

Historical Earthquakes Studies in Tabriz Area

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The city of Tabriz in the northwest of Iran is the provincial capital of Eastern Azerbaijan Province. This city with about 2 million population and the area of about 250 km² is the second large and economically important city of Iran and located on the southwestern side of a major active fault. In addition to this major fault there are also many relatively minor faults inside the city of Tabriz and its surrounding areas that majority of them are also active. Therefore, as it is clear from the results of historical earthquake studies in this area, the reactivation of these active faults was the main reason for the occurrence of numerous earthquakes events during a considerably long history of Tabriz area. The examination of available historical earthquake data reveals that most of the earthquake events have occurred at night and during the summer and winter seasons. The analysis of these data also shows that there were at least 7 major events of magnitudes greater than $M=6$, during which the city of Tabriz has almost totally ruined and reconstructed again later. The calculation of average recurrence time for these events also indicates that the average return period for the major earthquake events is 232 years. Therefore, on the basis of this calculation it can be suggested that because the latest major earthquake event in Tabriz area has occurred 230 years ago, the next major event is expected to occur after 2 years.