



A new U-Pb age constraint on the Upper Triassic duration from southern Italy

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A stratigraphic section yielding conodonts and palynomorphs and containing a volcanic ash bed is presented. The section was measured in a pelagic, mainly carbonate succession belonging to the Calcari con Selce Fm. (Scandone, 1967, Boll. Soc. Nat. Napoli, 76:1-175) in the Lagonegro basin, southern Italy. A U-Pb age for the ash bed was determined from ID-TIMS analysis of eight zircon grains. We correlate the ash bed with other Tethyan sections through biostratigraphy and, indirectly, with the Newark basin through magnetostratigraphy. We demonstrate a substantial shortening of the Lower and Middle Triassic and a lengthening of the Norian stage to ca. 20 Myr, in general agreement with the "long Norian" option of Muttoni et al. (2004, GSA Bull., 116:1043-1058). This age is also a test for the Newark Astronomical Polarity Time Scale; if correlated with the Newark successions, our results show a general agreement with a Milankovitch forcing over sedimentation of the Newark playa-lake cycles.