



Project Manager's Report

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Overview

1. Liquid H₂
2. Trackers
3. Superconducting magnets
4. Data-taking.

H2 system

Now fully operational – satisfyingly boring.

- New internal pipework
- New ‘quench’ line
- New vent valves (lift plate design)
- ISIS Safety approval granted.
 - Huge effort from all LH2 team
 - Boehm, Tucker, Warburton, Kurup, Francini,
 - Top level – Bowden, Wark, Thomason, ISIS H2.
- Leak checking 10^{-8} level – faulty ‘o’rings found and replaced.
- Slightly slower to fill than desired.

Trackers

- Huge workload completed over summer processing cryostats after cold head refurbishment.
- M Uchida, P Kyberd, D Adey.
- Many problems solved
 - Dead channel impact minimised – Melissa, Paul
 - Re-calibration, Dave and ongoing Melissa, Paul, others?
- Hardware work ‘complete’
- Software in working condition but work ongoing.
- Calibration runs currently requiring higher statistics than previously.

Superconducting magnets

SS magnet re commissioned 9th to 18th August

- Smooth re-start – short term problems with noise on SSD QPS signals – reduced by running.
- problem in di/dt sensing – traced to connector and remediated.

Magnet run-up for data-taking ran to plan.

- SSD M2 ramp Thursday 5th October.

FC magnet – no current problems except

slight leak from helium volume into insulation volume. Not currently problematic



Data-taking

- ~~All~~ Most *All* shifts full
 - excellent response from shifters.
- BLOCs required towards end of run.
- Please make sure MiceAdmin know about your accommodation requirements.
- Aim generally 1M, 1M, 2M triggers at 3,6,10mm emittance
- Currently achieving approx. 2x in available time.
- Allows some contingency for ‘problems’ eg ISIS out for 4 hrs.
- Hard to accelerate schedule without magnet ramps in the middle of the night.



Schedule 2017/02

04-Oct-17	Wednesday	00:00	Full	Off	Flip-mode setting 2: data taking	Flip mode
		08:00	Full	Off	140 MeV/c data taking; ramp channel to 0A; intervention by R.Hale for solenoid mode mode; prepare to operate SSD(M2)	Flip mode/Field off (contingency)
	SF, prep	16:00	Full	Off	Field-off scattering/contingency	Field off (contingency)
05-Oct-17	Thursday	00:00	Full	Off	Field-off scattering/contingency	Field off (contingency)
	SSD M2	08:00	Full	Off/on	Ramp to solenoid-mode, SSD(M2)-on setting 1 optics; data taking	Field off/solenoid mode
		16:00	Full	On	Soln-mode, SSD(M2)-on setting 1: data taking	Solenoid mode
06-Oct-17	Friday	00:00	Full	On	Soln-mode, SSD(M2)-on setting 1: data taking	Solenoid mode
		08:00	Full	On	Soln-mode, SSD(M2)-on setting 1: data taking	Solenoid mode
		16:00	Full	On	Soln-mode, SSD(M2)-on setting 1: data taking	Solenoid mode
07-Oct-17	Saturday	00:00	Full	On	Soln-mode, SSD(M2)-on setting 1: data taking	Solenoid mode
	JC	08:00	Full	On	Ramp to solenoid-mode, SSD(M2)-on setting 2 optics; data taking	Solenoid mode
		16:00	Full	On	Soln-mode, SSD(M2)-on setting 2: data taking	Solenoid mode
08-Oct-17	Sunday	00:00	Full	On	Soln-mode, SSD(M2)-on setting 2: data taking	Solenoid mode
		08:00	Full	On	Soln-mode, SSD(M2)-on setting 2: data taking	Solenoid mode
		16:00	Full	On	Soln-mode, SSD(M2)-on setting 2: data taking	Solenoid mode
09-Oct-17	Monday	00:00	Full	On	Soln-mode, SSD(M2)-on setting 2: data taking	Solenoid mode
	JB	08:00	Full	On	Ramp to solenoid-mode, SSD(M2)-on setting 3 optics; data taking	Solenoid mode
	AB arrives	16:00	Full	On	Soln-mode, SSD(M2)-on setting 3: data taking	Solenoid mode
10-Oct-17	Tuesday	00:00	Full	On	Soln-mode, SSD(M2)-on setting 3: data taking	Solenoid mode
		08:00	Full	On	Soln-mode, SSD(M2)-on setting 3: data taking	Solenoid mode
		16:00	Full	On	Soln-mode, SSD(M2)-on setting 3: data taking	Solenoid mode
11-Oct-17	Wednesday	00:00	Full	On	Soln-mode, SSD(M2)-on setting 3: data taking	Solenoid mode
	JB, JC, AB	08:00	Full	On	Ramp to 0A; solenoid to flip, 2 magnet shifts. Ramp to baseline flip-M2D optics setting 1; data taking	Solenoid mode/Flip mode
		16:00	Full	On	Flip-mode, SSD(M2)-on setting 1: data taking	Flip mode
12-Oct-17	Thursday	00:00	Full	On	Flip-mode, SSD(M2)-on setting 1: data taking	Flip mode
		08:00	Full	On	Flip-mode, SSD(M2)-on setting 1: data taking	Flip mode
		16:00	Full	On	Flip-mode, SSD(M2)-on setting 1: data taking	Flip mode
13-Oct-17	Friday	00:00	Full	On	Flip-mode, SSD(M2)-on setting 1: data taking	Flip mode
	JC	08:00	Full	On	Ramp to flip mode setting 2; data taking	Flip mode
		16:00	Full	On	Flip-mode, SSD(M2)-on setting 2: data taking	Flip mode
14-Oct-17	Saturday	00:00	Full	On	Flip-mode, SSD(M2)-on setting 2: data taking	Flip mode
	JB away	08:00	Full	On	Flip-mode, SSD(M2)-on setting 2: data taking	Flip mode
		16:00	Full	On	Flip-mode, SSD(M2)-on setting 2: data taking	Flip mode

14-Oct-17 JB away	Saturday	00:00	Full	On	Flip-mode, SSD(M2)-on setting 2: data taking	Flip mode
		08:00	Full	On	Flip-mode, SSD(M2)-on setting 2: data taking	Flip mode
		16:00	Full	On	Flip-mode, SSD(M2)-on setting 2: data taking	Flip mode
15-Oct-17	Sunday ??Who??	00:00	Full	On	Flip-mode, SSD(M2)-on setting 2: data taking	Flip mode
		08:00	Full/empty	On	Empty absorber, flip-mode, SSD(M2)-on setting 2: data taking	Flip mode
		16:00	Empty	On	Flip-mode, SSD(M2)-on setting 2: data taking	Flip mode
16-Oct-17	Monday	00:00	Empty	On	Flip-mode, SSD(M2)-on setting 2: data taking	Flip mode
		08:00	Empty	On	Empty absorber, flip-mode, SSD(M2)-on setting 2: data taking	Flip mode
		16:00	Empty	On	Flip-mode, SSD(M2)-on setting 1: data taking	Flip mode
17-Oct-17 JB, JC.	Tuesday	00:00	Empty	On	Flip-mode, SSD(M2)-on setting 1: data taking	Flip mode
		08:00	Empty	On	Ramp channel to 0A- 2 magnet shifts, ramp to solenoid-mode, SSD(M2)-on	Solenoid mode/Flip-mode
		16:00	Empty	On	Soln-mode, SSD(M2)-on setting 1: data taking	Solenoid mode
18-Oct-17	Wednesday	00:00	Empty	On	Soln-mode, SSD(M2)-on setting 1: data taking	Solenoid mode
		08:00	Empty	On	Ramp to solenoid-mode, SSD(M2)-on setting 2 optics; data taking	Solenoid mode
		16:00	Empty	On	Soln-mode, SSD(M2)-on setting 2: data taking	Solenoid mode
19-Oct-17	Thursday	00:00	Empty	On	Soln-mode, SSD(M2)-on setting 2: data taking	Solenoid mode
		08:00	Empty	On	Ramp to solenoid-mode, SSD(M2)-on setting 3 optics; data taking	Solenoid mode
		16:00	Empty	On	Soln-mode, SSD(M2)-on setting 3: data taking	Solenoid mode
20-Oct-17 JC away	Friday	00:00	Empty	On	Soln-mode, SSD(M2)-on setting 3: data taking	Solenoid mode
		08:00	Empty	On/off	Ramp down	ramp down
		16:00	Empty	Off	Field-off scattering/contingency	Field off (contingency)
21-Oct-17	Saturday	00:00	Empty	Off	Field-off scattering/contingency	Field off (contingency)
		08:00	Empty	Off	Field-off scattering/contingency	Field off (contingency)
		16:00	Empty	Off	Field-off scattering/contingency	Field off (contingency)
22-Oct-17	Sunday	00:00	Empty	Off	Field-off scattering/contingency	Field off (contingency)
		08:00	Empty	Off	Field-off scattering/contingency	Field off (contingency)
		16:00	Empty	Off	Field-off scattering/contingency	Field off (contingency)
23-Oct-17	Monday	00:00	Empty	Off	Field-off scattering/contingency	Field off (contingency)
		08:00	Empty	Off	Ramp to 2017-02-3; 140 MeV/c data taking	Solenoid mode
		16:00	Empty	Off	140 MeV/c data taking	Solenoid mode
24-Oct-17	Tuesday	00:00	Empty	Off	140 MeV/c data taking	Solenoid mode
		08:00	Empty	Off	Switch to 2017-02-2; 200 MeV/c data taking	Solenoid mode
		16:00	Empty	Off	200 MeV/c data taking	Solenoid mode
25-Oct-17	Wednesday	00:00	Empty	Off	200 MeV/c data taking	Solenoid mode
		08:00	Empty	Off	2 magnet shifts - ramp down and up.	Solenoid mode/Flip-mode
		16:00	Empty	Off	Flip-mode setting 1: data taking	Flip mode
26-Oct-17	Thursday	00:00	Empty	Off	Flip-mode setting 1: data taking	Flip mode
		08:00	Empty	Off	Switch to 2017-02-4; 140 MeV/c data taking	Flip mode
		16:00	Empty	Off	Flip-mode setting 2: data taking	Flip mode
27-Oct-17	Friday	00:00	Empty	Off	Flip-mode setting 2: data taking	Flip mode

ISIS 2017/03

Cost

Currently forecasting an underspend this FY.

- Additional STFC staff costs can be accommodated within predicted underspend.
- ISIS purchased 4 tetrodes/3 triode glasses. (194k capital)

STFC staff availability will require discussion

- PPD are expecting to begin to recover staff starting now.
- No guarantee staff we want will be available.