3
lat: 47.716N lon: 20.299E h= 4.4 km
erh= 8.3km erz= 4.6km
nr= 10 gap=205 rms=1.03
Locality: Kál
Comments:

sta	dist	azm	phase	hr	mn	sec	res
TENK	7.8	152	ePgC	20:	58:	50.20	-0.66
			iSg		58:	52.20	0.10
PSZ	37.7	307	ePgC	20:	58:	56.50	0.46
			eSg		59:	02.30	0.97
PENC	76.7	276	ePg	20:	59:	03.00	0.02
			eSg		59:	12.30	-1.39
PKSG	148.1	256	eSn	20:	59:	31.00	-2.65
PKS9	198.1	231	ePn	20:	59:	21.80	1.37
PKSM	209.5	217	ePnC	20:	59:	23.30	1.45
			eSn		59:	48.30	1.02

74.

2013-05-05 time: 23:15:31.56 UTC ML= 1.0
lat: 47.649N lon: 20.251E h= 3.6 km
erh= 9.6km erz=23.7km
nr= 6 gap=196 rms=0.56
Locality: Boconád
Comments:

sta	dist	azm	phase	hr	mn	sec	res
TENK	7.3	86	ePgD	23:	15:	32.40	-0.62
			iSg		15:	34.30	0.14
PSZ	40.1	318	ePgD	23:	15:	38.60	-0.15
			eSg		15:	44.60	0.24
PENC	74.4	282	ePg	23:	15:	45.80	0.94
			eSg		15:	54.30	-0.93

75.

2013-05-07 time: 10:36:32.20 UTC ML= 0.9
lat: 45.670N lon: 18.118E h= 16.9 km
erh= 8.0km erz= 1.7km
nr= 6 gap=333 rms=0.35
Locality: Croatia
Comments:

sta	dist	azm	phase	hr	mn	sec	res
PKSV	26.4	23	ePgD	10:	36:	38.10	0.30
			eSg		36:	42.10	-0.07
PKSM	72.6	34	eP*D	10:	36:	45.50	0.09
			eS*		36:	55.20	-0.50
PKS9	102.7	7	ePn	10:	36:	49.20	-0.67
			eSn		37:	04.00	0.35

76.

2013-05-08 time: 20:49:15.02 UTC ML= 1.7
lat: 47.647N lon: 20.347E h= 12.5 km
erh= 2.9km erz= 2.1km
nr= 9 gap=196 rms=0.36
Locality: Tenk
Comments:

sta	dist	azm	phase	hr	mn	sec	res
TENK	0.8	7	ePgD	20:	49:	17.00	-0.26
			iSg		49:	19.10	0.09
PSZ	45.4	312	ePgD	20:	49:	23.60	0.18
			eSg		49:	29.70	-0.28
PENC	81.5	281	ePg	20:	49:	29.90	0.16
			eSg		49:	41.30	0.07
PKSN	90.9	204	ePg	20:	49:	32.00	0.59
			eSg		49:	43.70	-0.49
PKS6	130.7	207	eSn	20:	49:	52.30	-1.39

77.

2013-05-09 time: 1:42:19.13 UTC ML= 1.2
lat: 47.669N lon: 20.327E h= 10.0 km
erh= 5.3km erz= 3.9km
nr= 6 gap=186 rms=0.34
Locality: Tenk
Comments:

sta	dist	azm	phase	hr	mn	sec	res
TENK	2.3	137	ePgD	1:	42:	20.60	-0.36
			iSg		42:	22.60	0.21
PSZ	42.7	311	ePgD	1:	42:	27.00	0.04
			eSg		42:	32.70	-0.37
PENC	79.6	280	ePg	1:	42:	34.10	0.64
			eSg		42:	44.50	-0.14

78.

2013-05-12 time: 7:47:22.77 UTC ML= 0.7
lat: 47.567N lon: 20.222E h= 1.2 km
erh= ---km erz= ---km
nr= 4 gap=284 rms=0.15
Locality: Jászszentandrás
Comments:

sta	dist	azm	phase	hr mn	sec	res
TENK	13.6	44	ePgD	7:47:25.10		-0.11
			iSg	47:27.20		0.08
PSZ	46.2	328	ePg	7:47:31.30		0.28
			eSg	47:37.30		-0.15

79.

2013-05-12 time: 21:10:47.72 UTC ML= 1.1
lat: 47.639N lon: 20.248E h= 5.9 km
erh= 5.2km erz= 9.5km
nr= 6 gap=206 rms=0.34
Locality: Heves
Comments:

sta	dist	azm	phase	hr mn	sec	res
TENK	7.7	77	ePg	21:10:48.80		-0.66
			iSg	10:50.90		0.09
PSZ	40.8	320	ePgC	21:10:55.10		0.01
			eSg	11:00.80		-0.03
PENC	74.4	283	ePgC	21:11:01.50		0.45
			eSg	11:11.00		-0.45

80.

2013-05-17 time: 4:23:21.33 UTC ML= 1.7
lat: 47.675N lon: 20.298E h= 15.5 km
erh= 1.6km erz= 1.4km
nr= 10 gap=192 rms=0.25
Locality: Erdőtelek
Comments:

sta	dist	azm	phase	hr mn	sec	res
PSZ	40.6	312	ePg	4:23:29.20		0.12
			eSg	23:34.90		-0.22
PENC	77.3	280	eP*C	4:23:35.00		-0.38
			eS*	23:46.60		0.26
KECS	90.9	9	eP*	4:23:37.60		0.15
			eS*	23:49.10		-0.93
PKSN	92.4	201	eP*	4:23:37.90		0.22
			eS*	23:50.20		-0.24
PKS7	110.7	231	ePn	4:23:40.40		0.22
			eSn	23:54.90		0.01

81.

2013-05-17 time: 6:58:01.45 UTC ML= 1.8
lat: 47.681N lon: 16.123E h= 7.0 km
erh= 5.1km erz= 3.8km
nr= 28 gap= 87 rms=1.81
Locality: Austria
Comments:

sta	dist	azm	phase	hr mn	sec	res
SOP	32.7	90	ePg	6:58:08.20		0.78
			eSg	58:12.70		0.62
ARSA	65.9	223	Pg	6:58:12.70		-0.58
			Sg	58:20.40		-2.10
ZST	92.9	52	ePg	6:58:16.20		-1.89
			eSg	58:28.40		-2.67
MODS	115.5	48	ePn	6:58:20.30		-1.69
			eSn	58:34.90		-3.11
SMOL	134.3	46	eSn	6:58:41.60		-0.57
KOGS	137.4	176	iPn	6:58:27.30		2.58
			iSn	58:41.90		-0.97
PERS	139.0	213	iPn	6:58:25.10		0.18
			iSn	58:39.80		-3.43
GROS	143.6	199	iPn	6:58:26.20		0.71
PKST	151.5	108	ePn	6:58:28.80		2.32
			eSn	58:47.60		1.60
PKSG	173.7	101	ePnD	6:58:31.20		1.95
			eSn	58:52.90		1.97
TREC	185.5	345	eSn	6:58:52.00		-1.54
MOZS	200.3	220	iPn	6:58:35.90		3.34
VYHS	221.4	66	ePn	6:58:35.70		0.51
			eSn	58:58.40		-3.11
KHC	248.0	311	ePn	6:58:41.10		2.59
			eSn	59:07.80		0.39
MORH	251.7	130	ePnD	6:58:39.00		0.03
PKSM	251.9	130	ePnD	6:58:39.00		0.01
			eSn	59:06.40		-1.87
PKSV	257.2	141	ePnC	6:58:40.20		0.55

82.

2013-05-18 time: 20:34:20.01 UTC ML= 2.9
lat: 47.654N lon: 20.296E h= 10.0 km
erh= 2.2km erz= 2.1km
nr= 43 gap= 45 rms=1.03
Locality: Erdőtelek
Comments: felt 4-5 EMS

sta	dist	azm	phase	hr mn	sec	res
PSZ	42.0	314	ePgD	20:34:27.80		0.08
PENC	77.6	281	ePgD	20:34:33.90		-0.08
PKSN	90.2	201	ePgD	20:34:36.40		0.19
KECS	93.3	9	ePg	20:34:36.10		-0.66
			eSg	34:48.80		-1.02
PKS7	109.1	232	ePnC	20:34:39.10		-0.27
LTVH	124.5	104	ePn	20:34:40.80		-0.49
			eSn	34:58.20		0.31
PKS6	129.7	205	ePnD	20:34:42.70		0.77
			eSn	34:56.30		-2.73
SRO2	143.2	275	ePn	20:34:43.00		-0.62
			eSn	35:00.90		-1.14
VYHS	143.4	311	ePn	20:34:43.50		-0.14
			eSn	35:01.60		-0.47
PKSG	146.4	259	ePn	20:34:44.00		-0.02
			eSn	35:01.90		-0.85
SRO	149.8	277	ePn	20:34:45.00		0.56
			eSn	35:03.40		-0.09
PKS2	153.1	212	ePnD	20:34:46.50		1.64
			eSn	35:06.70		2.46
CSKK	156.7	258	ePn	20:34:45.40		0.10
			eSn	35:03.90		-1.13
TRPA	175.9	72	ePnD	20:34:46.60		-1.10
			eSn	35:10.30		1.00
PKST	176.1	256	ePnD	20:34:47.60		-0.12
LANS	177.3	340	ePn	20:34:50.30		2.43
			eSn	35:11.40		1.79
SIRR	185.8	146	iPnD	20:34:48.20		-0.73
PKS9	193.7	232	ePn	20:34:49.60		-0.31
			eSn	35:16.60		3.37
TIH	200.2	245	ePnD	20:34:53.90		3.17
			eSn	35:18.90		4.21
PKSM	203.9	218	ePn	20:34:49.60		-1.59
			eSn	35:20.00		4.49
KOLS	204.3	46	ePn	20:34:53.00		1.76
			eSn	35:14.60		-1.00
DRGR	206.5	118	iPnD	20:34:51.50		-0.02
BMR	240.5	90	iPn	20:34:56.80		1.06
BZS	248.0	156	iPn	20:34:56.10		-0.59
PKSV	250.8	218	ePn	20:34:55.50		-1.53
CJR	271.3	113	iPn	20:35:01.10		1.51
SOP	280.7	271	ePnD	20:34:59.20		-1.57
			eSn	35:30.50		-2.06
MORC	311.1	319	iPnD	20:35:04.70		0.15
ARCR	313.0	102	iPnD	20:35:06.10		1.32
GZR	315.3	143	iPnD	20:35:05.10		0.03
VRAC	329.8	304	iPn	20:35:05.80		-1.08

```
CONA 333.6 275    Pn   20:35:07.00   -0.35
                  Sn      35:42.40   -1.88
LOT  362.1 133   iPn   20:35:10.60   -0.31
ARSA 362.7 263    Pn   20:35:11.30    0.31
                  Sn      35:49.00   -1.75
KRLC 372.8 316   ePn   20:35:13.00    0.75
DPC  417.7 316   ePn   20:35:18.10    0.26
                 eSn      36:00.80   -2.15
MOA  452.7 273    Pn   20:35:22.70    0.49
KBA  529.0 263    Pn   20:35:32.40    0.68
```

83.

```
 2013-05-18  time: 22:25:16.95 UTC  ML= 1.7
   lat: 48.132N  lon: 20.852E  h=  8.3 km
                 erh= 1.5km    erz= 1.3km
   nr= 14        gap=125       rms=0.33
   Locality: Onga
   Comments:

sta   dist azm  phase  hr mn  sec     res
KECS  47.6 325   ePg   22:25:25.80    0.22
                 eSg      25:31.90   -0.41
PSZ   75.2 252   ePgC  22:25:30.40   -0.07
LTVH 114.4 137   eSn   22:25:53.50    0.53
PENC 123.2 252   ePnD  22:25:38.40    0.11
                 eSn      25:54.70   -0.24
TRPA 125.6  90   ePnD  22:25:38.50   -0.09
                 eSn      25:53.90   -1.57
LANS 152.5 318   ePn   22:25:43.20    1.26
                 eSn      26:01.00   -0.42
VYHS 154.8 285   ePn   22:25:42.30    0.06
                 eSn      26:01.70   -0.26
DRGR 204.6 137   iPn   22:25:48.30   -0.13
SIRR 216.1 164   iPn   22:25:49.60   -0.27
```

84.

```
 2013-05-22  time:  4:10:31.82 UTC  ML= 0.6
   lat: 47.022N  lon: 17.928E  h=  4.3 km
                 erh= 6.3km    erz=16.3km
   nr=  8        gap=186       rms=0.58
   Locality: Felsőörs
   Comments:

sta   dist azm  phase  hr mn  sec     res
TIH   13.9 191   ePgC   4:10:34.10   -0.31
                 eSg      10:36.10   -0.34
PKST  27.5  17   ePgC   4:10:37.10    0.32
                 eSg      10:40.50   -0.16
CSKK  45.5  34   ePg    4:10:40.40    0.43
                 eSg      10:45.20   -1.13
PKSG  54.0  40   ePgD   4:10:43.00    1.52
                 eSg      10:49.10    0.07
```

85.

```
 2013-05-22  time: 10:55:43.21 UTC  ML= 1.8
   lat: 48.374N  lon: 19.825E  h=  0.0 km
                 erh= 1.6km    erz= 558km
   nr=  8        gap=106       rms=0.40
   Locality: Slovakia
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
KECS  50.3  76   ePg   10:55:52.00   -0.21
                 eSg      55:58.80   -0.42
PSZ   50.9 174   ePgD  10:55:52.50    0.19
                 eSg      55:59.40   -0.01
VYHS  74.4 280   ePg   10:55:56.90    0.40
                 eSg      56:06.30   -0.56
LANS  90.3 343   ePg   10:56:00.20    0.87
                 eSg      56:11.60   -0.30
```

86.

```
 2013-05-24  time:  9:13:50.03 UTC  ML= 0.6
   lat: 47.435N  lon: 18.359E  h=  0.0 km
                 erh= 4.1km    erz= 444km
   nr=  5        gap=282       rms=0.20
   Locality: Oroszlány
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   5.4 154   ePgC   9:13:51.00    0.01
                 eSg      13:51.60   -0.14
CSKK  10.9 223   ePgD   9:13:52.30    0.32
                 eSg      13:53.50   -0.01
PKST  31.4 231   ePgC   9:13:55.40   -0.24
```

87.

```
 2013-05-24  time:  9:17:11.76 UTC  ML= 0.8
   lat: 47.405N  lon: 18.369E  h=  0.0 km
                 erh= 5.2km    erz= 505km
   nr=  6        gap=252       rms=0.29
   Locality: Gánt
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   2.2 133   ePgD   9:17:12.00   -0.16
                 eSg      17:12.60    0.13
CSKK   9.4 240   ePgD   9:17:13.30   -0.15
                 eSg      17:14.50   -0.27
PKST  30.1 237   ePg    9:17:17.80    0.66
                 eSg      17:21.30   -0.02
```

88.

```
 2013-05-24  time:  9:17:41.20 UTC  ML= 1.1
   lat: 47.432N  lon: 18.385E  h=  0.0 km
                 erh= 8.0km    erz= ***km
   nr=  6        gap=301       rms=0.70
   Locality: Gánt
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   4.5 175   ePgD   9:17:41.90   -0.09
                 eSg      17:42.70    0.09
CSKK  12.1 231   ePgD   9:17:43.30   -0.06
                 eSg      17:44.40   -0.65
PKST  32.7 234   ePg    9:17:48.50    1.46
                 eSg      17:50.60   -1.00
```

89.

```
 2013-05-24  time: 18:54:54.43 UTC  ML= 1.8
   lat: 47.663N  lon: 20.286E  h=  0.4 km
                 erh= 3.5km    erz= 3.3km
   nr= 29        gap= 83       rms=1.37
   Locality: Erdőtelek
   Comments: felt 3-4 EMS

sta   dist azm  phase  hr mn  sec     res
PSZ   40.8 314   ePg   18:55:01.70   -0.02
                 eSg      55:07.40   -0.01
PKSN  90.8 200   ePg   18:55:10.60   -0.06
                 eSg      55:22.90   -0.41
KECS  92.4   9   ePg   18:55:11.50    0.57
                 eSg      55:22.70   -1.10
PKS7 109.2 231   ePg   18:55:13.00   -0.92
                 eSg      55:26.90   -2.23
PKS6 130.3 205   ePn   18:55:16.80   -0.86
                 eSn      55:34.70   -1.07
VYHS 142.2 311   ePn   18:55:18.30   -0.84
                 eSn      55:35.70   -2.71
PKSG 145.9 258   ePnD  18:55:20.50    0.89
                 eSn      55:36.20   -3.04
```

```
PKS2 153.6 212   eSn   18:55:41.80    0.85
CSKK 156.2 258   ePnD  18:55:23.20    2.31
                 eSn      55:41.60    0.08
PKST 175.6 255   ePn   18:55:23.10   -0.21
                 eSn      55:42.00   -3.84
LANS 176.2 340   ePn   18:55:24.40    1.02
                 eSn      55:45.40   -0.56
TRPA 176.3  73   ePnD  18:55:23.40    0.00
                 eSn      55:44.80   -1.19
PKS9 193.7 232   ePn   18:55:27.30    1.74
                 eSn      55:51.30    1.46
KOLS 204.2  46   ePn   18:55:29.60    2.73
PKSM 204.2 218   ePnD  18:55:29.10    2.22
                 eSn      55:54.20    2.01
DRGR 207.6 118   iPnD  18:55:25.10   -2.20
```

90.

```
 2013-05-28  time: 10:48:06.53 UTC  ML= 0.4
   lat: 47.187N  lon: 18.302E  h=  0.0 km
                 erh= 1.5km    erz= 476km
   nr=  9        gap=125       rms=0.37
   Locality: Székesfehérvár
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
CSKK  19.9 351   ePgD  10:48:09.90   -0.18
                 eSg      48:13.10    0.25
PKST  21.8 292   ePgD  10:48:10.40   -0.03
                 eSg      48:13.20   -0.26
PKSG  23.8  16   ePgD  10:48:10.80    0.02
                 eSg      48:14.10    0.01
PKS7  67.0 103   ePg   10:48:17.80   -0.70
PKSM 111.4 167   ePg   10:48:27.50    1.06
                 eSg      48:42.30    0.34
```

91.

```
 2013-05-29  time:  7:19:47.99 UTC  ML= 0.5
   lat: 47.359N  lon: 18.397E  h=  0.0 km
                 erh= 2.4km    erz= 226km
   nr=  5        gap=256       rms=0.12
   Locality: Gánt
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   3.7 352   ePgC   7:19:48.60   -0.06
CSKK  10.4 273   ePgD   7:19:49.90    0.06
                 eSg      19:51.20   -0.08
PKST  29.6 248   ePg    7:19:53.40    0.13
                 eSg      19:57.00   -0.40
```

92.

```
 2013-05-29  time:  7:19:59.91 UTC  ML= 1.1
   lat: 47.442N  lon: 18.405E  h=  0.0 km
                 erh= 2.7km    erz= 316km
   nr=  5        gap=317       rms=0.14
   Locality: Várgesztes
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   5.7 191   ePgC   7:20:01.00    0.07
                 eSg      20:01.70   -0.03
CSKK  14.0 231   ePgD   7:20:02.30   -0.11
                 eSg      20:04.20   -0.16
PKST  34.6 234   eSg    7:20:11.20    0.29
```

93.

```
 2013-05-29  time: 11:42:50.25 UTC  ML= 1.3
   lat: 48.265N  lon: 21.219E  h=  1.2 km
                 erh= 3.1km    erz= 174km
   nr=  6        gap=202       rms=0.14
   Locality: Abaújszántó
   Comments:

sta   dist azm  phase  hr mn  sec     res
KECS  59.5 294   ePg   11:43:00.70   -0.17
                 eSg      43:09.30    0.15
PSZ  105.9 249   ePg   11:43:09.30    0.13
                 eSg      43:23.80   -0.12
KOLS 107.5  46   ePg   11:43:09.60    0.15
                 eSg      43:24.30   -0.13
```

94.

```
 2013-05-31  time:  9:15:44.77 UTC  ML= 1.4
   lat: 48.634N  lon: 20.768E  h=  0.0 km
                 erh= 5.5km    erz= 3.7km
   nr=  8        gap=278       rms=0.59
   Locality: Slovakia
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
KECS  26.7 231   ePg    9:15:49.70    0.16
                 eSg      15:53.30    0.04
PSZ  102.6 219   ePg    9:16:02.20   -0.90
                 eSg      16:17.50    0.11
LANS 111.3 301   ePg    9:16:05.40    0.75
                 eSg      16:19.80   -0.35
VYHS 143.4 264   ePn    9:16:10.70    1.01
                 eSn      16:28.40   -0.72
```

95.

```
 2013-06-01  time:  2:48:00.89 UTC  ML= 1.0
   lat: 47.784N  lon: 18.015E  h=  5.0 km
                 erh= 1.6km    erz=12.2km
   nr= 16        gap=125       rms=0.44
   Locality: Komárom
   Comments:

sta   dist azm  phase  hr mn  sec     res
SRO   22.6  82   ePg    2:48:05.50    0.48
                 eSg      48:08.60    0.36
SRO2  28.5  95   ePg    2:48:05.30   -0.76
                 eSg      48:09.50   -0.58
CSKK  50.2 158   ePgD   2:48:10.00    0.09
                 eSg      48:17.00    0.05
PKSG  51.9 147   ePg    2:48:10.30    0.09
                 eSg      48:17.60    0.13
PKST  58.3 179   ePg    2:48:11.30   -0.05
                 eSg      48:18.90   -0.61
ZST   82.1 304   ePg    2:48:16.00    0.41
                 eSg      48:27.10    0.05
MODS  85.6 320   ePg    2:48:16.50    0.29
                 eSg      48:26.60   -1.55
VYHS  99.9  38   ePg    2:48:18.90    0.15
                 eSg      48:30.70   -1.98
```

96.

```
 2013-06-01  time:  8:37:47.56 UTC  ML= 0.9
   lat: 47.783N  lon: 18.026E  h= 10.0 km
                 erh= 2.4km    erz= 8.7km
   nr=  9        gap=140       rms=0.48
   Locality: Komárom
   Comments:

sta   dist azm  phase  hr mn  sec     res
SRO   21.8  81   ePg    8:37:52.00    0.15
```

```
                 eSg      37:55.30    0.11
PKSG  51.4 148   ePgC   8:37:57.00    0.09
                 eSg      38:03.80   -0.41
PKST  58.2 179   eSg    8:38:05.90   -0.45
MODS  86.2 320   ePg    8:38:03.90    0.84
                 eSg      38:14.30   -0.84
VYHS  99.5  37   ePg    8:38:05.50    0.09
                 eSg      38:17.30   -2.04
```

97.

```
 2013-06-03  time:  9:00:30.43 UTC  ML= 1.5
   lat: 48.620N  lon: 20.566E  h=  0.0 km
                 erh= 3.2km    erz= 525km
   nr=  8        gap=255       rms=0.37
   Locality: Slovakia
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
KECS  16.4 201   ePg    9:00:32.50   -0.85
                 eSg      00:36.20    0.57
PSZ   92.6 213   ePgC   9:00:47.10    0.14
                 eSg      00:59.90    0.04
LANS  99.8 306   ePg    9:00:48.20   -0.04
                 eSg      01:02.50    0.36
VYHS 128.4 264   ePg    9:00:53.10   -0.26
                 eSg      01:10.90   -0.35
```

98.

```
 2013-06-03  time: 12:30:33.44 UTC  ML= 1.8
   lat: 48.378N  lon: 19.834E  h=  0.2 km
                 erh= 0.9km    erz= 339km
   nr=  8        gap=105       rms=0.34
   Locality: Slovakia
   Comments:

sta   dist azm  phase  hr mn  sec     res
KECS  49.6  76   ePg   12:30:42.30    0.01
                 eSg      30:48.90   -0.30
PSZ   51.3 175   ePgC  12:30:42.60    0.01
                 eSg      30:49.50   -0.24
VYHS  75.0 280   ePg   12:30:47.20    0.38
                 eSg      30:56.80   -0.47
LANS  90.0 343   ePg   12:30:50.40    0.88
                 eSg      31:02.10    0.04
```

99.

```
 2013-06-03  time: 21:23:06.23 UTC  ML= 2.2
   lat: 47.667N  lon: 20.289E  h=  0.5 km
                 erh= 2.7km    erz= 2.4km
   nr= 31        gap= 94       rms=1.12
   Locality: Erdőtelek
   Comments: felt 5 EMS

sta   dist azm  phase  hr mn  sec     res
PSZ   40.7 313   ePgC  21:23:14.20    0.70
                 eSg      23:20.00    0.83
PKSN  91.3 200   ePgD  21:23:22.80    0.27
                 eSg      23:35.20   -0.05
KECS  92.0   9   ePg   21:23:22.50   -0.15
                 eSg      23:35.20   -0.26
BUD   97.3 258   ePg   21:23:22.80   -0.81
                 eSg      23:34.60   -2.57
PKS7 109.6 231   ePgD  21:23:24.90   -0.89
                 eSg      23:39.10   -1.96
PKS6 130.7 205   eSn   21:23:46.60   -1.04
VYHS 142.1 310   ePn   21:23:30.50   -0.41
                 eSn      23:48.50   -1.66
PKSG 146.2 258   ePnC  21:23:32.70    1.28
                 eSn      23:48.50   -2.57
AMBH 150.1 167   ePn   21:23:32.50    0.59
                 eSn      23:51.40   -0.54
PKS2 154.0 212   ePnD  21:23:33.10    0.70
                 eSn      23:52.60   -0.22
CSKK 156.5 258   eSn   21:23:53.80    0.44
LANS 175.8 340   ePn   21:23:36.90    1.78
                 eSn      23:57.50   -0.15
TRPA 176.0  73   ePn   21:23:35.50    0.36
                 eSn      23:56.80   -0.88
PKS9 194.1 232   ePn   21:23:39.50    2.11
                 eSn      24:02.90    1.20
TIH  200.3 245   eSn   21:24:05.50    2.42
KOLS 203.7  46   ePn   21:23:37.90   -0.70
                 eSn      24:01.10   -2.74
PKSM 204.7 218   ePn   21:23:35.90   -2.82
                 eSn      24:05.40    1.34
```

100.

```
 2013-06-04  time:  6:34:57.10 UTC  ML= 0.6
   lat: 47.460N  lon: 18.383E  h=  0.0 km
                 erh= 4.4km    erz= 541km
   nr=  6        gap=306       rms=0.32
   Locality: Várgesztes
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   7.6 175   ePgC   6:34:58.60    0.15
                 eSg      34:59.20   -0.31
CSKK  14.2 221   ePgD   6:34:59.90    0.27
                 eSg      35:01.30   -0.30
PKST  34.5 230   ePgC   6:35:02.90   -0.37
                 eSg      35:08.60    0.53
```

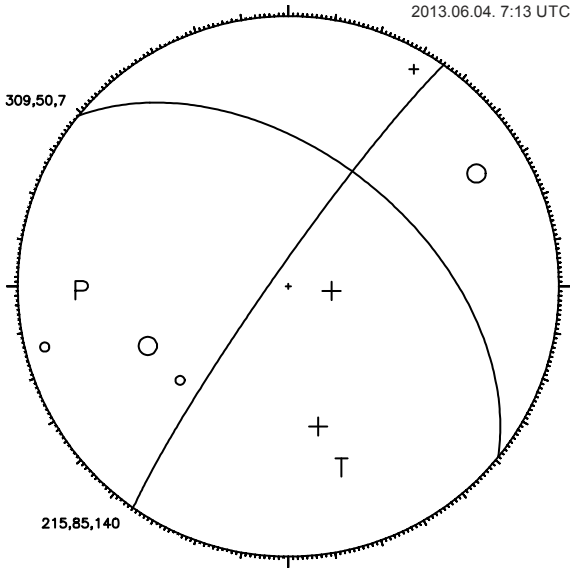
101.

```
 2013-06-04  time:  6:42:06.91 UTC  ML= 1.2
   lat: 47.472N  lon: 18.433E  h=  0.0 km
                 erh= 5.1km    erz= 525km
   nr=  6        gap=328       rms=0.34
   Locality: Várgesztes
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   9.4 200   ePgC   6:42:08.90    0.30
                 eSg      42:09.60   -0.31
CSKK  17.8 227   ePgC   6:42:10.20    0.12
                 eSg      42:11.60   -0.96
PKST  38.3 232   ePgC   6:42:13.60   -0.15
                 eSg      42:19.40    0.32
```

102.

```
 2013-06-04  time:  7:13:23.08 UTC  ML= 2.2
   lat: 47.361N  lon: 18.285E  h=  8.1 km
                 erh= 1.7km    erz= 1.1km
   nr= 32        gap= 45       rms=0.82
   Locality: Csókakő
   Comments:

sta   dist azm  phase  hr mn  sec     res
CSKK   1.9 276   ePgC   7:13:24.50   -0.07
                 eSg      13:25.20   -0.52
PKSG   8.6  67   ePgD   7:13:24.70   -0.50
                 eSg      13:25.90   -0.94
PKST  22.1 239   ePgD   7:13:27.10   -0.19
                 eSg      13:30.50   -0.08
SRO2  45.4  10   ePg    7:13:31.50    0.19
                 eSg      13:38.50    0.77
SRO   50.3   2   ePg    7:13:34.10    1.92
                 eSg      13:41.70    2.42
BUD   57.3  76   ePgD   7:13:33.00   -0.43
                 eSg      13:40.70   -0.79
TIH   59.3 210   ePgC   7:13:33.50   -0.27
PKS9  86.1 180   ePg    7:13:39.10    0.58
                 eSg      13:51.30    0.73
```

PKS2	119.7	144	eSn	7:13:59.80	-0.53
ZST	128.4	316	ePn	7:13:44.80	-0.29
			eSn	14:00.80	-1.45
PKS6	129.0	131	eSn	7:14:02.60	0.21
PKSM	130.6	168	ePnC	7:13:44.60	-0.77
			eSn	13:59.50	-3.26
PKSN	130.6	113	eSn	7:14:03.80	1.04
VYHS	132.5	18	ePn	7:13:46.50	0.90
			eSn	14:03.00	-0.17
SOP	134.9	285	eSn	7:14:03.40	-0.31
MODS	135.5	326	ePn	7:13:45.50	-0.48
			eSn	14:02.10	-1.74
PSZ	135.8	63	ePn	7:13:46.30	0.28
			eSn	14:03.10	-0.81
BEHE	151.8	229	ePnD	7:13:50.30	2.29
			eSn	14:10.60	3.14
PKSV	163.7	181	eSn	7:14:11.10	0.99



103.

2013-06-04 time: 12:08:47.47 UTC ML= 0.2
lat: 47.446N lon: 18.094E h= 10.0 km
erh= 5.1km erz= 7.3km
nr= 6 gap=273 rms=0.24
Locality: Bakonysárkány
Comments:

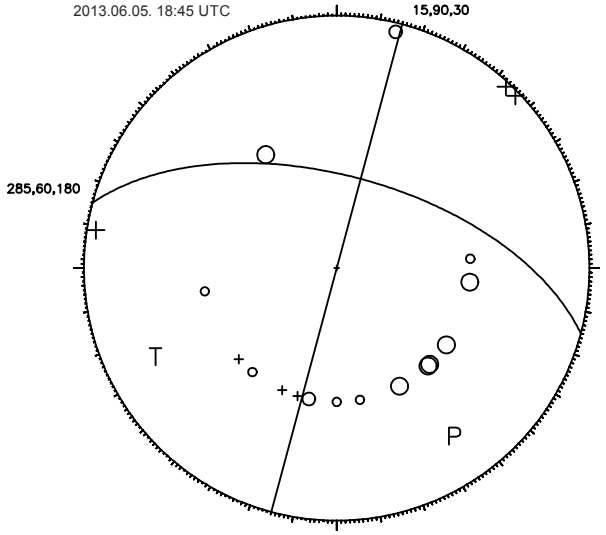
sta	dist	azm	phase	hr mn	sec	res
CSKK	15.6	126	ePg	12:08:51.10		0.32
			eSg	08:53.60		0.24
PKST	21.3	192	ePgD	12:08:51.60		-0.06
			eSg	08:54.70		-0.23
PKSG	23.2	105	ePgC	12:08:52.00		0.02
			eSg	08:55.00		-0.50

104.

2013-06-05 time: 18:45:46.34 UTC ML= 4.1
lat: 47.993N lon: 19.216E h= 3.9 km
erh= 1.0km erz= 1.0km
nr= 58 gap= 35 rms=0.66
Locality: Érsekvadkert
Comments: felt 5-6 EMS

sta	dist	azm	phase	hr mn	sec	res
PSZ	51.4	99	ePgC	18:45:55.60		0.06
			eSg	46:01.70		-1.02
BUD	58.5	194	ePgD	18:45:56.90		0.09
			eSg	46:04.50		-0.47
VYHS	62.4	333	ePg	18:45:58.40		0.90
			eSg	46:06.30		0.09
SRO2	66.6	247	ePg	18:45:57.80		-0.45
			eSg	46:06.50		-1.05
SRO	70.4	253	ePg	18:45:59.40		0.47
			eSg	46:08.60		-0.14
PKSG	91.2	223	ePgC	18:46:02.70		0.07
			eSg	46:14.90		-0.44
CSKK	100.3	226	ePgC	18:46:04.10		-0.16
			eSg	46:18.80		0.56
PKS7	105.3	182	ePg	18:46:05.70		0.55
			eSg	46:19.30		-0.53
KECS	108.9	60	ePg	18:46:04.80		-1.00
			eSg	46:17.80		-3.18
PKST	120.6	227	ePg	18:46:07.30		-0.59
LANS	130.0	8	ePn	18:46:09.60		0.51
			eSn	46:25.70		-1.13
PKSN	131.4	158	ePn	18:46:09.60		0.34
			eSn	46:26.70		-0.45
MODS	150.2	286	ePn	18:46:10.60		-1.01
			eSn	46:31.00		-0.31
PKS6	157.2	170	ePnD	18:46:12.80		0.33
			eSn	46:33.20		0.34
TIH	157.3	219	ePnD	18:46:13.40		0.91
			eSn	46:34.90		2.02
ZST	159.0	278	ePn	18:46:11.80		-0.90
			eSn	46:32.10		-1.17
PKS2	166.9	180	ePnD	18:46:13.90		0.21
			eSn	46:35.80		0.77
PKS9	171.7	204	ePnC	18:46:14.50		0.22
			eSn	46:37.60		1.52
SOP	201.9	260	ePnD	18:46:18.30		0.25
			eSn	46:41.30		-1.49
PKSM	202.8	192	ePnD	18:46:17.70		-0.47
			eSn	46:45.80		2.81
AMBH	215.6	148	ePn	18:46:20.00		0.24
			eSn	46:44.10		-1.73
STHS	217.5	43	ePn	18:46:21.10		1.10
			eSn	46:50.20		3.94
OKC	219.5	339	ePn	18:46:21.40		1.15
			eSn	46:45.60		-1.09
MORC	233.2	328	iPnD	18:46:22.80		0.84
VRAC	242.3	307	iPn	18:46:23.50		0.41
PKSV	245.2	197	ePnC	18:46:23.50		0.04
			eSn	46:52.40		-0.01
TRPA	248.2	86	ePnD	18:46:23.30		-0.52
KOLS	249.1	65	ePn	18:46:23.90		-0.04
CONA	250.5	268	Pn	18:46:24.30		0.19
			Sn	46:52.50		-1.07
BEHE	250.7	227	ePnC	18:46:25.40		1.27
			eSn	46:58.20		4.59
SIRR	266.8	136	iPnD	18:46:25.70		-0.45
KOGS	282.8	233	iPn	18:46:28.60		0.46
ARSA	289.6	253	Pn	18:46:29.60		0.61
			Sn	47:03.20		0.95
DRGR	295.8	117	iPn	18:46:29.50		-0.26
TREC	310.5	298	ePn	18:46:32.30		0.70
BZS	321.6	145	iPn	18:46:32.80		-0.17
BMR	322.5	96	iPnD	18:46:33.80		0.71
DPC	336.5	321	ePn	18:46:35.90		1.07
SOKA	348.4	245	Pn	18:46:36.90		0.59
			Sn	47:13.20		-2.09
GOLS	351.0	231	iPn	18:46:36.90		0.26
CJR	360.4	113	iPn	18:46:37.80		-0.02
UPC	364.1	320	ePn	18:46:39.30		1.03
			eSn	47:27.70		8.92
DEV	365.9	130	iPn	18:46:38.30		-0.20
MOA	370.3	268	Pn	18:46:39.70		0.65
			Sn	47:20.30		0.14
GOPC	388.4	303	ePn	18:46:41.60		0.30
			eSn	47:22.30		-1.87
BLY	389.2	204	iPn	18:46:42.10		0.70
OBKA	389.9	245	Pn	18:46:42.30		0.80
			Sn	47:23.80		-0.72
GZR	397.2	137	iPnD	18:46:42.80		0.40
ARCR	399.8	105	iPn	18:46:43.00		0.27

MDVR	405.4	152	iPnD	18:46:43.40	-0.03
PRU	407.7	303	ePn	18:46:44.10	0.39
			eSn	47:26.50	-1.97
KHC	434.9	287	ePn	18:46:47.90	0.79
			eSn	47:33.10	-1.41
PVCC	440.3	310	ePn	18:46:48.40	0.62
			eSn	47:34.30	-1.40
MDB	443.1	118	iPn	18:46:49.00	0.88
MYKA	447.9	250	Pn	18:46:49.70	0.97
			Sn	47:35.30	-2.09
LOT	448.7	129	iPn	18:46:48.70	-0.12
BURB	451.5	95	iPn	18:46:50.20	1.02
KBA	453.6	257	Pn	18:46:50.40	0.96
			Sn	47:37.50	-1.15
ARR	507.0	125	iPnD	18:46:56.20	0.10



105.

2013-06-05 time: 20:46:37.64 UTC ML= 1.7
lat: 47.980N lon: 19.252E h= 6.4 km
erh= 1.4km erz= 1.5km
nr= 26 gap= 61 rms=0.63
Locality: Szente
Comments:

sta	dist	azm	phase	hr mn	sec	res
PSZ	48.5	98	ePgC	20:46:46.80		0.43
			eSg	46:53.10		-0.08
BUD	57.8	197	eSg	20:46:56.00		-0.10
VYHS	65.0	332	ePg	20:46:50.00		0.70
			eSg	46:57.50		-0.89
SRO2	68.6	249	ePg	20:46:49.20		-0.74
			eSg	46:58.50		-1.03
SRO	72.6	255	ePg	20:46:51.60		0.95
			eSg	47:00.10		-0.70
PKSG	92.0	225	ePgD	20:46:54.10		0.01
			eSg	47:05.90		-1.03
CSKK	101.2	227	ePgC	20:46:56.10		0.35
			eSg	47:09.90		0.03
PKS7	103.9	184	ePgC	20:46:56.70		0.48
			eSg	47:11.00		0.28
KECS	107.4	59	ePg	20:46:56.30		-0.55
			eSg	47:09.80		-2.03
PKST	121.7	229	ePnD	20:46:58.80		-0.22
			eSn	47:15.70		-0.01
PKSN	129.0	159	eSn	20:47:16.90		-0.44
LANS	131.2	7	ePn	20:47:01.00		0.79
			eSn	47:16.60		-1.22
MODS	153.3	287	ePn	20:47:03.70		0.74
			eSn	47:23.00		0.28
PKSM	201.9	193	ePn	20:47:09.10		0.07
			eSn	47:35.50		1.97

106.

2013-06-05 time: 22:00:56.11 UTC ML= 1.5
lat: 47.992N lon: 19.228E h= 2.2 km
erh= 1.3km erz= 1.5km
nr= 29 gap= 71 rms=0.63
Locality: Érsekvadkert
Comments:

sta	dist	azm	phase	hr mn	sec	res
PSZ	50.5	99	ePgC	22:01:05.30		0.16
			eSg	01:11.80		-0.37
BUD	58.6	195	ePg	22:01:06.50		-0.08
			eSg	01:13.90		-0.84
VYHS	62.9	332	ePg	22:01:08.30		0.94
			eSg	01:15.60		-0.53
SRO2	67.4	248	ePg	22:01:07.40		-0.75
			eSg	01:16.90		-0.64
SRO	71.2	254	ePg	22:01:09.20		0.37
			eSg	01:18.30		-0.45
PKSG	91.7	223	ePgC	22:01:12.30		-0.19
			eSg	01:25.70		0.44
CSKK	100.8	226	ePg	22:01:14.40		0.28
			eSg	01:27.60		-0.57
PKS7	105.2	183	ePgC	22:01:15.80		0.91
			eSg	01:28.50		-1.04
KECS	108.2	60	ePg	22:01:14.80		-0.65
			eSg	01:28.20		-2.32
LANS	130.0	8	ePn	22:01:19.80		0.71
			eSn	01:35.00		-2.00
MODS	151.1	286	ePn	22:01:22.20		0.49
			eSn	01:41.40		-0.28
PKS6	156.9	171	eSn	22:01:42.60		-0.36
TIH	157.7	220	ePn	22:01:23.40		0.86
PKS2	166.8	180	eSn	22:01:45.10		-0.06
PKS9	171.9	205	ePn	22:01:24.90		0.59
			eSn	01:47.10		0.80
PKSM	202.9	193	ePnD	22:01:27.90		-0.27
			eSn	01:50.20		-2.97

107.

2013-06-06 time: 10:21:15.47 UTC ML= 1.6
lat: 47.986N lon: 19.999E h= 0.0 km
erh= 3.2km erz= 688km
nr= 7 gap=193 rms=0.49
Locality: Mátraballa
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PSZ	10.8	226	ePgC	10:21:17.40		0.00
			eSg	21:19.90		0.99
PENC	57.8	248	ePgC	10:21:25.20		-0.60
			eSg	21:34.10		0.24
KECS	66.1	33	eSg	10:21:37.10		0.62
VYHS	103.2	303	ePg	10:21:33.80		-0.10
			eSg	21:47.90		-0.38

108.

2013-06-07 time: 3:05:35.75 UTC ML= 1.2
lat: 47.401N lon: 17.973E h= 8.5 km
erh= 2.4km erz= 1.9km
nr= 20 gap=148 rms=0.70
Locality: Ácsteszér
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKST	16.4	164	ePgD	3:05:38.80		-0.25
			eSg	05:41.40		-0.23
CSKK	22.1	101	ePg	3:05:39.80		-0.17
			eSg	05:42.90		-0.37
PKSG	31.5	92	ePgD	3:05:41.20		-0.38

```
                  eSg      05:45.60   -0.53
SRO2  51.2  38   ePg    3:05:43.90   -1.11
                  eSg      05:52.30    0.06
SRO   52.5  29   ePg    3:05:45.80    0.55
                  eSg      05:54.10    1.44
TIH   56.0 186   ePgD   3:05:47.00    1.14
                  eSg      05:53.80    0.05
PENC 107.5  66   eSg    3:06:10.80    0.77
MODS 120.1 334   ePn    3:05:56.90    0.24
                  eSn      06:11.00   -1.97
VYHS 137.6  28   ePn    3:05:59.70    0.85
                  eSn      06:16.10   -0.76
PKSM 141.7 159   ePnD   3:05:59.60    0.25
                  eSn      06:18.00    0.23
PSZ  155.4  68   eSn    3:06:24.20    3.39
```

109.

```
 2013-06-11  time:  5:31:25.61 UTC  ML= 2.3
   lat: 47.995N  lon: 19.226E  h=  5.2 km
                 erh= 1.4km    erz= 1.6km
   nr= 30        gap= 70       rms=0.69
   Locality: Érsekvadkert
   Comments: felt 4-5 EMS

sta   dist azm  phase  hr mn  sec     res
PENC  23.1 170   ePgD   5:31:30.10    0.26
                 eSg      31:33.20    0.06
PSZ   50.6 100   ePgC   5:31:35.10    0.40
                 eSg      31:41.90    0.11
VYHS  62.6 332   ePg    5:31:38.00    1.17
                 eSg      31:45.40   -0.18
SRO2  67.4 247   ePg    5:31:37.00   -0.68
                 eSg      31:46.80   -0.30
SRO   71.2 254   ePg    5:31:38.70    0.34
                 eSg      31:47.80   -0.50
PKSG  91.8 223   ePgC   5:31:41.80   -0.23
CSKK 101.0 226   ePg    5:31:43.00   -0.66
PKS7 105.5 183   ePg    5:31:45.00    0.53
                 eSg      31:58.80   -0.37
KECS 108.2  60   ePg    5:31:44.60   -0.35
                 eSg      31:58.40   -1.63
PKST 121.3 228   ePnD   5:31:46.60   -0.50
LANS 129.7   8   ePn    5:31:49.10    0.95
                 eSn      32:04.60   -1.14
MODS 150.9 286   ePn    5:31:51.70    0.91
                 eSn      32:10.20   -0.24
ZST  159.8 278   ePn    5:31:52.40    0.50
                 eSn      32:12.10   -0.30
PKS9 172.1 205   ePnC   5:31:55.90    2.46
MORH 202.7 193   ePnC   5:31:57.00   -0.24
PKSM 203.1 193   ePnC   5:31:57.00   -0.30
                 eSn      32:23.70    1.68
OKC  219.7 339   eSn    5:32:27.70    2.01
KOLS 248.3  65   ePn    5:32:09.10    6.16
CONA 251.3 268    Pn    5:32:03.20   -0.11
                  Sn      32:33.10    0.38
```

110.

```
 2013-06-11  time:  6:40:06.02 UTC  ML= 1.0
   lat: 47.425N  lon: 18.381E  h=  0.0 km
                 erh= 0.9km    erz= 109km
   nr=  6        gap=293       rms=0.06
   Locality: Gánt
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   3.8 168   ePg    6:40:06.70    0.01
                 eSg      40:07.20   -0.02
CSKK  11.4 233   ePg    6:40:08.10    0.05
                 eSg      40:09.50   -0.13
PKST  32.0 235   ePgC   6:40:11.70   -0.04
                 eSg      40:16.30    0.10
```

111.

```
 2013-06-11  time:  6:40:18.77 UTC  ML= 1.0
   lat: 47.440N  lon: 18.417E  h=  0.0 km
                 erh= 2.6km    erz= 286km
   nr=  6        gap=325       rms=0.17
   Locality: Várgesztes
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   5.8 200   ePg    6:40:19.90    0.10
                 eSg      40:20.40   -0.20
CSKK  14.6 234   ePgD   6:40:21.30   -0.08
                 eSg      40:23.30   -0.12
PKST  35.3 235   ePgC   6:40:25.10    0.03
                 eSg      40:30.50    0.51
```

112.

```
 2013-06-11  time:  7:50:41.10 UTC  ML= 0.6
   lat: 45.858N  lon: 18.409E  h=  0.0 km
                 erh= 0.9km    erz=93.9km
   nr=  6        gap=261       rms=0.05
   Locality: Nagyharsány
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSV  12.6 286   ePg    7:50:43.30   -0.06
                 eSg      50:45.20    0.08
PKSM  43.3  25   ePgD   7:50:48.90    0.07
                 eSg      50:54.80   -0.06
MORH  43.8  25   ePgC   7:50:48.90   -0.02
                 eSg      50:55.00   -0.02
```

113.

```
 2013-06-11  time: 11:15:37.59 UTC  ML= 0.4
   lat: 47.174N  lon: 18.304E  h=  0.0 km
                 erh= 3.4km    erz= 400km
   nr=  5        gap=280       rms=0.19
   Locality: Sárkeszi
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
CSKK  21.3 351   ePgD  11:15:41.20   -0.19
                 eSg      15:44.60    0.23
PKST  22.5 295   eSg   11:15:44.90    0.15
PKSG  25.1  15   ePgC  11:15:42.20    0.13
                 eSg      15:45.30   -0.27
```

114.

```
 2013-06-13  time: 12:01:14.36 UTC  ML= 0.6
   lat: 47.185N  lon: 18.307E  h=  0.0 km
                 erh= 5.2km    erz= 682km
   nr=  6        gap=276       rms=0.41
   Locality: Székesfehérvár
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
CSKK  20.1 350   ePgC  12:01:17.30   -0.65
                 eSg      01:20.40   -0.35
PKST  22.2 292   ePg   12:01:18.50    0.18
                 eSg      01:21.70    0.28
PKSG  23.9  15   ePgC  12:01:19.00    0.38
                 eSg      01:22.20    0.26
```

115.

2013-06-14 time: 6:35:52.93 UTC ML= 1.5
lat: 48.009N lon: 19.244E h= 10.0 km
erh= 3.1km erz= 3.5km
nr= 17 gap= 72 rms=1.08
Locality: Csesztve
Comments:

sta	dist	azm	phase	hr mn	sec	res
PENC	24.5	173	ePg	6:35:58.70		1.04
			eSg	36:02.90		1.56
PSZ	49.6	102	ePg	6:36:01.70		-0.26
			eSg	36:08.00		-1.01
VYHS	61.8	331	ePg	6:36:04.80		0.69
			eSg	36:12.80		-0.04
SRO	72.9	253	eSg	6:36:15.00		-1.33
PKSG	93.9	223	ePg	6:36:09.10		-0.70
			eSg	36:20.90		-2.05
CSKK	103.1	226	eP*	6:36:11.40		-0.02
			eS*	36:25.00		-0.84
KECS	106.2	60	eP*	6:36:11.00		-0.89
			eS*	36:24.90		-1.78
LANS	128.0	7	ePn	6:36:16.70		2.06
			eSn	36:31.40		-0.17
MODS	151.8	285	ePn	6:36:19.00		1.39
			eSn	36:35.80		-1.06

116.

2013-06-14 time: 6:44:23.59 UTC ML= 0.9
lat: 45.872N lon: 18.398E h= 0.0 km
erh= 1.4km erz= 136km
nr= 6 gap=253 rms=0.08
Locality: Kisharsány
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSV	11.5	279	ePg	6:44:25.60		-0.03
			eSg	44:27.30		0.07
PKSM	42.2	27	ePg	6:44:31.20		0.07
			eSg	44:37.10		0.09
MORH	42.7	27	ePgC	6:44:31.20		-0.02
			eSg	44:37.00		-0.17

117.

2013-06-14 time: 11:06:30.66 UTC ML= 0.5
lat: 45.801N lon: 18.624E h= 0.0 km
erh= 2.2km erz= 251km
nr= 6 gap=287 rms=0.15
Locality: Croatia
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSV	30.5	289	ePgC	11:06:36.00		-0.10
			eSg	06:40.40		0.06
PKSM	45.7	2	ePgD	11:06:38.90		0.08
			eSg	06:45.40		0.22
MORH	46.1	2	ePgD	11:06:38.90		0.00
			eSg	06:44.90		-0.43

118.

2013-06-16 time: 0:10:31.23 UTC ML= 1.8
lat: 48.115N lon: 22.264E h= 5.0 km
erh= 3.6km erz= 4.0km
nr= 18 gap= 85 rms=0.69
Locality: Vásárosnamény
Comments:

sta	dist	azm	phase	hr mn	sec	res
TRPA	20.5	85	iPgD	0:10:35.30		0.30
			eSg	10:38.50		0.56
KOLS	91.0	0	ePg	0:10:47.50		-0.01
			eSg	10:59.30		-0.90
BMR	104.4	118	iPg	0:10:49.40		-0.50
KECS	138.2	287	ePn	0:10:53.70		-1.15
			eSn	11:09.40		-3.88
DRGR	150.9	167	iPnD	0:10:55.60		-0.83
STHS	163.1	333	ePn	0:10:58.60		0.65
			eSn	11:18.70		-0.10
PSZ	178.2	263	ePnD	0:11:00.30		0.47
			eSn	11:21.90		-0.25
CJR	185.5	147	iPnD	0:11:00.80		0.05
ARCR	194.4	126	iPn	0:11:02.10		0.25
SIRR	210.4	193	iPnD	0:11:04.50		0.65
PENC	225.7	261	ePn	0:11:08.00		2.24
BURB	227.8	104	iPn	0:11:06.80		0.78
LANS	236.1	299	ePn	0:11:09.10		2.04
VYHS	257.8	279	ePn	0:11:08.40		-1.37

119.

2013-06-16 time: 15:10:26.39 UTC ML= 2.0
lat: 48.000N lon: 19.236E h= 5.0 km
erh= 1.7km erz= 2.2km
nr= 18 gap= 58 rms=0.67
Locality: Csesztve
Comments:

sta	dist	azm	phase	hr mn	sec	res
PENC	23.5	172	ePgC	15:10:30.90		0.21
			eSg	10:33.80		-0.24
PSZ	50.0	100	ePgC	15:10:35.70		0.33
			eSg	10:42.00		-0.36
VYHS	62.5	332	ePg	15:10:38.70		1.12
			eSg	10:46.10		-0.21
SRO2	68.3	247	eSg	15:10:47.20		-0.96
SRO	72.1	253	ePg	15:10:40.00		0.71
			eSg	10:49.40		0.05
PKSG	92.7	223	ePgC	15:10:42.70		-0.28
			eSg	10:55.60		-0.32
KECS	107.2	60	ePg	15:10:45.10		-0.46
			eSg	10:58.50		-2.02
LANS	129.1	8	ePn	15:10:49.90		1.02
			eSn	11:05.50		-0.92
PKSN	131.5	159	eSn	15:11:06.70		-0.26
MODS	151.5	286	ePn	15:10:52.40		0.73
			eSn	11:10.80		-0.59
SOP	203.5	260	eSn	15:11:08.40		-14.54

120.

2013-06-18 time: 6:50:59.52 UTC ML= 0.6
lat: 47.301N lon: 18.340E h= 0.0 km
erh= 1.4km erz= 222km
nr= 6 gap=238 rms=0.13
Locality: Magyaralmás
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
CSKK	9.1	319	ePgD	6:51:01.20		0.05
			eSg	51:02.40		-0.02
PKSG	10.8	21	ePgC	6:51:01.60		0.16
			eSg	51:02.70		-0.24
PKST	23.6	258	ePgD	6:51:03.60		-0.13
			eSg	51:07.10		0.08

121.

2013-06-18 time: 7:06:12.57 UTC ML= 0.9
lat: 47.442N lon: 18.389E h= 0.0 km
erh= 2.9km erz= 359km
nr= 6 gap=306 rms=0.21
Locality: Várgesztes
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSG	5.6	179	ePgC	7:06:13.70		0.13
			eSg	06:14.20		-0.15
CSKK	13.1	228	ePgC	7:06:15.00		0.10
			eSg	06:16.40		-0.32
PKST	33.7	233	ePgC	7:06:18.40		-0.18
			eSg	06:23.70		0.44

122.

2013-06-18 time: 7:06:24.95 UTC ML= 1.3
lat: 47.473N lon: 18.458E h= 0.0 km
erh= 7.7km erz= 679km
nr= 6 gap=336 rms=0.41
Locality: Várgesztes
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSG	10.4	209	ePgC	7:06:27.10		0.30
			eSg	06:28.20		-0.06
CSKK	19.3	231	ePgC	7:06:28.40		0.01
			eSg	06:29.60		-1.48
PKST	39.9	233	ePgC	7:06:31.90		-0.17
			eSg	06:38.10		0.46

123.

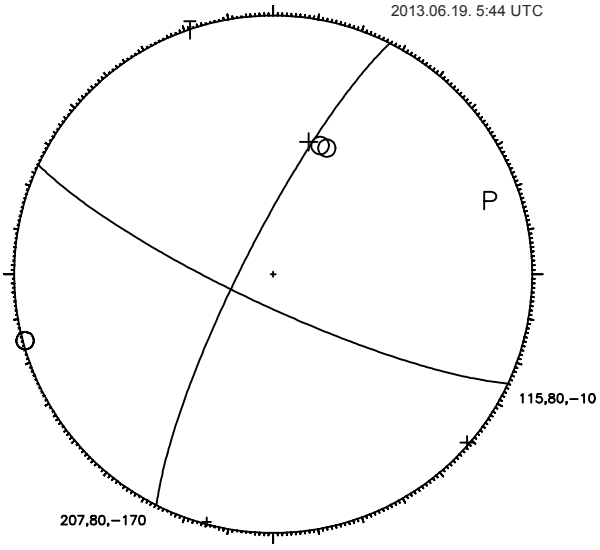
2013-06-18 time: 8:05:48.47 UTC ML= 0.8
lat: 47.432N lon: 18.413E h= 0.0 km
erh= 3.2km erz= 359km
nr= 6 gap=324 rms=0.21
Locality: Várgesztes
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSG	4.8	201	ePgD	8:05:49.40		0.08
			eSg	05:49.90		-0.09
CSKK	13.8	236	ePgD	8:05:50.70		-0.24
			eSg	05:52.60		-0.27
PKST	34.5	236	ePgD	8:05:54.80		0.17
			eSg	05:59.80		0.37

124.

2013-06-19 time: 5:44:37.31 UTC ML= 2.1
lat: 46.005N lon: 17.540E h= 1.1 km
erh= 3.4km erz= 3.2km
nr= 17 gap=208 rms=0.80
Locality: Darány
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKSV	56.7	103	ePg	5:44:47.60		0.16
			eSg	44:55.30		-0.04
BEHE	78.4	311	ePgC	5:44:51.60		0.29
			eSg	45:01.50		-0.73
PKS9	86.1	41	ePg	5:44:53.70		1.01
			eSg	45:05.60		0.91
PKSM	88.2	75	ePgD	5:44:52.90		-0.16
			eSg	45:04.80		-0.54
MORH	88.5	75	ePgD	5:44:52.90		-0.22
			eSg	45:04.90		-0.54
TIH	103.1	15	ePgC	5:44:55.70		-0.02
			eSg	45:09.20		-0.88
PKST	144.4	15	ePnC	5:45:00.70		-1.50
			eSn	45:20.50		-1.12
CSKK	160.7	20	ePnD	5:45:05.30		1.07
			eSn	45:26.70		1.46
PKSG	167.3	23	ePnD	5:45:06.30		1.24



125.

2013-06-19 time: 6:25:48.59 UTC ML= 2.1
lat: 47.865N lon: 18.467E h= 10.0 km
erh= 2.0km erz= 1.5km
nr= 27 gap= 79 rms=0.78
Locality: Slovakia
Comments:

sta	dist	azm	phase	hr mn	sec	res
SRO2	12.6	206	ePg	6:25:50.70		-0.76
			eSg	25:53.10		-0.60
SRO	12.8	244	ePg	6:25:52.50		1.00
			eSg	25:55.90		2.14
PKSG	52.9	186	ePg	6:25:58.60		0.40
			eSg	26:04.60		-1.10
CSKK	57.9	196	ePgC	6:25:59.00		-0.08
BUD	59.5	135	ePgC	6:25:59.50		0.13
PKST	74.8	206	ePgD	6:26:01.80		-0.27
			eSg	26:12.30		-0.28
VYHS	75.2	21	ePg	6:26:02.50		0.37
			eSg	26:11.30		-1.39
MODS	105.1	303	eP*	6:26:07.80		0.41
			eS*	26:21.20		-0.85
PSZ	106.9	87	eP*	6:26:05.70		-1.97
ZST	108.2	290	ePn	6:26:08.10		0.26
			eSn	26:21.40		-1.46
PKS9	142.8	186	eSn	6:26:31.40		0.88
PKSN	150.9	135	eSn	6:26:31.90		-0.42
LANS	161.0	27	ePn	6:26:16.20		1.78
			eSn	26:37.00		2.44
KECS	165.2	65	ePn	6:26:14.90		-0.04
			eSn	26:35.10		-0.39
MORH	183.8	176	ePnD	6:26:18.20		0.93
			eSn	26:39.40		-0.23
PKSM	184.2	176	ePnD	6:26:17.10		-0.22
			eSn	26:39.50		-0.23

126.

2013-06-19 time: 11:22:40.23 UTC ML= 1.2
lat: 48.213N lon: 19.775E h= 4.1 km
erh= 1.3km erz=23.3km
nr= 6 gap=129 rms=0.46
Locality: Slovakia
Comments:

sta	dist	azm	phase	hr mn	sec	res
PSZ	33.9	165	ePg	11:22:46.50		0.17
			eSg	22:50.50		-0.59
KECS	60.6	60	ePg	11:22:51.30		0.22

		eSg	22:59.20	-0.34
VYHS	76.3	294	ePg	11:22:54.80	0.92
			eSg	23:04.20	-0.32

127.

2013-06-20 time: 10:37:28.11 UTC ML= 0.5
lat: 47.174N lon: 18.315E h= 0.0 km
erh= 3.0km erz= 395km
nr= 6 gap=281 rms=0.23
Locality: Székesfehérvár
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
CSKK	21.4	349	ePg	10:37:31.70	-0.24
			eSg	37:35.20	0.28
PKST	23.3	294	ePgD	10:37:32.30	0.03
			eSg	37:35.40	-0.11
PKSG	24.9	13	ePgC	10:37:32.80	0.25
			eSg	37:35.60	-0.42

128.

2013-06-22 time: 10:09:00.25 UTC ML= 1.5
lat: 48.280N lon: 19.683E h= 0.0 km
erh= 3.0km erz= 508km
nr= 5 gap=168 rms=0.23
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
PSZ	43.2	159	ePgD	10:09:07.70	-0.26
			eSg	09:14.40	0.42
VYHS	67.1	291	ePg	10:09:12.10	-0.13
			eSg	09:21.70	0.13
LANS	98.1	351	ePg	10:09:17.90	0.14

129.

2013-06-22 time: 15:32:37.71 UTC ML= 1.2
lat: 47.846N lon: 19.127E h= 10.0 km
erh= 5.7km erz= 7.4km
nr= 6 gap=225 rms=0.41
Locality: Szendehely
Comments:

sta	dist	azm	phase	hr mn sec	res
PENC	13.1	118	ePg	15:32:40.30	-0.35
			eSg	32:43.10	0.16
PSZ	58.0	82	ePgD	15:32:48.20	-0.01
			eSg	32:56.40	0.00
VYHS	75.3	343	ePg	15:32:52.00	0.73
			eSg	33:01.20	-0.64

130.

2013-06-23 time: 3:47:20.89 UTC ML= 2.3
lat: 47.989N lon: 19.208E h= 2.2 km
erh= 1.2km erz= 1.4km
nr= 53 gap= 35 rms=0.78
Locality: Érsekvadkert
Comments:

sta	dist	azm	phase	hr mn sec	res
PENC	22.8	166	ePgD	3:47:25.40	0.42
PSZ	51.9	99	ePgC	3:47:30.30	0.13
			eSg	47:36.90	-0.50
BUD	57.9	194	ePg	3:47:31.10	-0.14
			eSg	47:38.40	-0.91
VYHS	62.5	334	ePg	3:47:32.80	0.74
			eSg	47:40.70	-0.07
SRO2	65.9	247	ePg	3:47:32.10	-0.57
			eSg	47:40.70	-1.15
SRO	69.7	254	ePg	3:47:33.90	0.56
			eSg	47:43.30	0.24
PKSG	90.4	223	ePgC	3:47:37.00	-0.05
			eSg	47:49.60	-0.05
TENK	93.2	114	ePg	3:47:37.90	0.36
			eSg	47:51.00	0.48
CSKK	99.6	226	ePgD	3:47:38.60	-0.07
			eSg	47:53.90	1.36
PKS7	104.8	182	ePgD	3:47:40.00	0.39
			eSg	47:53.20	-1.02
KECS	109.7	60	ePg	3:47:39.70	-0.78
			eSg	47:53.60	-2.15
PKST	119.9	227	ePgD	3:47:41.80	-0.51
			eSg	47:58.20	-0.81
LANS	130.5	8	ePn	3:47:44.20	0.28
			eSn	48:00.00	-1.88
PKSN	131.2	158	ePnD	3:47:44.70	0.69
			eSn	48:01.10	-0.94
MODS	149.8	287	ePn	3:47:45.60	-0.72
			eSn	48:05.00	-1.16
PKS6	156.8	170	eSn	3:48:07.80	0.08
ZST	158.5	278	ePn	3:47:46.80	-0.61
			eSn	48:06.90	-1.19
PKS2	166.5	180	ePn	3:47:48.50	0.10
			eSn	48:10.60	0.74
PKS9	171.0	204	ePn	3:47:51.00	2.03
			eSn	48:11.40	0.53
SOP	201.3	260	ePnD	3:47:57.50	4.76
			eSn	48:21.50	3.92
MORH	201.8	192	ePnD	3:47:52.10	-0.70
			eSn	48:13.40	-4.30
PKSM	202.3	192	ePnC	3:47:52.30	-0.56
			eSn	48:13.50	-4.30
STHS	218.3	43	ePn	3:47:58.50	3.64
			eSn	48:24.70	3.34
OKC	219.7	339	eSn	3:48:22.30	0.62
MORC	233.3	328	iPn	3:47:58.30	1.57
VRAC	242.1	307	iPn	3:47:58.70	0.87
TRPA	248.8	86	iPn	3:47:58.20	-0.47
KOLS	249.8	65	ePn	3:47:59.00	0.21
CONA	249.9	268	Pn	3:47:59.20	0.39
SIRR	267.0	136	iPnD	3:48:00.30	-0.63
ARSA	288.9	253	Pn	3:48:04.20	0.53
DRGR	296.2	117	iPn	3:48:04.60	0.03
BZS	321.6	145	iPn	3:48:07.10	-0.64
DPC	336.5	321	eSn	3:48:47.50	-0.09
DEV	366.1	130	iPn	3:48:12.70	-0.59
MOA	369.7	268	Pn	3:48:14.20	0.46
GZR	397.3	137	iPn	3:48:17.10	-0.08
MDVR	405.3	152	iPn	3:48:17.70	-0.49
KHC	434.5	287	ePn	3:48:23.50	1.68
			eSn	49:08.50	-0.85
LOT	448.9	129	iPn	3:48:22.60	-1.01
BURB	452.1	95	iPn	3:48:24.00	-0.01
MLR	585.1	118	iPn	3:48:40.20	-0.39

131.

2013-06-23 time: 15:47:52.58 UTC ML= 2.1
lat: 47.985N lon: 19.242E h= 5.1 km
erh= 1.5km erz= 1.6km
nr= 25 gap= 60 rms=0.71
Locality: Csesztve
Comments:

sta	dist	azm	phase	hr mn sec	res
PENC	21.8	172	ePg	15:47:57.00	0.42
			eSg	47:59.70	0.00
PSZ	49.3	99	ePg	15:48:01.80	0.36
			eSg	48:08.10	-0.25
BUD	58.1	196	eSg	15:48:10.90	-0.21
VYHS	64.1	332	ePg	15:48:04.90	0.83
			eSg	48:12.20	-0.83
SRO2	68.0	249	eSg	15:48:13.20	-1.07
SRO	72.0	255	ePg	15:48:06.50	1.03
			eSg	48:14.90	-0.62

```
PKSG  91.8 224   ePgC  15:48:08.90   -0.10
                 eSg     48:22.90    1.09
PKS7 104.4 183   eSg   15:48:25.20   -0.61
KECS 107.8  59   ePg   15:48:11.30   -0.55
                 eSg     48:24.80   -2.08
PKST 121.4 228   ePnD  15:48:13.60   -0.51
                 eSn     48:30.80   -0.11
PKSN 129.8 159   eSn   15:48:32.80    0.03
LANS 130.7   7   ePn   15:48:16.10    0.83
                 eSn     48:31.60   -1.36
MODS 152.3 286   ePn   15:48:18.80    0.83
                 eSn     48:38.30    0.53
PKS6 155.9 171   eSn   15:48:39.50    0.94
PKSM 202.3 193   ePn   15:48:23.90   -0.30
                 eSn     48:45.40   -3.46
KOLS 247.8  65   e n   15:48:36.70    6.83
KHC  437.1 287   ePn   15:48:54.10    0.63
```

132.

```
 2013-06-24  time: 23:06:39.46 UTC  ML= 1.2
   lat: 47.669N  lon: 20.295E  h=  0.3 km
                 erh= 1.4km    erz=26.2km
   nr=  5        gap=167       rms=0.08
   Locality: Erdőtelek
   Comments:

sta   dist azm  phase  hr mn  sec     res
TENK   4.4 113   ePgC  23:06:40.30    0.06
                 eSg     06:40.70   -0.15
PSZ   40.8 313   ePg   23:06:46.70   -0.05
                 eSg     06:52.50    0.07
PENC  77.2 280   eSg   23:07:04.00    0.01
```

133.

```
 2013-06-25  time:  7:24:01.22 UTC  ML= 1.0
   lat: 47.415N  lon: 18.351E  h=  0.0 km
                 erh= 5.3km    erz= 520km
   nr=  6        gap=257       rms=0.31
   Locality: Gánt
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   3.9 131   ePgC   7:24:01.80   -0.12
                 eSg     24:02.30   -0.16
CSKK   8.9 230   ePgD   7:24:03.20    0.38
                 eSg     24:04.50    0.43
PKST  29.6 234   ePgC   7:24:06.40   -0.10
                 eSg     24:10.00   -0.62
```

134.

```
 2013-06-25  time:  7:24:14.66 UTC  ML= 1.2
   lat: 47.440N  lon: 18.395E  h=  0.0 km
                 erh= 0.7km    erz=88.9km
   nr=  6        gap=310       rms=0.05
   Locality: Várgesztes
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   5.4 184   ePgC   7:24:15.70    0.07
                 eSg     24:16.30   -0.08
CSKK  13.3 230   ePgD   7:24:17.00   -0.04
                 eSg     24:18.90    0.01
PKST  33.9 234   ePgC   7:24:20.70   -0.02
                 eSg     24:25.50    0.06
```

135.

```
 2013-06-26  time:  9:31:21.78 UTC  ML= 1.4
   lat: 48.188N  lon: 19.073E  h=  0.0 km
                 erh= 3.4km    erz= 925km
   nr=  8        gap=172       rms=0.66
   Locality: Slovakia
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
VYHS  38.3 333   ePg    9:31:28.70    0.07
                 eSg     31:33.50   -0.46
PENC  46.8 161   ePg    9:31:30.80    0.65
                 eSg     31:35.60   -1.07
PSZ   68.2 116   ePg    9:31:34.60    0.64
                 eSg     31:42.50   -0.96
KECS 109.8  73   ePg    9:31:42.00    0.61
                 eSg     31:56.10   -0.58
```

136.

```
 2013-06-27  time: 13:27:55.49 UTC  ML= 0.7
   lat: 47.190N  lon: 18.308E  h=  0.0 km
                 erh= 4.4km    erz= 473km
   nr=  5        gap=275       rms=0.22
   Locality: Székesfehérvár
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
CSKK  19.6 350   ePgD  13:27:59.00    0.00
                 eSg     28:01.20   -0.53
PKST  22.1 290   ePgD  13:27:59.40   -0.04
                 eSg     28:02.70    0.18
PKSG  23.3  16   eSg   13:28:03.20    0.29
```

137.

```
 2013-06-28  time:  8:37:18.02 UTC  ML= 1.3
   lat: 47.745N  lon: 16.148E  h=  0.2 km
                 erh= 2.9km    erz= 4.3km
   nr=  9        gap=149       rms=0.63
   Locality: Austria
   Comments:

sta   dist azm  phase  hr mn  sec     res
CONA  29.6 314    Pg    8:37:23.30    0.00
                  Sg      37:27.50    0.08
SOP   31.5 103   ePgD   8:37:23.80    0.15
                 eSg      37:27.30   -0.74
ARSA  72.4 221    Pg    8:37:31.10    0.15
                  Sg      37:40.50   -0.53
MOA  141.5 275    Pn    8:37:42.90    0.22
                  Sn      38:00.50   -1.41
SOKA 145.6 215    Pn    8:37:44.80    1.61
```

138.

```
 2013-07-01  time: 10:39:17.20 UTC  ML= 1.2
   lat: 48.104N  lon: 20.594E  h=  6.2 km
                 erh= 0.4km    erz= 0.2km
   nr=  5        gap=259       rms=0.05
   Locality: Lillafüred
   Comments:

sta   dist azm  phase  hr mn  sec     res
KECS  42.9 349   ePg   10:39:25.00    0.06
                 eSg     39:30.90   -0.08
PSZ   56.1 248   ePgC  10:39:27.30    0.02
                 eSg     39:35.10   -0.04
VYHS 137.4 288   eSn   10:39:58.80   -0.01
```

139.

2013-07-01 time: 12:28:17.39 UTC ML= 0.3
lat: 47.343N lon: 18.215E h= 8.0 km
erh= 4.0km erz= 1.0km
nr= 6 gap=181 rms=0.07
Locality: Bodajk
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	4.1	57	ePgD	12:28:		19.00	0.00
			eSg		28:	20.30	0.05
PKSG	14.4	68	ePg	12:28:		20.40	0.07
			eSg		28:	22.50	-0.12
PKST	16.5	236	ePgD	12:28:		20.60	-0.07
			eSg		28:	23.30	0.07

140.

2013-07-01 time: 12:51:25.85 UTC ML= 0.7
lat: 47.360N lon: 18.204E h= 9.3 km
erh= 1.8km erz= 0.7km
nr= 8 gap=207 rms=0.10
Locality: Mór
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	4.3	84	ePgC	12:51:		27.70	0.02
			eSg		51:	29.10	-0.01
PKSG	14.5	76	ePgD	12:51:		28.90	-0.03
			eSg		51:	31.30	-0.04
PKST	17.0	229	ePgD	12:51:		29.20	-0.12
			eSg		51:	32.20	0.18
PKSM	131.9	165	ePnC	12:51:		48.30	0.16
			eSn		52:	05.40	-0.13

141.

2013-07-01 time: 13:10:04.95 UTC ML= 0.0
lat: 47.341N lon: 18.219E h= 8.7 km
erh= 4.8km erz= 1.2km
nr= 6 gap=175 rms=0.09
Locality: Bodajk
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	4.0	52	ePgC	13:10:		06.60	-0.05
			eSg		10:	08.00	0.02
PKSG	14.1	67	ePgD	13:10:		08.00	0.09
			eSg		10:	10.20	-0.02
PKST	16.7	237	ePgD	13:10:		08.20	-0.11
			eSg		10:	11.10	0.16

142.

2013-07-01 time: 15:47:40.22 UTC ML=-0.1
lat: 47.340N lon: 18.225E h= 6.7 km
erh= 5.2km erz= 1.7km
nr= 6 gap=173 rms=0.10
Locality: Bodajk
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	3.7	46	ePgD	15:47:		41.60	0.01
			eSg		47:	42.70	0.04
PKSG	13.8	65	ePg	15:47:		42.90	-0.06
			eSg		47:	45.10	0.01
PKST	17.0	238	ePg	15:47:		43.60	0.12
			eSg		47:	45.80	-0.22

143.

2013-07-01 time: 15:53:02.62 UTC ML=-0.3
lat: 47.367N lon: 18.199E h= 8.8 km
erh= ---km erz= ---km
nr= 4 gap=213 rms=0.01
Locality: Mór
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	4.7	96	ePgD	15:53:		04.40	-0.01
			eSg		53:	05.80	0.00
PKSG	14.8	79	eSg	15:53:		08.10	0.01
PKST	17.3	226	eSg	15:53:		08.80	0.00

144.

2013-07-01 time: 20:31:06.52 UTC ML= 0.2
lat: 47.336N lon: 18.215E h= 8.3 km
erh= 8.5km erz= 2.6km
nr= 6 gap=173 rms=0.14
Locality: Bodajk
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	4.6	48	ePgD	20:31:		08.20	-0.01
			eSg		31:	09.50	-0.03
PKSG	14.6	65	ePgD	20:31:		09.70	0.18
			eSg		31:	11.70	-0.17
PKST	16.1	238	ePgD	20:31:		09.60	-0.17
			eSg		31:	12.50	0.21

145.

2013-07-01 time: 20:31:53.82 UTC ML=-0.5
lat: 47.334N lon: 18.226E h= 8.9 km
erh= 6.9km erz= 2.3km
nr= 6 gap=177 rms=0.14
Locality: Bodajk
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	4.2	39	ePgD	20:31:		55.40	-0.17
			eSg		31:	57.00	0.07
PKSG	14.0	63	ePgD	20:31:		57.00	0.22
			eSg		31:	59.10	0.01
PKST	16.7	240	ePgD	20:31:		57.10	-0.10
			eSg		31:	59.90	0.06

146.

2013-07-01 time: 20:33:12.20 UTC ML=-0.5
lat: 47.314N lon: 18.244E h= 2.8 km
erh= 9.0km erz=16.3km
nr= 6 gap=197 rms=0.17
Locality: Bodajk
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	5.6	13	ePg	20:33:		13.20	-0.12
			eSg		33:	14.30	0.10
PKSG	14.1	52	ePg	20:33:		14.70	-0.06
			eSg		33:	16.70	-0.06
PKST	17.0	249	ePg	20:33:		15.60	0.32
			eSg		33:	17.50	-0.18

147.

2013-07-01 time: 20:33:21.44 UTC ML=-0.5
lat: 47.334N lon: 18.231E h= 9.0 km
erh= 6.1km erz= 2.1km
nr= 6 gap=179 rms=0.11
Locality: Bodajk
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	3.9	35	ePg	20:33:		23.10	-0.09
			eSg			33:24.60	0.04
PKSG	13.7	62	ePg	20:33:		24.60	0.24
			eSg			33:26.60	-0.04
PKST	17.1	241	ePgD	20:33:		24.80	-0.09
			eSg			33:27.60	0.02

148.

2013-07-01 time: 23:30:20.80 UTC ML=-0.4
lat: 47.315N lon: 18.239E h= 10.0 km
erh= 1.5km erz= 0.8km
nr= 6 gap=195 rms=0.13
Locality: Bodajk
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	5.6	17	ePgD	23:30:		22.70	-0.15
			eSg			30:24.30	-0.14
PKSG	14.3	53	ePgD	23:30:		23.90	-0.01
			eSg			30:26.60	0.26
PKST	16.7	248	ePgD	23:30:		24.30	0.02
			eSg			30:27.20	0.21

149.

2013-07-01 time: 23:30:28.76 UTC ML=-0.4
lat: 47.347N lon: 18.220E h= 8.5 km
erh= 2.6km erz= 0.6km
nr= 6 gap=184 rms=0.05
Locality: Mór
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	3.6	59	ePgD	23:30:		30.40	-0.01
			eSg			30:31.70	0.01
PKSG	13.9	69	ePgD	23:30:		31.70	0.04
			eSg			30:33.90	-0.03
PKST	17.1	235	ePgD	23:30:		32.10	-0.06
			eSg			30:34.90	0.08

150.

2013-07-01 time: 23:30:42.82 UTC ML=-0.6
lat: 47.352N lon: 18.214E h= 8.3 km
erh= 5.1km erz= 1.1km
nr= 5 gap=199 rms=0.07
Locality: Mór
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	3.7	71	ePgD	23:30:		44.40	-0.05
			eSg			30:45.80	0.08
PKSG	14.1	72	ePgD	23:30:		45.80	0.06
			eSg			30:47.90	-0.12
PKST	17.1	233	eSg	23:30:		48.90	0.03

151.

2013-07-01 time: 23:31:35.02 UTC ML=-0.8
lat: 47.331N lon: 18.235E h= 7.8 km
erh= 0.7km erz= 0.4km
nr= 5 gap=182 rms=0.01
Locality: Bodajk
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	4.1	28	ePg	23:31:		36.60	0.01
			eSg			31:37.80	-0.01
PKSG	13.6	60	ePg	23:31:		37.80	-0.01
			eSg			31:40.00	0.01
PKST	17.1	242	eSg	23:31:		41.00	0.00

152.

2013-07-01 time: 23:42:19.34 UTC ML=-0.3
lat: 47.370N lon: 18.198E h= 9.2 km
erh= 1.9km erz= 0.6km
nr= 6 gap=215 rms=0.03
Locality: Mór
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	4.8	99	ePgD	23:42:		21.20	0.01
			eSg			42:22.60	-0.04
PKSG	14.7	80	ePgD	23:42:		22.40	-0.04
			eSg			42:24.90	0.04
PKST	17.5	225	ePgD	23:42:		22.90	0.04
			eSg			42:25.60	-0.01

153.

2013-07-02 time: 0:20:55.60 UTC ML=-0.2
lat: 47.326N lon: 18.229E h= 10.0 km
erh= 4.0km erz= 1.6km
nr= 6 gap=184 rms=0.16
Locality: Bodajk
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	4.8	30	ePgD	0:20:		57.50	-0.09
			eSg			20:58.90	-0.23
PKSG	14.3	59	ePg	0:20:		58.70	-0.02
			eSg			21:01.40	0.26
PKST	16.5	243	ePg	0:20:		59.00	-0.04
			eSg			21:02.00	0.27

154.

2013-07-02 time: 0:38:56.78 UTC ML=-0.4
lat: 47.358N lon: 18.209E h= 9.4 km
erh= 0.8km erz= 0.2km
nr= 6 gap=204 rms=0.01
Locality: Mór
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	3.9	82	ePgD	0:38:		58.60	0.01
			eSg			39:00.00	-0.01
PKSG	14.2	75	ePgD	0:38:		59.80	-0.02
			eSg			39:02.20	0.02
PKST	17.2	230	ePg	0:39:		00.30	0.02
			eSg			39:03.00	-0.02

155.

2013-07-02 time: 11:13:07.91 UTC ML= 0.5
lat: 47.176N lon: 18.307E h= 0.0 km
erh= 2.0km erz= 191km
nr= 5 gap=279 rms=0.09
Locality: Sárkeszi
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
CSKK	21.1	350	ePg	11:13:		11.50	-0.17
PKST	22.6	294	ePgC	11:13:		12.00	0.05
			eSg			13:15.10	0.00
PKSG	24.8	15	ePgC	11:13:		12.40	0.07
			eSg			13:15.80	0.02

156.

2013-07-02 time: 11:45:13.90 UTC ML= 1.7
lat: 47.721N lon: 18.444E h= 12.3 km
erh= 1.9km erz= 1.5km
nr= 23 gap= 99 rms=0.72
Locality: Süttő
Comments:

sta	dist	azm	phase	hr mn	sec	res
SRO2	6.0	321	ePg	11:45:15.20		-1.15
SRO	14.2	317	ePg	11:45:18.00		0.74
			eSg		45:21.20	1.32
PKSG	36.8	186	ePg	11:45:19.70		-1.12
			eSg		45:26.60	0.38
CSKK	42.1	199	ePgD	11:45:21.70		-0.02
			eSg		45:26.00	-1.83
BUD	50.9	121	ePg	11:45:23.60		0.35
			eSg		45:28.60	-1.95
PKST	59.9	211	ePg	11:45:25.10		0.29
			eSg		45:33.80	0.47
PENC	63.3	83	ePg	11:45:25.70		0.29
			eSg		45:34.90	0.51
VYHS	90.8	19	ePg	11:45:29.80		-0.47
			eSg		45:41.20	-1.83
PSZ	110.8	79	ePnC	11:45:33.70		0.53
			eSn		45:48.00	-0.21
MODS	113.3	310	ePn	11:45:34.00		0.52
			eSn		45:48.50	-0.26
MORH	168.0	175	ePnD	11:45:40.70		0.40
			eSn		45:59.60	-1.29
PKSM	168.4	175	ePnD	11:45:40.80		0.45
			eSn		46:00.00	-0.98

157.

2013-07-02 time: 13:15:18.05 UTC ML= 0.3
lat: 47.364N lon: 18.192E h= 8.4 km
erh= 0.6km erz= 0.2km
nr= 5 gap=213 rms=0.01
Locality: Mór
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	5.2	91	ePgD	13:15:19.80		-0.01
			eSg		15:21.20	0.01
PKSG	15.3	78	eSg	13:15:23.60		0.00
PKST	16.7	226	ePgD	13:15:21.40		0.01
			eSg		15:24.00	0.00

158.

2013-07-02 time: 13:20:04.95 UTC ML=-0.2
lat: 47.375N lon: 18.189E h= 7.7 km
erh= 4.4km erz= 1.9km
nr= 6 gap=221 rms=0.07
Locality: Mór
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	5.6	104	ePgC	13:20:06.60		-0.04
			eSg		20:08.00	0.03
PKSG	15.3	83	ePgC	13:20:08.10		0.09
			eSg		20:10.30	-0.10
PKST	17.4	222	ePgD	13:20:08.30		-0.05
			eSg		20:11.10	0.09

159.

2013-07-02 time: 17:44:03.27 UTC ML= 1.9
lat: 47.652N lon: 20.274E h= 1.1 km
erh= 2.3km erz= 3.6km
nr= 15 gap=116 rms=0.79
Locality: Erdőtelek
Comments:

sta	dist	azm	phase	hr mn	sec	res
TENK	5.6	87	iPgD	17:44:04.20		-0.08
			eSg		44:04.60	-0.47
PSZ	41.1	316	ePgD	17:44:10.70		0.10
			eSg		44:16.30	-0.02
PENC	76.0	282	ePg	17:44:16.50		-0.35
			eSg		44:28.20	0.76
PKSN	89.4	200	ePgD	17:44:19.20		-0.03
			eSg		44:31.40	-0.28
PKS7	107.7	231	iPgD	17:44:21.90		-0.60
			eSg		44:36.40	-1.09
PKSG	144.8	258	ePnC	17:44:30.50		2.29
			eSn		44:44.10	-3.56
TRPA	177.6	73	ePn	17:44:32.40		0.10
			eSn		44:53.30	-1.64
PKSM	202.7	218	ePn	17:44:37.00		1.57

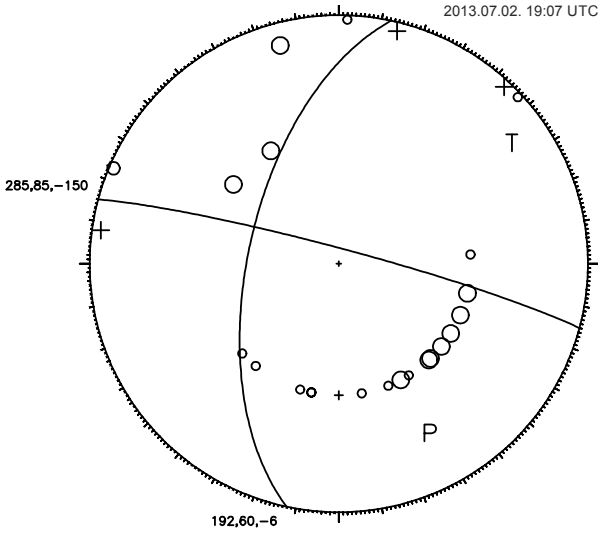
160.

2013-07-02 time: 19:07:32.08 UTC ML= 3.4
lat: 47.987N lon: 19.204E h= 4.0 km
erh= 1.3km erz= 1.3km
nr= 49 gap= 57 rms=0.73
Locality: Érsekvadkert
Comments: felt 5 EMS

sta	dist	azm	phase	hr mn	sec	res
PENC	22.6	165	iPgD	19:07:36.40		0.23
			eSg		07:39.50	0.13
PSZ	52.1	98	ePgC	19:07:41.30		-0.12
			eSg		07:47.80	-0.90
BUD	57.5	194	ePgC	19:07:42.50		0.12
			eSg		07:49.90	-0.51
VYHS	62.7	334	ePg	19:07:43.90		0.60
			eSg		07:51.90	-0.14
SRO2	65.5	248	ePg	19:07:43.10		-0.70
			eSg		07:52.20	-0.74
PKSG	90.0	223	ePgC	19:07:48.20		0.03
TENK	93.3	113	ePgD	19:07:48.90		0.14
			eSg		08:00.30	-1.47
CSKK	99.1	226	ePg	19:07:49.50		-0.30
			eSg		08:04.60	0.99
PKS7	104.5	182	ePgD	19:07:51.20		0.45
PKST	119.5	227	ePgD	19:07:52.90		-0.53
LANS	130.9	9	ePn	19:07:55.10		0.18
			eSn		08:11.10	-1.64
PKSN	131.1	158	ePnD	19:07:55.70		0.75
			eSn		08:12.40	-0.38
MODS	149.6	287	ePn	19:07:56.40		-0.86
			eSn		08:16.60	-0.30
TIH	156.1	219	ePnD	19:07:59.10		1.03
			eSn		08:20.60	2.25
PKS6	156.6	170	ePnD	19:08:00.30		2.17
			eSn		08:18.80	0.35
ZST	158.3	278	ePn	19:07:57.40		-0.94
			eSn		08:17.40	-1.42
PKS2	166.2	180	ePnC	19:07:59.60		0.27
			eSn		08:21.50	0.92
PKS9	170.6	204	ePn	19:08:00.10		0.22
SOP	200.9	260	ePn	19:08:04.00		0.34
			eSn		08:26.20	-2.09
MORH	201.4	192	ePnD	19:08:03.10		-0.62
			eSn		08:23.60	-4.80
PKSM	201.9	192	ePnD	19:08:03.20		-0.58
			eSn		08:24.20	-4.30
AMBH	215.4	148	ePnD	19:08:05.70		0.23

Földrengés paraméterek **Hypocenter Parameters**

			eSn	08:39.50	7.99
MORC	233.4	329	iPnD	19:08:09.10	1.39
VRAC	242.1	307	iPnD	19:08:09.30	0.51
PKSV	244.3	197	ePnD	19:08:09.10	0.04
			eSn	08:36.20	-1.71
TRPA	249.1	86	ePnD	19:08:09.00	-0.67
			eSn	08:44.20	5.21
BEHE	249.5	227	ePnD	19:08:10.80	1.08
CONA	249.6	269	Pn	19:08:09.90	0.17
KOLS	250.2	65	ePn	19:08:09.00	-0.81
SIRR	266.9	136	iPnD	19:08:11.20	-0.69
KOGS	281.6	233	iPn	19:08:14.60	0.88
ARSA	288.6	254	Pn	19:08:15.10	0.51
TREC	310.2	298	ePn	19:08:17.80	0.52
BZS	321.5	145	iPn	19:08:18.30	-0.39
BMR	323.3	96	iPn	19:08:17.70	-1.22
DPC	336.5	321	ePn	19:08:21.40	0.83
			eSn	08:56.80	-1.59
SOKA	347.2	245	Pn	19:08:22.40	0.50
			Sn	08:59.40	-1.37
CJR	361.0	113	iPnD	19:08:23.70	0.09
UPC	364.1	320	ePn	19:08:24.20	0.19
			eSn	09:02.40	-2.12
MOA	369.4	268	Pn	19:08:25.30	0.63
GOPC	388.1	304	ePn	19:08:27.30	0.30
BLY	388.1	204	iPn	19:08:27.90	0.90
OBKA	388.8	245	Pn	19:08:28.40	1.31
GZR	397.3	137	iPnD	19:08:28.50	0.36
ARCR	400.5	104	iPn	19:08:28.60	0.06
MDVR	405.2	152	iPnD	19:08:28.80	-0.33
PRU	407.4	303	ePn	19:08:30.40	0.99
			eSn	09:11.90	-2.22
KHC	434.3	287	ePn	19:08:33.30	0.54
			eSn	09:18.60	-1.50
PVCC	440.2	310	ePn	19:08:33.80	0.31
MDB	443.5	118	iPn	19:08:32.10	-1.81
MYKA	446.9	250	Pn	19:08:35.00	0.68
LOT	448.9	129	iPnD	19:08:35.00	0.42
BURB	452.4	95	iPn	19:08:35.40	0.39
KBA	452.6	257	Pn	19:08:36.50	1.46
			Sn	09:23.10	-1.05
CADS	458.7	245	iPn	19:08:37.70	1.89
SKDS	480.4	236	iPn	19:08:39.70	1.19
VOIR	529.3	122	iPnD	19:08:44.90	0.30
BIZ	533.2	103	iPnD	19:08:45.10	0.02
OZUR	542.6	113	iPn	19:08:46.40	0.13
NKC	553.0	297	ePn	19:08:48.30	0.75
			eSn	09:44.20	-2.22
WTTA	574.5	262	Pn	19:08:51.60	1.36
MLR	585.2	118	iPn	19:08:51.40	-0.17
TESR	587.0	106	iPn	19:08:50.40	-1.40
SQTA	607.2	262	Pn	19:08:56.50	2.18
MOTA	612.6	263	Pn	19:08:57.10	2.11
PLOR	614.9	113	iPn	19:08:53.60	-1.67
VRI	619.6	112	iPn	19:08:55.90	0.04
FETA	647.5	260	Pn	19:09:00.30	0.96
DAVA	705.0	264	Pn	19:09:08.20	1.69
CFR	752.5	115	iPn	19:09:10.40	-2.03
TLB	779.0	119	iPn	19:09:14.60	-1.14
TIRR	811.6	119	iPn	19:09:19.10	-0.70



161.

2013-07-02 time: 19:47:00.62 UTC ML= 2.3
lat: 47.990N lon: 19.198E h= 4.9 km
erh= 1.3km erz= 1.3km
nr= 35 gap= 90 rms=0.65
Locality: Érsekvadkert
Comments:

sta	dist	azm	phase	hr mn sec	res
PENC	23.0	164	iPgC	19:47:04.90	0.08
			eSg	47:08.10	0.00
PSZ	52.6	99	ePgC	19:47:09.80	-0.25
			eSg	47:16.30	-1.11
BUD	57.8	193	ePg	19:47:10.90	-0.07
			eSg	47:18.70	-0.35
VYHS	62.2	334	ePg	19:47:12.70	0.94
			eSg	47:20.10	-0.34
SRO2	65.2	247	ePg	19:47:11.70	-0.60
			eSg	47:20.40	-1.02
PKSG	90.0	222	ePgC	19:47:16.50	-0.21
			eSg	47:29.80	0.54
TENK	93.8	113	ePg	19:47:17.40	0.00
			eSg	47:30.50	0.01
CSKK	99.1	225	ePg	19:47:18.30	-0.03
			eSg	47:33.10	0.96
PKS7	104.8	182	eSg	19:47:33.90	-0.07
PKST	119.4	227	ePnD	19:47:21.30	-0.61
			eSn	47:37.30	-1.23
LANS	130.6	9	ePn	19:47:23.70	0.39
			eSn	47:39.40	-1.61
PKSN	131.5	157	ePn	19:47:24.30	0.87
			eSn	47:40.80	-0.42
MODS	149.1	287	ePn	19:47:26.00	0.38
			eSn	47:44.50	-0.62
PKS6	157.0	170	eSn	19:47:47.40	0.53
ZST	157.8	278	ePn	19:47:27.60	0.90
			eSn	47:46.00	-1.05
PKS2	166.5	180	ePnC	19:47:28.50	0.71
			eSn	47:50.10	1.12
MORH	201.7	192	ePnD	19:47:31.60	-0.57
			eSn	47:52.10	-4.68
PKSM	202.1	192	ePnD	19:47:31.60	-0.63
			eSn	47:52.80	-4.09
CONA	249.2	268	Pn	19:47:39.30	1.20
			Sn	48:09.70	2.36
KOLS	250.5	65	ePn	19:47:43.90	5.64
ARSA	288.2	253	Pn	19:47:44.50	1.53

162.

2013-07-03 time: 11:12:24.15 UTC ML= 1.7
lat: 48.360N lon: 19.836E h= 0.0 km
erh= 1.1km erz= 339km
nr= 8 gap=106 rms=0.25
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PSZ	49.3	175	ePgD	11:12:33.10		0.16
			eSg	12:39.80		-0.01
KECS	50.0	74	ePg	11:12:32.70		-0.37
			eSg	12:39.90		-0.14
VYHS	75.5	281	ePg	11:12:37.70		0.07
			eSg	12:47.20		-0.95
LANS	92.0	343	ePg	11:12:40.90		0.32
			eSg	12:53.20		-0.20

163.

2013-07-04 time: 9:40:08.25 UTC ML= 0.2
lat: 47.183N lon: 18.313E h= 0.0 km
erh= 2.6km erz= 334km
nr= 6 gap=278 rms=0.19
Locality: Székesfehérvár
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
CSKK	20.4	349	ePg	9:40:12.00		0.10
			eSg	40:14.30		-0.45
PKST	22.7	292	ePgD	9:40:12.20		-0.11
			eSg	40:15.70		0.22
PKSG	24.0	14	ePg	9:40:12.50		-0.03
			eSg	40:16.10		0.23

164.

2013-07-05 time: 5:00:44.04 UTC ML= 2.2
lat: 46.107N lon: 16.444E h= 10.0 km
erh= 1.9km erz= 1.3km
nr= 52 gap=134 rms=0.84
Locality: Croatia
Comments:

sta	dist	azm	phase	hr mn	sec	res
KOGS	40.8	338	ePg	5:00:51.30		-0.24
			iSg	00:56.90		-0.49
BEHE	47.8	32	ePgD	5:00:53.00		0.25
			eSg	00:59.90		0.35
GOLS	64.3	260	iPg	5:00:56.00		0.34
GCIS	68.7	247	iPg	5:00:56.60		0.17
DOBS	75.5	274	iPg	5:00:57.30		-0.34
CESS	77.4	259	iPg	5:00:58.20		0.23
			eSg	01:09.00		0.16
GROS	82.6	298	iPg	5:00:58.10		-0.80
CRES	82.7	248	iPg	5:00:58.70		-0.21
			iSg	01:10.60		0.10
LEGS	89.0	259	iPg	5:00:59.60		-0.43
			eSg	01:12.40		-0.10
PDKS	111.9	268	iPn	5:01:03.40		-0.35
			eSn	01:18.70		-0.42
BOJS	114.4	234	ePn	5:01:04.30		0.25
			eSn	01:19.40		-0.26
BISS	117.9	301	iPn	5:01:03.70		-0.79
SOKA	125.8	300	Pn	5:01:05.20		-0.28
			Sn	01:20.70		-1.50
VISS	128.9	255	iPn	5:01:06.20		0.33
			eSn	01:22.60		-0.30
VNDS	134.8	270	iPn	5:01:06.90		0.30
			eSn	01:23.30		-0.89
TIH	141.9	52	ePnD	5:01:07.40		-0.09
			eSn	01:26.00		0.22
PKSV	142.1	100	ePnD	5:01:06.90		-0.61
			eSn	01:26.00		0.18
ARSA	145.4	331	Pn	5:01:07.90		-0.02
			Sn	01:25.50		-1.05
PKS9	151.0	69	ePnD	5:01:08.90		0.28
			eSn	01:29.60		1.81
OBKA	152.7	287	Pn	5:01:09.90		1.07
			Sn	01:29.40		1.22
MOZS	155.9	278	iPn	5:01:10.90		1.68
PKSM	170.1	86	ePn	5:01:10.20		-0.80
			eSn	01:29.60		-2.43
MORH	170.3	86	ePn	5:01:10.10		-0.93
			eSn	01:29.10		-2.99
SOP	175.5	3	ePnC	5:01:13.90		2.23
			eSn	01:35.60		2.37
PKST	176.6	44	ePnC	5:01:11.60		-0.22
			eSn	01:36.90		3.41
CSKK	196.9	45	ePn	5:01:16.40		2.06
			eSn	01:43.40		5.41
PKSG	206.2	46	eSn	5:01:44.20		4.15
CONA	207.3	348	Pn	5:01:16.20		0.56
			Sn	01:46.00		5.70
ZST	237.6	12	ePn	5:01:17.70		-1.72
MOA	255.0	319	Pn	5:01:22.90		1.32
			Sn	01:51.20		0.33
MODS	259.8	14	ePn	5:01:20.70		-1.49
			eSn	01:47.60		-4.34
KBA	261.0	294	Pn	5:01:28.30		5.97
			Sn	02:00.80		8.60
VYHS	321.2	34	ePn	5:01:29.50		-0.34
			eSn	02:02.40		-3.17
PSZ	330.7	52	eSn	5:02:05.80		-1.89
KHC	399.4	327	ePn	5:01:40.70		1.11
			eSn	02:20.80		-2.12

165.

2013-07-05 time: 7:26:22.11 UTC ML= 0.9
lat: 45.844N lon: 18.419E h= 0.0 km
erh= 1.9km erz= 205km
nr= 6 gap=268 rms=0.12
Locality: Nagyharsány
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSV	13.9	291	ePg	7:26:24.40		-0.19
			eSg	26:26.70		0.18
PKSM	44.4	23	ePgC	7:26:30.10		0.06
			eSg	26:36.10		-0.12
MORH	44.9	23	ePgC	7:26:30.20		0.08
			eSg	26:36.30		-0.08

166.

2013-07-05 time: 19:34:58.04 UTC ML= 1.3
lat: 47.633N lon: 20.243E h= 1.4 km
erh= 6.3km erz=45.4km
nr= 6 gap=210 rms=0.65
Locality: Heves
Comments:

sta	dist	azm	phase	hr mn	sec	res
TENK	8.2	73	ePgD	19:34:59.30		-0.23
			eSg	34:59.70		-0.99
PSZ	41.1	320	ePgD	19:35:05.60		0.21
			eSg	35:11.20		0.08
PENC	74.3	284	ePg	19:35:13.10		1.79
			eSg	35:21.40		-0.25

167.

2013-07-09 time: 9:27:44.86 UTC ML= 0.0
lat: 47.398N lon: 18.220E h= 0.9 km
erh= 6.4km erz=31.8km
nr= 6 gap=231 rms=0.10
Locality: Mór
Comments:

sta	dist	azm	phase	hr mn sec	res
CSKK	5.0	142	ePgC	9:27:45.90	0.14
			eSg	27:46.30	-0.17
PKSG	12.9	93	ePgC	9:27:47.20	0.03
			eSg	27:48.90	-0.07
PKST	20.9	222	ePgC	9:27:48.50	-0.10
			eSg	27:51.60	0.09

168.

2013-07-10 time: 11:13:36.25 UTC ML= 0.9
lat: 47.383N lon: 18.688E h= 0.0 km
erh= 1.3km erz=72.3km
nr= 5 gap=342 rms=0.03
Locality: Vál
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
PKSG	22.5	272	ePgC	11:13:40.30	0.03
			eSg	13:43.40	0.00
CSKK	32.4	266	ePgD	11:13:42.00	-0.03
			eSg	13:46.50	-0.04
PKST	51.3	254	eSg	11:13:52.60	0.03

169.

2013-07-11 time: 6:10:21.24 UTC ML= 1.9
lat: 47.641N lon: 20.254E h= 1.1 km
erh= 2.2km erz= 3.9km
nr= 18 gap=121 rms=0.83
Locality: Heves
Comments: felt 4 EMS

sta	dist	azm	phase	hr mn sec	res
TENK	7.2	79	ePgD	6:10:22.50	-0.04
			eSg	10:22.90	-0.65
PSZ	40.9	319	ePgD	6:10:28.80	0.25
			eSg	10:34.60	0.35
PENC	74.8	283	ePgD	6:10:34.90	0.30
			eSg	10:44.50	-0.52
PKSN	87.8	199	ePg	6:10:37.70	0.79
			eSg	10:49.00	-0.13
BUD	94.2	259	ePg	6:10:36.70	-1.37
			eSg	10:51.10	-0.09
PKS7	105.8	231	ePgD	6:10:40.10	-0.03
			eSg	10:53.70	-1.16
VYHS	142.0	312	ePn	6:10:45.00	-0.83
			eSn	11:02.50	-2.52
PKS9	190.3	232	ePnD	6:10:54.10	2.24
			eSn	11:17.60	1.85
PKSM	200.9	218	ePn	6:10:55.50	2.32
			eSn	11:20.90	2.81

170.

2013-07-11 time: 7:23:45.93 UTC ML= 1.2
lat: 47.319N lon: 18.419E h= 0.0 km
erh= 9.2km erz= ***km
nr= 5 gap=272 rms=0.56
Locality: Zámoly
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
PKSG	8.4	345	ePgC	7:23:47.50	0.07
			eSg	23:47.90	-0.70
CSKK	13.0	292	ePgD	7:23:48.80	0.56
			eSg	23:50.80	0.75
PKST	29.9	257	ePgC	7:23:50.60	-0.66

171.

2013-07-12 time: 9:18:56.45 UTC ML= 0.6
lat: 45.885N lon: 18.253E h= 0.0 km
erh= 1.4km erz= 166km
nr= 6 gap=305 rms=0.10
Locality: Máriagyüd
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
PKSV	0.4	344	ePgC	9:18:56.40	-0.12
			eSg	18:56.60	0.03
PKSM	47.1	40	ePgD	9:19:04.90	0.04
			eSg	19:11.60	0.18
MORH	47.6	39	ePgD	9:19:05.00	0.05
			eSg	19:11.40	-0.17

172.

2013-07-15 time: 10:17:49.57 UTC ML= 1.1
lat: 47.881N lon: 19.407E h= 0.0 km
erh= 3.3km erz= 919km
nr= 6 gap=140 rms=0.54
Locality: Bercel
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
PENC	13.8	223	ePgD	10:17:51.90	-0.12
			eSg	17:54.10	0.16
PSZ	36.7	83	ePgD	10:17:55.90	-0.21
			eSg	18:01.60	0.38
VYHS	80.3	328	ePg	10:18:05.20	1.29
			eSg	18:14.20	-0.89

173.

2013-07-18 time: 9:04:48.85 UTC ML= 0.4
lat: 47.170N lon: 18.319E h= 0.0 km
erh= 2.9km erz= 370km
nr= 6 gap=282 rms=0.22
Locality: Sárszentmihály
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
CSKK	21.9	348	ePgC	9:04:52.50	-0.26
			eSg	04:56.10	0.28
PKST	23.7	295	ePgC	9:04:53.20	0.11
			eSg	04:56.10	-0.29
PKSG	25.2	12	ePg	9:04:53.60	0.24
			eSg	04:56.80	-0.07

174.

2013-07-19 time: 9:31:27.79 UTC ML= 1.6
lat: 48.677N lon: 20.684E h= 0.0 km
erh= 6.0km erz= 5.3km
nr= 6 gap=175 rms=1.03
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
PSZ	102.7	215	ePgD	9:31:46.80	0.68
			eSg	31:58.60	-1.82
KOLS	120.2	76	ePg	9:31:50.10	0.85
			eSg	32:04.50	-1.49
VYHS	137.8	262	ePn	9:31:52.70	0.70
			eSn	32:10.30	-0.59

175.

2013-07-20 time: 20:13:17.58 UTC ML= 2.4
lat: 48.730N lon: 18.269E h= 0.6 km
erh= 2.0km erz= 2.3km
nr= 42 gap= 66 rms=1.09
Locality: Slovakia
Comments:

sta	dist	azm	phase	hr mn	sec	res
VYHS	49.4	122	ePg	20:13:27.30		0.91
			eSg	13:33.20		-0.07
MODS	83.2	242	ePg	20:13:32.20		-0.24
			eSg	13:44.20		0.17
LANS	99.5	62	ePg	20:13:34.90		-0.45
			eSg	13:46.90		-2.31
ZST	104.7	235	ePg	20:13:35.90		-0.37
			eSg	13:50.10		-0.76
OKC	123.5	356	ePg	20:13:39.70		0.07
			eSg	13:55.00		-1.84
MORC	127.9	336	iPg	20:13:40.40		-0.02
PENC	128.7	144	ePgD	20:13:41.00		0.44
			eSg	13:56.30		-2.19
VRAC	138.4	298	iPn	20:13:41.60		-0.19
PKSG	149.0	177	ePn	20:13:43.60		0.48
			eSn	14:01.80		-1.24
BUD	149.5	158	ePnC	20:13:43.30		0.12
			eSn	14:03.80		0.66
PSZ	150.6	127	ePnD	20:13:43.70		0.39
			eSn	14:01.90		-1.48
CSKK	152.0	180	ePn	20:13:44.50		1.02
			eSn	14:02.80		-0.88
PKST	164.5	186	ePnC	20:13:45.00		-0.04
			eSn	14:03.30		-3.16
SOP	172.4	228	ePnC	20:13:46.00		-0.02
			eSn	14:06.80		-1.41
CONA	199.4	243	Pn	20:13:49.90		0.50
			Sn	14:13.70		-0.51
TIH	205.4	188	ePnC	20:13:54.30		4.16
DPC	228.8	322	ePn	20:13:54.10		1.04
			eSn	14:23.50		2.77
PKSN	236.3	150	ePn	20:13:59.70		5.70
			eSn	14:26.10		3.69
UPC	256.3	320	ePn	20:14:01.40		4.91
			eSn	14:31.40		4.56
ARSA	262.8	231	Pn	20:13:57.70		0.40
BEHE	275.2	204	ePn	20:14:11.30		12.46
MORH	280.9	174	ePnD	20:13:59.50		-0.06
			eSn	14:28.70		-3.61
PKSM	281.3	174	ePn	20:13:59.70		0.09
			eSn	14:28.70		-3.70
GOPC	285.4	297	eSn	20:14:40.10		6.81
KOLS	294.9	86	ePn	20:14:02.60		1.30
			eSn	14:34.80		-0.60
PRU	304.8	297	eSn	20:14:44.60		6.99
MOA	312.8	252	Pn	20:14:04.40		0.87
			Sn	14:37.60		-1.77
TRPA	323.0	102	ePn	20:14:04.70		-0.10
SOKA	333.2	227	Pn	20:14:06.40		0.32
PVCC	333.9	307	ePn	20:14:08.40		2.24
			eSn	14:53.60		9.54
KHC	346.6	277	ePn	20:14:08.40		0.65
			eSn	14:45.00		-1.88
OBKA	373.0	229	Pn	20:14:11.70		0.65
DRGR	396.7	123	iPn	20:14:13.50		-0.49
KBA	411.4	243	Pn	20:14:17.40		1.57
			Sn	15:00.50		-0.77
BZS	429.2	144	iPnD	20:14:18.10		0.05
GZR	504.8	137	iPn	20:14:27.30		-0.18
MDVR	511.7	149	iPnD	20:14:27.90		-0.44
WTTA	521.2	252	Pn	20:14:31.60		2.09
			Sn	15:23.80		-1.82
BURB	531.5	103	iPn	20:14:31.20		0.40
MOTA	556.1	254	Pn	20:14:35.60		1.73

176.

2013-07-21 time: 1:12:46.67 UTC ML= 1.7
lat: 46.512N lon: 19.035E h= 2.0 km
erh= 2.4km erz= 3.4km
nr= 22 gap=145 rms=0.88
Locality: Negyvenszállás
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKS6	41.8	76	ePgD	1:12:53.70		-0.44
MORH	44.6	222	ePgD	1:12:54.40		-0.24
PKSM	45.0	222	ePgD	1:12:54.40		-0.33
PKS9	58.6	278	ePgD	1:12:59.40		2.26
PKS7	60.3	9	ePgD	1:12:57.90		0.45
PKSN	76.7	56	ePg	1:13:00.10		-0.28
			eSg	13:10.90		-0.18
PKSV	91.9	221	ePgD	1:13:02.90		-0.19
			eSg	13:15.20		-0.70
BUD	108.1	360	ePg	1:13:07.70		1.73
			eSg	13:19.80		-1.23
PKSG	109.4	333	ePg	1:13:06.50		0.28
			eSg	13:19.00		-2.47
CSKK	111.5	328	ePgD	1:13:07.20		0.61
			eSg	13:21.00		-1.13
PKST	112.8	317	ePgD	1:13:06.60		-0.22
			eSg	13:21.50		-1.03
PENC	143.4	7	ePn	1:13:11.00		-0.33
			eSn	13:29.10		-1.45
PSZ	169.4	23	ePnD	1:13:15.40		0.83
			eSn	13:36.10		-0.22
BEHE	173.5	268	eSn	1:13:39.70		2.46

177.

2013-07-23 time: 10:11:16.49 UTC ML= 0.5
lat: 47.192N lon: 18.291E h= 0.0 km
erh= 2.2km erz= 288km
nr= 6 gap=272 rms=0.17
Locality: Sárkeszi
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
CSKK	19.2	353	ePg	10:11:19.90		-0.01
			eSg	11:22.20		-0.39
PKST	20.8	291	ePgD	10:11:20.30		0.10
			eSg	11:23.10		0.00
PKSG	23.5	19	ePgD	10:11:20.60		-0.08
			eSg	11:24.30		0.35

178.

2013-07-24 time: 11:00:22.75 UTC ML= 2.1
lat: 48.875N lon: 20.981E h= 10.0 km
erh= 7.8km erz= 5.7km
nr= 11 gap=161 rms=1.36
Locality: Slovakia
Comments:

sta	dist	azm	phase	hr mn	sec	res
KECS	56.8	220	ePg	11:00:32.30		-0.76
			eSg	00:39.10		-1.99
KOLS	94.9	86	ePg	11:00:40.00		0.21
			eSg	00:52.50		-0.59
LANS	114.9	285	eSn	11:00:56.10		-2.39
PSZ	133.4	217	ePnC	11:00:46.00		0.86
			eSn	01:02.30		-0.30
VYHS	163.5	255	ePn	11:00:49.90		1.00
			eSn	01:08.60		-0.69
PENC	174.4	226	ePn	11:00:52.50		2.25
			eSn	01:14.60		2.89

179.

2013-07-24 time: 20:01:16.42 UTC ML= 1.4
lat: 46.214N lon: 16.664E h= 10.0 km
erh= 1.8km erz= 1.3km
nr= 30 gap=138 rms=0.67
Locality: Croatia
Comments:

sta	dist	azm	phase	hr mn sec	res
BEHE	29.7	17	ePgC	20:01:22.10	0.08
			eSg	01:26.20	-0.19
KOGS	41.1	309	iPg	20:01:24.10	0.12
			iSg	01:29.40	-0.48
GOLS	83.5	254	iPg	20:01:31.60	0.16
			eSg	01:43.40	0.25
GCIS	89.0	244	iSg	20:01:45.60	0.70
DOBS	92.6	266	iPg	20:01:32.80	-0.25
			iSg	01:46.10	0.09
GROS	93.6	287	iSg	20:01:45.80	-0.55
CRES	103.0	245	ePg	20:01:35.20	0.30
			iSg	01:49.10	-0.21
LEGS	108.3	254	iPn	20:01:35.50	-0.18
			iSn	01:50.70	0.01
BISS	127.6	292	iPn	20:01:38.00	-0.09
			iSn	01:54.10	-0.89
PERS	127.9	292	iPn	20:01:38.50	0.38
			iSn	01:54.20	-0.85
PKSV	128.1	106	ePn	20:01:33.20	-4.95
			eSn	01:55.40	0.30
PKS9	130.9	72	eSn	20:01:59.30	3.58
SOKA	135.6	292	Pn	20:01:40.00	0.92
			Sn	01:56.30	-0.46
PKSM	152.6	90	ePnD	20:01:40.60	-0.60
			eSn	02:01.60	1.07
MORH	152.8	90	ePnD	20:01:40.60	-0.63
			eSn	01:58.20	-2.38
PKST	156.4	42	ePnC	20:01:42.80	1.12
			eSn	02:03.80	2.42
OBKA	166.1	281	Pn	20:01:43.40	0.51
			Sn	02:06.10	2.57

180.

2013-07-25 time: 7:15:03.81 UTC ML= 1.3
lat: 47.358N lon: 18.416E h= 0.0 km
erh= 3.6km erz= 503km
nr= 6 gap=259 rms=0.29
Locality: Gánt
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
PKSG	4.3	333	ePgC	7:15:04.70	0.13
			eSg	15:05.20	0.04
CSKK	11.8	273	ePgD	7:15:05.80	-0.11
			eSg	15:07.50	-0.05
VYHS	130.2	14	ePg	7:15:27.70	0.64
			eSg	15:44.50	-0.69

181.

2013-07-25 time: 10:01:33.52 UTC ML= 0.2
lat: 47.221N lon: 18.292E h= 0.0 km
erh= 4.4km erz= 586km
nr= 6 gap=261 rms=0.34
Locality: Moha
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
CSKK	16.0	351	ePgC	10:01:37.00	0.62
			eSg	01:38.60	-0.01
PKST	20.0	282	ePgC	10:01:36.80	-0.29
			eSg	01:39.90	0.03
PKSG	20.4	21	ePgC	10:01:37.10	-0.07
			eSg	01:39.60	-0.42

182.

2013-07-26 time: 8:16:58.33 UTC ML= 1.5
lat: 48.613N lon: 20.555E h= 0.0 km
erh= 4.9km erz= 781km
nr= 8 gap=253 rms=0.58
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
KECS	15.3	200	ePg	8:17:00.60	-0.46
			eSg	17:04.80	1.61
PSZ	91.5	212	ePg	8:17:14.20	-0.46
			eSg	17:28.30	0.90
LANS	99.7	307	ePg	8:17:16.30	0.17
			eSg	17:30.60	0.59
VYHS	127.6	264	ePg	8:17:20.70	-0.41
			eSg	17:38.70	-0.18

183.

2013-07-29 time: 5:22:37.10 UTC ML= 0.8
lat: 45.993N lon: 18.509E h= 0.1 km
erh= 4.1km erz= 850km
nr= 10 gap=195 rms=0.84
Locality: Versend
Comments:

sta	dist	azm	phase	hr mn sec	res
PKSV	23.0	240	ePg	5:22:41.20	-0.02
			eSg	22:44.10	-0.33
PKSM	26.4	23	ePgD	5:22:41.30	-0.52
			eSg	22:44.50	-0.99
MORH	26.9	23	ePgD	5:22:41.30	-0.60
			eSg	22:44.70	-0.95
PKS9	68.4	345	ePg	5:22:50.20	0.89
			eSg	23:00.10	1.27
PKS2	77.6	44	ePg	5:22:52.20	1.23
			eSg	23:03.20	1.42

184.

2013-07-31 time: 9:24:53.58 UTC ML= 0.6
lat: 47.186N lon: 18.292E h= 0.0 km
erh= 2.9km erz= 371km
nr= 6 gap=274 rms=0.22
Locality: Sárkeszi
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
CSKK	19.8	353	ePgD	9:24:56.80	-0.32
			eSg	24:59.60	-0.28
PKST	21.1	293	ePgD	9:24:57.40	0.04
			eSg	25:00.50	0.19
PKSG	24.0	18	ePgD	9:24:58.10	0.22
			eSg	25:01.40	0.17

185.

2013-08-02 time: 14:01:53.95 UTC ML= 0.9
lat: 47.221N lon: 18.256E h= 6.7 km
erh= 1.4km erz= 1.1km
nr= 12 gap=119 rms=0.24
Locality: Iszkaszentgyörgy
Comments:

sta	dist	azm	phase	hr mn sec	res
CSKK	15.8	1	ePgD	14:01:56.70	-0.31
			eSg	01:59.50	0.10
PKST	17.3	284	ePgD	14:01:57.30	0.04
			eSg	02:00.20	0.36
PKSG	21.6	28	ePg	14:01:58.00	0.02

```
                 eSg      02:01.40    0.28
MORH 115.6 165   ePnC  14:02:14.60    0.06
                 eSn      02:30.60   -0.01
PKSM 116.0 165   ePn   14:02:14.30   -0.29
                 eSn      02:29.00   -1.69
PSZ  145.6  58   ePnC  14:02:18.50    0.21
                 eSn      02:38.10    0.83
VYHS 148.1  17   eSn   14:02:37.50   -0.31
```

186.

```
 2013-08-05  time:  0:52:01.25 UTC  ML= 0.2
   lat: 47.404N  lon: 18.230E  h=  8.9 km
                 erh= 3.8km    erz= 2.0km
   nr=  6        gap=234       rms=0.06
   Locality: Pusztavám
   Comments:

sta   dist azm  phase  hr mn  sec     res
CSKK   5.1 153   ePgC   0:52:03.10    0.01
                 eSg      52:04.50   -0.03
PKSG  12.2  97   ePgC   0:52:04.00    0.05
                 eSg      52:06.00   -0.06
PKST  21.9 222   ePgD   0:52:05.40   -0.08
                 eSg      52:08.90    0.13
```

187.

```
 2013-08-05  time:  7:43:21.96 UTC  ML= 0.6
   lat: 47.463N  lon: 18.337E  h=  0.0 km
                 erh= 3.8km    erz= 495km
   nr=  6        gap=288       rms=0.30
   Locality: Oroszlány
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   8.9 153   ePg    7:43:23.70    0.15
                 eSg      43:24.30   -0.48
CSKK  12.5 208   ePg    7:43:24.70    0.50
                 eSg      43:26.00    0.06
PKST  32.2 225   ePgC   7:43:27.50   -0.22
                 eSg      43:32.10   -0.10
```

188.

```
 2013-08-05  time:  7:43:34.63 UTC  ML= 0.9
   lat: 47.434N  lon: 18.364E  h=  0.0 km
                 erh= 2.2km    erz= 246km
   nr=  5        gap=285       rms=0.12
   Locality: Oroszlány
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   5.1 157   ePg    7:43:35.50   -0.04
                 eSg      43:36.40    0.15
CSKK  11.1 225   ePg    7:43:36.50   -0.12
                 eSg      43:38.00   -0.16
PKST  31.6 232   ePgC   7:43:40.40    0.12
```

189.

```
 2013-08-05  time:  7:47:33.14 UTC  ML= 0.6
   lat: 47.407N  lon: 18.344E  h=  0.0 km
                 erh= 5.2km    erz= 432km
   nr=  6        gap=241       rms=0.27
   Locality: Gánt
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   3.9 116   ePgC   7:47:33.70   -0.14
                 eSg      47:34.30   -0.08
CSKK   8.0 232   ePg    7:47:34.70    0.14
                 eSg      47:35.80    0.13
PKST  28.6 235   ePgC   7:47:38.50    0.25
                 eSg      47:41.40   -0.84
```

190.

```
 2013-08-05  time:  7:47:42.54 UTC  ML= 0.8
   lat: 47.439N  lon: 18.382E  h=  0.0 km
                 erh= 3.1km    erz= 359km
   nr=  5        gap=301       rms=0.16
   Locality: Várgesztes
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   5.3 173   ePgC   7:47:43.60    0.12
                 eSg      47:44.20   -0.02
CSKK  12.5 228   ePg    7:47:44.60   -0.17
                 eSg      47:46.30   -0.21
PKST  33.0 233   eSg    7:47:53.30    0.25
```

191.

```
 2013-08-07  time:  5:44:19.31 UTC  ML= 1.6
   lat: 47.677N  lon: 20.273E  h=  0.7 km
                 erh= 3.4km    erz= 4.7km
   nr= 14        gap=104       rms=1.15
   Locality: Erdőtelek
   Comments:

sta   dist azm  phase  hr mn  sec     res
TENK   6.2 114   ePgD   5:44:20.30   -0.12
                 eSg      44:20.80   -0.49
PSZ   39.0 313   ePgD   5:44:26.60    0.32
                 eSg      44:32.40    0.68
KECS  91.1  10   ePg    5:44:35.20   -0.37
                 eSg      44:47.50   -0.75
PKSN  91.9 199   eSg    5:44:47.70   -0.83
PKS7 109.3 230   ePg    5:44:37.90   -0.93
                 eSg      44:51.60   -2.46
VYHS 140.4 310   eSn    5:45:01.10   -1.74
MORH 204.3 217   ePnC   5:44:53.70    1.97
                 eSn      45:20.10    3.08
PKSM 204.8 217   ePnC   5:44:53.70    1.91
                 eSn      45:19.20    2.07
```

192.

```
 2013-08-07  time:  8:01:16.74 UTC  ML= 2.5
   lat: 47.626N  lon: 20.415E  h=  6.1 km
                 erh= 5.6km    erz= 4.6km
   nr= 12        gap=130       rms=1.06
   Locality: Átány
   Comments:

sta   dist azm  phase  hr mn  sec     res
PSZ   50.8 310   iPgD   8:01:25.70   -0.18
KECS  95.5   3   ePg    8:01:33.60   -0.23
                 eSg      01:47.80    0.64
VYHS 152.2 309   ePn    8:01:41.40   -0.58
                 eSn      01:59.70   -1.96
SRO  159.1 278   eSn    8:02:03.50    0.32
SIRR 178.2 148   iPn    8:01:43.70   -1.52
LANS 183.5 338   ePn    8:01:48.40    2.52
                 eSn      02:09.10    0.50
DRGR 197.1 118   iPnD   8:01:48.70    1.13
MODS 248.5 290   ePn    8:01:56.30    2.32
                 eSn      02:23.60    0.57
GZR  307.3 144   iPn    8:01:59.80   -1.51
LOT  353.3 133   iPn    8:02:06.10   -0.95
VOIR 430.8 124   iPn    8:02:16.30   -0.41
```

193.

2013-08-07 time: 11:34:06.87 UTC ML= 0.1
lat: 47.401N lon: 18.239E h= 0.5 km
erh= 3.0km erz=24.5km
nr= 6 gap=231 rms=0.06
Locality: Pusztavám
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	4.5	159	ePgC	11:34:07.70		0.02
			eSg	34:08.20		-0.11
PKSG	11.5	95	ePgD	11:34:08.90		-0.02
			eSg	34:10.60		0.08
PKST	22.1	224	ePgC	11:34:10.80		-0.03
			eSg	34:14.00		0.09

194.

2013-08-07 time: 23:40:14.96 UTC ML= 1.5
lat: 46.032N lon: 18.781E h= 10.0 km
erh= 2.7km erz= 1.3km
nr= 17 gap=205 rms=0.50
Locality: Dunafalva
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKSM	22.7	332	ePgD	23:40:19.30		-0.09
MORH	23.0	333	ePgD	23:40:19.30		-0.14
			eSg	40:22.60		-0.33
PKSV	44.0	249	ePg	23:40:23.10		0.07
PKS2	61.0	33	ePg	23:40:26.00		0.00
			eSg	40:37.50		2.89
PKS9	72.8	328	ePg	23:40:28.30		0.21
PKS6	87.3	44	ePg	23:40:30.10		-0.55
			eSg	40:43.30		0.41
PKS7	116.5	14	ePnD	23:40:35.70		0.45
			eSn	40:51.00		-0.07
TIH	118.2	325	ePn	23:40:35.60		0.15
			eSn	40:49.40		-2.03
PKST	147.9	337	ePn	23:40:39.50		0.34
			eSn	40:59.60		1.57
PKSG	154.1	349	ePn	23:40:40.20		0.27
			eSn	40:57.60		-1.80

195.

2013-08-08 time: 9:04:37.12 UTC ML= 0.5
lat: 47.145N lon: 18.314E h= 0.0 km
erh= 5.9km erz= 771km
nr= 5 gap=289 rms=0.35
Locality: Úrhida
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
CSKK	24.6	351	eSg	9:04:44.20		-0.73
PKST	24.7	301	ePg	9:04:41.50		-0.02
			eSg	04:45.20		0.24
PKSG	28.1	12	ePg	9:04:42.10		-0.03
			eSg	04:46.50		0.46

196.

2013-08-08 time: 9:13:59.25 UTC ML= 1.7
lat: 48.368N lon: 19.826E h= 0.0 km
erh= 5.8km erz= ***km
nr= 8 gap=191 rms=0.87
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PSZ	50.3	174	ePgD	9:14:07.70		-0.54
			eSg	14:14.50		-0.75
VYHS	74.5	281	ePg	9:14:12.20		-0.36
			eSg	14:21.10		-1.84
PENC	76.0	212	ePg	9:14:13.70		0.88
			eSg	14:25.50		2.10
LANS	90.8	343	ePg	9:14:15.50		0.03
			eSg	14:29.10		0.97

197.

2013-08-08 time: 9:27:01.48 UTC ML= 1.5
lat: 48.605N lon: 20.742E h= 0.0 km
erh= 3.0km erz= 3.5km
nr= 6 gap=147 rms=0.41
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PSZ	98.9	219	ePgD	9:27:19.40		0.26
			eSg	27:32.60		-0.31
LANS	111.4	303	ePg	9:27:21.70		0.33
KOLS	118.4	72	eSg	9:27:38.80		-0.30
VYHS	141.2	265	ePn	9:27:26.50		0.38
			eSn	27:44.40		-0.94

198.

2013-08-08 time: 10:43:44.98 UTC ML= 0.6
lat: 47.563N lon: 18.449E h= 0.0 km
erh= 4.6km erz= 449km
nr= 6 gap=330 rms=0.26
Locality: Tatabánya
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSG	19.5	193	ePgC	10:43:48.40		-0.07
			eSg	43:51.40		0.20
CSKK	26.4	213	ePgC	10:43:49.50		-0.20
			eSg	43:53.00		-0.37
PKST	46.1	223	ePg	10:43:53.70		0.49
			eSg	43:59.70		0.07

199.

2013-08-09 time: 7:18:24.85 UTC ML= 1.0
lat: 45.828N lon: 18.435E h= 0.0 km
erh= 1.7km erz= 191km
nr= 6 gap=275 rms=0.11
Locality: Nagyharsány
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSV	15.7	295	ePgC	7:18:27.60		-0.06
			eSg	18:29.90		0.06
PKSM	45.5	21	ePg	7:18:33.00		0.02
			eSg	18:39.50		0.18
MORH	46.0	21	ePg	7:18:33.10		0.03
			eSg	18:39.20		-0.28

200.

2013-08-11 time: 2:31:42.58 UTC ML=-0.2
lat: 47.367N lon: 18.214E h= 3.5 km
erh= 3.7km erz= 1.7km
nr= 6 gap=210 rms=0.11
Locality: Mór
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	3.5	97	ePgC	2:31:43.30		-0.17
			eSg	31:44.20		0.04
PKSG	13.6	78	ePgC	2:31:45.20		0.11
			eSg	31:47.20		0.15
PKST	18.1	229	ePgC	2:31:45.80		-0.07
			eSg	31:48.50		0.06

201.

2013-08-11 time: 3:17:42.90 UTC ML=-0.2
lat: 47.387N lon: 18.197E h= 0.1 km
erh= 3.3km erz= 111km
nr= 6 gap=227 rms=0.08
Locality: Mór
Comments:

sta	dist	azm	phase	hr	mn	sec	res
CSKK	5.5	119	ePgC	3:	17:	43.80	-0.08
			eSg		17:	44.60	-0.04
PKSG	14.6	88	ePgC	3:	17:	45.60	0.08
			eSg		17:	47.60	0.04
PKST	18.8	221	ePgC	3:	17:	46.20	-0.06
			eSg		17:	49.00	0.13

202.

2013-08-12 time: 1:14:28.35 UTC ML= 2.0
lat: 46.493N lon: 16.818E h= 13.3 km
erh= 2.4km erz= 2.1km
nr= 42 gap=107 rms=0.83
Locality: Valkonya
Comments:

sta	dist	azm	phase	hr	mn	sec	res
KOGS	43.9	263	iPg	1:	14:	36.20	-0.33
			eSg		14:	43.00	0.08
TIH	93.9	61	eP*C	1:	14:	45.30	0.17
			eS*		14:	57.90	-0.32
GROS	101.1	268	eP*	1:	14:	45.30	-0.93
			eS*		14:	59.60	-0.58
GOLS	106.5	240	iPn	1:	14:	46.60	-0.36
			eSn		15:	00.60	-0.88
DOBS	110.7	250	iPn	1:	14:	47.10	-0.38
PKS9	112.6	85	ePn	1:	14:	47.80	0.08
			eSn		15:	03.80	0.97
GCIS	115.3	233	iPn	1:	14:	47.80	-0.26
			eSn		15:	04.30	0.87
CESS	119.4	241	ePn	1:	14:	48.80	0.23
PKST	125.9	47	ePnC	1:	14:	49.60	0.22
			eSn		15:	05.50	-0.29
CRES	128.6	235	iPn	1:	14:	49.30	-0.42
PKSV	129.5	121	ePnC	1:	14:	49.70	-0.14
			eSn		15:	05.60	-1.00
LEGS	130.6	242	iPn	1:	14:	50.60	0.63
BISS	130.7	278	ePn	1:	14:	49.90	-0.09
PERS	131.4	277	ePn	1:	14:	49.90	-0.17
			eSn		15:	05.50	-1.50
SOP	133.8	352	ePn	1:	14:	50.70	0.34
			eSn		15:	06.30	-1.24
SOKA	138.3	279	Pn	1:	14:	51.90	0.97
			Sn		15:	07.20	-1.35
PKSM	143.8	103	ePnD	1:	14:	50.80	-0.82
			eSn		15:	07.90	-1.86
MORH	143.9	102	ePnD	1:	14:	50.80	-0.83
			eSn		15:	10.50	0.71
CSKK	146.4	49	ePnC	1:	14:	52.40	0.46
			eSn		15:	12.80	2.46
PKSG	156.0	50	ePn	1:	14:	54.10	0.97
			eSn		15:	15.50	3.04
BOJS	163.7	228	ePn	1:	14:	56.30	2.21
VNDS	168.8	255	iPn	1:	14:	57.00	2.27
VISS	171.0	243	ePn	1:	14:	56.80	1.80
VYHS	269.5	34	ePn	1:	15:	07.80	0.51
			eSn		15:	35.50	-2.16
PSZ	281.9	56	ePn	1:	15:	08.50	-0.33
			eSn		15:	40.50	0.09

203.

2013-08-12 time: 7:17:00.56 UTC ML= 1.0
lat: 47.456N lon: 18.346E h= 0.0 km
erh= 7.3km erz= 773km
nr= 5 gap=288 rms=0.36
Locality: Oroszlány
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKSG	7.9	155	ePgC	7:	17:	02.00	0.04
			eSg		17:	02.60	-0.46
CSKK	12.2	212	ePgD	7:	17:	03.00	0.27
			eSg		17:	05.10	0.67
PKST	32.2	227	eSg	7:	17:	10.40	-0.38

204.

2013-08-13 time: 11:05:04.74 UTC ML= 0.2
lat: 47.179N lon: 18.287E h= 0.0 km
erh= 2.5km erz= 303km
nr= 6 gap=277 rms=0.18
Locality: Sárkeszi
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
CSKK	20.6	355	ePgD	11:	05:	08.30	-0.11
			eSg		05:	10.80	-0.48
PKST	21.1	295	ePgD	11:	05:	08.50	0.00
			eSg		05:	11.60	0.16
PKSG	25.0	18	ePg	11:	05:	09.30	0.10
			eSg		05:	12.90	0.23

205.

2013-08-14 time: 3:27:22.32 UTC ML= 1.3
lat: 45.736N lon: 18.192E h= 15.6 km
erh= 3.0km erz= 1.2km
nr= 8 gap=331 rms=0.21
Locality: Croatia
Comments:

sta	dist	azm	phase	hr	mn	sec	res
PKSV	17.6	15	ePgD	3:	27:	26.40	-0.11
			eSg		27:	30.00	0.21
PKSM	63.3	33	ePgD	3:	27:	34.00	0.04
			eSg		27:	43.20	0.16
MORH	63.8	33	ePgD	3:	27:	34.00	-0.04
			eSg		27:	43.10	-0.09
PKS9	94.8	4	eP*	3:	27:	39.80	0.78
			eS*		27:	51.70	-0.36

206.

2013-08-14 time: 8:45:17.03 UTC ML= 1.5
lat: 47.869N lon: 19.117E h= 0.0 km
erh= 2.2km erz= 349km
nr= 6 gap=218 rms=0.24
Locality: Szendehely
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PENC	15.1	125	ePgC	8:	45:	19.70	-0.04
			eSg		45:	22.10	0.25
PSZ	58.4	85	ePgC	8:	45:	27.40	-0.06
			eSg		45:	35.30	-0.30
VYHS	72.5	343	ePg	8:	45:	30.60	0.62
			eSg		45:	39.90	-0.18

207.

2013-08-15 time: 1:57:32.65 UTC ML=-0.1
lat: 47.407N lon: 18.219E h= 0.7 km
erh= 9.5km erz=68.4km
nr= 6 gap=237 rms=0.15
Locality: Pusztavám
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	5.8	147	ePg	1:57:33.80		0.11
			eSg	57:34.40		-0.10
PKSG	13.1	97	ePgC	1:57:35.10		0.11
			eSg	57:36.70		-0.11
PKST	21.5	220	ePgC	1:57:36.30		-0.20
			eSg	57:39.70		0.20

208.

2013-08-15 time: 2:22:42.02 UTC ML= 2.8
lat: 45.847N lon: 17.585E h= 0.6 km
erh= 3.0km erz= 2.6km
nr= 34 gap=110 rms=1.01
Locality: Croatia
Comments: felt 4-5 EMS

sta	dist	azm	phase	hr mn	sec	res
PKSV	52.0	85	ePgD	2:22:51.30		-0.01
PKSM	91.3	64	ePgD	2:22:57.80		-0.52
MORH	91.7	63	ePgD	2:22:57.80		-0.59
PKS9	98.1	33	ePgD	2:23:00.20		0.66
TIH	119.4	11	ePg	2:23:03.30		-0.04
			eSg	23:19.20		-0.77
BLY	121.9	195	iPg	2:23:04.20		0.41
PKS2	144.7	60	ePn	2:23:07.60		0.57
			eSn	23:26.10		-0.44
PKST	160.7	12	ePnC	2:23:08.50		-0.52
			eSn	23:30.30		0.22
PKS6	174.1	61	ePn	2:23:09.30		-1.40
			eSn	23:35.00		1.93
CSKK	176.3	17	ePnD	2:23:13.30		2.33
			eSn	23:35.40		1.86
PKS7	180.2	42	ePn	2:23:10.30		-1.15
			eSn	23:35.80		1.40
PKSG	182.5	20	ePn	2:23:11.60		-0.14
			eSn	23:34.00		-0.91
PKSN	210.9	56	ePn	2:23:18.70		3.42
			eSn	23:46.40		5.18
SOKA	217.4	295	Pn	2:23:15.60		-0.49
			Sn	23:40.20		-2.46
SOP	218.7	339	ePn	2:23:16.30		0.05
			eSn	23:41.10		-1.85
ARSA	222.1	315	Pn	2:23:16.80		0.12
			Sn	23:47.60		3.88
OBKA	245.7	287	Pn	2:23:19.90		0.28
PENC	251.9	31	ePn	2:23:19.40		-0.99
CONA	266.0	330	Pn	2:23:22.40		0.24
			Sn	23:58.40		4.94
PSZ	289.8	37	ePnC	2:23:23.10		-2.02
			eSn	23:55.10		-3.64
SMOL	296.7	358	ePn	2:23:25.90		-0.08
			eSn	23:56.40		-3.87
VYHS	309.2	18	ePn	2:23:27.50		-0.04
			eSn	24:00.20		-2.84
MYKA	316.4	286	Pn	2:23:28.70		0.27
			Sn	24:04.10		-0.53
MOA	337.1	311	Pn	2:23:32.10		1.08
			Sn	24:07.90		-1.33
KBA	353.3	293	Pn	2:23:33.50		0.46
ABTA	403.5	284	Pn	2:23:39.90		0.61
GZR	408.1	97	iPn	2:23:41.50		1.63
TREC	414.5	338	ePn	2:23:40.50		-0.17
			eSn	24:22.60		-3.82
MORC	436.9	360	iPn	2:23:42.70		-0.77
OKC	445.7	5	eSn	2:24:27.30		-6.03
TRPA	454.4	56	iPn	2:23:49.70		4.06
KHC	473.8	320	ePn	2:23:49.20		1.14
			eSn	24:37.60		-1.97
WTTA	482.6	289	Pn	2:23:51.10		1.94
			Sn	24:50.10		8.57
WATA	489.3	290	Pn	2:23:51.00		1.00

209.

2013-08-15 time: 11:46:02.48 UTC ML= 1.4
lat: 48.293N lon: 21.222E h= 1.0 km
erh= 2.1km erz= 131km
nr= 6 gap=200 rms=0.19
Locality: Abaújalpár
Comments:

sta	dist	azm	phase	hr mn	sec	res
KECS	58.5	291	ePg	11:46:13.00		0.07
			eSg	46:21.10		0.02
KOLS	105.2	47	ePg	11:46:21.40		0.13
			eSg	46:35.70		-0.23
PSZ	107.3	247	ePgC	11:46:21.80		0.16
			eSg	46:36.20		-0.39

210.

2013-08-16 time: 0:55:26.57 UTC ML= 0.7
lat: 47.671N lon: 20.296E h= 1.6 km
erh= 0.3km erz= 0.9km
nr= 5 gap=165 rms=0.03
Locality: Erdőtelek
Comments:

sta	dist	azm	phase	hr mn	sec	res
TENK	4.3	115	ePgD	0:55:27.40		0.01
			eSg	55:28.00		-0.04
PSZ	40.8	312	ePgC	0:55:33.90		0.04
			eSg	55:39.50		-0.04
PENC	77.3	280	eSg	0:55:51.10		-0.03

211.

2013-08-16 time: 7:11:24.46 UTC ML= 1.2
lat: 47.127N lon: 17.913E h= 14.6 km
erh= 5.8km erz= 2.2km
nr= 14 gap=209 rms=0.67
Locality: Kádárta
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKST	17.3	32	ePg	7:11:28.20		-0.31
			eSg	11:31.80		0.13
TIH	25.3	183	ePg	7:11:29.00		-0.68
			eSg	11:32.90		-0.85
CSKK	37.2	45	ePgC	7:11:31.30		-0.29
			eSg	11:37.30		0.14
PKSG	46.6	51	ePgC	7:11:33.60		0.42
			eSg	11:37.80		-2.19
PKS9	66.2	155	ePg	7:11:38.20		1.63
			eSg	11:46.10		0.09
MORH	115.7	151	ePnD	7:11:44.60		0.55
			eSn	11:58.40		-0.93
PKSM	116.0	151	ePnD	7:11:44.40		0.32
			eSn	11:58.10		-1.29

212.

2013-08-16 time: 10:16:17.06 UTC ML= 1.9
lat: 48.376N lon: 19.835E h= 0.0 km
erh= 2.7km erz= 865km
nr= 8 gap=156 rms=0.62
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
KECS	49.6	76	ePg	10:16:25.90	-0.02
			eSg	16:32.30	-0.54
PSZ	51.1	175	ePgC	10:16:26.40	0.23
			eSg	16:33.40	0.11
VYHS	75.0	280	ePg	10:16:30.80	0.34
			eSg	16:40.50	-0.41
PENC	77.0	212	ePgC	10:16:33.10	2.29
			eSg	16:39.10	-2.44

213.

2013-08-19 time: 8:25:11.18 UTC ML= 1.5
lat: 48.702N lon: 20.704E h= 0.0 km
erh= 8.7km erz= 7.9km
nr= 7 gap=177 rms=0.49
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
KECS	29.1	213	ePg	8:25:16.10	-0.28
			eSg	25:20.50	0.06
PSZ	105.8	215	ePgD	8:25:30.60	0.53
			eSg	25:44.00	-0.80
KOLS	118.1	77	eSg	8:25:48.50	-0.22
VYHS	139.7	260	ePn	8:25:36.40	0.78
			eSn	25:54.30	-0.39

214.

2013-08-19 time: 13:34:09.22 UTC ML= 2.1
lat: 48.989N lon: 20.317E h= 5.1 km
erh= 4.4km erz= 4.7km
nr= 13 gap=129 rms=1.19
Locality: Slovakia
Comments:

sta	dist	azm	phase	hr mn sec	res
KECS	57.6	168	ePg	13:34:19.60	0.06
			eSg	34:26.10	-1.49
LANS	64.6	286	ePg	13:34:21.20	0.41
			eSg	34:28.90	-0.91
STHS	82.6	55	eSg	13:34:34.50	-1.04
VYHS	122.0	243	ePn	13:34:30.40	-0.41
			eSn	34:44.20	-3.45
PSZ	123.0	195	ePnD	13:34:31.30	0.36
			eSn	34:45.30	-2.58
KOLS	143.4	92	ePn	13:34:35.30	1.82
			eSn	34:52.20	-0.21
PENC	153.7	210	ePnD	13:34:36.60	1.84
			eSn	34:54.60	-0.09

215.

2013-08-20 time: 9:48:07.56 UTC ML= 1.0
lat: 47.644N lon: 20.268E h= 0.4 km
erh= 5.5km erz= 109km
nr= 6 gap=203 rms=0.49
Locality: Heves
Comments:

sta	dist	azm	phase	hr mn sec	res
TENK	6.2	79	ePgD	9:48:08.50	-0.16
			eSg	48:08.80	-0.72
PSZ	41.4	317	ePgD	9:48:14.80	-0.15
			eSg	48:20.90	0.19
PENC	75.8	282	ePgD	9:48:21.90	0.81
			eSg	48:31.20	-0.44

216.

2013-08-20 time: 9:48:38.67 UTC ML= 1.5
lat: 47.560N lon: 20.246E h= 0.6 km
erh= 6.9km erz= 164km
nr= 6 gap=253 rms=0.46
Locality: Jászszentandrás
Comments:

sta	dist	azm	phase	hr mn sec	res
TENK	13.0	36	ePgD	9:48:41.40	0.40
			eSg	48:42.00	-0.81
PSZ	47.8	327	ePgD	9:48:47.70	0.49
			eSg	48:53.80	-0.07
PENC	76.8	290	ePgD	9:48:51.90	-0.49
			eSg	49:03.30	0.21

217.

2013-08-20 time: 19:05:28.79 UTC ML= 1.9
lat: 47.387N lon: 19.093E h= 12.0 km
erh= 2.2km erz= 2.0km
nr= 35 gap= 60 rms=1.08
Locality: Dunaharaszti
Comments:

sta	dist	azm	phase	hr mn sec	res
BUD	12.0	334	ePgD	19:05:30.90	-0.91
			eSg	05:32.60	-1.57
PKS7	38.1	172	ePg	19:05:36.00	0.09
			eSg	05:41.80	0.34
PENC	47.1	17	ePg	19:05:36.70	-0.76
			eSg	05:43.00	-1.23
PKSG	53.1	271	ePgC	19:05:38.50	0.00
CSKK	63.0	268	ePg	19:05:43.00	2.77
			eSg	05:47.50	-1.66
SRO	75.5	309	ePg	19:05:44.00	1.57
			eSg	05:55.10	2.03
PKSN	80.0	133	ePg	19:05:44.50	1.26
PKST	81.3	260	ePg	19:05:43.40	-0.06
PSZ	84.4	46	ePgD	19:05:43.30	-0.70
			eSg	05:55.20	-0.67
PKS6	94.5	158	eP*	19:05:47.10	1.31
			eS*	05:58.40	-0.65
TENK	99.1	73	eP*D	19:05:46.90	0.42
			eS*	06:00.80	0.51
PKS2	99.9	175	eP*	19:05:47.20	0.60
			eS*	05:59.80	-0.70
TIH	105.9	239	ePnD	19:05:47.60	0.10
			eSn	06:01.40	-0.69
PKS9	108.4	215	ePn	19:05:47.10	-0.70
			eSn	06:02.50	-0.13
VYHS	124.6	351	ePn	19:05:50.00	0.17
			eSn	06:04.00	-2.24
MORH	134.6	195	ePn	19:05:50.20	-0.87
			eSn	06:06.60	-1.85
PKSM	135.1	195	ePn	19:05:50.80	-0.33
			eSn	06:06.60	-1.96
KECS	160.3	40	ePn	19:05:55.70	1.42
			eSn	06:14.60	0.44
PKSV	178.6	201	ePn	19:06:00.10	3.55
			eSn	06:21.60	3.39

218.

2013-08-21 time: 6:00:57.96 UTC ML= 0.4
lat: 47.444N lon: 18.207E h= 0.0 km
erh= 2.1km erz= 313km
nr= 6 gap=260 rms=0.18
Locality: Pusztavám
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
CSKK	9.8	156	ePg	6:01:00.00	0.29

```
                 eSg      01:01.10    0.02
PKSG  15.0 113   ePg    6:01:00.50   -0.14
                 eSg      01:02.60   -0.13
PKST  24.3 212   ePgC   6:01:02.40    0.10
                 eSg      01:05.40   -0.30
```

219.

```
 2013-08-21  time:  7:26:44.74 UTC  ML= 0.8
   lat: 47.390N  lon: 18.355E  h=  0.0 km
                 erh= 1.5km    erz= 219km
   nr=  7        gap=153       rms=0.14
   Locality: Gánt
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   2.7  86   ePgC   7:26:45.20   -0.03
                 eSg      26:45.60   -0.01
CSKK   7.7 247   ePgC   7:26:46.00   -0.12
                 eSg      26:47.00   -0.20
PKST  28.3 239   ePg    7:26:49.90    0.11
                 eSg      26:54.10    0.37
VYHS 127.9  16   ePg    7:27:07.70    0.12
```

220.

```
 2013-08-21  time:  7:26:55.09 UTC  ML= 1.1
   lat: 47.424N  lon: 18.366E  h=  0.0 km
                 erh= 5.4km    erz= 632km
   nr=  6        gap=278       rms=0.36
   Locality: Gánt
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   4.0 152   ePgC   7:26:55.80    0.00
                 eSg      26:56.40    0.05
CSKK  10.4 230   ePgD   7:26:56.70   -0.25
                 eSg      26:57.80   -0.61
PKST  31.0 234   ePg    7:27:00.90    0.26
                 eSg      27:05.80    0.84
```

221.

```
 2013-08-25  time: 10:26:09.60 UTC  ML= 1.5
   lat: 45.846N  lon: 18.556E  h= 10.0 km
                 erh= 4.9km    erz= 3.9km
   nr= 10        gap=239       rms=0.44
   Locality: Lippó
   Comments:

sta   dist azm  phase  hr mn  sec     res
PKSV  24.0 281   ePgD  10:26:14.10   -0.14
                 eSg      26:17.70   -0.17
PKSM  41.2   9   ePgD  10:26:17.10   -0.07
                 eSg      26:22.90   -0.18
MORH  41.7   9   ePgD  10:26:17.10   -0.15
                 eSg      26:22.90   -0.33
PKS9  85.1 345   ePgD  10:26:26.30    1.40
                 eSg      26:38.50    1.66
PKS6 114.4  43   ePnD  10:26:30.10    0.49
                 eSn      26:44.90   -0.33
```

222.

```
 2013-08-26  time:  7:42:23.35 UTC  ML= 0.7
   lat: 47.324N  lon: 18.390E  h=  0.0 km
                 erh= 3.3km    erz= 464km
   nr=  6        gap=255       rms=0.27
   Locality: Zámoly
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   7.5   0   ePgC   7:42:24.70    0.01
                 eSg      42:25.30   -0.44
CSKK  10.7 294   ePgD   7:42:25.50    0.23
                 eSg      42:27.00    0.24
PKST  27.9 255   ePgC   7:42:28.40    0.07
                 eSg      42:31.60   -0.61
```

223.

```
 2013-08-26  time:  7:42:37.22 UTC  ML= 0.7
   lat: 47.463N  lon: 18.375E  h=  0.0 km
                 erh= 5.9km    erz= 734km
   nr=  6        gap=303       rms=0.44
   Locality: Várgesztes
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   8.0 172   ePgC   7:42:39.10    0.46
                 eSg      42:39.60   -0.15
CSKK  14.1 218   ePgD   7:42:39.80    0.07
                 eSg      42:41.00   -0.69
PKST  34.3 229   ePgC   7:42:42.90   -0.45
                 eSg      42:48.80    0.68
```

224.

```
 2013-08-27  time: 11:35:36.93 UTC  ML= 1.8
   lat: 48.456N  lon: 19.330E  h=  0.0 km
                 erh= 1.7km    erz= 2.4km
   nr=  9        gap=137       rms=1.04
   Locality: Slovakia
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
VYHS  36.8 277   ePg   11:35:44.80    1.30
                 eSg      35:49.80    1.18
PSZ   73.0 145   ePgD  11:35:50.10    0.13
                 eSg      35:59.90   -0.24
PENC  74.1 183   eSg   11:36:00.60    0.12
LANS  77.9   7   ePg   11:35:51.50    0.66
                 eSg      36:01.10   -0.59
SMOL 140.7 273   eSn   11:36:19.10   -1.58
MODS 152.3 267   eSn   11:36:20.50   -2.74
```

225.

```
 2013-08-28  time: 13:26:59.51 UTC  ML= 0.4
   lat: 47.228N  lon: 18.281E  h=  0.0 km
                 erh= 3.8km    erz= 508km
   nr=  6        gap=256       rms=0.30
   Locality: Iszkaszentgyörgy
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
CSKK  15.1 354   ePgD  13:27:01.70   -0.51
                 eSg      27:04.40    0.08
PKST  19.0 280   ePgC  13:27:02.90   -0.01
                 eSg      27:05.60    0.04
PKSG  20.0  24   ePgD  13:27:03.50    0.41
                 eSg      27:05.90    0.03
```

226.

```
 2013-08-29  time: 10:12:16.82 UTC  ML= 0.7
   lat: 46.134N  lon: 18.225E  h=  0.0 km
                 erh= 5.0km    erz= 502km
   nr=  6        gap=259       rms=0.80
   Locality: Mánfa
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSV  27.4 176   ePgC  10:12:22.20    0.49
                 eSg      12:24.20   -1.32
PKSM  33.3  75   ePg   10:12:23.40    0.63
                 eSg      12:27.10   -0.32
MORH  33.6  74   ePg   10:12:23.40    0.57
```

```
                eSg      12:26.10   -1.42
```

227.

```
 2013-08-29  time: 11:21:35.31 UTC  ML= 0.3
   lat: 47.209N  lon: 18.266E  h=  0.0 km
                 erh= 7.2km    erz= 913km
   nr=  5        gap=263       rms=0.41
   Locality: Csór
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
CSKK  17.1 359   ePg   11:21:37.50   -0.87
                 eSg      21:40.90    0.15
PKST  18.4 287   ePgD  11:21:38.60    0.00
                 eSg      21:41.50    0.34
PKSG  22.4  25   ePgD  11:21:39.60    0.29
```

228.

```
 2013-08-30  time:  8:25:00.64 UTC  ML= 0.6
   lat: 47.440N  lon: 18.352E  h=  0.0 km
                 erh= 3.8km    erz= 467km
   nr=  6        gap=281       rms=0.28
   Locality: Oroszlány
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   6.1 151   ePg    8:25:01.70   -0.03
                 eSg      25:02.50   -0.08
CSKK  11.0 219   ePgD   8:25:02.40   -0.20
                 eSg      25:04.40    0.27
PKST  31.3 230   ePgC   8:25:06.60    0.37
                 eSg      25:10.10   -0.49
```

229.

```
 2013-08-30  time:  8:25:11.49 UTC  ML= 0.8
   lat: 47.291N  lon: 18.443E  h=  0.0 km
                 erh= 2.1km    erz= 278km
   nr=  6        gap=283       rms=0.73
   Locality: Pátka
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG  11.9 341   ePg    8:25:13.60   -0.02
                 eSg      25:14.00   -1.28
CSKK  16.0 300   ePgD   8:25:14.20   -0.14
                 eSg      25:15.70   -0.87
PKST  31.1 263   ePgC   8:25:18.10    1.05
                 eSg      25:21.70    0.32
```

230.

```
 2013-08-30  time:  8:25:41.65 UTC  ML= 0.9
   lat: 47.435N  lon: 18.386E  h=  0.0 km
                 erh= 7.9km    erz= 988km
   nr=  6        gap=302       rms=0.58
   Locality: Várgesztes
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   4.8 176   ePg    8:25:42.50    0.00
                 eSg      25:43.20    0.03
CSKK  12.4 230   ePgD   8:25:43.30   -0.56
                 eSg      25:44.60   -0.98
PKST  33.0 234   ePgC   8:25:48.20    0.66
                 eSg      25:52.80    0.67
```

231.

```
 2013-09-01  time:  2:28:40.02 UTC  ML= 0.7
   lat: 47.340N  lon: 18.230E  h=  7.3 km
                 erh= 9.0km    erz= 3.1km
   nr=  6        gap=174       rms=0.20
   Locality: Bodajk
   Comments:

sta   dist azm  phase  hr mn  sec     res
CSKK   3.5  41   ePgD   2:28:41.30   -0.18
                 eSg      28:42.60   -0.01
PKSG  13.4  64   ePgD   2:28:42.90    0.14
                 eSg      28:44.90    0.01
PKST  17.3 239   ePg    2:28:43.20   -0.19
                 eSg      28:46.50    0.49
```

232.

```
 2013-09-02  time:  8:07:19.42 UTC  ML= 0.5
   lat: 47.421N  lon: 18.331E  h=  0.0 km
                 erh= 2.3km    erz= 207km
   nr=  5        gap=254       rms=0.10
   Locality: Oroszlány
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   5.6 126   ePgD   8:07:20.40   -0.02
                 eSg      07:21.10   -0.10
CSKK   8.3 219   ePgD   8:07:21.00    0.09
                 eSg      07:22.20    0.13
PKST  28.7 231   eSg    8:07:28.40   -0.16
```

233.

```
 2013-09-02  time:  8:17:18.02 UTC  ML= 1.1
   lat: 47.459N  lon: 18.386E  h=  0.0 km
                 erh= 7.4km    erz= 900km
   nr=  6        gap=307       rms=0.53
   Locality: Várgesztes
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   7.5 177   ePgC   8:17:19.80    0.44
                 eSg      17:20.30   -0.11
CSKK  14.3 222   ePgD   8:17:20.60    0.03
                 eSg      17:21.50   -1.06
PKST  34.7 230   ePgC   8:17:23.80   -0.41
                 eSg      17:30.00    0.96
```

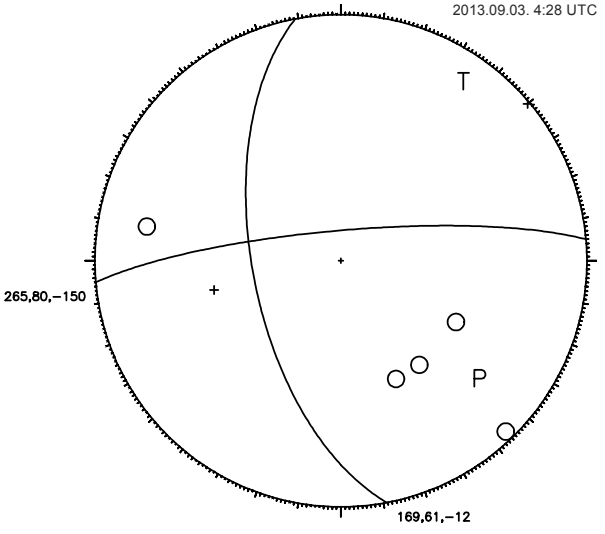
234.

```
 2013-09-02  time: 10:59:37.46 UTC  ML=
   lat: 48.792N  lon: 21.163E  h=  0.0 km
                 erh= 2.8km    erz= 4.7km
   nr=  8        gap=156       rms=0.57
   Locality: Slovakia
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
KECS  60.7 235   ePg   10:59:48.40    0.11
                 eSg      59:55.60   -1.14
STHS  69.7   5   eSg   10:59:59.40   -0.20
KOLS  82.9  79   ePg   10:59:52.70    0.43
                 eSg   11:00:02.80   -1.02
LANS 130.4 288   ePg   10:60:01.60    0.86
VYHS 174.7 259   ePn   10:60:06.30    0.02
                 eSn      60:28.40   -0.35
```

235.

2013-09-03 time: 4:28:51.34 UTC ML= 2.1
lat: 47.665N lon: 20.261E h= 2.5 km
erh= 2.6km erz= 2.6km
nr= 29 gap= 44 rms=1.24
Locality: Erdőtelek
Comments:

sta	dist	azm	phase	hr mn	sec	res
TENK	6.7	100	ePgD	4:28:52.50		-0.11
			eSg		28:53.00	-0.61
PSZ	39.3	316	ePgD	4:28:58.80		0.43
			eSg		29:02.00	-1.86
PENC	74.8	281	ePg	4:29:04.80		0.11
			eSg		29:14.40	-0.71
PKSN	90.4	199	ePg	4:29:07.50		0.02
			eSg		29:20.00	-0.08
KECS	92.5	10	ePg	4:29:08.40		0.54
			eSg		29:19.70	-1.05
PKS7	107.8	230	ePgC	4:29:10.10		-0.49
			eSg		29:24.40	-1.21
VYHS	140.6	311	eSn	4:29:32.60		-1.88
PKSG	144.1	258	ePn	4:29:17.10		1.09
			eSn		29:33.60	-1.65
CSKK	154.4	257	ePnC	4:29:18.80		1.51
			eSn		29:37.60	0.07
LANS	175.3	340	ePn	4:29:21.50		1.60
			eSn		29:40.80	-1.39
TRPA	178.1	73	ePn	4:29:22.50		2.26
			eSn		29:42.00	-0.79
MORH	202.7	217	ePn	4:29:25.20		1.88
			eSn		29:49.90	1.63
PKSM	203.2	217	ePn	4:29:25.50		2.12
			eSn		29:50.80	2.42
KOLS	205.4	47	e n	4:29:23.70		0.05
			eSn		29:52.30	3.44
DRGR	209.4	118	iPnD	4:29:22.00		-2.16
BZS	250.2	155	iPnD	4:29:25.80		-3.45
GZR	317.8	143	iPnD	4:29:35.50		-2.17



236.

2013-09-05 time: 6:15:19.14 UTC ML= 1.6
lat: 47.985N lon: 19.966E h= 0.2 km
erh= 1.9km erz= 2.7km
nr= 9 gap=181 rms=0.38
Locality: Mátramindszent
Comments:

sta	dist	azm	phase	hr mn	sec	res
PSZ	9.2	216	ePgD	6:15:20.50		-0.28
			eSg		15:22.40	0.35
PENC	55.6	247	ePg	6:15:28.60		-0.46
			eSg		15:37.10	0.29
KECS	67.5	35	eSg	6:15:40.60		0.01
VYHS	101.2	304	ePg	6:15:37.60		0.39
			eSg		15:51.00	-0.31
LANS	134.7	344	ePn	6:15:43.90		0.96
			eSn		16:01.50	0.00

237.

2013-09-05 time: 11:14:20.18 UTC ML= 1.3
lat: 47.331N lon: 18.566E h= 10.0 km
erh= 5.4km erz= 3.6km
nr= 8 gap=250 rms=0.93
Locality: Lovasberény
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKSG	14.9	297	ePg	11:14:24.60		1.22
			eSg		14:26.10	0.23
CSKK	23.3	279	ePgD	11:14:24.60		-0.11
			eSg		14:26.80	-1.45
PKST	41.0	259	ePgD	11:14:28.00		0.29
			eSg		14:32.80	-0.78
VYHS	130.9	9	ePn	11:14:42.50		0.24
			eSn		14:56.50	-2.99

238.

2013-09-08 time: 13:00:42.67 UTC ML= 4.0
lat: 45.598N lon: 22.830E h= 3.7 km
erh= 2.4km erz= 2.6km
nr= 32 gap= 39 rms=0.89
Locality: Romania
Comments:

sta	dist	azm	phase	hr mn	sec	res
GZR	23.1	190	iPg	13:00:47.40		0.56
DEV	32.3	10	iPg	13:00:48.90		0.44
LOT	75.2	103	iPgD	13:00:55.00		-1.12
BZS	94.7	271	iPgD	13:00:58.90		-0.69
SRE	108.1	164	iPg	13:01:02.50		0.53
MDVR	126.3	224	iPn	13:01:04.20		-0.77
TIM	126.4	277	iPn	13:01:05.00		0.02
DRGR	133.0	356	iPn	13:01:05.30		-0.51
BANR	134.6	260	iPnD	13:01:06.50		0.49
MDB	134.7	63	iPn	13:01:05.10		-0.92
CJR	137.5	26	iPn	13:01:05.70		-0.66
ARR	143.3	100	iPnD	13:01:05.60		-1.49
VOIR	174.3	96	iPnD	13:01:10.20		-0.76
MTUR	179.6	103	iPn	13:01:12.00		0.38
GOLR	187.5	117	iPnD	13:01:15.00		2.40
ARCR	202.7	35	iPn	13:01:15.30		0.80
DOPR	203.1	78	iPn	13:01:15.20		0.64
HUMR	206.9	125	iPnD	13:01:16.70		1.68
LTVH	211.1	340	ePnD	13:01:19.70		4.15
			eSn		01:43.90	2.71
OZUR	236.2	76	iPn	13:01:19.50		0.82
BMR	236.3	12	iPn	13:01:19.00		0.32
MLR	243.5	93	iPnD	13:01:20.50		0.91
PKSN	270.3	302	ePnD	13:01:24.00		1.07
			eSn		01:55.50	1.16
PKS6	276.0	294	ePnC	13:01:24.30		0.66
			eSn		01:54.80	-0.81
TRPA	282.4	355	ePnD	13:01:25.20		0.76
			eSn		02:04.30	7.27
SULR	288.1	111	iPn	13:01:26.30		1.15
BURB	289.3	39	iPn	13:01:26.60		1.30
BIZ	293.1	59	iPn	13:01:27.10		1.32
PKS2	297.1	290	ePnC	13:01:26.90		0.63
			eSn		02:00.20	-0.09
PLOR	298.7	85	iPn	13:01:27.30		0.83
VRI	304.8	84	iPn	13:01:28.20		0.97
TESR	312.5	71	iPn	13:01:29.00		0.81

Hypocenter Parameters **Földrengés paraméterek**

PKS7	325.3	300	ePnD	13:01:30.30	0.51
			eSn	02:05.70	-0.85
MORH	332.0	282	ePnD	13:01:30.50	-0.13
			eSn	02:05.90	-2.13
PKSM	332.2	282	ePnD	13:01:30.50	-0.14
			eSn	02:05.80	-2.26
VTS	335.4	175	iPn	13:01:30.80	-0.24
PSZ	341.9	319	ePn	13:01:32.20	0.35
			eSn	02:07.40	-2.82
PETR	343.3	88	iPn	13:01:33.20	1.17
PKSV	357.8	275	ePnD	13:01:34.20	0.37
			eSn	02:12.10	-1.65
BUD	359.5	306	ePnD	13:01:35.90	1.85
			eSn	02:14.40	0.28
PENC	364.8	312	ePn	13:01:35.80	1.08
			eSn	02:16.40	1.08
KECS	367.0	331	ePn	13:01:36.20	1.22
			eSn	02:27.40	11.61
PKS9	368.8	287	ePnC	13:01:35.40	0.19
			eSn	02:14.80	-1.39
KOLS	373.2	354	ePn	13:01:38.00	2.24
			eSn	02:29.70	12.52
PKSG	394.9	300	ePn	13:01:39.70	1.23
			eSn	02:22.70	0.71
CSKK	402.1	299	ePnD	13:01:40.20	0.84
			eSn	02:22.80	-0.78
PKST	412.3	297	ePnD	13:01:41.10	0.46
			eSn	02:25.50	-0.36
HARR	413.7	104	iPn	13:01:41.80	1.00
CFR	418.1	96	iPn	13:01:40.80	-0.56
TLB	425.4	105	iPn	13:01:42.60	0.33
VYHS	442.5	317	ePn	13:01:44.50	0.10
TIRR	457.8	106	iPn	13:01:46.70	0.39
LANS	469.6	327	ePn	13:01:49.10	1.32
			eSn	02:59.10	20.53
SMOL	523.0	308	ePn	13:01:57.10	2.66
MODS	523.2	306	ePn	13:01:53.20	-1.26
ZST	523.4	303	ePn	13:01:53.50	-0.99
SOP	533.3	296	ePnD	13:01:56.00	0.28
			eSn	02:49.80	-2.90
GCIS	561.5	273	iPn	13:01:59.00	-0.23
CRES	574.7	273	iPn	13:02:00.60	-0.29
OKC	588.0	323	ePn	13:02:03.20	0.66
			eSn	03:04.80	-0.04
ARSA	591.0	288	Pn	13:02:03.10	0.18
			Sn	03:01.50	-4.02
BOJS	591.9	269	iPn	13:02:03.00	-0.03
CONA	592.0	296	Pn	13:02:03.20	0.16
			Sn	03:02.90	-2.84
MORC	611.2	319	iPn	13:02:06.30	0.87
SOKA	614.4	281	Pn	13:02:05.10	-0.74
			Sn	03:07.70	-3.01
VISS	622.8	272	iPn	13:02:06.60	-0.28
VRAC	625.6	311	iPnD	13:02:06.80	-0.44
OBKA	648.9	279	Pn	13:02:10.70	0.57
			Sn	03:15.50	-2.86
MOA	701.0	291	Pn	13:02:17.60	0.97
DPC	717.9	317	ePn	13:02:20.20	1.46
			eSn	03:32.10	-1.58
UPC	745.9	317	ePn	13:02:23.30	1.07
KBA	748.7	283	Pn	13:02:23.40	0.83
GOPC	770.7	309	ePn	13:02:25.90	0.57
			eSn	03:43.20	-2.21

239.

2013-09-08 time: 13:22:12.69 UTC ML= 4.4
lat: 45.600N lon: 22.846E h= 5.1 km
erh= 1.8km erz= 1.9km
nr= 33 gap= 38 rms=0.67
Locality: Romania
Comments:

sta	dist	azm	phase	hr mn	sec	res
GZR	23.6	193	iPg	13:22:17.50		0.50
DEV	31.8	8	iPg	13:22:18.80		0.35
LOT	74.1	103	iPgD	13:22:24.70		-1.26
BZS	95.9	271	iPgD	13:22:29.00		-0.84
SRE	108.0	165	iPg	13:22:32.50		0.51
MDVR	127.3	224	iPn	13:22:34.40		-0.54
TIM	127.5	277	iPnD	13:22:35.20		0.22
DRGR	132.9	356	iPn	13:22:35.30		-0.35
MDB	133.5	63	iPn	13:22:35.30		-0.42
BANR	135.9	260	iPnD	13:22:36.40		0.38
CJR	136.7	25	iPn	13:22:35.80		-0.33
ARR	142.1	100	iPnD	13:22:35.70		-1.10
VOIR	173.1	96	iPnD	13:22:40.30		-0.36
MTUR	178.5	103	iPn	13:22:41.70		0.37
ARCR	201.9	35	iPn	13:22:44.40		0.15
DOPR	201.9	78	iPn	13:22:45.00		0.75
HUMR	206.0	125	iPnD	13:22:45.80		1.04
LTVH	211.3	340	ePn	13:22:47.00		1.58
OZUR	235.0	76	iPnD	13:22:49.20		0.83
BMR	235.8	12	iPn	13:22:48.80		0.32
MLR	242.3	93	iPnD	13:22:50.40		1.11
PKSN	271.2	302	ePnD	13:22:54.00		1.11
			eSn	23:25.40		1.15
PKS6	277.0	294	ePnC	13:22:54.30		0.68
			eSn	23:25.20		-0.34
TRPA	282.3	355	ePnD	13:22:55.00		0.72
			eSn	23:24.20		-2.51
BUC1	287.0	119	iPn	13:22:56.00		1.14
SULR	287.1	111	iPnD	13:22:56.00		1.13
BURB	288.4	39	iPn	13:22:56.30		1.26
BIZ	292.0	59	iPn	13:22:56.90		1.42
ISR	294.6	100	iPnD	13:22:57.90		2.09
ZIMR	297.4	138	iPn	13:22:56.10		-0.05
PLOR	297.5	85	iPn	13:22:57.30		1.14
PKS2	298.2	289	ePnC	13:22:57.00		0.75
			eSn	23:30.00		-0.23
VRI	303.6	84	iPn	13:22:58.10		1.17
TESR	311.3	71	iPn	13:22:58.90		1.01
PKS7	326.2	300	ePnD	13:23:00.30		0.55
MORH	333.1	282	ePnD	13:23:00.50		-0.12
			eSn	23:36.10		-1.90
PKSM	333.3	282	ePnD	13:23:00.50		-0.13
			eSn	23:36.20		-1.83
VTS	335.5	175	iPnD	13:23:00.40		-0.51
PSZ	342.5	319	ePnD	13:23:01.80		0.02
			eSn	23:37.40		-2.66
PKSV	358.9	275	ePnD	13:23:03.80		-0.03
			eSn	23:41.00		-2.72
BUD	360.3	306	ePnD	13:23:04.20		0.20
			eSn	23:44.10		0.08
PENC	365.6	312	ePnD	13:23:06.50		1.84
KECS	367.3	331	ePn	13:23:06.00		1.12
			eSn	23:44.80		-0.78
PKS9	369.9	287	ePnD	13:23:05.50		0.31
			eSn	23:44.30		-1.84
AMRR	370.1	107	iPn	13:23:05.70		0.48
KOLS	373.1	353	ePn	13:23:07.00		1.40
			eSn	23:59.70		12.83
BIR	378.1	79	iPn	13:23:07.60		1.38
PKSG	395.8	300	ePnD	13:23:09.40		0.97
CSKK	403.0	299	ePnC	13:23:10.00		0.67
			eSn	23:52.80		-0.70
IAS	403.6	64	iPnD	13:23:10.30		0.89
TIH	408.4	291	ePnD	13:23:10.50		0.50
			eSn	23:52.60		-2.09
HARR	412.5	104	iPn	13:23:11.60		1.09
PKST	413.3	297	ePnD	13:23:11.30		0.69
			eSn	23:55.40		-0.38
CFR	417.0	96	iPn	13:23:10.80		-0.27
TLB	424.3	105	iPn	13:23:12.70		0.72
STHS	441.2	344	ePn	13:23:16.50		2.41
			eSn	24:19.70		17.72
VYHS	443.1	317	ePn	13:23:14.50		0.17
			eSn	24:02.30		-0.11
TIRR	456.7	106	iPn	13:23:16.50		0.48
TLCR	469.7	96	iPn	13:23:18.00		0.36

```
LANS 470.0 327   ePn   13:23:18.90    1.22
                 eSn      24:27.80   19.42
BEHE 479.8 282   ePn   13:23:19.40    0.50
MANR 496.3 114   iPnD  13:23:21.60    0.64
MODS 524.0 306   ePn   13:23:23.10   -1.31
                 eSn      24:17.00   -3.35
ZST  524.3 303   ePn   13:23:22.90   -1.55
                 eSn      24:17.50   -2.92
SOP  534.2 296   ePnD  13:23:26.20    0.51
                 eSn      24:19.70   -2.93
GCIS 562.6 273   iPn   13:23:28.90   -0.33
                 eSn      24:25.60   -3.33
CRES 575.9 273   iPn   13:23:30.50   -0.38
                 eSn      24:28.60   -3.28
```

240.

```
 2013-09-09  time:  6:08:53.20 UTC  ML= 1.5
   lat: 47.980N  lon: 20.010E  h=  0.0 km
                 erh= 3.8km    erz= 821km
   nr=  6        gap=199       rms=0.48
   Locality: Mátraballa
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PSZ   11.0 231   ePgD   6:08:54.70   -0.47
                 eSg      08:56.70    0.00
PENC  58.4 249   eSg    6:09:12.60    0.84
KECS  66.2  32   eSg    6:09:14.50    0.27
VYHS 104.2 303   ePg    6:09:12.20    0.39
                 eSg      09:25.80   -0.52
```

241.

```
 2013-09-09  time:  8:07:34.79 UTC  ML= 0.7
   lat: 47.456N  lon: 18.380E  h=  0.0 km
                 erh= 5.2km    erz= 637km
   nr=  6        gap=304       rms=0.38
   Locality: Várgesztes
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   7.2 174   ePgC   8:07:36.30    0.22
                 eSg      07:36.90   -0.18
CSKK  13.8 221   ePgD   8:07:37.00   -0.25
                 eSg      07:38.40   -0.76
PKST  34.1 230   ePgC   8:07:41.00    0.12
                 eSg      07:46.40    0.76
```

242.

```
 2013-09-09  time:  8:15:52.10 UTC  ML= 0.8
   lat: 47.501N  lon: 18.403E  h=  0.0 km
                 erh= 7.2km    erz= 841km
   nr=  6        gap=318       rms=0.50
   Locality: Várgesztes
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG  12.2 184   ePgC   8:15:55.00    0.72
                 eSg      15:55.40   -0.58
CSKK  18.8 215   ePg    8:15:55.60    0.15
                 eSg      15:58.10    0.03
PKST  38.8 226   ePgC   8:15:58.40   -0.62
                 eSg      16:04.60    0.18
```

243.

```
 2013-09-09  time:  8:16:17.29 UTC  ML= 0.8
   lat: 47.486N  lon: 18.333E  h=  0.0 km
                 erh= 8.2km    erz= ***km
   nr=  5        gap=296       rms=0.48
   Locality: Oroszlány
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG  11.3 157   ePgC   8:16:19.50    0.18
                 eSg      16:20.10   -0.80
CSKK  14.7 202   eSg    8:16:22.80    0.84
PKST  33.8 222   ePgC   8:16:23.40    0.07
                 eSg      16:27.50   -0.54
```

244.

```
 2013-09-10  time:  2:07:40.47 UTC  ML= 1.6
   lat: 47.658N  lon: 20.348E  h= 10.0 km
                 erh= 5.1km    erz= 2.4km
   nr=  9        gap=226       rms=0.51
   Locality: Tenk
   Comments:

sta   dist azm  phase  hr mn  sec     res
TENK   0.4 177   ePgC   2:07:42.50    0.24
                 eSg      07:42.80   -0.85
PSZ   44.7 310   ePgD   2:07:49.00    0.36
                 eSg      07:54.60   -0.42
PENC  81.3 280   ePg    2:07:55.50    0.39
                 eSg      08:06.60    0.08
PKS7 112.5 233   ePnD   2:08:00.10   -0.15
                 eSn      08:15.00   -0.68
PKS6 131.8 207   eSn    2:08:24.10    4.14
```

245.

```
 2013-09-10  time:  9:37:38.53 UTC  ML= 1.6
   lat: 48.626N  lon: 20.685E  h=  0.0 km
                 erh= 3.8km    erz= 5.6km
   nr= 10        gap=143       rms=0.85
   Locality: Slovakia
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
KECS  21.7 223   ePg    9:37:42.20   -0.21
                 eSg      37:46.20    0.77
PSZ   98.2 217   ePgC   9:37:56.10    0.03
                 eSg      38:09.00   -0.75
LANS 106.6 303   ePg    9:37:58.00    0.43
                 eSg      38:12.20   -0.22
KOLS 121.6  74   ePg    9:38:02.40    2.15
                 eSg      38:15.10   -2.08
VYHS 137.3 264   ePn    9:38:02.70    0.02
                 eSn      38:20.30   -1.22
```

246.

```
 2013-09-10  time: 11:40:59.26 UTC  ML= 0.5
   lat: 47.462N  lon: 18.042E  h=  0.0 km
                 erh= 2.7km    erz= 337km
   nr=  6        gap=285       rms=0.20
   Locality: Vérteskethely
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
CSKK  19.8 124   ePgC  11:41:02.60   -0.20
                 eSg      41:05.90    0.34
PKST  22.6 182   ePgC  11:41:03.40    0.10
                 eSg      41:06.30   -0.15
PKSG  27.4 107   ePgD  11:41:04.30    0.14
                 eSg      41:07.70   -0.28
```

247.

```
 2013-09-11  time:  6:10:29.77 UTC  ML= 0.8
   lat: 45.853N  lon: 18.425E  h=  0.0 km
                 erh= 1.4km    erz= 146km
   nr=  6        gap=263       rms=0.09
   Locality: Nagyharsány
   Comments: probably explosion
```

sta	dist	azm	phase	hr mn	sec	res
PKSV	14.0	286	ePg	6:10:32.40		0.13
			eSg		10:34.10	-0.12
PKSM	43.2	23	ePgC	6:10:37.50		0.02
			eSg		10:43.60	0.10
MORH	43.7	23	ePgC	6:10:37.50		-0.07
			eSg		10:43.60	-0.06

248.

2013-09-11 time: 9:03:58.81 UTC ML= 1.5
lat: 47.822N lon: 19.047E h= 0.0 km
erh= 7.6km erz= 882km
nr= 6 gap=247 rms=0.52
Locality: Verőce
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PENC	17.9	101	ePg	9:04:01.40		-0.61
			eSg		04:04.80	0.29
PSZ	64.3	80	ePgC	9:04:10.50		0.21
			eSg		04:19.10	-0.15
VYHS	76.4	348	ePg	9:04:13.20		0.75
			eSg		04:22.30	-0.79

249.

2013-09-16 time: 7:47:38.53 UTC ML= 0.8
lat: 47.421N lon: 18.346E h= 0.0 km
erh= 6.4km erz= 677km
nr= 6 gap=262 rms=0.41
Locality: Gánt
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSG	4.7	134	ePgC	7:47:39.40		0.03
			eSg		47:39.90	-0.13
CSKK	9.1	225	ePgD	7:47:39.90		-0.26
			eSg		47:40.70	-0.73
PKST	29.7	233	ePgC	7:47:44.10		0.27
			eSg		47:48.90	0.94

250.

2013-09-18 time: 7:30:59.09 UTC ML= 0.6
lat: 45.856N lon: 18.416E h= 0.0 km
erh= 2.1km erz= 209km
nr= 6 gap=262 rms=0.12
Locality: Nagyharsány
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSV	13.2	286	ePg	7:31:01.50		0.04
			eSg		31:03.30	0.00
PKSM	43.3	24	ePgC	7:31:06.80		-0.02
			eSg		31:13.10	0.25
MORH	43.8	24	ePgC	7:31:06.90		-0.01
			eSg		31:12.70	-0.30

251.

2013-09-20 time: 1:41:07.82 UTC ML=-0.2
lat: 47.411N lon: 18.171E h= 1.4 km
erh= 8.9km erz=48.3km
nr= 6 gap=246 rms=0.41
Locality: Felsődobos
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	8.6	128	ePgC	1:41:09.10		-0.28
			eSg		41:09.50	-1.09
PKSG	16.7	97	ePgD	1:41:11.30		0.48
			eSg		41:13.00	-0.16
PKST	19.8	211	ePgC	1:41:11.50		0.14
			eSg		41:14.30	0.17

252.

2013-09-20 time: 2:06:33.50 UTC ML= 3.8
lat: 47.964N lon: 16.454E h= 6.5 km
erh= 1.1km erz= 1.1km
nr= 45 gap= 54 rms=0.39
Locality: Austria
Comments: felt at Sopron

sta	dist	azm	phase	hr mn	sec	res
SOP	32.2	166	iPg	2:06:39.70		0.33
			eSg		06:43.40	-0.54
ZST	54.8	62	ePg	2:06:43.20		-0.16
			eSg		06:50.90	-0.14
MODS	76.3	53	ePg	2:06:46.70		-0.48
			eSg		06:57.70	-0.15
SMOL	94.8	50	ePg	2:06:50.80		0.33
			eSg		07:04.20	0.50
ARSA	105.8	221	iPg	2:06:51.10		-1.33
			eSg		07:03.00	-4.20
SRO	140.1	97	ePn	2:06:57.00		-0.17
			eSn		07:14.20	-1.42
PKST	142.3	123	iPn	2:06:57.30		-0.15
SRO2	146.9	99	ePn	2:06:56.80		-1.22
			eSn		07:14.70	-2.43
CSKK	151.2	116	iPn	2:06:58.50		-0.06
PKSG	158.7	114	iPn	2:07:00.10		0.61
TIH	160.6	137	iPn	2:07:00.00		0.28
TREC	164.3	334	ePn	2:07:00.30		0.12
			eSn		07:19.60	-1.40
BEHE	167.8	172	iPn	2:07:00.70		0.07
BISS	177.4	214	iPn	2:07:01.70		-0.13
			iSn		07:04.00	-19.92
PERS	179.0	214	iPn	2:07:01.90		-0.12
			iSn		07:04.10	-20.16
GROS	182.0	203	iPnD	2:07:02.00		-0.40
			iSn		07:04.20	-20.73
VYHS	186.5	72	ePn	2:07:02.70		-0.26
BUD	200.1	105	iPn	2:07:04.50		-0.15
PKS9	206.2	138	iPn	2:07:05.70		0.29
PENC	212.4	95	iPn	2:07:06.30		0.11
DOBS	215.1	200	iPn	2:07:06.20		-0.33
			iSn		07:10.30	-21.99
OBKA	216.7	222	iPn	2:07:07.00		0.27
GOLS	226.1	196	ePn	2:07:07.80		-0.10
			iSn		07:12.30	-22.42
PKS7	228.0	117	iPn	2:07:08.20		0.07
CESS	233.8	199	iPn	2:07:08.90		0.05
			iSn		07:13.60	-22.83
KRLC	236.0	6	ePn	2:07:09.80		0.67
			eSn		07:35.70	-1.22
PDKS	237.0	208	iPn	2:07:09.60		0.35
			iSn		07:14.80	-22.34
GCIS	241.5	195	ePn	2:07:10.00		0.19
OKC	242.5	31	ePn	2:07:10.50		0.56
			eSn		07:36.60	-1.77
KHC	248.9	301	ePn	2:07:11.40		0.67
			eSn		07:38.40	-1.37
CRES	249.5	198	iPn	2:07:10.90		0.08
KBA	254.0	247	iPn	2:07:12.40		1.02
MORH	255.8	139	iPn	2:07:11.00		-0.60
PKSM	256.0	140	iPn	2:07:11.20		-0.42
PSZ	257.1	91	iPn	2:07:11.80		0.04
LANS	258.7	59	ePn	2:07:12.50		0.54
			eSn		07:42.20	0.25
PRU	265.1	328	ePn	2:07:12.60		-0.16
			eSn		07:42.50	-0.88
PKS2	265.4	128	iPn	2:07:12.90		0.10
DPC	265.6	358	ePn	2:07:13.00		0.19
			eSn		07:41.30	-2.18
PKSV	268.3	149	iPn	2:07:12.90		-0.26
VISS	269.9	207	iPn	2:07:13.30		-0.05

```
PRA  277.0 328   ePn    2:07:14.70    0.46
                 eSn      07:50.80    4.78
PKS6 280.0 123   iPn    2:07:14.70    0.09
PKSN 283.5 115   iPn    2:07:15.40    0.35
UPC  284.7 354   ePn    2:07:15.10   -0.10
                 eSn      07:54.80    7.08
KECS 305.1  79   ePn    2:07:18.00    0.26
PVCC 316.5 334   ePn    2:07:18.80   -0.37
                 eSn      08:02.60    7.82
BLY  357.4 171   iPn    2:07:15.20   -9.07
NKC  386.4 311   ePn    2:07:28.50    0.62
                 eSn      08:22.80   12.51
STHS 387.9  65   ePn    2:07:28.70    0.63
LTVH 414.1  99   iPn    2:07:31.20   -0.13
SIRR 437.8 116   iPnD   2:07:29.80   -4.49
KOLS 443.8  76   ePn    2:07:34.80   -0.24
TRPA 454.1  88   iPn    2:07:27.30   -9.02
BANR 459.0 129   iPnD   2:07:36.40   -0.53
BZS  472.7 124   iPnD   2:07:35.00   -3.65
DRGR 490.2 105   iPn    2:07:33.50   -7.32
BMR  528.4  94   iPn    2:07:37.00   -8.59
DEV  543.0 115   iPnD   2:07:42.60   -4.80
CJR  557.5 104   iPnD   2:07:41.90   -7.32
ARCR 602.9  99   iPnD   2:07:46.60   -8.28
BURB 657.8  93   iPnD   2:07:52.80   -8.92
```

253.

```
 2013-09-22  time: 11:12:19.81 UTC  ML= 2.0
   lat: 48.287N  lon: 21.322E  h=  1.9 km
                 erh= 2.5km    erz= 4.4km
   nr= 10        gap=101       rms=0.73
   Locality: Sima
   Comments:

sta   dist azm  phase  hr mn  sec     res
KECS  65.6 289   ePg   11:12:31.70    0.16
                 eSg      12:39.80   -0.89
TRPA  92.2 101   iPgD  11:12:35.80   -0.47
KOLS 100.4  44   ePg   11:12:38.80    1.05
                 eSg      12:51.70   -0.03
PSZ  113.9 249   iPgD  11:12:39.60   -0.56
STHS 125.7 357   eSg   11:12:59.50   -0.28
VYHS 185.5 277   ePn   11:12:52.00    2.27
                 eSn      13:12.80   -0.27
DRGR 196.5 148   iPn   11:12:52.10    1.00
```

254.

```
 2013-09-23  time:  7:08:42.11 UTC  ML= 0.9
   lat: 47.415N  lon: 18.343E  h=  0.0 km
                 erh= 3.4km    erz= 323km
   nr=  6        gap=252       rms=0.19
   Locality: Gánt
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   4.5 125   ePgC   7:08:43.00    0.10
                 eSg      08:43.50   -0.02
CSKK   8.5 227   ePgD   7:08:43.50   -0.12
                 eSg      08:44.50   -0.29
PKST  29.0 233   ePgC   7:08:47.30    0.01
                 eSg      08:51.90    0.56
```

255.

```
 2013-09-23  time:  7:08:54.26 UTC  ML= 0.8
   lat: 47.437N  lon: 18.338E  h=  0.0 km
                 erh= 3.6km    erz= 427km
   nr=  6        gap=272       rms=0.26
   Locality: Oroszlány
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   6.4 141   ePgC   7:08:55.60    0.20
                 eSg      08:56.10   -0.19
CSKK  10.0 215   ePgD   7:08:56.10    0.05
                 eSg      08:57.00   -0.45
PKST  30.3 229   ePgC   7:08:59.50   -0.16
                 eSg      09:04.40    0.52
```

256.

```
 2013-09-24  time: 13:53:17.69 UTC  ML= 2.1
   lat: 47.966N  lon: 16.413E  h=  1.7 km
                 erh= 2.0km    erz= 2.1km
   nr= 22        gap= 55       rms=0.60
   Locality: Austria
   Comments:

sta   dist azm  phase  hr mn  sec     res
SOP   33.2 161   ePgD  13:53:24.20    0.57
                 eSg      53:27.90   -0.37
CONA  41.3 264    Pg   13:53:25.10    0.02
                  Sg      53:30.30   -0.54
ZST   57.4  63   ePg   13:53:27.70   -0.24
                 eSg      53:36.20    0.27
MODS  78.6  55   ePg   13:53:31.20   -0.54
                 eSg      53:42.30   -0.39
SMOL  96.9  51   ePg   13:53:35.60    0.60
                 eSg      53:49.20    0.69
ARSA 104.0 220    Pg   13:53:35.40   -0.86
                  Sg      53:47.50   -3.24
SRO  143.1  97   ePn   13:53:43.30    0.95
CSKK 154.1 116   ePnD  13:53:43.20   -0.52
                 eSn      54:00.70   -3.33
MOA  161.1 265    Pn   13:53:44.50   -0.09
                  Sn      54:04.50   -1.08
PKSG 161.6 113   ePnD  13:53:44.80    0.14
                 eSn      54:04.10   -1.60
TREC 162.8 335   ePn   13:53:44.70   -0.11
                 eSn      54:04.40   -1.56
TIH  162.8 137   ePn   13:53:45.10    0.29
                 eSn      54:09.10    3.14
SOKA 177.2 216    Pn   13:53:46.50   -0.11
                  Sn      54:07.20   -1.96
VYHS 189.3  72   e n   13:53:47.20   -0.92
                 eSn      54:12.80    0.95
OBKA 214.9 221    Pn   13:53:51.90    0.60
                  Sn      54:19.90    2.38
PENC 215.4  95   ePn   13:53:51.20   -0.17
KHC  246.2 302   ePn   13:53:56.20    0.99
                 eSn      54:22.60   -1.87
GOPC 247.3 331   eSn   13:54:29.10    4.39
KBA  251.3 247    Pn   13:53:59.20    3.35
                  Sn      54:28.20    2.59
MYKA 256.9 235    Pn   13:54:01.30    4.75
                  Sn      54:32.40    5.54
MORH 258.0 139   ePnD  13:53:55.70   -0.98
                 eSn      54:20.70   -6.38
PKSM 258.2 139   ePnC  13:53:55.60   -1.10
                 eSn      54:22.30   -4.83
PSZ  260.1  91   eSn   13:54:27.30   -0.27
PRU  263.4 329   ePn   13:54:01.20    3.85
                 eSn      54:32.30    4.01
DPC  265.2 359   ePn   13:53:57.10   -0.48
                 eSn      54:34.00    5.30
PRA  275.2 328   eSn   13:54:37.30    6.38
UPC  284.2 354   eSn   13:54:39.20    6.30
ABTA 324.4 245    Pn   13:54:11.90    6.94
                  Sn      54:51.10    9.27
WTTA 367.5 258    Sn   13:55:04.30   12.89
NKC  384.0 311   eSn   13:55:07.00   11.94
RETA 427.3 263    Sn   13:55:21.20   16.53
FETA 441.0 256    Pn   13:54:30.80   11.30
```

257.

2013-09-25 time: 9:44:05.61 UTC ML= 0.8
lat: 47.440N lon: 18.047E h= 0.0 km
erh= 2.7km erz= 337km
nr= 6 gap=279 rms=0.20
Locality: Aka
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
CSKK	18.2	118	ePgD	9:44:08.60		-0.27
			eSg	44:11.20		-0.21
PKST	20.2	183	ePgD	9:44:09.20		-0.01
			eSg	44:12.20		0.18
PKSG	26.5	102	ePgD	9:44:10.60		0.26
			eSg	44:14.10		0.07

258.

2013-09-25 time: 16:32:19.26 UTC ML= 0.1
lat: 47.359N lon: 18.184E h= 0.7 km
erh= 7.6km erz=22.1km
nr= 6 gap=212 rms=0.22
Locality: Mór
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	5.8	86	ePgD	16:32:20.20		-0.11
			eSg	32:20.80		-0.33
PKST	15.8	225	ePg	16:32:21.90		-0.19
			eSg	32:24.50		0.20
PKSG	16.1	77	ePg	16:32:22.40		0.27
			eSg	32:24.60		0.23

259.

2013-09-28 time: 10:36:13.26 UTC ML= 0.9
lat: 47.676N lon: 18.238E h= 13.5 km
erh= 4.5km erz= 3.0km
nr= 13 gap=119 rms=0.82
Locality: Naszály
Comments:

sta	dist	azm	phase	hr mn	sec	res
SRO2	15.2	51	ePg	10:36:16.40		-0.49
			eSg	36:19.00		-0.71
PKSG	33.7	160	ePgD	10:36:21.20		1.46
			eSg	36:25.50		0.71
CSKK	34.9	177	eSg	10:36:24.70		-0.45
PKST	48.9	198	ePgC	10:36:22.50		0.18
			eSg	36:28.80		-0.58
VYHS	101.3	26	eP*	10:36:32.10		0.95
			eS*	36:44.30		-0.80
MODS	105.5	317	ePn	10:36:32.50		0.77
			eSn	36:45.70		-0.44
MORH	165.3	169	ePn	10:36:37.80		-1.38
PKSM	165.7	169	ePn	10:36:38.50		-0.73

260.

2013-09-28 time: 15:12:45.86 UTC ML= 1.6
lat: 46.300N lon: 17.130E h= 10.0 km
erh= 3.6km erz= 2.7km
nr= 16 gap=167 rms=1.03
Locality: Somogycsicsó
Comments:

sta	dist	azm	phase	hr mn	sec	res
BEHE	33.2	305	ePg	15:12:51.30		-0.75
			eSg	12:55.40		-1.48
TIH	88.7	41	eSg	15:13:14.90		0.65
PKSV	98.1	118	ePgD	15:13:03.60		0.13
			eSg	13:16.90		-0.30
PKSM	117.0	95	ePnD	15:13:05.60		-0.60
			eSn	13:22.30		0.23
MORH	117.1	95	ePnC	15:13:05.50		-0.72
			eSn	13:22.10		0.00
PKST	127.1	33	ePnD	15:13:07.50		0.04
			eSn	13:23.90		-0.41
CSKK	146.4	36	eSn	15:13:28.50		-0.09
ARSA	162.0	311	Pn	15:13:15.00		3.19
			Sn	13:31.60		-0.45
SOKA	166.4	285	Pn	15:13:14.10		1.73
			Sn	13:31.70		-1.34

261.

2013-09-30 time: 7:43:12.30 UTC ML= 0.7
lat: 47.439N lon: 18.326E h= 0.0 km
erh= 2.6km erz= 310km
nr= 6 gap=269 rms=0.19
Locality: Oroszlány
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSG	7.2	137	ePgC	7:43:13.70		0.12
			eSg	43:14.30		-0.27
CSKK	9.8	210	ePgC	7:43:14.10		0.06
			eSg	43:15.30		-0.10
PKST	29.8	228	ePg	7:43:17.40		-0.21
			eSg	43:22.10		0.34

262.

2013-09-30 time: 7:43:24.93 UTC ML= 0.5
lat: 47.394N lon: 18.338E h= 0.0 km
erh= 2.6km erz= 130km
nr= 6 gap=214 rms=0.08
Locality: Gánt
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSG	4.0	93	ePgC	7:43:25.60		-0.04
			eSg	43:26.30		0.10
CSKK	6.8	240	ePgD	7:43:26.10		-0.03
			eSg	43:26.90		-0.17
PKST	27.4	237	ePg	7:43:29.90		0.08
			eSg	43:33.70		0.06

263.

2013-09-30 time: 7:43:54.68 UTC ML= 0.4
lat: 47.397N lon: 18.328E h= 0.0 km
erh= 6.6km erz= 336km
nr= 5 gap=221 rms=0.15
Locality: Gánt
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSG	4.8	97	ePgC	7:43:55.40		-0.13
			eSg	43:56.40		0.20
CSKK	6.3	234	ePgD	7:43:55.80		-0.01
			eSg	43:56.50		-0.20
PKST	27.0	235	ePg	7:43:59.70		0.20

264.

2013-09-30 time: 7:50:19.83 UTC ML= 0.6
lat: 47.417N lon: 18.340E h= 0.0 km
erh= 2.3km erz= 230km
nr= 6 gap=253 rms=0.14
Locality: Gánt
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSG	4.7	126	ePgC	7:50:20.70		0.03
			eSg	50:21.30		-0.03
CSKK	8.4	225	ePg	7:50:21.60		0.26

		eSg	50:22.30	-0.21
PKST	29.0	233	ePgC	7:50:24.90	-0.11
			eSg	50:29.10	0.05

265.

2013-10-01 time: 10:16:48.02 UTC ML= 1.9
lat: 48.628N lon: 20.756E h= 0.0 km
erh= 1.8km erz= 2.9km
nr= 9 gap=146 rms=0.36
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
KECS	25.6	231	ePg	10:16:52.40		-0.19
			eSg	16:56.30		0.14
STHS	94.7	22	ePg	10:17:05.30		0.37
PSZ	101.6	219	ePg	10:17:06.20		0.05
LANS	110.9	302	ePg	10:17:08.00		0.17
			eSg	17:22.20		-1.08
KOLS	116.6	73	eSg	10:17:24.90		-0.17
VYHS	142.5	264	ePn	10:17:13.10		0.28
			eSn	17:31.10		-1.06

266.

2013-10-02 time: 4:09:52.71 UTC ML= 1.4
lat: 47.943N lon: 16.414E h= 4.3 km
erh= 2.0km erz= 2.1km
nr= 28 gap= 74 rms=0.96
Locality: Austria
Comments:

sta	dist	azm	phase	hr mn	sec	res
SOP	30.8	160	ePgD	4:09:59.20		0.93
			eSg	10:02.80		0.19
CONA	41.3	268	Pg	4:10:00.60		0.47
			Sg	10:05.70		-0.22
ZST	58.5	61	eSg	4:10:10.70		-0.66
MODS	80.1	53	ePg	4:10:06.30		-0.74
			eSg	10:17.30		-0.91
SMOL	98.5	50	eSg	4:10:24.20		0.14
ARSA	102.1	221	Pg	4:10:10.50		-0.46
			Sg	10:22.80		-2.39
PKST	143.6	122	ePnD	4:10:16.80		-0.30
			eSn	10:35.80		-0.32
PKSG	160.6	112	ePnD	4:10:19.80		0.58
			eSn	10:40.10		0.21
MOA	161.0	266	Pn	4:10:19.70		0.44
			Sn	10:38.80		-1.17
TREC	165.1	336	ePn	4:10:20.60		0.82
			eSn	10:39.10		-1.79
SOKA	175.2	217	Pn	4:10:22.60		1.56
			Sn	10:43.10		-0.03
VYHS	190.1	71	e n	4:10:26.60		3.70
			eSn	10:45.00		-1.44
KHC	247.6	302	ePn	4:10:32.30		2.23
			eSn	11:01.10		1.90
GOPC	249.5	331	eSn	4:11:03.20		3.58
MORH	256.0	139	ePn	4:10:29.80		-1.32
			eSn	10:57.90		-3.17
PKSM	256.2	139	ePn	4:10:30.60		-0.54

267.

2013-10-02 time: 5:26:54.73 UTC ML= 1.5
lat: 47.939N lon: 16.423E h= 3.2 km
erh= 2.3km erz= 2.4km
nr= 27 gap= 74 rms=1.05
Locality: Austria
Comments:

sta	dist	azm	phase	hr mn	sec	res
SOP	30.2	160	ePgD	5:27:01.10		0.94
			eSg	27:04.70		0.31
CONA	42.0	268	Pg	5:27:02.50		0.25
			Sg	27:07.90		-0.21
ZST	58.1	61	eSg	5:27:11.90		-1.34
MODS	79.8	53	ePg	5:27:08.20		-0.80
			eSg	27:19.60		-0.53
SMOL	98.3	49	ePg	5:27:13.20		0.90
			eSg	27:26.60		0.60
ARSA	102.2	221	Pg	5:27:12.50		-0.49
			Sg	27:24.80		-2.43
PKST	142.8	122	ePnD	5:27:18.70		-0.46
			eSn	27:37.90		-0.32
MOA	161.6	266	Pn	5:27:21.90		0.40
			Sn	27:42.00		-0.39
TREC	165.8	335	ePn	5:27:22.40		0.38
			eSn	27:40.90		-2.41
SOKA	175.3	217	Pn	5:27:24.90		1.69
			Sn	27:44.90		-0.52
VYHS	189.6	71	ePn	5:27:28.30		3.30
			eSn	27:47.00		-1.61
KHC	248.4	302	ePn	5:27:33.90		1.57
			eSn	28:03.60		1.95
GOPC	250.2	331	eSn	5:28:05.20		3.15
MORH	255.3	139	ePn	5:27:33.50		0.32
PKSM	255.5	139	ePnC	5:27:32.60		-0.61
PRU	266.3	329	eSn	5:28:08.30		2.68

268.

2013-10-02 time: 5:33:03.64 UTC ML= 1.2
lat: 47.925N lon: 16.377E h= 1.7 km
erh= 3.4km erz= 4.4km
nr= 14 gap=110 rms=0.99
Locality: Austria
Comments:

sta	dist	azm	phase	hr mn	sec	res
SOP	30.2	153	ePgD	5:33:09.60		0.57
			eSg	33:13.10		-0.14
CONA	38.5	270	Pg	5:33:11.00		0.49
			Sg	33:16.40		0.52
MODS	83.5	53	ePg	5:33:17.50		-1.05
			eSg	33:28.10		-2.09
ARSA	98.8	221	Pg	5:33:21.10		-0.17
			Sg	33:33.30		-1.73
MOA	158.1	267	Pn	5:33:30.50		0.33
			Sn	33:50.00		-0.86
VYHS	193.4	71	ePn	5:33:37.10		2.53
			eSn	34:01.60		2.89
KHC	246.4	303	ePn	5:33:42.50		1.32
			eSn	34:11.20		0.74

269.

2013-10-02 time: 17:17:35.94 UTC ML= 3.7
lat: 47.964N lon: 16.430E h= 5.3 km
erh= 1.1km erz= 1.2km
nr= 44 gap= 36 rms=0.46
Locality: Austria
Comments: felt 3-4 EMS in Hungary

sta	dist	azm	phase	hr mn	sec	res
SOP	32.6	163	iPgD	17:17:42.40		0.55
			iSg	17:46.10		-0.35
CONA	42.7	265	Pg	17:17:43.40		-0.22
			Sg	17:49.30		-0.30
ZST	56.4	63	ePg	17:17:45.90		-0.15
			eSg	17:53.60		-0.34
MODS	77.8	54	ePg	17:17:49.30		-0.56
			eSg	18:01.10		0.38
SMOL	96.1	51	ePg	17:17:53.60		0.47
			eSg	18:06.80		0.26
ARSA	104.6	221	Pg	17:17:53.10		-1.55
			Sg	18:05.50		-3.74
SRO	141.8	97	ePn	17:17:59.70		-0.29

			eSn	18:20.00	1.26
PKST	143.8	123	iPnD	17:18:00.10	-0.14
			eSn	18:16.70	-2.49
SRO2	148.6	99	ePn	17:17:59.40	-1.44
			eSn	18:21.70	1.44
VRAC	150.0	5	iPnD	17:18:00.90	-0.10
CSKK	152.9	116	ePnD	17:18:01.20	-0.16
			eSn	18:19.30	-1.89
PKSG	160.4	113	iPnD	17:18:03.10	0.80
			eSn	18:21.30	-1.56
MOA	162.3	266	Pn	17:18:02.50	-0.04
			Sn	18:23.00	-0.29
TREC	163.5	335	ePn	17:18:02.70	0.01
			eSn	18:22.40	-1.15
BEHE	168.1	171	ePn	17:18:03.90	0.63
			eSn	18:26.90	2.32
KOGS	169.1	185	iPn	17:18:02.90	-0.48
BISS	176.4	214	iPn	17:18:04.20	-0.10
SOKA	177.8	216	Pn	17:18:04.40	-0.07
			Sn	18:25.30	-1.42
PERS	178.0	214	iPn	17:18:04.40	-0.09
GROS	181.3	203	iPn	17:18:04.60	-0.31
			eSn	18:24.50	-3.00
VYHS	188.2	72	ePn	17:18:05.40	-0.37
			eSn	18:30.60	1.56
BUD	201.8	105	iPnD	17:18:07.50	0.04
			eSn	18:36.60	4.55
PKS9	207.4	138	ePnD	17:18:08.30	0.14
			eSn	18:44.00	10.71
PENC	214.2	95	ePn	17:18:09.20	0.19
			eSn	18:35.30	0.50
OBKA	215.5	221	Pn	17:18:09.60	0.42
			Sn	18:38.20	3.10
MORC	217.5	22	iPn	17:18:09.90	0.48
PKS7	229.6	116	iPnD	17:18:11.00	0.07
KRLC	236.2	6	ePn	17:18:12.50	0.74
			eSn	18:39.00	-0.69
OKC	243.4	31	ePn	17:18:13.10	0.44
			eSn	18:39.50	-1.79
KHC	247.4	302	ePn	17:18:14.00	0.85
			eSn	18:40.90	-1.26
KBA	252.4	247	Pn	17:18:14.90	1.13
			Sn	18:45.70	2.42
MORH	257.0	139	iPnD	17:18:13.80	-0.54
			eSn	18:40.40	-3.90
PKSM	257.2	139	iPnD	17:18:13.80	-0.57
			eSn	18:40.30	-4.04
MYKA	257.8	235	Pn	17:18:14.80	0.35
			Sn	18:43.30	-1.19
PSZ	258.9	91	ePnD	17:18:14.80	0.22
			eSn	18:43.30	-1.42
LANS	260.2	60	ePn	17:18:15.40	0.65
			eSn	18:45.20	0.19
DPC	265.5	358	ePn	17:18:15.40	-0.01
PKS2	266.8	128	ePn	17:18:15.60	0.02
VISS	269.1	207	iPn	17:18:15.90	0.05
PKSV	269.3	149	ePnD	17:18:15.70	-0.18
			eSn	18:43.10	-3.92
GBAS	271.7	214	iPn	17:18:16.50	0.32
PKS6	281.5	123	iPnD	17:18:17.40	0.00
			eSn	18:47.10	-2.64
UPC	284.5	354	ePn	17:18:17.90	0.12
PKSN	285.2	115	ePnD	17:18:18.20	0.34
KECS	306.8	79	ePn	17:18:20.50	-0.06
			eSn	18:54.00	-1.36
ABTA	325.4	245	Pn	17:18:23.70	0.82
			Sn	19:08.10	8.61
SKDS	326.0	214	iPn	17:18:23.10	0.14
BLY	362.1	171	iPn	17:18:27.50	0.05
WTTA	368.7	258	Pn	17:18:29.20	0.92
			Sn	19:20.20	11.10
WATA	371.3	259	Pn	17:18:30.20	1.60
			Sn	19:21.30	11.63
NKC	385.1	311	ePn	17:18:31.10	0.79
			eSn	19:25.30	12.57
STHS	389.5	65	ePn	17:18:31.30	0.43
			eSn	19:14.10	0.39
SQTA	401.3	258	Pn	17:18:33.70	1.36
			Sn	19:15.70	-0.64
MOTA	406.0	260	Pn	17:18:33.60	0.67
			Sn	19:30.30	12.92
LTVH	415.8	99	ePn	17:18:34.00	-0.15
RETA	428.5	263	Pn	17:18:36.50	0.77
			Sn	19:36.50	14.13
SIRR	439.4	115	iPn	17:18:36.40	-0.70
KOLS	445.5	76	ePn	17:18:37.80	-0.05
			eSn	19:26.20	0.06
TRPA	455.9	88	iPnD	17:18:38.20	-0.95

270.

2013-10-02 time: 19:42:43.33 UTC ML= 2.3
lat: 47.955N lon: 16.417E h= 4.5 km
erh= 1.5km erz= 1.5km
nr= 64 gap= 46 rms=1.04
Locality: Austria
Comments:

sta	dist	azm	phase	hr mn	sec	res
SOP	32.0	161	iPgD	19:42:49.90		0.80
			iSg	42:53.60		0.00
CONA	41.6	266	Pg	19:42:50.90		0.10
			Sg	42:56.80		0.17
ZST	57.7	62	ePg	19:42:53.40		-0.27
			eSg	43:01.10		-0.63
MODS	79.1	54	ePg	19:42:56.90		-0.59
			eSg	43:08.00		-0.53
SMOL	97.5	50	ePg	19:43:01.00		0.23
			eSg	43:14.90		0.54
ARSA	103.2	221	Pg	19:43:00.90		-0.88
			Sg	43:13.20		-2.97
SRO	142.7	96	ePn	19:43:07.30		-0.29
			eSn	43:27.00		0.49
PKST	144.1	122	ePnD	19:43:07.70		-0.07
			eSn	43:24.20		-2.63
SRO2	149.5	98	ePn	19:43:07.10		-1.33
			eSn	43:28.90		0.89
VRAC	151.1	5	iPnD	19:43:08.40		-0.23
CSKK	153.3	115	ePnD	19:43:08.70		-0.21
			eSn	43:27.30		-1.56
PKSG	160.9	113	ePnD	19:43:10.60		0.74
			eSn	43:30.00		-0.54
MOA	161.3	266	Pn	19:43:10.30		0.40
			Sn	43:29.50		-1.13
TIH	161.7	136	ePnD	19:43:13.80		3.84
			eSn	43:32.30		1.57
TREC	164.0	335	ePn	19:43:10.80		0.55
			eSn	43:29.90		-1.34
BEHE	167.3	171	ePn	19:43:11.90		1.25
			eSn	43:33.90		1.94
SOKA	176.4	216	Pn	19:43:12.20		0.41
			Sn	43:31.40		-2.58
VYHS	189.5	72	ePn	19:43:12.80		-0.62
			eSn	43:37.80		0.91
PKS9	207.3	137	ePnD	19:43:15.70		0.06
			eSn	43:39.90		-0.95
OBKA	214.1	221	Pn	19:43:17.30		0.81
			Sn	43:45.10		2.74
PENC	215.1	95	ePnD	19:43:16.90		0.29
MORC	218.8	22	iPnD	19:43:17.30		0.22
PKS7	230.0	116	ePn	19:43:19.00		0.52
OKC	244.8	31	ePn	19:43:20.80		0.48
			eSn	43:47.20		-1.97
KHC	247.1	302	ePn	19:43:21.70		1.10
			eSn	43:48.80		-0.87
GOPC	248.5	331	ePn	19:43:21.80		1.03
KBA	251.1	247	Pn	19:43:22.60		1.50
			Sn	43:53.70		3.13
MYKA	256.5	235	Pn	19:43:27.10		5.33
			Sn	43:50.80		-0.96

MORH	256.9	139	ePnD	19:43:21.40	-0.42
			eSn	43:47.40	-4.45
PKSM	257.1	139	ePnD	19:43:21.40	-0.45
			eSn	43:48.00	-3.89
PSZ	259.9	91	ePnD	19:43:22.90	0.70
			eSn	43:53.00	0.49
LANS	261.5	59	ePn	19:43:22.80	0.39
			eSn	43:52.40	-0.48
PRU	264.6	329	ePn	19:43:23.90	1.12
			eSn	43:53.50	-0.05
DPC	266.5	359	ePn	19:43:23.40	0.38
			eSn	43:59.50	5.52
PKSV	268.9	149	ePnD	19:43:23.20	-0.12
			eSn	43:51.10	-3.42
UPC	285.4	354	eSn	19:44:05.50	7.32
KECS	308.0	79	ePn	19:43:28.20	0.00
			eSn	44:01.90	-1.29
ABTA	324.2	246	Pn	19:43:37.30	7.09
			Sn	44:16.70	9.92
BZS	474.6	123	iPnD	19:43:48.60	-0.37
DRGR	492.7	105	iPn	19:43:50.40	-0.82
DAVA	497.0	261	Pn	19:43:52.90	1.14
MDVR	539.0	131	iPnD	19:43:57.20	0.20
BURB	660.5	93	iPn	19:44:11.00	-1.15

271.

2013-10-03 time: 0:18:23.28 UTC ML= 1.3
lat: 47.952N lon: 16.381E h= 4.7 km
erh= 1.7km erz= 1.8km
nr= 26 gap= 75 rms=0.77
Locality: Austria
Comments:

sta	dist	azm	phase	hr mn	sec	res
SOP	32.7	156	ePgD	0:18:29.90		0.73
			eSg	18:33.70		-0.07
CONA	38.9	266	Pg	0:18:30.70		0.42
			Sg	18:36.00		0.26
ZST	60.2	63	ePg	0:18:33.80		-0.27
			eSg	18:41.70		-0.78
MODS	81.5	55	ePg	0:18:37.10		-0.76
			eSg	18:48.90		-0.33
SMOL	99.8	51	ePg	0:18:41.70		0.58
			eSg	18:55.10		0.06
ARSA	101.2	220	Pg	0:18:40.80		-0.57
			Sg	18:52.40		-3.09
PKST	146.2	122	ePnD	0:18:48.10		0.15
			eSn	19:07.40		0.21
MOA	158.6	266	Pn	0:18:49.90		0.41
			Sn	19:09.70		-0.23
TREC	163.3	336	ePn	0:18:50.60		0.53
			eSn	19:09.70		-1.27
VYHS	192.1	72	ePn	0:18:53.20		-0.47
			eSn	19:17.50		0.13
KHC	245.0	302	ePn	0:19:02.90		2.63
			eSn	19:28.30		-0.82
GOPC	247.5	332	eSn	0:19:34.50		4.83
KBA	248.5	247	Sn	0:19:32.70		2.81
MORH	258.4	138	ePnC	0:19:01.50		-0.44
PKSM	258.6	138	ePn	0:19:01.70		-0.26
PRU	263.5	329	eSn	0:19:32.60		-0.62

272.

2013-10-03 time: 4:44:54.28 UTC ML= 2.0
lat: 45.882N lon: 20.705E h= 10.0 km
erh= 3.0km erz= 3.1km
nr= 16 gap=136 rms=0.55
Locality: Romania
Comments:

sta	dist	azm	phase	hr mn	sec	res
BZS	76.8	113	iPg	4:45:08.40		0.29
SIRR	85.3	60	iPg	4:45:09.40		-0.22
PKS6	118.8	312	ePn	4:45:13.50		-1.34
			eSn	45:31.30		0.42
MDVR	145.6	147	iPn	4:45:18.50		0.31
MORH	163.8	283	iPnD	4:45:20.70		0.25
			eSn	45:39.10		-1.77
PKSM	163.9	283	iPnD	4:45:20.70		0.23
			eSn	45:41.40		0.50
GZR	170.4	109	iPn	4:45:21.10		-0.18
HERR	174.2	130	iPn	4:45:21.30		-0.45
PKS7	175.6	318	eSn	4:45:47.90		4.40
DRGR	184.6	57	iPnD	4:45:23.30		0.25
PSZ	234.6	345	ePn	4:45:29.80		0.51
			eSn	45:55.40		-1.20
PKSG	244.1	313	ePn	4:45:32.20		1.73
PKST	255.7	307	ePn	4:45:32.00		0.09

273.

2013-10-03 time: 10:17:10.84 UTC ML= 1.3
lat: 47.583N lon: 16.356E h= 1.7 km
erh= 2.4km erz= 2.4km
nr= 16 gap=134 rms=0.76
Locality: Austria
Comments:

sta	dist	azm	phase	hr mn	sec	res
SOP	18.9	54	ePgC	10:17:14.50		0.28
			eSg	17:17.20		0.34
CONA	53.4	316	Pg	10:17:20.40		0.02
			Sg	17:27.40		-0.42
ARSA	72.9	240	Pg	10:17:23.70		-0.16
			Sg	17:33.30		-0.72
MODS	111.7	38	ePg	10:17:29.40		-1.38
			eSg	17:45.10		-1.23
SMOL	130.8	38	ePn	10:17:34.10		0.14
			eSn	17:51.90		-0.10
PKST	131.6	106	ePn	10:17:33.80		-0.26
			eSn	17:51.70		-0.48
MOA	159.6	281	Pn	10:17:38.50		0.95
			Sn	17:59.20		0.81
VYHS	210.9	61	ePn	10:17:46.80		2.85
			eSn	18:13.90		4.13
KBA	234.4	256	Sn	10:18:20.70		5.70

274.

2013-10-04 time: 2:23:53.93 UTC ML=-0.2
lat: 47.348N lon: 18.193E h= 0.2 km
erh= 4.2km erz=21.5km
nr= 6 gap=201 rms=0.24
Locality: Bodajk
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	5.4	71	ePgD	2:23:54.60		-0.29
			eSg	23:55.30		-0.34
PKST	15.5	231	ePgD	2:23:56.70		-0.01
			eSg	23:59.10		0.23
PKSG	15.7	72	ePg	2:23:57.00		0.27
			eSg	23:59.20		0.28

275.

2013-10-06 time: 10:53:52.75 UTC ML= 1.9
lat: 47.833N lon: 16.205E h= 2.9 km
erh= 1.9km erz= 2.0km
nr= 41 gap= 51 rms=1.12
Locality: Austria
Comments:

sta	dist	azm	phase	hr mn	sec	res
CONA	27.8	292	Pg	10:53:57.70		-0.04
			Sg	54:02.30		0.67
SOP	31.3	122	ePgC	10:53:59.10		0.73

```
                  eSg      54:03.30    0.55
ZST   78.2  59    ePg   10:54:06.40   -0.33
                  eSg      54:16.90   -0.74
ARSA  82.6 218     Pg   10:54:06.80   -0.72
                   Sg      54:17.20   -1.83
MODS 100.0  53    ePg   10:54:09.90   -0.72
                  eSg      54:23.10   -1.45
SMOL 118.4  50    ePg   10:54:14.20    0.29
                  eSg      54:30.20   -0.21
MOA  145.1 271     Pn   10:54:17.30   -0.21
                   Sn      54:35.80   -1.02
PKST 151.8 115    ePn   10:54:18.40    0.06
                  eSn      54:37.90   -0.40
SOKA 156.1 215     Pn   10:54:19.00    0.13
                   Sn      54:38.00   -1.25
BEHE 157.6 164    ePn   10:54:22.60    3.54
                  eSn      54:47.00    7.42
TREC 171.0 342    ePn   10:54:20.80    0.07
                  eSn      54:41.10   -1.46
PKSG 171.5 107    ePnD  10:54:21.70    0.90
OBKA 193.4 220     Pn   10:54:23.50   -0.03
                   Sn      54:50.10    2.56
VYHS 209.1  69    ePn   10:54:25.20   -0.29
                  eSn      54:49.20   -1.82
KBA  231.4 249     Pn   10:54:27.80   -0.47
                   Sn      54:54.70   -1.27
MYKA 235.7 235     Pn   10:54:33.20    4.39
                   Sn      54:57.40    0.48
KHC  241.9 307    ePn   10:54:31.60    2.02
                  eSn      55:00.70    2.39
KRLC 252.9  10    ePn   10:54:31.40    0.45
                  eSn      55:00.00   -0.75
MORH 258.3 134    ePnD  10:54:31.40   -0.22
                  eSn      55:01.70   -0.24
PKSM 258.5 134    ePn   10:54:31.30   -0.34
                  eSn      54:59.20   -2.77
PRU  268.9 333    eSn   10:55:07.60    3.30
DPC  280.1   2    ePn   10:54:38.30    3.96
                  eSn      55:11.60    4.83
WTTA 349.7 260     Pn   10:54:42.70   -0.31

276.
```

```
 2013-10-06  time: 11:08:21.20 UTC  ML= 1.2
   lat: 47.923N  lon: 18.948E  h= 10.0 km
                 erh= 6.7km    erz=33.1km
   nr=  8        gap= 98       rms=1.35
   Locality: Kóspallag
   Comments:

sta   dist azm  phase  hr mn  sec     res
PENC  29.0 121   ePg   11:08:27.10    0.41
                 eSg      08:31.90    0.94
SRO   49.0 256   ePg   11:08:32.90    2.76
BUD   49.2 173   eSg   11:08:34.80   -2.37
VYHS  64.0 353   ePg   11:08:32.50   -0.27
                 eSg      08:41.10   -0.69
PSZ   70.8  90   ePg   11:08:32.80   -1.16
                 eSg      08:44.90    0.98

277.
```

```
 2013-10-06  time: 11:43:37.39 UTC  ML= 1.2
   lat: 47.888N  lon: 18.894E  h= 19.4 km
                 erh= 3.2km    erz= 2.6km
   nr=  6        gap=189       rms=0.50
   Locality: Kóspallag
   Comments:

sta   dist azm  phase  hr mn  sec     res
PENC  31.0 111   ePg   11:43:44.20    0.28
                 eSg      43:49.50    0.49
BUD   46.0 168   eSg   11:43:52.10   -1.17
VYHS  67.5 356   eP*   11:43:49.90    0.31
                 eS*      43:58.70   -0.40
PSZ   74.9  87   eS*   11:44:01.00   -0.09

278.
```

```
 2013-10-06  time: 19:26:24.69 UTC  ML= 0.9
   lat: 47.333N  lon: 18.227E  h= 10.0 km
                 erh= 4.0km    erz= 1.9km
   nr= 12        gap=139       rms=0.70
   Locality: Bodajk
   Comments:

sta   dist azm  phase  hr mn  sec     res
CSKK   4.1  38   ePg   19:26:25.80   -0.82
                 eSg      26:26.60   -1.53
PKSG  14.0  62   ePgD  19:26:28.30    0.55
                 eSg      26:30.20    0.06
PKST  16.8 240   ePgD  19:26:28.30    0.13
                 eSg      26:31.20    0.31
MORH 128.3 166   ePnD  19:26:47.10    0.66
                 eSn      27:02.70   -0.70
PKSM 128.7 166   ePn   19:26:47.10    0.62
                 eSn      27:02.40   -1.09
VYHS 136.8  19   ePn   19:26:48.20    0.70
                 eSn      27:04.30   -1.00

279.
```

```
 2013-10-07  time:  9:13:45.81 UTC  ML= 1.0
   lat: 47.412N  lon: 18.328E  h=  0.0 km
                 erh= 1.9km    erz= 178km
   nr=  6        gap=243       rms=0.11
   Locality: Gánt
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   5.2 115   ePgC   9:13:46.80    0.06
                 eSg      13:47.30   -0.17
CSKK   7.4 223   ePgD   9:13:47.20    0.07
                 eSg      13:48.10   -0.07
PKST  27.9 233   ePgC   9:13:50.70   -0.10
                 eSg      13:54.90    0.21

280.
```

```
 2013-10-07  time:  9:14:16.89 UTC  ML= 1.0
   lat: 47.383N  lon: 18.337E  h=  0.0 km
                 erh= 1.3km    erz=56.7km
   nr=  6        gap=188       rms=0.04
   Locality: Gánt
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   4.2  77   ePgC   9:14:17.60   -0.03
                 eSg      14:18.20   -0.01
CSKK   6.2 249   ePgD   9:14:18.00    0.01
                 eSg      14:18.90    0.05
PKST  26.7 239   ePgC   9:14:21.70    0.04
                 eSg      14:25.30   -0.08

281.
```

```
 2013-10-07  time:  9:14:39.78 UTC  ML= 1.0
   lat: 47.451N  lon: 18.336E  h=  0.0 km
                 erh= 3.7km    erz= 459km
   nr=  6        gap=281       rms=0.27
   Locality: Oroszlány
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   7.8 148   ePgC   9:14:41.40    0.22
                 eSg      14:42.10   -0.17
CSKK  11.3 210   ePgD   9:14:41.80    0.00
                 eSg      14:42.90   -0.48
PKST  31.2 227   ePgC   9:14:45.20   -0.16
```

		eSg	14:50.30	0.59

282.

2013-10-08 time: 7:59:58.67 UTC ML= 1.5
lat: 46.201N lon: 16.607E h= 10.0 km
erh= 2.3km erz= 1.6km
nr= 15 gap=154 rms=0.56
Locality: Croatia
Comments:

sta	dist	azm	phase	hr mn	sec	res
BEHE	32.6	23	ePgD	8:00:05.00		0.25
			eSg	00:08.90		-0.60
KOGS	38.8	315	iPg	8:00:05.90		0.07
			iSg	00:11.10		-0.31
GOLS	78.9	254	iPg	8:00:12.90		0.03
GCIS	84.5	244	iPg	8:00:13.70		-0.16
SOKA	132.1	294	Pn	8:00:20.90		0.00
			Sn	00:37.90		-0.33
ARSA	143.1	325	Pn	8:00:22.90		0.64
			Sn	00:40.00		-0.67
PKSM	157.0	90	ePn	8:00:22.80		-1.20
MORH	157.2	89	ePn	8:00:23.40		-0.63
PKST	160.4	43	ePn	8:00:26.10		1.68
OBKA	162.1	282	Pn	8:00:26.70		2.07
			Sn	00:45.10		0.21

283.

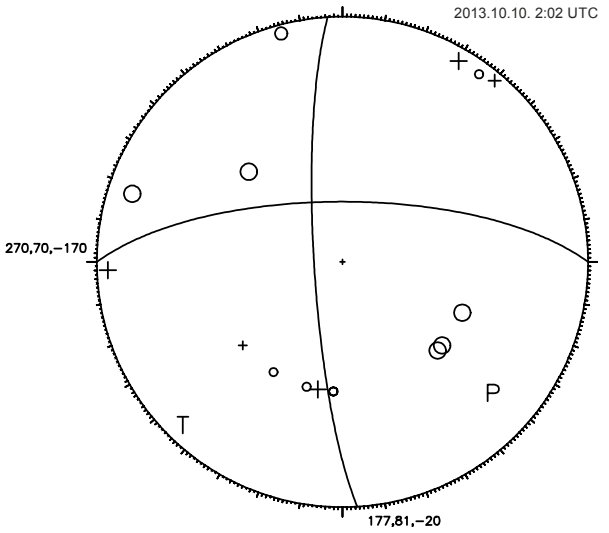
2013-10-09 time: 7:24:58.95 UTC ML= 0.3
lat: 47.312N lon: 18.044E h= 1.1 km
erh= 6.7km erz=35.6km
nr= 6 gap=183 rms=0.78
Locality: Szápár
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKST	6.0	187	ePgC	7:24:58.70		-1.33
			eSg	25:00.70		-0.17
CSKK	17.3	71	ePgC	7:25:02.30		0.25
			eSg	25:05.10		0.64
MPLH	41.3	248	eSg	7:25:12.90		0.81
TIH	47.2	194	eSg	7:25:14.60		0.63

284.

2013-10-10 time: 2:02:32.04 UTC ML= 2.3
lat: 47.893N lon: 18.822E h= 7.2 km
erh= 1.6km erz= 1.4km
nr= 47 gap= 47 rms=0.94
Locality: Letkés
Comments: felt 4 EMS

sta	dist	azm	phase	hr mn	sec	res
SRO2	35.1	246	ePg	2:02:37.40		-1.04
			eSg	02:42.60		-0.83
PENC	36.3	108	ePgD	2:02:38.50		-0.14
SRO	39.0	257	ePg	2:02:41.00		1.87
			eSg	02:45.30		0.64
BUD	48.0	162	ePg	2:02:40.70		0.00
			eSg	02:46.50		-0.95
PKSG	64.4	210	ePgC	2:02:44.30		0.69
			eSg	02:52.20		-0.44
VYHS	66.9	1	ePg	2:02:44.70		0.65
			eSg	02:53.40		-0.01
CSKK	72.4	216	ePgD	2:02:44.60		-0.43
			eSg	02:54.20		-0.97
PSZ	80.3	88	ePgC	2:02:45.80		-0.63
			eSg	02:56.90		-0.75
PKST	92.1	220	ePgC	2:02:47.60		-0.92
PKS7	97.4	165	ePgD	2:02:49.50		0.02
MPLH	125.6	230	ePnC	2:02:53.90		0.09
			eSn	03:10.30		-0.50
MODS	126.8	295	ePn	2:02:53.40		-0.56
			eSn	03:08.60		-2.46
TIH	130.8	212	ePnD	2:02:54.40		-0.06
			eSn	03:13.10		1.16
ZST	132.5	285	eSn	2:03:09.90		-2.44
PKSN	136.0	145	eSn	2:03:13.70		0.60
KECS	140.1	62	ePn	2:02:55.50		-0.12
			eSn	03:12.70		-1.31
LANS	147.8	19	ePn	2:02:58.00		1.42
			eSn	03:15.70		-0.02
PKS9	150.9	196	ePnD	2:02:58.20		1.23
			eSn	03:18.30		1.89
PKS6	154.4	159	ePn	2:02:58.60		1.20
			eSn	03:17.80		0.62
PKS2	158.5	169	ePn	2:02:58.90		0.98
			eSn	03:19.00		0.89
SOP	171.2	262	ePn	2:03:01.60		2.10
			eSn	03:23.00		2.08
MORH	186.9	184	ePnD	2:03:01.00		-0.46
			eSn	03:21.90		-2.51
PKSM	187.4	184	ePnD	2:03:01.10		-0.42
			eSn	03:22.10		-2.41
CONA	221.3	271	Pn	2:03:06.30		0.55
			Sn	03:31.90		-0.14
BEHE	221.5	224	ePn	2:03:11.50		5.73
PKSV	227.0	191	iPnC	2:03:06.50		0.04
			eSn	03:31.90		-1.41
VRAC	227.6	314	iPnD	2:03:06.30		-0.23
TRPA	278.6	85	iPn	2:03:07.00		-5.90
SIRR	281.3	130	iPnD	2:03:13.20		-0.02
DRGR	318.4	113	iPnD	2:03:17.00		-0.86
DPC	328.6	326	ePn	2:03:21.40		2.27
			eSn	03:55.20		-0.66
BZS	331.1	140	iPn	2:03:20.40		0.96
GZR	411.0	133	iPnD	2:03:31.40		2.00
KHC	411.2	290	ePn	2:03:30.50		1.08
			eSn	04:12.60		-1.58
LOT	466.1	126	iPn	2:03:36.90		0.63



285.

2013-10-10 time: 2:23:15.09 UTC ML= 1.1
lat: 47.862N lon: 18.853E h= 3.2 km
erh= 3.0km erz= 3.9km
nr= 15 gap=127 rms=0.94
Locality: Márianosztra
Comments:

sta	dist	azm	phase	hr mn	sec	res
PENC	33.1	104	ePgD	2:23:21.60		0.58
			eSg	23:26.80		1.15
BUD	44.0	163	eSg	2:23:25.00		-4.11

```
PKSG  62.8 214   ePg    2:23:27.40    1.08
                 eSg      23:35.70    0.62
VYHS  70.3 359   ePg    2:23:28.10    0.45
                 eSg      23:36.70   -0.75
CSKK  71.2 219   ePg    2:23:28.00    0.19
PSZ   78.1  85   ePgD   2:23:28.50   -0.55
                 eSg      23:38.30   -1.64
PKST  91.1 223   ePg    2:23:31.00   -0.37
                 eSg      23:43.30   -0.76
MPLH 125.4 232   ePnD   2:23:37.20   -0.15
                 eSn      23:53.50   -1.20
PKS6 150.3 159   eSn    2:24:01.20    0.95
```

286.

```
 2013-10-10  time:  7:08:12.10 UTC  ML= 1.5
   lat: 46.552N  lon: 17.768E  h=  7.9 km
                 erh= 1.4km    erz=11.9km
   nr= 18        gap=110       rms=0.52
   Locality: Polány
   Comments:

sta   dist azm  phase  hr mn  sec     res
PKS9  39.3  84   ePg    7:08:20.70    1.44
                 eSg      08:25.80    0.95
TIH   39.9  14   iPgC   7:08:19.30   -0.06
                 eSg      08:24.70   -0.32
MPLH  70.9 346   ePg    7:08:25.60    0.76
                 eSg      08:34.60   -0.18
BEHE  76.7 263   eSg    7:08:36.40   -0.23
MORH  77.0 119   ePg    7:08:25.90   -0.03
                 eSg      08:36.30   -0.42
PKSM  77.1 119   ePg    7:08:26.20    0.27
                 eSg      08:36.90    0.18
PKST  81.2  14   ePgD   7:08:26.40   -0.27
                 eSg      08:37.10   -0.93
PKSV  82.6 153   eSg    7:08:37.70   -0.79
CSKK  97.7  23   ePg    7:08:28.90   -0.70
                 eSg      08:43.10   -0.15
PKSG 104.7  27   ePg    7:08:31.30    0.45
                 eSg      08:45.50    0.02
```

287.

```
 2013-10-10  time: 11:01:50.56 UTC  ML= 2.2
   lat: 48.656N  lon: 20.133E  h=  1.3 km
                 erh= 1.8km    erz= 2.5km
   nr= 21        gap= 85       rms=0.80
   Locality: Slovakia
   Comments:

sta   dist azm  phase  hr mn  sec     res
KECS  32.3 127   ePg   11:01:56.00   -0.34
                 eSg      02:00.00   -0.85
LANS  73.5 318   ePg   11:02:04.30    0.61
                 eSg      02:13.50   -0.43
PSZ   83.9 192   ePgD  11:02:05.50   -0.05
                 eSg      02:17.40    0.16
VYHS  97.4 259   ePg   11:02:08.00    0.04
                 eSg      02:20.80   -0.73
PENC 115.2 213   ePgD  11:02:10.90   -0.23
                 eSg      02:26.00   -1.18
STHS 117.2  44   ePg   11:02:10.40   -1.09
KOLS 160.2  79   ePn   11:02:19.00    1.60
                 eSn      02:38.80    0.46
TRPA 187.5 108   ePn   11:02:21.10    0.29
                 eSn      02:46.80    2.40
PKSG 191.5 223   ePn   11:02:23.30    2.00
CSKK 200.5 224   ePn   11:02:22.80    0.37
MODS 213.3 262   ePn   11:02:24.20    0.17
PKST 220.7 225   ePnD  11:02:23.60   -1.35
                 eSn      02:57.60    5.83
MORH 293.7 202   ePnD  11:02:33.50   -0.54
PKSM 294.2 203   ePnD  11:02:33.50   -0.61
```

288.

```
 2013-10-10  time: 11:11:45.72 UTC  ML= 1.8
   lat: 48.375N  lon: 19.844E  h=  0.4 km
                 erh= 2.0km    erz= 446km
   nr=  7        gap=104       rms=0.50
   Locality: Slovakia
   Comments:

sta   dist azm  phase  hr mn  sec     res
KECS  49.0  76   ePg   11:11:54.40   -0.06
                 eSg      12:00.60   -0.69
PSZ   50.9 176   ePgD  11:11:54.80   -0.01
                 eSg      12:01.70   -0.21
VYHS  75.7 280   ePg   11:11:59.30    0.06
                 eSg      12:08.90   -0.89
LANS  90.6 342   ePg   11:12:03.00    1.11
```

289.

```
 2013-10-14  time:  2:34:26.29 UTC  ML= 1.5
   lat: 47.943N  lon: 16.416E  h=  0.6 km
                 erh= 2.4km    erz= 3.4km
   nr= 22        gap= 78       rms=1.05
   Locality: Austria
   Comments:

sta   dist azm  phase  hr mn  sec     res
SOP   30.7 160   iPgD   2:34:32.60    0.82
                 iSg      34:36.20    0.14
CONA  41.5 268    Pg    2:34:34.10    0.41
                  Sg      34:39.50    0.04
ZST   58.4  61   ePg    2:34:36.10   -0.62
MODS  80.0  53   ePg    2:34:39.50   -1.08
                 eSg      34:50.70   -1.02
ARSA 102.1 221    Pg    2:34:44.00   -0.53
                  Sg      34:56.60   -2.15
MPLH 120.5 135   eSg    2:35:04.00   -0.60
MOA  161.1 266    Pn    2:34:53.70    0.37
                  Sn      35:13.60   -0.83
TREC 165.2 336   ePn    2:34:53.90    0.05
                 eSn      35:12.70   -2.65
VYHS 190.0  71   ePn    2:34:59.30    2.36
                 eSn      35:23.80    2.95
KHC  247.8 302   ePn    2:35:05.70    1.56
                 eSn      35:34.10    0.44
GOPC 249.6 331   eSn    2:35:37.00    2.92
KBA  250.5 247    Pn    2:35:06.00    1.52
                  Sn      35:36.00    1.72
PRU  265.7 329   eSn    2:35:40.40    2.76
```

290.

```
 2013-10-14  time:  7:41:54.85 UTC  ML= 0.9
   lat: 47.431N  lon: 18.343E  h=  0.0 km
                 erh= 7.2km    erz= 835km
   nr=  6        gap=270       rms=0.49
   Locality: Oroszlány
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   5.6 141   ePgC   7:41:56.10    0.25
                 eSg      41:56.60   -0.04
CSKK   9.8 220   ePgC   7:41:56.40   -0.20
                 eSg      41:57.20   -0.76
PKST  30.2 231   ePg    7:42:00.10   -0.14
                 eSg      42:05.80    1.36
```

291.

2013-10-15 time: 18:55:24.78 UTC ML= 0.9
lat: 47.047N lon: 18.098E h= 6.2 km
erh= 1.7km erz= 9.4km
nr= 15 gap=126 rms=0.50
Locality: Balatonkenese
Comments:

sta	dist	azm	phase	hr mn	sec	res
TIH	22.6	224	ePgC	18:55:	29.00	0.04
			eSg	55:	32.30	0.07
PKST	24.0	348	ePgD	18:55:	28.90	-0.31
			eSg	55:	32.20	-0.47
CSKK	37.2	19	ePgD	18:55:	31.20	-0.32
			eSg	55:	36.20	-0.58
PKSG	44.3	30	ePgC	18:55:	33.30	0.53
			eSg	55:	39.60	0.60
MPLH	44.5	288	ePg	18:55:	32.80	-0.01
			eSg	55:	39.20	0.13
PKS9	53.0	165	eSg	18:55:	42.60	0.86
MORH	101.4	156	ePg	18:55:	43.00	0.07
			eSg	55:	55.40	-1.68
PKSM	101.8	156	ePg	18:55:	42.70	-0.28
			eSg	55:	55.10	-2.08

292.

2013-10-16 time: 2:45:49.02 UTC ML=-0.3
lat: 47.341N lon: 18.295E h= 10.0 km
erh= 9.5km erz= 4.3km
nr= 6 gap=193 rms=0.19
Locality: Csákberény
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	3.6	314	ePg	2:45:	50.90	-0.02
			eSg	45:	52.20	-0.20
PKSG	9.2	52	ePg	2:45:	51.70	0.26
			eSg	45:	53.20	-0.13
PKST	21.7	245	ePg	2:45:	53.10	-0.19
			eSg	45:	56.90	0.28

293.

2013-10-16 time: 14:46:00.20 UTC ML= 1.8
lat: 48.126N lon: 16.994E h= 4.0 km
erh= 1.9km erz= 1.8km
nr= 25 gap= 77 rms=0.78
Locality: Austria
Comments:

sta	dist	azm	phase	hr mn	sec	res
ZST	11.3	46	ePg	14:46:	02.50	0.17
			eSg	46:	04.10	0.10
MODS	34.7	37	ePg	14:46:	06.00	-0.43
			eSg	46:	10.70	-0.60
SMOL	53.9	37	ePg	14:46:	10.40	0.55
			eSg	46:	16.70	-0.67
SOP	59.0	213	ePgC	14:46:	10.90	0.14
CONA	87.3	255	Pg	14:46:	15.70	-0.10
			Sg	46:	26.30	-1.66
MPLH	113.9	159	ePg	14:46:	21.80	1.25
			eSg	46:	35.10	-1.32
PKST	124.1	141	ePn	14:46:	22.70	0.51
			eSn	46:	37.10	-2.23
VYHS	142.7	73	ePn	14:46:	25.60	1.09
			eSn	46:	41.80	-1.67
ARSA	147.2	229	Pn	14:46:	25.10	0.03
			Sn	46:	44.50	0.03
TREC	170.9	320	ePn	14:46:	28.10	0.08
			eSn	46:	48.30	-1.42
MOA	205.9	261	Pn	14:46:	33.00	0.61
			Sn	46:	58.80	1.30
MORH	246.5	149	ePnD	14:46:	37.50	0.05
PKSM	246.7	150	ePnD	14:46:	37.60	0.12
			eSn	47:	02.30	-4.26
KHC	275.5	294	ePn	14:46:	41.70	0.63
			eSn	47:	15.00	2.06

294.

2013-10-17 time: 12:34:11.56 UTC ML= 0.5
lat: 47.215N lon: 18.281E h= 0.0 km
erh= 5.2km erz= 716km
nr= 7 gap=242 rms=0.50
Locality: Iszkaszentgyörgy
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
CSKK	16.6	355	ePgD	12:34:	14.30	-0.23
			eSg	34:	16.50	-0.34
PKST	19.3	285	ePgD	12:34:	14.50	-0.51
			eSg	34:	17.80	0.11
PKSG	21.4	23	ePgD	12:34:	15.90	0.51
			eSg	34:	18.20	-0.17
MPLH	56.4	265	eSg	12:34:	30.80	1.32

295.

2013-10-18 time: 7:04:36.17 UTC ML= 0.8
lat: 47.108N lon: 17.956E h= 10.0 km
erh= 3.9km erz=10.4km
nr= 8 gap=146 rms=0.71
Locality: Kádárta
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKST	17.8	19	ePgD	7:04:	38.90	-0.91
			eSg	04:	42.60	-0.06
TIH	23.6	192	eSg	7:04:	45.00	0.68
MPLH	32.4	282	ePgC	7:04:	42.00	-0.22
			eSg	04:	48.00	1.06
CSKK	36.5	39	ePgD	7:04:	42.50	-0.43
			eSg	04:	48.50	0.29
PKSG	45.6	46	eSg	7:04:	52.50	1.50

296.

2013-10-18 time: 10:58:30.88 UTC ML= 1.8
lat: 48.369N lon: 19.840E h= 0.0 km
erh= 1.8km erz= 617km
nr= 8 gap=105 rms=0.45
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
KECS	49.4	75	ePg	10:58:	39.50	-0.20
			eSg	58:	46.00	-0.59
PSZ	50.3	175	ePgD	10:58:	40.00	0.15
			eSg	58:	47.00	0.15
VYHS	75.6	281	ePg	10:58:	44.60	0.22
			eSg	58:	54.20	-0.71
LANS	91.1	343	ePg	10:58:	48.00	0.85
			eSg	58:	59.50	-0.35

297.

2013-10-19 time: 2:58:06.03 UTC ML= 1.3
lat: 47.686N lon: 17.984E h= 10.0 km
erh= 1.7km erz= 2.5km
nr= 23 gap=100 rms=0.80
Locality: Ács
Comments:

sta	dist	azm	phase	hr mn	sec	res
SRO	28.5	60	ePg	2:58:	12.20	0.78
			eSg	58:	16.00	0.38

SRO2	31.9	75	ePg	2:58:10.90	-1.11
			eSg	58:15.80	-0.87
CSKK	41.5	150	ePg	2:58:13.50	-0.16
			eSg	58:18.50	-1.11
PKSG	44.8	137	ePgD	2:58:14.70	0.47
			eSg	58:20.70	0.07
PKST	47.7	175	ePgD	2:58:15.70	0.97
			eSg	58:20.40	-1.11
MPLH	66.5	210	ePg	2:58:17.90	-0.13
			eSg	58:27.00	-0.39
ZST	86.9	311	eSg	2:58:33.40	-0.43
TIH	87.7	184	eSg	2:58:32.60	-1.48
MODS	92.8	325	ePg	2:58:22.90	0.20
			eSg	58:34.90	-0.81
PENC	98.0	83	ePg	2:58:24.10	0.47
			eSg	58:38.20	0.84
SMOL	100.9	336	ePg	2:58:26.20	2.07
			eSg	58:37.30	-0.95
VYHS	110.0	35	ePn	2:58:25.70	0.20
			eSn	58:39.30	-1.39
PSZ	145.5	80	eSn	2:58:48.50	-0.06

298.

2013-10-19 time: 7:02:44.05 UTC ML= 3.0
lat: 47.680N lon: 17.966E h= 4.1 km
erh= 1.0km erz= 1.2km
nr= 45 gap= 42 rms=0.54
Locality: Bana
Comments: felt 5 EMS

sta	dist	azm	phase	hr mn	sec	res
SRO	29.9	60	ePg	7:02:50.50		1.05
			eSg	02:54.40		0.74
SRO2	33.4	74	ePg	7:02:49.40		-0.66
			eSg	02:54.10		-0.64
CSKK	41.6	148	Pg	7:02:51.30		-0.22
			eSg	02:56.80		-0.55
PKSG	45.3	135	Pg	7:02:52.70		0.53
PKST	47.1	174	Pg	7:02:52.30		-0.20
			eSg	02:59.00		-0.09
MPLH	65.2	210	Pg	7:02:55.60		-0.12
BUD	82.5	105	Pg	7:02:58.60		-0.20
ZST	86.3	312	ePg	7:02:59.30		-0.18
			eSg	03:11.40		-0.12
TIH	86.9	184	Pg	7:02:59.70		0.11
MODS	92.6	326	ePg	7:03:00.60		-0.01
			eSg	03:13.30		-0.23
PENC	99.4	83	Pg	7:03:01.30		-0.52
SMOL	101.0	337	ePg	7:03:02.80		0.71
			eSg	03:15.90		-0.27
SOP	105.7	270	Pg	7:03:03.30		0.36
VYHS	111.3	36	ePg	7:03:03.70		-0.24
			eSg	03:17.90		-1.55
PKS7	114.4	128	Pg	7:03:05.20		0.70
PKS9	123.8	169	Pn	7:03:06.30		0.31
PSZ	146.9	80	Pn	7:03:08.80		-0.07
CONA	160.0	280	Pn	7:03:10.20		-0.31
			Sn	03:32.40		1.25
BEHE	162.1	214	Pn	7:03:11.10		0.33
PKS6	170.7	135	Pn	7:03:12.40		0.57
MORH	170.8	162	Pn	7:03:10.90		-0.95
PKSM	171.2	163	Pn	7:03:11.00		-0.89
ARSA	190.3	255	Pn	7:03:14.50		0.22
			Sn	03:36.40		-1.46
LANS	197.7	34	ePn	7:03:16.10		0.90
			eSn	03:42.10		2.59
PKSV	200.4	174	Pn	7:03:15.80		0.26
VRAC	207.5	331	iPn	7:03:16.50		0.07
KECS	207.9	65	ePn	7:03:16.30		-0.17
			eSn	03:44.60		2.84
MORC	235.2	352	iPnD	7:03:19.80		-0.08
SOKA	248.7	243	Pn	7:03:21.60		0.03
			Sn	03:56.90		6.07
TREC	256.5	314	eSn	7:03:50.60		-1.97
MOA	278.0	274	Pn	7:03:27.10		1.88
			Sn	04:01.20		3.87
OBKA	290.3	243	Pn	7:03:27.00		0.25
			Sn	03:58.40		-1.66
STHS	309.6	51	ePn	7:03:29.30		0.14
			eSn	04:15.00		10.66
DPC	320.3	338	ePn	7:03:31.20		0.70
			eSn	04:04.40		-2.33
SIRR	322.0	119	iPnD	7:03:30.30		-0.40
BLY	331.4	190	iPnD	7:03:32.10		0.23
MYKA	348.1	250	Pn	7:03:33.10		-0.86
			Sn	04:09.90		-2.99
KOLS	348.6	66	ePn	7:03:35.60		1.58
			eSn	04:24.00		11.01
BANR	352.7	136	iPn	7:03:35.30		0.77
KBA	355.4	259	Pn	7:03:35.60		0.74
			Sn	04:12.50		-2.00
PRU	359.3	316	ePn	7:03:34.80		-0.55
			eSn	04:12.50		-2.87
KHC	362.7	296	ePn	7:03:36.50		0.72
			eSn	04:13.10		-3.03
DRGR	372.6	105	iPnD	7:03:37.10		0.08
ABTA	426.0	256	Pn	7:03:45.40		1.73
			Sn	04:48.80		18.63
MDVR	432.9	138	iPnD	7:03:44.80		0.27
HERR	463.1	132	iPn	7:03:49.20		0.91
WTTA	479.4	264	Pn	7:03:52.10		1.77
SQTA	512.2	264	Pn	7:03:56.00		1.58
			Sn	04:45.30		-4.01
MOTA	518.3	266	Pn	7:03:58.60		3.42
BURB	544.8	91	iPnD	7:03:57.70		-0.79
FETA	551.7	262	Pn	7:04:00.00		0.65

299.

2013-10-19 time: 8:58:18.67 UTC ML= 1.3
lat: 47.711N lon: 17.992E h= 10.0 km
erh= 1.5km erz= 2.3km
nr= 15 gap=115 rms=0.53
Locality: Ács
Comments:

sta	dist	azm	phase	hr mn	sec	res
SRO	26.6	65	ePg	8:58:24.50		0.75
			eSg	58:28.40		0.69
SRO2	30.7	79	eSg	8:58:28.60		-0.33
CSKK	43.7	152	ePg	8:58:26.60		-0.07
			eSg	58:30.90		-2.01
PKSG	46.5	140	ePg	8:58:27.10		-0.06
			eSg	58:33.20		-0.59
PKST	50.4	176	ePg	8:58:28.50		0.65
			eSg	58:33.00		-2.00
MPLH	69.2	210	eSg	8:58:41.00		0.11
MODS	90.9	324	ePg	8:58:35.00		0.00
			eSg	58:47.40		-0.33
SMOL	98.6	335	eSg	8:58:49.90		-0.26
VYHS	107.3	36	ePn	8:58:38.00		0.19
			eSn	58:51.70		-1.04

300.

2013-10-19 time: 15:42:52.22 UTC ML= 0.4
lat: 47.356N lon: 18.118E h= 1.5 km
erh= 4.0km erz=12.5km
nr= 6 gap=229 rms=0.32
Locality: Nagyveleg
Comments:

sta	dist	azm	phase	hr mn	sec	res
CSKK	10.8	86	ePgD	15:42:53.80		-0.37
			eSg	42:55.30		-0.39
PKST	12.5	210	ePgD	15:42:54.40		-0.08
			eSg	42:56.40		0.16
PKSG	21.0	79	ePgC	15:42:56.30		0.32
			eSg	42:59.40		0.49

301.

2013-10-20 time: 6:51:27.29 UTC ML= 1.2
lat: 47.672N lon: 17.958E h= 12.7 km
erh= 2.4km erz= 3.2km
nr= 15 gap=117 rms=0.54
Locality: Bana
Comments:

sta	dist	azm	phase	hr mn sec	res
SRO	30.9	60	ePg	6:51:33.70	0.44
			eSg	51:37.40	-0.51
CSKK	41.2	146	ePgD	6:51:35.00	0.01
			eSg	51:39.90	-1.10
PKSG	45.1	134	ePgD	6:51:36.20	0.55
			eSg	51:42.20	0.02
PKST	46.3	173	ePgD	6:51:36.10	0.24
			eSg	51:41.80	-0.75
MPLH	64.1	209	ePg	6:51:39.70	0.73
			eSg	51:51.40	3.33
TIH	86.0	183	eSg	6:51:54.50	-0.42
MODS	93.1	327	eP*	6:51:43.70	-0.31
			eS*	51:56.30	-0.75
SMOL	101.5	337	eS*	6:51:59.80	0.46
VYHS	112.4	36	ePn	6:51:47.10	0.38
			eSn	52:00.70	-1.17

302.

2013-10-20 time: 14:32:56.32 UTC ML= 2.8
lat: 47.687N lon: 16.121E h= 6.9 km
erh= 1.5km erz= 1.4km
nr= 58 gap= 58 rms=0.87
Locality: Austria
Comments:

sta	dist	azm	phase	hr mn sec	res
SOP	32.8	91	ePgD	14:33:02.60	0.29
CONA	33.2	324	Pg	14:33:02.20	-0.17
			Sg	33:08.20	1.12
ARSA	66.2	223	Pg	14:33:07.80	-0.41
			Sg	33:16.20	-1.29
ZST	92.6	52	ePg	14:33:10.90	-2.01
			eSg	33:24.50	-1.35
MODS	115.2	48	ePn	14:33:14.40	-2.43
			eSn	33:31.20	-1.63
MPLH	121.4	118	ePn	14:33:17.50	-0.11
			eSn	33:33.30	-0.92
SMOL	133.9	47	ePn	14:33:19.00	-0.17
			eSn	33:36.60	-0.39
BISS	137.9	213	iPn	14:33:19.90	0.23
SOKA	139.2	216	Pn	14:33:19.30	-0.53
			Sn	33:37.70	-0.47
PERS	139.5	213	iPn	14:33:19.60	-0.26
MOA	140.2	277	Pn	14:33:20.40	0.44
			Sn	33:37.80	-0.59
GROS	144.2	199	iPn	14:33:20.80	0.36
PKST	151.9	108	ePnD	14:33:21.90	0.50
			eSn	33:41.20	0.23
TIH	160.0	123	ePn	14:33:23.60	1.18
SRO	165.0	85	ePn	14:33:22.80	-0.24
			eSn	33:44.50	0.62
CSKK	165.1	103	ePn	14:33:25.70	2.65
			eSn	33:42.90	-1.00
SRO2	170.7	87	ePn	14:33:23.50	-0.25
			eSn	33:43.60	-1.55
PKSG	174.0	101	ePnD	14:33:25.30	1.14
			eSn	33:47.60	1.72
OBKA	177.2	222	Pn	14:33:25.90	1.34
VRAC	183.7	11	iPnD	14:33:25.70	0.33
TREC	184.9	345	ePn	14:33:26.50	0.98
			eSn	33:47.80	-0.49
PKS9	204.3	127	ePn	14:33:28.50	0.56
VYHS	221.3	66	ePn	14:33:29.50	-0.56
			eSn	33:56.40	0.02
PENC	237.3	87	ePn	14:33:32.60	0.54
			eSn	34:01.70	1.76
KHC	247.5	310	ePn	14:33:35.70	2.38
			eSn	34:02.00	-0.19
MORH	252.3	130	ePnD	14:33:34.10	0.18
			eSn	34:00.50	-2.75
PKSM	252.4	131	ePnD	14:33:34.10	0.16
			eSn	34:00.20	-3.08
MORC	254.9	24	iPnD	14:33:33.50	-0.75
PKSV	257.8	141	ePnD	14:33:35.20	0.59
GOPC	266.4	338	ePn	14:33:36.20	0.52
			eSn	34:04.80	-1.58
KRLC	270.0	10	ePn	14:33:36.70	0.57
			eSn	34:06.30	-0.89
OKC	281.8	32	ePn	14:33:39.60	2.00
			eSn	34:09.30	-0.50
PSZ	283.8	85	ePn	14:33:38.30	0.44
			eSn	34:08.80	-1.46
LANS	296.4	57	ePn	14:33:40.60	1.17
			eSn	34:13.10	0.05
DPC	296.6	3	ePn	14:33:41.20	1.75
			eSn	34:18.20	5.12
UPC	313.8	359	eSn	14:34:22.90	5.99
PVCC	335.7	340	eSn	14:34:30.20	8.43
BLY	336.7	166	iPn	14:33:46.20	1.75
NKC	390.6	316	ePn	14:33:53.20	2.03
			eSn	34:47.30	13.35
BZS	479.5	119	iPnD	14:34:01.50	-0.76
DRGR	508.8	101	iPn	14:34:04.00	-1.91
BURB	683.4	91	iPnD	14:34:25.60	-2.08

303.

2013-10-21 time: 7:21:46.07 UTC ML= 1.1
lat: 47.409N lon: 18.319E h= 0.0 km
erh= 3.9km erz= 375km
nr= 6 gap=238 rms=0.22
Locality: Pusztavám
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
PKSG	5.7	110	ePgC	7:21:47.00	-0.10
			eSg	21:47.80	-0.10
CSKK	6.8	221	ePg	7:21:47.40	0.12
			eSg	21:48.40	0.17
PKST	27.2	232	ePgC	7:21:51.10	0.16
			eSg	21:54.00	-0.74

304.

2013-10-21 time: 7:22:11.37 UTC ML= 1.0
lat: 47.412N lon: 18.331E h= 0.0 km
erh= 2.1km erz= 199km
nr= 6 gap=244 rms=0.13
Locality: Gánt
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
PKSG	5.0	116	ePgC	7:22:12.30	0.04
			eSg	22:12.80	-0.16
CSKK	7.6	225	ePg	7:22:12.70	-0.02
			eSg	22:13.90	0.12
PKST	28.1	233	ePgC	7:22:16.50	0.11
			eSg	22:20.00	-0.31

305.

2013-10-22 time: 12:20:27.17 UTC ML= 0.9
lat: 47.182N lon: 18.311E h= 0.0 km
erh= 2.3km erz= 803km
nr= 11 gap=152 rms=0.66
Locality: Székesfehérvár
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
CSKK	20.4	349	ePgD	12:20:30.30		-0.52
			eSg		20:32.70	-0.96
PKST	22.6	292	ePgD	12:20:30.80		-0.40
			eSg		20:33.70	-0.65
PKSG	24.0	15	ePgD	12:20:32.20		0.74
			eSg		20:35.60	0.79
MPLH	58.5	269	eSg	12:20:46.60		0.85
MORH	110.5	167	ePg	12:20:47.40		0.51
			eSg		21:01.90	-0.37
PKSM	110.8	167	ePg	12:20:47.80		0.84
			eSg		21:01.80	-0.60

306.

2013-10-23 time: 0:06:57.47 UTC ML= 1.2
lat: 47.680N lon: 16.138E h= 0.1 km
erh= 2.3km erz= 2.7km
nr= 33 gap= 86 rms=1.19
Locality: Austria
Comments:

sta	dist	azm	phase	hr mn	sec	res
SOP	31.6	89	iPgD	0:07:03.50		0.39
			eSg		07:07.20	-0.32
CONA	34.5	323	Pg	0:07:03.20		-0.43
			Sg		07:09.10	0.67
ARSA	66.5	224	Pg	0:07:08.90		-0.45
			Sg		07:17.30	-1.32
ZST	92.1	51	ePg	0:07:13.00		-0.93
			eSg		07:25.60	-1.16
MODS	114.8	48	ePg	0:07:18.40		0.43
			eSg		07:32.30	-1.65
MPLH	120.0	118	ePg	0:07:20.20		1.29
			eSg		07:35.20	-0.42
SMOL	133.6	46	ePn	0:07:22.00		0.85
			eSn		07:37.90	-1.73
SOKA	139.4	217	Pn	0:07:20.70		-1.18
MOA	141.6	278	Pn	0:07:22.10		-0.05
			Sn		07:39.00	-2.40
PKST	150.5	108	ePn	0:07:25.20		1.94
SRO2	169.6	87	eSn	0:07:47.20		-0.41
OBKA	177.5	223	Pn	0:07:28.20		1.57
VYHS	220.5	66	ePn	0:07:35.00		3.01
			eSn		08:00.40	1.48
KBA	221.3	252	Pn	0:07:34.70		2.61
			Sn		08:02.00	2.91
KHC	248.9	310	ePn	0:07:35.20		-0.33
			eSn		08:06.30	1.09
MORH	250.8	130	ePnD	0:07:35.00		-0.78
			eSn		08:01.40	-4.26
PKSM	251.0	131	ePnD	0:07:35.30		-0.49
			eSn		08:01.50	-4.18
PRU	282.2	335	ePn	0:07:40.50		0.82
			eSn		08:15.60	3.00
DPC	297.2	3	eSn	0:08:19.40		3.45

307.

2013-10-23 time: 19:34:53.21 UTC ML= 2.1
lat: 47.938N lon: 16.424E h= 8.0 km
erh= 1.5km erz= 1.3km
nr= 52 gap= 57 rms=0.95
Locality: Austria
Comments:

sta	dist	azm	phase	hr mn	sec	res
SOP	30.1	160	ePgD	19:34:59.60		0.83
			eSg		35:03.30	0.19
CONA	42.0	269	Pg	19:35:00.90		0.05
			Sg		35:06.80	0.00
ZST	58.2	60	ePg	19:35:03.10		-0.60
			eSg		35:10.80	-1.08
MODS	79.9	53	ePg	19:35:06.60		-0.95
			eSg		35:17.90	-0.83
SMOL	98.4	49	ePg	19:35:11.20		0.37
			eSg		35:24.00	-0.58
ARSA	102.1	222	Pg	19:35:10.60		-0.91
			Sg		35:23.00	-2.78
MPLH	119.8	135	ePnC	19:35:15.80		1.65
			eSn		35:30.00	-0.49
SRO	142.0	96	ePn	19:35:17.00		0.07
PKST	142.7	122	ePnD	19:35:17.40		0.38
			eSn		35:33.80	-1.79
SRO2	148.8	98	ePn	19:35:16.90		-0.87
			eSn		35:38.90	1.98
CSKK	152.1	115	ePn	19:35:18.50		0.32
			eSn		35:36.30	-1.36
PKSG	159.7	112	iPnD	19:35:20.40		1.26
			eSn		35:38.80	-0.56
MOA	161.6	267	Pn	19:35:19.80		0.43
			Sn		35:39.20	-0.58
TREC	165.9	335	ePn	19:35:21.10		1.19
			eSn		35:39.70	-1.03
SOKA	175.2	217	Pn	19:35:21.60		0.54
			Sn		35:41.20	-1.59
VYHS	189.7	71	ePn	19:35:22.60		-0.27
			eSn		35:47.70	1.70
OBKA	213.1	222	Pn	19:35:26.20		0.41
			Sn		35:51.00	-0.20
PENC	214.5	94	ePn	19:35:27.90		1.94
KRLC	239.1	6	eSn	19:35:56.10		-0.88
OKC	246.2	31	eSn	19:35:56.70		-1.84
KHC	248.5	302	ePn	19:35:31.50		1.29
			eSn		36:01.80	2.74
GOPC	250.3	331	ePn	19:35:32.30		1.87
KBA	250.9	248	Pn	19:35:30.10		-0.40
			Sn		35:59.30	-0.29
MORH	255.2	139	ePnD	19:35:31.20		0.17
			eSn		35:57.80	-2.74
PKSM	255.4	139	ePn	19:35:31.20		0.14
			eSn		35:57.60	-2.98
MYKA	255.8	235	Pn	19:35:31.00		-0.12
			Sn		36:00.50	-0.19
LANS	262.1	59	ePn	19:35:32.80		0.90
			eSn		36:02.20	0.12
PRU	266.4	329	eSn	19:36:02.80		-0.23
PKSV	267.1	149	ePnD	19:35:33.00		0.48
			eSn		36:01.00	-2.18
ABTA	323.9	246	Pn	19:35:42.70		3.10
			Sn		36:15.50	-0.29

308.

2013-10-24 time: 11:16:23.54 UTC ML= 1.7
lat: 48.649N lon: 20.685E h= 0.0 km
erh= 2.8km erz= 4.9km
nr= 11 gap=141 rms=0.72
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
KECS	23.6	219	ePg	11:16:27.40		-0.36
			eSg		16:31.30	0.25
STHS	94.6	26	eSg	11:16:53.30		-0.31
PSZ	100.3	216	ePg	11:16:41.60		0.16
			eSg		16:54.70	-0.70
LANS	105.2	302	ePg	11:16:43.20		0.87
			eSg		16:56.30	-0.69
KOLS	120.9	75	ePg	11:16:46.40		1.28
			eSg		17:00.50	-1.46
VYHS	137.6	263	ePn	11:16:47.90		0.18
			eSn		17:05.10	-1.49

309.

2013-10-25 time: 9:07:10.90 UTC ML= 0.4
lat: 47.147N lon: 18.059E h= 10.0 km
erh= 6.0km erz= 8.1km
nr= 6 gap=172 rms=0.44
Locality: Hajmáskér
Comments:

sta	dist	azm	phase	hr mn sec	res
PKST	12.6	351	ePgD	9:07:13.00	-0.78
			eSg	07:16.60	0.58
CSKK	28.5	32	ePgD	9:07:16.30	0.01
			eSg	07:21.00	0.51
TIH	30.2	205	ePgC	9:07:16.60	0.01
			eSg	07:21.30	0.28

310.

2013-10-28 time: 4:40:35.72 UTC ML= 0.4
lat: 47.355N lon: 18.353E h= 10.0 km
erh= 9.3km erz= 4.3km
nr= 6 gap=211 rms=0.18
Locality: Gánt
Comments:

sta	dist	azm	phase	hr mn sec	res
PKSG	4.9	35	ePg	4:40:38.00	0.29
			eSg	40:38.90	-0.36
CSKK	7.1	277	ePgC	4:40:37.80	-0.10
			eSg	40:39.70	0.09
PKST	26.4	246	ePgD	4:40:40.70	-0.05
			eSg	40:44.80	0.12

311.

2013-10-28 time: 8:47:09.75 UTC ML= 1.1
lat: 47.476N lon: 18.337E h= 0.0 km
erh= 5.9km erz= 747km
nr= 6 gap=293 rms=0.43
Locality: Oroszlány
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
PKSG	10.2	157	ePgC	8:47:12.00	0.43
			eSg	47:12.60	-0.39
CSKK	13.8	205	ePgC	8:47:12.30	0.08
			eSg	47:13.80	-0.35
PKST	33.3	223	ePgC	8:47:15.20	-0.49
			eSg	47:21.10	0.78

312.

2013-10-28 time: 8:47:26.61 UTC ML= 1.0
lat: 47.458N lon: 18.351E h= 0.0 km
erh= 6.7km erz= 836km
nr= 6 gap=291 rms=0.49
Locality: Oroszlány
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
PKSG	7.9	158	ePgC	8:47:28.40	0.38
			eSg	47:29.00	-0.12
CSKK	12.6	213	ePgC	8:47:28.70	-0.15
			eSg	47:29.80	-0.80
PKST	32.6	227	ePgC	8:47:32.20	-0.23
			eSg	47:38.20	1.23

313.

2013-10-28 time: 13:00:55.22 UTC ML= 0.9
lat: 47.181N lon: 18.145E h= 10.0 km
erh=10.0km erz=19.2km
nr= 7 gap=173 rms=0.72
Locality: Pétfürdő
Comments:

sta	dist	azm	phase	hr mn sec	res
PKST	12.0	316	ePgD	13:00:58.60	0.58
			eSg	01:00.10	-0.10
CSKK	22.0	23	ePgD	13:00:58.90	-0.64
			eSg	01:01.10	-1.81
PKSG	29.9	38	ePgD	13:01:01.40	0.55
			eSg	01:06.00	0.76
TIH	36.7	211	eSg	13:01:06.90	-0.40

314.

2013-10-28 time: 21:56:08.61 UTC ML= 1.4
lat: 47.199N lon: 17.153E h= 12.8 km
erh= 2.2km erz= 1.8km
nr= 30 gap= 66 rms=0.92
Locality: Izsákfa
Comments:

sta	dist	azm	phase	hr mn sec	res
MPLH	29.5	96	ePgD	21:56:13.90	-0.45
			eSg	56:17.50	-1.33
PKST	67.1	84	ePgD	21:56:20.40	-0.41
			eSg	56:30.30	-0.03
SOP	70.1	320	ePg	21:56:22.00	0.66
			eSg	56:31.40	0.13
CSKK	85.8	78	ePg	21:56:24.00	-0.10
			eSg	56:36.70	0.52
BEHE	85.9	200	ePgD	21:56:25.30	1.18
			eSg	56:35.80	-0.43
PKSG	96.1	77	eP*	21:56:26.90	1.13
			eS*	56:40.60	1.44
SRO	111.0	52	ePn	21:56:28.60	0.75
			eSn	56:43.60	0.75
SRO2	112.6	56	ePn	21:56:27.40	-0.65
			eSn	56:43.00	-0.21
ARSA	123.6	273	Pn	21:56:29.20	-0.21
			Sn	56:43.40	-2.24
CONA	126.6	310	Pn	21:56:30.60	0.81
			Sn	56:45.60	-0.71
MODS	131.0	4	ePn	21:56:30.70	0.36
			eSn	56:45.70	-1.59
SMOL	147.7	8	eSn	21:56:49.50	-1.50
MORH	157.9	134	ePnD	21:56:32.90	-0.80
			eSn	56:54.90	1.64
PKSM	158.1	134	ePnD	21:56:32.90	-0.82
			eSn	56:54.60	1.30
SOKA	171.5	250	Pn	21:56:36.70	1.31
			Sn	56:56.20	-0.08
VYHS	191.4	41	ePn	21:56:40.80	2.93
			eSn	57:05.80	5.11

315.

2013-10-29 time: 12:16:39.57 UTC ML= 0.8
lat: 47.204N lon: 18.291E h= 0.0 km
erh= 2.0km erz= 587km
nr= 10 gap=146 rms=0.47
Locality: Székesfehérvár
Comments: probably explosion

sta	dist	azm	phase	hr mn sec	res
CSKK	17.8	353	ePgC	12:16:42.30	-0.46
			eSg	16:44.90	-0.34
PKST	20.4	287	ePgC	12:16:42.70	-0.51
			eSg	16:45.70	-0.35

```
PKSG  22.2  20   ePgC  12:16:44.20    0.66
                 eSg     16:46.90    0.27
MPLH  57.1 266   ePg   12:16:50.00    0.24
                 eSg     16:58.60    0.89
PKSM 113.5 166   ePgC  12:16:59.90    0.06
                 eSg     17:13.10   -2.55
```

316.

```
 2013-10-29  time: 16:33:42.41 UTC  ML= 0.7
   lat: 47.656N  lon: 18.337E  h=  0.0 km
                 erh= 7.2km    erz= 674km
   nr=  5        gap=325       rms=0.31
   Locality: Tata
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG  29.7 172   ePgD  16:33:48.00    0.29
                 eSg     33:51.80   -0.04
CSKK  33.1 190   ePgC  16:33:48.10   -0.22
                 eSg     33:52.40   -0.53
PKST  49.7 207   eSg   16:33:58.60    0.38
```

317.

```
 2013-10-31  time:  6:10:50.04 UTC  ML= 3.0
   lat: 45.591N  lon: 22.816E  h=  2.6 km
                 erh= 2.5km    erz= 2.9km
   nr= 20        gap= 48       rms=0.75
   Locality: Romania
   Comments:

sta   dist azm  phase  hr mn  sec     res
GZR   22.2 188   iPg    6:10:55.00    0.98
DEV   33.2  12   iPg    6:10:56.40    0.42
LOT   76.2 102   iPgD   6:11:02.30   -1.35
BZS   93.6 272   iPgD   6:11:06.50   -0.26
SRE  107.7 163   iPg    6:11:09.20   -0.07
SIRR 117.0 310   iPgD   6:11:10.60   -0.34
MDVR 124.9 224   iPnD   6:11:11.90   -0.41
MDB  136.1  63   iPnD   6:11:13.40   -0.30
CJR  138.6  26   iPn    6:11:13.20   -0.82
MTUR 180.5 103   iPn    6:11:19.10   -0.15
ARCR 204.0  35   iPnD   6:11:23.20    1.02
DOPR 204.4  78   iPnD   6:11:21.90   -0.33
HUMR 207.4 125   iPn    6:11:24.50    1.90
BMR  237.2  13   iPn    6:11:27.40    1.08
OZUR 237.5  76   iPn    6:11:26.90    0.55
MLR  244.7  93   iPn    6:11:28.50    1.26
PKS6 275.3 294   ePnD   6:11:31.90    0.83
                 eSn     12:03.20    0.13
TRPA 283.1 356   iPn    6:11:33.60    1.56
BURB 290.6  39   iPn    6:11:33.50    0.53
PLOR 299.9  84   iPn    6:11:35.10    0.97
VRI  306.0  84   iPnD   6:11:35.00    0.10
MORH 331.1 282   ePnD   6:11:37.90   -0.12
                 eSn     12:13.10   -2.35
PKSM 331.2 282   ePnC   6:11:38.00   -0.04
                 eSn     12:12.40   -3.08
VTS  334.7 175   iPn    6:11:39.50    1.03
PSZ  341.7 319   ePn    6:11:39.60    0.26
                 eSn     12:14.60   -3.21
KECS 367.1 331   ePn    6:11:43.50    0.99
                 eSn     12:36.30   12.86
PKS9 368.0 288   ePnC   6:11:42.70    0.08
                 eSn     12:21.80   -1.83
PKSG 394.4 301   eSn    6:12:28.70   -0.79
CSKK 401.5 299   ePn    6:11:48.70    1.90
                 eSn     12:29.30   -1.78
PKST 411.7 297   ePnD   6:11:48.50    0.43
                 eSn     12:29.10   -4.24
MPLH 442.3 293   ePnC   6:11:52.80    0.92
                 eSn     12:39.20   -0.92
VYHS 442.3 317   ePn    6:11:52.10    0.21
LANS 469.6 327   ePn    6:11:57.00    1.70
MODS 522.8 306   ePn    6:12:02.10    0.18
                 eSn     12:47.50  -10.49
```

318.

```
 2013-10-31  time: 19:37:03.52 UTC  ML= 2.1
   lat: 45.780N  lon: 18.461E  h=  3.9 km
                 erh= 4.7km    erz= 2.4km
   nr= 22        gap=257       rms=0.96
   Locality: Beremend
   Comments:

sta   dist azm  phase  hr mn  sec     res
PKSV  20.2 307   ePgD  19:37:06.70   -0.50
                 eSg     37:09.40   -0.67
PKSM  50.0  16   ePgD  19:37:12.40   -0.08
                 eSg     37:19.00   -0.47
MORH  50.5  16   ePgD  19:37:12.50   -0.06
                 eSg     37:19.30   -0.32
PKS9  90.8 351   ePgD  19:37:20.40    0.65
                 eSg     37:33.60    1.19
PKS6 124.8  43   ePn   19:37:24.70   -0.91
                 eSn     37:42.00   -0.84
TIH  132.0 341   ePnD  19:37:26.70    0.19
                 eSn     37:41.00   -3.44
PKS7 150.8  21   ePn   19:37:28.80   -0.06
                 eSn     37:47.40   -1.22
BEHE 151.2 301   ePnD  19:37:30.20    1.30
                 eSn     37:46.00   -2.70
PKST 167.7 349   ePn   19:37:33.10    2.14
                 eSn     37:53.30    0.94
MPLH 170.0 335   ePn   19:37:32.00    0.75
                 eSn     37:51.80   -1.07
CSKK 176.7 355   eSn   19:37:56.80    2.44
PSZ  261.7  25   ePn   19:37:41.40   -1.28
                 eSn     38:07.80   -5.42
```

319.

```
 2013-11-02  time:  4:36:29.13 UTC  ML= 1.2
   lat: 47.972N  lon: 19.455E  h= 10.0 km
                 erh= 2.1km    erz= 9.7km
   nr=  6        gap=139       rms=0.24
   Locality: Cserhátsurány
   Comments:

sta   dist azm  phase  hr mn  sec     res
PENC  24.0 213   ePgC   4:36:33.50   -0.27
                 eSg     36:37.70    0.31
PSZ   33.3 100   ePgD   4:36:35.50    0.15
                 eSg     36:40.00   -0.20
VYHS  74.1 322   ePg    4:36:42.80    0.32
                 eSg     36:52.70   -0.19
```

320.

```
 2013-11-04  time:  3:06:52.25 UTC  ML= 0.7
   lat: 47.683N  lon: 17.951E  h= 10.0 km
                 erh= 2.2km    erz= 2.7km
   nr= 11        gap=154       rms=0.52
   Locality: Bana
   Comments:

sta   dist azm  phase  hr mn  sec     res
SRO   30.8  62   ePg    3:06:58.50    0.47
                 eSg     07:02.40   -0.14
CSKK  42.5 147   ePg    3:07:00.00   -0.05
                 eSg     08:04.80   -1.33
PKSG  46.3 134   ePg    3:07:01.00    0.29
                 eSg     07:07.20   -0.10
PKST  47.5 172   ePg    3:07:01.50    0.57
                 eSg     07:06.80   -0.89
MODS  91.8 327   eSg    3:07:21.50   -0.11
VYHS 111.7  36   ePn    3:07:12.20    0.26
```

		eSn	07:26.00		-1.30	

321.

2013-11-04 time: 8:23:47.54 UTC ML= 0.7
lat: 47.419N lon: 18.325E h= 0.0 km
erh= 3.6km erz= 329km
nr= 6 gap=250 rms=0.20
Locality: Pusztavám
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKSG	5.8	121	ePgC	8:	23:	48.70	0.12
			eSg		23:	49.30	-0.08
CSKK	7.9	218	ePgD	8:	23:	49.00	0.05
			eSg		23:	49.90	-0.15
PKST	28.3	231	ePg	8:	23:	52.30	-0.29
			eSg		23:	58.10	1.57

322.

2013-11-04 time: 8:24:29.74 UTC ML= 0.9
lat: 47.459N lon: 18.335E h= 0.0 km
erh= 6.3km erz= 786km
nr= 6 gap=285 rms=0.47
Locality: Oroszlány
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKSG	8.6	151	ePgC	8:	24:	31.60	0.33
			eSg		24:	32.20	-0.27
CSKK	12.1	208	ePgD	8:	24:	31.90	0.01
			eSg		24:	32.80	-0.77
PKST	31.8	226	ePg	8:	24:	35.10	-0.32
			eSg		24:	40.90	1.05

323.

2013-11-04 time: 9:14:45.30 UTC ML= 0.9
lat: 47.085N lon: 18.072E h= 0.0 km
erh= 2.9km erz= 8.5km
nr= 7 gap=189 rms=0.50
Locality: Papkeszi
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKST	19.5	352	ePgC	9:	14:	48.40	-0.38
			eSg		14:	51.60	0.10
TIH	24.7	213	ePgC	9:	14:	49.20	-0.51
			eSg		14:	53.60	0.45
CSKK	34.0	25	eSg	9:	14:	57.00	0.89
MPLH	41.5	283	eSg	9:	14:	58.50	0.02
ARSA	194.1	275	Pn	9:	15:	17.40	0.86
MOA	299.3	286	Pn	9:	15:	30.30	0.66

324.

2013-11-05 time: 23:49:53.52 UTC ML= 0.2
lat: 47.338N lon: 18.113E h= 2.9 km
erh= 4.0km erz= 4.7km
nr= 6 gap=220 rms=0.34
Locality: Bakonycsernye
Comments:

sta	dist	azm	phase	hr	mn	sec	res
PKST	10.5	214	ePgD	23:	49:	55.50	0.03
			eSg		49:	57.20	0.21
CSKK	11.5	76	ePgD	23:	49:	55.20	-0.44
			eSg		49:	57.00	-0.30
PKSG	21.9	74	ePgD	23:	49:	57.60	0.15
			eSg		50:	01.30	0.78

325.

2013-11-08 time: 10:56:31.00 UTC ML= 0.9
lat: 47.124N lon: 17.929E h= 14.5 km
erh= 2.8km erz= 2.6km
nr= 12 gap=108 rms=0.67
Locality: Kádárta
Comments:

sta	dist	azm	phase	hr	mn	sec	res
PKST	17.1	28	ePg	10:	56:	34.20	-0.80
			eSg		56:	37.30	-0.82
TIH	25.0	186	ePgD	10:	56:	35.80	-0.36
			eSg		56:	40.70	0.52
MPLH	30.0	280	ePg	10:	56:	37.00	0.05
			eSg		56:	42.20	0.62
CSKK	36.6	43	ePg	10:	56:	37.10	-0.93
			eSg		56:	43.50	-0.02
PKSG	46.0	50	ePgD	10:	56:	40.10	0.50
			eSg		56:	47.70	1.38
MORH	114.8	152	ePn	10:	56:	51.20	0.71
			eSn		57:	04.90	-0.79

326.

2013-11-10 time: 5:34:35.77 UTC ML= 2.4
lat: 46.919N lon: 21.208E h= 10.0 km
erh= 2.3km erz= 2.3km
nr= 30 gap= 81 rms=0.94
Locality: Vésztő
Comments:

sta	dist	azm	phase	hr	mn	sec	res
LTVH	73.8	45	ePg	5:	34:	48.60	-0.46
			eSg		34:	58.90	-0.54
SIRR	80.2	154	iPgD	5:	34:	50.40	0.19
PKSN	102.2	269	ePgD	5:	34:	53.70	-0.40
			eSg		35:	08.10	-0.30
DRGR	115.5	97	iPn	5:	34:	55.40	-0.52
			eSn		35:	09.60	-2.05
PKS6	130.5	254	ePn	5:	34:	57.40	-0.39
			eSn		35:	15.50	0.53
BZS	148.1	168	iPn	5:	34:	59.90	-0.09
PSZ	148.9	318	ePn	5:	34:	59.10	-0.99
			eSn		35:	17.60	-1.46
PKS2	159.8	253	ePn	5:	35:	01.00	-0.44
			eSn		35:	21.70	0.23
TRPA	167.9	37	iPn	5:	35:	03.30	0.84
PENC	174.9	304	ePn	5:	35:	02.10	-1.22
			eSn		35:	26.30	1.48
KECS	182.2	343	ePn	5:	35:	05.90	1.66
			eSn		35:	27.10	0.65
CJR	183.8	97	iPn	5:	35:	05.90	1.45
GZR	208.4	144	iPn	5:	35:	08.40	0.89
MORH	211.5	248	ePn	5:	35:	06.20	-1.70
			eSn		35:	36.90	3.94
PKSM	211.9	248	ePn	5:	35:	06.30	-1.64
			eSn		35:	36.80	3.76
PKSG	220.0	284	ePn	5:	35:	10.10	1.14
			eSn		35:	41.20	6.35
PKST	243.9	279	ePn	5:	35:	11.60	-0.34
HERR	245.1	158	iPn	5:	35:	12.50	0.41
VYHS	249.7	315	ePn	5:	35:	14.50	1.84
			eSn		35:	44.50	3.06
BURB	313.1	76	iPn	5:	35:	21.30	0.74

327.

2013-11-11 time: 8:59:23.48 UTC ML= 0.9
lat: 47.449N lon: 18.337E h= 0.0 km
erh= 5.8km erz= 715km
nr= 6 gap=280 rms=0.42
Locality: Oroszlány
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKSG	7.5	147	ePgC	8:	59:	25.10	0.28
			eSg		59:	25.70	-0.16
CSKK	11.1	211	ePgD	8:	59:	25.40	-0.06
			eSg		59:	26.30	-0.71
PKST	31.1	227	ePg	8:	59:	28.80	-0.23
			eSg		59:	34.40	1.04

328.

2013-11-11 time: 8:59:47.22 UTC ML= 0.8
lat: 47.415N lon: 18.310E h= 0.0 km
erh= 2.6km erz= 282km
nr= 6 gap=243 rms=0.17
Locality: Pusztavám
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKSG	6.6	113	ePgC	8:	59:	48.40	-0.01
			eSg		59:	49.10	-0.23
CSKK	6.9	213	ePgD	8:	59:	48.70	0.25
			eSg		59:	49.50	0.09
PKST	27.1	230	ePg	8:	59:	52.00	-0.06
			eSg		59:	55.60	-0.24

329.

2013-11-11 time: 9:00:23.74 UTC ML= 0.8
lat: 47.410N lon: 18.320E h= 0.0 km
erh= 2.1km erz= 193km
nr= 6 gap=239 rms=0.12
Locality: Pusztavám
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKSG	5.7	111	ePgC	9:	00:	24.80	0.04
			eSg		00:	25.40	-0.16
CSKK	6.9	220	ePgD	9:	00:	25.10	0.13
			eSg		00:	26.00	0.07
PKST	27.4	232	ePg	9:	00:	28.60	-0.03
			eSg		00:	32.20	-0.24

330.

2013-11-13 time: 23:56:41.55 UTC ML= 0.4
lat: 47.316N lon: 18.013E h= 0.1 km
erh= 8.7km erz= 579km
nr= 8 gap=188 rms=0.28
Locality: Szápár
Comments:

sta	dist	azm	phase	hr	mn	sec	res
PKST	6.6	166	ePgC	23:	56:	42.50	-0.23
			eSg		56:	43.80	0.16
CSKK	19.4	74	ePgC	23:	56:	44.50	-0.52
			eSg		56:	47.70	-0.03
PKSG	29.8	74	ePgC	23:	56:	47.10	0.23
			eSg		56:	51.30	0.29
MPLH	39.3	246	ePg	23:	56:	48.80	0.22
			eSg		56:	54.20	0.14

331.

2013-11-14 time: 8:40:48.77 UTC ML= 0.7
lat: 47.428N lon: 18.343E h= 0.0 km
erh= 3.4km erz= 379km
nr= 6 gap=267 rms=0.22
Locality: Oroszlány
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKSG	5.4	138	ePgC	8:	40:	49.70	-0.03
			eSg		40:	50.50	0.03
CSKK	9.5	221	ePgD	8:	40:	50.40	-0.07
			eSg		40:	51.40	-0.39
PKST	29.9	231	ePgC	8:	40:	54.20	0.08
			eSg		40:	59.00	0.71

332.

2013-11-14 time: 8:49:35.98 UTC ML= 1.1
lat: 47.424N lon: 18.338E h= 0.0 km
erh= 5.3km erz= 560km
nr= 6 gap=260 rms=0.33
Locality: Oroszlány
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKSG	5.3	132	ePgC	8:	49:	37.00	0.07
			eSg		49:	37.70	0.03
CSKK	8.9	221	ePgD	8:	49:	37.40	-0.17
			eSg		49:	38.10	-0.72
PKST	29.4	231	ePgC	8:	49:	41.30	0.08
			eSg		49:	46.10	0.79

333.

2013-11-14 time: 8:52:24.33 UTC ML= 1.0
lat: 47.471N lon: 18.373E h= 0.0 km
erh= 8.2km erz= 997km
nr= 6 gap=304 rms=0.59
Locality: Várgesztes
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKSG	8.8	171	ePgC	8:	52:	26.20	0.29
			eSg		52:	26.90	-0.24
CSKK	14.6	215	ePgC	8:	52:	26.60	-0.34
			eSg		52:	27.70	-1.28
PKST	34.7	227	ePgC	8:	52:	30.70	0.17
			eSg		52:	36.60	1.23

334.

2013-11-14 time: 10:26:53.30 UTC ML= 0.7
lat: 47.464N lon: 17.981E h= 0.0 km
erh= 3.9km erz= 612km
nr= 7 gap=239 rms=0.41
Locality: Bakonyszombathely
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
PKST	23.1	170	ePgD	10:	26:	58.00	0.56
			eSg		27:	00.70	0.04
CSKK	23.9	118	ePg	10:	26:	57.30	-0.27
			eSg		27:	00.60	-0.30
PKSG	32.0	105	ePgC	10:	26:	59.30	0.29
			eSg		27:	02.70	-0.76
MPLH	46.7	226	eSg	10:	27:	07.80	-0.34

335.

2013-11-14 time: 13:31:54.04 UTC ML= 0.5
lat: 47.362N lon: 18.147E h= 0.0 km
erh= 7.6km erz= 990km
nr= 8 gap=195 rms=0.71
Locality: Nagyveleg
Comments: probably explosion

sta	dist	azm	phase	hr	mn	sec	res
CSKK	8.6	90	ePg	13:	31:	55.00	-0.57
			eSg		31:	57.40	0.64
PKST	14.3	217	ePg	13:	31:	55.50	-1.10
			eSg		31:	58.60	0.01
PKSG	18.7	80	ePg	13:	31:	57.30	-0.07
			eSg		32:	00.60	0.62
MPLH	50.7	245	ePg	13:	32:	03.10	0.01

```
                eSg      32:11.80    1.64
```

336.

```
 2013-11-15  time:  7:33:30.75 UTC  ML= 0.2
   lat: 47.370N  lon: 18.067E  h=  0.0 km
                 erh= 6.0km    erz= 607km
   nr=  6        gap=253       rms=0.35
   Locality: Súr
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKST  12.6 191   ePgD   7:33:32.70   -0.31
                 eSg      33:35.10    0.33
CSKK  14.6  93   ePgD   7:33:33.40    0.03
                 eSg      33:35.50    0.09
PKSG  24.6  84   ePgD   7:33:35.50    0.36
                 eSg      33:37.70   -0.86
```

337.

```
 2013-11-15  time:  7:37:36.52 UTC  ML=-0.1
   lat: 47.358N  lon: 18.080E  h=  0.0 km
                 erh= 9.1km    erz= 816km
   nr=  6        gap=243       rms=0.50
   Locality: Súr
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKST  11.5 197   ePgC   7:37:38.30   -0.28
                 eSg      37:40.80    0.62
CSKK  13.6  88   ePgD   7:37:39.10    0.14
                 eSg      37:40.60   -0.26
PKSG  23.8  81   ePg    7:37:41.30    0.54
                 eSg      37:42.90   -1.17
```

338.

```
 2013-11-15  time:  7:42:15.60 UTC  ML=-0.1
   lat: 47.284N  lon: 18.174E  h=  0.0 km
                 erh= 9.4km    erz= 736km
   nr=  6        gap=202       rms=0.45
   Locality: Isztimér
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKST  10.9 256   ePgC   7:42:17.00   -0.55
                 eSg      42:19.40    0.33
CSKK  11.0  36   ePgC   7:42:17.80    0.24
                 eSg      42:18.60   -0.50
PKSG  20.3  54   ePgC   7:42:19.80    0.57
                 eSg      42:21.70   -0.36
```

339.

```
 2013-11-15  time: 23:06:36.79 UTC  ML= 1.9
   lat: 46.563N  lon: 17.779E  h= 10.0 km
                 erh= 1.8km    erz= 1.5km
   nr= 37        gap= 85       rms=0.82
   Locality: Polány
   Comments:

sta   dist azm  phase  hr mn  sec     res
PKS9  38.4  86   ePgD  23:06:44.80    0.92
TIH   38.5  13   ePgC  23:06:44.10    0.22
                 eSg      06:49.60    0.18
MPLH  69.9 345   ePgD  23:06:49.30   -0.10
                 eSg      06:59.70    0.46
PKSM  77.0 120   ePgD  23:06:50.10   -0.55
                 eSg      07:00.70   -0.76
PKST  79.8  14   ePgD  23:06:51.20    0.05
                 eSg      07:02.00   -0.35
PKSV  83.4 154   ePgD  23:06:51.90    0.12
                 eSg      07:02.50   -0.98
CSKK  96.2  22   ePgC  23:06:53.80   -0.26
                 eSg      07:06.90   -0.64
PKSG 103.2  27   eP*   23:06:56.10    0.80
                 eS*      07:10.00    0.26
PKS2 110.3  94   ePn   23:06:56.20   -0.10
                 eSn      07:13.90    2.38
KOGS 118.0 264    Pn   23:06:56.00   -1.25
PKS7 118.5  63   ePn   23:06:56.80   -0.51
                 eSn      07:14.00    0.68
PKS6 136.9  88   eSn   23:07:16.80   -0.62
SRO  144.8  16   ePn   23:07:03.40    2.80
                 eSn      07:22.70    3.53
PTJ  158.6 242   eSn   23:07:22.60    0.37
ZAG  160.1 239   eSn   23:07:22.80    0.23
ARSA 188.1 294    Pn   23:07:07.80    1.81
                  Sn      07:29.00    0.23
MODS 204.8 349   ePn   23:07:07.80   -0.28
                 eSn      07:29.80   -2.69
CONA 210.0 316    Pn   23:07:08.50   -0.23
                  Sn      07:32.20   -1.44
SOKA 210.7 273    Pn   23:07:07.20   -1.62
                  Sn      07:36.40    2.60
PSZ  219.9  47   ePn   23:07:09.10   -0.86
                 eSn      07:35.70   -0.14
VYHS 229.0  20   ePn   23:07:11.00   -0.09
                 eSn      07:36.80   -1.05
MOA  302.1 298    Pn   23:07:26.00    5.79
```

340.

```
 2013-11-16  time:  9:22:33.26 UTC  ML= 1.1
   lat: 48.016N  lon: 19.567E  h=  2.9 km
                 erh= 3.2km    erz=51.9km
   nr=  6        gap=159       rms=0.78
   Locality: Nagylóc
   Comments:

sta   dist azm  phase  hr mn  sec     res
PSZ   26.7 114   ePgD   9:22:37.80   -0.26
                 eSg      22:41.00   -0.81
PENC  32.9 220   ePgC   9:22:40.00    0.85
                 eSg      22:42.70   -1.05
VYHS  76.0 314   ePg    9:22:47.80    0.96
                 eSg      22:56.70   -0.73
```

341.

```
 2013-11-16  time: 11:03:19.80 UTC  ML= 0.9
   lat: 47.021N  lon: 18.011E  h=  3.5 km
                 erh= 1.5km    erz= 6.4km
   nr=  7        gap=187       rms=0.15
   Locality: Balatonalmádi
   Comments:

sta   dist azm  phase  hr mn  sec     res
TIH   16.2 214   ePg   11:03:22.90    0.14
                 eSg      03:25.00   -0.07
PKST  26.5   4   ePgD  11:03:24.40   -0.17
                 eSg      03:28.20   -0.09
MPLH  39.5 295   ePg   11:03:26.90    0.03
CSKK  42.4  26   ePg   11:03:27.40    0.00
                 eSg      03:33.80    0.47
```

342.

```
 2013-11-17  time:  3:12:23.62 UTC  ML= 1.9
   lat: 46.533N  lon: 17.664E  h=  6.3 km
                 erh= 1.7km    erz= 1.6km
   nr= 30        gap= 94       rms=0.72
   Locality: Osztopán
   Comments:

sta   dist azm  phase  hr mn  sec     res
TIH   44.4  23   ePgC   3:12:31.90    0.28
```

			eSg	12:37.60	-0.27
PKS9	47.5	83	ePgC	3:12:32.60	0.43
			eSg	12:39.20	0.35
MPLH	71.5	352	ePgD	3:12:37.00	0.57
			eSg	12:47.60	1.17
PKSM	83.2	115	ePg	3:12:38.10	-0.42
			eSg	12:48.40	-1.74
PKSV	84.8	148	ePgD	3:12:39.50	0.70
			eSg	12:48.90	-1.74
PKST	85.5	19	ePgD	3:12:38.90	-0.03
			eSg	12:49.70	-1.17
CSKK	102.9	26	ePgD	3:12:41.50	-0.52
			eSg	12:54.10	-2.27
KOGS	109.0	265	Pg	3:12:42.70	-0.41
PKSG	110.4	30	ePgD	3:12:43.70	0.35
			eSg	12:56.80	-1.95
PKS2	119.0	92	ePnD	3:12:45.10	0.42
			eSn	13:01.40	0.29
PKS7	127.8	63	eSn	3:13:02.40	-0.67
PKS6	145.9	87	eSn	3:13:08.20	1.11
PTJ	149.3	242	Pn	3:12:48.10	-0.36
SOP	153.0	327	ePn	3:12:48.70	-0.22
			eSn	13:07.00	-1.66
ARSA	181.6	296	Pn	3:12:52.40	-0.10
PENC	186.0	41	ePn	3:12:55.10	2.06
			eSn	13:17.80	1.81
CONA	206.7	319	Pn	3:12:56.10	0.48
PSZ	228.6	48	ePn	3:12:57.80	-0.55
			eSn	13:24.20	-1.25

343.

2013-11-18 time: 0:20:55.32 UTC ML= 1.9
lat: 45.992N lon: 19.540E h= 0.7 km
erh= 3.3km erz= 2.3km
nr= 20 gap=243 rms=0.82
Locality: Serbia
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKS2	61.1	336	ePgD	0:21:06.60		0.38
			eSg	21:15.90		1.17
PKS6	67.6	2	ePg	0:21:07.40		0.00
			eSg	21:16.60		-0.22
PKSM	73.7	289	ePgC	0:21:08.30		-0.17
			eSg	21:18.20		-0.53
PKSV	100.5	263	ePg	0:21:13.40		0.13
			eSg	21:26.30		-0.97
PKSN	103.8	14	ePg	0:21:13.30		-0.55
			eSg	21:26.60		-1.70
PKS9	117.6	304	ePg	0:21:16.80		0.49
			eSg	21:32.80		0.11
PKS7	120.9	346	eSg	0:21:32.60		-1.15
BSZH	155.7	21	eSn	0:21:42.00		-0.23
PKSG	178.8	331	ePn	0:21:25.40		0.85
			eSn	21:49.00		1.65
CSKK	181.2	327	eSn	0:21:49.70		1.82
PKST	182.1	321	ePn	0:21:25.20		0.24
			eSn	21:45.70		-2.38
PENC	201.0	354	eSn	0:21:55.10		2.83

344.

2013-11-19 time: 10:43:58.71 UTC ML= 1.1
lat: 48.010N lon: 19.487E h= 0.0 km
erh= 2.5km erz= 212km
nr= 5 gap=210 rms=0.24
Locality: Nógrádsipek
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PSZ	32.1	109	ePgD	10:44:04.30		-0.14
			eSg	44:08.90		-0.01
VYHS	72.3	318	ePg	10:44:11.60		-0.03
			eSg	44:21.60		-0.11
KECS	90.9	55	ePg	10:44:15.60		0.65

345.

2013-11-19 time: 12:48:42.04 UTC ML= 0.5
lat: 47.458N lon: 18.035E h= 0.0 km
erh= 2.0km erz= 221km
nr= 5 gap=285 rms=0.10
Locality: Vérteskethely
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
CSKK	20.0	122	ePgD	12:48:45.50		-0.12
			eSg	48:48.40		-0.01
PKST	22.2	180	ePgD	12:48:46.10		0.10
			eSg	48:49.00		-0.08
PKSG	27.8	105	eSg	12:48:51.00		0.12

346.

2013-11-19 time: 14:02:19.66 UTC ML= 0.6
lat: 47.576N lon: 18.388E h= 0.0 km
erh= 2.7km erz= 245km
nr= 5 gap=322 rms=0.11
Locality: Tatabánya
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSG	20.4	179	ePgC	14:02:23.40		0.10
			eSg	02:26.10		-0.05
CSKK	25.5	202	ePg	14:02:24.00		-0.21
			eSg	02:27.80		0.04
PKST	44.2	217	ePg	14:02:27.60		0.06

347.

2013-11-21 time: 10:37:08.68 UTC ML= 1.7
lat: 48.593N lon: 20.562E h= 0.0 km
erh= 2.6km erz= 405km
nr= 8 gap=257 rms=0.29
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
KECS	13.5	205	ePg	10:37:11.10		0.01
			eSg	37:15.50		2.54
PSZ	89.9	213	ePg	10:37:24.50		-0.24
			eSg	37:37.20		-0.07
LANS	101.4	308	ePg	10:37:26.80		0.01
			eSg	37:41.00		0.09
VYHS	127.9	265	ePg	10:37:31.60		0.08
			eSg	37:49.30		-0.03

348.

2013-11-21 time: 12:30:21.33 UTC ML= 0.8
lat: 47.184N lon: 18.288E h= 0.0 km
erh= 3.5km erz= ***km
nr= 13 gap=147 rms=1.13
Locality: Sárkeszi
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
CSKK	20.0	354	ePgC	12:30:24.20		-0.70
			eSg	30:26.90		-0.79
PKST	21.0	293	ePgD	12:30:24.70		-0.37
			eSg	30:27.70		-0.29
PKSG	24.4	19	ePgD	12:30:26.10		0.42
			eSg	30:29.70		0.63
MPLH	56.8	268	ePgD	12:30:32.10		0.63
			eSg	30:40.40		1.02
PKS9	66.4	181	ePgD	12:30:37.30		4.12
			eSg	30:46.90		4.47
MORH	111.0	166	ePg	12:30:39.30		-1.85

```
PKSM 111.4 166   ePg   12:30:40.60   -0.62
                 eSg      30:55.10   -1.64
```

349.

```
 2013-11-23  time: 18:53:33.01 UTC  ML= 2.2
   lat: 47.890N  lon: 21.021E  h=  1.9 km
                 erh= 2.6km    erz= 2.8km
   nr= 22        gap= 87       rms=0.96
   Locality: Tiszapalkonya
   Comments:

sta   dist azm  phase  hr mn  sec     res
KECS  77.0 329   ePg   18:53:46.80    0.04
                 eSg      53:56.40   -1.09
PSZ   84.3 272   ePgD  18:53:47.70   -0.36
                 eSg      53:58.80   -1.00
BSZH  86.8 221   ePg   18:53:49.10    0.59
LTVH  86.8 130   ePgD  18:53:49.20    0.68
                 eSg      54:01.40    0.79
TRPA 116.4  77   ePgD  18:53:53.60   -0.20
                 eSg      54:08.20   -1.82
PENC 130.7 265   ePnD  18:53:55.40   -0.70
                 eSn      54:12.10   -2.00
KOLS 148.5  39   ePn   18:54:00.10    1.78
                 eSn      54:18.40    0.35
PKS7 168.7 236   ePn   18:54:01.40    0.56
                 eSn      54:22.90    0.36
VYHS 175.7 292   ePn   18:54:02.20    0.48
                 eSn      54:23.10   -1.01
DRGR 176.8 134    Pn   18:54:00.60   -1.25
NIE  177.8 343    Pn   18:54:03.70    1.73
LANS 181.1 321   ePn   18:54:04.20    1.82
                 eSn      54:25.90    0.61
PKSG 205.3 254   ePnD  18:54:09.80    4.40
PKSM 259.8 224   ePnC  18:54:17.60    5.40
                 eSn      54:37.30   -5.47
```

350.

```
 2013-11-25  time:  8:54:03.34 UTC  ML= 1.1
   lat: 47.421N  lon: 18.322E  h=  0.0 km
                 erh= 7.7km    erz= 813km
   nr=  6        gap=252       rms=0.49
   Locality: Pusztavám
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   6.1 122   ePgC   8:54:04.30   -0.13
                 eSg      54:04.90   -0.39
CSKK   7.9 216   ePgD   8:54:04.60   -0.16
                 eSg      54:06.70    0.84
PKST  28.2 230   ePgC   8:54:08.90    0.52
                 eSg      54:11.40   -0.91
```

351.

```
 2013-11-25  time:  8:54:13.00 UTC  ML= 1.1
   lat: 47.454N  lon: 18.316E  h=  0.0 km
                 erh= 6.8km    erz= 722km
   nr=  5        gap=276       rms=0.33
   Locality: Oroszlány
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
PKSG   8.9 141   ePgC   8:54:14.70    0.11
                 eSg      54:15.30   -0.53
CSKK  10.9 203   ePgD   8:54:15.00    0.04
                 eSg      54:17.10    0.62
PKST  30.4 225   eSg    8:54:22.30   -0.36
```

352.

```
 2013-11-25  time: 11:03:56.85 UTC  ML= 1.8
   lat: 48.278N  lon: 21.204E  h= 14.5 km
                 erh= 3.3km    erz= 3.8km
   nr=  7        gap=114       rms=0.42
   Locality: Abaújszántó
   Comments:

sta   dist azm  phase  hr mn  sec     res
KECS  57.9 293   eSg   11:04:15.70   -0.12
PSZ  105.4 248   ePn   11:04:16.00    0.83
                 eSn      04:28.90   -0.57
KOLS 107.4  47   ePn   11:04:15.50    0.08
                 eSn      04:29.80   -0.11
LTVH 112.1 152   ePn   11:04:15.60   -0.41
                 eSn      04:31.10    0.14
```

353.

```
 2013-11-26  time:  8:13:30.02 UTC  ML= 0.6
   lat: 47.401N  lon: 18.291E  h= 12.1 km
                 erh= 3.4km    erz= 1.9km
   nr= 13        gap=174       rms=0.69
   Locality: Pusztavám
   Comments:

sta   dist azm  phase  hr mn  sec     res
CSKK   4.8 209   ePg    8:13:31.60   -0.75
                 eSg      13:33.20   -0.97
PKSG   7.6  98   ePgC   8:13:33.00    0.43
                 eSg      13:34.90    0.33
PKST  25.0 231   ePg    8:13:34.10   -0.89
                 eSg      13:37.30   -1.56
MPLH  62.4 246   ePgD   8:13:42.20    0.83
PKS7  76.7 121    Pg    8:13:44.50    0.61
PENC  86.1  60   eSg    8:13:56.60   -1.07
PKS9  90.5 181   ePgC   8:13:46.80    0.47
                 eSg      13:58.50   -0.54
PSZ  133.5  64    Pn    8:13:51.70   -0.44
PKSM 134.9 169   eSn    8:14:09.30   -0.41
```

354.

```
 2013-11-26  time:  9:05:52.45 UTC  ML= 1.4
   lat: 48.635N  lon: 20.739E  h=  0.0 km
                 erh= 6.7km    erz= 5.2km
   nr=  7        gap=170       rms=0.32
   Locality: Slovakia
   Comments: probably explosion

sta   dist azm  phase  hr mn  sec     res
KECS  25.2 228   ePg    9:05:57.00    0.06
                 eSg      06:01.00    0.55
PSZ  101.4 218   ePg    9:06:10.40   -0.15
                 eSg      06:23.70   -0.97
KOLS 117.5  74   eSg    9:06:29.70   -0.11
VYHS 141.3 264   ePn    9:06:17.40    0.30
                 eSn      06:36.20   -0.13
```

355.

```
 2013-11-26  time: 11:07:32.12 UTC  ML= 2.1
   lat: 48.855N  lon: 20.457E  h=  7.5 km
                 erh= 4.7km    erz= 3.9km
   nr= 12        gap=152       rms=0.97
   Locality: Slovakia
   Comments:

sta   dist azm  phase  hr mn  sec     res
KECS  41.4 177   ePg   11:07:39.10   -0.53
                 eSg      07:44.70   -0.79
LANS  79.5 294   ePg   11:07:47.30    0.92
                 eSg      07:56.10   -1.40
PSZ  112.2 202   ePnC  11:07:52.40    0.22
                 eSn      08:06.90   -0.93
VYHS 125.9 251   ePn   11:07:53.40   -0.50
```

		eSn	08:08.80	-2.09
KOLS	133.5	86	ePn	11:07:54.50	-0.34
			eSn	08:12.00	-0.56
PENC	147.0	216	ePnD	11:07:57.90	1.38
			eSn	08:18.80	3.24

356.

2013-12-01 time: 6:04:29.58 UTC ML= 3.1
lat: 46.023N lon: 18.461E h= 10.0 km
erh= 2.3km erz= 1.4km
nr= 44 gap=174 rms=0.79
Locality: Máriakéménd
Comments: felt 5 EMS

sta	dist	azm	phase	hr mn	sec	res
PKSV	22.1	227	iPgD	6:04:33.90		0.00
			eSg	04:37.10		-0.18
PKSM	25.2	34	iPgD	6:04:34.10		-0.31
			eSg	04:37.40		-0.78
PKS9	64.2	347	ePg	6:04:41.20		0.02
			eSg	04:52.80		2.57
PKS2	77.9	48	ePgD	6:04:43.30		-0.31
			eSg	04:54.10		-0.45
PKS6	106.4	53	eP*C	6:04:47.90		-0.68
			eS*	05:03.10		-0.30
TIH	106.8	336	eP*	6:04:48.40		-0.23
			eS*	05:02.60		-0.89
PKS7	125.8	25	ePnD	6:04:51.90		0.88
			eSn	05:07.50		-0.25
BEHE	139.2	291	ePnD	6:04:52.70		0.02
			eSn	05:09.30		-1.41
PKST	141.2	347	ePnC	6:04:52.90		-0.04
			eSn	05:11.40		0.24
PKSN	145.3	48	ePnD	6:04:54.80		1.36
			eSn	05:14.00		1.94
MPLH	145.7	331	ePnD	6:04:54.10		0.60
			eSn	05:11.30		-0.87
CSKK	149.7	354	ePnD	6:04:54.60		0.60
			eSn	05:11.10		-1.95
PKSG	152.2	358	ePnC	6:04:55.20		0.89
			eSn	05:12.00		-1.60
BUD	167.9	15	ePnD	6:04:58.80		2.53
			eSn	05:18.00		0.91
SRO	199.3	357	ePn	6:05:02.00		1.82
PENC	206.2	18	ePnD	6:05:01.00		-0.04
			eSn	05:23.00		-2.58
SOP	234.8	322	ePnD	6:05:04.80		0.20
PSZ	237.2	27	iPnC	6:05:03.90		-1.01
			eSn	05:29.90		-2.57
ZST	262.6	337	ePn	6:05:07.40		-0.68
ARSA	263.1	301	Pn	6:05:08.30		0.16
SOKA	273.8	285	Pn	6:05:08.90		-0.57
			Sn	05:39.00		-1.58
VYHS	276.1	6	ePn	6:05:09.70		-0.06
MODS	276.3	341	ePn	6:05:09.10		-0.68
SMOL	287.7	344	ePn	6:05:11.50		0.30
			eSn	05:42.30		-1.37
CONA	289.8	317	Pn	6:05:11.60		0.14
			Sn	05:42.50		-1.64
OBKA	306.4	280	Pn	6:05:12.60		-0.94
			Sn	05:48.60		0.77
LANS	355.8	12	ePn	6:05:20.80		1.10
MYKA	377.2	280	Pn	6:05:23.20		0.83
			Sn	06:02.50		-1.04
MOA	378.5	302	Pn	6:05:23.50		0.97
			Sn	06:04.40		0.57
TREC	426.9	328	ePn	6:05:28.40		-0.16
			eSn	06:12.30		-2.26
ABTA	464.7	280	Pn	6:05:34.30		1.03
KHC	504.3	313	ePn	6:05:38.80		0.58
			eSn	06:28.90		-2.85
DPC	506.7	342	ePn	6:05:38.40		-0.11
			eSn	06:28.90		-3.39
GOPC	512.3	328	ePn	6:05:39.10		-0.11
			eSn	06:30.10		-3.42
PRU	529.1	326	ePn	6:05:40.30		-1.00
			eSn	06:34.50		-2.74
UPC	530.7	340	ePn	6:05:41.70		0.19
WTTA	540.4	285	Pn	6:05:44.50		1.78
			Sn	06:41.90		2.13
WATA	546.6	285	Pn	6:05:45.70		2.21
			Sn	06:42.50		1.36

357.

2013-12-01 time: 6:19:04.30 UTC ML= 1.6
lat: 45.956N lon: 18.536E h= 10.0 km
erh= 4.2km erz= 2.5km
nr= 9 gap=210 rms=0.62
Locality: Bóly
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKSV	23.3	251	ePg	6:19:09.20		0.37
PKSM	29.6	16	ePgD	6:19:09.30		-0.58
PKS9	72.9	344	ePg	6:19:17.10		-0.35
			eSg	19:27.90		0.20
PKS2	79.2	41	ePg	6:19:18.80		0.24
			eSg	19:31.30		1.61
PKS7	130.5	22	eSn	6:19:43.30		-0.20
PKST	149.9	345	eSn	6:19:46.70		-1.11
PKSG	160.0	356	eSn	6:19:50.70		0.64

358.

2013-12-03 time: 12:17:23.50 UTC ML= 2.0
lat: 48.273N lon: 21.228E h= 6.5 km
erh= 2.6km erz=34.4km
nr= 8 gap=149 rms=0.48
Locality: Abaújszántó
Comments:

sta	dist	azm	phase	hr mn	sec	res
KECS	59.7	293	ePg	12:17:34.30		0.07
			eSg	17:42.40		-0.20
TRPA	98.8	99	ePg	12:17:40.60		-0.58
			eSg	17:54.60		-0.37
KOLS	106.5	46	ePg	12:17:42.00		-0.55
			eSg	17:58.00		0.59
PSZ	106.8	248	ePgD	12:17:43.30		0.69
			eSg	17:57.30		-0.22

359.

2013-12-04 time: 8:02:59.14 UTC ML= 1.1
lat: 47.308N lon: 18.479E h= 0.0 km
erh= 2.6km erz= 2.5km
nr= 7 gap=249 rms=0.72
Locality: Pátka
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSG	11.5	325	ePgC	8:03:01.90		0.71
			eSg	03:02.50		-0.29
PKST	34.1	261	ePg	8:03:05.60		0.38
			eSg	03:09.40		-0.56
VYHS	134.6	11	ePn	8:03:23.80		0.85
			eSn	03:40.40		-1.13
ZST	142.9	314	ePn	8:03:23.00		-0.98

360.

2013-12-04 time: 11:14:34.28 UTC ML= 1.6
lat: 48.608N lon: 20.767E h= 0.0 km
erh= 1.7km erz= 2.6km
nr= 9 gap=148 rms=0.28
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
KECS	25.0	236	ePg	11:14:38.70		-0.05
			eSg	14:42.50		0.27
STHS	96.5	21	ePg	11:14:51.70		0.19
			eSg	15:04.80		-0.14
PSZ	100.4	220	ePg	11:14:52.20		-0.01
			eSg	15:06.00		-0.20
KOLS	116.5	72	eSg	11:15:11.30		0.00
VYHS	143.1	265	ePn	11:14:59.40		0.24
			eSn	15:16.90		-1.67

361.

2013-12-05 time: 10:52:37.35 UTC ML= 1.5
lat: 48.189N lon: 21.221E h= 7.1 km
erh= 6.3km erz= 6.2km
nr= 10 gap=159 rms=1.07
Locality: Ond
Comments:

sta	dist	azm	phase	hr mn	sec	res
KECS	63.6	301	ePg	10:52:48.30		-0.47
			eSg	52:57.00		-0.68
TRPA	98.3	94	ePg	10:52:54.90		-0.05
			eSg	53:08.70		0.03
PSZ	103.4	253	ePg	10:52:57.60		1.75
			eSg	53:09.30		-0.98
KOLS	113.5	43	ePn	10:52:57.10		-0.53
			eSn	53:12.00		-1.44
STHS	136.5	1	eSn	10:53:20.20		1.64
LANS	167.6	310	eSn	10:53:29.70		4.24

362.

2013-12-05 time: 13:13:59.14 UTC ML= 0.2
lat: 47.185N lon: 18.277E h= 0.0 km
erh= 6.0km erz= 945km
nr= 7 gap=248 rms=0.66
Locality: Sárkeszi
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
CSKK	19.8	356	ePgD	13:14:00.90		-1.79
			eSg	14:05.40		-0.05
PKST	20.2	294	ePgD	13:14:02.30		-0.44
			eSg	14:05.40		-0.15
PKSG	24.5	20	ePg	13:14:03.80		0.27
			eSg	14:07.10		0.15
MPLH	56.0	268	ePgC	13:14:10.00		0.86

363.

2013-12-09 time: 7:21:29.66 UTC ML= 1.9
lat: 46.183N lon: 16.580E h= 10.0 km
erh= 2.0km erz= 1.6km
nr= 32 gap=156 rms=0.71
Locality: Croatia
Comments:

sta	dist	azm	phase	hr mn	sec	res
BEHE	35.3	25	ePgD	7:21:36.20		-0.02
			eSg	21:40.20		-1.14
KOGS	38.9	319	iPg	7:21:37.20		0.36
			iSg	21:42.40		-0.03
GOLS	76.3	255	iPg	7:21:43.80		0.40
			eSg	21:53.30		-0.82
GCIS	81.6	245	iPg	7:21:44.70		0.35
DOBS	85.8	268	iPg	7:21:44.90		-0.20
GROS	88.6	290	iPg	7:21:45.40		-0.18
CRES	95.6	245	iPg	7:21:47.10		0.27
			iSg	21:59.50		-0.71
LEGS	101.0	255	iPg	7:21:47.70		-0.10
PERS	123.2	294	iPn	7:21:51.10		0.31
TIH	128.5	52	ePn	7:21:51.50		0.06
			eSn	22:06.40		-2.03
SOKA	131.0	295	Pn	7:21:52.60		0.84
			Sn	22:08.20		-0.79
MPLH	132.1	34	ePnD	7:21:52.40		0.51
			eSn	22:10.90		1.68
ARSA	143.6	326	Pn	7:21:53.90		0.58
			Sn	22:09.70		-2.07
PKSM	159.2	89	ePnD	7:21:54.10		-1.17
			eSn	22:12.40		-2.84
MORH	159.4	89	ePn	7:21:54.30		-1.00
			eSn	22:13.80		-1.49
OBKA	160.5	283	Pn	7:21:56.10		0.67
			Sn	22:15.70		0.17
PKST	163.4	43	ePnD	7:21:56.90		1.11
			eSn	22:14.30		-1.87
PKSG	192.9	46	ePnD	7:22:02.50		3.03
MOA	255.5	316	Pn	7:22:08.00		0.72
			Sn	22:34.90		-1.72

364.

2013-12-11 time: 8:47:39.95 UTC ML= 0.8
lat: 45.846N lon: 18.419E h= 0.0 km
erh= 7.6km erz= 810km
nr= 7 gap=267 rms=0.54
Locality: Nagyharsány
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSV	13.8	290	ePg	8:47:42.30		-0.11
			eSg	47:43.90		-0.43
PKSM	44.1	23	ePgD	8:47:47.90		0.07
			eSg	47:53.60		-0.38
MORH	44.6	23	ePgD	8:47:47.70		-0.22
			eSg	47:53.60		-0.54
PKS9	83.0	353	ePgC	8:47:56.00		1.22

365.

2013-12-11 time: 17:14:10.06 UTC ML= 2.5
lat: 47.821N lon: 16.236E h= 8.8 km
erh= 1.6km erz= 1.4km
nr= 57 gap= 51 rms=1.06
Locality: Austria
Comments:

sta	dist	azm	phase	hr mn	sec	res
SOP	28.6	122	ePgD	17:14:16.40		0.99
			eSg	14:20.10		0.52
CONA	30.4	293	Pg	17:14:15.70		-0.01
			Sg	14:20.10		-0.02
ZST	77.0	57	ePg	17:14:23.30		-0.59
			eSg	14:33.90		-0.78
ARSA	83.1	220	Pg	17:14:23.90		-1.08
			Sg	14:33.90		-2.72
MODS	99.0	52	ePg	17:14:26.90		-0.90
			eSg	14:40.70		-0.94
SMOL	117.5	49	ePn	17:14:31.10		0.48
			eSn	14:47.20		0.55
MPLH	122.0	126	ePnD	17:14:31.60		0.42
			eSn	14:46.30		-1.36
MOA	147.5	271	Pn	17:14:34.50		0.14
			Sn	14:52.60		-0.71
PKST	149.2	115	ePnD	17:14:35.10		0.54
			eSn	14:52.30		-1.38
SRO	155.6	90	ePn	17:14:35.40		0.03
			eSn	14:54.00		-1.11
BEHE	155.7	165	ePnD	17:14:38.50		3.12
			eSn	14:58.70		3.57
SOKA	156.4	216	Pn	17:14:35.60		0.14
			Sn	14:53.50		-1.78
CSKK	160.6	108	ePn	17:14:36.50		0.51
			eSn	14:54.80		-1.42
TIH	161.8	129	ePn	17:14:36.90		0.76

		eSn	14:54.60	-1.88
PKSG	168.9	106	ePnC	17:14:38.30	1.27
			eSn	14:57.40	-0.67
TREC	172.9	341	ePn	17:14:38.10	0.57
			eSn	14:58.90	-0.06
OBKA	194.0	221	Pn	17:14:40.80	0.64
			Sn	15:05.00	1.37
PKS9	206.9	132	ePn	17:14:42.60	0.84
VYHS	207.4	69	ePn	17:14:41.80	-0.03
			eSn	15:04.60	-2.02
PENC	228.2	91	ePn	17:14:43.70	-0.72
KBA	233.2	249	Pn	17:14:49.10	4.06
			Sn	15:17.60	5.28
MYKA	236.9	236	Sn	17:15:17.10	3.94
KHC	244.6	307	ePn	17:14:47.80	1.34
			eSn	15:14.30	-0.56
KRLC	253.9	9	ePn	17:14:48.50	0.88
MORH	255.7	134	ePnC	17:14:47.80	-0.05
			eSn	15:14.70	-2.63
GOPC	255.9	335	ePn	17:14:49.50	1.63
			eSn	15:17.60	0.24
PKSM	255.9	134	ePnD	17:14:47.80	-0.07
			eSn	15:14.70	-2.66
PKSV	264.2	144	ePnD	17:14:49.30	0.39
			eSn	15:18.70	-0.52
PRU	271.1	333	ePn	17:14:51.00	1.23
			eSn	15:24.80	4.05
PSZ	274.0	88	eSn	17:15:22.40	1.02
LANS	281.0	58	ePn	17:14:52.10	1.10
			eSn	15:22.70	-0.23
DPC	281.3	1	ePn	17:14:52.50	1.46
UPC	299.2	357	ePn	17:14:53.70	0.43
			eSn	15:33.80	6.82
KECS	324.7	77	ePn	17:14:57.00	0.55
			eSn	15:32.20	-0.44
WTTA	351.8	260	Pn	17:15:01.80	1.97
			Sn	15:47.70	9.05
SQTA	384.5	260	Pn	17:15:06.20	2.30
			Sn	15:47.50	1.59
MOTA	389.7	262	Pn	17:15:06.40	1.84
			Sn	15:47.70	0.64
STHS	409.7	64	ePn	17:15:08.60	1.55
			eSn	15:52.40	0.90
DAVA	482.0	263	Pn	17:15:18.30	2.23
			Sn	16:08.40	0.84

366.

2013-12-12 time: 8:08:12.82 UTC ML= 1.3
lat: 47.348N lon: 18.475E h= 0.0 km
erh= 3.4km erz= 751km
nr= 10 gap=227 rms=0.60
Locality: Lovasberény
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PKSG	8.0	307	ePgC	8:08:14.80		0.55
			eSg	08:15.40		0.04
CSKK	16.3	276	ePgD	8:08:15.10		-0.62
			eSg	08:17.40		-0.59
PKST	34.8	253	ePgC	8:08:19.20		0.18
			eSg	08:23.10		-0.77
MPLH	73.5	254	eSg	8:08:37.20		1.02
MORH	126.5	174	eSg	8:08:51.80		-1.24
PKSM	127.0	174	ePgD	8:08:35.80		0.31
			eSg	08:53.70		0.53

367.

2013-12-12 time: 20:53:09.14 UTC ML= 1.0
lat: 47.203N lon: 17.664E h= 11.2 km
erh= 1.7km erz= 1.2km
nr= 13 gap=180 rms=0.30
Locality: Németbánya
Comments:

sta	dist	azm	phase	hr mn	sec	res
MPLH	10.2	249	ePgD	20:53:11.70		-0.14
			eSg	53:13.90		-0.04
PKST	28.7	78	ePgD	20:53:14.40		-0.24
			eSg	53:18.40		-0.52
TIH	37.9	153	ePgC	20:53:16.40		0.20
			eSg	53:21.60		-0.11
CSKK	48.5	68	ePgD	20:53:18.20		0.18
			eSg	53:24.10		-0.85
PKSG	58.8	69	ePgD	20:53:20.40		0.57
			eSg	53:28.10		-0.06
MORH	132.9	146	ePnD	20:53:31.20		-0.12
			eSn	53:48.80		0.19
PKSM	133.1	146	ePnD	20:53:31.20		-0.15
			eSn	53:46.60		-2.07

368.

2013-12-13 time: 12:24:42.77 UTC ML= 0.5
lat: 47.300N lon: 18.513E h= 10.0 km
erh= 9.3km erz=13.0km
nr= 6 gap=305 rms=0.66
Locality: Pátka
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKSG	13.7	318	ePgD	12:24:45.90		0.09
			eSg	24:48.90		0.73
CSKK	20.3	290	ePgD	12:24:46.00		-0.82
			eSg	24:49.40		-0.57
PKST	36.5	263	ePgD	12:24:49.60		0.07
			eSg	24:56.30		1.50

369.

2013-12-14 time: 19:42:16.42 UTC ML= 1.6
lat: 45.560N lon: 18.330E h= 2.7 km
erh= 6.6km erz= 3.8km
nr= 11 gap=311 rms=0.61
Locality: Croatia
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKSV	37.0	351	ePgC	19:42:23.10		0.04
PKSM	76.4	18	ePgC	19:42:29.80		-0.28
			eSg	42:40.80		0.07
MORH	76.9	19	ePgC	19:42:29.80		-0.37
			eSg	42:40.80		-0.09
PKS9	114.3	358	ePgD	19:42:37.30		0.47
			eSg	42:53.10		0.35
PKS2	124.2	33	ePn	19:42:37.10		-1.50
			eSn	42:56.10		0.21
PKS6	150.0	40	ePn	19:42:42.80		0.99
			eSn	43:02.90		1.28
PKST	190.3	353	ePn	19:42:43.50		-3.34

370.

2013-12-15 time: 19:44:58.17 UTC ML= 1.9
lat: 47.760N lon: 18.216E h= 6.8 km
erh= 1.4km erz= 1.5km
nr= 42 gap= 64 rms=0.85
Locality: Komárom
Comments:

sta	dist	azm	phase	hr mn	sec	res
SRO	9.4	51	ePg	19:45:00.10		-0.14
			eSg	45:02.20		0.34
PKSG	43.0	162	ePg	19:45:06.20		0.26
			eSg	45:11.90		-0.10
CSKK	44.2	176	ePg	19:45:05.90		-0.26
			eSg	45:12.70		0.30
PKST	57.3	194	ePgD	19:45:07.70		-0.78

			eSg	45:16.20	-0.33
PENC	79.9	88	ePg	19:45:12.80	0.30
			eSg	45:24.40	0.73
MPLH	83.1	218	ePg	19:45:13.50	0.45
			eSg	45:26.90	2.24
VYHS	93.8	29	ePg	19:45:14.50	-0.46
			eSg	45:25.70	-2.36
ZST	96.3	300	ePg	19:45:15.20	-0.20
			eSg	45:26.80	-2.04
MODS	97.7	314	ePg	19:45:15.10	-0.56
			eSg	45:28.20	-1.11
TIH	98.7	194	ePg	19:45:16.00	0.17
			eSg	45:29.20	-0.41
SMOL	102.3	325	ePg	19:45:16.50	0.02
			eSg	45:30.10	-0.65
PKS7	106.6	138	ePg	19:45:19.30	2.06
			eSg	45:31.70	-0.42
SOP	124.7	266	ePnD	19:45:21.00	1.12
			eSn	45:36.10	-0.71
PSZ	126.9	82	ePnC	19:45:20.30	0.14
			eSn	45:37.30	-0.01
PKS9	130.5	178	ePnC	19:45:21.40	0.79
			eSn	45:38.00	-0.11
MORH	174.7	169	ePnC	19:45:25.50	-0.62
			eSn	45:44.80	-3.12
PKSM	175.1	169	ePnD	19:45:25.60	-0.57
			eSn	45:45.40	-2.61
CONA	177.2	276	Pn	19:45:27.30	0.87
			Sn	45:48.60	0.12
LANS	180.2	31	ePn	19:45:28.90	2.09
			eSn	45:48.40	-0.75
PKSV	208.1	179	eSn	19:45:52.60	-2.72
ARSA	210.6	254	Pn	19:45:31.70	1.10
			Sn	45:55.90	0.01
LTVH	280.4	99	ePn	19:45:41.00	1.71
MOA	296.1	272	Pn	19:45:49.70	8.45
			Sn	46:26.10	11.24

371.

2013-12-16 time: 9:44:04.83 UTC ML= 1.7
lat: 47.939N lon: 19.861E h= 0.0 km
erh= 2.9km erz= 5.4km
nr= 10 gap=117 rms=0.73
Locality: Mátraszentimre
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
PSZ	3.3	133	ePgD	9:44:05.20		-0.23
			eSg	44:07.00		1.11
PENC	46.4	249	ePgD	9:44:12.40		-0.72
			eSg	44:19.70		0.12
KECS	76.3	37	ePg	9:44:19.50		1.05
			eSg	44:27.60		-1.47
VYHS	98.1	309	ePg	9:44:22.80		0.46
			eSg	44:37.40		1.40
LANS	137.9	348	ePn	9:44:29.10		0.05
			eSn	44:47.40		-0.54

372.

2013-12-16 time: 11:12:21.14 UTC ML= 1.6
lat: 46.160N lon: 16.424E h= 10.0 km
erh= 4.0km erz= 2.2km
nr= 20 gap=143 rms=0.87
Locality: Croatia
Comments:

sta	dist	azm	phase	hr mn	sec	res
BEHE	43.8	38	ePgD	11:12:29.00		-0.16
			eSg	12:35.70		0.29
GOLS	64.1	255	iPg	11:12:32.10		-0.61
			iSg	12:43.00		1.26
GCIS	69.8	242	iPg	11:12:33.00		-0.73
CRES	83.7	244	iPg	11:12:35.30		-0.88
			iSg	12:48.60		0.68
LEGS	88.8	255	iPg	11:12:36.20		-0.90
			iSg	12:50.30		0.76
BOJS	116.7	231	iSn	11:12:57.00		-0.28
SOKA	121.5	298	Pn	11:12:41.60		-0.44
			Sn	12:57.70		-0.64
VISS	129.1	252	iSn	11:13:00.30		0.27
ARSA	139.4	330	Pn	11:12:44.40		0.13
			Sn	13:01.50		-0.82
OBKA	149.5	285	Pn	11:12:46.60		1.06
			Sn	13:07.10		2.53
PKSM	171.3	88	ePn	11:12:50.20		1.95
MORH	171.5	88	ePn	11:12:50.30		2.02
MOA	249.4	319	Sn	11:13:26.90		0.16

373.

2013-12-17 time: 2:10:47.37 UTC ML= 1.6
lat: 47.777N lon: 18.210E h= 7.8 km
erh= 1.5km erz= 1.5km
nr= 37 gap= 66 rms=0.82
Locality: Komárom
Comments:

sta	dist	azm	phase	hr mn	sec	res
SRO	8.7	63	ePg	2:10:49.30		-0.17
			eSg	10:51.20		0.10
PKSG	44.9	162	ePgC	2:10:55.80		0.28
			eSg	11:02.10		0.23
CSKK	46.2	175	ePg	2:10:55.30		-0.43
PKST	59.1	193	ePgD	2:10:56.80		-1.22
			eSg	11:05.10		-1.22
BUD	69.3	118	ePgC	2:11:01.40		1.57
			eSg	11:08.10		-1.45
PENC	80.3	89	ePg	2:11:02.50		0.71
			eSg	11:12.80		-0.23
MPLH	84.3	217	ePgC	2:11:03.80		1.31
			eSg	11:15.60		1.32
VYHS	92.4	30	ePg	2:11:03.70		-0.22
			eSg	11:14.90		-1.93
ZST	94.9	299	ePg	2:11:04.40		0.03
			eSg	11:16.00		-1.63
MODS	96.1	314	ePg	2:11:04.40		-0.18
			eSg	11:17.20		-0.81
TIH	100.4	194	ePgD	2:11:05.50		0.14
			eSg	11:18.40		-0.98
SMOL	100.5	325	eSg	2:11:19.60		0.20
SOP	124.3	265	ePnD	2:11:10.00		1.10
			eSn	11:26.50		0.80
PSZ	127.1	83	ePnD	2:11:09.50		0.25
			eSn	11:26.30		-0.01
PKS9	132.4	178	ePnD	2:11:09.90		-0.01
			eSn	11:29.00		1.50
CONA	176.5	275	Pn	2:11:15.00		-0.41
			Sn	11:37.30		0.01
MORH	176.7	169	ePn	2:11:14.70		-0.73
			eSn	11:36.40		-0.92
PKSM	177.1	169	ePn	2:11:14.70		-0.78
			eSn	11:36.70		-0.71
PKSV	210.0	179	ePn	2:11:19.80		0.22
			eSn	11:43.30		-1.41
ARSA	210.7	254	Sn	2:11:44.00		-0.86

374.

2013-12-18 time: 10:09:08.21 UTC ML= 1.9
lat: 48.606N lon: 20.747E h= 0.0 km
erh= 2.7km erz= 3.4km
nr= 10 gap=129 rms=0.61
Locality: Slovakia
Comments: probably explosion

sta	dist	azm	phase	hr mn	sec	res
KECS	23.7	235	ePg	10:09:12.60		0.17
PSZ	99.3	220	ePgD	10:09:26.20		0.26

			eSg	09:38.80	-0.97	MPLH	39.0	287	eSg	9:34:12.10	1.18
LANS	111.6	303	ePg	10:09:28.30	0.16	PKSG	45.4	37	ePgD	9:34:07.40	0.97
			eSg	09:42.60	-1.09				eSg	34:13.70	0.80
KOLS	117.9	72	eSg	10:09:45.20	-0.49	PKS9	56.5	160	eSg	9:34:19.20	2.83
VYHS	141.6	265	ePn	10:09:33.10	0.20	MORH	105.5	154	eP*D	9:34:17.50	0.51
			eSn	09:51.10	-1.06				eS*	34:31.40	-0.31
TRPA	143.0	112	ePnD	10:09:33.90	0.83	PKSM	105.8	154	eP*C	9:34:17.60	0.56
			eSn	09:50.00	-2.46				eS*	34:30.50	-1.29

375.

2013-12-18 time: 13:07:25.44 UTC ML= 0.9
lat: 47.466N lon: 18.688E h= 10.0 km
erh= 3.3km erz= 3.7km
nr= 10 gap=170 rms=0.47
Locality: Herceghalom
Comments:

sta	dist	azm	phase	hr mn	sec	res
PKSG	23.9	250	ePgC	13:07:30.30		0.24
			eSg	07:34.30		0.63
CSKK	34.2	251	ePgC	13:07:30.90		-0.90
			eSg	07:36.60		-0.17
PKST	54.5	245	eSg	13:07:43.70		0.66
PKS9	102.5	198	ePgC	13:07:43.60		-0.23
			eSg	07:58.40		0.22
PSZ	103.6	61	eP*D	13:07:44.20		0.19
			eS*	07:58.70		0.20
PKSM	139.5	181	eSn	13:08:06.20		-0.43

376.

2013-12-20 time: 10:56:09.46 UTC ML= 1.0
lat: 47.073N lon: 18.000E h= 10.0 km
erh= 3.1km erz= 3.4km
nr= 14 gap=113 rms=0.87
Locality: Litér
Comments:

sta	dist	azm	phase	hr mn	sec	res
TIH	20.8	203	ePgD	10:56:13.80		0.22
			eSg	56:17.90		1.10
PKST	20.9	7	ePg	10:56:12.40		-1.19
			eSg	56:15.50		-1.32
MPLH	36.6	287	ePg	10:56:16.10		-0.13
			eSg	56:20.80		-0.71
CSKK	37.9	31	ePg	10:56:16.30		-0.15
			eSg	56:21.70		-0.20
PKSG	46.2	40	ePgC	10:56:18.60		0.70
			eSg	56:25.50		1.01
MORH	107.3	153	eP*C	10:56:29.40		0.82
			eS*	56:41.20		-2.30
PKSM	107.6	153	ePn	10:56:29.30		0.68
			eSn	56:42.70		-0.87

377.

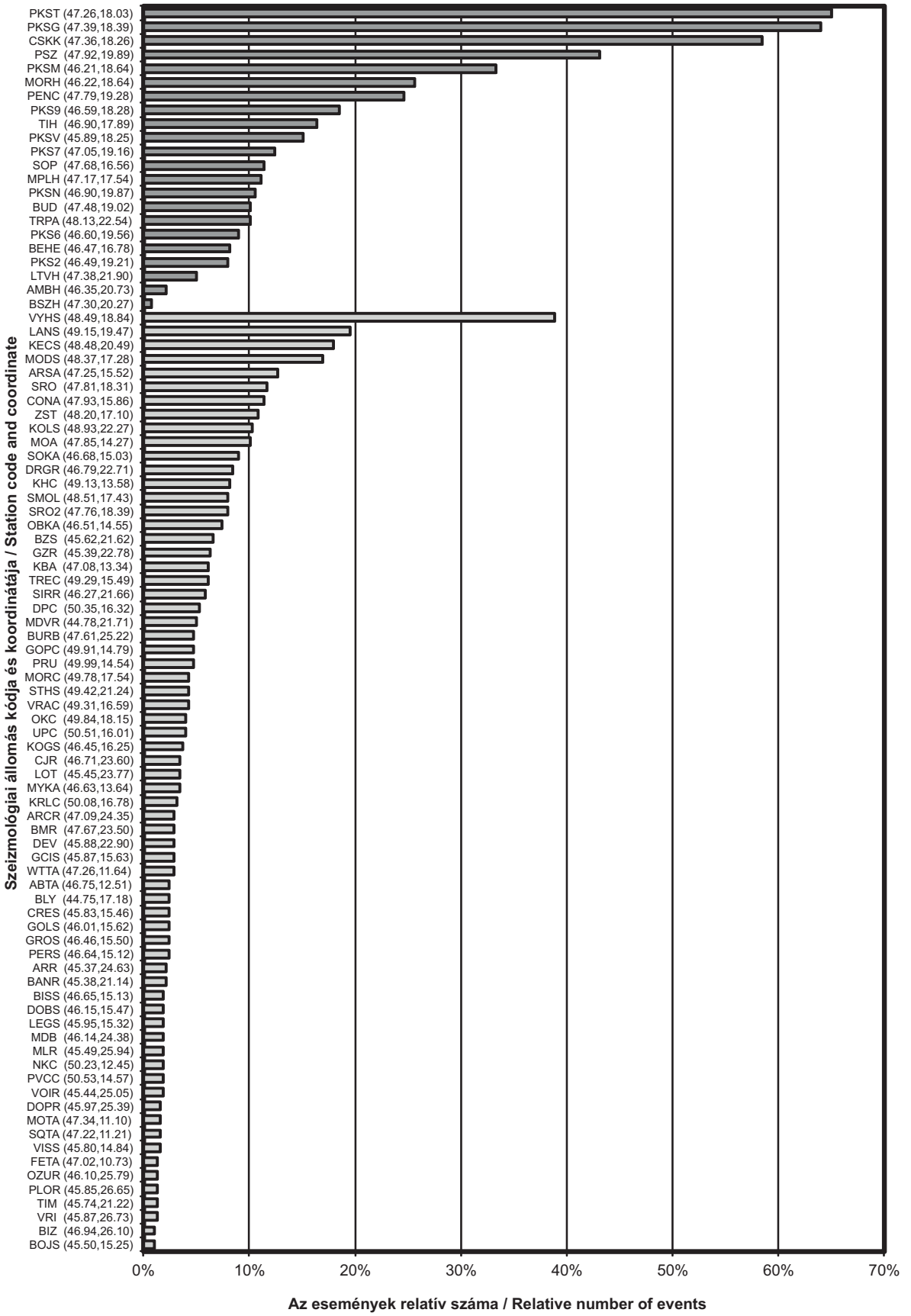
2013-12-23 time: 9:33:58.13 UTC ML= 0.9
lat: 47.066N lon: 18.030E h= 10.0 km
erh= 3.9km erz= 4.8km
nr= 14 gap=117 rms=0.90
Locality: Balatonfűzfő
Comments:

sta	dist	azm	phase	hr mn	sec	res
TIH	21.2	210	ePg	9:34:02.30		-0.01
			eSg	34:05.10		-0.47
PKST	21.5	1	ePgD	9:34:01.30		-1.06
			eSg	34:05.50		-0.16
CSKK	37.4	28	ePgD	9:34:04.00		-1.04
			eSg	34:10.20		-0.23

378.

2013-12-30 time: 22:21:52.85 UTC ML= 2.3
lat: 47.454N lon: 16.893E h= 0.7 km
erh= 1.8km erz= 2.0km
nr= 43 gap=103 rms=1.03
Locality: Iván
Comments: felt 4-5 EMS

sta	dist	azm	phase	hr mn	sec	res
MPLH	58.2	123	ePg	22:22:03.90		0.66
ZST	84.0	11	ePg	22:22:07.60		-0.25
			eSg	22:19.90		0.34
PKST	88.9	104	ePg	22:22:09.10		0.37
			eSg	22:19.40		-1.71
CONA	93.7	304	Pg	22:22:10.50		0.92
			Sg	22:23.00		0.37
TIH	97.7	129	ePgD	22:22:10.80		0.51
			eSg	22:22.90		-0.99
CSKK	103.7	96	ePgD	22:22:11.90		0.53
			eSg	22:23.80		-2.01
ARSA	105.9	258	Pg	22:22:11.80		0.03
			Sg	22:24.40		-2.12
MODS	106.2	16	ePg	22:22:11.10		-0.72
			eSg	22:25.10		-1.52
PKSG	113.2	93	ePgD	22:22:13.70		0.63
			eSg	22:28.50		-0.34
SMOL	124.5	19	ePg	22:22:14.60		-0.48
			eSg	22:31.60		-0.81
PKS9	142.8	132	ePn	22:22:20.60		3.00
BUD	160.7	89	eSn	22:22:42.20		1.33
SOKA	165.6	239	Pn	22:22:20.00		-0.44
			Sn	22:40.50		-1.45
PKS7	177.5	105	eSn	22:22:46.10		1.49
PENC	183.4	78	ePnD	22:22:23.10		0.44
VYHS	185.6	51	ePn	22:22:22.00		-0.93
MORH	191.8	136	ePnD	22:22:22.10		-1.61
			eSn	22:48.20		0.42
PKSM	192.0	136	ePnD	22:22:22.10		-1.63
			eSn	22:48.10		0.28
MOA	202.2	283	Pn	22:22:24.20		-0.81
			Sn	22:52.00		1.91
OBKA	207.0	240	Pn	22:22:25.50		-0.10
			Sn	22:52.80		1.65
PKS6	224.2	115	eSn	22:22:58.50		3.54
TREC	229.7	333	eSn	22:22:58.20		2.01
PSZ	231.2	77	ePnD	22:22:28.30		-0.32
			eSn	22:53.70		-2.82
LANS	268.5	45	ePn	22:22:33.00		-0.27
			eSn	23:02.80		-2.00
KBA	271.8	261	Pn	22:22:34.10		0.42
			Sn	23:04.00		-1.52
KRLC	291.6	358	ePn	22:22:36.20		0.04
KHC	308.7	307	ePn	22:22:40.10		1.82
			eSn	23:16.10		2.38
GOPC	314.5	330	ePn	22:22:39.70		0.69
UPC	345.7	349	ePn	22:22:43.60		0.71
WTTA	397.7	267	Pn	22:22:51.30		1.92



3.4. ábra Az egyes állomások részvétele a hipocentrum meghatározásban

Figure 3.4. Contribution of individual stations to the hypocenter determination

4.

JELENTŐS FÖLDRENGÉSEK 2013-BAN
(Magyarországon érezhető földrengések)

2013. február 16.	–	Heves
2013. április 22.	–	Tenk
2013. május 18.	–	Erdőtelek
2013. május 24.	–	Erdőtelek
2013. június 3.	–	Erdőtelek
2013. június 5.	–	Érsekvadkert
2013. június 11.	–	Érsekvadkert
2013. július 2.	–	Érsekvadkert
2013. július 11.	–	Heves
2013. augusztus 15.	–	Horvátország
2013. október 2.	–	Ausztria
2013. október 10.	–	Letkés
2013. október 19.	–	Bana
2013. december 1.	–	Máriakéménd
2013. december 30.	–	Iván

AZ INTENZITÁS ELOSZLÁS MEGHATÁROZÁSA

A Magyarországon érezhető földrengések intenzitás eloszlását a ShakeMap program (Field et al., 2003) segítségével modelleztük.

Az intenzitás leírása az *Európai Makroszeizmikus Skála (EMS)* szerint történik, mely részletesen megtalálható Grünthal (1998) munkájában. (*A Melléklet*)

4.

SIGNIFICANT EARTHQUAKES IN 2013

(Earthquakes felt in Hungary)

16 February 2013	–	Heves
22 April 2013	–	Tenk
18 May 2013	–	Erdőtelek
24 May 2013	–	Erdőtelek
3 June 2013	–	Erdőtelek
5 June 2013	–	Érsekvadkert
11 June 2013	–	Érsekvadkert
2 July 2013	–	Érsekvadkert
11 July 2013	–	Heves
15 August 2013	–	Croatia
2 October 2013	–	Austria
10 October 2013	–	Letkés
19 October 2013	–	Bana
1 December 2013	–	Máriakéménd
30 December 2013	–	Iván

METHOD USED FOR ESTIMATION OF INTENSITY

Intensity distribution of earthquakes felt in Hungary has been calculated by ShakeMap program (Field et al., 2003).

The assigned intensities correspond to the *European Macroseismic Scale 1998 (EMS)* edited by Grünthal (1998). (*Appendix A*)

2013. február 16. - Heves / 16 February 2013 - Heves

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/02/16
Kipattanási idő / Origin Time:	17:18:42.18 UTC
Szélesség és hosszúság / Latitude and Longitude:	47.643 N 20.269 E (S.D. 1.8 km)
Mélység / Depth:	9.8 km (S.D. 1.7 km)
Magnitúdó / Magnitude:	3.6 ML
Maximális intenzitás / Maximum Intensity:	4-5 EMS

LEÍRÁS

Február 16-án este 3.6 M_L magnitúdójú földrengést éreztek Heves város térségében. A rengés intenzitása 4-5 EMS fokra becsülhető az epicentrum térségében. A rengés a mintegy két hónappal később, április 22-én keletkező nagyobb földrengés előrengése volt.

A rengés számított intenzitás eloszlását a 4.1. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 11169 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 2965 km^2

$I \geq 5$ (mérsékelt érezhetőség) becsült területe 553 km^2

DISCUSSION

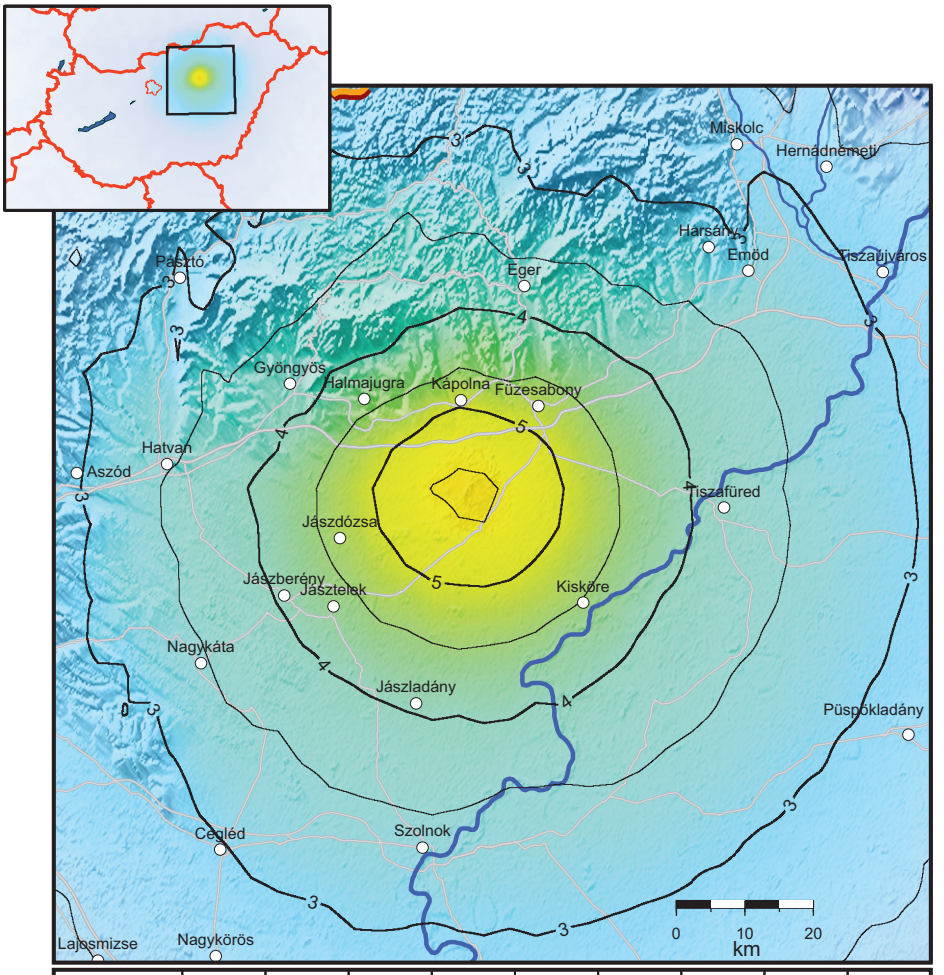
In the late afternoon of February 16th, a 3.6 M_L magnitude earthquake was reported from the town of Heves and its surroundings. The maximum intensity was estimated like 4-5 EMS at the epicentral area. The earthquake can be treated as a foreshock of the larger event occurred in 22nd April in the same region.

Calculated intensity distribution of the event is shown in Figure 4.1.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 11169 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 2965 km^2

Estimated area of $I \geq 5$ (perceived shaking: moderate) is about 553 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.1. ábra A 2013. február 16-i, hevesi földrengés (17:18 UTC) számított intenzitás eloszlása

Figure 4.1. Instrumental intensity distribution of the Heves earthquake 16th February 2013 (17:18 UTC)

2013. április 22. - Tenk / 22 April 2013 - Tenk

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/04/22
Kipattanási idő / Origin Time:	22:28:46.76 UTC
Szélesség és hosszúság / Latitude and Longitude:	47.650 N 20.302 E (S.D. 1.9 km)
Mélység / Depth:	10.0 km (S.D. 1.8 km)
Magnitúdó / Magnitude:	4.8 ML
Maximális intenzitás / Maximum Intensity:	6 EMS

LEÍRÁS

Április 22-én késő este 4.8 M_L magnitúdójú földrengés pattant ki Tenk – Heves város térségében. A rengés intenzitása az epicentrum térségében elérte a 6 EMS fokot, több településen épületek is károsodtak. Elsősorban gyengébb, régebbi épületekben repedések keletkeztek, vakolathullások történtek, illetve kémények és tetők sérültek. A földrengés nagy területen volt érezhető, egészen Budapest nyugati részéig. A rengést számos utórengés követte, melyek közül több érezhető is volt (május 18-án, május 24-én, június 3-án, július 11-én).

A rengés számított intenzitás eloszlását a 4.2. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 50719 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 13673 km^2

$I \geq 5$ (mérsékelt érezhetőség) becsült területe 3140 km^2

$I \geq 6$ (erős érezhetőség) becsült területe 321 km^2

DISCUSSION

In the late evening of April 22nd, a 4.8 M_L magnitude earthquake occurred in the surroundings of Tenk – Heves. Moderate but significant damages (fall of chimneys, cracks in walls, and damage of roofs) were reported from the epicentral area mostly at poorer quality older buildings. The maximum intensity was estimated 6 EMS at the epicentral area. The earthquake was felt in a large area as far as in the west part of Budapest. In the next three months, four of the several aftershocks were reported as felt (18 May, 24 May, 3 June, 11 July).

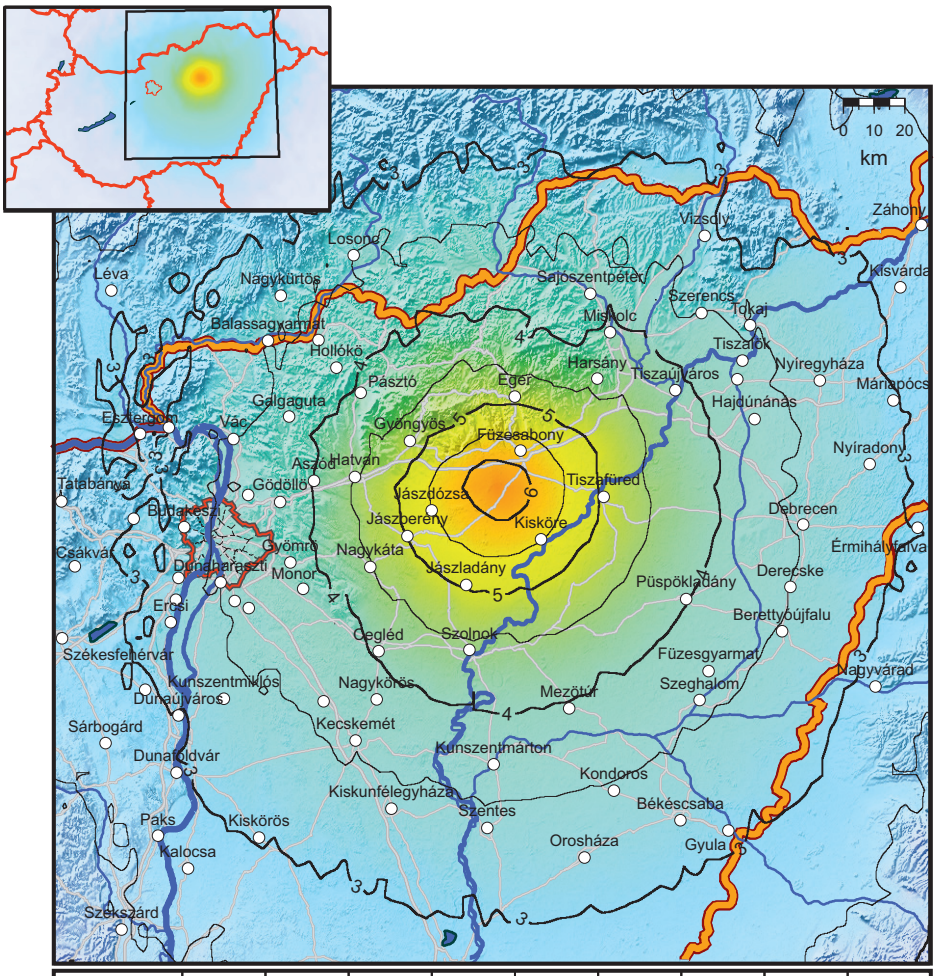
Calculated intensity distribution of the event is shown in Figure 4.2.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 50719 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 13673 km^2

Estimated area of $I \geq 5$ (perceived shaking: moderate) is about 3140 km^2

Estimated area of $I \geq 6$ (perceived shaking: strong) is about 321 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.2. ábra A 2013. április 22-i, tenki földrengés (22:28 UTC) számított intenzitás eloszlása

Figure 4.2. Instrumental intensity distribution of the Tenk earthquake 22nd April 2013 (22:28 UTC)

2013. május 18. - Erdőtelek / 18 May 2013 - Erdőtelek

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/05/18
Kipattanási idő / Origin Time:	20:34:20.01 UTC
Szélesség és hosszúság / Latitude and Longitude:	47.654 N 20.296 E (S.D. 2.2 km)
Mélység / Depth:	10.0 km (S.D. 2.1 km)
Magnitúdó / Magnitude:	2.9 ML
Maximális intenzitás / Maximum Intensity:	4-5 EMS

LEÍRÁS

Május 18-án este Erdőteleken és környékén éreztek földrengést. A rengés az április 22-i tenki földrengés egyik nagyobb utórengése volt. A 2.9 M_L magnitúdójú rengés maximális intenzitása 4-5 EMS.

A rengés számított intenzitás eloszlását a 4.3. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 4747 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 1200 km^2

$I \geq 5$ (mérsékelt érezhetőség) becsült területe 56 km^2

DISCUSSION

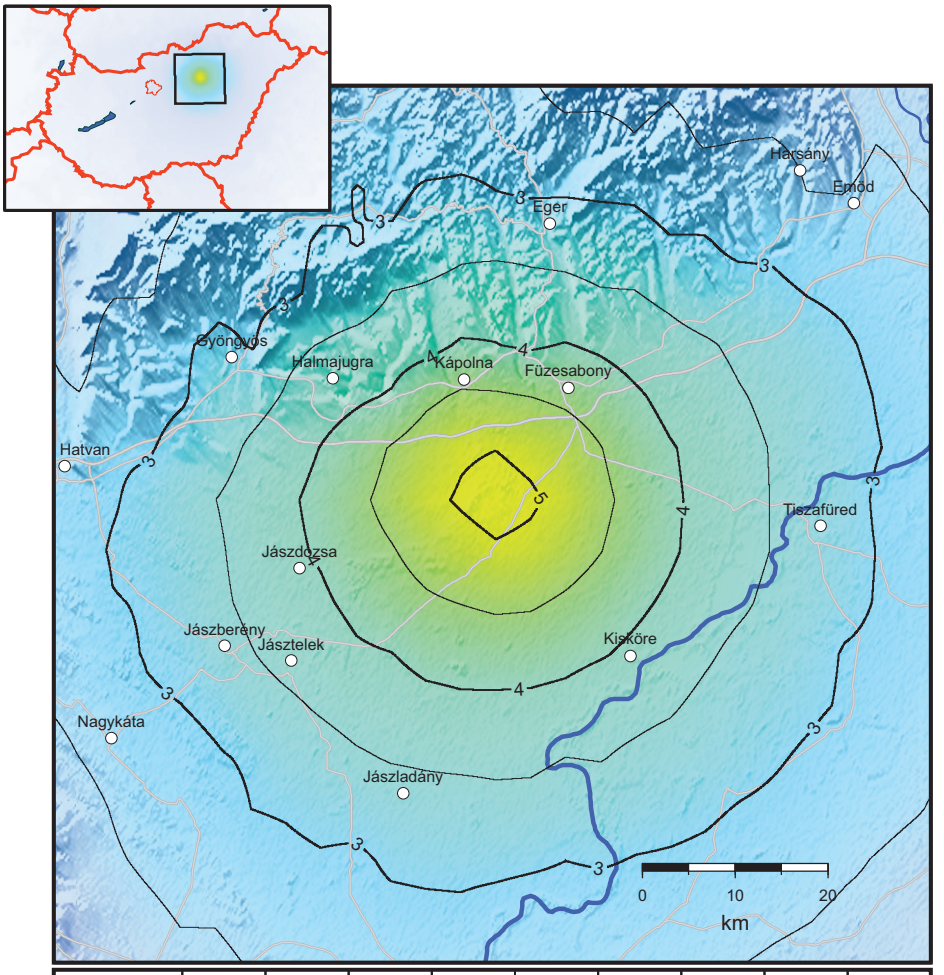
In the evening of May 18th, a 2.9 M_L magnitude event was felt 4-5 EMS in Erdőtelek and surroundings. The earthquake was one of the larger and felt aftershocks of the April 22nd Tenk earthquake.

Calculated intensity distribution of the event is shown in Figure 4.3.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 4747 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 1200 km^2

Estimated area of $I \geq 5$ (perceived shaking: moderate) is about 56 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.3. ábra A 2013. május 18-i, erdőteleki földrengés (20:34 UTC) számított intenzitás eloszlása

Figure 4.3. Instrumental intensity distribution of the Erdőtelek earthquake 18th May 2013 (20:34 UTC)

2013. május 24. - Erdőtelek / 24 May 2013 - Erdőtelek

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/05/24
Kipattanási idő / Origin Time:	18:54:54.43 UTC
Szélesség és hosszúság / Latitude and Longitude:	47.663 N 20.286 E (S.D. 3.5 km)
Mélység / Depth:	0.4 km (S.D. 3.3 km)
Magnitúdó / Magnitude:	1.8 ML
Maximális intenzitás / Maximum Intensity:	3-4 EMS

LEÍRÁS

Május 24-án este Erdőteleken és környékén éreztek ismét földrengést. A rengés az április 22-i tenki földrengés egyik érezhető utórengése volt. Az 1.8 M_L magnitúdójú rengés maximális intenzitása 3-4 EMS.

A rengés számított intenzitás eloszlását a 4.4. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 1534 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 420 km^2

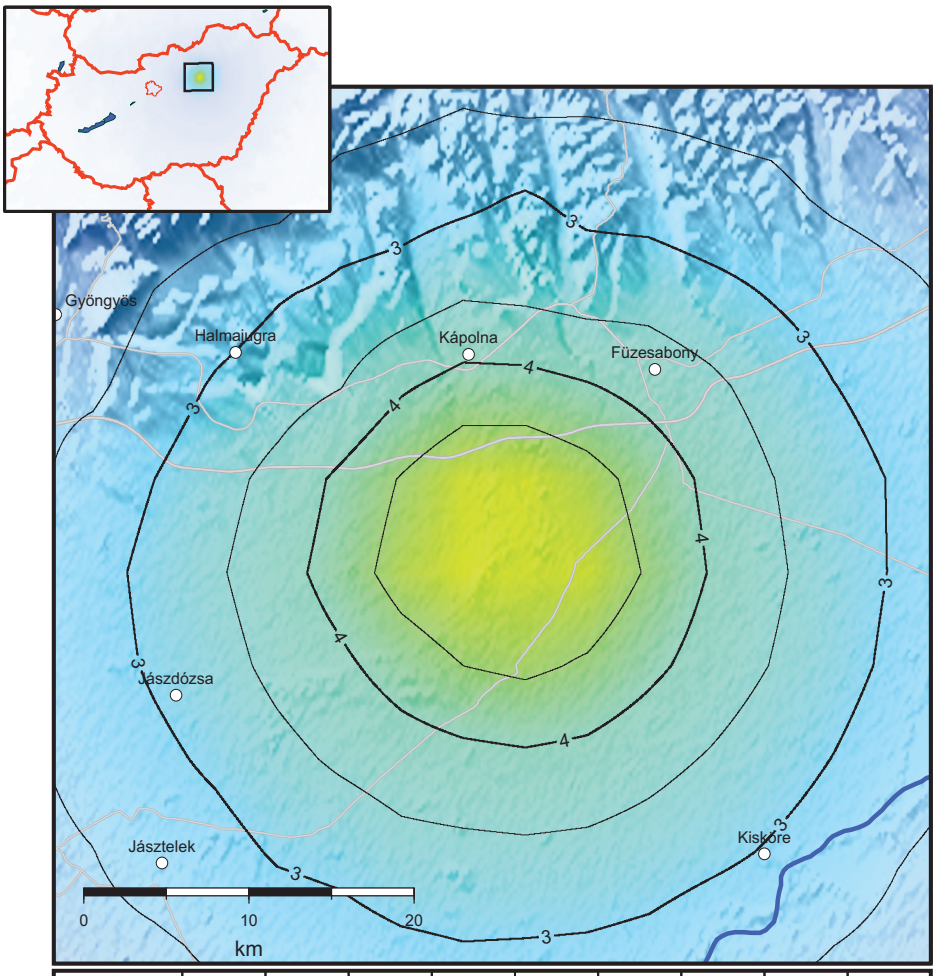
DISCUSSION

In the evening of May 24th, a 1.8 M_L magnitude event was felt 3-4 EMS in Erdőtelek and surroundings. The earthquake was one of the felt aftershocks of the April 22nd Tenk earthquake.

Calculated intensity distribution of the event is shown in Figure 4.4.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 1534 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 420 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.4. ábra A 2013. május 24-i, erdőteleki földrengés (18:54 UTC) számított intenzitás eloszlása

Figure 4.4. Instrumental intensity distribution of the Erdőtelek earthquake 24th May 2013 (18:54 UTC)

2013. június 3. - Erdőtelek / 3 June 2013 - Erdőtelek

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/06/03
Kipattanási idő / Origin Time:	21:23:06.23 UTC
Szélesség és hosszúság / Latitude and Longitude:	47.667 N 20.289 E (S.D. 2.7 km)
Mélység / Depth:	0.5 km (S.D. 2.4 km)
Magnitúdó / Magnitude:	2.2 ML
Maximális intenzitás / Maximum Intensity:	5 EMS

LEÍRÁS

Június 3-án késő este Erdőteleken és környékén éreztek ismét földrengést. A rengés az április 22-i tenki földrengés egyik érezhető utórengése volt. A 2.2 M_L magnitúdójú rengés maximális intenzitása 5 EMS.

A rengés számított intenzitás eloszlását a 4.5. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 2329 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 656 km^2

$I \geq 5$ (mérsékelt érezhetőség) becsült területe 63 km^2

DISCUSSION

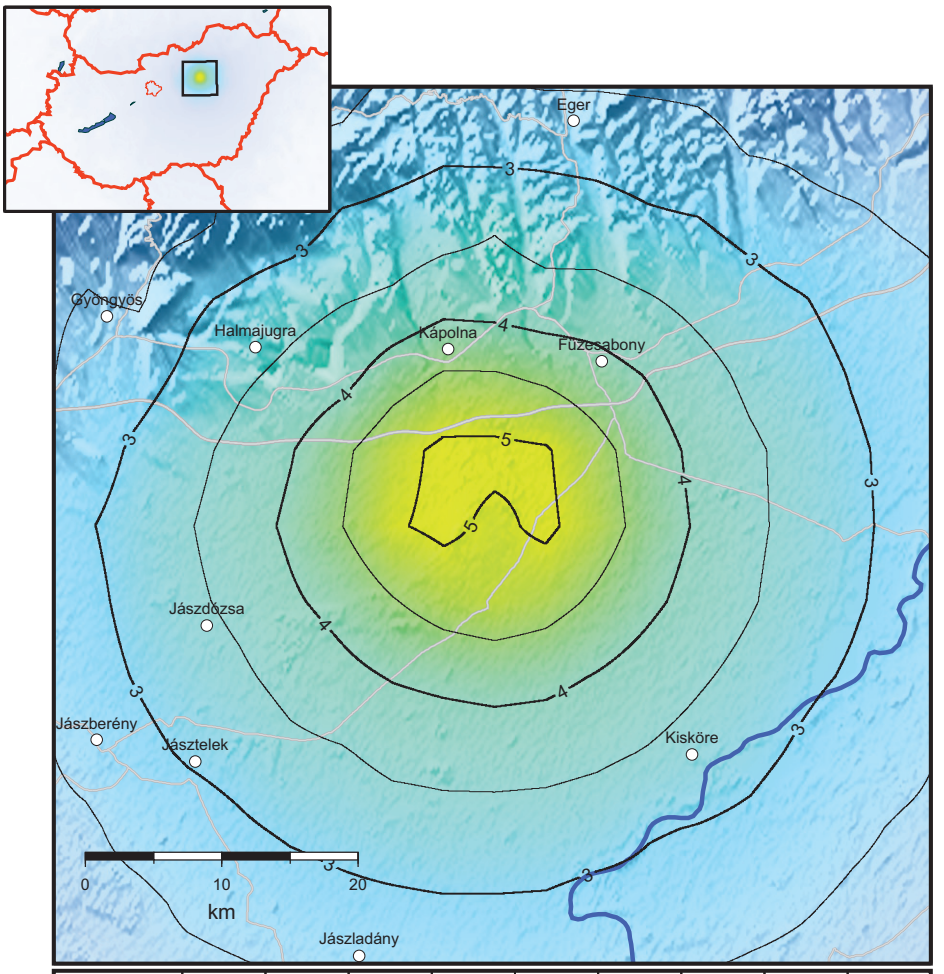
In the late evening of June 3rd, a 2.2 M_L magnitude event was felt 5 EMS in Erdőtelek and surroundings. The earthquake was one of the felt aftershocks of the April 22nd Tenk earthquake.

Calculated intensity distribution of the event is shown in Figure 4.5.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 2329 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 656 km^2

Estimated area of $I \geq 5$ (perceived shaking: moderate) is about 63 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.5. ábra A 2013. június 3-i, erdőteleki földrengés (21:23 UTC) számított intenzitás eloszlása

Figure 4.5. Instrumental intensity distribution of the Erdőtelek earthquake 3rd June 2013 (21:23 UTC)

2013. június 5. - Érsekvadkert / 5 June 2013 - Érsekvadkert

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/06/05
Kipattanási idő / Origin Time:	18:45:46.34 UTC
Szélesség és hosszúság / Latitude and Longitude:	47.993 N 19.216 E (S.D. 1.0 km)
Mélység / Depth:	3.9 km (S.D. 1.0 km)
Magnitúdó / Magnitude:	4.1 ML
Maximális intenzitás / Maximum Intensity:	5-6 EMS

LEÍRÁS

Június 5-én este, Nógrád megyében, Érsekvadkert környékén éreztek földrengést. A 4.1 M_L magnitúdójú rengés nagy területen volt érezhető, az epicentrum kisebb környezetében enyhe épületsérüléseket is okozott. A rengés maximális intenzitása 5-6 EMS.

A rengés számított intenzitás eloszlását a 4.6. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 19245 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 4705 km^2

$I \geq 5$ (mérsékelt érezhetőség) becsült területe 964 km^2

DISCUSSION

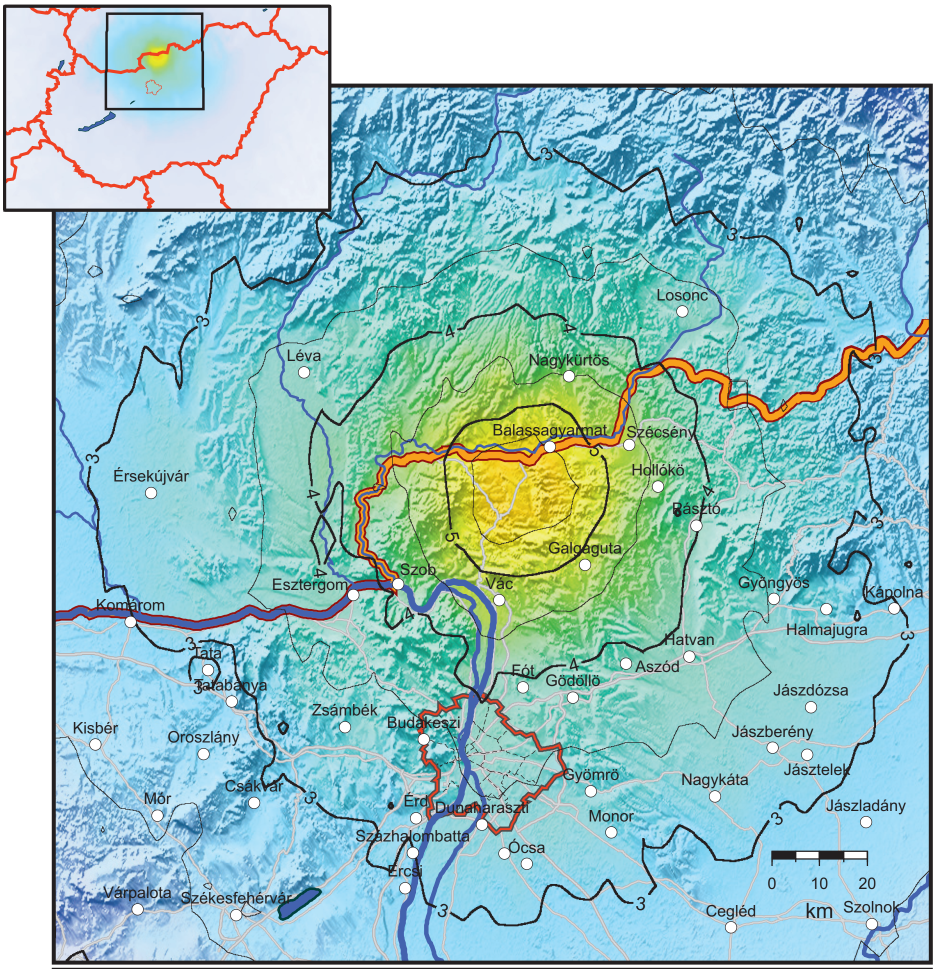
In the evening of June 5th, a 4.1 M_L magnitude event was felt in a relatively large area around Érsekvadkert, Nógrád County. Slight damages were reported in a few cases from the epicenter region. The assigned maximum intensity is 5-6 EMS.

Calculated intensity distribution of the event is shown in Figure 4.6.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 19245 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 4705 km^2

Estimated area of $I \geq 5$ (perceived shaking: moderate) is about 964 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.6. ábra A 2013. június 5-i, érsekvadkerti földrengés (18:45 UTC) számított intenzitás eloszlása

Figure 4.6. Instrumental intensity distribution of the Érsekvadkert earthquake 5th June 2013 (18:45 UTC)

2013. június 11. - Érsekvadkert / 11 June 2013 - Érsekvadkert

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/06/11
Kipattanási idő / Origin Time:	05:31:25.61 UTC
Szélesség és hosszúság / Latitude and Longitude:	47.995 N 19.226 E (S.D. 1.4 km)
Mélység / Depth:	5.2 km (S.D. 1.6 km)
Magnitúdó / Magnitude:	2.3 ML
Maximális intenzitás / Maximum Intensity:	4-5 EMS

LEÍRÁS

Június 11-én reggel, Nógrád megyében, Érsekvadkert környékén ismét földrengést éreztek. A 2.3 M_L magnitúdójú rengés a június 5-i rengés egyik érezhető utórengése volt. A rengés maximális intenzitása 4-5 EMS.

A rengés számított intenzitás eloszlását a 4.7. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 1976 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 467 km^2

$I \geq 5$ (mérsékelt érezhetőség) becsült területe 4 km^2

DISCUSSION

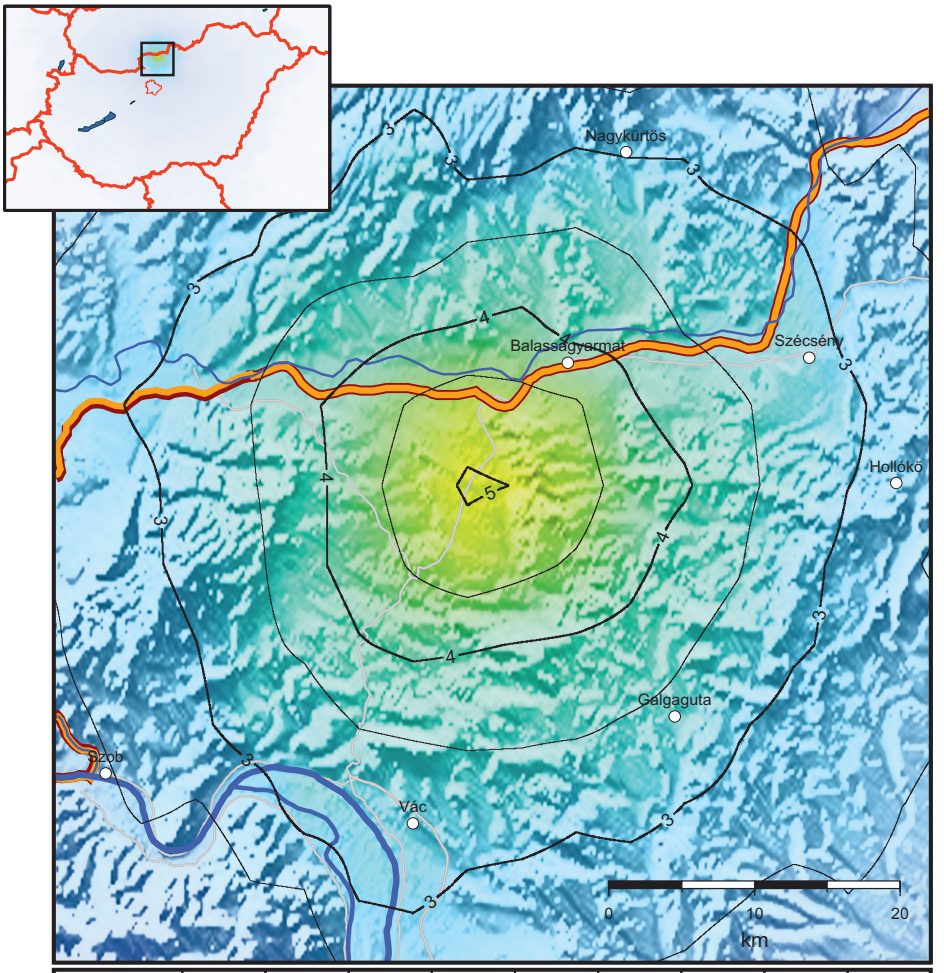
In the morning of June 11th, a 2.3 M_L magnitude earthquake was felt again around Érsekvadkert, Nógrád County. The event was one of the felt aftershocks of the June 5th earthquake. The assigned maximum intensity is 4-5 EMS.

Calculated intensity distribution of the event is shown in Figure 4.7.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 1976 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 467 km^2

Estimated area of $I \geq 5$ (perceived shaking: moderate) is about 4 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.7. ábra A 2013. június 11-i, érsekvadkerti földrengés (05:31 UTC) számított intenzitás eloszlása

Figure 4.7. Instrumental intensity distribution of the Érsekvadkert earthquake 11th June 2013 (05:31 UTC)

2013. július 2. - Érsekvadkert / 2 July 2013 - Érsekvadkert

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/07/02
Kipattanási idő / Origin Time:	19:07:32.08 UTC
Szélesség és hosszúság / Latitude and Longitude:	47.987 N 19.204 E (S.D. 1.3 km)
Mélység / Depth:	4.0 km (S.D. 1.3 km)
Magnitúdó / Magnitude:	3.4 ML
Maximális intenzitás / Maximum Intensity:	5 EMS

LEÍRÁS

Július 2-án este, Nógrád megyében, Érsekvadkert környékén ismét földrengést éreztek. A 3.4 M_L magnitúdójú rengés a június 5-i rengés egyik nagyobb, érezhető utórengése volt. A rengés maximális intenzitása 5 EMS.

A rengés számított intenzitás eloszlását a 4.8. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 7704 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 1914 km^2

$I \geq 5$ (mérsékelt érezhetőség) becsült területe 375 km^2

DISCUSSION

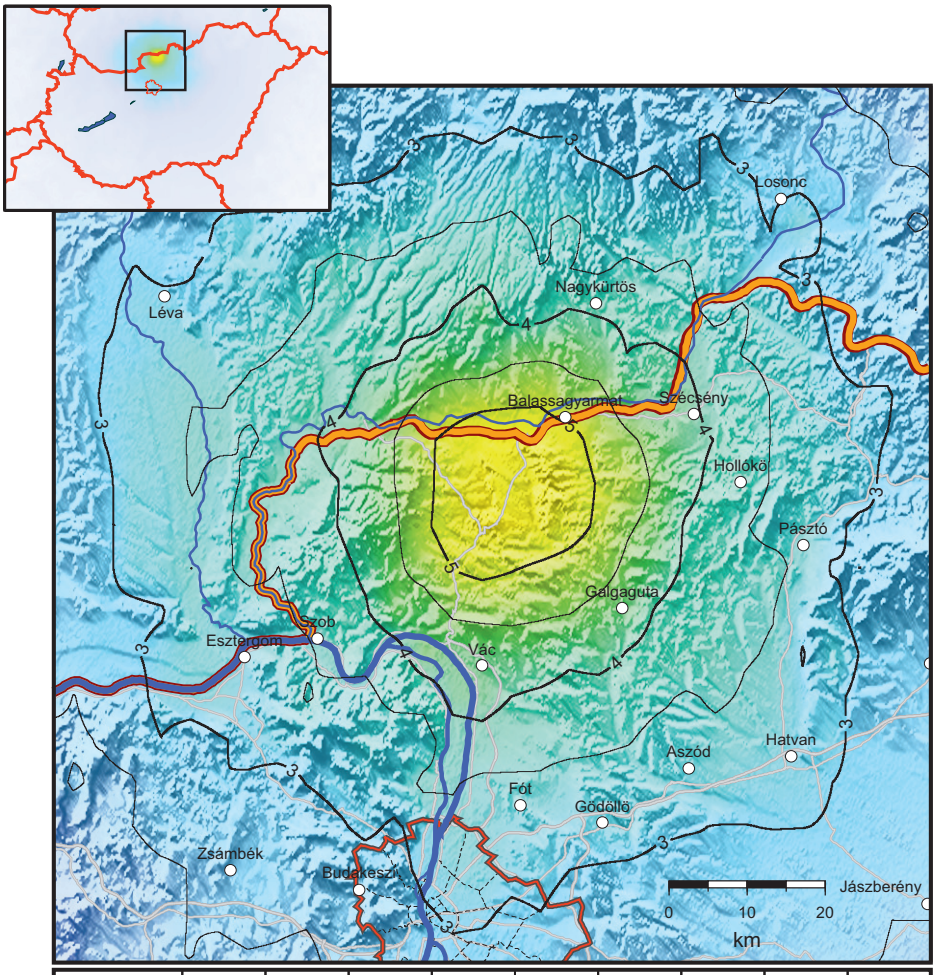
In the evening of July 2nd, a 3.4 M_L magnitude earthquake was felt again around Érsekvadkert, Nógrád County. The event was one of the larger felt aftershocks of the June 5th earthquake. The assigned maximum intensity is 5 EMS.

Calculated intensity distribution of the event is shown in Figure 4.8.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 7704 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 1914 km^2

Estimated area of $I \geq 5$ (perceived shaking: moderate) is about 375 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.8. ábra A 2013. július 2-i, érsekvadkerti földrengés (19:07 UTC) számított intenzitás eloszlása

Figure 4.8. Instrumental intensity distribution of the Érsekvadkert earthquake 2nd July 2013 (19:07 UTC)

2013. július 11. - Heves / 11 july 2013 - Heves

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/07/11
Kipattanási idő / Origin Time:	06:10:21.24 UTC
Szélesség és hosszúság / Latitude and Longitude:	47.641 N 20.254 E (S.D. 2.2 km)
Mélység / Depth:	1.1 km (S.D. 3.9 km)
Magnitúdó / Magnitude:	1.9 ML
Maximális intenzitás / Maximum Intensity:	4 EMS

LEÍRÁS

Július 11-én reggel Hevesen és környékén éreztek ismét földrengést. A rengés az április 22-i tenki földrengés egyik érezhető utórengése volt. Az 1.9 M_L magnitúdójú rengés maximális intenzitása 4 EMS.

A rengés számított intenzitás eloszlását a 4.9. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 1716 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 484 km^2

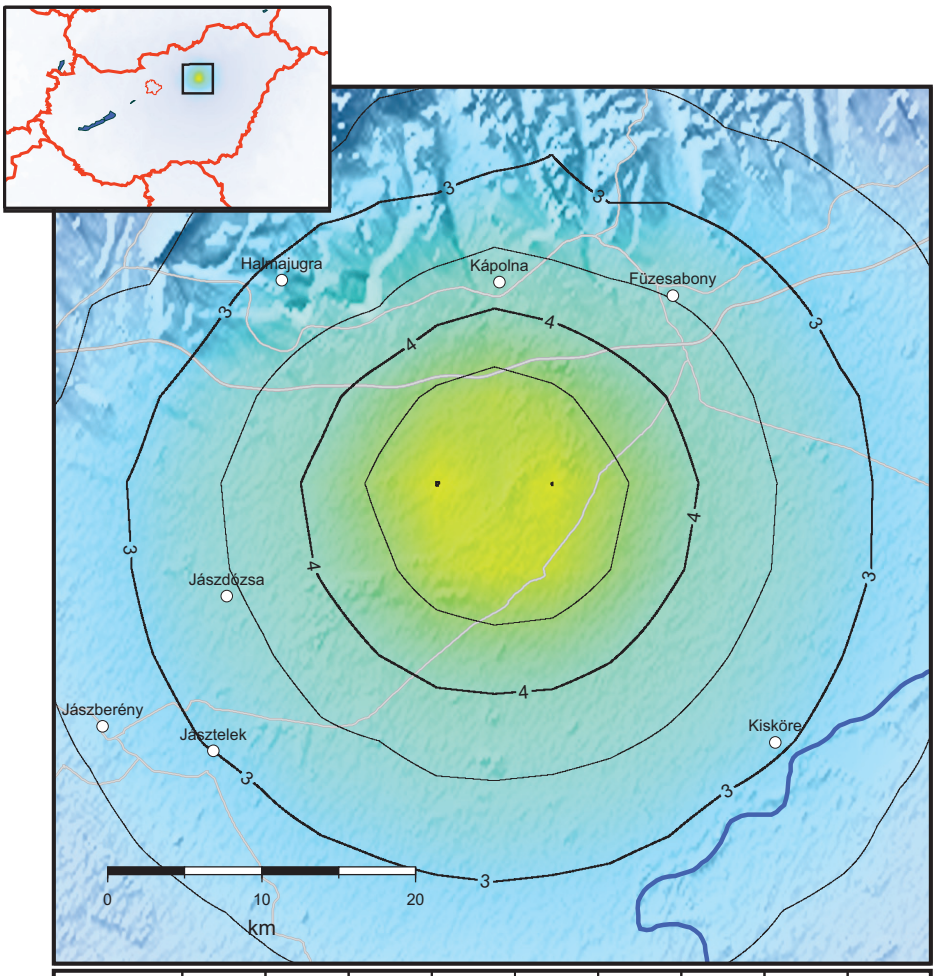
DISCUSSION

In the morning of July 11th, a 1.9 M_L magnitude event was felt 4 EMS in Heves and surroundings. The earthquake was one of the felt aftershocks of the April 22nd Tenk earthquake.

Calculated intensity distribution of the event is shown in Figure 4.9.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 1716 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 484 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.9. ábra A 2013. július 11-i, hevesi földrengés (06:10 UTC) számított intenzitás eloszlása

Figure 4.9. Instrumental intensity distribution of the Heves earthquake 11th July 2013 (06:10 UTC)

2013. augusztus 15. - Horvátország / 15 August 2013 - Croatia

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/08/15
Kipattanási idő / Origin Time:	02:22:42.02 UTC
Szélesség és hosszúság / Latitude and Longitude:	45.847 N 17.585 E (S.D. 3.0 km)
Mélység / Depth:	0.6 km (S.D. 2.6 km)
Magnitúdó / Magnitude:	2.8 ML
Maximális intenzitás / Maximum Intensity:	4-5 EMS

LEÍRÁS

Augusztus 15-én hajnalban, Baranya megyében, a magyar - horvát határ közelében éreztek földrengést. A 2.8 M_L magnitúdójú rengés maximális intenzitása 4-5 EMS.

A rengés számított intenzitás eloszlását a 4.10. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 4131 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 1225 km^2

$I \geq 5$ (mérsékelt érezhetőség) becsült területe 246 km^2

DISCUSSION

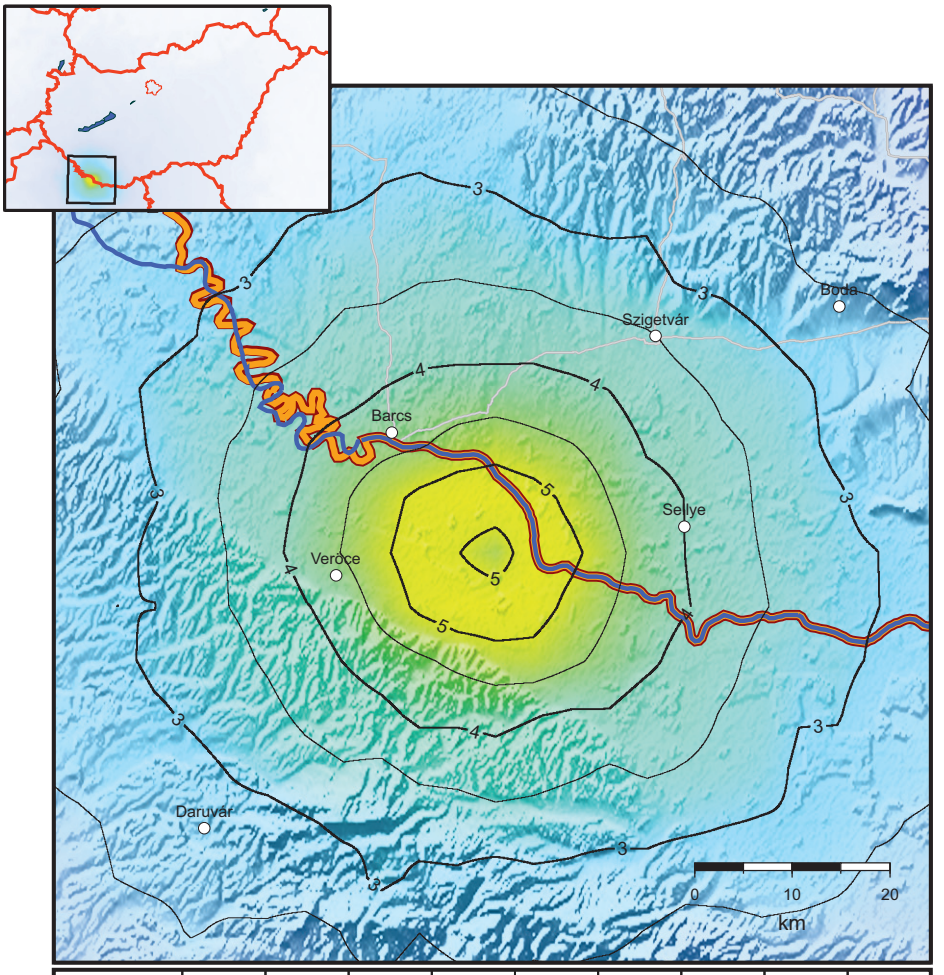
In the early morning of August 15th, a 2.8 M_L magnitude event was felt at the Hungarian – Croatian border region, SW of Hungary. 4-5 EMS epicentral intensity was reported.

Calculated intensity distribution of the event is shown in Figure 4.10.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 4131 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 1225 km^2

Estimated area of $I \geq 5$ (perceived shaking: moderate) is about 246 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.10. ábra A 2013. augusztus 15-i, horvátországi földrengés (02:22 UTC) számított intenzitás eloszlása

Figure 4.10. Instrumental intensity distribution of the Croatia earthquake 15th August 2013 (02:22 UTC)

2013. október 2. - Ausztria / 2 October 2013 - Austria

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/10/02
Kipattanási idő / Origin Time:	17:17:35.94 UTC
Szélesség és hosszúság / Latitude and Longitude:	47.964 N 16.430 E (S.D. 1.1 km)
Mélység / Depth:	5.3 km (S.D. 1.2 km)
Magnitúdó / Magnitude:	3.7 ML
Maximális intenzitás / Maximum Intensity:	5 EMS (3-4 EMS in Hungary)

LEÍRÁS

Október 2-án este, a magyar - osztrák határ közelében, Sopronban és környékén volt érezhető egy Ausztriában keletkezett földrengés. A 3.7 M_L magnitúdójú rengés epicentrális intenzitása 5 EMS körüli, Magyarországon 3-4 EMS.

A rengés számított intenzitás eloszlását a 4.11. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 11504 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 3170 km^2

$I \geq 5$ (mérsékelt érezhetőség) becsült területe 646 km^2

DISCUSSION

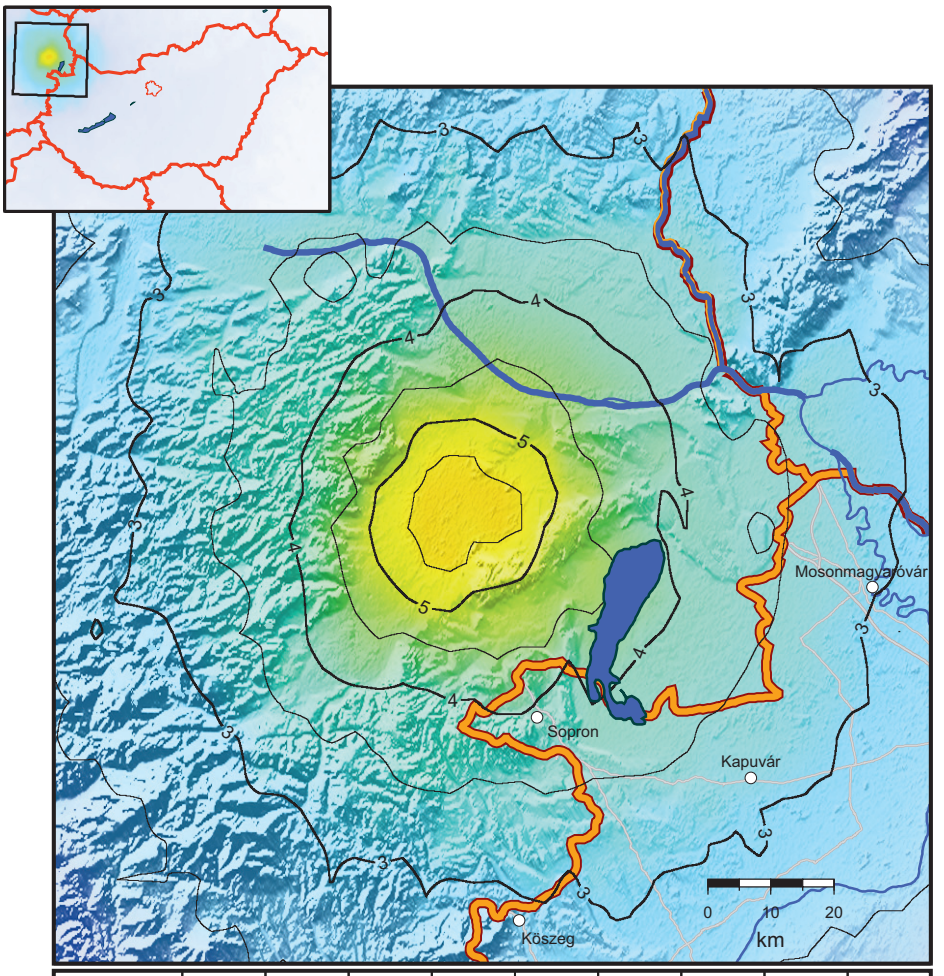
In the evening of October 2nd, a 3.7 M_L magnitude earthquake in Austria alerted people at the Hungarian – Austrian border region, in Sopron and surroundings. 3-4 EMS intensity was reported from Hungarian territories, while the epicentral intensity in Austria can be estimated around 5 EMS.

Calculated intensity distribution of the event is shown in Figure 4.11.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 11504 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 3170 km^2

Estimated area of $I \geq 5$ (perceived shaking: moderate) is about 646 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.11. ábra A 2013. október 2-i, ausztriai földrengés (17:17 UTC) számított intenzitás eloszlása

Figure 4.11. Instrumental intensity distribution of the Austria earthquake 2nd October 2013 (17:17 UTC)

2013. október 10. - Letkés / 10 October 2013 - Letkés

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/10/10
Kipattanási idő / Origin Time:	02:02:32.04 UTC
Szélesség és hosszúság / Latitude and Longitude:	47.893 N 18.822 E (S.D. 1.6 km)
Mélység / Depth:	7.2 km (S.D. 1.4 km)
Magnitúdó / Magnitude:	2.3 ML
Maximális intenzitás / Maximum Intensity:	4 EMS

LEÍRÁS

Október 10-én éjjel, a Börzsöny hegységben, Letkés környékén volt érezhető egy kisebb földrengés. A 2.3 M_L magnitúdójú rengés epicentrális intenzitása 4 EMS körüli. Utoljára 1995-ben volt ugyanezen a területen egy 3.7 M_L magnitúdójú rengés.

A rengés számított intenzitás eloszlását a 4.12. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 2068 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 405 km^2

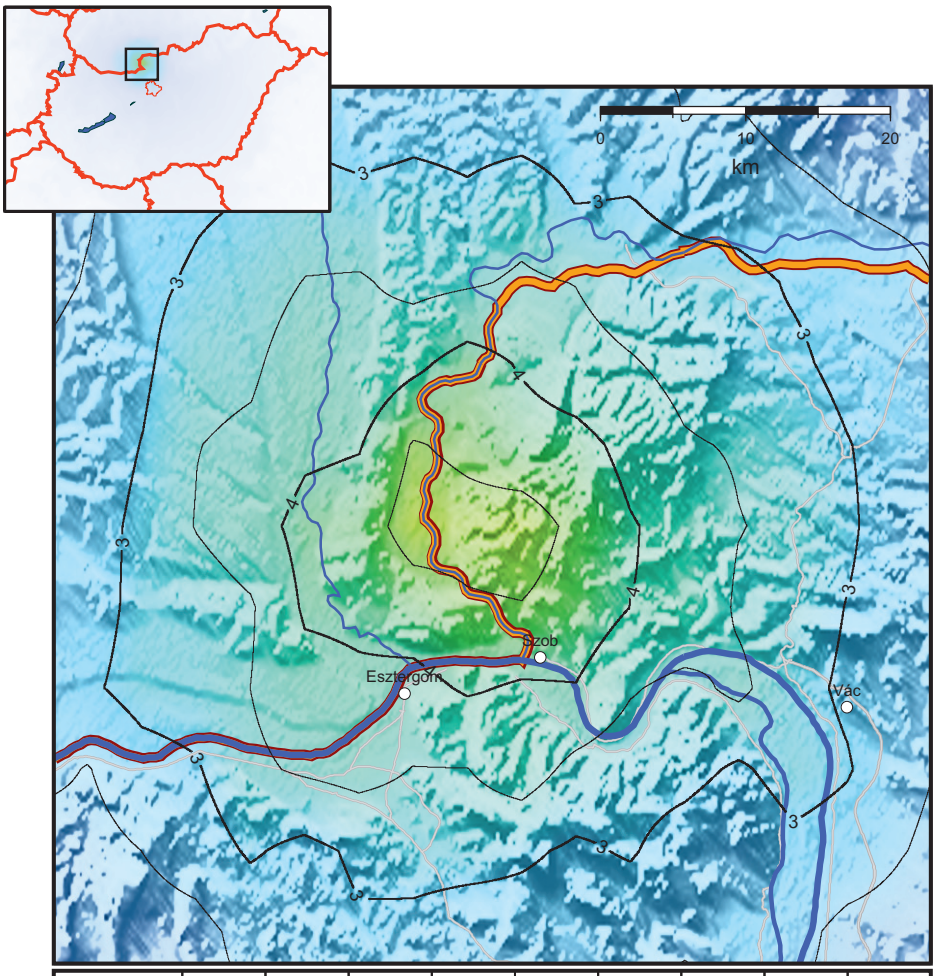
DISCUSSION

In the night of October 10th, a 2.3 M_L magnitude earthquake was felt and reported from the Börzsöny mt region. The quake was felt 4 EMS in a small area around Letkés. In 1995, a 3.7 M_L magnitude earthquake was reported from the same area.

Calculated intensity distribution of the event is shown in Figure 4.12.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 2068 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 405 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.12. ábra A 2013. október 10-i, letkési földrengés (02:02 UTC) számított intenzitás eloszlása

Figure 4.12. Instrumental intensity distribution of the Letkés earthquake 10th October 2013 (02:02 UTC)

2013. október 19. - Bana / 19 October 2013 - Bana

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/10/19
Kipattanási idő / Origin Time:	07:02:44.05 UTC
Szélesség és hosszúság / Latitude and Longitude:	47.680 N 17.966 E (S.D. 1.0 km)
Mélység / Depth:	4.1 km (S.D. 1.2 km)
Magnitúdó / Magnitude:	3.0 ML
Maximális intenzitás / Maximum Intensity:	5 EMS

LEÍRÁS

Október 19-én reggel, Bana - Bábolna környékén volt érezhető (5 EMS) egy 3.0 M_L magnitúdójú földrengés. A rengést több utórengés is követte, de ezek nem voltak érezhetők. Utoljára 2011-ben volt érezhető ugyanezen a területen egy kisebb, 2.1 M_L magnitúdójú rengés, illetve 2004-ben három rengés valamelyest délebbre (Kerékteleki, Kisbér, Mezőörs).

A rengés számított intenzitás eloszlását a 4.13. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 5465 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 1540 km^2

$I \geq 5$ (mérsékelt érezhetőség) becsült területe 322 km^2

DISCUSSION

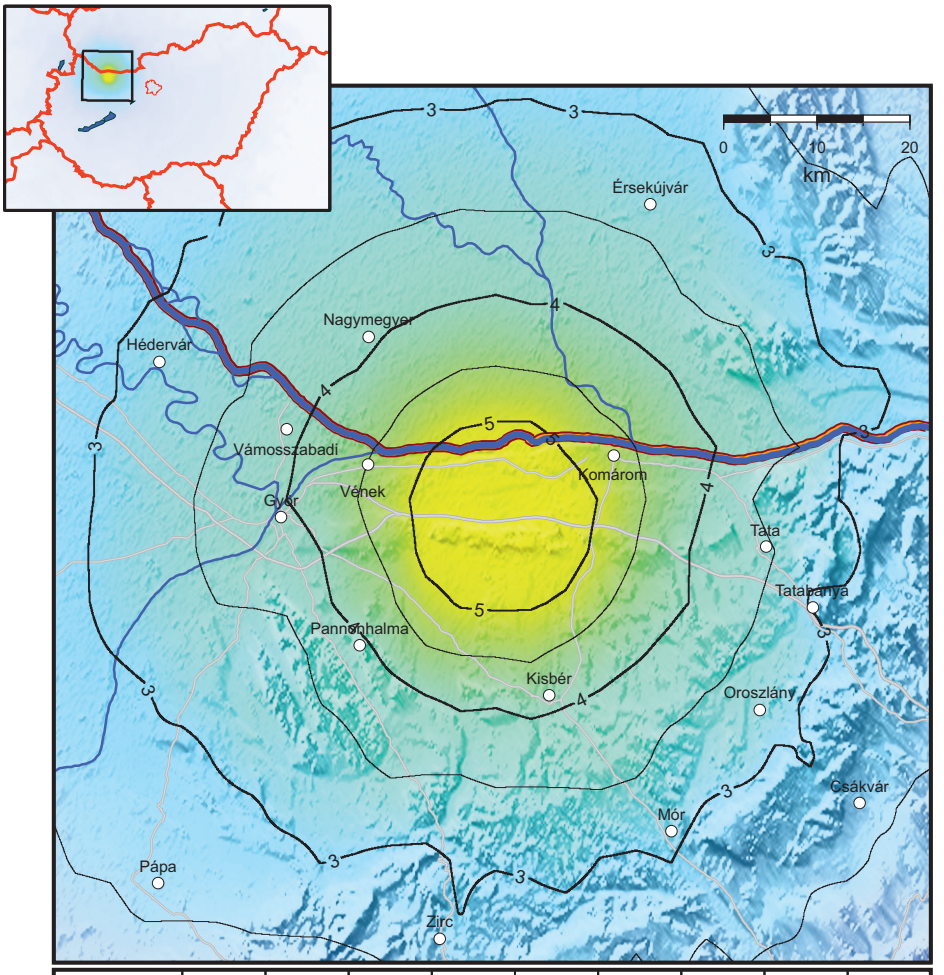
In the morning of October 19th, a 3.0 M_L magnitude earthquake was felt and reported (5 EMS) from Bana – Bábolna area. The main shock was followed by a number of aftershocks but none of the aftershocks was felt. In recent times, a 2.1 M_L magnitude earthquake was reported in 2011, and in 2014, somewhat to the South from the current epicenter, three shocks were felt and reported from the same area.

Calculated intensity distribution of the event is shown in Figure 4.13.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 5465 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 1540 km^2

Estimated area of $I \geq 5$ (perceived shaking: moderate) is about 322 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.13. ábra A 2013. október 19-i, banai földrengés (07:02 UTC) számított intenzitás eloszlása

Figure 4.13. Instrumental intensity distribution of the Bana earthquake 19th October 2013 (07:02 UTC)

2013. december 1. - Máriakéménd / 1 December 2013 - Máriakéménd

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/12/01
Kipattanási idő / Origin Time:	06:04:29.58 UTC
Szélesség és hosszúság / Latitude and Longitude:	46.023 N 18.461 E (S.D. 2.3 km)
Mélység / Depth:	10.0 km (S.D. 1.4 km)
Magnitúdó / Magnitude:	3.1 ML
Maximális intenzitás / Maximum Intensity:	5 EMS

LEÍRÁS

December 1-én reggel, Baranya megyében, Máriakéménd környékén volt érezhető (5 EMS) egy 3.1 M_L magnitúdójú földrengés. Legutóbb 2010-ben volt érezhető ugyanezen a területen egy valamivel kisebb, 2.4 M_L magnitúdójú rengés.

A rengés számított intenzitás eloszlását a 4.14. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 6234 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 1275 km^2

$I \geq 5$ (mérsékelt érezhetőség) becsült területe 37 km^2

DISCUSSION

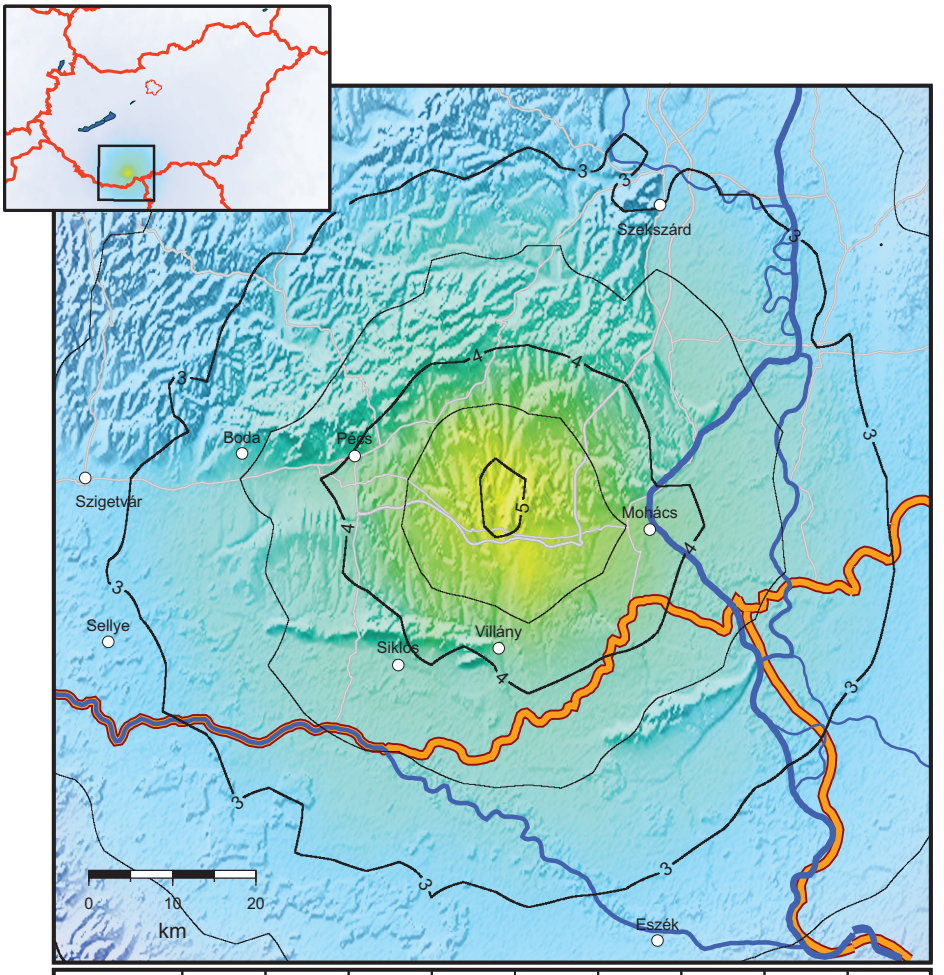
In the morning of December 1st, a 3.1 M_L magnitude earthquake was felt (5 EMS) at Máriakéménd area, Baranya County. Recently, in 2010, a somewhat lower magnitude 2.1 M_L earthquake was reported from the same area.

Calculated intensity distribution of the event is shown in Figure 4.14.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 6234 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 1275 km^2

Estimated area of $I \geq 5$ (perceived shaking: moderate) is about 37 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.14. ábra A 2013. december 1-i, máriakéméndi földrengés (06:04 UTC) számított intenzitás eloszlása

Figure 4.14. Instrumental intensity distribution of the Máriakéménd earthquake 1st December 2013 (06:04 UTC)

2013. december 30. - Iván / 30 December 2013 - Iván

FÉSZEKPARAMÉTEREK / HYPOCENTER PARAMETERS

Dátum / Date:	2013/12/30
Kipattanási idő / Origin Time:	22:21:52.85 UTC
Szélesség és hosszúság / Latitude and Longitude:	47.454 N 16.893 E (S.D. 1.8 km)
Mélység / Depth:	0.7 km (S.D. 2.0 km)
Magnitúdó / Magnitude:	2.3 ML
Maximális intenzitás / Maximum Intensity:	4-5 EMS

December 30-án éjjel, a Győr-Moson-Sopron megyei Iván környékén volt enyhén érezhető (4-5 EMS) egy 2.3 M_L magnitúdójú földrengés. Legutóbb 2004-ben (Beled, 3.8 M_L) és 2007-ben (Bő, 3.0 M_L) volt érezhető ugyanezen a környéken rengés.

A rengés számított intenzitás eloszlását a 4.15. ábra mutatja.

$I \geq 3$ (gyenge érezhetőség) becsült területe 2623 km^2

$I \geq 4$ (enyhe érezhetőség) becsült területe 717 km^2

$I \geq 5$ (mérsékelt érezhetőség) becsült területe 54 km^2

DISCUSSION

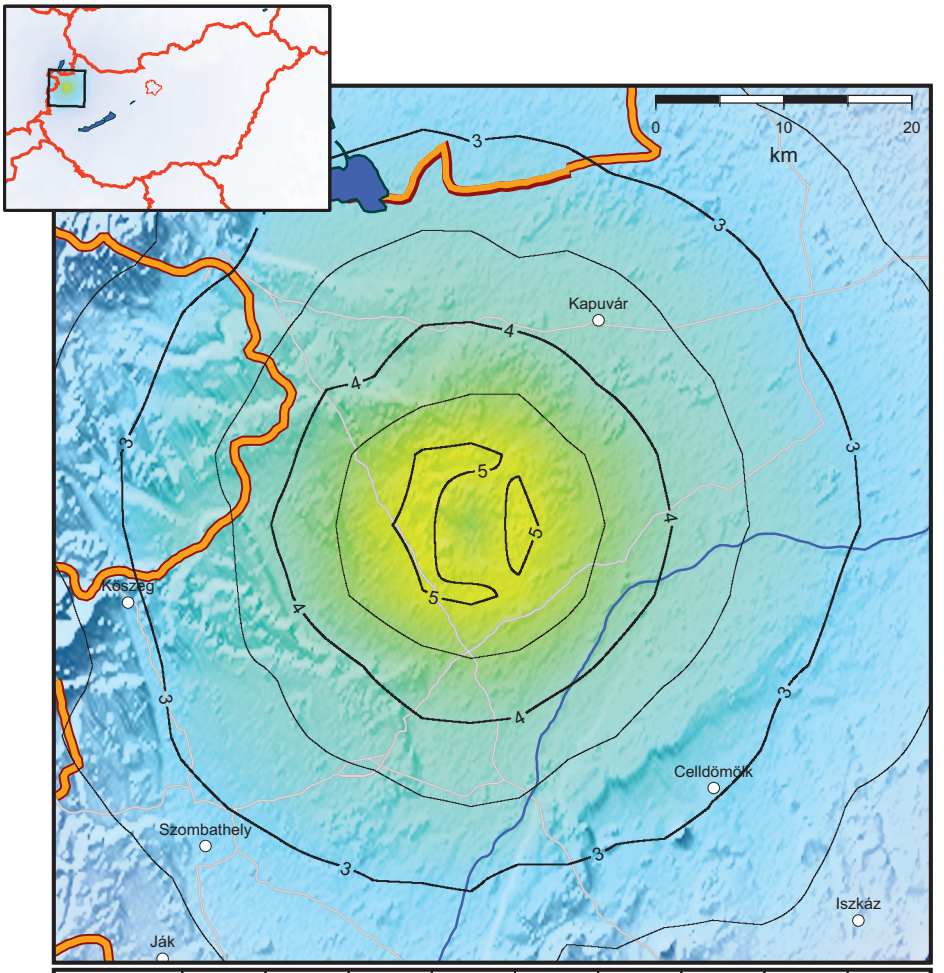
In the night of December 30th, a 2.3 M_L magnitude earthquake was felt (4-5 EMS) at Iván area, Győr-Moson-Sopron County. Recently, in 2004 (Beled, 3.8 M_L) and in 2007 (Bő, 3.0 M_L) were felt earthquakes reported from the same area.

Calculated intensity distribution of the event is shown in Figure 4.15.

Estimated area of $I \geq 3$ (perceived shaking: weak) is about 2623 km^2

Estimated area of $I \geq 4$ (perceived shaking: light) is about 717 km^2

Estimated area of $I \geq 5$ (perceived shaking: moderate) is about 54 km^2



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+

4.15. ábra A 2013. december 30-i, iváni földrengés (22:21 UTC) számított intenzitás eloszlása

Figure 4.15. Instrumental intensity distribution of the Iván earthquake 30th December 2013 (22:21 UTC)

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A MELLÉKLET

EURÓPAI MAKROSZEIZMIKUS SKÁLA (EMS)

1 ☞ **Nem érezhető**

Nem érezhető, még a legkedvezőbb körülmények között sem.

2 ☞ **Alig érezhető**

A rezgést csak egy-egy, elsősorban fekvő ember érzi, különösen magas épületek felsőbb emeletein.

3 ☞ **Gyenge**

A rezgés gyenge, néhány ember érzi, főleg épületen belül. A fekvő emberek lengést vagy gyenge remegést éreznek.

4 ☞ **Széles körben érezhető**

A rengést épületen belül sokan érzik, a szabadban kevesen. Néhány ember felébred. A rezgés mértéke nem ijesztő. Ablakok, ajtók, edények megcsörrennek, felfüggesztett tárgyak lengenek.

5 ☞ **Erős**

A rengést épületen belül a legtöbben érzik, a szabadban csak néhányan. Sok alvó ember felébred, néhányan a szabadba menekülnek. Az egész épület remeg, a felfüggesztett tárgyak nagyon lengenek. Tányérok, poharak összekoccannak. A rezgés erős. Felül nehéz tárgyak felborulnak. Ajtók, ablakok kinyílanak vagy bezáródnak.

6 ☞ **Kisebb károkat okozó**

Épületen belül szinte mindenki, szabadban sokan érzik. Épületben tartózkodók közül sokan megijednek, és a szabadba menekülnek. Kisebb tárgyak leesnek. Hagyományos épületek közül sokban keletkezik kisebb kár, hajszálrepedés a vakolatban, kisebb vakolatdarabok lehullanak.

7 ☞ **Károkat okozó**

A legtöbb ember megrémül, és a szabadba menekül. Bútorok elmozdulnak, a polcokról sok tárgy leesik. Sok hagyományos épület szenved mérsékelt sérülést: kisebb repedések keletkeznek a falakban, kémények ledőlnek.

8 ☞ **Súlyos károkat okozó**

Bútorok felborulnak. Sok hagyományos épület megsérül: kémények ledőlnek, a falakban nagy repedések keletkeznek, néhány épület részlegesen összedől.

9 ☞ **Pusztító**

Oszlopok, műemlékek ledőlnek vagy elferdülnek. Sok hagyományos épület részlegesen, néhány teljesen rombadől.

10 ☞ **Nagyon pusztító**

Sok hagyományos épület összedől.

11 ☞ **Elsöprő**

A legtöbb épület összedől.

12 ☞ **Teljesen elsöprő**

Gyakorlatilag minden építmény megsemmisül.

(Részletesen lásd: Grünthal, 1998)

APPENDIX A

EUROPEAN MACROSEISMIC SCALE (EMS)

1 ☞ **Not felt**

Not felt, even the most favourable circumstances.

2 ☞ **Scarcely felt**

Vibration is felt only by individual people at rest in houses, especially on upper floors of buildings.

3 ☞ **Weak**

The vibration is weak and is felt indoors by a few people. People at rest feel a swaying or light trembling.

4 ☞ **Largely observed**

The earthquake is felt indoors by many people, outdoors by very few. A few people are awakened. The level of vibration is not frightening. Windows, doors and dishes rattle. Hanging objects swing.

5 ☞ **Strong**

The earthquake is felt indoors by most, outdoors by few. Many sleeping people awake. A few run outdoors. Buildings tremble throughout. Hanging objects swing considerably. China and glasses clatter together. The vibration is strong. Top heavy objects topple over. Doors and windows swing open or shut.

6 ☞ **Slightly damaging**

Felt by most indoors and many outdoors. Many people in buildings are frightened and run outdoors. Small objects fall. Slight damage to many ordinary buildings eg. fine cracks in plaster and small pieces of plaster fall.

7 ☞ **Damaging**

Most people are frightened and run outdoors. Furniture is shifted and objects fall from shelves in large numbers. Many ordinary buildings suffer moderate damage: small cracks in walls, partial collapse of chimneys.

8 ☞ **Heavily damaging**

Furniture may be overturned. Many ordinary buildings suffer damage: chimneys fall, large cracks appear in walls and few buildings may partially collapse.

9 ☞ **Destructive**

Monuments and columns fall or are twisted. Many ordinary buildings partially collapse and few collapse completely.

10 ☞ **Very destructive**

Many ordinary buildings collapse.

11 ☞ **Devastating**

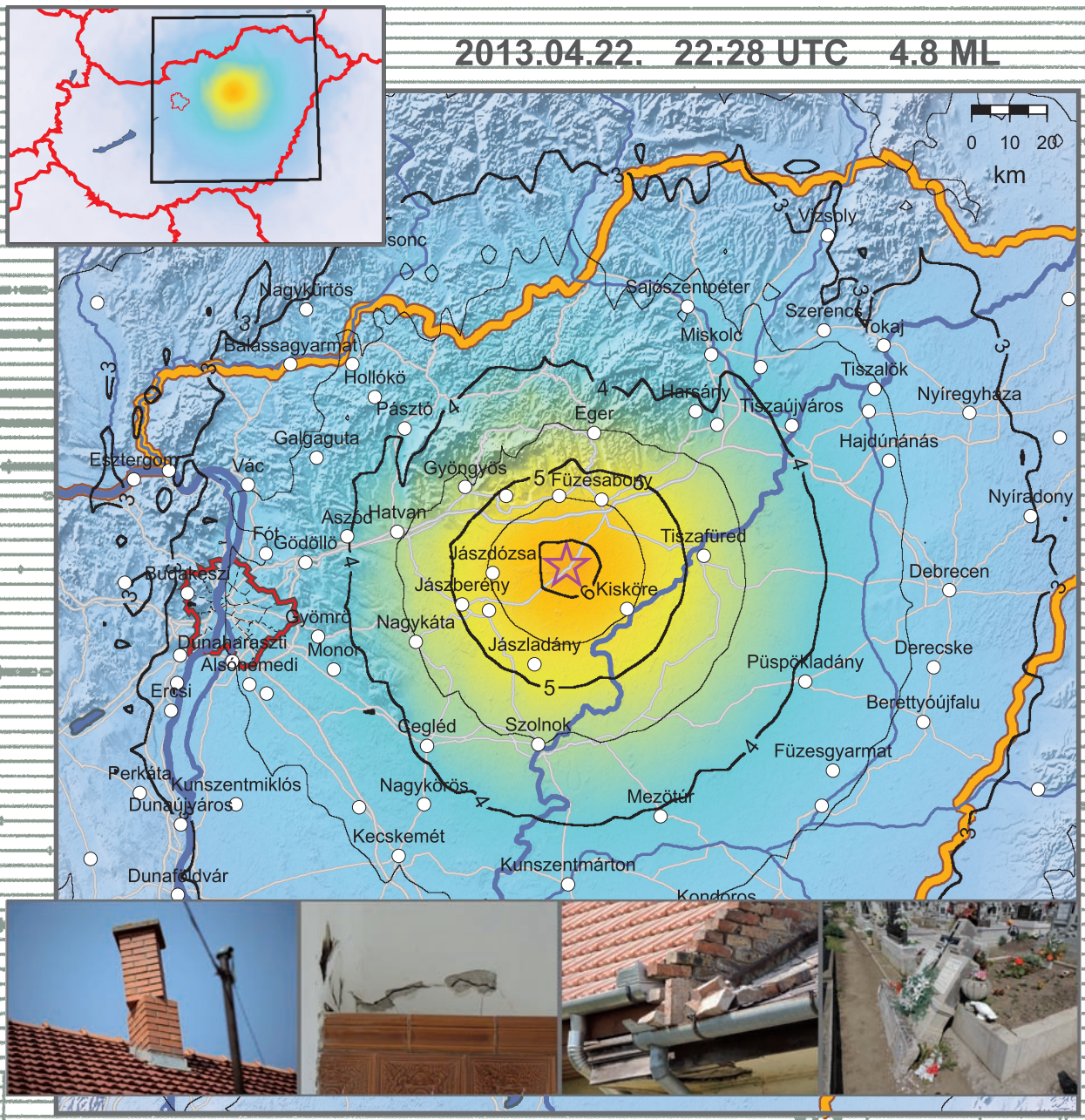
Most ordinary buildings collapse.

12 ☞ **Completely devastating**

Practically all structures above and below ground are heavily damaged or destroyed.

(For details see Grünthal, 1998)

2013.04.22. 22:28 UTC 4.8 ML



ÉREZHETŐSÉG	nem érezhető	gyenge	enyhe	mérsékelt	erős	nagyon erős	súlyos	nagyon súlyos	különösen súlyos
POTENCIÁLIS KÁR	nincs	nincs	nincs	nagyon csekély	csekély	mérsékelt	mérsékelt nagy	nagy	nagyon nagy
GYORSULÁS (m/s^2)	< 0.017	0.017-0.14	0.14-0.39	0.39-0.92	0.92-1.8	1.8-3.4	3.4-6.5	6.5-12.4	>12.4
SEBESSÉG (m/s)	< 0.001	0.001-0.011	0.011-0.034	0.034-0.081	0.081-0.16	0.16-0.31	0.31-0.60	0.60-1.16	>1.16
INTENZITÁS (SZÁMÍTOTT)	I	II-III	IV	V	VI	VII	VIII	IX	X+