

Little Dome C

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

Situation Report 15, 01. Dezember 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: -34°C, wind 5 knts



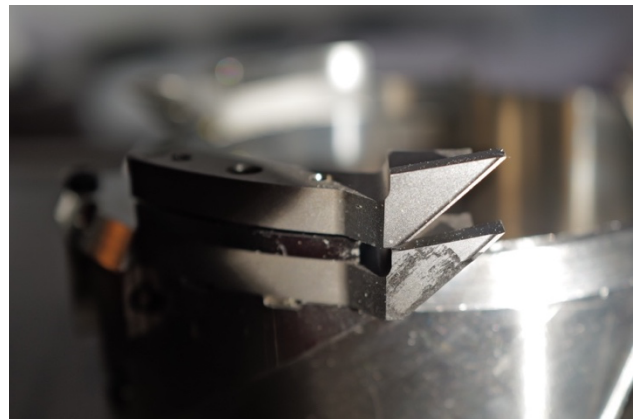
The weekend rest lasted till the end of the lunch and after lunch, we resumed the drilling, processing, and camp operations.

Boring. We did 2 runs between 13:00 and 19:30. Martin mounted an additional emergency button at the position, where the second driller usually sojourns while the tower is operated. The inclination of the hole should be around 3°–4°, which is acceptable. In past drilling operations, we always tried to get the inclination of the hole as much down as possible, as this also in principle increases the resolution of several analyses. An often-used measure is to make the cutters more aggressive by removing the edges. With the second run, we tried this and switched to an accordingly tuned drill head. The modification is — as expected — changing the behavior of the drill. The core diameter shrunk — as expected — slightly from about 97.8 mm to 96.8 mm. The core quality is still acceptable, apart from the changed diameter, one feels very slight undulations on the core when wiping it from drill liquid, but these are still too small to be recognized visually. Processing in the trench continued for 24 more meters. The PICARRO runs fine.



Martin mounted an additional emergency stop button, directly opposite of the tower control, where usually the second driller sojourns while operating the tower.

Credit: F. Wilhelms ©PNRA/IPEV



Below cutter with removed edges, above standard figuration.

Credit: F. Wilhelms ©PNRA/IPEV





Comparison of cutters from a slightly different angle. Credit: F. Wilhelms ©PNRA/IPEV



Federico (and Lisa behind the shelf) unpacking the ice cores in the core buffer. Here the cores will rest for 2 days, before processing. Credit: J. Westhoff ©PNRA/IPEV

End of day statistics at 19:30:

- Driller's depth: 2068.69 m;
- we did 2 runs between 13h00 and 19h30. The length of these cores was: 4.50, 4.52 (driller length, last run #719), for a total of 9.02 m;
- Logger's depth: 2067.44 m
- Current processing depth: 1977 m; daily total: 24 m; season total: 282 m.

FW, JW, MH, 01.12.2024

