



Study of GPS-TEC related to Wenchuan earthquake (M=7.9) of 12 May 2008 and their fractal analysis

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Daily variation of vertical TEC data recorded at Bichpuri Agra station (Geographic Lat. 27.20N, Geographic Long. 780E, Geomagnetic Lat. 17.100N) employing a GPS receiver has been studied for a period of three months from 1 April to 30 June 2008 in relation to Wenchuan earthquake (M=7.9) of 12 May 2008. A significant enhancement has been observed in TEC 22 days before this earthquake. This result is interpreted in terms of $E \times B$ drift mechanism, where E is electric field of seismic origin. Further, fractal analysis of TEC data has also been carried out using Burlaga- Klein method and it is found that fractal dimension gradually increases long before the occurrence of this earthquake. These results are not influenced by magnetic storms and are attributed strongly to earthquake.