



## **S-wave seismic velocity structure beneath Canary Islands from receiver function analysis**

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The Canary Archipelago is composed of seven islands located a few hundred kilometres from the western of Moroccan coast, and with an extension of 450 km from west to east. The origin of the Canary Islands is not well established yet. Local and regional geology features cannot be explained by the current tectonic models which some of them include a thermal hot spot model as its origin. The main aim of this study is to characterize the crust and mantle of the area by probing its seismic structure and physical properties in order to provide clues that help to understand its origin and the tectonic evolution.

The 1-D S-wave velocity structure under each station is obtained applying P-receiver function technique to the P-coda data recorded by the broadband seismic sensors network installed at the Canary Island by the Instituto Geográfico Nacional (IGN). We computed the receiver functions using the multiple-taper correlation (MTC) method. 55 teleseismic earthquakes ( $M_w > 6.0$ ) recorded between 2004-January and 2007-April, have been selected from the IGN catalogue. Radial receiver function shows different positive pulses at about 2.2 s, 4 s and 6.0 s. Transverse receiver function shows a considerable amplitude at 1.0 and 4.0 s, which could be caused by anisotropy and/or dipping interfaces at the crust.