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Seismic Structure of the Crust and Upper Mantle in the Central and Northern Red Sea Focus Site

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Abstract

The main objectives of the study are to map the crustal and lithospheric geometries of the Red Sea, assess the level of crustal heterogeneity, determine the first-order nature of the deep crustal composition and evaluate lithospheric stress from the local seismicity. The PIs will use existing Saudi broadband seismic data to obtain images of the crustal and lithospheric structure of the Arabian shield and parts of the Red Sea. They will combine the

Saudi seismic data with their Ethiopian data consisting of an initial deployment of 25 stations and a later deployment of 50 broadband stations. The PIs will analyze the seismicity data to produce results that would be relevant and useful to a planned MARGINS geological/geophysical study of the northern Red Sea.

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