Geophysical Research Abstracts, Vol. 9, 10969, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-10969

Volcano Popocatepetl, Mexico: ULF geomagnetic anomalies observed at Tlamacas station during 2003-2006

A. Kotsarenko (1), V. Grimalsky (2), R. Pérez Enríquez (1), C. Valdés-Gonzáles (3), S. Koshevaya (2), J. A. López Cruz-Abeyro (1), V.Yutsis (4) and R.A. Villegas Cerón (4)

(1) Centro de Geociencias en Juriquilla, Universidad Nacional Autónoma de México (UNAM), Apdo Postal 1-742, Queretaro, Qro, Mexico, C.P. 76001, e-mail: kotsarenko@geociencias.unam.mx,

(2) Universidad Autónoma del Estado de Morelos (UAEM), Cuernavaca 62210, Mor., México,

(3) Instituto de Geofísica, UNAM, México D.F., México,

(4) Universidad Autónoma del estado de Nuevo León (UANL), Facultad de Ciencias de la Tierra, Linares, Nuevo León, México.

Results of ULF (Ultra Low Frequency) geomagnetic anomalies observed at Tlamacas station (Long. 261.37, Lat. 19.07) located at 4 km near the volcano Popocatepetl (active volcano, Long. 261.37, Lat. 19.02) for the period 2003-2006 and their analysis are presented. The geomagnetic data were collected with 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 vicinity of the volcano is significantly noisier than in other reference stations; the sporadic strong noise-like geomagnetic activity observed in the H-component; locally generated geomagnetic pulsations (without preferred polarization) are detected only at Tlamacas station.