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Crustal Thickness and Lithospheric Structure in Northwestern Namibia from the WALPASS experiment

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An amphibian passive-source seismic network (WALPASS) have been deployed for a period of two years in the area where the Walvis Ridge intersects with the continental margin of northwestern Namibia. The deployment was intended to study and map the lithospheric and upper mantle structure in the ocean-continent transition beneath the passive continental margin. The main idea is to find seismic anomalies related to the postulated hotspot track from the continent to the ocean along the Walvis Ridge that links the Etendeka continental flood-basalt province to the Tristan da Cunha hotspot in the middle Atlantic ocean. This could provide clues that help us to better understand the role of plume-lithosphere interaction during the continental break-up. We present here first estimates of crustal and lithospheric thicknesses along with a map of distribution of local seismicity in this geophysically little studied region.