

Tectonic Plates Interactions and Detection Capabilities of the IMS Seismic Stations in the Africa Region

Monitoring seismicity and appropriately analysing the data are important for both scientific and civil applications. Correct analysis forms the premise for estimating the risks in intercontinental seismicity occasioned by tectonic plate interaction. The International Monitoring Stations IMS seismic stations in African region consist of 9 primary and 15 auxiliary stations. Two earthquakes occurred in Indonesia (Indo-Australian plate) on 12 August, 2010 and 16 April, 2016. The IMS stations in Africa (African plate) are of teleseismic distances from the two Indonesian events. The ability of these stations to be deployed for scientific purposes was assessed using the two Indonesian events. The data from these stations were analysed using Geotool software to locate both events. Parameters studied were spectrum, f_k , ray-tracing and azimuth for phase, magnitude, time and slowness. This analysis of both events is presented in this study.

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