

Little Dome C

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

Situation Report 19, 15. 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.: -10°C; wind: 2.6 m/s



Today we're continuing with what we did yesterday. Drilling continues in shift with runs averaging 4.5 metres in length, with excellent core quality despite being in the brittle zone. During the last 24h we drilled more than 40 meters.

We are still training more people on the logging. We also had a trip to Concordia to get 36 boxes of ice for further processing. We processed 30 meters of ice from last year, including very difficult sections.

What we did today at LDC:

- We continued to drill in shifts;
- We prepared a second core barrel 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 30 m in shifts, reaching 392m depth;
- We put two times 500 liter of fresh drill liquid in the hole;
- We send 30 ice core boxes (with processed ice) to Concordia and then we get 36 new core boxes from Concordia (with ice unprocessed from last season);
- We continue using empty ice core boxes to further insulate the science/processing trench.





Figure 1: the mast out of the drill tent at night: O. Alemany

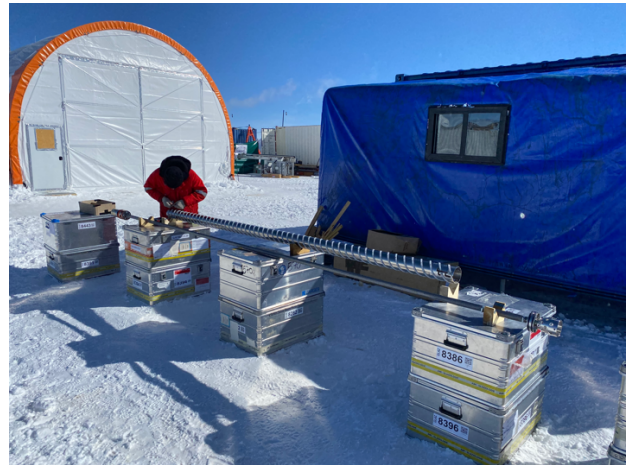


Figure 2: Lemmi preparing the second 4 meters core barrel: photo O. Alemany

End of day statistics at 20h

Driller's depth: 917.5 m, in between yesterday 20h, and today 20h we made 9 runs (drillers delta depth: 4.53, 4.54, 4.47, 4.34, 4.46, 4.41, 4.55, 4.47 and 4.48) for a total length of 40.2 meters (drillers delta depth) meters in 24h;

Logger's depth: 919.91 m

Current processing depth: 392 m, daily total: 30 m, season total: 370 m.

OA, MH, JW, and SP, 15.12.2023

