



A different method to detect ionospheric anomaly induced by earthquake

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In this study we analyzed the seismic ionospheric disturbances before and after Karakul earthquake occurred at 14:24:30 UTC on 25 November 2016 with its epicenter at 39.2730 N, 73.9780 E and its focal depth at 17 km under surface. Total Electron Content (TEC) data from the Global Ionosphere Map (GIM) published by Center for Orbit Determination in Europe (CODE) is used for analysis of the ionospheric variations. The quartile-based running median statistical method is utilized to detect abnormal signals caused by earthquake. To apply running median method effectively, k value is determined by analysing the earthquake region. As a result of analysis, the strong positive anomalies were observed before 14, 13, 11 days before the earthquake and on the day of earthquake. We conclude that these positive anomalies can possibly be related to solar activity and earthquake.