

Little Dome C

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

Situation Report 19, 05. December 2024

Personnel @LDC:

Lisa Ardoin (ULB), Marie Bouchet (CNRS), Ailsa Chung (CNRS), Danilo Collino (ENEA, Camp Leader), Inès Gay (IPEV), Matthias Hüther (AWI, Chief Driller), Manuela Krebs (AWI), Gunther Lawer (AWI), Johannes Lemburg (AWI), Martin Leonhardt (AWI), Michele Scalet (ENEA), Federico Scoto (CNR), Barbara Seth (UNIBE), Lison Soussaintjean (UNIBE), Julien Westhoff (UCPH, Chief Scientist), Frank Wilhelms (AWI, PI in the field)

Weather at LDC 5 pm: sunny

Weather at DC 5 pm: temperature: -32°C, wind 3 knts



Boring. We did 6 runs between 19:30 yesterday and 19:30 today. During the night, we filtered the hole and collected a moderate amount of fine slush. Today, processing continued with 30 m. The PICARRO is still unstable. The temperatures in the drill tent rose to -15 °C, and in the science trench, they approached -30 °C. Furthermore, we have decided to purposely misalign the last part of the logging table to enforce a vertical break of the ice core after approx. 1-2 cm of cutting. This preserves the 2.5 mm of ice, which would be lost, i.e. removed by the saw blade, during cutting. For the older ice and as annual layers become increasingly compressed (assuming 10,000 years per meter) we save 25 years of annual layers per cut.



Lower end of slush recovered from the filter run.
Credit: G. Lawer ©PNRA/IPEV



Upper end of slush recovered from the filter run.
Credit: G. Lawer ©PNRA/IPEV



Recovered slush in the sieve. Credit: G. Lawer ©PNRA/IPEV

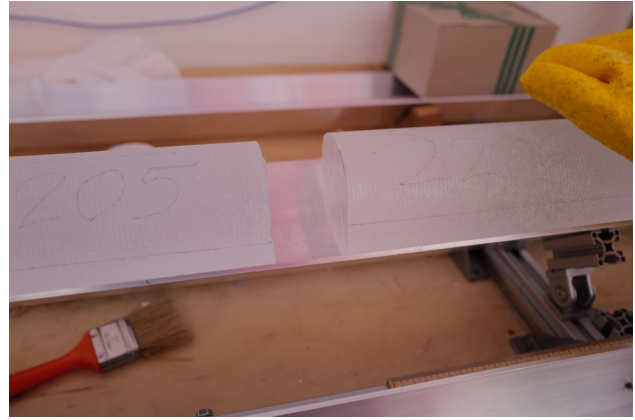


The ice core box shield is effective, at least in the morning.
Credit: F. Wilhelms ©PNRA/IPEV





The loggers press slightly onto the end of the core.
Credit: F. Wilhelms ©PNRA/IPEV



When cutting slightly with the saw, the cores break nicely-
Credit: F. Wilhelms ©PNRA/IPEV

End of day statistics at 19:30:

- Driller's depth: 2183.51 m;
- we did 6 runs between 19h30 and 19h30. The length of these cores was: 4.495, 4.50, 4.50, 4.51, 4.515, 4.515 (driller length, last run #746), for a total of 27.035 m;
- Logger's depth: 2181.7 m
- Current processing depth: 2132 m; daily total: 30 m; season total: 435 m.

FW, JW, MH, 05.12.2024

