Plumbing Reservoirs Of The Earth Under Santorini

Emilie Hooft, Joanna Morgan, Paraskevi Nomikou, Doug Toomey, Mike Warner, Costas Papazachos
Visit Emilie Hooft’s overview poster Tuesday afternoon: D123B-2619
• 14,300 R/V Langseth sound sources
• 60 German land seismometers
• 5 Greek land stations on remote islands
89 OBSIP short period OBS
Sanotrini Seismic Data

Station 813 line 6

Time (s)

0 20

65 km 17 km 55 km
Anafi Seismic Data

Station 905 line 6

Time (s)
Santorini Seismic Experiment

Goal: recover the entire crustal magma plumbing structure of an arc volcano:

• We will analyze the seismic data using state-of-the-art methods:
  1. 3D anisotropic seismic tomography
  2. 3D full waveform inversion
Preliminary Tomography Images for Upper Crustal Velocity Structure

Includes 70,000 P-wave picks from 2 to 20 km range.

Visit Ben Heath’s tomography results poster Friday afternoon: V53C-3129
Shallow Velocity Structure beneath Santorini

From Druitt, 1999

• Low velocity volume at shallow depth (1-2 km) beneath the northern caldera basin
• Co-located with inflation source from 2011-2012 episode – but was at 4-6 km depth
• Stay tuned for the deeper structure!

Visit Ben Heath’s tomography results poster Friday afternoon: V53C-3129
Santorini Seismic Experiment

Goal: recover the entire crustal magma plumbing structure of an arc volcano:
- We will analyze the seismic data using state-of-the-art methods:
  1. 3D anisotropic seismic tomography
  2. 3D full waveform inversion

Questions/comments contact: emilie@uoregon.edu
Or come and see our posters Tuesday and Friday afternoons: D123B-2619 & V53C-3129