Results of the ULF geomagnetic monitoring of the volcano Popocatepetl, Mexico in 2005

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Results of ULF (Ultra Low Frequency) geomagnetic anomalies observed at Tlamacas station (Long. 261.37, Lat. 19.07) located in the vicinity (4 km) near volcano Popocatepetl (active volcano, Long. 261.37, Lat. 19.02) during 2005 and their analysis are presented. The geomagnetic data were collected by a 3-axial fluxgate magnetometer designed at UCLA (University of California, Los Angeles, 1 Hz sampling rate frequency, GPS). Our analysis reveals some anomalies which are suspected to be generated by local volcanic origin: the EM background in the volcano is significantly noisier than in other reference stations; strong (up to 100 gamma), wide band and noise-like geomagnetic activity is detected in the H-component; some geomagnetic pulsations (without preferred polarization) are observed only at Tlamacas station. The mentioned monitoring can serve as another perspective tool to study volcanic geodynamical processes besides the traditional ones.