Correlation Study for Ionospheric Precursors of Earthquakes

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In this paper we report the variation in foF2 (Critical frequency of F2 layer) parameter by correlation method at the time of strong seismic event. We used ionosonde data installed at different locations of earth. We analyzed four cases of earthquake. For each case we use two ionosonde recorders, in which one ionosonde is in the earthquake preparation zone and the other is outside of it. By correlation method we calculate Karl's Pearson Coefficient of correlation. Results of the study show the anomaly in Karl Pearson Coefficient, related to foF2 parameter, some days before the seismic activity. This fact can be regarded as precursory phenomenon. It may be due to the inflow of energy from the earth and then propagated upward, which perturb the F-region of ionosphere. Hence E×B drift in the ionospheric region get changed. This study may be beneficial for prediction of earthquake.

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