Geophysical Research Abstracts
Vol. 17, EGU2015-13771, 2015
EGU General Assembly 2015

seismicity and seismotectonics of Libya

abdunnur Ben Suleman
Libya (babdunnur@yahoo.com)

Libya, located at the central Mediterranean margin of the African shield, underwent many episodes of orogenic activity that shaped its geological setting. The present day deformation of Libya is the result of the Eurasia-Africa continental collision. The tectonic evolution of Libya has yielded a complex crustal structure that is composed of a series of basins and uplifts. This study aims to explain in detail the seismicity and seismotectonics of Libya using new data recorded by the recently established Libyan National Seismograph Network (LNSN) incorporating other available geophysical and geological information.
Detailed investigations of the Libyan seismicity indicates that Libya has experienced earthquakes of varying magnitudes The seismic activity of Libya shows dominant trends of Seismicity with most of the seismic activity concentrated along the northern coastal areas. Four major clusters of Seismicity were quit noticeable.
Fault plane solution was estimated for 20 earthquakes recorded by the Libyan National Seismograph Network in northwestern and northeastern Libya. Results of fault plane solution suggest that normal faulting was dominant in the westernmost part of Libya; strike slip faulting was dominant in northern-central part of Libya. The northern-eastern part of the country suggests that dip-dip faulting were more prevalent.