

Little Dome C

Beyond EPICA Oldest Ice Drilling Site (75.29917 °S, 122.44516 °E) – Season 2022/23

Situation Report #13, 15 December 2022

Personnel @LDC:

Romain Duphil (IGE), Romilly Harris-Stuart (LSCE), Gunther Lawer (AWI), Matthias Hüther (AWI), Julien Westhof (UCPH), Martin Leonhardt (AWI), Frank Wilhelms (AWI), Giuditta Celli (UNIVE, ISP), Johannes Lemburg, (AWI), Rob Mulvaney (BAS), Saverio Panichi (ENEA), Michele Scalet (ENEA), Andrea Devito (ENEA)

Personnel @DC:

Markus Grimmer (UNIBE), Florian Krauß (UNIBE)

Weather at LDC 5 pm: sunny

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



Great progress with the new drill setting today. All the work done is giving good results in terms of drilling yield and ice core quality. We are all very happy for the coming days.

In Concordia cold lab things are also going well. Following the last fine tuning steps in the last days we processed the first 18m of ice core today (DEP measurement-Swiss saw-ice Core Storage). Everything worked well and we developed an efficient handling routine for the next weeks.

What we did today:

- 6 runs in total: first yielded 2.45 m; second 2.63 m; third 2.91 m; fourth 3.05 m; perception that run time is too long - changed to head with higher pitch; fifth 0.17 m; changed to step cutters; sixth 2.23 m
- besides drilling a lot of modifications to make the surface environment workable: work on the core extraction system, liquid system, ventilation of the drill tent, repair of the chips melter (pig) + mounting hoses for liquid drainage and water drainage
- replaced 2 boosters
- arranged processing area with Swiss saw and DEP at DC and put it operational

Drillers depth: 166.90 m

Delta D: 13.59 m

Loggers depth: 172.60 m

Delta D: 13.53 m





Left. The DEP setup in the cold lab of Concordia. Right. A detail of the the temporary core storage facility in the cold lab in Concordia.

FW & RM, 15.12.2022

