Thermic conditions of the ice

The force of glacial movements is essentially affected by the temperature of the ice. While Werenskiold Glacier lies in the zone of long-term permafrost, the glacier substratum must be for fairly large extent in a non-frozen condition, as indicated by the water streams issuing even during winter from under the glacier and forming a naledi-type ice sheet [Baranowski, in press]. Considering these conditions, temperature measurements (Photo 2) were made to the depth of 8 meters (thus to the level not reached any more by seasonal temperature oscillations); these measurements were made near the glacier front (0.2 km from the snout), in its most active zone (some 2.5 km from the snout) and near the line of equilibrium (4.5 km from the snout). In the snout part (at 50 m a. s. l.) the ice temperature proved to be $-2.5°$, in the active part (225 m a. s. l.) $-4.2°$, and at the boundary of the ablation zone (380 m a. s. l.) $-3{,}2°$. Further, temperature measurements were made in snow