MICE Operations

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- Operations Structure
- MICE Operations Manager
- Manning the experiment
- Operations Plans

Steve Boyd

Operations Structure

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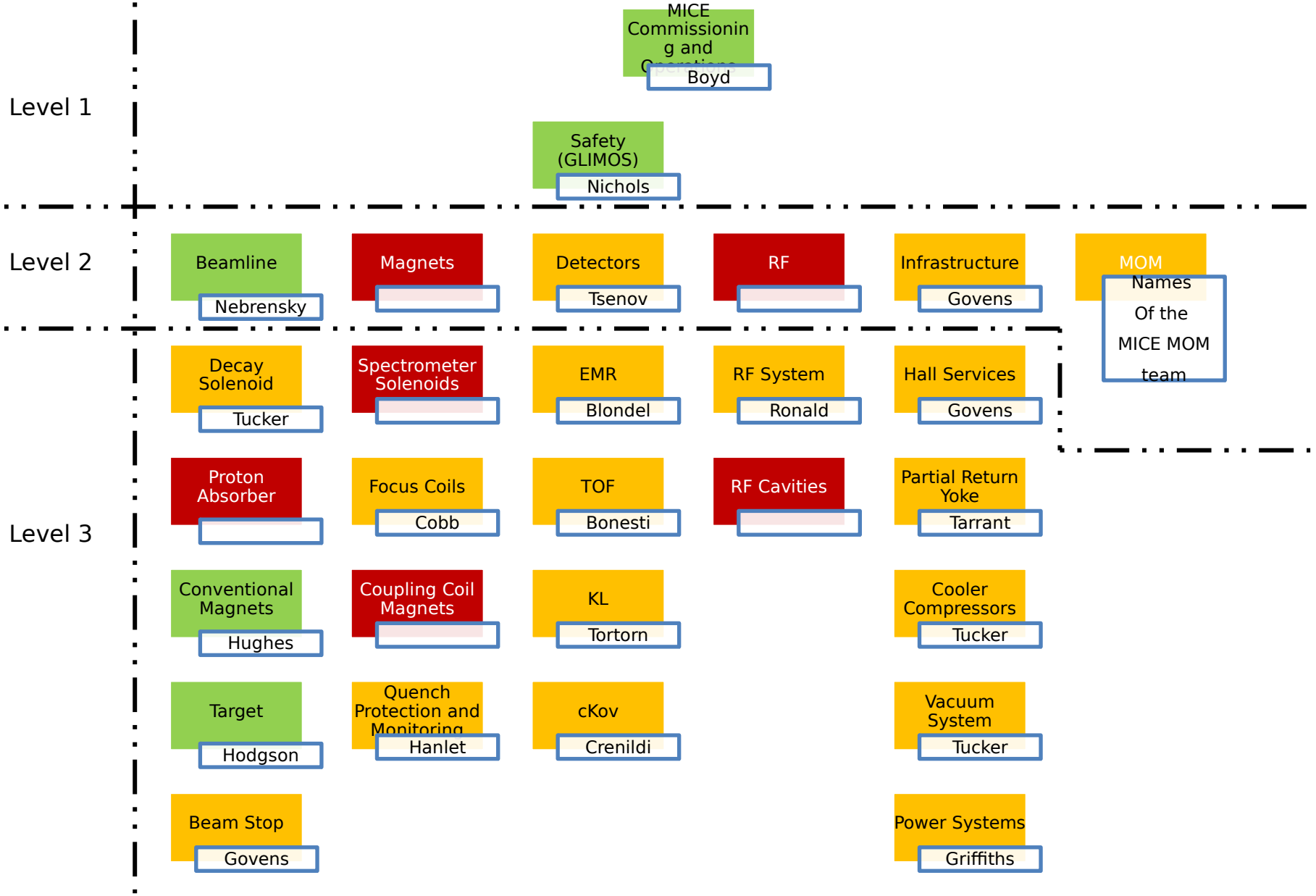

Hall Team

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John Govans is now the Hall Manager and leads the Hall team. They are responsible (and in charge) of all work that goes on in the Hall

The Hall team includes technical leads covering RF, magnets, cryo and ancillary plant. Most have been identified.

These posts will be incorporated in (and managed by) ISIS technical teams so that the wider ISIS resources are available

ISIS Support

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- Operations will require continual technical support from ISIS
- Technical leads will work with resources from the ISIS Operations Group

Function/Title	FTE	Band	ISIS Structure	ISIS Group
MICE Hall Manager	1.0	E[1]	IAC/AEG	Accelerator Engineering
RF Engineer	1.0	D[1]	IAC/INJ	Linac RF
Vacuum	0.1	E[1]	IEO/SENV	Sample Environment Cryogenics
S/C Magnets	0.5			
Cryogenics	0.2			
Mechanical Engineering	0.2	D/E[2]	IAC/AEG	Accelerator Engineering
Ancillary Plant	0.8			
Mechanical Craft	0.1	B-C	IAC/AEG	Accelerator Engineering
Accelerator Physics	0.1	D-F	IAC/SYNCH	Accelerator Physics
Controls	0.5	D-F	IEO/CON	Target Controls
Electrical/Interlocks	0.5	C-E	IAC/OPS	Accelerator Operations
Conventional Magnets	0.3	D-E	IAC/EEG	Electrical Engineering
S/C Magnets	0.5	D-E	IEO/SENV	Sample Environment Cryogenics
Design	0.1	D-E	IDD	Accelerator Design
Heavy Gang/logistics	0.1	B-D	IEO/TGT	Target Operations
Total	**6.0**			

Mice Operations Manager Role

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- The MOM is a role that is crucial to the smooth running of MICE. They are a contact point between ISIS, MICE Operations and Shifters.

- In discussion with current MOMs, it is apparent that the roles and responsibilities need to be clarified and updated

- We do not want to be too prescriptive – we should trust the MOM to know what to do, when and how, or to bring the issue up with the Co-ordinator or relevant people if they don't.

Nature of the role

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- The primary responsibility of the MOM is to oversee day-to-day operations and ensure that the operations plan is carried out

- There is a concern that the MOM is responsible for safety in the Hall. Beyond being aware of safety issues, this is no longer the case. Safety in the Hall is the responsibility of the Hall Manager and the Project Engineer & GLIMOS.

- A document specifying roles and an updated MOM authorization document from Andy Nicholls is in development

Tenure and MOM pool

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Currently MOMs are being drawn from a pool of about 10 people:

Ray Gamet, Yagmur Torun, Paul Soler, Victoria Blackmore, Adam Dobbs, David Adey, Chris Rogers, Durga Rajaram, Ryan Bayes, Yordan Karadahov, Pierrick Hanlet, Ian Taylor, Melissa Uchida, Andy Nichols

They have done a brilliant job. My concern is that we are relying too much on a small, reasonably local, crew.

List of MOMs

- List is SHORT
- November - Pierrick
- December - Yordan
- Christmas - Andy/Ian/Ken/Pierrick
- January - Ian
- February - Pierrick/Andy (now)

Do you see a problem here?

P.Hanlet/MOM Report

Changes to MOM pool

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- enlarge the pool of trained MOMs
- negotiate with the pool to select a small team of people, who will act as MOMs for one year.
- At the end of each year, the members in the team will be offered a choice to continue or to leave the active team.
- Each MOM will, ideally, serve 4 weeks + 3 days overlap with the previous MOM, including a Hall meeting.
- No MOM should serve more than twice in one year and there should be at least 5 months between tenures, subject to negotiation.
- There will be an induction process for new MOMs
- I am especially interested in hearing from new people

MOM Sign-up

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MOM Rotation to July

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From	To	MOM
March 31st	April 13th	Adam Dobbs
April 14th	April 27th	Ray Gamet
April 28th	May 11th	Adam Dobbs
May 12th	May 25th	Melissa Uchida
May 26th	June 8th	Paul Soler
June 9th	June 23rd	Ryan Bayes
June 24th	July 6th	Ryan Bayes

MOM Recognition

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- Being a MOM is a important role in the experiment and takes up a lot of time.
- I would like to recognise the MOM role somehow
- Currently the MOM will be credited a shift credit for every day that they serve as MOM.
- The MOM role will, of course, appear on CVs
- MOM service could be considered when deciding on conference speakers.
- Communication of the MOM holder with the collaboration should be made clearer.

Manning the experiment

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Personnel required to be present, or contactable, when taking data

- MOM
- MICE Beamline On-call (BLOC)
- An online expert
- A near-online software expert
- Shift team
- Subsystem Experts

Subsystem Experts

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- All running experiments provide experts for their individual subsystems.
- Each system (TOF, Tracker, EMR, Cerenkov) should field an on-call expert at all times when the detectors are running. The MOM should be aware when the expert is changed.
- A list of those responsible for systems and an expert list will be maintained by Debbie Loader and Rose Hayes, in consultation with the MOM
- The expert should be local – either a member of the detector group, or someone the detector group has agreed will be an expert.

Shifts

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- More stable running implies that the experiment needs to manned.

- Shifters should be available during times when MICE plans to take data.
- How many do we need?
  - 2 shifters per shift to ensure that the MLCR is not left empty by shifters at any time
  - Each shift is at most 8 hours long (with a 20 minute break every 6 hours)
  - If we find that we run for 12 hours a day, each shift can be 6 hours long – requiring 4 shifters to cover the day.

Shift make-up and procedure

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- Each shift consists of a *shift-leader*, and another shifter
- A shift-leader must have completed at least 3 shifts
- New shifters must under-take 2 shadow shifts before the start of their shift period.
- The experiment can undergo a number of changes between different running periods. Even an experienced shifter may not be familiar with new routines.
- If a shifter has not done a shift for more than 6 months (this depends on how much the experiment has changed) they should also do a shadow shift to be aware of the changes.

Shift allocation

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- Overseas collaborators need to know that they are doing a shift at least one month in advance. This implies that we need to understand the operational plan well in advance (more later)

- ISIS User Runs are known in advance. Let's assume that in Step IV we run continuously. If planned well in advance, I think we can use shift self-allocation as many other experiments do.

- An online shift-allocation and tracking system will be implemented.

Operations Planning

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- To meet the Step IV deadline and ensure smooth running of the experiment we need to have an operational plan with at least a 6 month time horizon.
- Such a plan requires input from everyone – detector groups (what sort of calibration runs do you need? Survey? etc) , Physics (what data do we take), Beamline & Target (ISIS activation checks, …), Reference run requirements, ...

Calibration requirements & Outstanding issues

- Current calibrations come from August 2013 run
  - Good coverage except for a few corner pixels and edge-slabs in TOF0
  - 8700 pulses, 320k integrated triggers, took ~10 hours
- Almost all calibration data are with TOF1 as the trigger station
  - If we trigger on TOF2, the data will not be immediately analyzable
  - requires calibration data with TOF2 as trigger → calibrations uploaded to DB
- Should monitor stability of calibrations
- Calibrations are dependent on station positions –
  - currently no interface to get positions from survey geometry/DB
- The input data (ROOT Trees) used in the calibration are not stored/archived

Known runs

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- Two ISIS Cycles before the long shutdown:

  6th May – 27th June and 15th July – 22nd August

- April 4th – 6th 2014 – Beam bump tuning and double dip target rate test.
  A DAQ rate test is also necessary. Yordan needs to comment on a plan and requirements for this to go ahead quickly.

- 29th June 2014 – Activation test with double dip rate

Could also take data if required.

- Are we going to be in a position to do a full field-off data run before the long shutdown?

- What about commissioning runs?

- A 1 day planning meeting at RAL is being considered for late March to define what runs we need this summer and by 2015.

Summary

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- New operations structure is being defined
- MOM Role is being refined. The MOMs have been consulated and a document outlining MOM responsibilities is available
- We need to be able to plan the manning of the experiment well in-advance. A shift allocation and tracking system should be installed.
- Discussions on the operations plan is beginning.