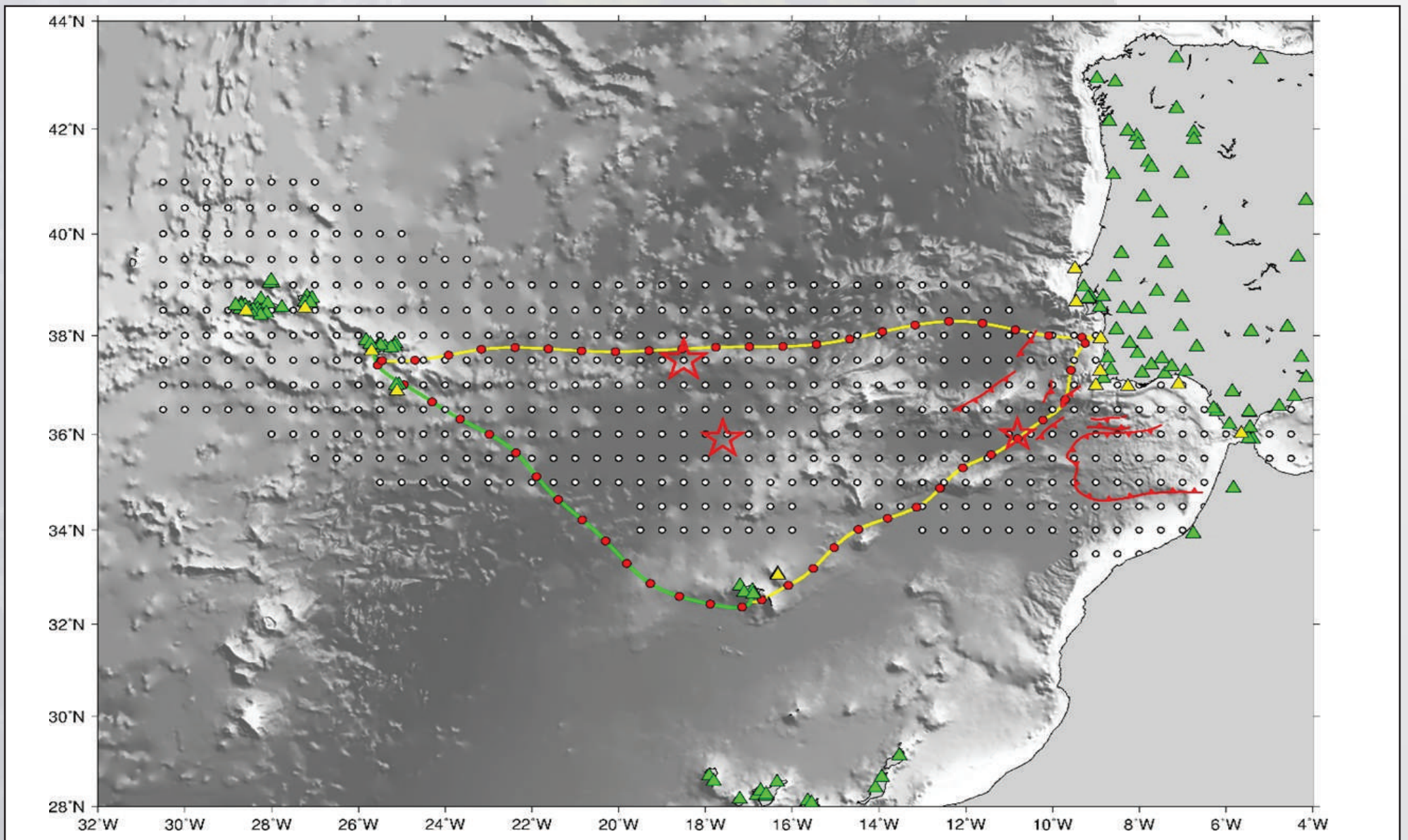


# SOLID EARTH SEMINARS

## USING SUBMARINE CABLES FOR EARTHQUAKE, TSUNAMI AND ENVIRONMENT MONITORING



Portugal mainland and the Azores archipelago are subject to destructive tsunamis and offshore earthquakes. The current network of seismic stations and tide gauges received at IPMA, based on land, have strong limitations in azimuthal coverage for many earthquake prone offshore areas and it does not provide timely tsunami alerts for the coast that is hit first by the tsunamis. New developments in optical fibre cable technology allows the use of existing and new submarine telecommunication cables to provide seismic and sea-level information that can be integrated in the monitoring networks. In this work we explore the opportunities provide by three different technologies: i) DAS, Distributed Acoustic Sensing; ii) PEM, Photonics for Earthquake Monitoring; iii) SMART, Science Monitoring and Reliable Telecommunications. This presentation will show the gains that the cable systems allow for tsunami early warning (SMART), earthquake monitoring and Earthquake Early Warning (all 3).

**ZOOM**



**WHAT'S THIS  
ABOUT?**

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Wednesday: 13:00**

**PASS: 2021\_RG234**

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