The influence of the Earth's atmosphere on the degradation of the characteristics of images of space radar stations with a synthetic aperture

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Abstract

The article analyzes the degradation of characteristics of radar images of transionospheric synthetic aperture radars (SAR), caused by the effects of radio wave propagation in the Earth's atmosphere. A method is proposed for calculating the characteristics of images and, in particular, the azimuth resolution of SAR. The results of calculating the potential spatial resolution on radar images are presented, including the influence of the atmosphere.

Keywords: Earth atmosphere, space radar station, synthetic aperture radar, SAR, radar image, azimuth resolution.

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Access full text (in Russian)

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