Geophysical Research Abstracts,
Vol. 11, EGU2009-922, 2009
EGU General Assembly 2009

Imaging active volcanes: High resolution 3D seismic tomography of Tenerife Island (Spain)

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Tenerife Island internal structure is not well-known. The 3D seismic tomography shows the internal structure of this active volcano with a high resolution. More than 6000 sources and 150 land stations deployed over the island have been used. Tenerife Island is an active volcanic island and it is located in Canary Island's archipelago (Spain). In January of 2007 an active seismic experiment carried out at Tenerife Island. About 600000 seismograms have been analyzed to perform the high resolution 3D seismic tomography. More than 150000 P-waves first arrivals have been used to obtain the images. The seismic tomography has been perfomed using FAST code, (Zelt et al., 1991). These results will be essential in the development and interpretation of future volcanic models in this region. Moreover, the 3-D velocity model provided is a necessity for the accurate location of recorded seismicity.