MICE Operations

THE UNIVERSITY OF WARWICK

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

Steve Boyd

MOM Rota

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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 | # MOM Shifts | | |
|-------------|------------|--------------------------|--------|--------------------|--------------------|--------------------|----------------|
| 2014/03 | 10 | 4 | 40 | per week | 18 | | |
| 2015/01a | 36 | 3 | 98 | 1 | Shift credit for | | |
| 2015/01b | 10 | 6 | 58 | - | One MOM Shift | | |
| 2015/02 | 39 | 6 | 224 | | 0 | | |
| 2015/02 | 45 | 6 | 258 | | #MOM Shifts | | |
| | 45 | | 250 | | | | |
| 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 | 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 | ō | 2 | 29.71 | 6 | 3.0 |
| Osaka | Ō | Ō | ŏ | ō | 0.00 | ŏ | 0.0 |
| Sichuan | ĭ | ŏ | ŏ | ĭ | 14.86 | ž | 3.0 |
| Brookhaven | 1 | ŏ | ŏ | | 14.86 | 3 | 3.0 |
| DL | 0 | ŏ | ŏ | 6 | 0.00 | 0 | 0.0 |
| | ų į | | | v v | | · · · · · | 0.0 |
| lowa | 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 | i 1 | Ó | ī | 2 | 14.86 | 3 | 3.0 |
| Riverside | 1 | ĭ | ō | 5 | 29.71 | ő | 3.0 |
| Roma | 2 | Ô | ŏ | 2 | 29.71 | ĕ | 3.0 |
| Glasgow | 1 | ĭ | | | 29.71 | 6 | 3.0 |
| Sofia | 1 | 1 | 0 | 2 | 44.57 | 9 | 3.0 |
| | | 1 | | | | | 5.0 |
| Mississippi | 3 | 0 | 0 | 3 | 44.57 | 9 | 3.0 |
| Sheffield | 1 | 1 | | 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 | |
| | | 12 1 2 1 1 1 1 1 | | | June in Dulance | | |

Data-taking to now

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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

More detail in the MOM talk tomorrow

Shift model in July



Currently : 24/7 with staggered shift streams

| 6 a | am – 2 pm | 2 pm – 10 pm | | 10 pm – 6 am | | |
|-----|------------|--------------|--------------|--------------|-------------|---|
| | 8am – 4 pm | | 4 pm – 12 pm | | 12 pm – 8 p | m |

Shift model in July

Proposal : 24/7 with non-staggered shift streams

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- Collision of commissioning/operations in July could make data-taking unstable. Although we've rostered for 24 hour data-taking, this may not happen. Day shifts may turn into reserve shifts with night shifts for data-taking.
- Shifters should assume that they are doing shift. Next day shifts will be cancelled at the daily run meeting if necessary.

Shift model in July

Proposal : 24/7 with non-staggered shift streams

| 6 am – 2 pm | 2 pm – 10 pm | 10 pm – 6 am |
|-------------|--------------|--------------|
|-------------|--------------|--------------|

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Collision of commissioning/operations in July could make data-taking unstable. Although we've planned for 24 hour data-taking, this may not happen. Day shifts may turn into reserve shifts with night shifts for data-taking.

Shifters should assume that they are doing shift. Next day shifts will be cancelled at the daily run meeting if necessary.





- 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 a | m – 2 pm 2 | | 2 pm – 10 pm 10 | | 0 pm – 6 am | |
|-----|------------|--|-----------------|--|-------------|----|
| | 8am – 4 pm | | 4 pm – 12 pm | | 12 pm – 8 p | om |

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

- Symptoms
- Diagnosis
- Solutions

| System | Shifter | Emergency | Expert |
|------------------------|---------------|--------------|--------|
| _ | Documentation | Instructions | 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 THE UNIVERSITY OF WARVICK

- 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

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- 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

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- 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.





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

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

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