

## Millennial scale site and source temperatures variability in Antarctica over the past 700,000 years

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Deuterium-excess ( $d\text{-excess} = \delta D - 8\delta^{18}O$ ) provides the information on the ocean surface conditions in the moisture source for polar precipitation. We show a new d-excess record from the 3,035m-depth Dome Fuji ice core (DF2), which was obtained at the Dome Fuji station (77°19S, 39°42S, 3,810m a.s.l.). The new part of DF2 core (2400m to 3034m depth) extends back to 700ky BP with fine time-resolution. The  $\Delta T_{\text{site}}$  and  $\Delta T_{\text{source}}$  histories were reconstructed based on the d-excess data.

Keywords: ice core, oxygen isotope, hydrogen isotope, d-excess, Antarctica