Field data and firn samples were collected during a short stay on James Ross Island at the beginning of December 1977. A 10 m firn core was taken and a pit 2 m deep dug 2 km west of the summit at an elevation of about 1 500 m. The site was situated on a gentle slope facing the Antarctic Peninsula. The snow surface was relatively hard and regular (small sastrugi). The air temperature during sampling was always well below zero.