

## Carbon isotope and ammonite biostratigraphy of the Early Aptian Oceanic Anoxic Event in Tethyan Himalaya of Southern Tibet

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The early Aptian Oceanic Anoxic Event, OAE1a, is well documented in western Tethys, North Atlantic and Pacific areas, but has not yet been reported from the eastern Tethys region. Here, we present carbon isotope data and ammonite biostratigraphy of the Lower Aptian succession in Gucuo area of southern Tibet to substantiate for the first time its occurrence in the eastern Tethys. The studied sediments belong to *D. forbesi* and *D. deshayesi* ammonite zones of the Lower Aptian. The obtained  $\delta^{13}\text{C}_{\text{org}}$  curve could be correlated to the early Aptian carbon isotope records in western Tethys and in Pacific Ocean areas. A distinct negative carbon isotope excursion (CIE) by 2.4‰ in the upper part of the section is correlated to the segment C3 of OAE1a, whereas the subsequent positive excursion up section is referred to the segment C4. The absolute values of carbon isotope ratio in Gucuo area are higher than those known from the western Tethys and equatorial Pacific sections. We suggest that diagenetic alterations and lower temperatures are responsible for these higher absolute values in Gucuo. According to spectral analysis on high resolution magnetic susceptibility data, the best fit mean sedimentation rate of the succession is ~17 cm/kyr. Therefore, the duration of the CIE in the studied section is ~29 kyr, which matches well with the estimations of C3 in other continents (Li et al., 2008).

Li, Y. et al., EPSL, 2008, **271**, 88–100.