# MICE Operations

- MOM Roster
- ISIS Schedule
- Running plans to July 2015
- Shift model for July
- On-call and Experts
- Training

Steve Boyd

MOM Rota

MOMRoster

Date From	Date To	MOM
7th January 2015	4th February 2015	Chris Rogers
4th February 2015	4th March 2015	Pierrick Hanlet
4th March 2015	1st April 2015	Yordan Karadzhov
1st April 2015	29th April 2015	Milorad Popovic
29th April 2015	27th May 2015	Paul Hodgson
27th May 2015	24th June 2015	Victoria Blackmore
24th June 2015	22nd July 2015	Ryan Bayes
22nd July 2015	19th August 2015	Paul Hodgson
19th August 2015	16th September 2015	Ed Overton
16th September 2015	14th October 2015	Yordan Karadzhov
14th October 2015	4th November 2015	Melissa Uchida
4th November 2015	2nd December 2015	Victoria Blackmore
2nd December 2015	30th December 2016	Paolo Franchini
4th January 2016	3rd February 2016	Ed Overton
3rd February 2016	2nd March 2016	Ryan Bayes
2nd March 2016	30th March 2016	Paul Kyberd
30th March 2016	27th April 2016	Melissa Uchida
27th April 2016	31st May 2016	Paolo Franchini

ISIS Schedule

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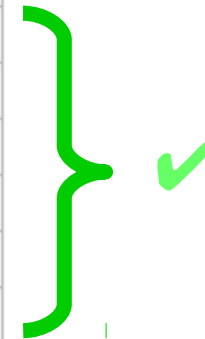
User Period	Start Date	End date	Days
Cycle 2014/03	17/3/2015	1/5/2015	45
Cycle 2015/01a	2/6/2015	5/7/2015	36
RAL Open Week			
Cycle 2015/01b	14/7/2015	24/7/2015	10
Cycle 2015/02	8/9/2015	16/10/2015	39
Cycle 2015/03	3/11/2015	18/12/2015	45
Cycle 2015/04	16/2/2016	1/4/2016	45

DAQ and Readout tests
Tracker integration
TOF calibration
Beamline precommissioning

Shift Model

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Current CHEESE list : 63 shifters

Cycle	Days	Shifts / day	Shifts	# Maintenance Days per week	# MOM Shifts		
2014/03	10	4	40		18		
2015/01a	36	3	98	1	**Shift credit for One MOM Shift**		
2015/01b	10	6	58				
2015/02	39	6	224		0		
2015/03	45	6	258		**#MOM Shifts**		
2015/04	45	6	258		0		
					Total Shifts		
		Total Experimental shift	936				
		# shifts / person			14.8571428571	**Shift block length**	
		# shift blocks / persion			2.9714285714	**5**	
Institute	**Scientists**	**RA + Students**	**MOMs**	**Total**	**Shifts / Institute**	**Shift Blocks per institute**	**Shift blocks per active shifter**
Belgrade	2	2	0	4	59.43	12	3.0
CERN	0	0	0	0	0.00	0	0.0
IHEP	1	1	0	2	29.71	6	3.0
Osaka	0	0	0	0	0.00	0	0.0
Sichuan	1	0	0	1	14.86	3	3.0
Brookhaven	1	0	0	1	14.86	3	3.0
DL	0	0	0	0	0.00	0	0.0
Iowa	1	0	0	1	14.86	3	3.0
LBNL	2	0	0	2	29.71	6	3.0
Liverpool	1	0	0	1	14.86	3	3.0
Milano	1	0	0	1	14.86	3	3.0
Napoli	1	0	0	1	14.86	3	3.0
NIKHEF	1	0	0	1	14.86	3	3.0
Oxford	1	0	0	1	14.86	3	3.0
Pavia	1	0	0	1	14.86	3	3.0
Imperial	4	4	2	10	118.86	24	3.0
RAL	1	0	1	2	14.86	3	3.0
Riverside	1	1	0	2	29.71	6	3.0
Roma	2	0	0	2	29.71	6	3.0
Glasgow	1	1	1	3	29.71	6	3.0
Sofia	2	1	0	3	44.57	9	3.0
Mississippi	3	0	0	3	44.57	9	3.0
Sheffield	1	1	2	4	29.71	6	3.0
Geneva	1	2	1	4	44.57	9	3.0
Strathclyde	1	3	0	4	59.43	12	3.0
Warwick	1	2	1	4	44.57	9	3.0
Brunel	1	2	1	4	44.57	9	3.0
IIT	3	2	1	6	74.29	15	3.0
Fermilab	2	3	1	6	74.29	15	3.0
				74	936.00	189	78
					Total Blocks	189	
					Total Shifts	945	
					Shift Imbalance	-9	

Data-taking to now

March – April : Weekend running

      Debugged DAQ and Run Control
      (Re)commissioned TOF, KL, CKOV and EMR
      Installed and commissioned new trigger board
   TOF calibration and CKOV tuning

June - Now : Nightly running

      Further Development of DAQ, Run Control and
      online reconstruction
      Integration and commissioning of tracker
      Beamline pre-commissioning activities
      Full operation of Step IV detectors & online
      reconstruction with beam
      Tracker alignment

More detail in the MOM talk tomorrow

Shift model in July

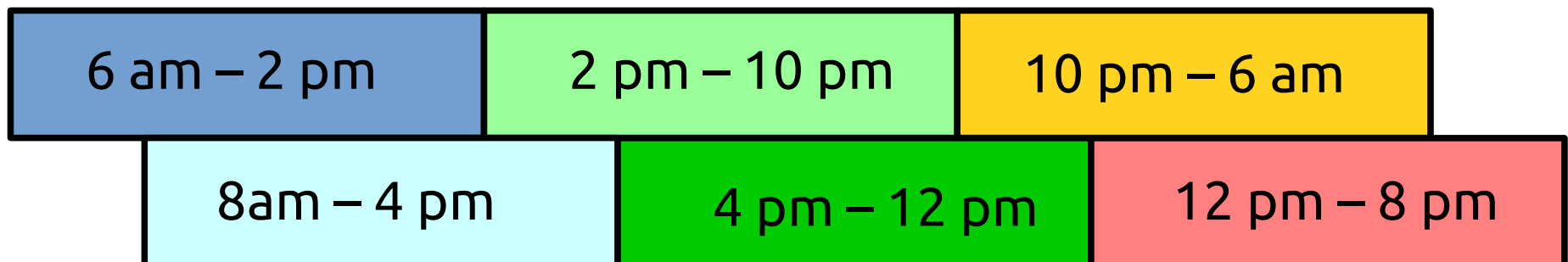▶ Currently : 24/7 with staggered shift streams

6 am – 2 pm	2 pm – 10 pm	10 pm – 6 am

8am – 4 pm	4 pm – 12 pm	12 pm – 8 pm
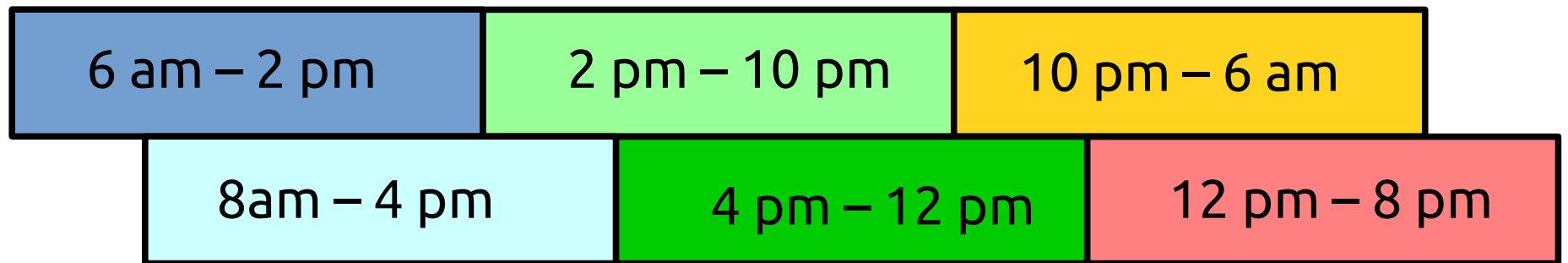
Shift model in July

▶ Proposal : 24/7 with non-staggered shift streams

6 am – 2 pm 2	2 pm – 10 pm 2	10 pm – 6 am 2
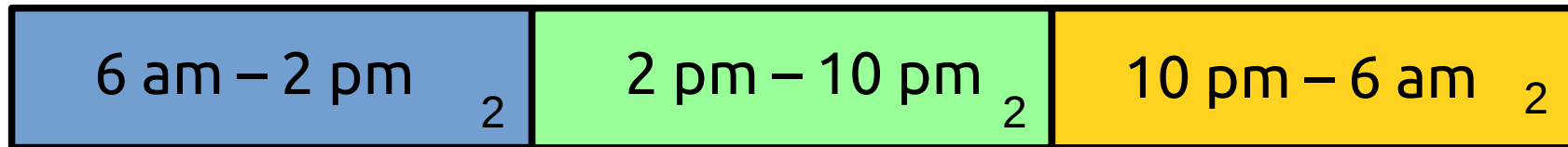
▶ Collision of commissioning/operations in July could make data-taking unstable. Although we've rostered for 24 hour data-taking, what actually happens on a particular shift is dependent on the day's activities.

▶ Operations on a particular day will be defined in the daily run meeting.

▶ Shifters should turn up for their shift assuming that they will be taking data. Full shift credit will be given for turning up for shift.

Cycle 2015/02

▶ Shift allocation for the September User Run will open in July

▶ The first week will be open for academics and scientists at national labs only. Paul and I will monitor the allocation.

▶ Aim for 24/7 running

6 am – 2 pm	2 pm – 10 pm	10 pm – 6 am

8am – 4 pm	4 pm – 12 pm	12 pm – 8 pm

Documentation

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▶ Documentation still needs some work
▶ Elog discipline needs some work as well.
▶ Include as much information about an entry as possible (not just one line)
- Symptoms
- Diagnosis
- Solutions

System	Shifter Documentation	Emergency Instructions	Expert Manual
Beamstop			
Target			
Beamline Magnets			
Luminosity Monitor			
Decay Solenoid			
Diffuser			
CKOV			
TOF			
KL			
EMR			
Trackers			
Spectrometer Solenoids			
Focus Coil			
Hydrogen System			
PPS			
Online Reconstruction		N/A	
Online Monitoring		N/A	

Experts and on-call

▶ Software and Beamline issues during data taking have been served through SOC and BLOCs

▶ Staffing the SOCs and BLOCs has been tricky

▶ We will soon need a TROC (Tracker On Call) and we also need a DAQ On Call (DOC).

▶ The pool of trained experts is small and there is significant overlap between a small number of very hard-working individuals

▶ If you, or a member of your group, can come to RAL for a reasonable period (2 months) whom we can train to be SOC or BLOC it would help lighten the burden a bit.

Shift Training

▶ RAL and ISIS safety Induction : ISIS can be done online

▶ Hall safety and PPE (John Govans)

▶ MOM talk (MOM)

▶ PPS : mostly controlled access (Craig/Henry/Adam)

▶ Beamline and Target (Henry)

▶ Control room (Chris H, Rhys Gardner, Adam)

▶ Two Shadow shifts

Shadow shifts serve two purposes : training in control room operations and familiarisation with running environment. Best done just before your shift block.

Training

- Plan to offer training both at CM (Wednesday/Thursday) and individually.

- Can't do this at any old time.

- Will offer beamline, MOM, PPE training on Tuesdays and Thursdays. PPS training will happen on Wednesday's as this is a maintenance day and we potentially have access to the Hall.

- A training schedule will be developed every month depending on the training status of the shifters.

CM Training

http://micewww.pp.rl.ac.uk/projects/operations/wiki/RunPlan20150624

Wednesday Hall training : 2 teams. Please check the page above to work out what team you are on.

Thursday training : All together in the the ATLAS building. This will be a series of short talks on safety procedures and the MOM introduction

Plan might change

Summary

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We have now started taking data "regularly".

CHEESE has been rolled out and seems to work well.

On-call / on-site expert list is stretched.

The mechanics of data-taking is going reasonably well but there is room for improvement

- must get better at regular monitoring of OnRec and OnMon
- eLog discipline must be better (write everything down)

Shift model

▶ In 24/7 running : two shift streams staggered by 2 hours

6 am – 2 pm	2 pm – 10 pm	10 pm – 6 am
8am – 4 pm	4 pm – 12 pm	12 pm – 8 pm
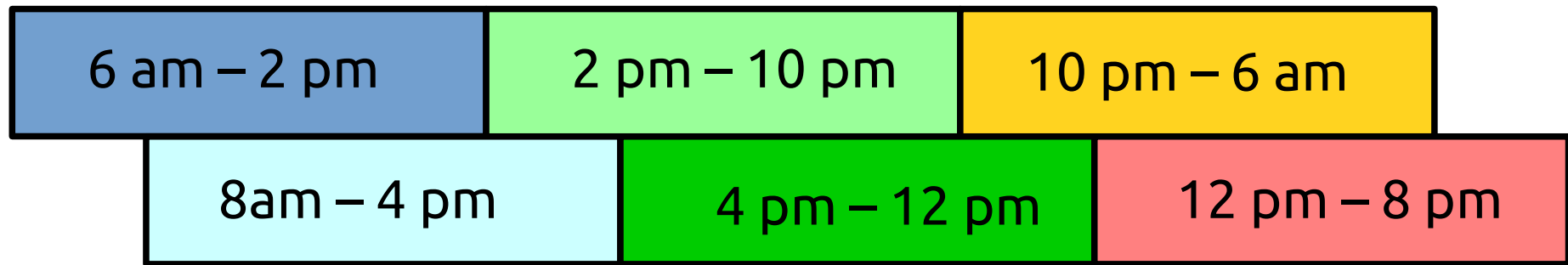
▶ Shifters will be required to sign up in blocks of N shifts

▶ Shifts will be allocated to institutes according to the number of people associated with that institute

▶ All MICE members must do at least half of their personal shift allocation

▶ All institutional shift loads must be met in full

Shift Training

▶ Training format is outlined on

<p style="text-align:center; color:red;">miceMine:Operations:Training Shifters</p>

▶ Training will have to be provided between user runs

▶ A training period coming up after the CM and PPS training will be offered weekly during March and between user runs

▶ Need to think about training frequency and format for shifters/BLOCs. Use the upcoming commissioning period for shift training

On-call & Experts

The last time the expert list was overhauled was July, 2014

Need to revisit this : all those with positions of responsibility should look at the expert list on the Operations page on miceMine and tell me or the MOM if anything – personnel and/or contact details - needs to be changed.

Detector groups should now start putting in place expert roster and detector staffing plans.
Experts should be on-site during the run periods
(as in any other particle physics experiment).
On-call expert access must be provided at all times during data-taking.

Documentation

I've already received some documentation for the spectrometer solenoids (thanks Pierrick) and the beamstop (thanks Henry)

Keep 'em coming......

Summary

Data taking is approaching at an interesting speed

CHEESE has been rolled out and seems to work well. Shift allocation for March 8th and weekend runs will be opened soon.

Training format needs some thought going into commissioning

On-call / on-site expert plans now need to be defined

Documentation documentation documentation

Online codebase

- We have a lot of code (run control, online reconstruction, etc) which is under development

- We are also taking data regularly with this code

- I think we need to be a bit more careful now about keeping development code and working data-taking production code separate

- Where at all possible, do development on versions of code that are not accessible from control room

- Should implement procedure for control room code updates – we don't want to be in a situation where we make changes to introduce a fix which impacts on something else in a way we haven't considered.