

Little Dome C

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

Situation Report #36, 22th 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: some clouds in the morning, slight wind and cold

Meteo at DC 6:20 pm: T = -21.8 °C, Wind speed = 5.3 kt, Windchill T = -29 °C, Humidity = 75%



After we changed to the 1.5 m drill yesterday evening, we could rest on the ledge – even with the motor on. However, we did not have the impression that we could penetrate the ice. Gunther's suspicion that the shoes behind the cutters might be slightly too high for the slanted edged cutters' knives, thus, preventing from penetration, was confirmed when the drill was up on the surface again.

Hence, Gunther was busy this morning with grinding down the feet of the cutter knives, and by midday we were on the way down the hole. We could again put load on the ledge, but with the motor on we could not hold it and slipped off the ledge. The next strategy was to loosen the antitorque a bit for having less stick slip, and to use smaller pins on the outer shaft, which did not show any improvement. At the same time, we had a strategy meeting with Europe. After dinner we prepared the camera with a new battery system to extend its lifetime. Additionally, Lemmi mounted a transparent cylinder filled with clear Estisol to improve the visibility in the slushy bore hole liquid.

The logistical team prepared the Itase's Science Module and a sledge full of stuff. Now these are both ready to move back to Concordia according to plan.

For desert after dinner, we had a wonderful coffee cake prepared by Mohammad to celebrate (with a day delay) the longest day/night of the year depending on where you are...

Additionally, we had another halo day with parhelic circle all around the camp.





Lemmis camera. Photo by J. Lemburg.



Sergio and Marion preparing the sfusi sledge. Photo by I. Koldtoft.





Mohammad preparing his delicious coffee cake. Photo by M. Lahuec.



Halo day in Little Dome C. Photo by B. Seth.

CB, GBF, BS & MH; LDC, 22.12.2025

