

- ▶ Operations Preparation
- ▶ Muon Beam and Channel Optics Commissioning (J. Pasternak)
- ▶ Step IV Measurement and Analysis Plans (C. Rogers)

# Operations Preparation

- ▶ Status of MICE Operations Manager
- ▶ Running periods
- ▶ Status of shift allocation system
- ▶ Shift Training plans
- ▶ MICE/ISIS Coordination

# MOM

## 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 Karadzhev
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 Karadzhev
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

MICE Operations Manager post has been allocated to the end of STEP IV running

# ISIS Schedule

ISIS Cycle	Date From	Data To	1 Jun 15	1 Jul 15	1 Aug 15	1 Sep 15	1 Oct 15	1 Nov 15	1 Dec 15	1 Jan 16	1 Feb 16	1 Mar 16	1 Apr 16
2015/01a	2 Jun 15	5 Jul 15	█										
2015/01b	14 Jul 15	24 Jul 15		█									
2015/02	8 Aug 15	16 Oct 15			█								
2015/03	3 Nov 15	18 Dec 15					█						
2015/04	14 Feb 16	1 Apr 16									█		

March 2015 – June 2015 : ISIS on but Step IV installation has priority. MICE Operations shakedown.

June 2015 – July 2015 : Channel commissioning (see talks by C. Rogers and J. Pasternak).

August 2015 – April 2016 : Production running

# Cycle 2014/03 : Shakedown Period

- ▶ Weekend running to shakedown Run Control, DAQ & Monitoring and detectors
- ▶ Goal is to be able to switch on beamline and take data routinely by the end of cycle 2014/03
  
- ▶ Two Mock Data Runs (Jan 21<sup>st</sup>, March 5<sup>th</sup>) were very useful in pinpointing areas of controls and DAQ that needed work.
  
- ▶ Instituted two operations meetings / week.
  - First meeting (Monday) is to triage the previous weekend run and start planning for the next.
  - Second meeting (Friday) reviews readiness for weekend run

# Weekend Runs

- ▶ March 21 / 22 : Upstream detectors (TOF 0/1, CKOV) in beam.
  - Commissioning of the new trigger system
  - Upstream TOF calibration
- ▶ March 28/29 : Upstream detectors (TOF 0/1, CKOV) in beam.
  - DAQ debugging
  - CKOV momentum and HV scans
- ▶ April 5/6 : Upstream detectors (TOF 0/1, CKOV) in beam
  - Decay solenoid being serviced
  - Decision was taken not to run

# Weekend Runs

- ▶ April 11/12 : Upstream detectors (TOF 0/1, CKOV) in beam
  - Decay solenoid had a fault which couldn't be fixed in time
  - Training was done but data-taking was cancelled
- ▶ April 18/19 and April 25/26 :
  - incorporate downstream PID detectors (TOF2, KL, EMR) into DAQ
  - PID detector calibration runs
  - beamline pre-commissioning (Step I)
  - may be possible to advance some partial tracker readout commissioning forward from Cycle 2015/01a to April 25/26

# CHEESE : Shift allocation system

**The MICE Collaboration**  
[Institutions](#) [Collaborators](#) [Publications](#)

**Institutions in the MICE Collaboration**

CHEESE is based on Glaucus, created for MINERvA by Nathaniel Tagg. Adapted for use by MICE by Jan Greife

- ▶ CHEESE rolled out in January 2015
- ▶ All collaborators have registered
- ▶ CHEESE tested successfully during March/April running



# Shift System

[Documentation on MICEmine](#)

[Public View](#)

### CHEESE: Shift Scheduler for MICE

Cheese Helpfully Enables the Entrusting of Shifts to Experimenters

Items in basket:

\* You should only sign up to shifts marked with an asterisk if you have done at least 5 days of shifts previously.

**March 2015**

Mon	Tue	Wed	Thu	Fri	Sat	Sun
23	24	25	26	27	28	1
MOM Available [28 pts]						
2	3	4	5	6	7	8
MOM Available [28 pts]			MOM [Yordan.Karadzhov/Geneva]			
08:00 - 16:00 [ken.long/Imper] 08:00 - 16:00 [chris.heidt/UCF] 16:00 - 24:00 [mark.palmer/Fr] 16:00-24:00 [pierrick.hanlet/IT]						
9	10	11	12	13	14	15
MOM [Yordan.Karadzhov/Geneva]						
16	17	18	19	20	21	22
MOM [Yordan.Karadzhov/Geneva]					08:00 - 16:00 [ken.long/Imperial] 08:00 - 16:00 [pierrick.hanlet/IT] 16:00 - 24:00 [paolo.franchini/Warwick] 16:00 - 24:00 [chris.heidt/UCR]	
23	24	25	26	27	28	29

Logged in as [Steven Boyd](#)  
Current clearance: Group Leader

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▶ CHEESE used successfully for shift allocation of weekend runs

# Shift Training

- ▶ Shift training as been offered every Friday as we get the Hall ready for weekend running
- ▶ DAQ/Monitoring/Run Control training has been merged into a single “Control room Operations” training period given by a single expert.
- ▶ PPS and Hall Operations training is given if necessary during Hall lock down
- ▶ During regular running, we plan to set aside Wednesday as a maintenance day. Training will be offered there for new shifters
- ▶ New shifters must also take at least two shadow shifts before starting their allocated shift blocks.

# Shift Pattern

- ▶ We will run one 8-hour data-taking shift / day during the commissioning period (ISIS Cycle 2015/01a)
- ▶ We aim to staff the experiment 24 hours / 7 days a week during the other user cycles in 3 8-hour shifts
- ▶ Collaborators will sign up in 5-day “shift blocks” .
- ▶ Each collaborator will be required to sit between 2 and 4 shift blocks over the Step IV running period (the exact number is under discussion)
- ▶ We will try to cushion the impact of shifts on small groups with limited flexibility

# Baseline shift pattern

Cycle	Days	Shifts / day	Shifts	# Maintenance Days per week	# MOM Shifts		
2014/03	10	4	40		18		
2015/01a	36	2	62	1	Shift credit for One MOM Shift		
2015/01b	10	6	58		0		
2015/02	39	6	224		#MOM Shifts		
2015/03	45	6	258		0		
2015/04	45	6	258		Total Shifts		
		<b>Total Experimental shifts</b>	900		900		
		<b># shifts / person</b>			15.5172413793	<b>Shift block length</b>	
		<b># shift blocks / person</b>			3.1034482759	5	
Institute	Scientists	RA + Students	MOMs	Total	Shifts / Institute	Shift Blocks per Institute	Shift blocks per active shifter
Belgrade	1	0	0	1	15.52	3	3.0
CERN	0	0	0	0	0.00	0	0.0
IHEP	1	0	0	1	15.52	3	3.0
Osaka	0	0	0	0	0.00	0	0.0
Sichuan	0	0	0	0	0.00	0	0.0
Brookhaven	1	0	0	1	15.52	3	3.0
DL	0	0	0	0	0.00	0	0.0
Iowa	1	0	0	1	15.52	3	3.0
LBNL	2	0	0	2	31.03	6	3.0
Liverpool	1	0	0	1	15.52	3	3.0
Milano	1	0	0	1	15.52	3	3.0
Napoli	1	0	0	1	15.52	3	3.0
NIKHEF	1	0	0	1	15.52	3	3.0
Oxford	1	0	0	1	15.52	3	3.0
Pavia	1	0	0	1	15.52	3	3.0
Imperial	4	4	2	10	124.14	25	3.1
RAL	1	0	1	2	15.52	3	3.0
Riverside	1	1	0	2	31.03	6	3.0
Roma	2	0	0	2	31.03	6	3.0
Glasgow	1	1	1	3	31.03	6	3.0
Sofia	2	1	0	3	46.55	9	3.0
Mississippi	3	0	0	3	46.55	9	3.0
Sheffield	1	1	2	4	31.03	6	3.0
Geneva	1	2	1	4	46.55	9	3.0
Strathclyde	1	3	0	4	62.07	12	3.0
Warwick	1	2	1	4	46.55	9	3.0
Brunel	1	2	1	4	46.55	9	3.0
IIT	3	2	1	6	77.59	16	3.2
Femilab	2	3	1	6	77.59	16	3.2
				69	900		
					Total Blocks	177	
					Total Shifts	885	
					Shift Imbalance	15	

# Alternate shift pattern

Cycle	Days	Shifts / day	Shifts	# Maintenance Days per week	# MOM Shifts		
2014/03	10	4	40		18		
2015/01a	36	2	62	1	Shift credit for One MOM Shift		
2015/01b	10	6	58		0		
2015/02	39	6	224		#MOM Shifts		
2015/03	45	6	258		0		
2015/04	45	6	258		Total Shifts		
		<b>Total Experimental shifts</b>	900		900		
		<b># shifts / person</b>			15.5172413793	<b>Shift block length</b>	
		<b># shift blocks / person</b>			3.1034482759	5	
Institute	Scientists	RA + Students	MOMs	Total	Shifts / Institute	Shift Blocks per Institute	Shift blocks per active shifter
Belgrade	1	0	0	1	7.76	2	2.0
CERN	0	0	0	0	0.00	0	0.0
IHEP	1	0	0	1	7.76	2	2.0
Osaka	0	0	0	0	0.00	0	0.0
Sichuan	0	0	0	0	0.00	0	0.0
Brookhaven	1	0	0	1	7.76	2	2.0
DL	0	0	0	0	0.00	0	0.0
Iowa	1	0	0	1	7.76	2	2.0
LBNL	2	0	0	2	15.52	3	1.5
Liverpool	1	0	0	1	7.76	2	2.0
Milano	1	0	0	1	7.76	2	2.0
Napoli	1	0	0	1	7.76	2	2.0
NIKHEF	1	0	0	1	7.76	2	2.0
Oxford	1	0	0	1	7.76	2	2.0
Pavia	1	0	0	1	7.76	2	2.0
Imperial	4	4	2	10	159.37	32	4.0
RAL	1	0	1	2	7.76	2	2.0
Riverside	1	1	0	2	15.52	3	1.5
Roma	2	0	0	2	15.52	3	1.5
Glasgow	1	1	1	3	15.52	3	1.5
Sofia	2	1	0	3	59.76	12	4.0
Mississippi	3	0	0	3	59.76	12	4.0
Sheffield	1	1	2	4	15.52	3	1.5
Geneva	1	2	1	4	59.76	12	4.0
Strathclyde	1	3	0	4	79.68	16	4.0
Warwick	1	2	1	4	59.76	12	4.0
Brunel	1	2	1	4	59.76	12	4.0
IIT	3	2	1	6	99.60	20	4.0
Femilab	2	3	1	6	99.60	20	4.0
				69	900.00		
					Total Blocks	185	
					Total Shifts	925	
					Shift Imbalance	-25	

# Shift patterns

- ▶ Shift options for 24 hour / 7 day running have been presented to the the Executive Board
- ▶ EB will choose their preferred options and refer these to the Collaboration Board for discussion.

# MICE / ISIS Co-ordination

- ▶ Two MICE/ISIS co-ordination meetings have been held to
  - ▶ introduce MICE and its plans to ISIS
  - ▶ work out how to run MICE whilst imposing a minimum burden on the ISIS Shift Crew
  - ▶ understand what information (and detail) & documentation that MICE needs to provide ISIS Shift Crew
- ▶ We now have monthly Operations meeting scheduled. Those attending are the MICE Ops Coordinator and MOM, and Dean Adams, Alan Stevens and the ISIS Shift Crew Manager from ISIS.
  - ▶ Discuss MICE running plans and their interaction with ISIS Operations
  - ▶ Discuss ISIS requests and any issues arising from MICE runs

# Summary

- ▶ Critical posts (e.g. MOM) have been filled.
- ▶ Shift policy, shift allocation and shift training plans have solidified and are in the “tweaking” stage
- ▶ Regular weekend runs have shaken out features in the run control. We expect to be able to routinely run with the PID detectors by the end of the current user run.
- ▶ Next user run will see the magnet and tracker commissioning.
- ▶ A measurement plan and magnet commissioning plan for the next user cycle has been developed.