

Little Dome C

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

Situation Report #15, 17 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



We had a bad day today, and drilling stopped because of problem with the motor. We are working hard to fix it, while we continue with the logging and optimization of the procedure.

What we did today:

- first run stopped due to high current after 1.58 m
- during the second run in the morning we observed high current while idling in the liquid: retrospective the problem developed over several runs
- pulled up and observed very noisy electronics when running on surface
- we assume that either the harmonic drive is broken oder the lowermost bearing
- disassembled electronics to locate problem in detail: but no spares have been sent
- started to mount other electronics kit
- full polarimetric ApRES radar at site R0

Drillers depth: 181.34 m

DeltaD: 1.50 m

Loggers depth: 186.97 m

DeltaD: 1.58 m

Processors depth: 50 m

DeltaD: 32 m





The cup of the gear with lot of metal shards from screws, bearing-balls and bearing cages mixed with the oil.

FW & RM, 17.12.2022

