

New Ice core drilling in North Eastern Greenland

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In 2015 the 14-meter high building, the 'Dome', weighing 47 tons, was pulled on skis almost 500 km over Greenland's ice-land by two tracked vehicles.

The first crew of researchers, technicians and students has arrived at the EastGRIP research camp on the Greenland ice cap, flown in by ski-equipped American Hercules planes. During the next 4 months, a number of projects aim to generate a new understanding about ice sheet

dynamics and climate history.

The project involves many international research groups organized by the Center for Ice and Climate at the Niels Bohr Institute. The Danish contribution is financed by a donation from A.P. Møller and Wife Chastine Mc-Kinney Møllers Foundation.

The aim of The East Greenland Ice-core Project (EastGRIP) is to drill an ice core 2550 meters through the ice sheet to the bottom of the ice cap, through the northeast Greenland ice stream. Ice streams are responsible for transporting a significant portion of the ice that ends in the ocean. The researchers hope to obtain new understanding of the behavior of these streams. Knowledge of how ice sheets react to past and present climate changes will help at estimating ice streams' contribution to future sea level changes.

The researchers will investigate the flow properties of ice from the core by measuring its physical properties and making deformation studies. In addition, the movement and deformation of the [drill hole](#) will be measured.

The drill site has been selected because it is the starting point of the northeast Greenland ice stream, presumably caused by elevated geothermal heat flux from the bedrock. The camp and drill hole moves 50 meters every year together with the ice. It is the first attempt ever to drill a long ice core in ice that has a daily movement equivalent to the width of the [drill](#) hole.



The aim of the drilling project is to better understand how ice caps respond to both past and future climate change, and get knowledge of how ice sheets react to past and present climate changes. Credit: University of Copenhagen

Measurements of the ice cores to be performed in research laboratories all over the world will provide new understanding of [climate history](#) in North East Greenland. The EastGRIP camp has a landing strip, good housing facilities and workshops. These facilities attract other projects not directly involved in this drilling [project](#).

The camp houses a wide range of projects doing atmospheric studies and making measurements from airplanes, drones, snow mobiles and wind sleds in the area around the icestream.

More information: Read more at www.eastgrip.org

Provided by University of Copenhagen

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