

Receiver Function Analysis of the IMS stations located in Africa

The International monitoring system of the Comprehensive Test-Ban Treaty Organization (CTBTO) is now composed of 18 seismic stations all over Africa. Initially, those stations has been installed to detect any nuclear explosion in the region and from all over the world. The state signatories of the treaty has access to those data in near real time and gets the opportunity to use them for their research and analysis. In this regard, we performed receiver function analysis. 9 of those 18 stations were used, to obtain an average seismic velocity V_p model in the direction North-East South-West of Africa. The result shows that the average depth of the upper mantle with the lower mantle (Moho) is around 30km. The result from the stations installed in the North-East of Africa shows a shallower Moho than those installed in the South-West. It can be explained by the geological structure of the Somalian plate at the East African rift. Further research is ongoing to provide more explanation regarding this fact

Primary author: WANYAGA, Magdalene Wangui (University of Nairobi)

Presenter: WANYAGA, Magdalene Wangui (University of Nairobi)

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