

Influence of IMF sector boundary crossings on sporadic E layer frequency parameters.

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A research of influence of interplanetary magnetic field sector boundary crossings on midlatitude sporadic E layer frequency parameters was conducted. Critical frequency of E-sporadic layer (foEs) and relative exceed of actual sporadic ionization over foEs monthly median values ($\text{foEs}-\text{foEsme}/\text{foEsme}$) are considered. Here foEsme - monthly median values of foEs for each hour. Analysis of above sporadic E layer frequency parameters for 22 midlatitude ionosphere sounding stations located in northern hemisphere was conducted for a period 1958-1990. As a result of conducted analysis were revealed that reaction of sporadic E layer to the interplanetary magnetic field sector boundary crossings is defined by sporadic E layer condition for the moment when the sector boundary is passing. The averaged over whole day values of above frequency parameters of sporadic E layer were decreased at periods of IMF sector boundary crossings, if in previous day there was the intensive sporadic-E layer. And conversely, the averaged over whole day values of sporadic E layer frequency parameters were increased at periods of IMF sector boundary crossings, if in previous day a sporadic-E layer there was weak. Received results are allow to realize a sporadic E layer frequency parameters forecast during interplanetary magnetic field sector boundary crossings.