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Title: (NL3) APPLICATION OF FRACTALS IN THE ANALYSIS OF BHUJ EARTH OF JANUARY 26, 2001.

Abstract:

The Fractal statistics has been a recent approach to tackle the most unpredictable earthquake distribution of any tectonically active regior earthquake of January 26, 2001 (M7.6) was considered with special reference to fractal geometry. The preliminary investigations have sh that Bhuj events are caused due to hidden fault near KMF (Kutch Mai Fault). The initial result gives the geometrical aspect of fractal analysi tectonics governing seismic activity in the area. The region has been into five blocks and the fractal dimension of each block has been calc using the box-counting technique. The results show significant low va fractal dimension of Kutch rift block consisting of the KMF compared t other surrounding blocks which are also having faults and rifts like Ca rift, Narmada rift. This indicates that cause of earthquakes in this blo be due to asperities and barriers. However, the predominance of after over foreshocks signifies that barriers may be the main cause. The ot results, like low value of dimension of fault clustering show that the K block is having faults, which are distributed in clustered manner near source region. In this context, the seismicity of this block seems to b These findings are being corroborated with the broadband data of the earthquake and the aftershocks in order to justify the cause due to ba The stress drop of the region has been analyzed to support the fracta of the region. Some of the physical fractal or chaotic dynamics aspect with the preliminary results will also be discussed to understand the r devastating earthquake in the continental region. The present study v other researchers in mitigation of seismic hazards due to similar activ systems in any region.

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