

Recent ice core drilling technology in glacier and ice sheet

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Ice core drilling has been conducted on glaciers in the Arctic, Greenland ice sheet and Antarctic ice sheet from the second half in 1980's. Developed ice core drilling system in Japan was used. 8 times of drilling data in Antarctic ice sheet and 9 times in Arctic glaciers from 1993 were collected and were analyzed. Regional characteristics in glaciers and an ice sheet were seen as the cutting speed of ice and the power consumption of drill motor. When drilling depth was exceeded 100m in arctic glacier, ice core tended to be unstable and break. When it passed 200m, it did not break any more.

High-quality ice core is strongly requested. These analysis will be contributes to improvement of the ice core drilling technology.