

Little Dome C

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

## Situation Report #47, 2<sup>nd</sup> December 2026

### Personnel @LDC:

Gianluca Bianchi Fasani (ENEA, Camp Leader), Katrin Ederer (AWI), Matthias Hüther (AWI, Chief Driller), Iben Koldtoft (UCPH), Marion Lahuec (IPEV), Gunther Lawer (AWI), Johannes Lemburg (AWI), Philippe Possenti (CNRS), Barbara Seth (UNIBE, PI in the field), Henrique Traeger (UNIBE), Mohammad Vafadarmanvelayat (AWI), Sergio Zannini (ENEA)

### Personnel @DC:

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Weather at LDC: cloudy, windy, cold

Meteo at DC 6:30 pm: T = -24.5 °C, Wind speed = 10.0 kt, Windchill T = -36 °C, Humidity = 72 %



On our way back to LDC yesterday afternoon, Sergio encountered some alarm lights on the Pistenbully linked with the air filter that probably was frozen and had to be replaced.

Additionally, one cover plate (a carter) on the underside of the Pistenbully carriage was loose. It was due to snow accumulation breaking the bolts which kept this carter in place. As there was no possibility to remove the remaining bolt from its thread, a nut had to be welded onto the chassis. A second thread of a M10 bolt was also damaged and needed to be re-cut to M12.

In the drill tent we continued milling the bore hole wall using the 2.5 m ice drill setup with the dead weight inside the core barrel. When we came to the surface in the afternoon, the chip chamber was completely packed with fresh ice chips, a clear sign that we actually milled the bore hole wall ! We decided to try the newly designed core catchers drill head on the same 2.5 m ice drill setup with the dead weight.

The new "Coretters" drill head features five core-catchers on its circumference, that bit into the ice in drilling direction, but are compliant and retractable in the reverse. Towards the front five additional cutters can optionally be mounted. The cutting and relieve angle of the core-catcher blades tangentially to the borehole wall are the same as the angles of the 'normal' cutters towards the face of the ice-core.

Henrique had his first skidoo driving lesson today – he passed!





Sergio, Gianluca and Lemmi repairing the Pistenbully. Photos by G. Lawer and G. Bianchi Fasani



The new "Coretters" drill head. Photos by G. Lawer and B. Seth



CB, GBF, BS & MH; LDC, 2.1.2026

