



Project Manager's Report

Colin Whyte

H2 system

LH2 project complete

Was fully operational – satisfyingly boring.

- Slightly slower to fill than desired.
- Data-taking excellent
 - All Flip and solenoid mode data with LH2 full completed
 - M2 off & M2 on – no issues with M2 itself
 - SSD pressure rises with M2 on when main coil field above 2T. SSD magnet is stressed.
 - Two flip mode settings complete with LH2 empty
- unitl....
 - ISIS problems, early end to cycle.
- Paper in preparation – 1st draft mid-December

Trackers

Hardware

Dave Adey – Melissa Uchida, Paul Kyberd, Chris Hunt

- Increased number of dead channels.
- Temperature margin reduced.
- Extensive work required for manual re-calibration x2.
- Regulation set point on 1 cassette required after ISIS2017/02.
- Manual re-cal for only 1 cryostat. – in progress.
- Cal for ISIS 2017/02 now complete
 - reprocessing in progress
 - Improvement seen.

Software

- Adam Dobbs moving on – replaced by
 - Paolo Francini, Durga Rajaram
 - Chris Hunt –interesting new ideas on more sophisticated cuts.

Superconducting magnets

FC magnet

- no current problems.
- Pumped out insulation volume during shutdown, pressure now good. Probable very slight internal helium leak.

SS magnet re commissioned 9th to 18th August

- Magnet run-up for data-taking ran to plan.
 - No problems during ISIS 2017/02
- Adsorber change 1st and 2nd November,
 - 8 adsorbers changed, all checked for oil contamination at outlet – none found
 - SSU CC5 poor performance – full autopsy on CC5 adsorber, no oil contamination at outlet.

SSU CC5

- Reduced cooling power. Heater on-time reduced from 60% to 20%
- J. Boehm diagnosis – damaged/compromised disc valve in cold head? Cryomech diagnose N₂ contamination – JB unconvinced but wavering.
 - Operated coldhead without gas pressure from compressor, 1 min as recommended by Cryomech.
 - Reduced compressor operating pressure to reduce load on CC5 coldhead.
 - 3 purge/pressurize cycles to clean helium gas in compressor/cold head cycle.
 - Compressor off for 1hr to allow coldhead to warm – possible route to decontamination.
- Tested SSU to operating current
 - Slight, short lived pressure rise in helium volume – magnet cooling is marginal but stable.
 - Magnet is safe for use in ISIS 207/03.
 - Magnet is safe even if CC5 degrades further and must be switched off
- Prepared to change CC5 if necessary.
 - 1 day project

ISIS 2017/03

- Almost all shifts full
 - excellent response from shifters.
 - Tight timetable.
- Aim generally 1M, 1M, 2M triggers at 3,6,10mm emittance
- Hard to accelerate schedule without magnet ramps in the middle of the night. Training additional magnet experts.
- Some risk as we have not attempted an extended run of daily magnet changes to date. Pressure on MoM/Magnet experts.
- Progressing very well to date.

SIS Start	End	Day	Activity	Time	Status	Notes		
15-Nov-17	08:00	Wednesday	LH2 empty 2 settings	08:00	LH2 empty	OFF		
	16:00			16:00	LH2 empty	OFF		
	00:00			00:00	LH2 empty	OFF		
	08:00			08:00	LH2 empty	OFF		
16-Nov-17	16:00	Thursday			16:00	LH2 empty	OFF	
	00:00			00:00	LH2 empty	OFF		
	08:00			08:00	LH2 empty	OFF		
	16:00			16:00	LH2 empty	OFF		
17-Nov-17	00:00	Friday			00:00	LH2 empty	OFF	
	08:00			08:00	LH2 empty	OFF		
	16:00			16:00	LH2 empty	OFF		
18-Nov-17	00:00	Saturday			00:00	LH2 empty	ON	
	08:00		08:00	LH2 empty	ON			
	16:00		16:00	LH2 empty	ON			
19-Nov-17	00:00	Sunday	LH2 empty 2 settings	00:00	LH2 empty	OFF		
	08:00			08:00	LH2 empty	OFF		
	16:00			16:00	LH2 empty	OFF		
20-Nov-17	00:00	Monday			00:00	LH2 empty	OFF	
	08:00			08:00	LH2 empty	OFF		
	16:00			16:00	LH2 empty	OFF		
21-Nov-17	00:00	Tuesday			00:00	LH2 empty	ON	
	08:00			08:00	LH2 empty	ON		
	16:00			16:00	LH2 empty	ON		
22-Nov-17	00:00	Wednesday			00:00	LH2 empty	OFF	
	08:00			08:00	LH2 empty	OFF		
	16:00			16:00	LH2 empty	OFF		
23-Nov-17	00:00	Thursday	Absorber change	00:00	Empty	OFF		
	08:00			08:00	Empty	OFF		
	16:00			16:00	Empty	OFF		
24-Nov-17	00:00	Friday			00:00	Empty	OFF	
	08:00			08:00	Empty	OFF		
	16:00			16:00	Empty	OFF		
25-Nov-17	00:00	Saturday		LH M2 empty	00:00	Empty	ON	
	08:00				08:00	Empty	ON	
	16:00				16:00	Empty	ON	
26-Nov-17	00:00	Sunday				00:00	Empty	ON
	08:00				08:00	Empty	ON	
	16:00				16:00	Empty	ON	
27-Nov-17	00:00	Monday			00:00	Empty	ON	
	08:00		08:00		Empty	ON		
	16:00		16:00		Empty	ON		
28-Nov-17	00:00	Tuesday			00:00	Empty	ON	
	08:00		08:00		Empty	ON		
	16:00		16:00		Empty	ON		
29-Nov-17	00:00	Wednesday	LH M2 empty	00:00	Empty	ON		
	08:00			08:00	Empty	ON		
	16:00			16:00	Empty	ON		
30-Nov-17	00:00	Thursday		LH empty, 3 solenoid 2 flip.	00:00	Empty	ON	
	08:00				08:00	Empty	OFF	
	16:00				16:00	Empty	OFF	
01-Dec-17	00:00	Friday				00:00	Empty	OFF
	08:00				08:00	Empty	OFF	
	16:00				16:00	Empty	OFF	
02-Dec-17	00:00	Saturday			LH field off	00:00	Empty	OFF
	08:00					08:00	Empty	OFF
	16:00					16:00	Empty	OFF
03-Dec-17	00:00	Sunday				00:00	Empty	OFF
	08:00		08:00			Empty	OFF	
	16:00		16:00			Empty	OFF	
04-Dec-17	00:00	Monday	LH empty, 3 solenoid 2 flip.	00:00		Empty	OFF	
	08:00			08:00		Empty	OFF	
	16:00			16:00		Empty	OFF	
05-Dec-17	00:00	Tuesday				00:00	Empty	OFF
	08:00			08:00		Empty	OFF	
	16:00			16:00		Empty	OFF	
06-Dec-17	00:00	Wednesday		Absorber change	00:00	Empty	OFF	
	08:00				08:00	Empty	OFF	
	16:00				16:00	Empty	OFF	
07-Dec-17	00:00	Thursday				00:00	Empty	OFF
	08:00				08:00	Empty	OFF	
	16:00				16:00	Empty	ON	
08-Dec-17	00:00	Friday	LH M2		00:00	Empty	ON	
	08:00				08:00	Empty	ON	
	16:00				16:00	Empty	ON	
09-Dec-17	00:00	Saturday				00:00	Empty	ON
	08:00				08:00	Empty	ON	
	16:00				16:00	LH	ON	
10-Dec-17	00:00	Sunday			00:00	LH	ON	
	08:00			08:00	LH	ON		
	16:00			16:00	LH	ON		
11-Dec-17	00:00	Monday		Absorber change	00:00	LH	ON	
	08:00				08:00	LH	ON	
	16:00				16:00	LH	ON	
12-Dec-17	00:00	Tuesday			00:00	LH	ON	
	08:00		08:00		LH	ON		
	16:00		16:00		LH	ON		
13-Dec-17	00:00	Wednesday	Wedge		00:00	LH	ON	
	08:00				08:00	LH	ON	
	16:00				16:00	LH	ON	
14-Dec-17	00:00	Thursday				00:00	???	???
	08:00				08:00	???	???	???
	16:00				16:00	???	???	???
15-Dec-17	00:00	Friday			00:00	ON	ON	
	08:00			08:00	Wedge	ON	Wedge change	
	16:00			16:00	Wedge	ON	Flip-mode, 2017-02-7; data taking	
16-Dec-17	00:00	Saturday			00:00	Wedge	ON	
	08:00			08:00	Wedge	ON	Flip-mode, 2017-02-7; data taking	
	16:00			16:00	Wedge	ON	Wedge change	
17-Dec-17	00:00	Sunday		00:00	Wedge	ON		
	08:00		08:00	Wedge	ON	Flip-mode, 2017-02-8; data taking		
	16:00		16:00	Wedge	ON	Flip-mode, 2017-02-8; data taking		
18-Dec-17	00:00	Monday		00:00	Wedge	ON		
	08:00		08:00	Wedge	ON	Wedge change		
	16:00		16:00	Wedge	ON	Soli-mode, 2017-02-5; data taking		
19-Dec-17	00:00	Tuesday		00:00	Wedge	ON		
	08:00		08:00	Wedge	ON	Soli-mode, 2017-02-5; data taking		
	16:00		16:00	Wedge	???	Wedge change		
20-Dec-17	00:00	Wednesday		00:00	???	???		
	08:00		08:00	???	???	???		
	16:00		16:00	???	???	???		
	00:00		00:00	???	???	???		

Shift blk 1

Shift blk 2

Shift blk 3

Shift blk 4

Shift blk 5

Shift blk 6

Shift blk 7

Straight tracks

Data Plan

ISIS Start 8am		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
15-Nov-17	Wednesday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	Ramp magnets
		16:00	LH2 empty	OFF	Flip-mode, 2017-02-3; data taking
16-Nov-17	Thursday	00:00	LH2 empty	OFF	Flip-mode, 2017-02-3; data taking
		08:00	LH2 empty	OFF	Magnet change
		16:00	LH2 empty	OFF	Flip-mode, 2017-02-4; data taking
17-Nov-17	Friday	00:00	LH2 empty	OFF	Flip-mode, 2017-02-4; data taking
		08:00	LH2 empty	OFF	Magnet change
		16:00	LH2 empty	ON	Soln-mode, 2017-02-5: data taking
18-Nov-17	Saturday	00:00	LH2 empty	ON	Soln-mode, 2017-02-5: data taking
		08:00	LH2 empty	OFF	Ramp magnets down
		16:00	LH2 empty	OFF	
19-Nov-17	Sunday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
20-Nov-17	Monday	00:00	LH2 empty	OFF	
				OFF	Ramp magnets
				ON	Soln-mode, 2017-02-6; data taking
21-Nov-17	Tuesday			ON	Soln-mode, 2017-02-6; data taking
				OFF	Magnet change
		16:00	LH2 empty	OFF	Soln-mode, 2017-02-1; data taking
22-Nov-17	Wednesday	00:00	LH2 empty	OFF	Soln-mode, 2017-02-1; data taking
		08:00	LH2 empty	OFF	Magnet change
		16:00	LH2 empty	OFF	Soln-mode, 2017-02-2; data taking
23-Nov-17	Thursday	00:00		OFF	Soln-mode, 2017-02-2; data taking
		08:00		OFF	Ramp magnets down
		16:00		OFF	
24-Nov-17	Friday	00:00		OFF	
		08:00		OFF	
		16:00	Empty	OFF	
25-Nov-17	Saturday	00:00	Empty	OFF	

empty 2 settings

Site Power Down plus recovery

Absorber change

Straight tracks

Data Plan LH2

		LiH M2 empty	08:00	Empty	ON	Ramp magnets	Shift blk 3
			16:00	Empty	ON	Soln-mode, 2017-02-5; data taking	
26-Nov-17	Sunday		00:00	Empty	ON	Soln-mode, 2017-02-5; data taking	
			08:00	Empty	ON	Magnet change	
			16:00	Empty	ON	Soln-mode, 2017-02-6; data taking	
27-Nov-17	Monday		00:00	Empty	ON	Soln-mode, 2017-02-6; data taking	
			08:00	Empty	ON	Magnet change	
		16:00	Empty	ON	Flip-mode, 2017-02-7; data taking	Shift blk 4	
28-Nov-17	Tuesday	00:00	Empty	ON	Flip-mode, 2017-02-7; data taking		
		08:00	Empty	ON	Magnet change		
		16:00	Empty	ON	Flip-mode, 2017-02-8; data taking		
29-Nov-17	Wednesday	00:00	Empty	ON	Flip-mode, 2017-02-8; data taking		
	ISIS Maintenance	08:00	Empty	ON	Magnet change		
		16:00	Empty	ON			
30-Nov-17	Thursday	00:00	Empty	ON		Shift blk 5	
		08:00	Empty	OFF	Flip-mode, 2016-05-1; data taking		
		16:00	Empty	OFF	Flip-mode, 2016-05-1; data taking		
01-Dec-17	Friday	00:00	Empty	OFF	Flip-mode, 2016-05-1; data taking		
		08:00	Empty	OFF	Magnet change		
		16:00	Empty	OFF	Flip-mode, 2016-05-2; data taking		
		00:00	Empty	OFF	Flip-mode, 2016-05-2; data taking		
		08:00	Empty	OFF	Ramp magnets down	Shift blk 6	
		16:00	Empty	OFF	LiH field off		
03-Dec-17	Sunday	00:00	Empty	OFF	LiH field off		
		08:00	Empty	OFF	LiH field off		
		16:00	Empty	OFF	LiH field off		
04-Dec-17	Monday	00:00	Empty	OFF	LiH field off		
		08:00	Empty	OFF	Ramp magnets		
		16:00	Empty	OFF	Soln-mode, 2016-04-1.2; data taking		
05-Dec-17	Tuesday	00:00	Empty	OFF	Soln-mode, 2016-04-1.2; data taking		
		08:00	Empty	OFF	Magnet change		
		16:00	Empty	OFF	Soln-mode, 2016-04-1.5; data taking		
06-Dec-17	Wednesday	00:00	Empty	OFF	Soln-mode, 2016-04-1.5; data taking		
		08:00	Empty	OFF	Magnet change		
		16:00	Empty	OFF	Soln-mode, 2016-04-1.7; data taking		
07-Dec-17	Thursday	00:00	Empty	OFF	Soln-mode, 2016-04-1.7; data taking		
		08:00	Empty	OFF	Ramp magnets down		
		16:00	Empty	ON			
08-Dec-17	Friday	00:00	Empty	ON			
		08:00	Empty	ON			
		16:00	Empty	ON			
09-Dec-17	Saturday	00:00	Empty	ON			
		08:00	Empty	ON	Magnet change		
		16:00	LiH	ON	Soln-mode, 2017-02-5; data taking		
10-Dec-17	Sunday	00:00	LiH	ON	Soln-mode, 2017-02-5; data taking		
		08:00	LiH	ON	Magnet change		
		16:00	LiH	ON	Soln-mode, 2017-02-6; data taking		
11-Dec-17	Monday	00:00	LiH	ON	Soln-mode, 2017-02-6; data taking		
		08:00	LiH	ON	Magnet change		
		16:00	LiH	ON	Flip-mode, 2017-02-7; data taking		
12-Dec-17	Tuesday	00:00	LiH	ON	Flip-mode, 2017-02-7; data taking		
		08:00	LiH	ON	Magnet change		
		16:00	LiH	ON	Flip-mode, 2017-02-8; data taking		
13-Dec-17	Wednesday	00:00	LiH	ON	Flip-mode, 2017-02-8; data taking		
		08:00	LiH	ON	Ramp magnets down		
		16:00	???	???			
14-Dec-17	Thursday	00:00	???	???			
		08:00	???	???			
		16:00	???	???			
15-Dec-17	Friday	00:00	ON	ON			

Data Plan LiH empty



		Absorber change	08:00	Empty	OFF	Ramp magnets down
			16:00	Empty	ON	
08-Dec-17	Friday		00:00	Empty	ON	
			08:00	Empty	ON	
		LiH M2	16:00	Empty	ON	
09-Dec-17	Saturday		00:00	Empty	ON	
			08:00	Empty	ON	Magnet change
			16:00	LiH	ON	Soln-mode, 2017-02-5; data taking
10-Dec-17	Sunday		00:00	LiH	ON	Soln-mode, 2017-02-5; data taking
			08:00	LiH	ON	Magnet change
			16:00	LiH	ON	Soln-mode, 2017-02-6; data taking
11-Dec-17	Monday		00:00	LiH	ON	Soln-mode, 2017-02-6; data taking
			08:00	LiH	ON	Magnet change
			16:00	LiH	ON	Flip-mode, 2017-02-7; data taking
12-Dec-17	Tuesday		00:00	LiH	ON	Flip-mode, 2017-02-7; data taking
			08:00	LiH	ON	Magnet change
			16:00	LiH	ON	Flip-mode, 2017-02-8; data taking
13-Dec-17	Wednesday		00:00	LiH	ON	Flip-mode, 2017-02-8; data taking
			08:00	LiH	ON	Ramp magnets down
		Absorber change	16:00		???	
14-Dec-17	Thursday			00:00		???
				08:00		???
			16:00		???	
15-Dec-17	Friday		00:00		ON	
		Wedge	08:00	Wedge	ON	Magnet change
			16:00	Wedge	ON	Flip-mode, 2017-02-7; data taking
16-Dec-17	Saturday		00:00	Wedge	ON	Flip-mode, 2017-02-7; data taking
			08:00	Wedge	ON	Magnet change
			16:00	Wedge	ON	Flip-mode, 2017-02-8; data taking
17-Dec-17	Sunday		00:00	Wedge	ON	Flip-mode, 2017-02-8; data taking
			08:00	Wedge	ON	Magnet change
			16:00	Wedge	ON	Soln-mode, 2017-02-5; data taking
18-Dec-17	Monday		00:00	Wedge	ON	Soln-mode, 2017-02-5; data taking
			08:00	Wedge	ON	Magnet change
			16:00	Wedge	ON	Soln-mode, 2017-02-6; data taking
19-Dec-17	Tuesday		00:00		???	Soln-mode, 2017-02-6; data taking
			08:00		???	Ramp magnets down
			16:00		???	
20-Dec-17	Wednesday		00:00		???	
ISIS off			08:00			

Data Plan Wedge



ISIS User Cycle 2017/02: detailed MICE run plan					
Date	Day	Shift	Absorber	SSD(W2)	Shift blk
13-Nov-17	Monday	00:00	LH2 empty	OFF	
14-Nov-17	Tuesday	00:00	LH2 empty	OFF	
ISIS Start Ram					
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
15-Nov-17	Wednesday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
16-Nov-17	Thursday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
17-Nov-17	Friday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
18-Nov-17	Saturday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
19-Nov-17	Sunday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
20-Nov-17	Monday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
21-Nov-17	Tuesday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
22-Nov-17	Wednesday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
23-Nov-17	Thursday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
24-Nov-17	Friday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
25-Nov-17	Saturday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
26-Nov-17	Sunday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
27-Nov-17	Monday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
28-Nov-17	Tuesday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
29-Nov-17	Wednesday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
30-Nov-17	Thursday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
01-Dec-17	Friday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
02-Dec-17	Saturday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
03-Dec-17	Sunday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
04-Dec-17	Monday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
05-Dec-17	Tuesday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
06-Dec-17	Wednesday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
07-Dec-17	Thursday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
08-Dec-17	Friday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
09-Dec-17	Saturday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
10-Dec-17	Sunday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
11-Dec-17	Monday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
12-Dec-17	Tuesday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
13-Dec-17	Wednesday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
14-Dec-17	Thursday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
15-Dec-17	Friday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
16-Dec-17	Saturday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
17-Dec-17	Sunday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
18-Dec-17	Monday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
19-Dec-17	Tuesday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
20-Dec-17	Wednesday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
ISIS off		08:00			
		16:00			

Date	Day	Shift	Absorber	SSD(W2)	Shift blk
20-Nov-17	Monday	08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
		00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
21-Nov-17	Tuesday	00:00	LH2 empty	ON	
		08:00	LH2 empty	ON	
		16:00	LH2 empty	ON	
22-Nov-17	Wednesday	00:00	LH2 empty	???	
		08:00	LH2 empty	???	
		16:00	LH2 empty	???	
23-Nov-17	Thursday	00:00	LH2 empty	???	
		08:00	LH2 empty	???	
		16:00	LH2 empty	???	
24-Nov-17	Friday	00:00	LH2 empty	???	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
25-Nov-17	Saturday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
26-Nov-17	Sunday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
27-Nov-17	Monday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
28-Nov-17	Tuesday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	
29-Nov-17	Wednesday	00:00	LH2 empty	OFF	
		08:00	LH2 empty	OFF	
		16:00	LH2 empty	OFF	

Date	Day	Shift	Absorber	SSD(W2)	Shift blk
08-Dec-17	Friday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
09-Dec-17	Saturday	00:00	Empty	ON	
		08:00	Empty	ON	
		16:00	Empty	ON	
10-Dec-17	Sunday	00:00	Empty	All off	
		08:00	Empty	All off	
		16:00	Empty	All off	
11-Dec-17	Monday	00:00	Empty	All off	
		08:00	Empty	All off	
		16:00	Empty	All off	
12-Dec-17	Tuesday	00:00	Empty	All off	
		08:00	Empty	All off	
		16:00	Empty	All off	
13-Dec-17	Wednesday	00:00	Empty	All off	
		08:00	Empty	All off	
		16:00	Empty	All off	
14-Dec-17	Thursday	00:00	LiH	ON	
		08:00	LiH	ON	
		16:00	LiH	ON	
15-Dec-17	Friday	00:00	LiH	ON	
		08:00	LiH	ON	
		16:00	LiH	ON	
16-Dec-17	Saturday	00:00	LiH	ON	
		08:00	LiH	ON	
		16:00	LiH	ON	
17-Dec-17	Sunday	00:00	LiH	ON	
		08:00	LiH	ON	
		16:00	LiH	ON	
18-Dec-17	Monday	00:00	LiH	ON	
		08:00	LiH	ON	
		16:00	LiH	ON	
19-Dec-17	Tuesday	00:00	LiH	ON	
		08:00	LiH	ON	
		16:00	LiH	ON	
20-Dec-17	Wednesday	00:00	LiH	ON	
		08:00	LiH	ON	
		16:00	LiH	ON	
ISIS off		08:00			
		16:00			

Shift blk 2

Shift blk 3

Shift

Shift blk 6

Shift blk 7

Straight tracks

Ramp to 2017-02-6; 140 MeV/c data taking
Soln-mode, 2017-02-6; data taking
Soln-mode, 2017-02-6; data taking
Switch to 2017-02-1; 140 MeV/c data taking
Soln-mode, 2017-02-1; data taking
Soln-mode, 2017-02-1; data taking
Switch to 2017-02-2; 140 MeV/c data taking
Soln-mode, 2017-02-2; data taking
Soln-mode, 2017-02-2; data taking
Ramp magnets down

ISIS Maintenance

Soln-mode, 2017-03-2; data taking
Magnet change
Soln-mode, 2017-03-3; data taking
Soln-mode, 2017-03-3; data taking
Ramp down
LiH FIELD OFF

Magnet ramp
Flip-mode, 2017-03-3; data taking
Flip-mode, 2017-03-3; data taking
Magnet change
Flip-mode, 2017-03-4; data taking
Flip-mode, 2017-03-4; data taking
Magnet change
Soln-mode, 2017-03-1; data taking
Soln-mode, 2017-03-1; data taking
Magnet change
Soln-mode, 2017-03-2; data taking
Soln-mode, 2017-03-2; data taking
Ramp down

Schedule fall back

Finance

<i>Against budgets</i>	Allocation (ex Over)	Forecast	Variance
MICE Phase 2 (Capital)	194.73	194.27	0.46
MICE Phase 2 (Resource)	39.99	137.31	-97.32
MICE Phase 2 (Operations and Analysis) (inc included)	495.00	390.10	104.90
MICE Common Fund	45.00	45.00	0.00
Total	729.72	721.69	8.03

- Capital now complete.
- STFC staff through Dec/Jan to allow ‘tidy-up’
- Admin to March
 - collaboration meeting in Feb.
 - Equipment from US.
- Additional travel costs added for Nov/Dec.
- Encumbrance included.
- ISIS transfer
 - in progress
 - asset numbers almost complete.

Historical Costs

MICE Total Cost				
2005-2008	10100	£22.249M	Phase 1	
2008/09	2953			
2009/10	3064			
2010/11	3003			
2011/12	3129			
2012/13	2344	£11.746M	Phase 2	
2013/14	3439			
2014/15	3116			
2015/16	2847			
2016/17	2947	£5.644M	Phase 3	
2017/18	2114			
2018/19	434			
2019/20	149			
Total		£39.639M		

		Active Risk	15					13							
		Retired Risk													
ID	Risk Description	Potential impact on project	Risk			Ownership	Proposed Action	Post-risk score			Comment / Conclusion				
			L	I	LxI			L	I	LxI					
MICE 3	Magnetic field effecting operation of electrical equipment relating to the continued operation of the cooling channel magnet systems and detectors.	Inability to operate the cooling channel	5	5	25	MICE - UK / MAP	Installation of a partial return yoke has mitigated the major risk. Movement of the control and power supply equipment to a dedicated room outside of the magnetic field.	1	4	4	Much work has been completed. Non staff risk persists in the event of additional material being required.				
MICE 4	Extended period of re-training for the lattice of magnets.	Timescales for the training period, cost of the amount of LHe required to carry out the training. Expert personnel required to be available for magnet operations over a protracted period of time.	4	5	20	MICE-UK / MAP	Magnet integration task force to define commissioning method to keep schedule and cost to a minimum.	3	4	12	Each re-cool and fill of the Spectrometer Solenoid can take upto 500l LHe, AFC remembers it's training. Each full lattice quench could cost in the region of £7K.				
MICE 8	Resourcing issues from the STFC and national labs	inability to complete significant sections of work on agreed time or cost scales.	4	5	20	MICE - UK / MAP	Realised. Escalation of the issue to the STFC and DOE.	2	4	8	Project scope has changed leading to a different labour profile required to complete the project.				
MICE 16	Failure of a Focus Coil Magnet	Internal cold mass or associated equipment deep within the assembly. LTS leads.	3	5	15	MICE UK	Follow all specific operational aspects as defined by the experts for the superconducting magnet	1	5	5	Investigation and fix would be extremely costly and extensive with regard to schedule.				
MICE 17.1	Failure of Upstream Spectrometer Solenoid Magnet	Internal cold mass or associated equipment deep within the assembly. LTS leads.	4	5	20	MAP	New quench protection system	1	5	5	Has the same design issues as SSD, confidence improving with operation and testing with forces.				
MICE 19	Failure of M2 in SSD.	Reduction in scientific output and resulting cooling effect.	3	4	12	MICE-UK / MAP	Maximise data collection before running M2.	1	4	4	Consider completing data set for one absorber.				
MICE 20	Failure of Helium space feedthrough in SSD.	Reduction in scientific output and resulting cooling effect.	3	4	12	MICE-UK / MAP	Limit number of quenches	1	4	4					
MICE 23	Risk of equipment failure/breakage	Cost of repair/replacement. Time lost during recovery	3	3	9	MICE UK	Spares inventory / proper planned maintenance	3	1	3	to some degree inevitable due to age of equipment				
MICE 24	Problems during magnet string commissioning	Further compromise of SSD / Delays to program	3	5	15	MICE UK	Conservative magnet settings.	3	3	9	Always recognised as a challenge - complicated and exacerbated by SSD situation				
MICE 29	Further compromise of SSD performance	Slower data-taking, more remedial action required	3	5	15	MICE-UK / MAP	Power supply improvements, feedthrough heating improvements.	2	5	10	Anomalous earth leakage and noise seen - now absent, but as yet unexplained.				
MICE 30	Insufficient international manpower available.	Delay in remediation of non-UK assets and associated reduction in effort on other tasks.	4	3	12	MICE-UK / MAP	Discussion with international management to maximise staff availability.	2	3	6	Long standing issue.				
MICE 39	Reduced ISIS beamtime during 2017/02	Insufficient LH2 'empty' data	3	5	15	MICE UK	Operation during ISIS 2017/03	1	5	5	Known ISIS dipole fix in delivery phase				
MICE 40	SSU CC5 further degradation	loss of data during repair	3	4	12	MICE UK	Prepare for CC swap	2	3	6	Mechanical issue may deteriorate at any time				

Risk

Risk

- MICE 40. Inability to certify FC at required pressure
 - no longer relevant
- MICE 28,39. Hydrogen absorber risk – ‘failure to cool’ and ‘delay to data-taking’ both reduced score.
- MICE 39. Reduced ISIS beamtime in ISIS 2017/02
 - Dipole – known problem, solution not yet delivered
 - Power cut – SSE ?
 - Cancelled from ~15th to end of run
 - ISIS 2017/03
 - Power cut – 1 day +

MICE Equipment

US equipment

- RF to CERN.
 - Return unused amplifiers
 - Co-ax 'donated'

UK Equipment

- RF to ISIS. – Triodes.
- Spares to MICE Hall (temporary)
- Some equipment returned to Universities.
- VAT - status