



Magnetic anomalies possibly linked to local low seismicity

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The INGV (Italian Istituto Nazionale di Geofisica e Vulcanologia) tectonomagnetic network was installed in Central Italy in 1989 to investigate the magnetic anomalies possibly related to tectonic events. The network is part of L'Aquila Geomagnetic Observatory and covers an area extending approximately in the latitude range $[41^\circ - 43^\circ]$ N and the longitude range $[12.5^\circ - 15.0^\circ]$ E. At the beginning of the 1990s some anomalies in the geomagnetic field, possibly related with earthquakes occurrence, have been pointed out, but until now no evident correlation between tectonic activity and changes in the local magnetic field has been observed. Anyway, in the last two decades, the network's area has shown a low-moderate seismic activity. During 2007 low intensity earthquakes ($M \approx 4$) occurred in the proximity of two stations of the network. Simultaneously with these events, magnetic anomalies ($\Delta F \approx 0.5$ nT) were found in the total geomagnetic field F . Here we report the magnetic anomalies observed in the local geomagnetic field, and the discussion about their relationship with the seismic activity.