



Dansgaard-Oeschger cycles observed in the Greenland ReCAP ice core project

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The new Renland ice CAP (RECAP) ice core was drilled in summer 2015 in Greenland and measured by means of Continuous flow analysis (CFA) during the last 3 months of 2015.

The Renland ice core was obtained as part of the ReCAP project, extending 584.11 meters to the bottom of the Renland ice cap located in east Greenland. The unique position on a mountain saddle above 2000 meters altitude, but close to the coast, ensures that the Renland ice core offers high accumulation, but also reaches far back in time. Results show that despite the short length the RECAP ice core holds ice all the way back to the past warm interglacial period, the Eemian. The glacial section is strongly thinned and covers on ~20 meters of the ReCAP core, but nonetheless due to the high resolution of the measurements all 25 expected DO events could be identified.

The record was analyzed for multiple elements including the water isotopes, forest fire tracers NH₄⁺ and black carbon, insoluble dust particles by means of Abakus laser particle counter and the dust ion Ca²⁺, sea salt Na⁺, and sea ice proxies as well as acidity useful for finding volcanic layers to date the core.

Below the glacial section another ~20 meters of warm Eemian ice have been analysed.

Here we present the chemistry results as obtained by continuous flow analysis (CFA) and compare the glacial section with the chemistry profile from other Greenland ice cores.