

Calculation of midlatitude sporadic E group delay as function of frequency

Akchurin A., Bochkarev V.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The deep quasiperiodic variations in the part of frequency dependence of amplitude of reflections from layer Es observed by Kazan ionosonde was discovered. The analysis of height location of traces in an ionogram has shown that beatings arise because of interference between o- and x-modes. For an explanation of such interaction details a modeling is performed on the basis of calculations of coefficient of reflection from Es a layer for conditions of Kazan. The W.K.B solution has shown similarity of frequency dependences of a group delay from the cosine electron density profile and from real ionogram. © 2011 IEEE.

<http://dx.doi.org/10.1109/URSIGASS.2011.6051012>
