

Dielectric profiling data from EPICA Dome C core EDC99, 7-3165 metres.

Contributors:

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Original references:

EPICA Community Members, Eight glacial cycles from an Antarctic ice core, *Nature*, 429 (6992), 623-628, 2004.

Stauffer, B., J. Flückiger, E.W. Wolff, and P.R.F. Barnes, The EPICA deep ice cores: First results and perspectives, *Annals of Glaciology*, 39, In Press.

Description:

From the dielectric profiler (DEP) this is the dataset of 100 kHz conductivity, measured in the field at temperatures of -20 ± 2 degrees C, and corrected to a temperature of -15 degrees C. Data were measured at 2 cm resolution, but are averaged here to 1 metre. Ages for the mid point of the average are given on timescale EDC2 (EPICA Community Members, Eight glacial cycles from an Antarctic ice core, *Nature*, 429 (6992), 623-628, 2004).

Deuterium data from EPICA Dome C ice cores, 6.6-3140.5 metres

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Original references:

EPICA Community Members, Eight glacial cycles from an Antarctic ice core, *Nature*, 429 (6992), 623-628, 2004.

Description:

δD was determined on meltwater from 55 cm long sections. The current dataset was derived using a "quick" mode (each sample is measured twice instead of four times), leading to a typical accuracy of 1.5‰, whereas we aim for a final precision of 0.5‰ over the entire core. The data here correspond to values averaged across seven successive samples. Ages are given on timescale EDC2 (EPICA Community Members, Eight glacial cycles from an Antarctic ice core, *Nature*, 429 (6992), 623-628, 2004).

Grain radius from selected samples of the EPICA Dome C ice cores, 110-3100 metres depth.

Contributors:

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Original references:

EPICA Community Members, Eight glacial cycles from an Antarctic ice core, *Nature*, 429 (6992), 623-628, 2004.

Description:

Vertical thin sections were prepared in the field at a periodicity of 10 m, then digitized and analyzed using an image analysis procedure, to determine the mean grain radius.

Concentration of insoluble dust in the EPICA Dome C cores, 100-3138 m depth.

Contributors:

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Original references:

EPICA Community Members, Eight glacial cycles from an Antarctic ice core, *Nature*, 429 (6992), 623-628, 2004.

Description:

Dust concentration and size distribution were measured by a 256 channel Coulter Counter, set to register particles in the size range from 0.7-20 μm . In calculating mass concentrations, density was taken as 2500 kg m^{-3} . Ages are given on timescale EDC2 (EPICA Community Members, Eight glacial cycles from an Antarctic ice core, *Nature*, 429 (6992), 623-628, 2004).

Timescales EDC1 and EDC2 for the EPICA Dome C ice core.

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Original references:

EPICA Community Members, Eight glacial cycles from an Antarctic ice core, *Nature*, 429 (6992), 623-628, 2004.

Schwander, J., J. Jouzel, C.U. Hammer, J.-R. Petit, R. Udisti, and E.W. Wolff, A tentative chronology for the EPICA Dome Concordia ice core, *Geophysical Research Letters*, 28 (22), 4243-4246, 2001.

Description:

The file gives the depth versus age timescales that have been adopted as official for the EPICA Dome C ice core. EDC1 is the official timescale for the top 800 metres of core; it is described fully in (Schwander, J., J. Jouzel, C.U. Hammer, J.-R. Petit, R. Udisti, and E.W. Wolff, A tentative chronology for the EPICA Dome Concordia ice core, *Geophysical Research Letters*, 28 (22), 4243-4246, 2001). EDC2 is the officially adopted timescale (as of July 2004, until superseded) for the rest of the ice core (see EPICA Community Members, Eight glacial cycles from an Antarctic ice core, *Nature*, 429 (6992), 623-628, 2004); full description can be found in supplementary information at the Nature web site (<http://www.nature.com/nature/journal/v429/n6992/supinfo/nature02599.html>).

Both timescales are based on an ice flow model with an accumulation model, and gas ages are derived using a firn densification model. Negative values of age near the surface denote years after 1950 (-47=1997).