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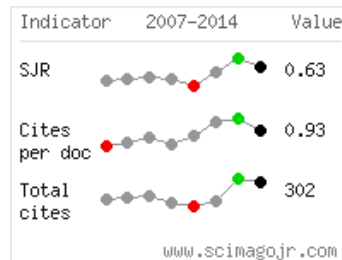
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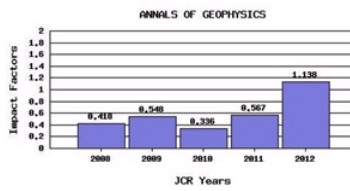
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## Depression of the ULF geomagnetic pulsation related to ionospheric irregularities

*V. M. Sorokin, E. N. Fedorov, A. Yu. Schekotov, O. A. Molchanov, M. Hayakawa*

### Abstract

We consider a depression in intensity of ULF magnetic pulsations, which is observed on the ground surface due to appearance of the irregularities in the ionosphere. It is supposed that oblique Alfvén waves in the ULF frequency range are downgoing from the magnetosphere and the

horizontal irregularities of ionospheric conductivity are created by upgoing atmospheric gravity waves from seismic source. Unlike the companion paper by Molchanov et al. (2003), we used a simple model of the ionospheric layer but took into consideration the lateral inhomogeneity of the perturbation region in the ionosphere. It is shown that ULF intensity could be essentially decreased for frequencies  $f = 0.001-0.1$  Hz at nighttime but the change is negligible at daytime in coincidence with observational results.

## Keywords

ULF; ionosphere; Alfvén; seismicity

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