

Little Dome C

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

Situation Report 18, 14. December 2023

Personnel @LDC:

Saverio Panichi (ENEA, Camp Leader), Olivier Alemany (CNRS), Philippe Possenti (CNRS), Matthias Hüther (AWI), Rémi Dallmayr (AWI), Gunther Lawer (AWI), Johannes Lemburg (AWI), Andrea Ceinini (ENEA), Federico Scoto (CNR), Tamara Gerber (UCPH), Iben Koldtoft (UCPH), Julien Westhoff (UCPH), James Veale (BAS), Michaela Mühl (UNIB), Fortunat Joos (UNIB), and Inès Gay (IPEV)

Weather at LDC 5 pm: sunny and nice; temp.: -15°C; wind: 4 m/s



Today, we started to drill in shifts, so that we can work from 8 am to midnight. The drill looks stable. We're keeping the setting: 4 meters AWI drill and Copenhagen motor section. We're taking the opportunity to train a more people in logging.

In parallel with drilling, processing of the core drilled last year is continuing apace, with a new record of 52m today

What we did today at LDC:

- We started to drill in shifts;
- We prepared a second hollow shaft for the 4 meters drill;
- We are now processing the ice from 222m to 608m, which is left unprocessed from last year. We finished another 52 m in shifts, reaching 368m depth.;
- We put 400 liter of fresh drill liquid in the hole;
- We are now using empty ice core boxes to further insulate the science/processing trench.





Figure 1: entrance of the science trench, with thermal insulation : O. Alemany



Figure 2: The busy drill tent: photo O. Alemany

End of day statistics at 20h

Driller's depth: 876.08 m (yesterday driller depth was wrong, it was 849.05), in between this morning 8h and 20h we made 6 runs (4.45, 4.52, 4.52, 4.51, 4.52, and 4.51) for a total length of 27.03 meters in 12h (before the evening shift) from 19h30 to midnight;

Logger's depth: 879.32 m

Current processing depth: 368 m, daily total: 52 m, season total: 340 m.

OA, MH, JW, and SP, 14.12.2023

