

Preliminary report on 27/10/2004 20:34 (UTC) Mw 6.0 Vrancea, ROMANIA

An earthquake of magnitude $M_L=6.0$ occurred on October 27, 23:34:30 in Vrancea region (Romania). The earthquake was generated in the north-eastern part of the Vrancea seismic area (45.79N 26.71E) at 100 km depth. The intensity in epicenter area was VI - VII. The quake was felt in several cities located NE and S from epicenter (Iasi, Bacau, Focsani, Bucharest). Cracks in walls and objects falling down inside buildings were noticed.

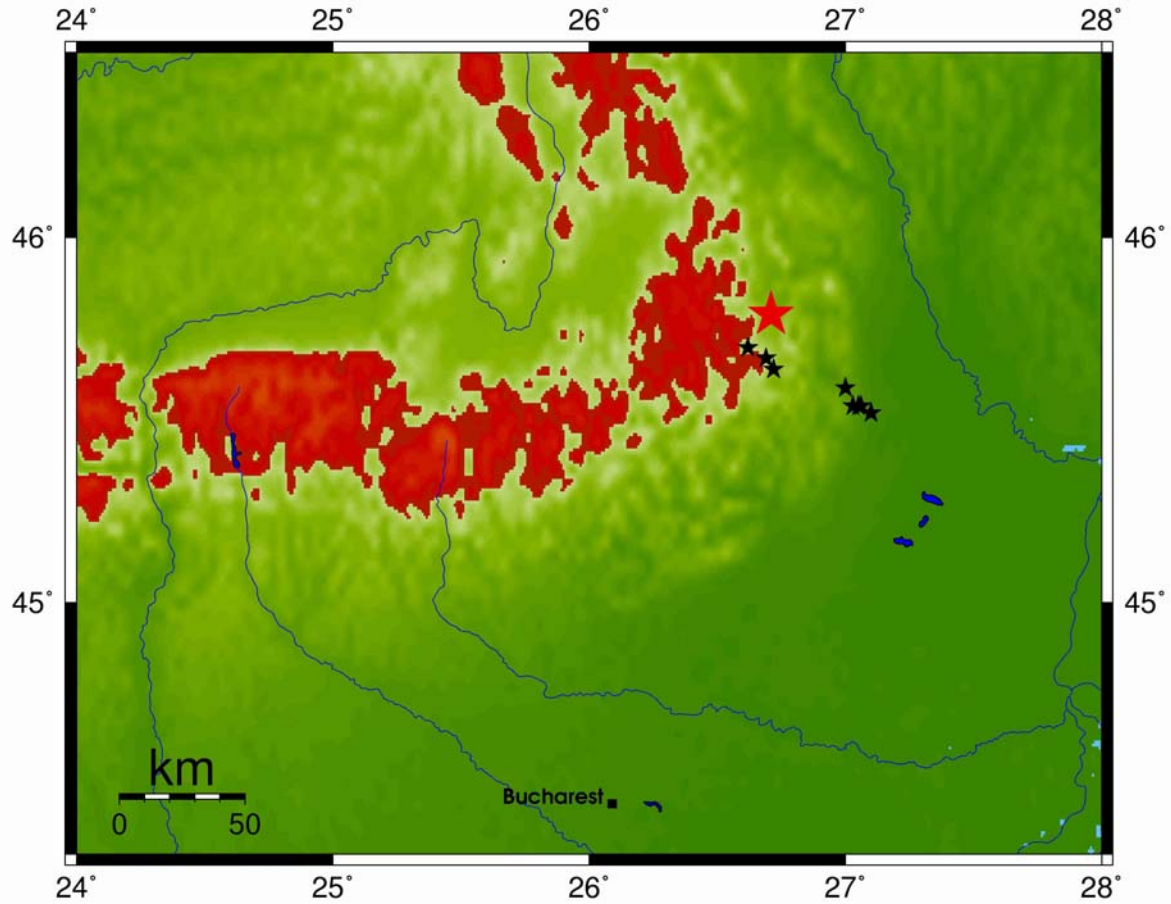
In Bucharest it was felt with intensity VI and knocked out telephone services. No injuries or damage were reported. Maximum acceleration values recorded at BTM (downtown Bucharest) and POP (periphery of Bucharest) stations were 37.7 cm/s^2 and 71.1 cm/s^2 respectively. Acceleration data provided by CRC461-B3 and NIEP K2 stations.

The quake was also felt in the Republic of Moldova, Ukraine, Bulgaria and Turkey.

The earthquake was preceded by a magnitude 5.1 event on September 27 and magnitude 4.2 event on October 25 in Vrancea area, but these two shocks were generated in the deeper part of the Vrancea seismic volume ($h > 140 \text{ km}$).

Nine shocks ($M_L < 2.5$) were recorded within 2 hours after the earthquake in the Ramnicu Sarat seismic area (about 30 km south east of the epicenter) in the upper part of the lithosphere ($h < 70 \text{ km}$), probably triggered by the shock at 100 km depth.

Seismic activity induced by the 27.10.2004 Mw = 6.0 Vrancea earthquake



DATE	ORIGIN TIME (UTC)	LATITUDE (N)	LONGITUDE (E)	DEPTH (Km)	MI
27.10.2004	21:36:04	45.70N	26.62E	75	2.2
27.10.2004	21:47:04	45.64N	26.72E	68	2.2
27.10.2004	21:53:47	45.54N	27.05E	26	1.7
27.10.2004	22:10:42	45.67N	26.69E	63	2.5
27.10.2004	22:50:48	45.54N	27.03E	20	2.4
27.10.2004	22:54:29	45.54N	27.05E	19	2
27.10.2004	22:58:31	45.54N	27.06E	20	2.1
27.10.2004	23:03:56	45.59N	27.00E	25	1.7
27.10.2004	23:04:04	45.52N	27.10E	17	1.9

Information provided by National Institute for Earth Physics, Romania

Focal mechanism from polarity data for the 27.10.2004 Mw = 6.0 Vrancea earthquake

	Strike	Dip	Slip
Np1:	346	21	44
NP2:	214	76	105

Principal axes:

P: 292/29 N: 30/15 T: 144/57

