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Earthquakes' Magnitude and Density Controls by Mechanical Stratigraphy in the Zagros, Iran

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Abstract : The Zagros fold and thrust belt is one of the most active seismic zones of Iran where hosts many people and considerable oil and gas resources. The Zagros fold and thrust belt, based on its stratigraphy has been divided into three provinces. Mechanical stratigraphy of these provinces is different together. Statistical analyses all of earthquakes which has happened in the Zagros fold and thrust belt from 1964 up to December 2014, shows that strong earthquakes have occurred within the southeastern part of these subdivisions which has a smaller ratio of incompetent to competent thickness and in the northwestern part of these subdivisions which has a greater ratio of incompetent to competent thickness has occurred the weakest earthquakes. The southeastern part of the Zagros has a higher seismic risk and northwestern part of these fold belt have a lower seismic risk.

Keywords : earthquake, mechanical stratigraphy, seismic risk, Zagros
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