Supplementary information: Atmospheric ^{10}Be from Talos Dome (East Antarctic) ice core records geomagnetic dipole intensity from 170 to 270 ka BP

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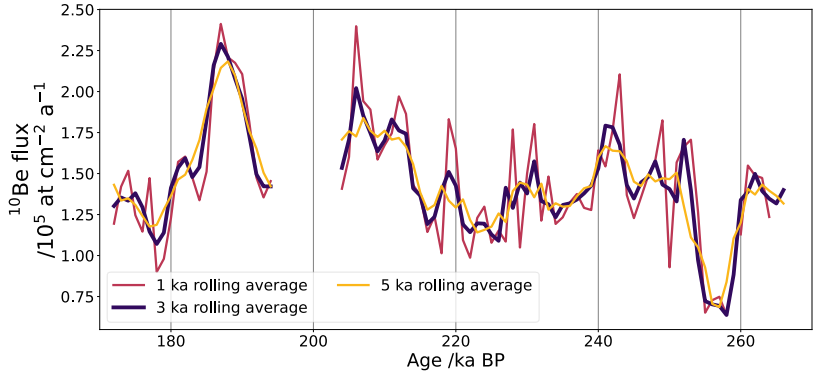
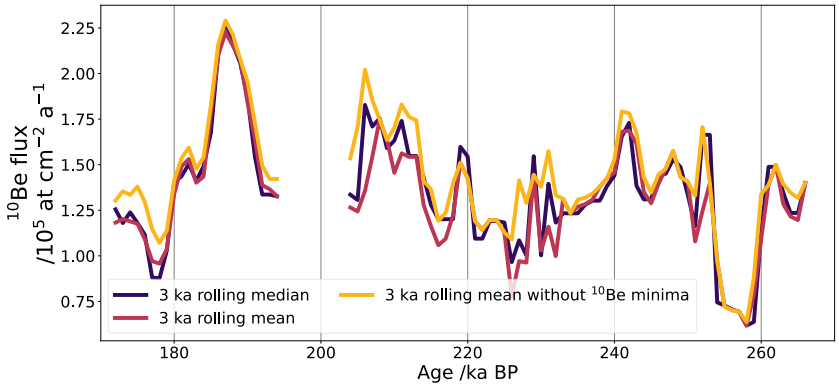
Figure S1: rolling averages



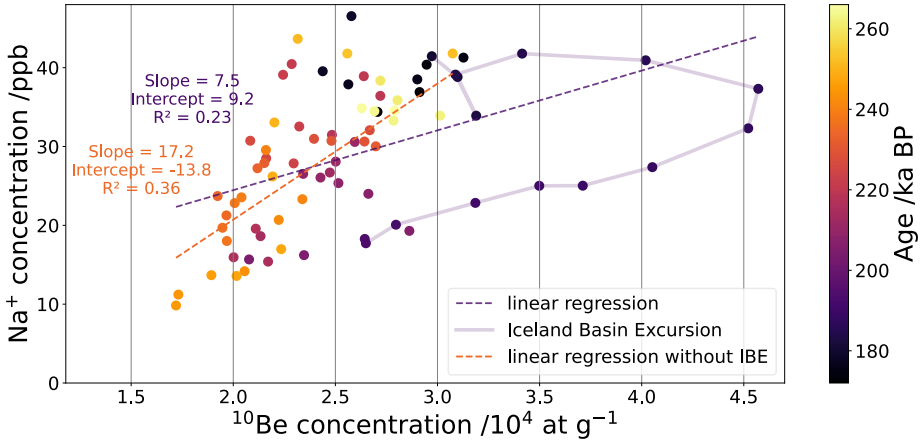
Comparison of three different rolling averages for ^{10}Be flux (/10^5 at cm^{-2} a^{-1}): with 1 ka (red), 3 ka (purple), 5 ka (orange)

Figure S2: median and mean averages



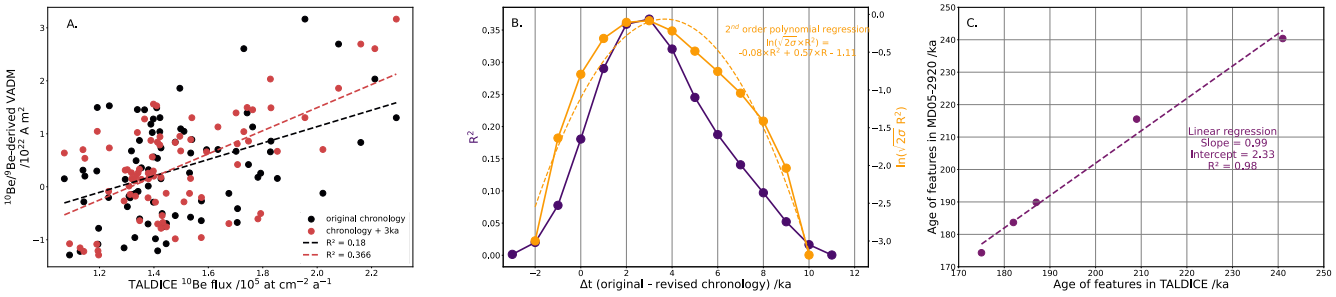
Comparison of three different rolling averages for ^{10}Be flux (/10^5 at cm^{-2} a^{-1}): with 3 ka rolling mean (red), 3 ka rolling median (purple), and a 3 ka rolling mean without the ^{10}Be minima (orange) in order to investigate the influence of minima on the flux variations.

Figure S3: comparison of sodium and ^{10}Be concentrations



We investigate the contribution of climate variations on ^{10}Be concentration comparing Na^+ concentration (/ppb = ng g^{-1}) with ^{10}Be concentration (/10^4 at g^{-1}). Each dot represent one year mean average. The Iceland Basin excursions is easily identifiable (purple dots and curve) which affects the linear regression (dashed lines) between Na^+ and ^{10}Be concentrations.

Figure S4: correlation between MD05-2920 authigenic ^{10}Be/^{9}Be and TALDICE ^{10}Be flux records



A. Comparison of the authigenic ^{10}Be/^{9}Be-based VADM (/10^{22} A m^2) from Simon et al., (2016) and TALDICE ^{10}Be flux (/10^5 at cm^{-2} a^{-1}) in the case of original oceanic chronology (black) or shifted 3 ka earlier (red). B. Cross-correlogram displaying R^2 (from the same variables as in Fig. A, purple) depending on fixed revision on the oceanic chronology (relative Δt = original – revised chronology, /ka). The correlation curve exhibits a Gaussian-like shape, with its maximum corresponding to the best temporal alignment between the two archives. The logarithm of the correlation ($\ln(\sqrt{2\sigma}R^2)$, orange dots) was fitted by a second-order polynomial (dashed orange line) to approximate a Gaussian function and determine the mean of the distribution (μ), representing the optimal offset between the records. C. Age-age relationship fort he same 5 distinguishable features in MD05-2920 (y axis) and TALDICE (x axis) as noted in Figure 5.

Table S1: TALDICE ^{10}Be concentrations over the last century

Top depth /m	Bottom depth /m	Mean depth /m	Top age /a CE	Bottom age /a CE	Mean age /a CE	^{10}Be conc. /at g^{-1}	Uncertainty of ^{10}Be conc. /at g^{-1}
4.5	5.0	4.8	1983.5	1980.7	1982.1	13193	575
5.0	5.5	5.2	1980.7	1977.8	1979.3	22939	714
5.5	6.0	5.7	1977.8	1975.0	1976.4	26440	831
6.0	6.5	6.3	1974.8	1971.6	1973.2	17023	531
6.5	7.0	6.8	1971.6	1968.9	1970.2	18894	670
7.0	7.5	7.3	1968.8	1965.6	1967.2	17675	630
7.5	8.0	7.8	1965.6	1962.9	1964.2	19577	612
8.0	8.5	8.2	1962.8	1959.9	1961.4	13802	453
8.5	9.0	8.7	1959.9	1956.8	1958.3	12714	398
9.0	9.5	9.3	1956.8	1953.7	1955.3	21421	668
9.5	10.0	9.7	1953.7	1950.7	1952.2	21526	672