

Preliminary comments on the Vrancea earthquake on December 13th 2005):

The focal plane solution determined using first P-wave polarities (25 local and regional stations) indicates a dip-slip faulting close to the mechanisms of the last greatest shocks produced in the Vrancea region: 27 October 2004 ($M_w = 6.0$) and 14 May 2005 ($M_w = 5.2$) – **Figure 1**.

The close to vertical NE-SW oriented fault plane is considered as the rupture plane, in agreement with the epicenter distribution (**Figure 2**).

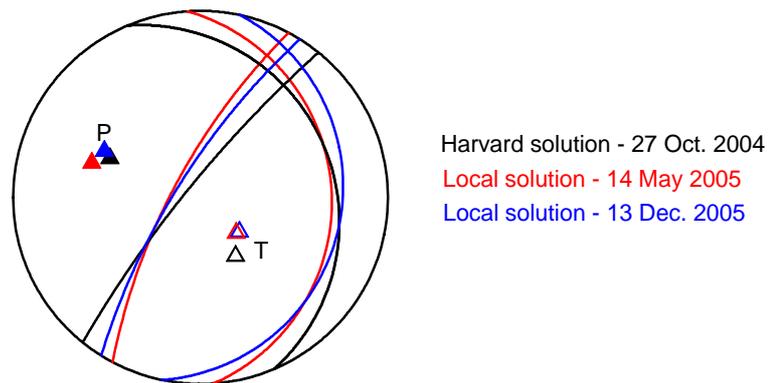


Figure 1. Fault plane solutions for the last three greatest shocks generated in the Vrancea region.

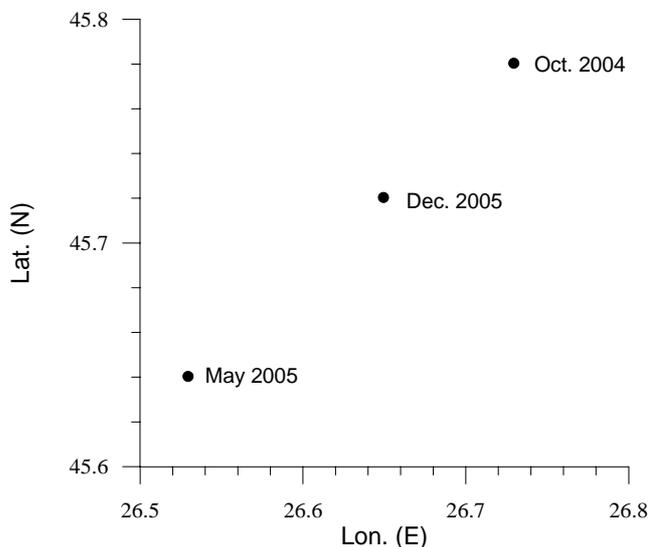


Figure 2. Distribution of the epicenters of the earthquakes of October 2004, May 2005 and December 2005 generated in the Vrancea subcrustal region at depths 105 km, 149 km and 144 km, respectively. The hypocenters are located on a plane oriented approximately $N30^{\circ}E$ and steeply dipping toward NW, in agreement with the nodal plane in Fig. 1.

Our preliminary analysis suggests a clustering effect in the recent seismicity regime of the Vrancea intermediate-depth region meaning a sort of migration on a NE-SW fault plane and focalization of the moment tensor principal axes.

May we speculate on this preliminary information and assume a sort of precursory activity outlining the future major shock rupture plane and focal mechanism in Vrancea seismic area?

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