



Beamline Status

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Decay Solenoid / PA / BS / Diffuser

- DS Compressor and main fridge serviced separately in January.
- DS Power Supply returned during the spring running
- Improved alarm limits have eliminated false alarms
- Overnight "standby" regime in place
 - No significant issues reported this cycle.
- DS Compressor maintenance in August, to include an early annual service to carry through to end StepIV



Conventional Magnets

Currents now set via Run Control and overnight “standby” regime agreed

- Known issue with limited cooling water flow
 - downstream quads restricted in current
 - significant water works upcoming
- During MDR a long-standing issue in Q1 supply went OTT; replacement supply leaked water into Q2 supply killing the latter. (Lesson: check spares before storage!)
- Continuing glitches in water to both magnets and supplies, require “manual” oversight from MLCR shifters and staff, and the chillers (ISIS water at 30°C at one point).



Target - 1

Installed S-series into ISIS in Dec. 2014:

- 2.5M 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

Overnight “standby” regime implemented with shifters stopping and waking target

Shifter training is mandatory!



Target - 2

Crash of controller<->server USB link last Friday (at suitable point in BLOC training!).

The target server couldn't be restarted and we had to bring in and have Ed remotely re-configure the R78 unit:

http://micewww.pp.rl.ac.uk/projects/computing-software/wiki/Debrief_TargetComputerFailure

Post-mortem continues...

Situation with other spares (VME crate, Xantrexes, etc.) is a concern - we have to take from R78, and spare target mechanisms still need to be prepared...



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 for autumn running - nearly had to cancel several shifts already.

Estimate a pool of 5 schedulable BLOCs (and some reserves) - have 4. Just don't have the local, experienced people (or many alternative candidates).

Proposed next training cycle:

- **ISIS & DSA: (one half-day of) 23rd August**
- **Beamline etc.: (another half-day in) late August**
- **Target/beambump (one half-day in) September**



Safety and Beamline Preparation

We have got permission to streamline the beamline start-up/shutdown (“standby”) by:

- allowing shifters to wake up target
- keeping the conventional magnet supplies continuously powered in remote mode
- leaving out the the beamstop mechanical restraint between shifts

Overt assumption that equipment is only driven from the MLCR, whence people know what is going on in the Hall!

Reduce need for on-site BLOC cover and Controlled Entries.

This works really well during unbroken running.

But the mess we've had this user cycle has, er, *alienated* those that have taken on the role.



"Oversight Environment"

Clunky phrase: includes software layers (EPICS, ALH), MLCR facilities (& beyond) and the *PEOPLE*. I believe it is NOT "fit for purpose."

Some things aren't monitored, others aren't in the Alarm Handler, some items in the Alarm Handler don't actually alarm (water flow trips). If the computers aren't doing the monitoring then the people *must*, but many are inexperienced and overwhelmed by the training (if they get it). Checklists are an aid, but only if followed - and only a few exist.

It took 6 days before anyone noticed Q2 was dead, with the MLCR running and often staffed.

Less than a week after we covered this at the last VC, I arrived at the MLCR (for other reasons) to find Q6 in a tripped state. It still took 35 minutes to persuade the 2 shifters and MOM to investigate... plenty of time for the issue to escalate. Not the only occurrence. **MICE must allocate sufficient resources**



Future work:

- Cleanup of R78 target controls (DL)
- Repeat earth leakage measurements on quads
- Water leaks in magnets: will leave as-is
- Linde Control PC upgrade
- Installation of pressure transducer to monitor high pressure/purity compressed air state from outside MICE Hall
- Extended list in MICEmine #1854
- Chilled water changes - **BIG**.