

Little Dome C

Beyond EPICA Oldest Ice Drilling Site (75.29917 °S, 122.44516 °E)

Situation Report #40, 26th December 2025

Personnel @LDC:

Gianluca Bianchi Fasani (ENEA, Camp Leader), Katrin Ederer (AWI), Matthias Hüther (AWI, Chief Driller), Iben Koldtoft (UCPH), Marion Lahuec (IPEV), Gunther Lawer (AWI), Johannes Lemburg (AWI), Philippe Possenti (CNRS), Barbara Seth (UNIBE, PI in the field), Henrique Traeger (UNIBE), Mohammad Vafadarmianvelayat (AWI), Sergio Zannini (ENEA)

Personnel @DC:

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Weather at LDC: mainly cloudy, windy and cold

Meteo at DC 6:00 pm: T = -19.0 °C, Wind speed = 11.1 kt, Windchill T = -29 °C, Humidity = 79%



This morning, we mounted the new dead weight into the core barrel of the 2.5 m drill setup and a drill head with three sharp edged cutters. We decided to try milling at a new spot in the hole where the inclinations might be twice as high as at 2350 m. This spot is about 300 m higher (at 2030-2050 m depth) as our old deviation spot. This higher inclination should ease the side milling without the supporting spring.

Meanwhile, Lemmi and Gunther designed, manufactured and assembled skids for the broaching-tool today, for future experiments if needed. The idea is to position two parallel skids opposite to the broaching tooth that are pressed into the borehole wall by the reaction force of the cutting blade. As two parallel skids can only align parallel to the longitudinal axis of the borehole, this configuration should be able to prevent rotation induced by the antitorque that follows any irregulars in the borehole wall.

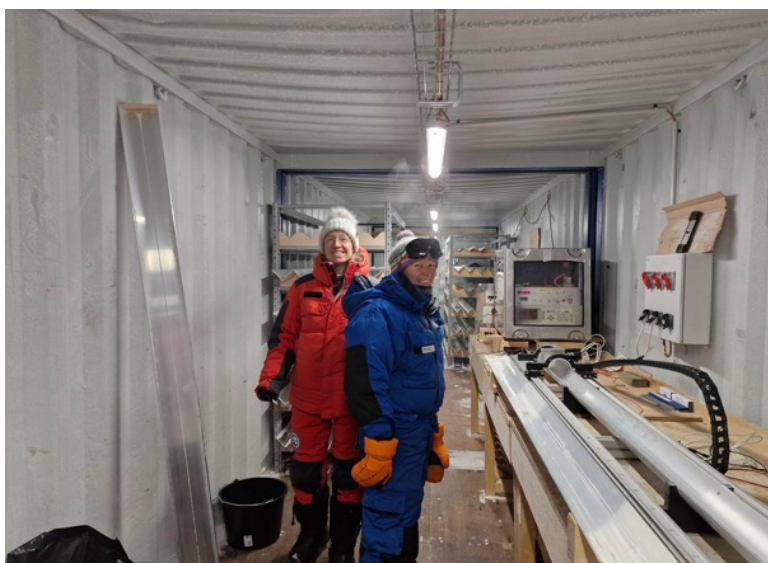
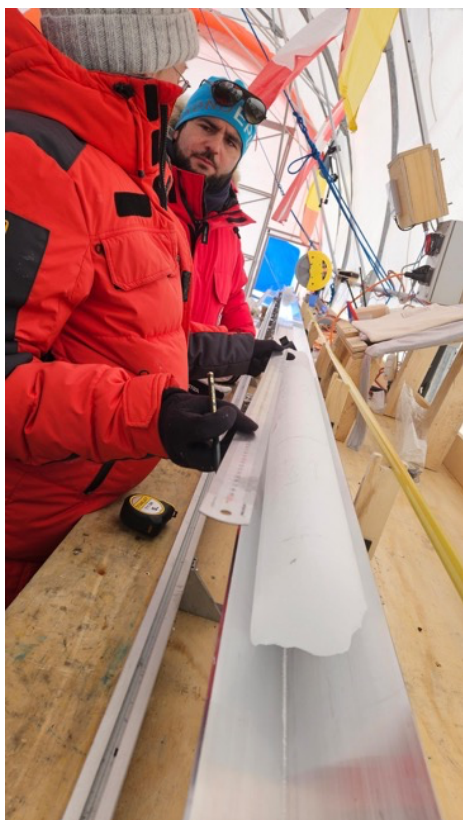
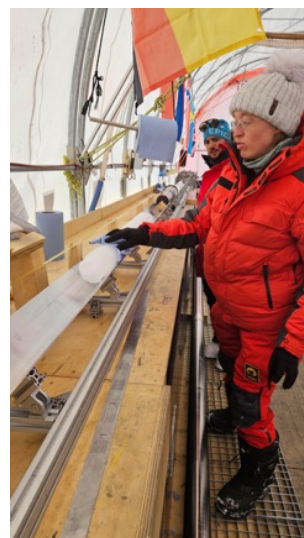
In the afternoon, Iben introduced Marion and Henrique into all the different steps of logging and processing the ice cores in the drilling tent and in the science trench, respectively.

Our logistic team was managing cargo for the upcoming Basler flight in Concordia besides the daily routing operation.



The new, 70 kg dead weight mounted underneath the valve will hang inside the core barrel. Photo by K. Ederer





Iben and Henrique checking out the core logging and processing line. Photos by M. Lahuec





Sergio refilling the fuel tank of the common tent. Photo by M. Lahuec

CB, GBF, BS & MH; LDC, 26.12.2025

