Evidences of pre-Zanclean marine reflooding of the Mediterranean Basin

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The base of the Trubi Formation in southern Italy -formally defined as the Zanclean Global Boundary Stratotype Section and Point (GSSP) at 5.33 Ma- has been traditionally considered as marking the re-establishment of normal marine conditions in the Mediterranean basin after the Messinity Salinity Crisis (Hilgen & Langereis, 1993). A coastal sedimentary prism consistently underlying the Trubi Formation along the southeastern coast of Calabria is composed of one to three progradational parasequences including nearshore, beach, and fluvial sedimentary facies, thus indicating that a relatively high baselevel existed before deposition of the Trubi Formation (Cavazza & DeCelles, 1998). Integration of calcareous nannoplankton and foraminifera, dinoflagellate cysts, and pollen grains analyses shows that such a sedimentary prism is full marine and has a latest Messinian age (Popescu *et al.*, 2021). This points to a marine reflooding of the Mediterranean basin before the beginning of the Zanclean as supported in many places around the Mediterranean Basin (Morocco, Alboran Sea, Southeastern Spain, Apennine foredeep, Dardanelles Strait, etc.: Cornée *et al.*, 2006 ; Bache *et al.*, 2012 ; Lancis *et al.*, 2015 ; Karakitsios et al., 2017). The age of the reflooding has been proposed at 5.46 Ma by Bache *et al.* (2012). The coastal sedimentary prism evidenced in Calabria is thus correlated with the Arenazzolo Formation in Sicily (Popescu *et al.*, 2021). These data contribute to specify the status of the Sicilian Caltanissetta Basin as a peripheral basin, probably somewhat deeper that the other peripheral basins, where evaporites (including the halite and K-Mg salts) belong to the 1st step (marginal) of the crisis (5.97-5.60 Ma), as also supported by several data in the region (Bertini *et al.*, 1998; El Euch-El Koundi *et al.*, 2009).

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