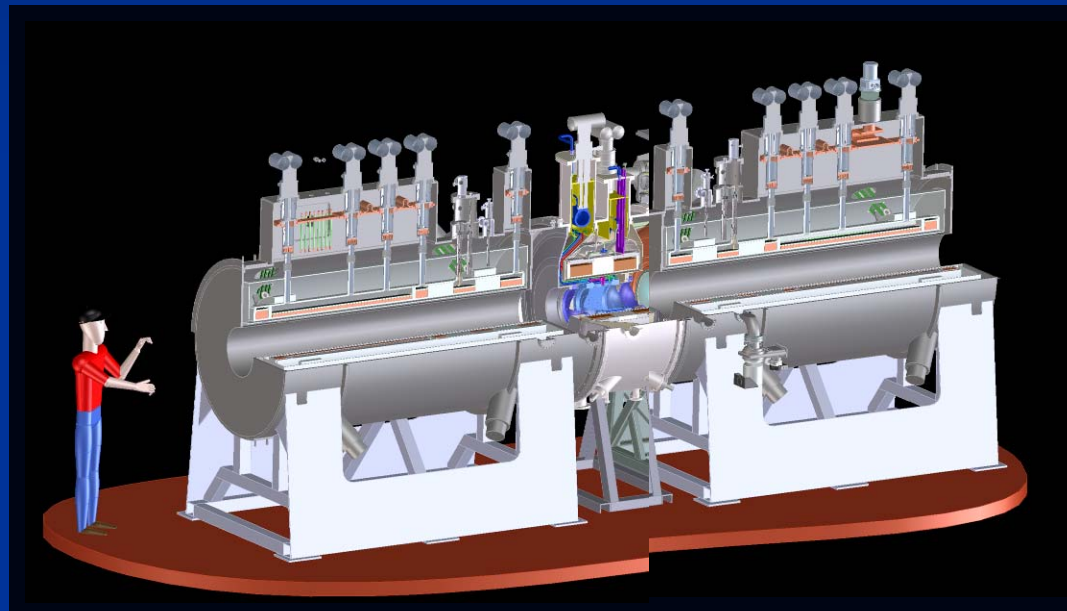# Online Overview

L. Coney – UCR

MICE CM36 – June 2013

Also in This Session:

- **Controls & Monitoring – Pierrick**
  - Yesterday – Integrated C&M for MICE magnets

- **DAQ – Yordan**

- **Will leave the specifics to them..**

Since CM35 in February

- **Significant events in the 4 months since the last CM:**
  - **Activation run was the last data-taking (13 Feb)**
  - **SS magnets – training/C&M/field measurement at Wang**
    - **State machines, Run Control, improved C&M**
  - **Maui**
  - **No running – attempts at cosmic ray runs**
  - **Another power outage – RAL instigated – planned (as opposed to unintentional)**

Running?

- **Activation run**
    - **Went well**
- **Attempts at cosmic ray runs – did not go smoothly**
    - **Goal: test new MAUS code in MLCR, test DAQ, test Online Monitoring**
    - **Problems with DAQ – no triggers recorded**
    - **Suspect due to twitchy NIM crate – known problem (note: NEW crate)**

- **Attempts to test/finish Run Control**
    - **Problems with network – micenet**
    - **Problems with C&M**
        - **HV control application – interference between system under development and production system**
        - **Run Control unable to be tested**

- **Evaluation of reliability within Online Systems**
    - **Develop more robust pre-run procedures for DAQ, C&M, Online Reconstruction**
    - **Create development protocol for C&M and DAQ**
    - **Need higher priority on documentation**
        - **More than one person to solve problems – must do better on handover of information**

Personnel

- **Personnel changes (as of Feb):**
  - **New network village manager – Chris Brew (RAL)**
  - **New RAL network liaison – Antony Wilson (RAL)**
    - **oops..off MICE – need new person**
  - **New DAQ deputy – David Adey (FNAL)**
    - **Postdoc running out…**
  - **New Online Monitoring owner – Rhys Gardner (Brunel grad student) – in place, going well..**
  - **New C&M deputy – Ian Taylor (Warwick)**
  - **New head of MICE Computing – Chris Rogers (RAL)**

Power Outage

- **ISIS taking down substation for maintenance**
  - Indicated would affect MICE control room/rack room
  - Went well – power down smooth
  - Recovery only minor issues – made use of new power outage recovery document
    - Ian, Henry iterated doc

- **Highlighted benefits of appropriate documentation!**

- **Although..we didn't actually lose power.**

Overall Online

- **Completed**
    - **Installation of new Online Reconstruction machines**
    - **Installation/configuration/use of new iocpc1 machine (for C&M)**
    - **Computing monitoring information now in Alarm Handler**
    - **Extra space added to bastions**
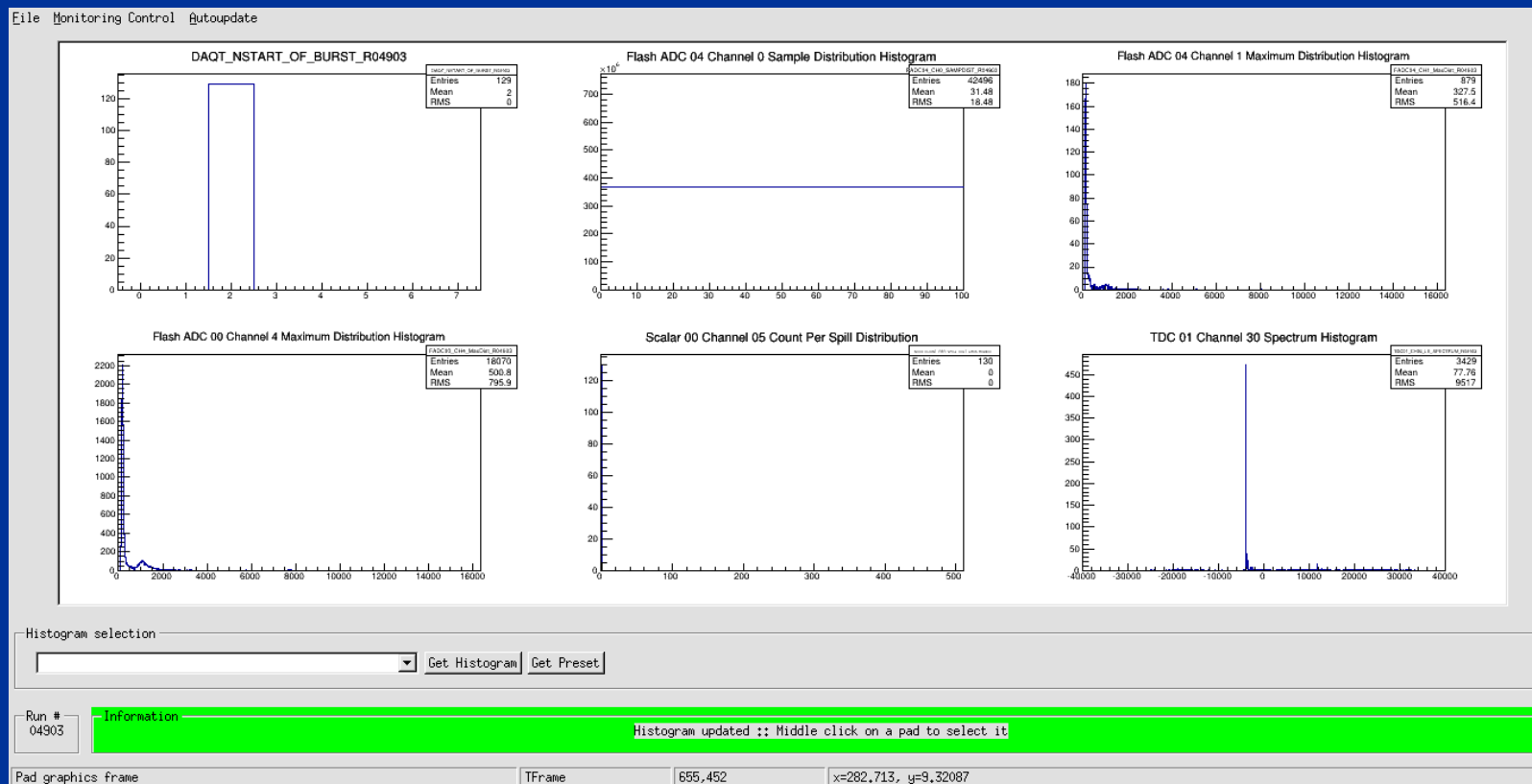   - **EMR equipment implemented in DATE**

- **In progress**
    - **Finalize monitoring of new UPS units (reliability/stability) – 98% done**
    - **Master server installation – 90% done**
    - **Restriction of external access to micenet**
    - **Resurrection of Online Monitoring**
    - **Progress on online reconstruction software – fixing bugs, completing Alex Richards' work**

- **Reviews of systems/code in progress across computing/software**

Online Monitoring

- **Has been brought back to life!**
  - **Rhys Gardener (Brunel grad student)**
  - **Code working again – fixed bugs, improved GUI**
  - **Installed on Onrec02**
  - **Needs cosmic test**

Overall Online^2

- **The link between Online Group, Software Group, and overall Computing has been strengthened**
    - **Chris Rogers now head of MICE Computing**
    - **Developing comprehensive understanding of all computing services/hardware/systems/links**

By June CM36…

- **Finish SS2** and SS1
  - fully developed C&M
  - SS state machine completed

- Finish FC – move to Hall

- **Documentation – needs higher priority**

- Improve stability & reliability
  - Complete installation of iocpc1
  - Complete computer monitoring
  - Stabilize C&M applications
  - Formalize development vs production C&M
  - Create comprehensive pre-run test plan for DAQ and C&M

- Simplify
  - Production version Run Control
  - Better limits w/in Alarm Handler
  - Automate datamover

- Improve functionality
  - Incorporate EMR into DAQ
  - Beam test EMR
  - Bring back Online Monitoring
  - EMR online plots
  - Online analysis prototype

- New C&M deputy.

Then….MICE Step IV

- **Both Spectrometer Solenoids – both Trackers – one FC and an Absorber module..**

- **Requires robust Online systems – DAQ, C&M, Online Reco & Analysis, Infrastructure**