

Cryostat Status

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cryostat is ready for detectors,
some small works are still to be done

History:

- cool down in November
- LAr filling in December
- integration into slow control
- since then tuning of parameters and integration of water drainage

Insulation vacuum:

- pressure before cool down $\sim 1\text{E-}5$ mbar
- pressure now $\sim 2\text{E-}8$ mbar
- outgasing currently $\sim 4\text{E-}7$ mbar*l/sec (2 weeks before $p > 1\text{E-}4$ mbar)

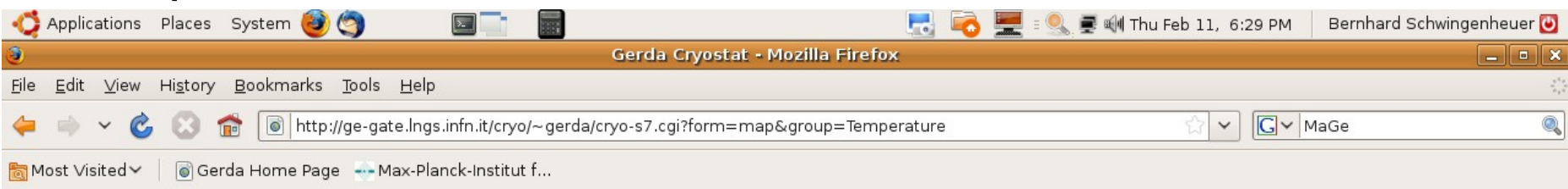
Pressure control:

- worked very well during cool down
- small problem with readout of transmitters in January due to bug in PLC code, fixed now, added a 3rd transmitter

Level control:

- swimmer mechanically blocked, 10 cm below nominal level
- “condensation” devices not very reliable, depend on ambient temp.
- radar is working
- no refilling needed since we operate without evaporation

Temperature control:



GERDA cryostat Temperature

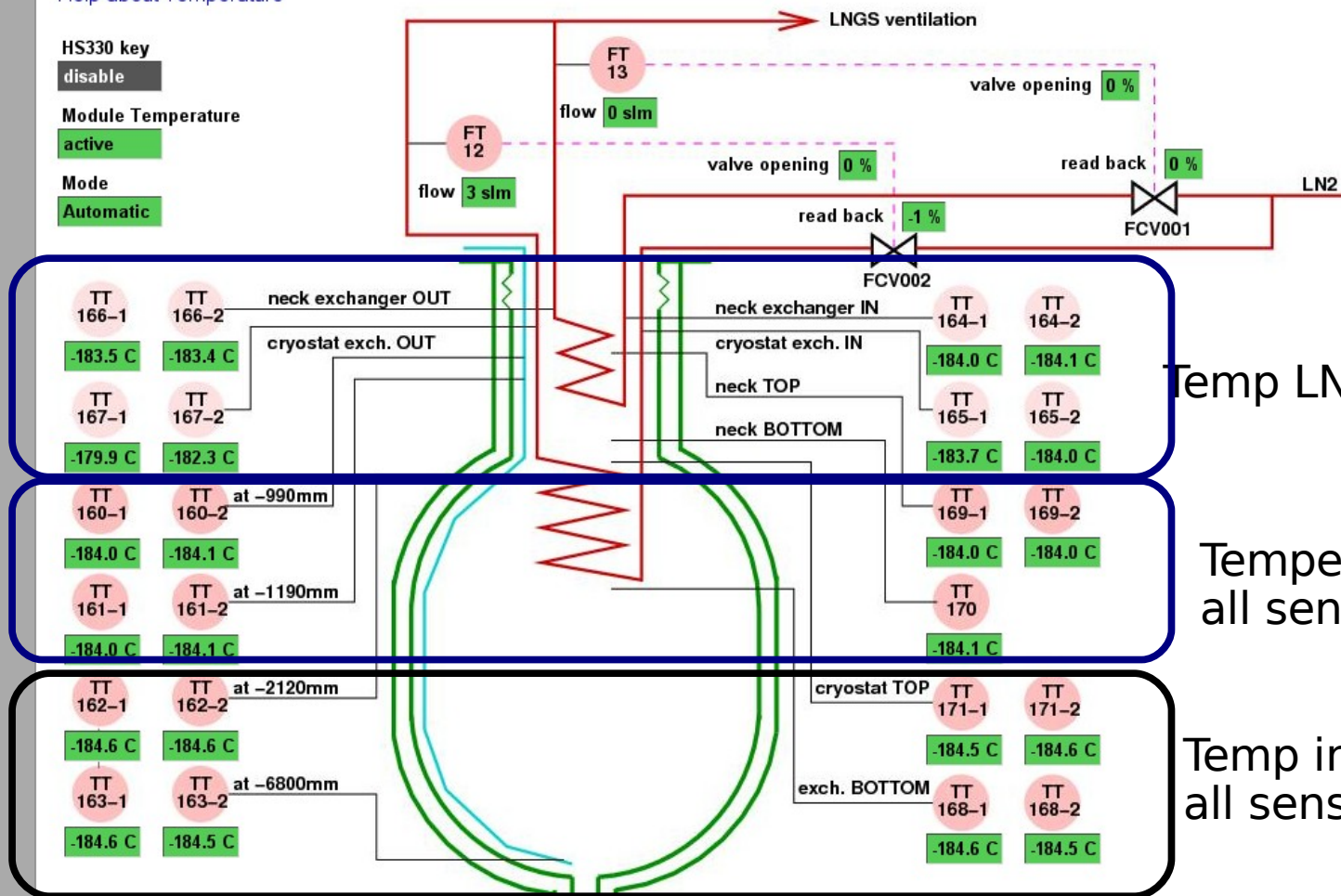
Status date: 2010-02-11 18:29:18
Select group: Water Temperature Level Pressure Vacuum Safety
[Help about Temperature](#)

HS330 key
disable

Module Temperature
active

Mode
Automatic

stable with nitrogen flow ~ 130 l/min gas
(heat loss from cryostat + piping)



Temp LN2 inlet and outlet

Temperature in neck
all sensors show same T

Temp in cryostat constant
all sensors show same T

by adjusting the flow through FCV001: set T in neck and P gas
by adjusting the flow through FCV002: set T in cryostat

Temperature Control (continued):

- temperature in main volume constant (no gradient) --> large convection ?
- temperature in neck can be adjusted a little bit higher (0.3 degrees)
- no argon losses, pressure below 1.2 bar (abs)

Water Control (water tank drainage and heat exchanger circuit):

- pipe from water pump to GNO pits is missing (got permission 2 weeks ago)
- some small works to connect compressed air + power to water drainage valves
- finalize logic: when to switch on our water pump, when to stop pumping to GNO pits (should be finalized before water tank is filled)

Expert shifts:

- since a few weeks we have a shift plan (organized by Matthias Junker)
- experts are notified by email+SMS in case of problems
- soon we expect other people to also participate in shifts

To be done:

- work on the Water Control as discussed above and maintenance