

Little Dome C

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

Situation Report #26, 12th December 2025

Personnel @LDC:

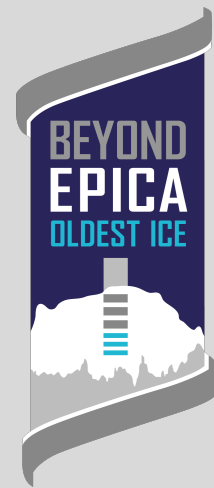
Carlo Barbante (UNIVE, CNR-ISP, PI in the field), Gianluca Bianchi Fasani (ENEA, Camp Leader), Katrin Ederer (AWI), Matthias Hüther (AWI, Chief Driller), Marion Lahuec (IPEV), Gunther Lawer (AWI), Johannes Lemburg (AWI), Barbara Seth (UNIBE), Philippe Possenti (CNRS), Chiara Venier (CNR-ISP), Sergio Zannini (ENEA), Mohammad Vafadarmianvelayat (AWI)

Personnel @DC:

Iben Koldtoft

Weather at LDC: sunny and cold

Meteo at DC 09 pm: T = -32.9°C, Wind speed = 8 kt, Windchill T = -43.8°C, Humidity = 69 %



The atmosphere at LDC remains highly focused, since the Beyond EPICA team presses forward into the second, crucial phase of the deep drilling campaign. Today has brought significant and promising improvements to our procedures, fueling a strong sense of optimism across the field.

We are continuing with the painstaking process of tuning and adjusting the drilling operations, ensuring that all systems are perfectly aligned for the next major phase. These days of methodical adjustments are essential, and the progress made on December 12th was particularly heartening.

In the morning, we improved the deviation tool even more in order to cut more efficiently into the wall of the bore hole: we sharpened the outer edges of the cutter knives. Then we started the fourth attempt.

As yesterday evening, the stick slip of the antitorque was much smaller than before. However, the current of the motor is still quite low (around 5 Amps) and, hence, does not tell us about any progress down in the hole. Our Danish colleagues confirmed that this is pretty normal, therefore: patiently milling down and up and after a while testing the ledge!!!

But LDC is more than just a scientific outpost; it's a temporary home. In a moment of beautiful shared humanity, the team took time out from the deep ice to focus on the surface, raising our annual Christmas Tree. This small, brightly decorated sentinel, standing against the vast Antarctic white, is more than just a decoration—it's a tiny beacon sent from the heart of Little Dome C, conveying a simple, powerful message of peace to the world.

Looking ahead, tomorrow brings both farewells and fresh arrivals. The field is preparing to bid a fond *arrivederci presto* to Chiara and Carlo will begin their journey back from LDC, after assembling, tuning and testing all the equipment in the science trench. To mark their departure and celebrate their invaluable contributions, Barbara baked two absolutely gorgeous farewell cakes. At the same time, we eagerly await the arrival of Iben at the camp tomorrow. Iben will bring renewed energy and expertise to the Science Trench, ensuring the readiness of our sensitive laboratory space for the moment those first, precious deep ice samples begin to emerge. The cycle of the campaign continues, bringing new faces and new momentum.





Gunther sharpening the outer edges of the cutters on the drill head. Pictures: B. Seth Photo by B. Seth.



Camp Life. Chiara, Barbara, and Marion proudly showing off the new LDC Christmas tree. The tree was harvested from the Little Dome C ice forest. Photo by J. Lemburg.





Chiara, Barbara, and Carlo, with the exquisite farewell cake (baked by Barbara). Photo by M. Lahuec.

CB, GBF, BS & MH; LDC, 12.12.2025

