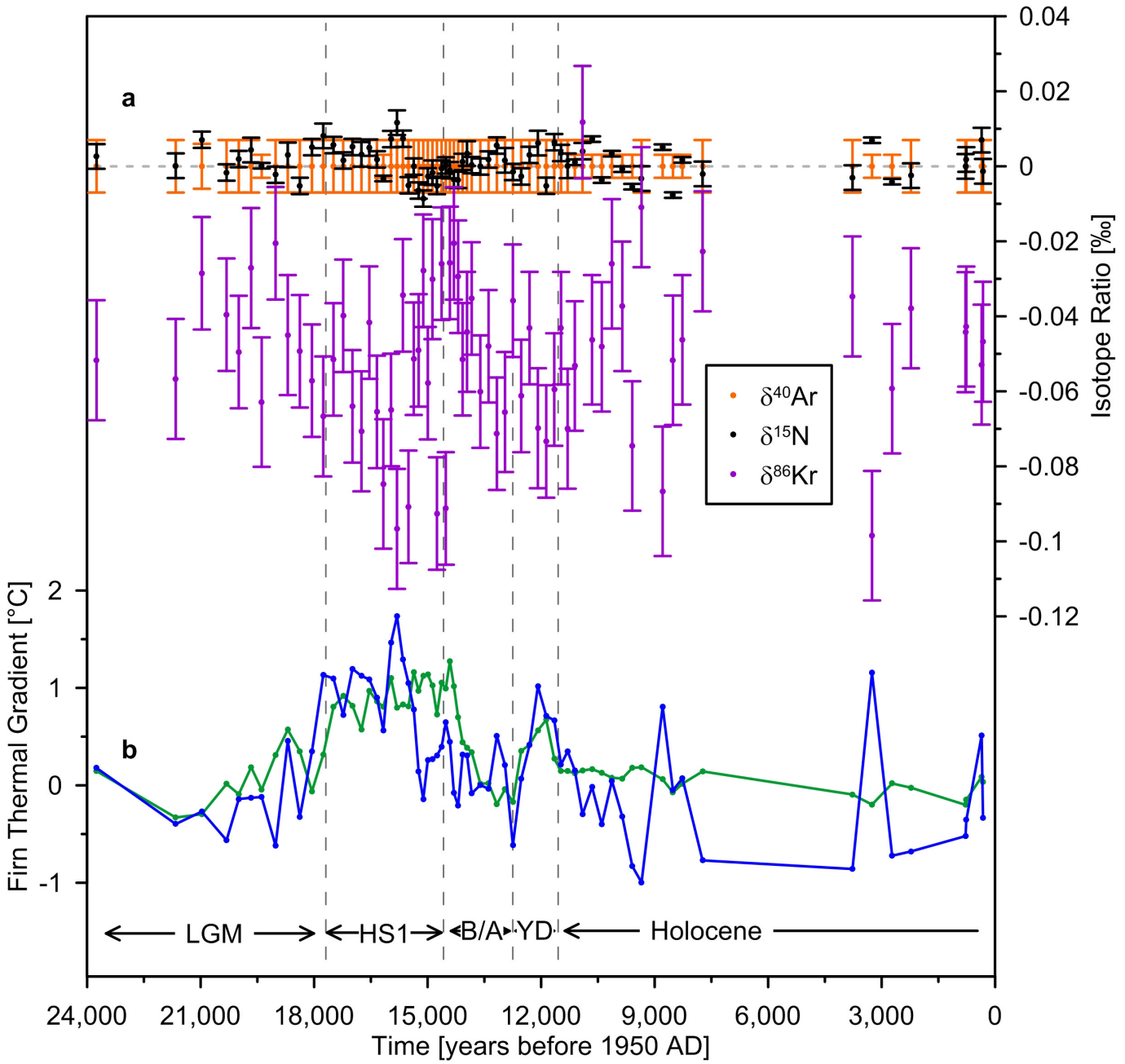

Extended Data Figure 1 | Elements related to the gravitational and thermal correction applied to the ice core data. a, Residual of the isotope data after correction for gravitational enrichment in the firn based on δ^{40}Ar (orange) and modelled firn thermal gradients (**b**, green[36]). In contrast to δ^{15}N (black), δ^{86}Kr (purple) clearly deviates from the zero line by −56 per meg on average, showing that our correction factors for δ^{86}Kr are over-estimated (δ^{40}Ar is zero by definition because we use this data for the correction). Error bars represent the 1σ analytical uncertainty of our method based on repeated measurements of modern air samples[10]. **b**, The two independent WAIS Divide ice core site firn thermal gradient scenarios used in this study. The blue trace represents the scenario derived from our isotope data for δ^{15}N, δ^{40}Ar and δ^{86}Kr, while first we corrected δ^{86}Kr by the offset seen in **a**. The green trace represents the model-based scenario and originates from ref. 36.