Figure S1. Upper: Comparison between Siple Dome CH₄ anomalies plotted with gas age adjusted to GICC05 (red, solid) and previous gas age (red, dashed; Brook et al., 2005). Lower: NGRIP δ¹⁸O anomaly in GICC05 scale. The horizontal error bars denote the age uncertainty of GICC05 chronology (Rasmussen et al., 2006), and the black triangles are age tie points used to adjusting the Siple Dome age scale to GICC05 scale.

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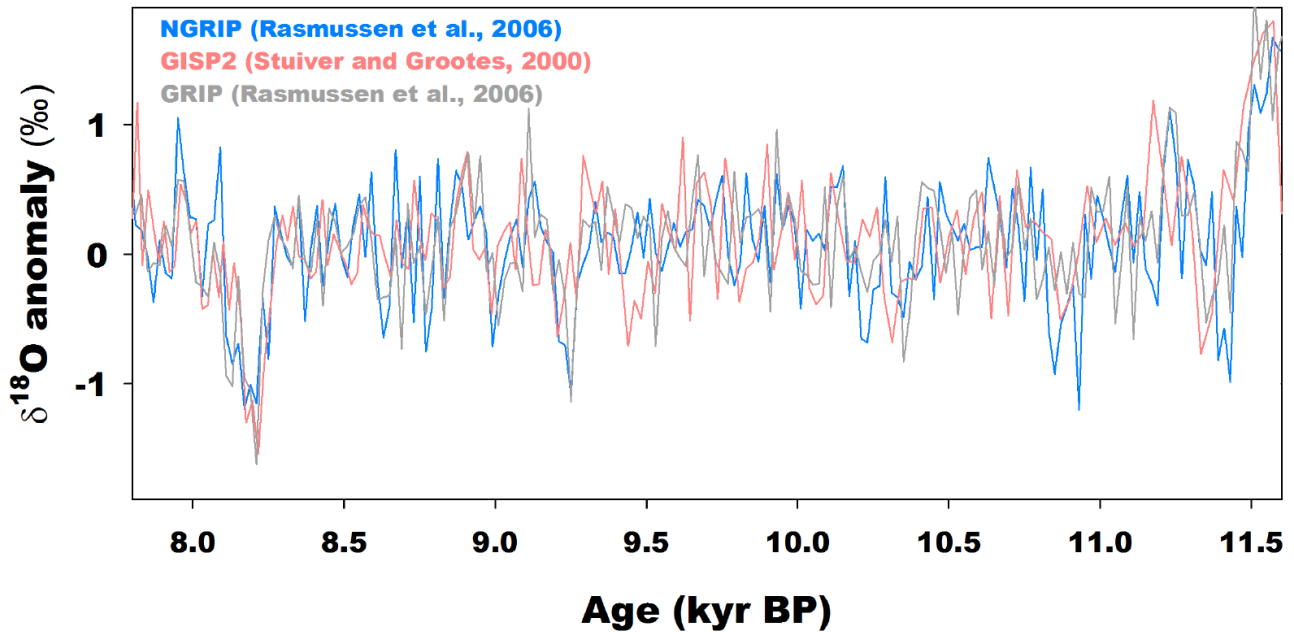
Figure S2. Comparison of Greenland oxygen isotope ratios from NGRIP (blue, Rasmussen et al., 2006), GRIP (grey, Rasmussen et al., 2006) and GISP2 (red, Stuiver and Grootes, 2000). All time series were high-pass filtered with 1/1800-year window. Note that the cooling amplitude at 10.3 ka is smaller than 8.2 and 9.3 ka events in NGRIP records, but this is not clear in GRIP and GISP2 ice cores.

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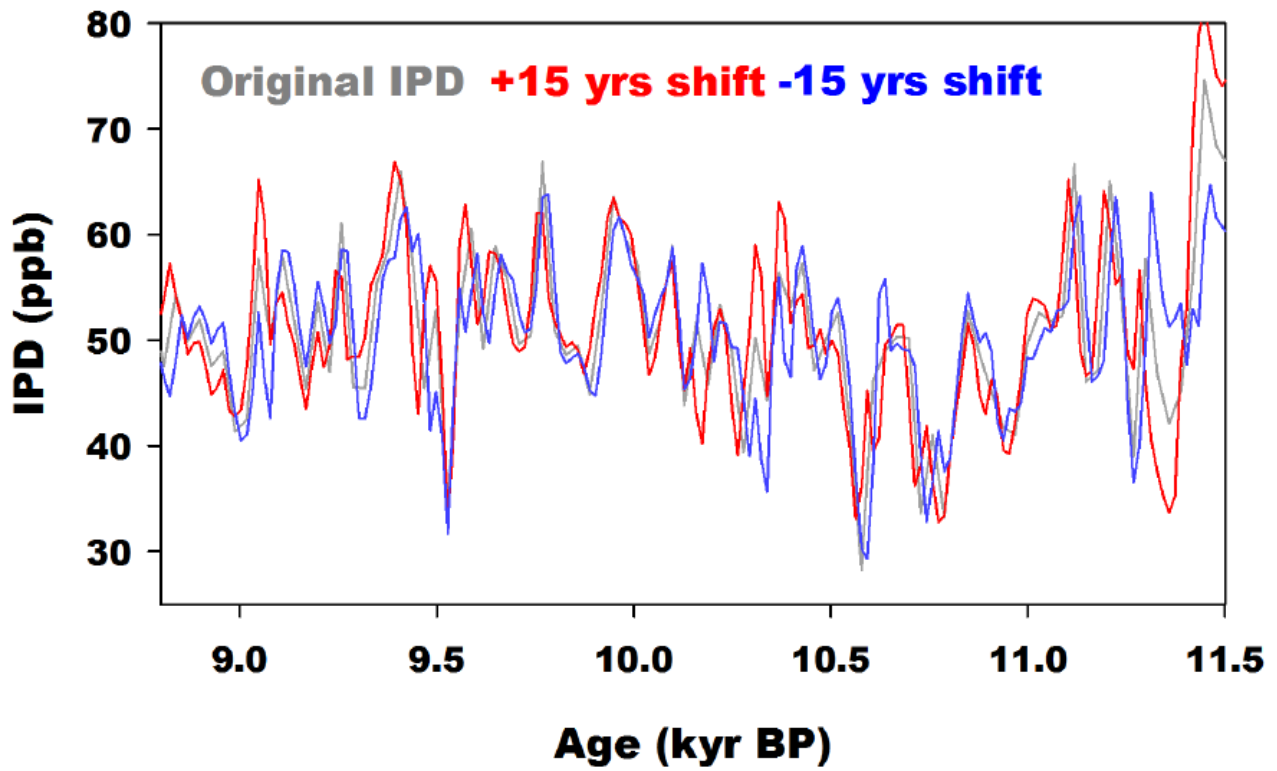
Figure S3. IPD sensitivity test. The IPD calculated by the best match chronology (grey line) is plotted with ±15 years shifted chronology (red and blue, respectively).