Correction to Burns *et al., Science* **301**.

The chronology for the climate time series presented in Burns et al. (*1*) has been found to be ~2.3 ky too old, due primarily to a systematic standardization error in measurement of the thorium isotopes. A new age model for stalagmite M1-2 based on 19 new Th/U analyses measured by thermal ionization mass spectrometry (TIMS) at the Heidelberg Academy of Sciences and 6 new measurements by induction-coupled plasma mass spectrometry at the University of Bern is shown in Figure S1. A simple linear fit through the data was used to re-calculate ages for individual data points in the stable oxygen isotope time series in Burns et al (*1*). The slope of this line (7.59 y/mm) is nearly identical to the slope of a linear fit through the original age model (7.60 y/mm). Thus, the pattern of climate change observed in the oxygen isotopes does not change with the new age model. The climate record, however, is moved forward in time by 2,290 y. On the revised time scale the ages of climate events in the record, specifically the Dansgaard/Oeschger cycles, match well with two other independently-dated records (Fig. S2): Hulu Cave stalagmites (*2)* and the most recent chronology for the GRIP Greenland ice core (*3)*.

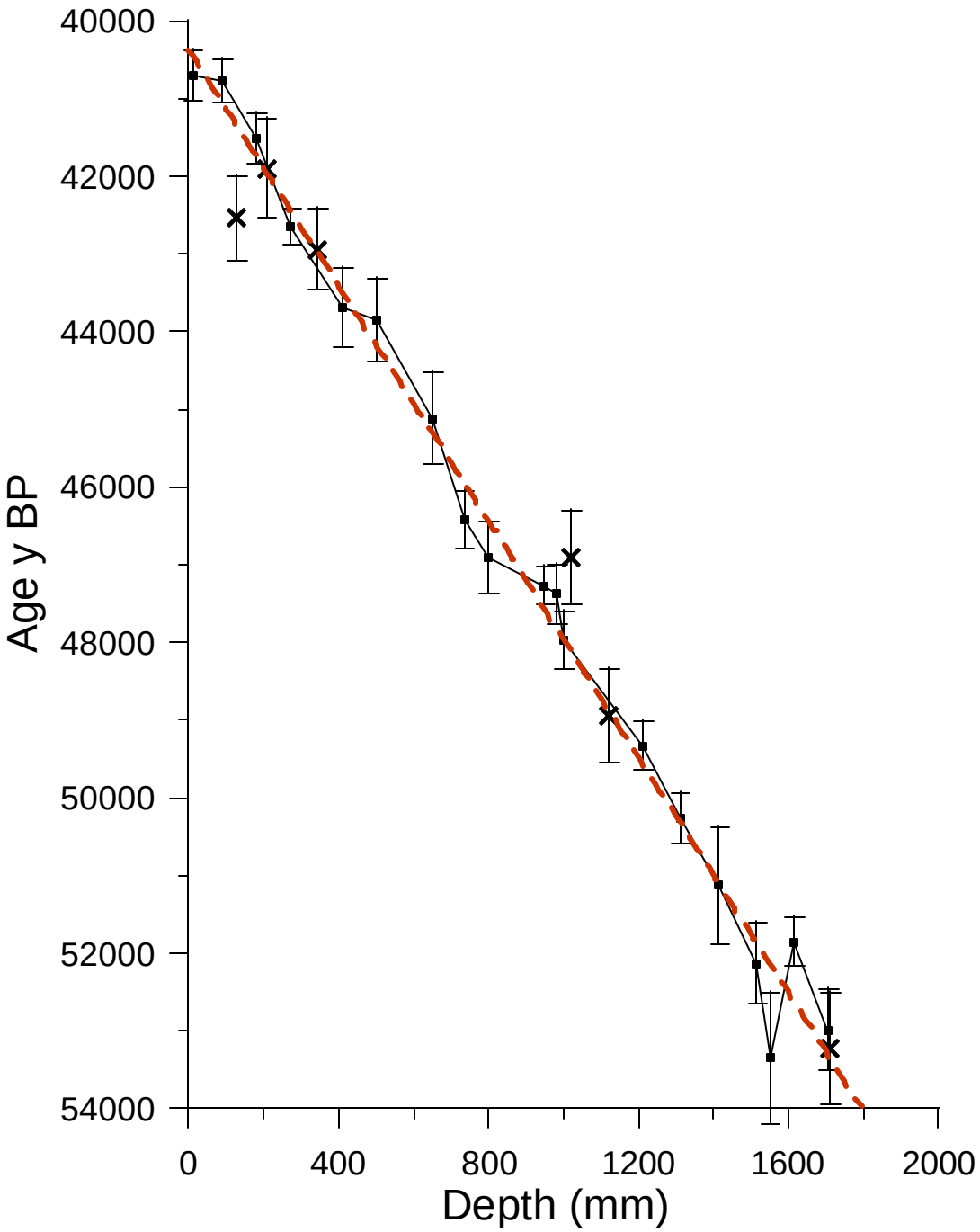
References:

1. S. J. Burns *et al., Science* **301**, 1365 (2003).
2. Y. J. Wang *et al., Science* **294**, 2345 (2001).
3. S. J. Johnsen *et al., J. Quat. Sci.* **16**, 299 (2001)

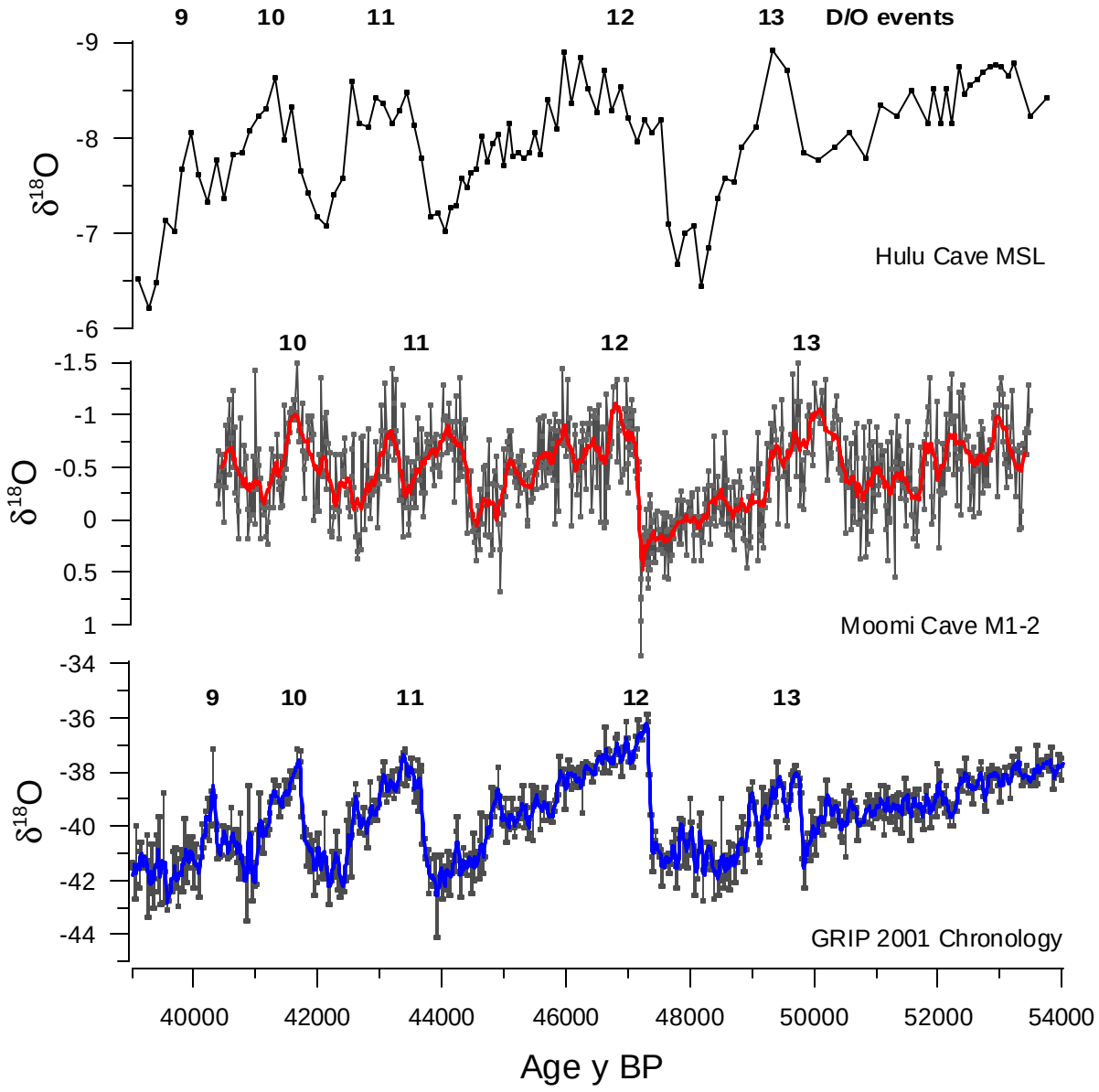
Figure captions:

Figure 1. Age vs depth with errors for stalagmite M1-2. The round symbols are samples measured by Augusto Mangini, Heidelberg Academy of Sciences, by TIMS according to the following protocol. The samples were weighed and dissolved in 7N HNO3. After dissolution, a $^{229}$Th spike and $^{233}$U/$^{236}$U double spike was added for determination of concentration. Isotopic measurements were performed on a Finnigan MAT 262 thermal mass spectrometer equipped with a retarding potential quadrupole system (RPQ). Uranium was determined with a single electron multiplier ($^{233}$U, $^{234}$U, $^{235}$U and $^{236}$U) and one Faraday cup ($^{238}$U). The natural ratio of $^{235}$U/$^{238}$U was used to calibrate the yield of the multiplier. The peak flatness is less than 0.2% (over 150 ppm in mass). The concentration of the $^{233}$U/$^{236}$U double spike was calibrated against the NIST CRM 960 uranium standard material. The $^{234}$U of this standard was measured at –31.8 ± 4.1‰ in good agreement with other workers. The reproducibility of the isotope ratio of $^{234}$U/$^{238}$U during the period of the measurement was at 0.3%. The peak flatness of the RPQ used for determination of $^{230}$Th was less than 0.2% (over 150 ppm in mass). We used a $^{229}$Th spike calibrated against an internal $^{230}$Th/$^{232}$Th standard (HDAKT-1). The reproducibility of the concentration of $^{232}$Th was 0.8%. $^{238}$U and $^{232}$Th blanks were routinely measured and taken into account. The cross symbols were measured at the University of Bern by ICP-MS following the methods in the original paper. Dashed red line is a linear fit through all data.

Figure 2. Comparison of the M1-2 $\delta^{18}$O record with GRIP $\delta^{18}$O from central Greenland (*3*) and the $\delta^{18}$O record of a stalagmite from Hulu Cave in central China (*2*). Each record is on its own timescale. The D/O events are identified in each record.




Correction to Burns et al. Figure 1




Correction to Burns et al. Figure 2