



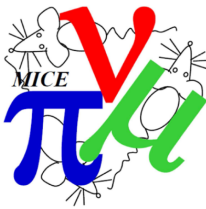
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MOM Report

MICE Video Conference 182

7th January 2016

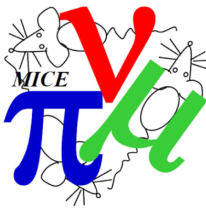




Summary

- Overview of the systems
- First shift period:
 - TOF alignment
 - FCU in flip mode
- Second shift period:
 - Xenon absorber, no field
- Conclusions

Overview of the systems



- **ISIS**

- 800 MeV – Repetition rate 64/50
- 0.8V – 1.5 V of beam loss
- Vacuum leak: replacement of the seals and pump down took nearly one day
- Minor issue on one power supply

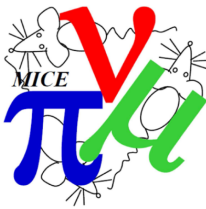
- **Beamline**

- DS not present
- Q6 had a slight leak: webcam 10

- **Trackers**

- Large leak in the downstream tracker

Overview of the systems

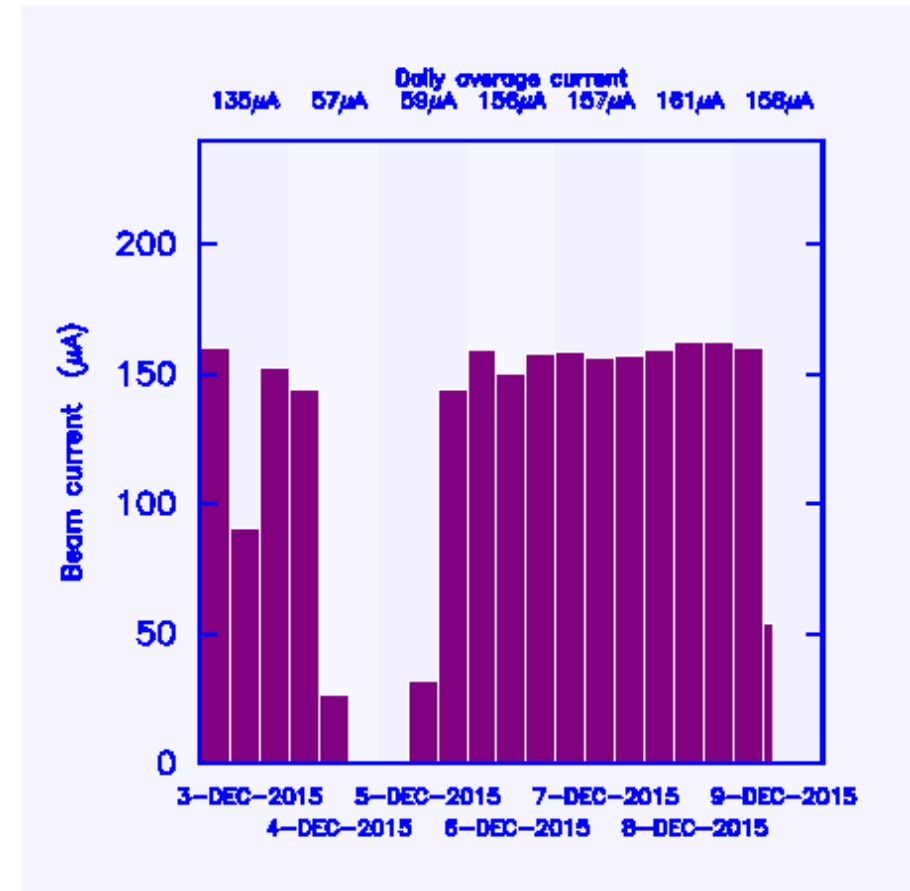


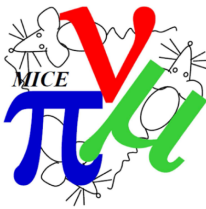
- **Focus Coil**
 - Two successful soak test. Stable during data-taking, no issues
- **Absorber**
 - Operation and safety procedures approved in time
 - Xenon pressure stable during the data taking
- **Control room**
 - Software versioning procedure used for updates
 - Run Control stable, no unknown issues with the CDB
 - Cooling channel tags still need to be implemented

3/12-7/12 shift summary



- Thu 3rd
 - Hall closed in the early afternoon
 - Beam tune (Dean Adams)
 - **Data for TOF0/TOF1 alignment**
- Fri 4th
 - No beam, vacuum leak in the linac
 - Magnetic search
 - FCU in flip mode @ 50A
- Sat. 5th
 - FCU in flip mode @ 100A
 - **Pion beam at 140/200/300 MeV/c**
- Sun 6th
 - **More data with FCU @ 100A**
- Mon 7th
 - FCU in flip mode @ -100A
 - **Pion beam at 140/200/300 MeV/c**



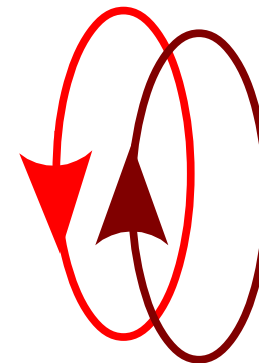
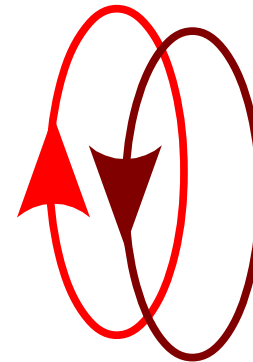


TOF alignments runs

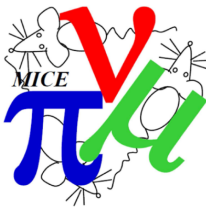
- *Experimenter:* François Drielsma
- Tried several settings to get more particles at TOF2
- 240 MeV/c muon beam; **all beam line magnets on:** 10K@TOF2
- 240 MeV/c muon beam; **Q7, Q8 and Q9 off:** 17K@TOF2
- Very low statistic at TOF2 in the reconstructed data
- Data useful for TOF0/1 alignments

FCU alignments runs

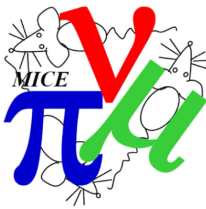
- *Experimenters:* C. Rogers/S.Middleton
- FCU current @ 100 A in **flip mode**
 - Pion reference run
 - Pion beams:
 - 140 MeV/c: 30K@TOF2
 - 200 MeV/c: 20K@TOF2
 - 240 MeV/c: 20K@TOF2
 - 300 MeV/c: 20K@TOF2
- FCU current @ -100 A in **flip mode**
 - 200 MeV/c: 20K@TOF2
 - 240 MeV/c: 20K@TOF2
 - 300 MeV/c: 20K@TOF2



13/12-17/12 shift summary



- Fry 11th: absorber filled with Xenon, pressure stable during the weekend
- 5 days x 13 hours (2 shifters + 2 extra shifters)
- 13th-16th:
 - *Experimenter*: John Nugent
 - Scattering measurement
 - No field in the FCU
 - SSD has run without Helium
 - Pion beam: nearly 50K @ TOF2
- 17th: Reference run, Xenon evacuated, replaced by Helium 8



Conclusions

- **FCU** stable
- No issues for the **absorber** filled with Xenon
- Few delays and glitches in the data taking mostly due to ISIS
- No major issues from the MICE side prevented to take data
- **Data quality** constantly checked: OnMon and OnRec plots, physics shifter and experimenters
- MOM/DC and DC/MOM **handover** checklist implemented
- Many thanks to the shifters that have permitted a longer period of data taking and to the FCU team for the great availability
- Next **MOM** will be Paul Kyberd in February
- Next **user run cycle** starts the 16th February 2016