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3D attenuation structure at Tenerife Island (Canary Islands, Spain)

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A three-dimensional S wave attenuation tomography of Tenerife island has been obtained with measurements of coda-normalization method. We used about 75000 waveforms relative to the dataset from an active seismic experiments using offshore shots (air guns) recorded at over 100 onshore seismic stations. The rays were traced in a 3D velocity model. The spatial resolution in our tomography is the same as that obtained by velocity tomography: we resolve 600m cubic cells. Results have shown that there is likewise agreement with the velocity tomography, the low velocity external zones being consistent with regions featuring high attenuation effects and the high velocity zones in the center of the island with regions featuring low attenuation effects. Therefore, our observations agree with the volcanic characteristics of the medium.