Greenland ice cores tell tales on past sea level changes

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All the deep ice cores drilled to the base of the Greenland ice sheet contain ice from the previous warm climate period, 130-115 thousand years before present, demonstrating the resilience of the Greenland ice sheet to a warming of 5 °C. Material from the base of the ice cores reveals the presence of boreal forests before the ice covered Greenland, implying that temperatures at that time had been more than 10 °C warmer than the present. To compare the paleo-behaviour of the Greenland ice sheet to the present, in relation to sea level rise, the international EGRIP-project is drilling an ice core in the centre of the active North East Greenland Ice Stream (NEGIS). At this lecture, the first results will be presented.

Dorthe Dahl-Jensen is a world-leading expert in past climate research and Head of the Centre for Ice and Climate at the Niels Bohr Institute, within the University of Copenhagen.

Ice core research has revolutionized our understanding of past and present climate, including ice sheet dynamics and sea-level change. Dorthe has led some of the most important expeditions to drill ice cores in Greenland and study ancient and modern ice up-close. Dorthe’s research focusses on the reconstruction of past climate records from ice cores and borehole data; ice low models to date ice cores; continuum mechanical properties of anisotropic ice; ice in the solar system; and the history and evolution of the Greenland Ice Sheet.