



## **First continuous flow analysis results from the Greenland ReCAP project**

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The new Renland ice core was drilled in summer 2015 in Greenland and measured by means of Continuous flow analysis 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. Preliminary results show that the record holds ice from the past warm interglacial period, the Eemian.

The record was analyzed for multiple elements including the forest fire tracers  $\text{NH}_4^+$  and black carbon, insoluble dust particles by means of Abakus laser particle counter and the dust ion  $\text{Ca}^{2+}$ , sea salt Na and acidity useful for finding volcanic layers to date the core. Further  $\text{H}_2\text{O}_2$ , and the nutrients Fe and dissolved reactive phosphorus was analyzed as well as the temperature indicator  $\delta^{18}\text{O}$  all by means of continuous flow analysis (CFA).

The core was melted at a rate of 3 cm/min providing a temporal resolution for most components determined sufficient to resolve annual layers through the Holocene. The glacial section is strongly thinned, but nonetheless due to the high resolution of the measurements all DO events could be identified. Below the glacial section another ~20 meters of warm Eemian ice have been analysed.

Here we present the first chemistry results as obtained by continuous flow analysis (CFA).