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Structural reconstruction and Quaternary evolution of the buried thrust in the central Adriatic Sea (Italy).

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Whenever sedimentation exceeds the tectonic rate, the detection and investigation of active faults become challenging, especially when the investigated area is offshore. The coastal area of the central Adriatic is characterized by the presence of Plio-Pleistocene thrusts, which strongly controlled the evolution of the Apennines foredeep. Apart from the significant exception of the Conero promontory, these thrusts are all blind and have no significant signature in the bathymetry. Nonetheless, the coastal and offshore central Adriatic has experienced some moderate-magnitude seismic sequences related to the frontal thrusts on either side, belonging to the Apennines and the Dinarides chains.

In the last years, multiple studies conducted along the Apennine orogeny assessed the Plio-Pleistocene slip rates using different approaches and methodologies. Fault plane dimensions and attitude are key parameters for seismotectonic information fed into seismic and tsunami hazard analyses. In this work, we present the interpretation of two regional seismic reflection profiles across the central Adriatic, calibrated with the available well-logs, which show the evolution of the thrust system in space and time and their influence on the development of the Apennines foredeep and help to put some constraints to understand the most recent tectonic history of the region.