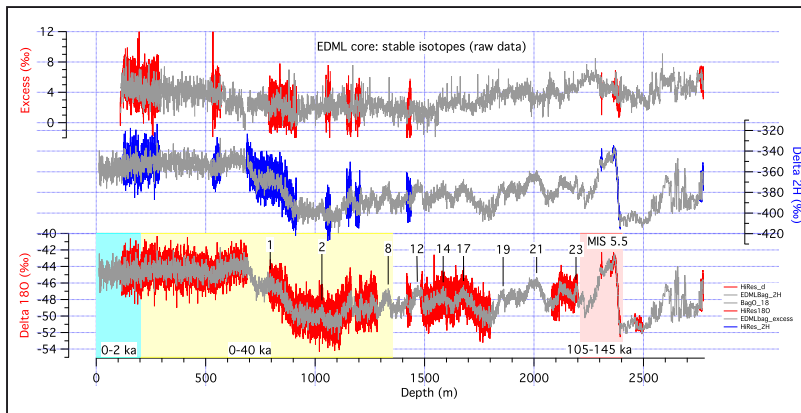


Update of delta 18-O and D data of the EDML-ice core

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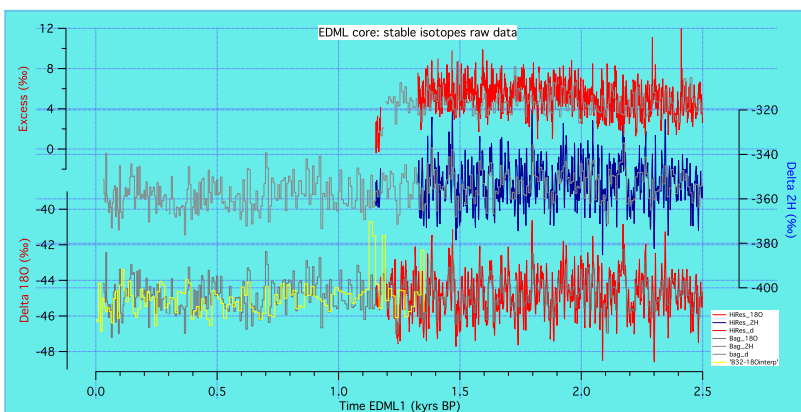
The poster shows the present status of measurements of stable isotopes on so-called bag samples (50 cm) and high-resolution samples (5 cm) from the EDML ice core.

50cm samples are shown in grey colour, 5cm samples in red (18-O, excess) or blue (D). The set of 50cm samples is now (almost) completed for both isotopes, deuterium excess was calculated (Stenni et al., 2010).

A few 50cm samples got lost and were substituted by mean values from the 5cm samples.

5cm samples were measured not always for both isotopes, as indicated in the plot on the left.

Three different periods are shown enlarged in the lower three panels:



The past 2.5 ka

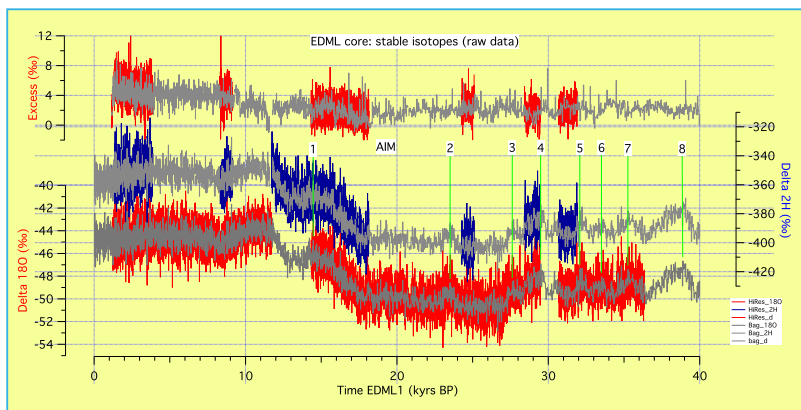
The EDML ice cores provides high resolution data for the past 2.5 ka period.

In the EPICA community paper (2006) for the topmost 125 m interpolated 18-O values from the B32 core (1.6 km to the west of EDML) had been used (yellow line), which now can be replaced by data from the 3in ch EDML core (grey), recovered when drilling the access hole in January 2001. Measurements on 5cm samples from this core are in progress.

Time resolution for 50cm:

at 13 m (ca.1915 AD) = 4 years

at 201 m (2.5 kaBP) = 8 years

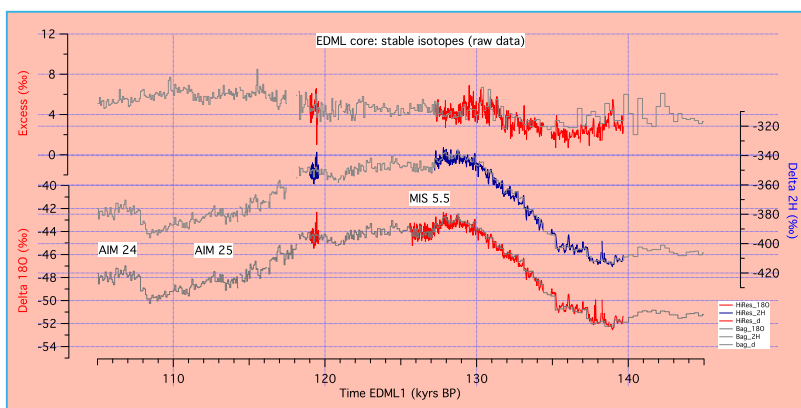


The past 40 ka

Time resolution for 50cm:

at 13 m (ca.1915 AD) = 4 years

at 1355 m (40 kaBP) = 28 years



The past interglacial, MIS 5.5

Time resolution for 50cm:

at 2211 m (105 kaBP) = 70 years

at 2405 m (40 kaBP) = 255 years

References:

EPICA community members, (2006). One-to-one coupling of glacial climate variability in Greenland and Antarctica. *Nature*, 444, 195-198.
Stenni, B., Masson-Delmotte, V., Selmo, E., Oerter, H., Meyer, H., Röthlisberger, R., Jouzel, J., Cattani, O., Falourd, S., Fischer, H., Hoffmann, G., Iacumin, P., Johnsen, S.J., Minster, B., Udisti, R. (2010). The deuterium excess records of EPICA Dome C and Dronning Maud Land ice cores (East Antarctica). *Quaternary Science Reviews* 29(1), 146-159