

Supplementary figures

Evaluating the 11-year solar cycle and short-term¹⁰Be deposition events with novel excess water samples from the EGRIP project

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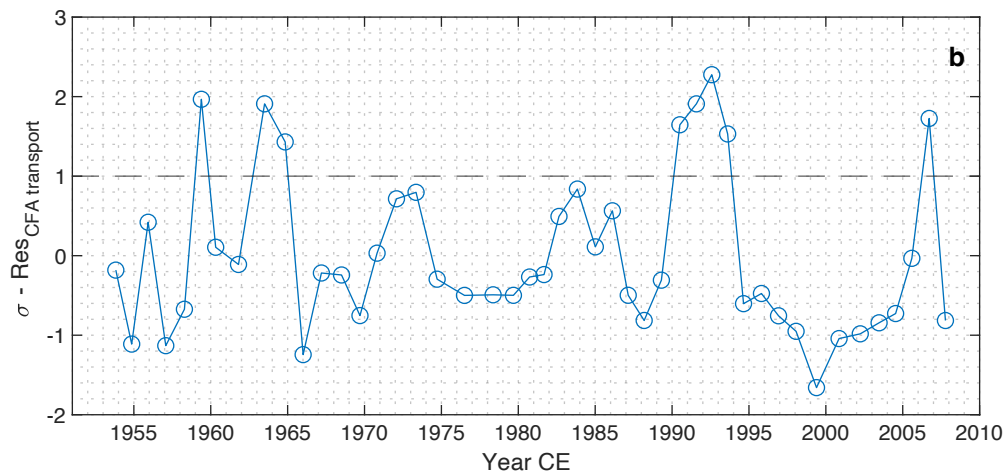
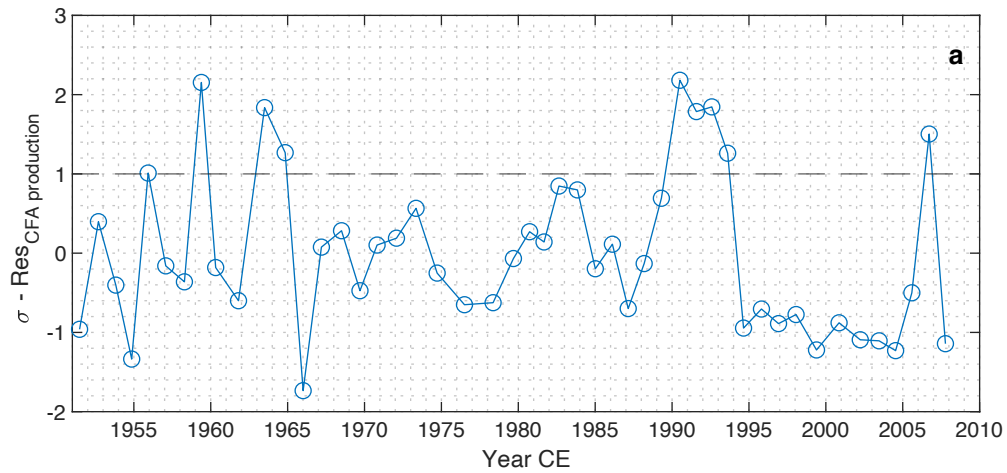
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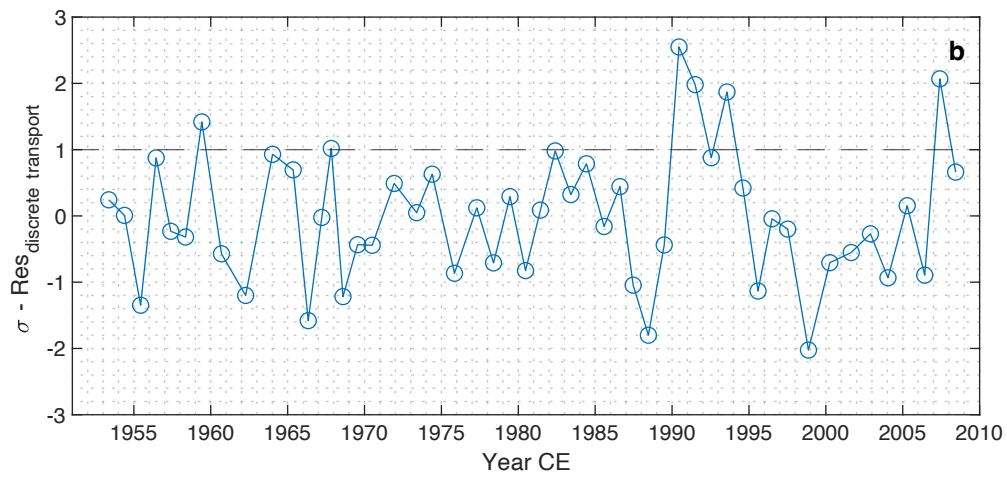
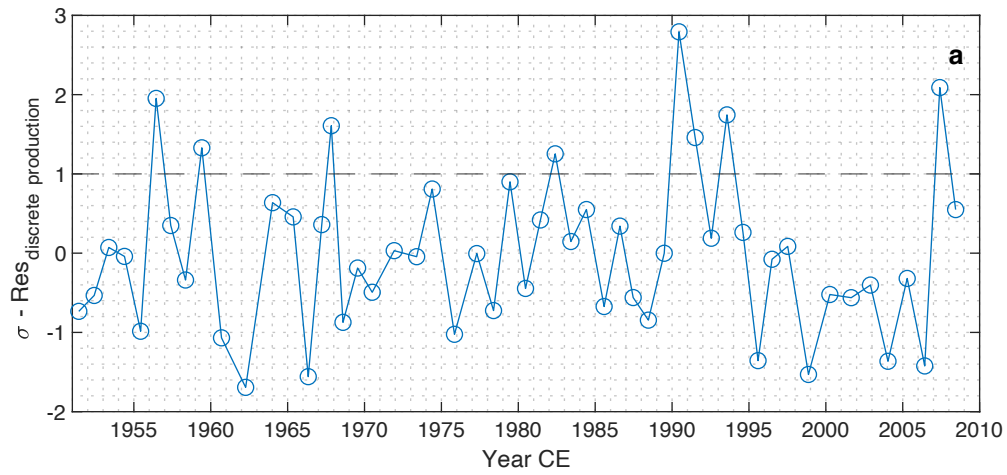
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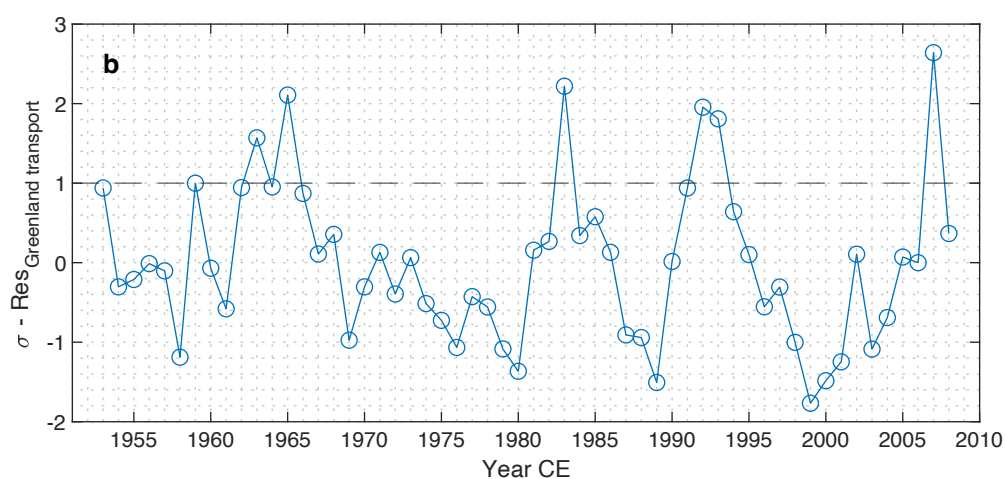
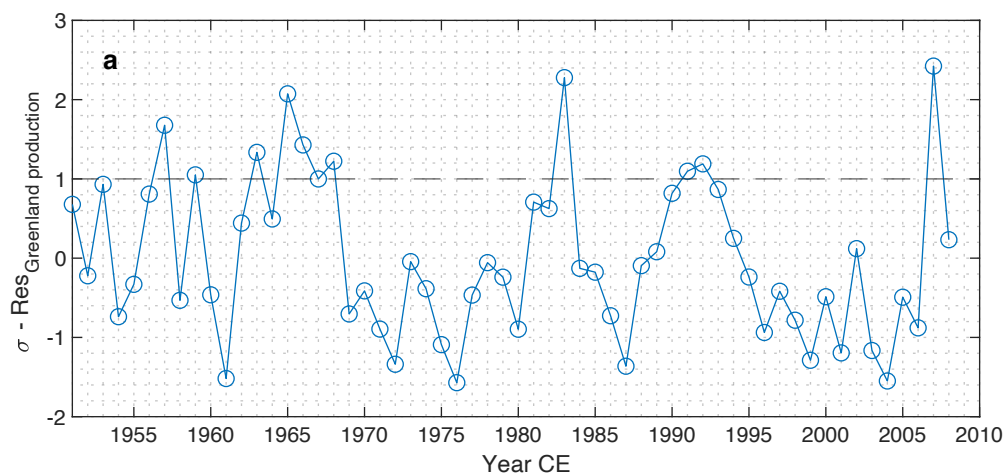
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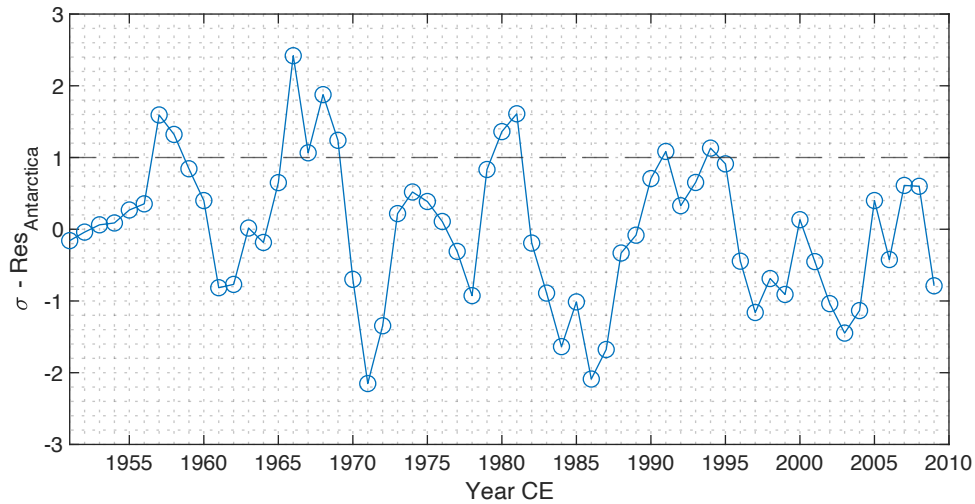
S1. Standard scores for the EGRIP S6 ^{10}Be record from CFA samples. Panel a shows the standardized residuals obtained by subtracting the normalized theoretical ^{10}Be global production rate from the normalized ^{10}Be record since 1951. Panel b shows the same, but for the ^{10}Be fluxes including the transport in the Northern Hemisphere. The theoretical ^{10}Be global production rate record is from (Mekhaldi et al., 2021).



S2. Standard scores for the EGRIP S6 ^{10}Be record from discrete samples. Panel a shows the standardized residuals obtained by subtracting the normalized theoretical ^{10}Be global production rate from the normalized ^{10}Be record since 1951. Panel b shows the same, but for the ^{10}Be fluxes including the transport in the Northern Hemisphere. The theoretical ^{10}Be global production rate record is from (Mekhaldi et al., 2021).



S3. Standard scores for the ^{10}Be Greenland stack. Panel a shows the standardized residuals obtained by subtracting the normalized theoretical ^{10}Be global production rate from the normalized ^{10}Be record since 1951. Panel b shows the same, but for the ^{10}Be fluxes including the transport in the Northern Hemisphere. The theoretical ^{10}Be global production rate record is from (Mekhaldi et al., 2021).



S4. Standard scores for the ^{10}Be Antarctic stack. The standardized residuals were obtained by subtracting the normalized theoretical ^{10}Be global production rate from the normalized ^{10}Be record since 1951. The theoretical ^{10}Be global production rate record is from (Mekhaldi et al., 2021).

References

Mekhaldi, F., Adolphi, F., Herbst, K., and Muscheler, R.: The Signal of Solar Storms Embedded in Cosmogenic Radionuclides: Detectability and Uncertainties, *Journal Geophys. Res. Sp. Phys.*, 126, <https://doi.org/10.1029/2021ja029351>, 2021.