

EGU21-12712

<https://doi.org/10.5194/egusphere-egu21-12712>

EGU General Assembly 2021

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## Morphological rejuvenation on tectonic seamounts: insights from the Gorringe Bank, SW Iberian Margin

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Seamounts are spectacular bathymetric features common within volcanic and tectonically active continental margins. During their lifecycles, they evolve through stages of construction and destruction. Seamount chains on the Southwest Iberian Margin are prone to instability and collapse due to regionally complex tectonism with moderate to high seismicity. In this work we investigate collapse episodes during the lifecycle of the tectonic Gorringe Bank (GB), the largest submarine seamount offshore European margins, based on recurrence patterns of MTDs on the active thrust flank. Eight MTDs with relevant expression on the seismic data were analysed, four of estimated Miocene age and four on a Pliocene-Quaternary interval. Miocene MTDs are overall larger and correlate with the main uplift stages of the GB structure. Their distribution and relative timing suggest that failure-triggering earthquakes were common along the whole length of the GB. Pliocene to Quaternary MTDs tend to cluster along the northern half of the GB flank and are generally smaller. Based on our observations, we propose that the lifecycle of tectonic seamounts is marked by morphological rejuvenation episodes driven by tectonic activity between major collapse events or cycles. Tectonic-driven rejuvenation is thus key to hinder or obliterate evidence of past high-magnitude destructive events on tectonic seamount morphology.