



## **The seismicity in the L'Aquila area (Italy) with particular regard to 1985 earthquake**

fabrizio Bernardi, maria grazia Ciaccio, and Barbara Palombo

Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy

We study moderate-magnitude earthquakes ( $M_I \geq 3.5$ ) occurred in the Aquila region recorded by the Istituto Nazionale di Geofisica e Vulcanologia from 1981 to 2009 (CSI, Castello et al., 2006 - <http://www.ingv.it/CSI/> ; and ISIDE, <http://iside.rm.ingv.it/iside/standard/index.jsp>) as well as local temporary seismic networks

We identify three major sequences (1985, 1994, 1996) occurring before the 6.th April 2009  $M_w=6.3$  earthquake. The 1985 earthquake ( $M_I=4.2$ ) is the larger earthquake occurred in the investigated region till April 2009. The 1994 ( $M_I=3.9$ ) and 1996 ( $M_I=4.1$ ) occurred in the Campotosto area (NE to L'Aquila).

We computed the source moment tensor using surface waves (Giardini et al., 1993) for the main shocks of the 1985 ( $M_w=4.7$ ) and 1996 ( $M_w=4.4$ ) sequences. The solutions show normal fault ruptures. We do not find a reliable solution for the major 1994 sequence earthquake. This suggests, that the magnitude of this event is probably below  $M_w \approx 4.2$ , which is the minimum magnitude threshold for this method.