Beamline Status

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Target

Installed S-series into ISIS in Dec. 2014:

- 4.3M successful pulses; expect 5M+
- Stable running at 30 deg.C
- Allowed to take 2V loss at 64/50 Hz
- Regular beam-bump tuning sessions
- Concern about continuing losses in readout fibres
  - Loopback monitoring restarted
  - Restart target run-in activity (R78)
  - Changed gains in HW and swapped fibres - stabilised

Overnight "standby" regime implemented with shifters stopping and waking target

Shifter training is mandatory!

Decay Solenoid

- DS Compressor maintenance in August, include an early annual service to carry through to end StepIV, went awry; after restart suffered mysterious drops in Helium level traced to a faulty level meter.
- DS Power Supply returned during the spring running, and the DS used in running since.
- Improved alarm limits have reduced false alarms
- Overnight "standby" regime in place
- Occasional instability seen in fridge in Dec. (no ALH most of that run)
- Gas cleaned over Christmas, but fridge tripped off by compressed air failure mid-January, turbines were reluctant to restart. Not something to repeat!

PA / BS / Diffuser

- PA had the 29 mm slab not correctly reading out as being raised. Not reproducible during shutdown. I've changed a couple of limit switches and improved their alignment. Readout issues believed to have been a dodgy electrical connection.
  Then yesterday all the readout seemed to have stopped working... I hope this is a C&M issue.
- BS sprang a leak in one of the circuits causing it to droop open – fixed during annual service.
- Diffuser had damaged electronics in controller repaired. Towards the end of the last run iris 4 ceased to open fully. Not seen this problem since (without field), and been unable to repeat with field without SSU.

Conventional Magnets - 1

Currents now set via Run Control and overnight "standby" regime agreed

Earth-leakage measurements are being made; show ...something. Predominantly a dependence on water resistivity.

Calibrations of the dipole and DS read-back currents checked and corrected as needed.

Conventional Magnets - 2

- Known issue with limited cooling water
  - Trench water system working – gets the heat from the magnets into the roof water ("process water")
  - Replacement "Manager" now steps up cooling power through both chillers on roof; and also reports problems on the display outside the MLCR
  - Have managed to dissipate an extra 195kW from the magnets without worrying the cryo-compressors – compared with barely managing 70kW last cycle (when we were down a chiller but couldn't tell).
  - Have now lost chiller 1 twice: "safe" running still depends on alert shifter response to working alarms.
  - Moving conventional magnets to loading-bay chiller should improve both resilience and margins during May run

BLOC roster

Showstopper for March running is lack of trained BLOCs and very few volunteers. Piggyback training on early March run.

STILL remains a potential showstopper – nearly had to cancel several shifts already.

Economic pressure is to take shifts, not BLOC. We now allow BLOCs to take the day shift – with the rider that *if they are called out overnight they can skip next day's shift.*

With 16/7 running, the only scheduled BLOC interventions are associated with the Wednesday maintenance period...

...the rest of the time it is "on-call"

Still need new volunteers to cover May run

Future work:

Short Term:

- Reinstate R78 target activity
- Extended list in MICEmine #1892

Longer Term:

- Chilled water – transfer heat load to chiller in loading bay?
- Loss of Target System expertise
- Maintaining BLOC expertise