

Ice temperature measurements

The mean ice temperature at 10 m depth from September 2018 to July 2019 in the accumulation part of Waldemarbreen (see [Fig. 3](#)) was -2.38°C , ranging by only 0.43°C throughout the entire measurement period. This average ice temperature was colder than that in 2007–08 (-2.32°C) by 0.06°C (Sobota, [2009](#)), and a difference of up to 0.2°C was reached at the end of July ([Fig. 7](#)). The mean annual ice temperature at 2 m depth in 2018–19 was -3.29°C , which is lower than that at a depth of 10 m. As the accuracy of thermistors is $\pm 0.2^{\circ}\text{C}$, the recorded decrease in ice temperatures between 2007–08 and 2018–19 cannot be considered significant, although it indicates the possibility of cooling in the accumulation area.