

VLF transmitters signals in the seismic regions-statistical studies of the satellite DEMETER measurements

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Many past researches describe anomalous behaviour in electromagnetic measurements, associated with seismic and volcanic activity. Some of these signals have been used in the studies of the possibility of the earthquake prediction, as pre and post seismic events that occur few hours or even few days before main shock. However, due to the subtle and poorly understood nature of earthquake precursors activity, it is necessary to examine as many data sets as possible, in order to gain more complete understanding of the physical mechanism involved in the precursors signal generations.

The main goal of our work is statistical studies on electromagnetic signals in VLF range. The choice of spectrum frequency for analyzes is strictly connected with the net of VLF transmitters situated in different world regions, but in the seismic regions. We are focused on analyzing of spectrograms for electric and magnetic field registered by DEMETER microsatellite, trying to describe normal behaviour of the signal without any seismic influence, and its evolution associated with earthquake events.