

Frequency dependences of reflection coefficient from Es layer at oblique incidence

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Abstract

For radio communication practice it is expedient to establish interrelation of level of the signal reflected radio waves from the Es layer at oblique incidence, with values of frequency parameters defined at vertical sounding (VS) in the center of a path. There are analytical dependences of reflection coefficient from value of limiting frequency f_{oEs} and f_{oE} , registered in radio path center, possesses a number of lacks. Here we investigate the behavior of experimental values of Es oblique sounding on 660 km radio path Moscow-Kazan at operating frequencies 5, 10, 15 and 20 MHz. Established that Es at oblique incidence most well correlates with f_{oEs} , in comparison with f_{bEs} which are registered at VS in the path center. Changes of reflecting ability of layer Es from type of a layer, time of measurements and height of an arrangement of a layer were found. © 2011 IEEE.

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