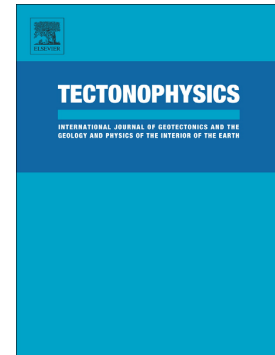


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The crustal structure of the continental margin east of the Falkland Islands

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Abstract

The 1500 km long Falkland Plateau is the most prominent morphological structure in the southern South Atlantic Ocean, which crustal composition and development is mainly unknown. At the westernmost boundary of the plateau, the Falkland Islands' Precambrian geology provides the only insight into basement structure and age. The question of whether continental basement of a similar age and origin underlies the Falkland Plateau further east is strongly disputed. We present new high quality constraints on the crustal fabric of the plateau east of the Falkland Islands, based on wide-angle seismic and potential field data acquired in 2013. The P-wave velocity model, supported by amplitude and density modelling, shows that the Falkland Plateau Basin is filled with 8 km of sediments. Continental crust of 34 km thickness underlies the Falkland Islands. The eastern continental margin of the Falkland Islands can be

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