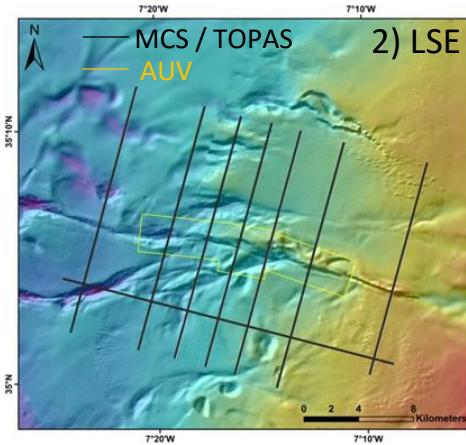
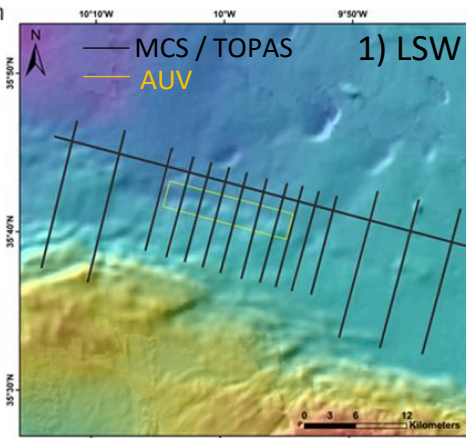
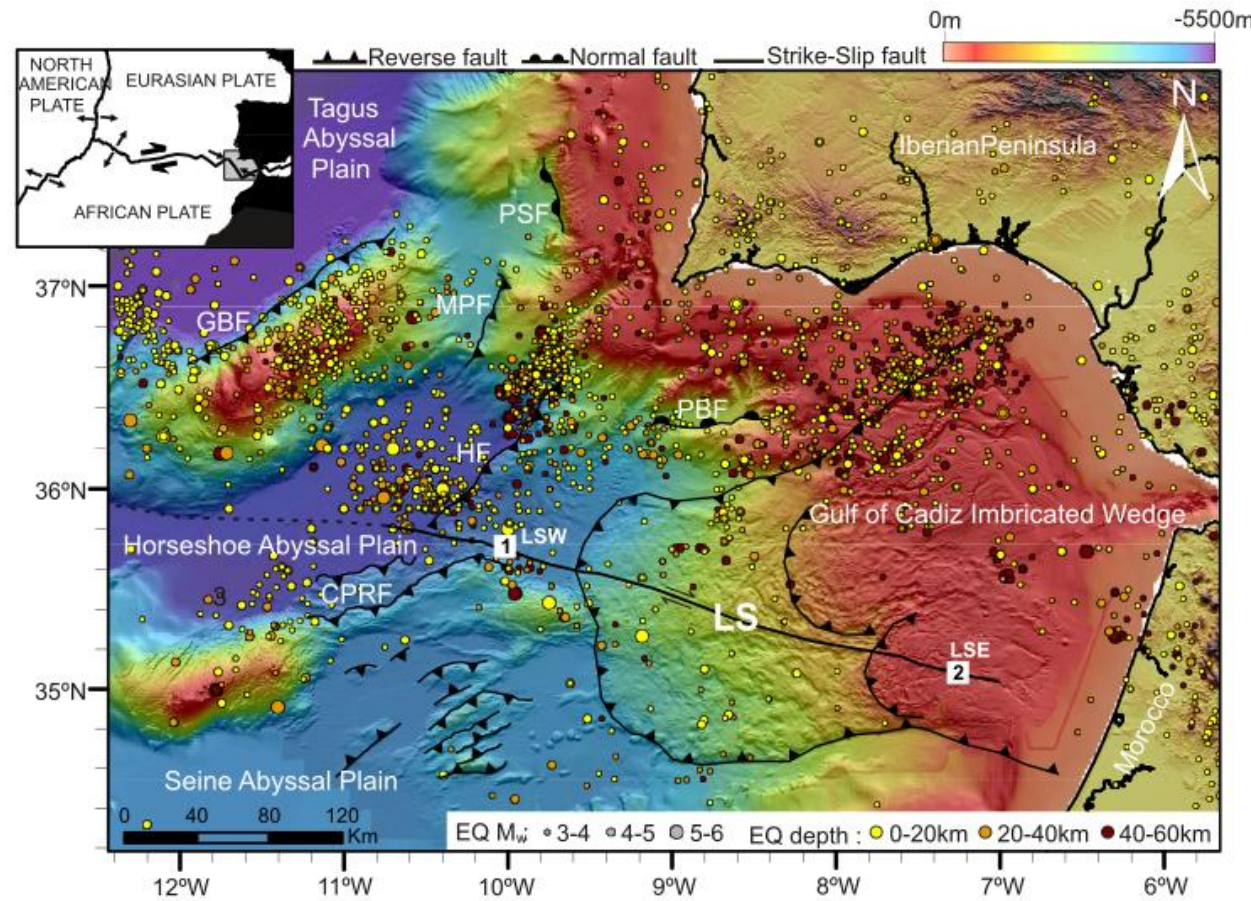


The Lineament South strike slip fault: A multiscale view and new insights about its seismogenic and tsunamigenic potential

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Data:

- a) Sub-bottom profiler (TOPAS)
- b) AUV "Abyss" (micro-bathymetry, 2m res.)
 - LSW → 15,5 km²
 - LSE → 18,5 km²
- a) High-resolution MCS profiles
 - LSW → 16 MCS profiles (263 km length)
 - LSE → 8 MCS profiles (153 km length)

Methodology:

- 1) Analysis of AUV images; 2) interpretation of MCS and TOPAS 3) mapping the trace of the faults; 4) generate a model of the subsurface of the fault; 5) defining the specific attributes for the fault (max. Mw and slip); 6) running the tsunami simulation using the Tsunami-HySEA software.

Results: The deformation associated to LS spans 2-3 km at the seafloor across strike, cutting the seismostratigraphic sequences including the Quaternary unit up to the seafloor. LS can generate a earthquake of $M_w = 7.9$, and tsunami that affects SW of Iberian peninsula with wave higher than 1 meter .