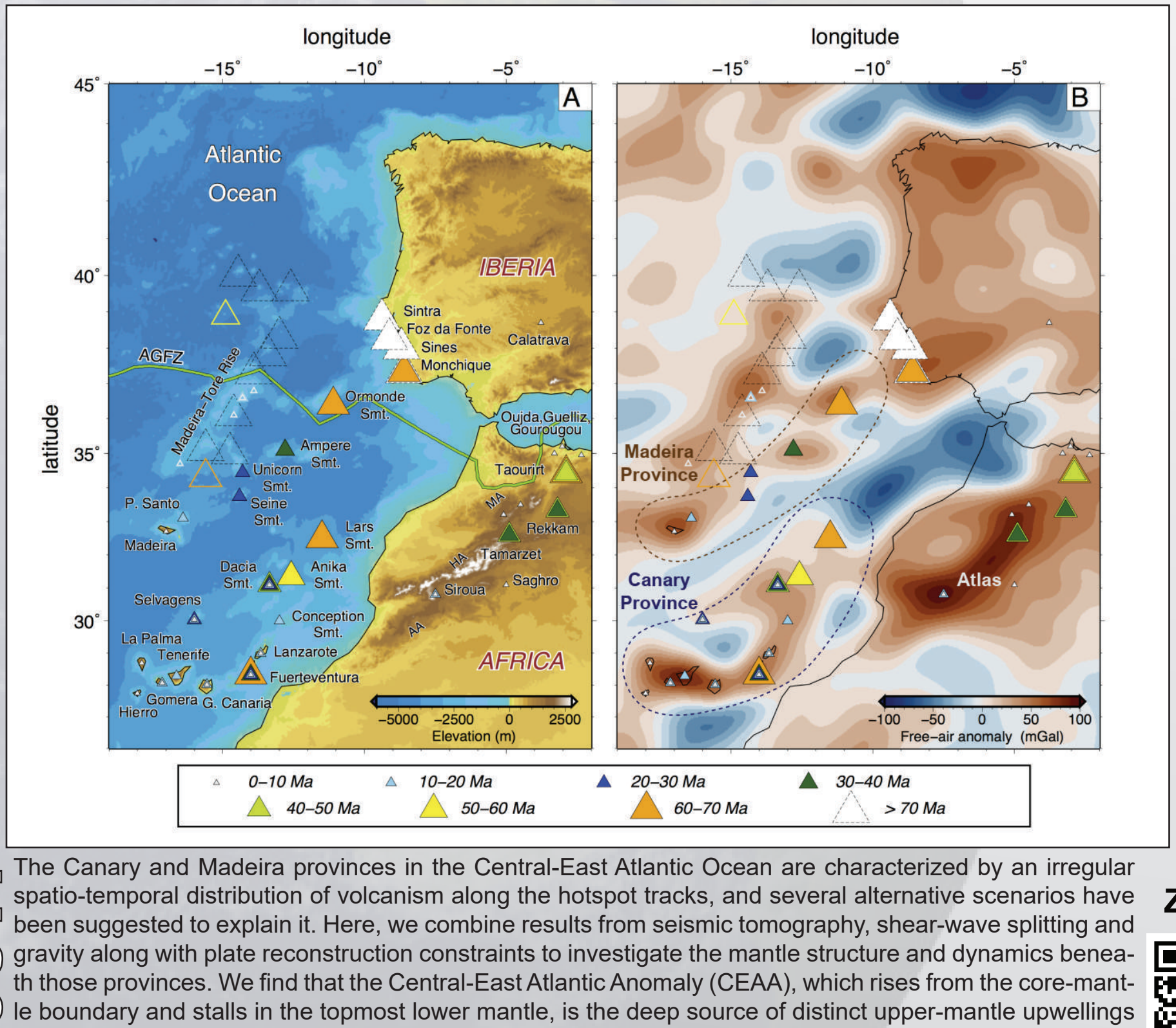
# SOLID EARTH SEMINARS

## THE CENTRAL-EAST ATLANTIC ANOMALY: ITS ROLE IN THE GENESIS OF THE CANARY AND MADEIRA VOLCANIC PROVINCES




**WHAT'S THIS ABOUT?**

The Canary and Madeira provinces in the Central-East Atlantic Ocean are characterized by an irregular spatio-temporal distribution of volcanism along the hotspot tracks, and several alternative scenarios have been suggested to explain it. Here, we combine results from seismic tomography, shear-wave splitting and gravity along with plate reconstruction constraints to investigate the mantle structure and dynamics beneath those provinces. We find that the Central-East Atlantic Anomaly (CEAA), which rises from the core-mantle boundary and stalls in the topmost lower mantle, is the deep source of distinct upper-mantle upwellings beneath the region. The upwellings detach intermittently from the top of the CEAA and appear to be at different evolutionary stages. We argue that the accumulation of plume material in the topmost lower mantle can play a key role in governing the first-order spatio-temporal irregularities in the distribution of hotspot volcanism.

**ZOOM**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**October 28**

**Thursday: 13:00**

**PASS: 2021_RG234**

https://videoconf-colibri.zoom.us/j/89018419156


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