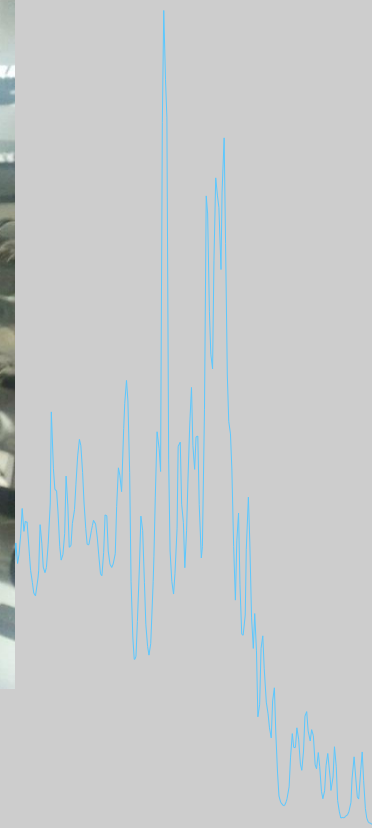


Unbreakable Prodigy ?

Juraj Bella

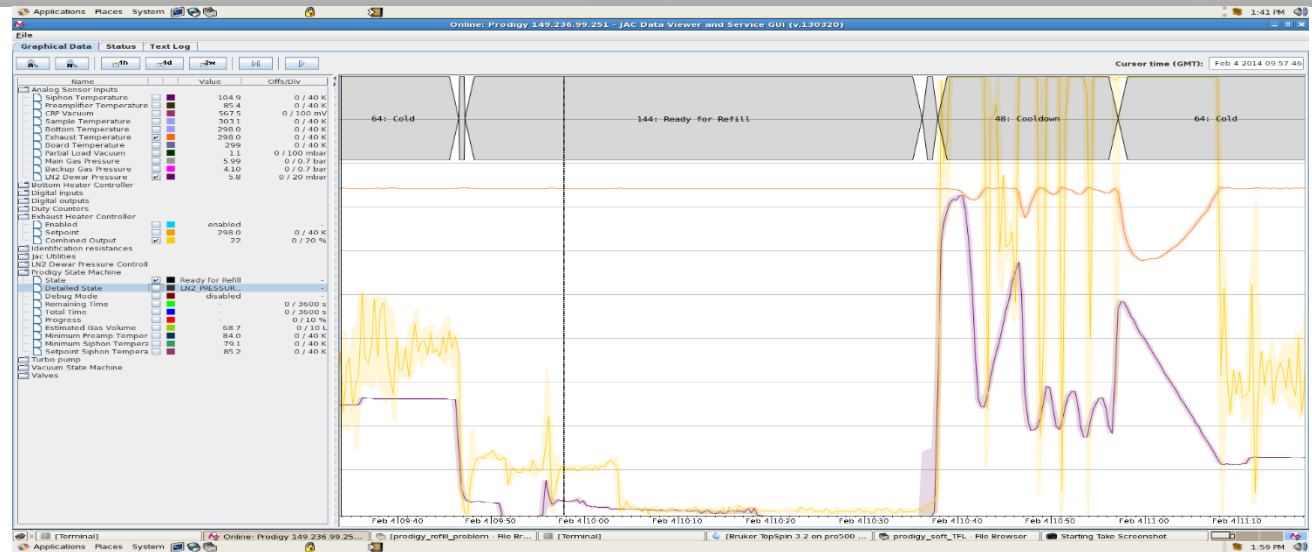


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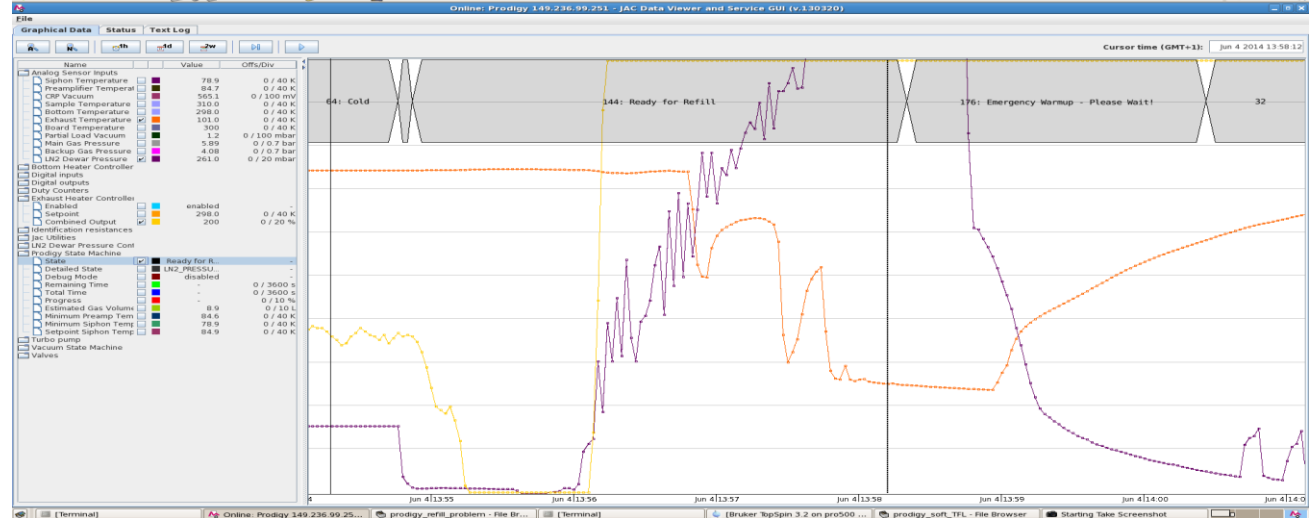
Example of normal & bad LN2 refill:



Dewar pressure:
DP 6-8 mbar
(purple)
Exhaust temp:
298 K
(orange)



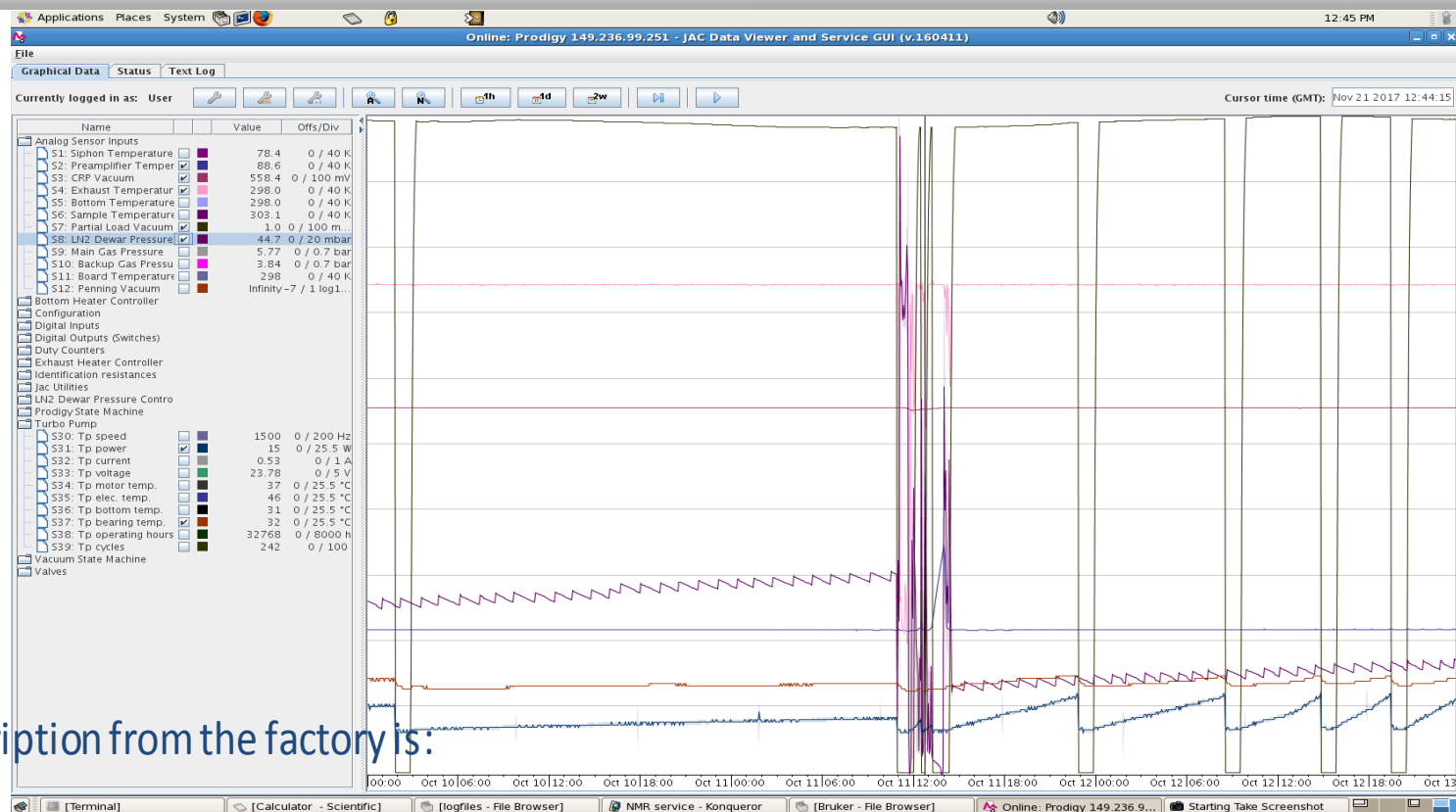
Dewar pressure:
DP 260 mbar !
Heater – 200 % !
Exhaust temp:
Below 100 K !



Possible consequences of careless LN2 refills:



Roughing
pump -
Green
Turbo
pump -
Blue
DP -
purple



The failure description from the factory is:

The C1 plug and the vacuum valve was leaking -> replaced; the vacuum sensor had a shortcut and was defective -> replaced; the preamp sensor showed a false value, so it had to be replaced; probe full NMR test passed; cleaned and tested

Attempts to revitalise vacuum by purging:



Purging the probe by dry nitrogen gas helped for about a week but then failed again and again.

Prodigy Cryoplatform Service.

- 500 installed in Dec 2013
- used from Jan 2014
- Serviced DIY in 2017
- 400 installed in May 2014
- Not serviced yet
- Turbo pump 35,000 hours
- Roughing pump 1,700

