Wednesday PO Session

CC03 : WEpm38 : G2
Is High Obliquity a Possible Mechanism to Explain Tropical Glaciation at Neoproterozoic?
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The display a strong orbital signal that shows vari- ation at all major Milankovich frequencies. We use the eccentricity driven amplitude modulation of precession to put our record onto a tropical paleo red background, assuming that the 400 kyr eccentricity cycle has been stable at that time (Laskar, 1999). The exact nature of the orbital signal might be subject to revision pending further calculations, but the consistent relationship between the different orbital frequencies present in the data suggests new ages for Magnetican C16, C17, and C18 that will refine the magneto-stratigraphic timescale created by Cande and Kent (1995). Our astronomical calibration suggests that the rela- tive durations of the “Selli Event” in theربية sections has not changed significantly, although the absolute ages might be ~200 ky younger than on the Carden Kent timescale. Our study should allow a better time control for high-resolution studies over the late Eocene time interval.

CC03 : WEpm39 : PO
Astronomical Forcing of Late Eocene Sediments: Using XRF Data from ODP Leg 171B Site 1052
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Recently the astronomically calibrated geochronology timescale has been extended to the base of the Oligocene (Shackleton et al., 1999). Here we present a new relative age calibration of sediments of late-Middle Eocene (39.5 Ma) to Late Eocene (35 Ma) that were obtained from deep-marine ODP Leg 171B Site 1052. We analyse elemental ratios of Fe and Ca as a proxy for calcium carbonate content, obtained by using an X-ray Fluorescent Scannner (XRF). Our data match very well with other proxy data (magnetic susceptibility and colour reflectance) but we were not able to identify a higher signal-to-noise ratio and a more consistent hole-to-hole agreement. The data obtained hence allow the construction of a more accu- rate composite depth scale.

The extension of grounded ice in southern Turkey is demonstrated by a stratified pavement upon subglacial sediments that contain in situ striated pebbles bearing the same orientation. In Adana province, the latest Ordovician succession suggests a prograding submarine fan in contact with ice (glacial maxima), followed by dropstone-bearing distal glaciomarine shelf deposits (deflagration). Tribolites or pebble Abbey age are present in the middle Eocene succession, and overlying black shales are dated as Llandovery by means of graphitophiles. These relationships suggest that, in southern Turkey, only a minor (if any) sedimentation takes place in the glacial-eustatic sea level lowstand.

This sequence displays strong affinities with coeval glacial successions in North Africa (Algeria, Morocco), Beria and Sardinia. Global reconstructions generally agree in locating the Southern Turkey, only a minor (if any) sedimentation takes place in the glacial-eustatic sea level lowstand.

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