Geophysical Research Abstracts,
Vol. 10, EGU2008-A-11694, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-11694
EGU General Assembly 2008

Search of the some characteristics of the low frequency turbulence observed by Demeter satellite in the ionosphere over the seismic regions

J. BŁ ęcki(1), M. Parrot(2), J-J Berthelier(3), E.SŁ omińska(1), J.SŁ omiński(1), R.Wronowski(1)

(1) Space Research Centre PAS 00-716 Warsaw, Bartycka 18A, Poland, (2) CETP/Velizy, France, (3) CETP/ Observatoire de Saint-Maur 4, avenue de Neptune94107 Saint-Maur-des-Fossés Cedex, France

The some strange behavior of the electromagnetic field around areas of the earthquakes as preseismic events can occur few hours or even few days before main shock. The payload of the DEMETER French microsatellite allows to measure waves and also some important plasma parameters (ion composition, electron density and temperature, energetic particles) with high temporal resolution in the regions over the seismic regions.

In the present work analysis of the low frequency fluctuations of the magnetic and electric fields for the strong earthquakes with magnitude M>6 will be given. Special attention will be given to study of the characteristics of the spectra of these variations and search of the nonlinear effects. This analysis is possible in the time interval when the waveform has been transmitted.

The mechanism of the energy transmission from the earthquake to the ionosphere is not clear, but we can discuss the behavior of the ionospheric plasma and search of the instabilities which could be a source of the electromagnetic field variations. Some attempt of this discussion will be given in the presentation. The search of the characteristics of the spectra and multispectra and first results of it will be given in this presentation