

Little Dome C

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

Situation Report #20; Thursday 22 December 2022

Personnel @LDC:

Saverio Panichi (ENEA, Camp Leader), Frank Wilhelms (AWI, Chief Driller), Robert Mulvaney (BAS, Chief Scientist), Giuditta Celli (ENEA), Romily Harris Stuart (LSCE), Matthias Hüther (AWI), Gunther Lawer (AWI), Johannes Lemburg (AWI), Martin Leonhardt (AWI), Michele Scalet (ENEA), Julian Westhoff (NBI), Andrea de Vito (ENEA)

Personnel @DC:

Marcus Grimmer (UNIBE), Florian Krauss (UNIBE)

Weather at LDC 5 pm: sunny, 2-3 knots

Meteo at DC 5 pm: T = -36°C, Wind = SW, 5 knots, Wind Chill T = -48°C



Drilling ran smoothly today. We had the feeling that the system was settling down and becoming a little more routine. With fewer stops for either breakdowns, or for testing new components, we managed a series of runs consistently over two meters, and recorded the best days drilling so far, with 27 m of excellent quality core recovered. The system is now fully of the new AWI design, with a 3.4 m long core barrel, a fluid pump on the hollow shaft, and the new gearless motor which seems very powerful when drilling. This has brought a lighter mood to the camp as the stresses of the last weeks' challenges for the engineers has reduced.



Romilly catches the drillers in an off-guard moment through the door of the drill control cabin (Julien in the centre, Giuditta to the rear, while Frank blows a raspberry in the foreground). The main drill tent generally varies between about -25 and -15°C during the day. During the long runs controlling the drill and winch, the drillers sit in a heated cabin for comfort. (Photo: Harris Stuart, Leica SL2, 24mm, 1/20, f8, ISO400)





Saverio and Michele refueling the drums that supply the heaters in the communal tent from the fuel tank on the Caterpillar Challenger tractor. As well as the huge Weatherhaven for the drill tent, we have two Weatherhaven tents for sleeping, and one larger Weatherhaven as a communal tent where we relax and eat meals. The sleeping and communal tents are heated with Dickinson Alaska diesel burning stoves which run 24 hours per day keeping the tents warm, water liquid, and our electronic gadgets functioning. (Photo: Mulvaney, Leica SL2, 31mm, 1/640, f11, ISO400)

End of day statistics:

Individual runs of the drill were recorded as: 1.88, 2.34, 2.53, 2.10, 2.06, 2.08, 2.14, 2.23, 2.34, 2.41, 2.43, 2.48 m

Drillers' depth: 260.63 m; daily total 27.21 m

Loggers' depth: 265.87 m; daily total 26.96 m

Processors' depth: 128.0 m; daily total 16.0 m

RM and FW, 23.12.2022

