

Greenland ice cores tell tales on the extent of the Greenland Ice Sheet during past warm climate periods

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Knowledge on the long-term response of the Greenland ice sheet to climate warming during past interglacials is essential for estimating the potential of future rise in sea level. During the last million years, the Greenland Ice Sheet (GRIS) has waxed and waned in response to glacial and interglacial periods. The deep ice cores through the Greenland ice sheet contain ice from the time ice covered the site. Ice from the last interglacial period (the Eemian, LIG) 130 to 115 kyears before present is present in most of the deep ice cores and can be used to determine both temperature and extent of the ice sheet during this warm interglacial period.

Going to the bed, basal material enclosed in the ice cores contain DNA remnants that can be used to determine the ecosystems present before ice covered Greenland.

The reaction of the Greenland ice sheet to climate changes and the sea level change from mass loss from the Greenland ice sheet is discussed based on the ice core findings.