



Formation of AKR source on the polar edge of auroral region

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On the base of the AKR measurements onboard INTERBALL-2 satellite dynamics and structure of the field distribution was studied. It was found that the expansion of the geomagnetic substorm leads to formation of low density cavity observed at the polar edge of auroral region. Waveguide mode was identified in the source region and opening radiation cone can be explained with a model of wave propagation in the inhomogeneous medium. The radiation cone formation and structure of AKR source (particularly, its dimension along the magnetic field line direction) were estimated. Possible structure of the AKR source at the polar edge of auroral region is presented and discussed.