

# **Relocation of earthquakes in the Eastern Greater Caucasus region and its tectonic implications.**

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## **Abstract**

The Caucasus-Caspian region is an area of high seismicity. This is due to the collision of the Arabian and Eurasian plates that produce constant earthquakes throughout the region. Accurate determination of earthquake hypocenters is important to understanding the tectonics of the area. This research focuses on earthquakes collected by a new digital seismic network in Azerbaijan. Examining earthquake seismicity in the region suggests that the majority of active shortening is occurring along the southern edge of the Greater Caucasus. Seismicity also suggests that the eastern Greater Caucasus is undergoing higher strain than the western end which is consistent with available GPS data. Relocation of an aftershock cluster using a relative location method shows a clear south-dipping fault which indicates active back-thrusting. The location of the presumed fault is close to south-dipping faults on geologic maps.