#105 Received 01/20/2015

Karaboga, Tuba[1]; Canyilmaz, Murat[2]; Ozcan, Osman[1]
1. Mus Alparslan University
2. Firat University

A Statistical Study on Earthquakes and Ionospheric F2 Region Critical Frequencies

Abstract:
In this study, variations of the ionospheric F2 region critical frequency (foF2) were investigated statistically before three earthquakes (M _ 6.0 and D _ 50 km) happened in Japan area. foF2 data was taken from ionosonde stations which is in the earthquake preparation zone. Mean and median based two methods applied to the foF2 data. Solar and geomagnetic activities were also investigated during these periods. We observed that there were anomalous variations on the foF2 before earthquakes on the quite solar and geomagnetic activities. If it can be shown that these ionospheric perturbations are systematic and related to the earthquakes then these variations could be used for short term earthquake prediction and maybe regarded as ionospheric precursors.