Little Dome C

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

Situation Report #59, 14th January 2026

Personnel @LDC:
Gianluca Bianchi Fasani (ENEA, Camp Leader), Katrin Ederer (AWI), Matthias Hüther (AWI, Chief Driller), Iben Koldtoft (UCPH), Gunther Lawer (AWI), Johannes Lemburg (AWI), Barbara Seth (UNIBE, PI in the field), Henrique Traeger (UNIBE), Mohammad Vafadarmianvelayat (AWI), Sergio Zannini (ENEA)

Personnel @DC:
Marion Lahuec (IPEV), Philippe Possenti (CNRS)

Weather at LDC: sunny, less windy, cold
Meteo at DC 7:20 pm: T = −28.8 °C, Wind speed = 2.5 kt, Windchill T = -34 °C, Humidity = 63 %

Once started, the drilling into the deviation at about 2042 m went smooth and the team proved its phantastic skills and spirit. What a boost for the motivation this success was! Since yesterday evening, we did 9 runs and brought up 19.82 m of ice core, one prettier than the other ;) The initial thin half-moon shape grew visibly with each run until we had a full core after 19 m of continuous drilling. The aim for today was to get the antitorque fully into the new, deviated hole. This will make it much easier for future drilling to penetrate further into the ice, and to eventually bring up a replicate of the oldest ice that has been drilled last season. However, during the day we realised that the amount of chips floating in the bore hole increased too much and that we had to do filtering, before we can continue drilling.

Luckily, the tower seemed to have noticed that this drilling activity is now really important to us, and it ‘behaved’ all night. In the morning, Lemmi and Katrin put in a new pin into one of the actuators and it should hold now until the end of its season.

We started cleaning the trench in the afternoon, that means taking up all the items that fell into it and emptying and cleaning the tray around the bore hole. We also started with the fluid management. The last Estisol 165 has been removed from the barrels, and the remaining IBC tanks were moved in the drilling tent. The incinolet was moved close to the Itase module today to get prepared for desperate times after the generators will be moved to Concordia together with our shower module.

We had most of our empty BEOI ice core boxes already sent to Concordia some days ago and only kept two for ‘emergency’ here in camp. Hence, we had to get some more boxes back from Concordia to pack all the freshly drilled ice. Since Sergio was cleaning/flattening the road half-way to Concordia this morning, while Ivan did the same job from the Concordian side, as the road was in a desperate condition, they half-way met to hand over three more empty ice core boxes for us.

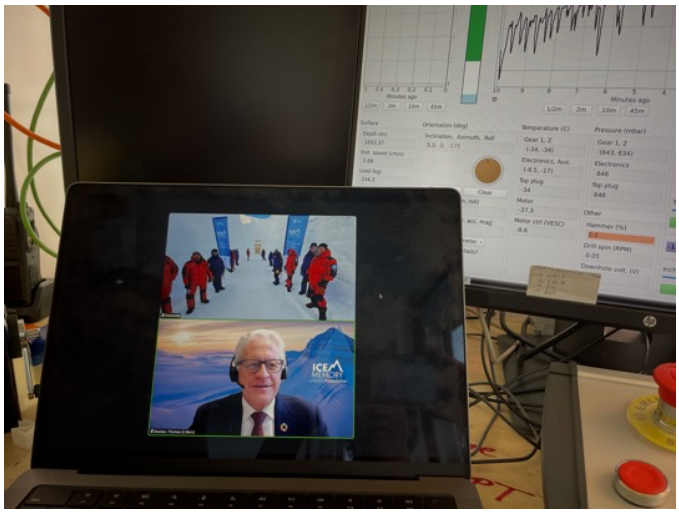
At 5pm, while filtering the bore hole, we took part in the online inauguration of the Ice Memory project.

The half-moon shaped core slowly grew to a full core (in lower picture from back to front). Photos by B. Seth

Repairing one of the tower actuators. Photo by H. Traeger

Cleaning the trench. Photos by H. Traeger, B. Seth and I. Koldtoft

Estisol IBC tanks being moved into the drilling tent. Photo by B. Seth



The Ice Memory project on zoom in the drillers' cabin. Photo by B. Seth

End of day statistics at 7pm:

- We did 9 runs between 7pm yesterday and 7pm today. We got 9 cores up to the surface: 2.27 m, 2.20 m, 2.37 m, 2.29 m, 2.20 m, 2.08m, 2.12 m, 2.15 m, 1.95 m (driller length, last run #12), for a total of 19.63 m;
- Driller's end depth: 2065.61 m;
- Logger's end depth: 23.35 m;
- Half-moon core thickness: last core bottom 97.6 mm = full core ;)
- Scraping: 20 samples (à 1 m = scrap A) for water isotopes (bags #2804-R to #2823-R);

CB, GBF, BS & MH; LDC, 14.1.2026