

## **PC2-3 GEOMAGNETIC PULSATIONS ON THE GROUND AND IN SPACE. RESULTS OF COMPARATIVE ANALYSIS OF MM100 AND CHAMP DATA**

NADEZDA YAGOVA (1), Balázs Heilig (2), Evgeny Fedorov (1), Péter Kovács (2), Hermann Lühr (3), Jan Reda (4), Kari Pajunpää (5), Tero Raita (6)

Institute of the Physics of the Earth, Laboratory of Wave Geomagnetic Fields, Moscow, Russia  
Eötvös Loránd Geophysical Institute, Budapest, Hungary  
GeoForschungsZentrum, Potsdam, Germany  
Institute of Geophysics, Polish Academy of Sciences, Warsaw, Poland  
Finnish Meteorological Institute, Finland  
Sodankylä Geophysical Observatory, Finland

Parameters of Pc2-3 pulsations, measured from auroral to middle latitudes on the ground surface at the MM100 meridional chain in the F-layer of the Earth's ionosphere by CHAMP satellite are analyzed. The combination of ground and ionospheric measurements at different geomagnetic latitudes allows to discriminate between temporal and spatial variations of pulsations' wave field, and the contribution of pulsations of different frequencies, polarization and spatial scales to the observed picture. The active role of the Earth's ionosphere in generation of local Pc2/3 disturbances is also discussed. It is found that typical signal spectra is enriched by higher frequencies in the ionosphere in comparison with the ground measured signal. Typical for Alfvénic resonance frequency dependence on latitude is sufficiently weaker in the ionosphere, than on the ground. Partly this can be explained by the short wavelengths of the pulsations in the ionosphere which are effectively damped by the ionospheric E-layer and not seen on the ground surface. Day to night amplitude ratio is low for the pulsations, measured in the ionosphere, in comparison with those, measured on the ground surface. Multiharmonic pulsations are more often in the ionosphere. The observed difference in main morphological features of pulsations on the ground and the ionosphere shows that along with extra-magnetospheric parameters and Alfvénic resonances, that control mostly the amplitude and frequency of big-scale MHD waves, registered on the ground as Pc3, for ionospheric pulsations with smaller spatial scales fine parameters of the field aligned distribution of plasma in the magnetosphere and ionosphere and, probably, intra-magnetospheric local sources are important.

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Nadezda Yagova, Institute of the Physics of the Earth, Laboratory of Wave Geomagnetic Fields, Moscow, Russia, nyagova@yandex.ru