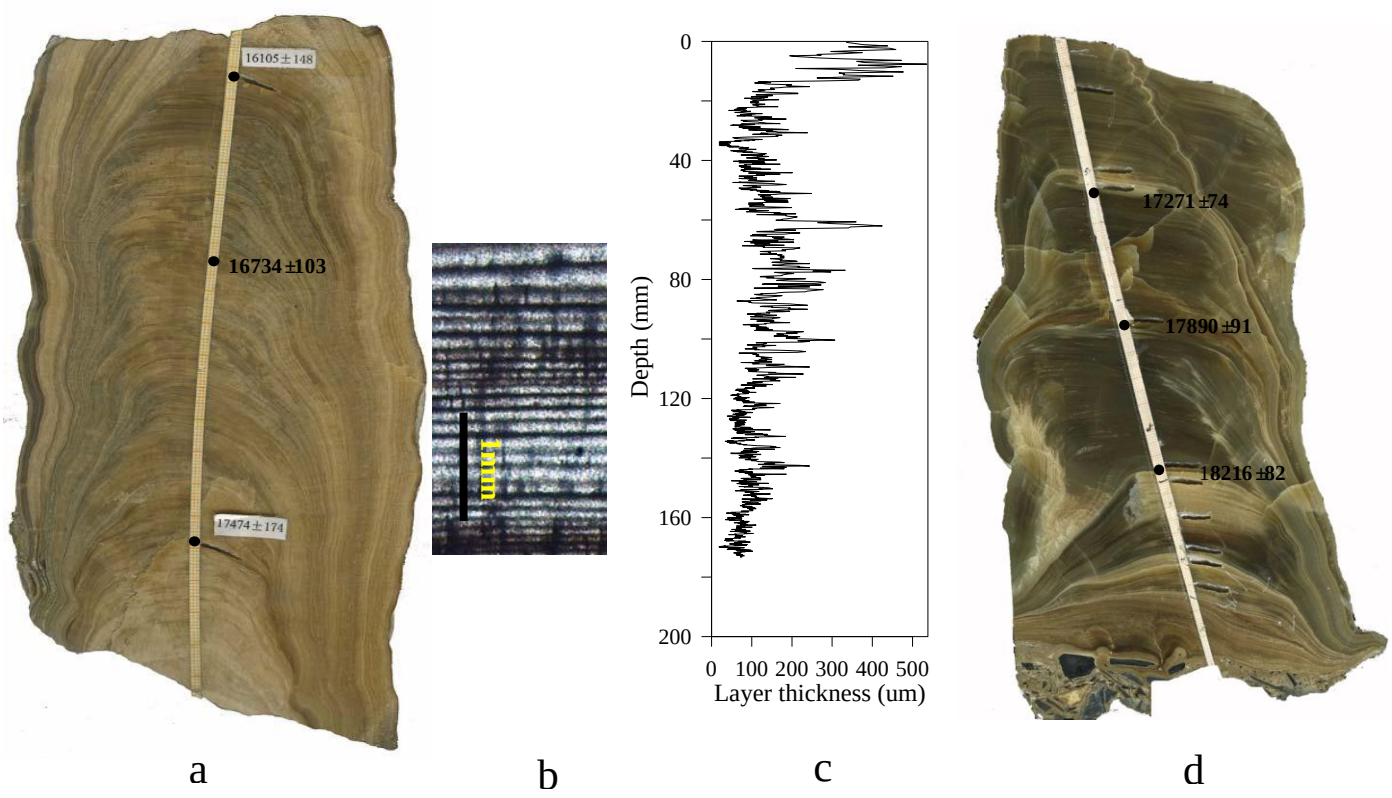
A detailed East Asian monsoon history surrounding the Mystery Interval derived from three Chinese speleothem records

By Zhang et al., 2014



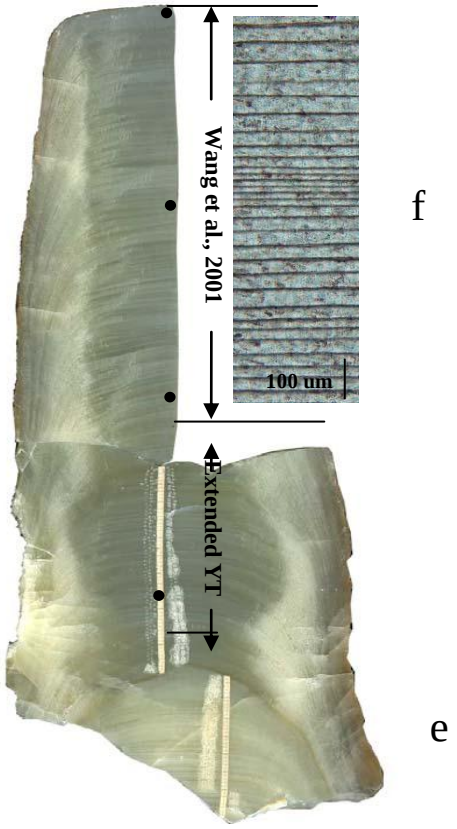


Figure S1. Photographs of stalagmites and their corresponding annual layers. Stalagmite QT20 (a) developed clear bands (b), with layer thickness ranging from 18.3 to 535.2 μm (c). However, sample QT29 (d) in the same cave does not show countable layers. Well-formed annual bands were also preserved in stalagmite YT (e and f). The solid black dots represent the positions of sub-samples for dating and the subsequent results are listed beside the dot.

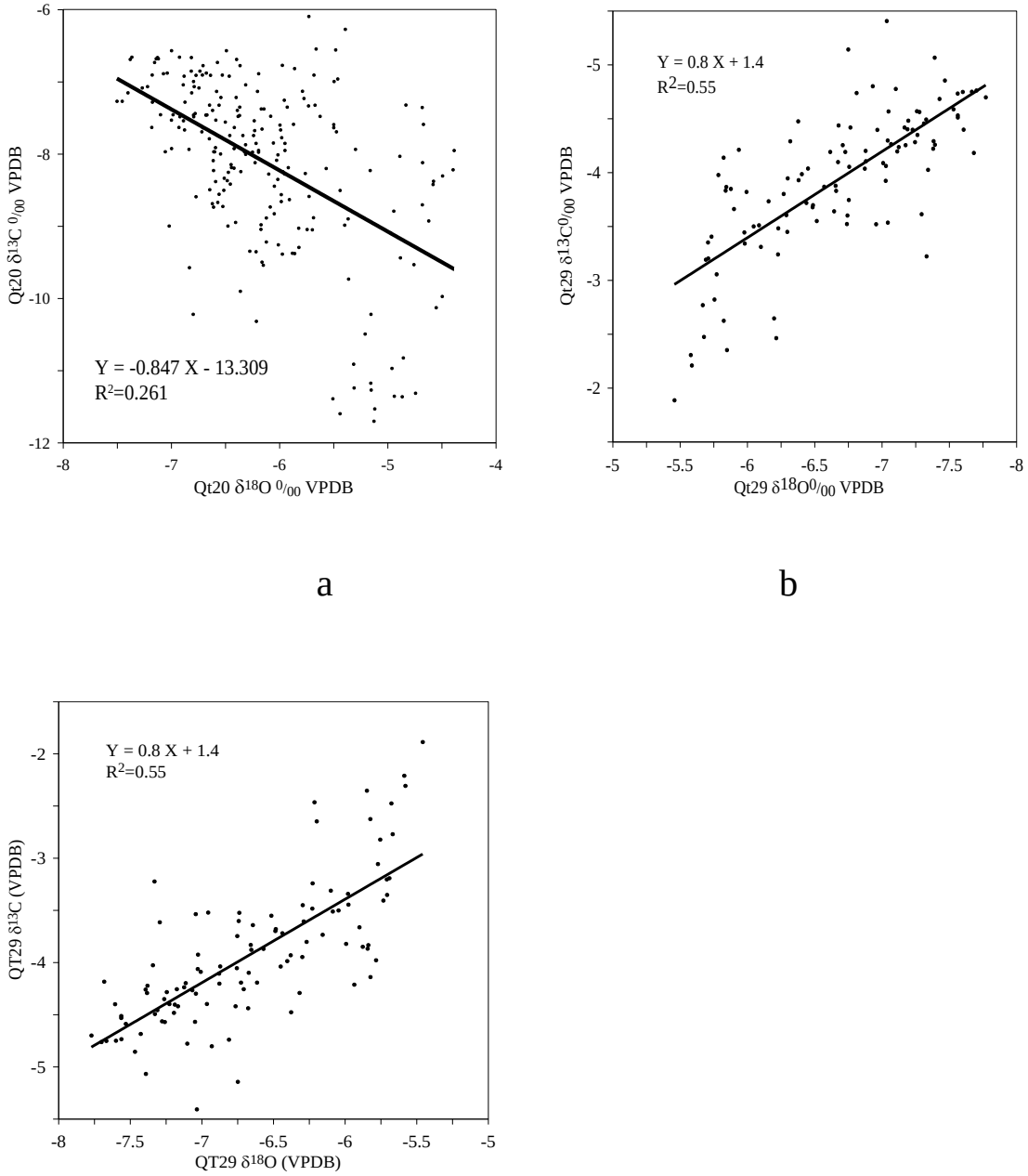


Figure S2. Correlation analysis between $\delta^{18}O$ and $\delta^{13}C$ for the 'Hendy Test'. The low correlations (R^2_{QT20}=0.26, R^2_{YT}=0.196) for samples YT (a) and QT20 (b) indicate that carbon and oxygen are not highly correlated as would be expected with kinetic fractionation, suggesting that the two stalagmites most likely grew under isotopic equilibrium conditions. The relatively high correlation (R^2_{QT29}=0.55) for QT29 (c), failing the so-called 'Hendy Test', would represent isotopic disequilibrium conditions. Nevertheless, the variations of the oxygen isotope may remain related to climatic changes (as stated in the context).

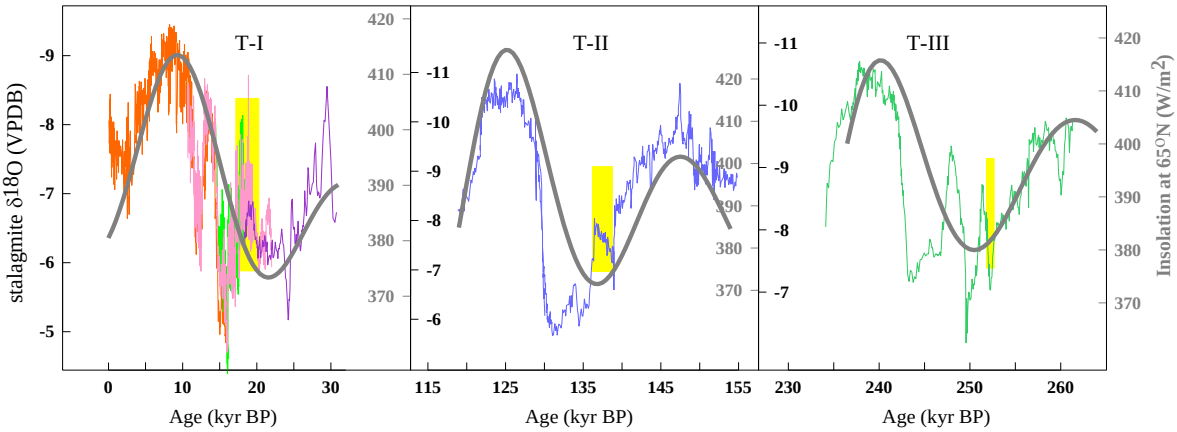


Figure S3. Similar sequence of events across the last three terminations. An analogous strong monsoon event, immediately preceding the MI during the termination Ⅰ (T-Ⅰ), reappeared in the T-Ⅱ and T-Ⅲ (Cheng et al., 2009). 21 July insolation at 65 ℕ (Berger, 1978) is in gray and yellow bands denote the strong events.