

Seismic Monitoring Evolution and Extensive Seismicity of Egypt

In September 03, 2015, a new earthquake with magnitude $M_B = 4.5$ was occurred in a completely silent area located at 40 km south El Alamein city, north western desert, where there are some 20 million pieces of unexploded ordnance. This study aims to review the widespread seismicity over interval periods of seismic monitoring of Egypt and argue El Alamein event as a new active source. Seismic catalog of Egypt was updated to the January 2017 including the historical and instrumental earthquakes since -2200 BC. Seismicity of Egypt was compared over four periods based on significant evolution in the seismic monitoring system. Seismic source zones were delineated for each period based on the earthquake catalog, geologic structure trends and focal mechanisms. The new local seismic spot was argued entire historical, instrumental and modern observations and interpreted in view of the local and regional tectonic movements.

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