

A study of AKR propagation properties from AKR observations with GEOTAIL and POLAR

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AKR occultation in the vicinity of the Earth are studied using two satellite observations: GEOTAIL and POLAR. We examine the dynamic spectra by the two satellites with paying attention to in what time and in which frequency the AKR are simultaneously observed or not. Two distinct regions where the AKR is occulted are found. One is the high latitude region on the night side of the Earth, mostly located within 18 to 24 MLT. In this region high frequency AKR ($>400\text{kHz}$) does not propagate, but lower frequency AKR does. In the vicinity of the plasmapause, there are the other AKR occultation regions both on the day side and night side of the Earth. Dependence of the illumination boundaries on the scale size of the plasmapause are found on the night side of the Earth.