

Little Dome C

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

Situation Report #35, 5. January 2022

Personnel @LDC:

Saverio Panichi (ENEA, Camp Leader), Carlo Barbante (ISP-CNR, PI), Olivier Alemany (IGE), Romain Duphil (IGE), Matthias Hüther (AWI), Calogero Monaco (ENEA), Philippe Possenti (IGE), Clément Savornin (IPEV), Michele Scalet (ENEA), Jakob Schwander (unibe), Thomas Stocker (unibe), Remo Walther (unibe)

Weather at LDC: sunny, low wind – pleasant day.

Meteo at DC 6 pm: T = -35°C, Wind = 5 knt, Wind Chill T = -44°C



Matthias continued to implement software for the drill and he installed the direct internet connection to the drilling tent. Olivier and Romain put the drip pan into the inclined trench and installed the fluid collector around the casing. This will collect the drilling liquid when the drill is retracted from the bore hole and brought to the surface. Clément built the protective rail around the trench opening. Carlo, Michele and Calogero have furnished the underground core buffer. They assembled the shelves and installed the core tray holders.



View along the drill tower through the BEOIC drill tent with the open roof, the driller's cabin and the fluid recycling cabin along the right side of the tent. Photo: T. Stocker (Leica SL2-S, 20 mm, f 5.6, 1/800 s, ISO-400).





One of the underground container ready to store ice cores in the season 2022/2023. Each shelf can accommodate 60 m of ice core.
Photo: T. Stocker (Leica SL2-S, 23 mm, f 6.3, 1/30 s, ISO-400).

At RADIX, we have further worked on the anti-torques by hardening the springs and shortening the length of the blade surface in contact with the hole surface. This will exert a higher pressure on the ice surface and hopefully increase the effectivity. Measurements with a torque meter confirmed that the maximum torque that can be sustained is larger than the torque of the drill head. Several attempts at continuing the drilling with different drill configurations have not yet been successful.

Radix drilling depth: 270.0 m

TS & CB, 5.1.2022

