عنوان مقاله:

The Alborz Region: Identification of Seismogenic Nodes with Morphostructural Zoning and Pattern Recognition

محل انتشار:

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خلاصه مقاله:

In the Alborz region, we define seismogenic nodes prone to earthquakes M۶+ and characteristic geomorphological-gelogical features that discriminate seismogenic nodes from non-seismogenic ones. Morphostructural nodes are formed around intersections or junctions of two or several lineaments. The nodes have been obtained by the morphostructural zoning (MZ) method. The compiled MZ map shows the hierarchical block-structure of the Alborz region, the network of boundary zones separating blocks, and the loci of the nodes, formed at the intersections of boundary zones. The recorded earthquakes of M۶+ nucleate at some of the nodes. The pattern recognition algorithm CORA-۳ defined other nodes capable of such size earthquakes using topographic, morphometric, and morphostructural parameters that describe the nodes. Nodes prone to M۶+ exhibit the high topographic contrast and the increased fragmentation of the crust. Results of the work points out the high seismic potential of the Alborz region: .this study identified a number of seismogenic nodes, where the target earthquakes have not yet been recorded

کلمات کلیدی:

Seismogenic Nodes, Alborz Region, Morphostructural Zoning, Lineaments