



Effects on atmospherics at 6 kHz and 9 kHz recorded at Tripura during the India-Pakistan Border earthquake

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The outcome of the results of some analyses of electromagnetic emissions recorded by VLF receivers at 6 kHz and 9 kHz over Agartala, Tripura, the North-Eastern state of India (Lat. 23° N, Long. 91.4° E) during the large earthquake at Muzaffarabad (Lat. 34.53° N, Long. 73.58° E) at Kashmir under Pakistan have been presented here. Spiky variations in integrated field intensity of atmospherics (IFIA) at 6 and 9 kHz have been observed 10 days prior (from midnight of 28 September 2005) to the day of occurrence of the earthquake on 8 October 2005 and the effect continued, decayed gradually and eventually ceased on 16 October 2005. The spikes distinctly superimposed on the ambient level with mutual separation of 2–5 min. Occurrence number of spikes per hour and total duration of their occurrence have been found remarkably high on the day of occurrence of the earthquake. The spike heights are higher at 6 kHz than at 9 kHz. The results have been explained on the basis of generation of electromagnetic radiation associated with fracture of rocks, their subsequent penetration into the Earth's atmosphere and finally their propagation between Earth-ionosphere waveguide. The present observation shows that VLF anomaly is well-confined between 6 and 9 kHz.

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