Supplementary information

Southern Hemisphere imprint for Indo-Asian summer monsoons during the last glacial period as revealed by Arabian Sea productivity records.

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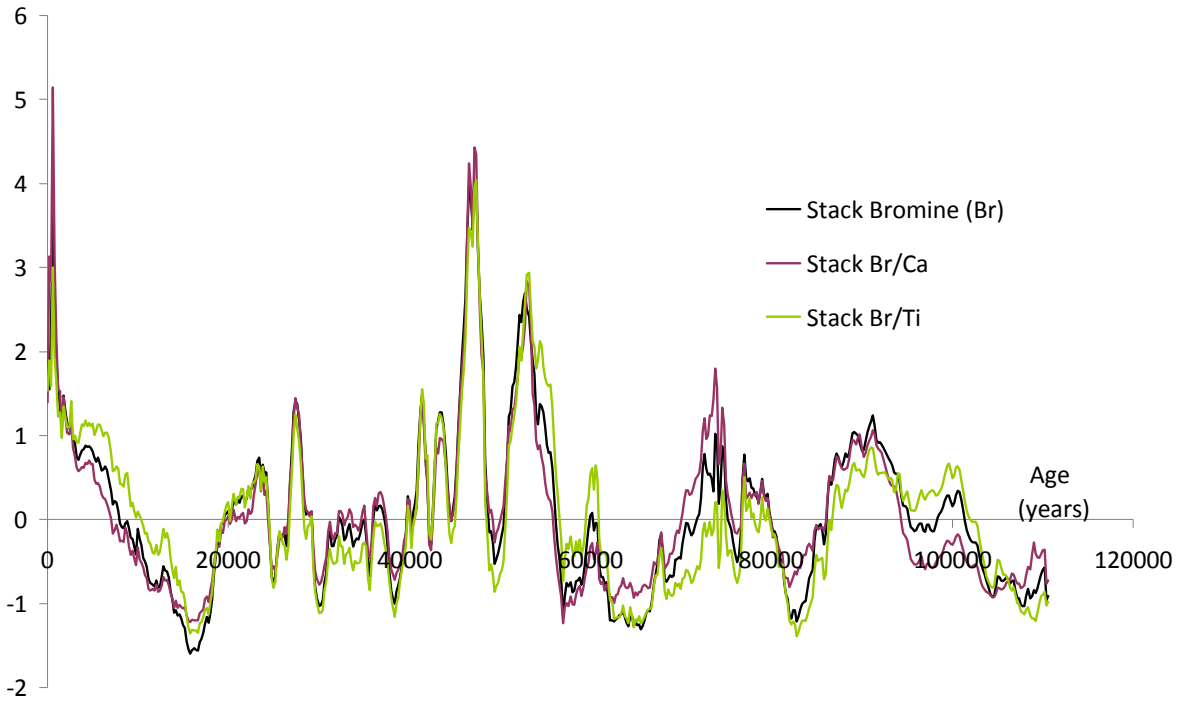

Figure S1: In addition to the bromine stack (Br), two other stacks has been computed following the same procedure describe in the method part but after normalization of the bromine signal by Calcium counts (Ca) and Titanium counts (Ti) obtained with the XRF core scanner. The comparison of the stacks allows the discussion of potential dilution effect for the bromine signal by the input and preservation of biogenic carbonate (documented by Ca counts) or terrestrial material (documented by Ti counts) (Richter, 2006). From this comparison, no significant dilution effect by the input and preservation of biogenic carbonate and terrestrial material can be found. The structures of the signal and monsoon events are conserved, particularly for the interval 16-40 kyr. Some amplitude differences occur between 60 and 110 kyr, but this does not affect the timing of events at the orbital scale discussed in this study.

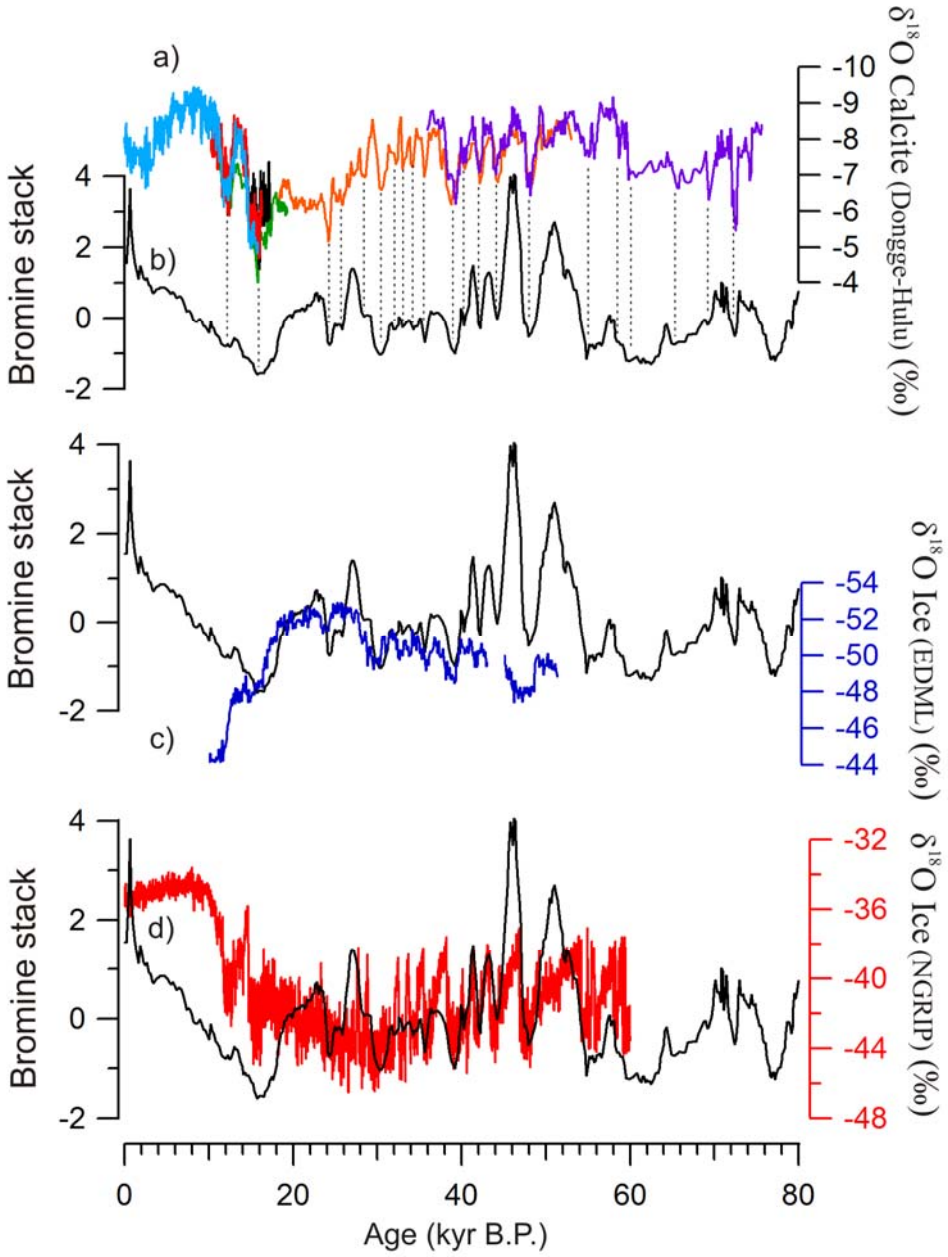

Figure S2a: a-b) Bromine stack tuned to the $\delta^{18}O$ of East-Asian speleothems using Analyseries software (Paillard et al., 1996). Dash lines indicate the control points used to transfer the continental age scale of speleothems records to the marine records (i.e. bromine stack). The first age model and this new age model show very good consistency (Fig. S3b). Divergence occurs only between 50 000 and 80 000 yrs (Fig. S3b). c-d) Comparison between the bromine stack (summer Indian monsoon), Antarctic (EDML) and Greenland (NGRIP) $\delta^{18}O$ice records.

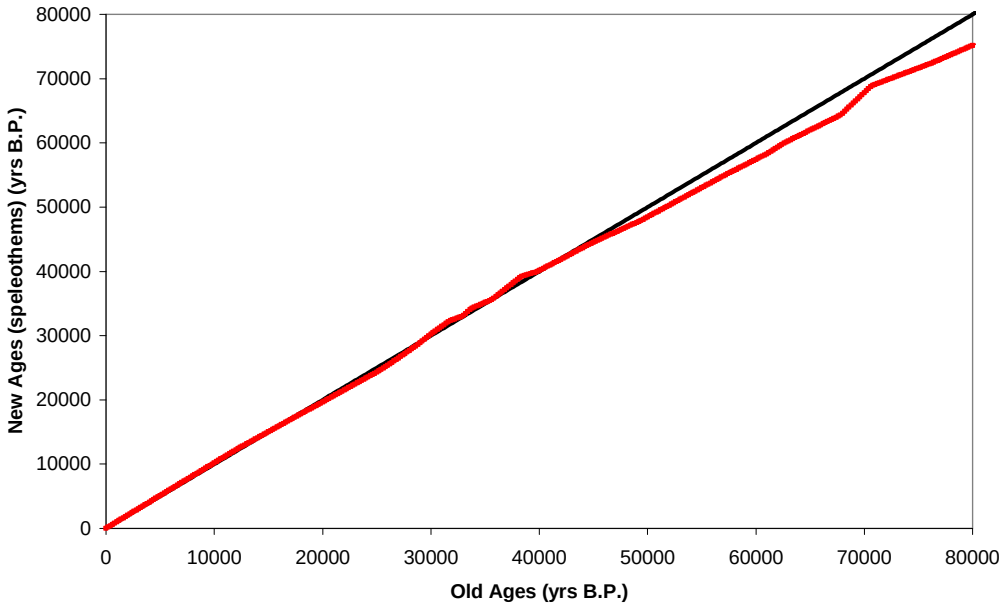

Figure S2b: Comparison between the first age model (^{14}C and GEs) of the bromine stack (old ages) and the new age model based on the correlation with the East Asian speleothems millennial events (new ages). Between 0 and ~50 000 yrs the two age models show and excellent relationship. Significant differences occur between ~50 000 and 80 000 yrs, with younger ages for the new age model, and are probably due to the low amount of control points on the first age model for this time interval (Figs. 2, S1 and S3).

Supplementary References

Richter, T., 2006. The Avaatech XRF Core Scanner: technical description and applications to NE Atlantic sediments, in New Techniques in Sediment Core Analysis. Geol. Soc. 267, 39–50.