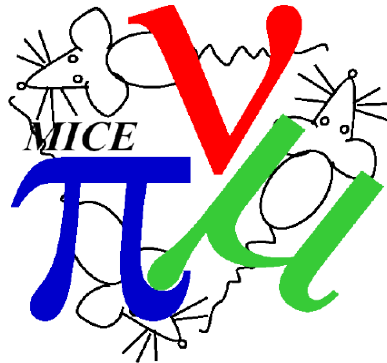




Physics Coordinators Report



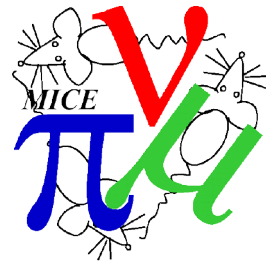
C. Rogers, ISIS Intense Beams Group
Rutherford Appleton Laboratory

Physics Report



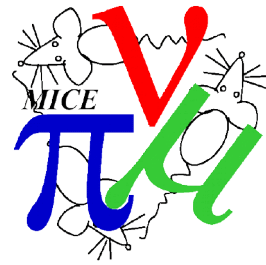
- Many analysis talks in the plenary sessions
- Here is only a very brief pointer to the different talks
 - Summary/reminder of data taken
 - Papers
 - Other analyses

Data taking to CM47



Date	Subject
June/July 2015	Tracker Commissioning
September/October 2015	Magnet commissioning
December 2015	Scattering in Xenon
February/March 2016	Straight tracks scattering programme (LiH)
July 2016	Single Magnet Powering Studies
September/October 2016	Field-on material physics studies
November/December 2016	Field-on emittance evolution studies

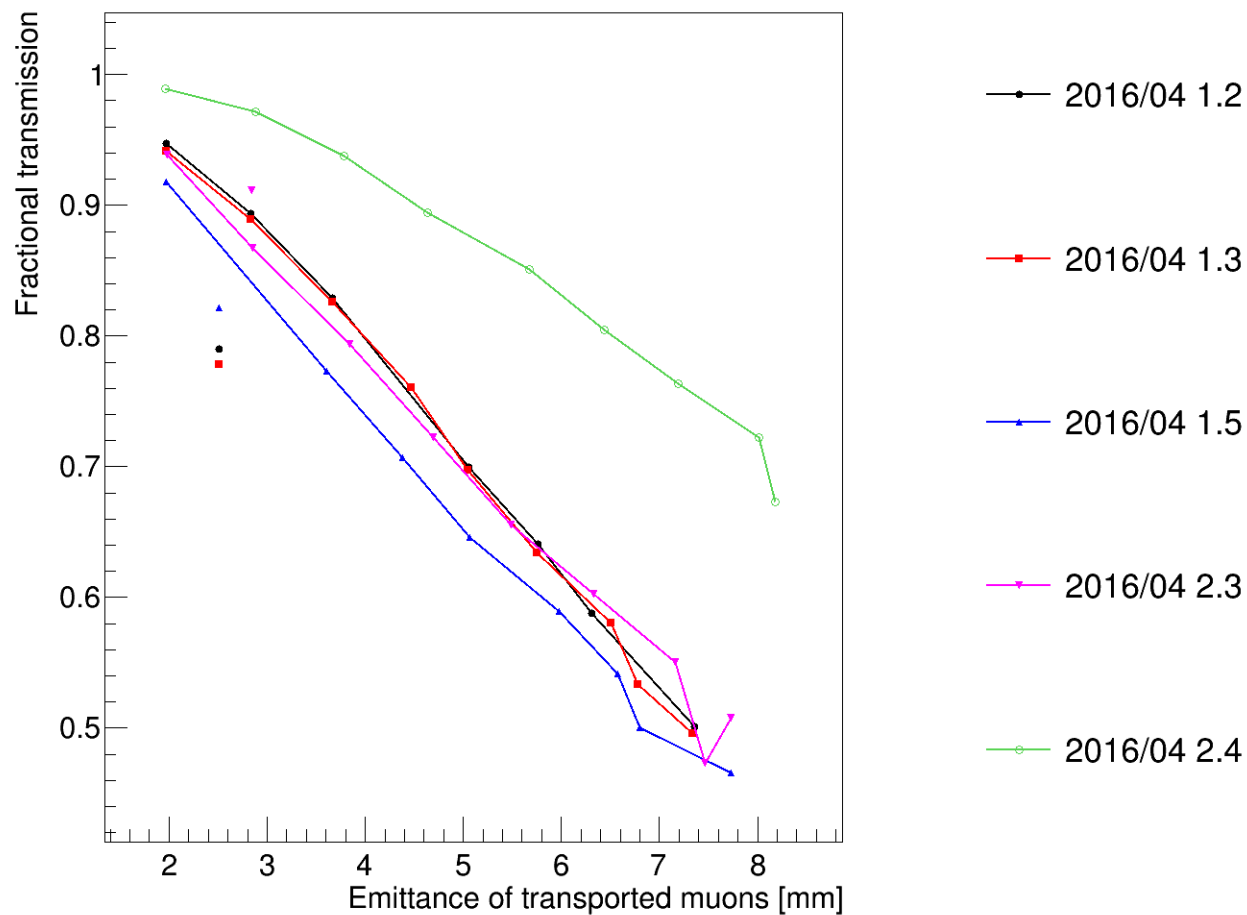
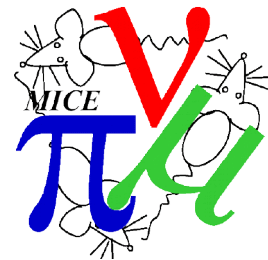
Data taking in 2016/04



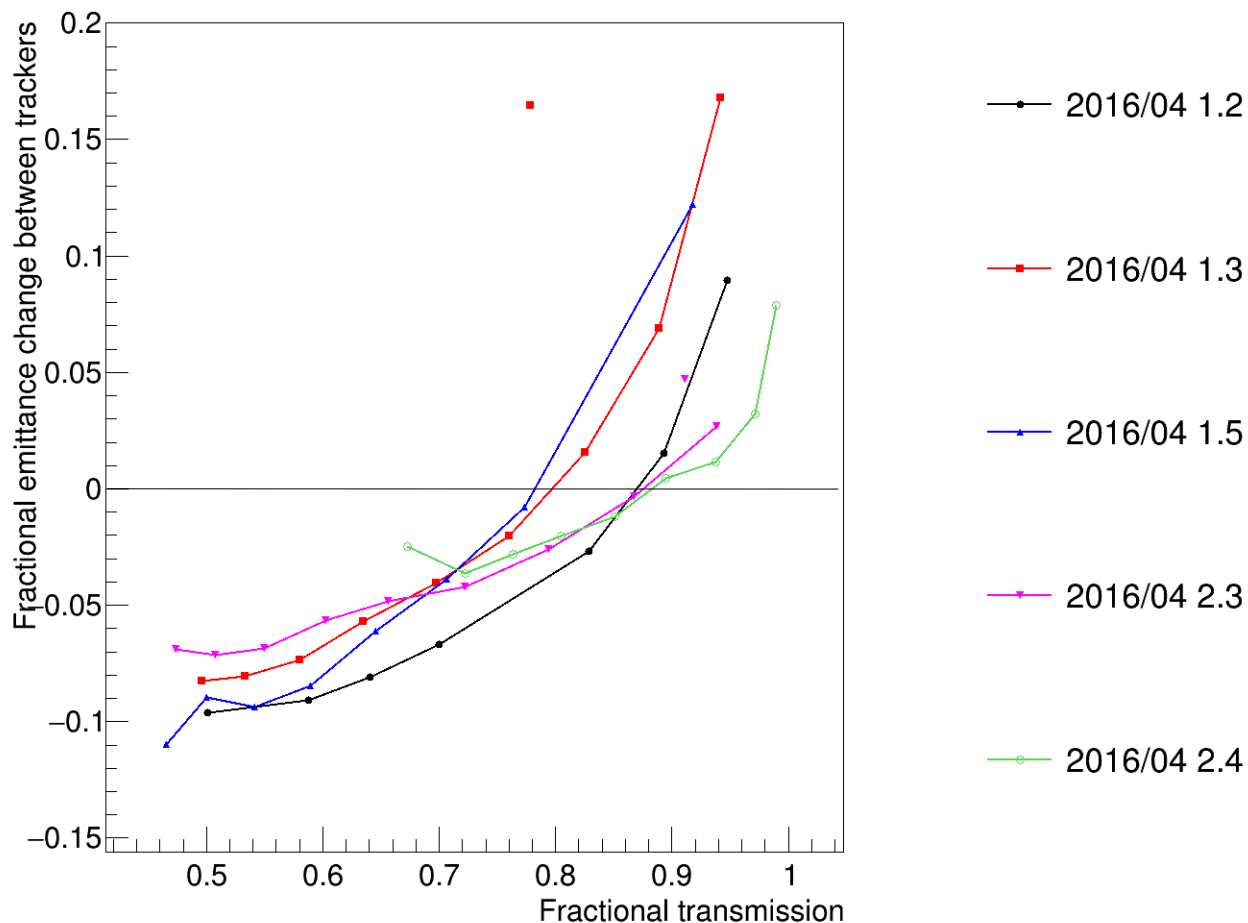
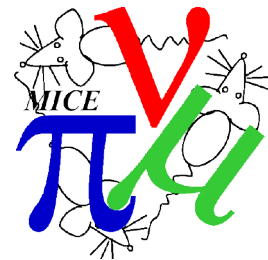
Date	Name	Subject
18 Nov – 23 Nov	2016/04 1.3	Beta ~ 1200 mm; p = 140 MeV/c
28 Nov – 5 Dec	2016/04 1.2	Beta ~ 800 mm; p = 140 MeV/c
5 Dec – 8 Dec	2016/04 1.5	Beta ~ 600 mm; p = 140 MeV/c
8 Dec – 12 Dec	2016/04 2.3	Beta ~ 700 mm; p = 200 MeV/c
12 Dec – 14 Dec	2016/04 2.4	Beta ~ 1200 mm; p = 240 MeV/c

- 2016/04
 - Beta function scan at 140 MeV/c
 - “Best” available settings at 200 and 240 MeV/c
- Thanks as always to MOMs
 - Ed Overton 9th November - 28th November 2016
 - Melissa Uchida 26th November - 16th December 2016

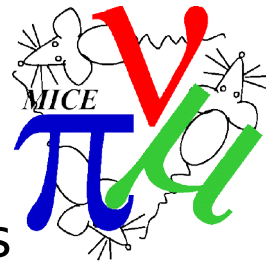
Expected Transmission



Expected Emittance Change

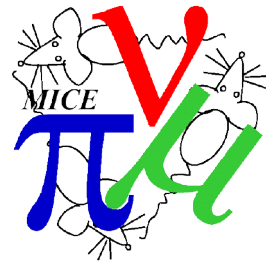


Papers Status



- **Demo Paper** sent to PRAB – now with journal referees
 - Thanks for comments
- **Two further publications** in progress
 - Direct measurement of emittance using the MICE scintillating fibre tracker (V. Blackmore)
 - Multiple Coulomb Scattering of muons in Lithium Hydride (R. Bayes)
 - Analysis is ongoing
 - Talks Tuesday am/pm

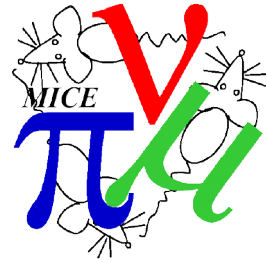
Further analyses



- Several further analyses in progress
 - Field-on measurement of scattering (A. Young, J. Greis)
 - Measurement of energy loss (S. Wilbur)
 - Emittance evolution (F. Drielsma, C. Hunt, A. Liu, C. Rogers)
 - Beam-based alignment (Y. Song, C. Rogers)
 - Phase space density and volume estimation (T. Mohayai, F. Drielsma)
- Talks on Tuesday and Wednesday



Future Plans



- 2016/05
 - Starting now – early March
 - Flip mode running
- 2017/01
 - 2nd May to 2nd June
 - Liquid Hydrogen running
- Run plans will be presented on Wednesday am

Summary



- Demo paper has passed final review and is now with journal
- Two further collaboration publications are in progress
- More are starting to work their way through the pipeline
- Thanks to hard work of computing, operations and hardware teams
- Physics group is looking forward to flip mode and liquid Hydrogen installation
- A lot of fun to come!