

REFLECTION OF ALFVEN WAVES
FROM THE IONOSPHERE AND POSSIBILITY
FOR ACTIVE MAGNETOSPHERIC RESONATOR

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S u m m a r y

The analysis of a possibility of amplification of ULF electromagnetic radiation of the lithospheric origin is carried out. The estimations of the intergral amplification of Alfven waves are obtained in the case of their resonant interaction with captured particles. Calculations of the reflection coefficient for Alfven waves are made on the base of the models of thin film and homogeneous ionosphere layer. The analysis of the influence of general parameters of the system on the reflection coefficient of Alfven waves is performed. For the obtained coefficients of amplification and reflection, the opportunity of forming an active 'magnetospheric resonator' is analyzed.