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The RECAP ice core – recovering a full Glacial record from Eastern Greenland

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During May-June 2015 the 584m an international team drilled the RECAP (REnland ice CAp Project) ice core to bedrock on the Renland ice cap in Eastern Greenland. The exact drill site selection was determined from a detailed radio echo sounding (RES) grid, that had been measured from the ice cap surface right before drilling operations began. The RES data suggested that the ice cap internal layers are horizontal almost right down to the bed at the selected site, and that ice from the Glacial period was present some 30-50m above bedrock. The RES results have now been confirmed by measurements on the RECAP core that shows the entire Glacial being nicely preserved in the 20m section indicated by the RES measurements. The RECAP core thus yields the first undisturbed ice core record from Eastern Greenland covering the last Glacial, a marked improvement compared to the landmark 1988 Renland ice core that was disturbed by ice flow features both during the mid-Holocene and especially during Marine Isotope Stages 4 and 5.