

Little Dome C

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

Situation Report #60, 15th 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 6:20 pm: T = -30.8 °C, Wind speed = 4.8 kt, Windchill T = -39 °C, Humidity = 64 %



The day started with a birthday cake and a song for Lemmi! Happy birthday!

Since yesterday evening, we drilled 4.89 m of replicate ice in the new hole. Hence, we now have 28.23 m of ice from the deviated bore hole. We had a full diameter core after 19 m, however, we do not know exactly when the whole drill will be completely in the new hole. The outer diameter of the drill is 129.7 mm. We are confident that, while drilling, at least the drill head is now fully surrounded by a new bore hole wall. However, we still had problems to get the antitorque sliding through the deviation area smoothly. We have the impression that one of the antitorque blades gets stuck in the several metres long narrowing gap between the two holes. Loosening the antitorque even further might help, but that will be the task for future drilling operation. Hence, we declared our drilling and logging to be finished. In total we filled four ice core boxes with replicate ice plus one box containing the scraping samples. All five will be lifted on the Sfusi sledge just before it goes to Concordia.

The removal of the SDMOs has been postponed to Sunday. Hence, we need to use the remaining time here in the drilling tent in LDC to filter the bore hole, to heat the pig for separating the filtered chips from the Estisol, and to finish cleaning the trench. We started the filtering this morning and will hopefully have a clean bore hole tonight.

More material has been packed onto the Sfusi sledge today, for example the heavy dead weight that was kindly provided by Concordia Station – thanks a lot for that, especially to Kiki organising it for us! The other dead weights, which we used for the rock drilling attempts last season, kindly provided by Mario Zucchelli Station, also went on the Sfusi sledge.

The trench was further cleaned today. And the overall packing and cleaning of the drilling tent and the camp continued.





Lemmi's birthday. Photo by I. Koldtoft



The last replicate core – it will also go to Concordia and will be needed for logging, once the drilling here in LDC will continue.
Photo by I. Koldtoft





Cleaning of the trench #2. Photos by J. Lemburg and B. Seth

End of day statistics at 7pm:

- We did 3 runs between 7pm yesterday and 7pm today. We got 3 cores up to the surface: 0.45 m, 2.22 m, 2.22 m (true length, last run #15), for a total of 4.89 m;
- Drillers' end depth: 2071.20 m;
- Loggers' end depth: 28.23 m;
- Scraping: 5 samples (à 1 m = scrap A) for water isotopes (bags #2424-R to #2428-R);

CB, GBF, BS & MH; LDC, 15.1.2026

