



# Physics Coordinator Report

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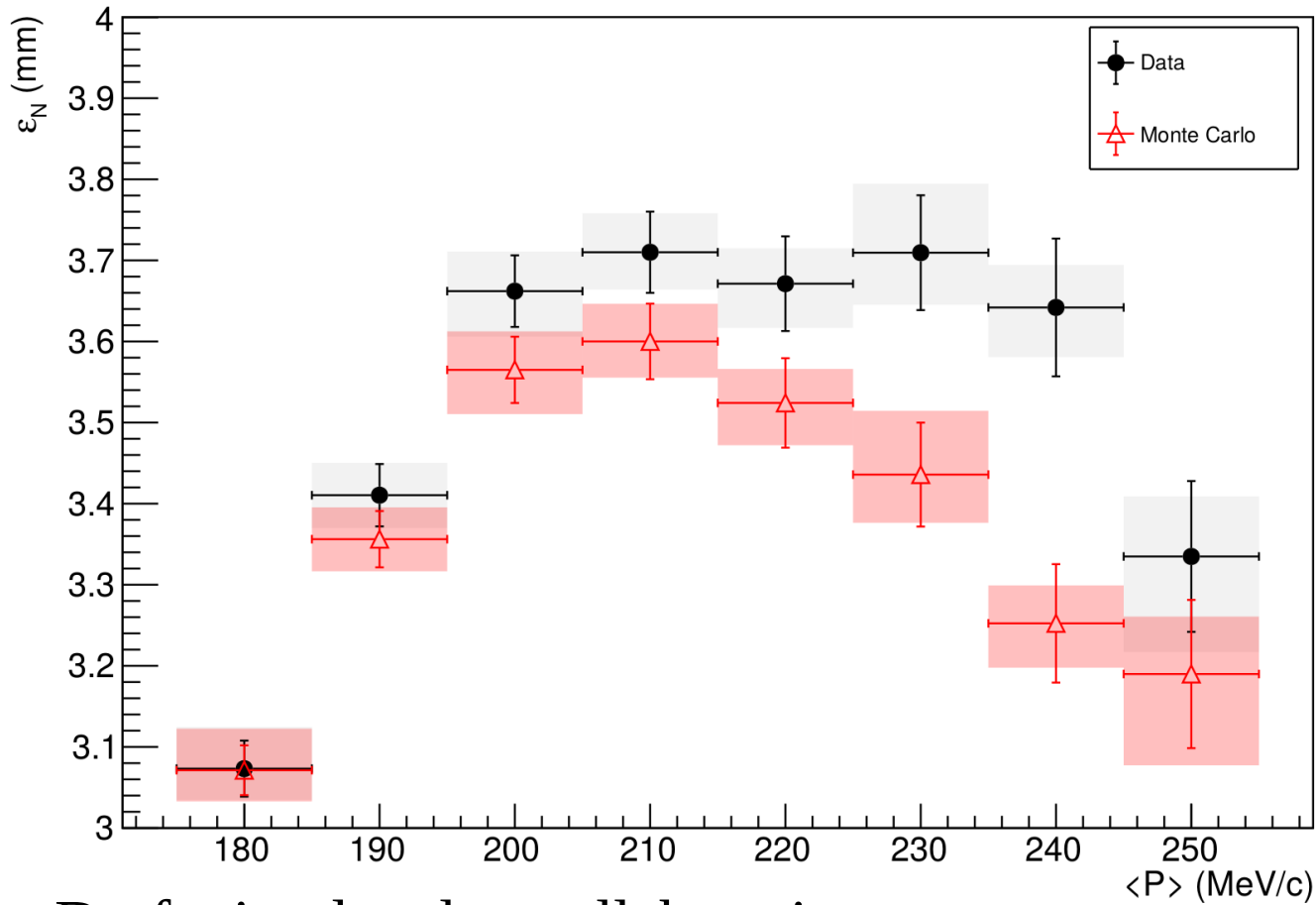
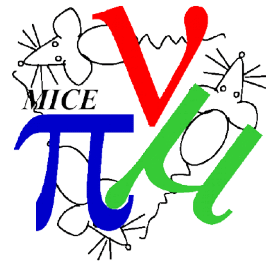
C. Rogers, ISIS Intense Beams Group  
Rutherford Appleton Laboratory

# Reminder – Publication plan



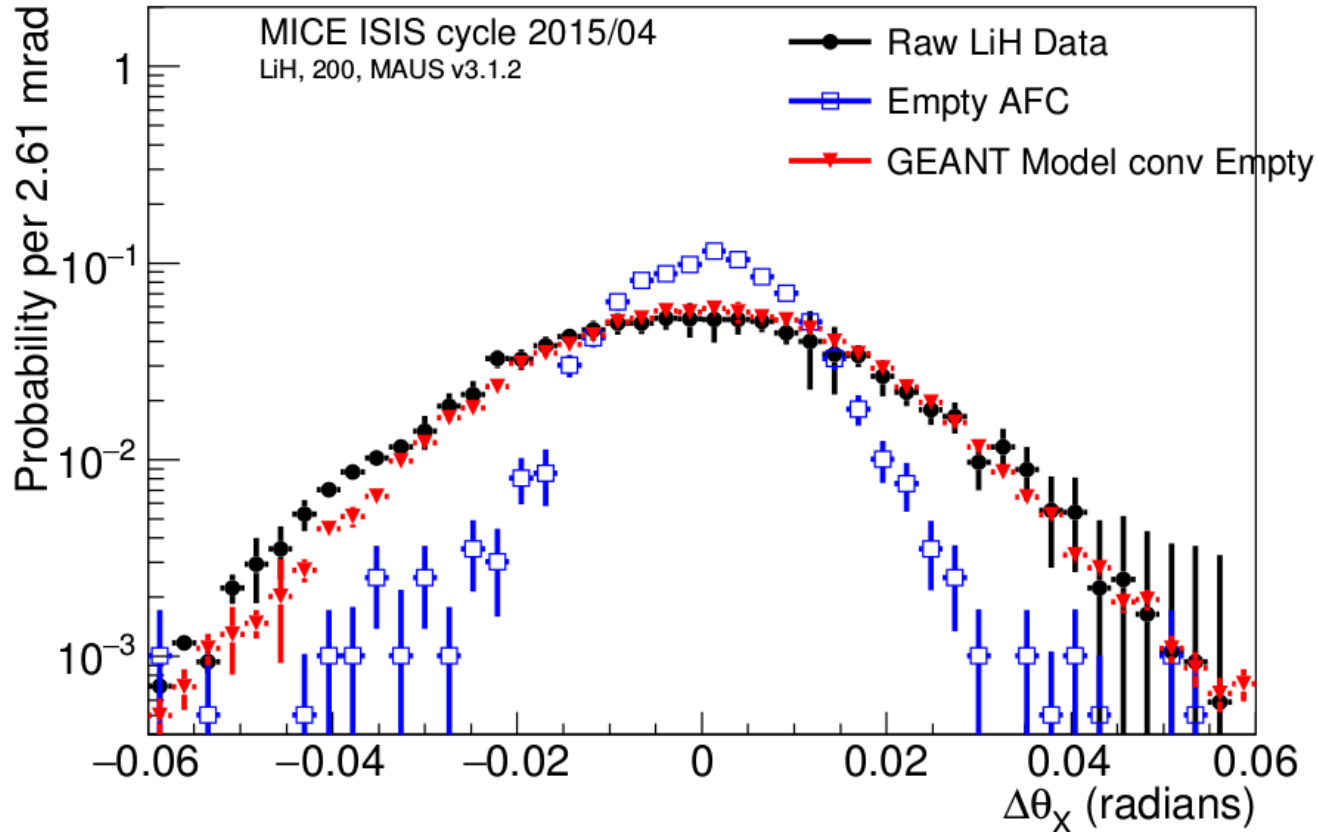
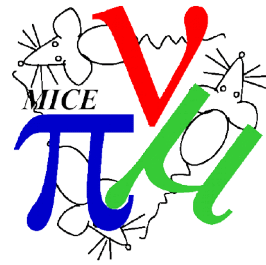
Title	Contact	Target date	
		Final	Preliminary
Direct measurement of emittance using the MICE scintillating-fibre tracker	V. Blackmore	Jun18 CM51	
Measurement of multiple Coulomb scattering of muons in lithium hydride	J. Nugent	Jun18 CM51?	
Phase-space density/ emittance evolution; rapid communication	C. Rogers	Jun18 CM51	Apr18 w/s
The MICE Analysis and User Software framework	D. Rajaram	Jun18 CM51	May18 w/s
The MICE liquid-hydrogen absorber	C. Whyte/J. Boehm	Jun-18	Apr18 w/s
Performance of the MICE diagnostic systems	S. Wylbur/P. Franchini		Jun-18
Beam-based alignment	C. Hunt		Jun-18
Muon Ionization Cooling Experiment (h/w)	C. Whyte/P. Franchini		Jun-18
Phase-space density/ KDE/ 6D-emittance evolution	T. Mohayai		Jun-18
Measurement of multiple Coulomb scattering of muons in LH2	J. Nugent		
Field-on measurement of multiple Coulomb scattering	A. Young		
Phase-space density/ emittance evolution review paper	TBD		

# Emittance Measurement Paper



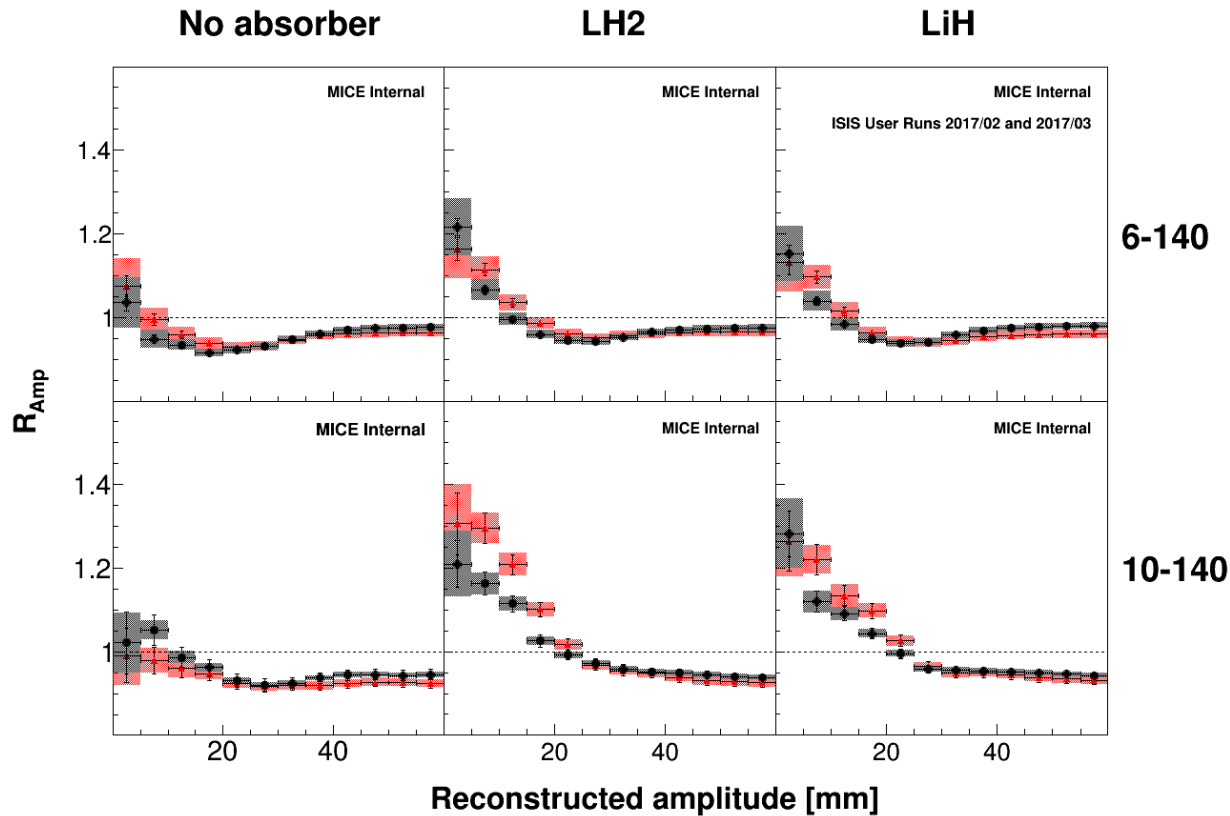
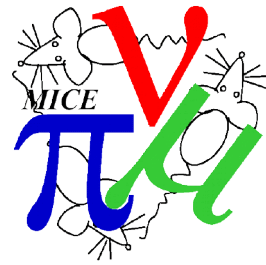
Draft circulated to collaboration;  
comments due Thursday 5<sup>th</sup> July

# Scattering Paper



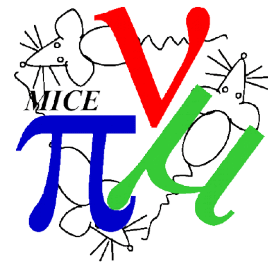
Left-right asymmetry issue solved; post-reconstruction patch  
Concerned now with deconvolution routine

# Emittance Evolution



Statistical and systematic errors included  
Target end of June for 1<sup>st</sup> draft MICE note

# Other Papers - Measurements



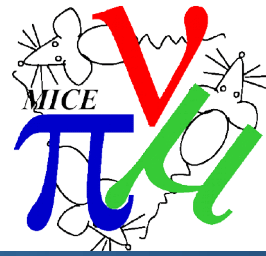
Scattering  
in LH2

Field-on  
Scattering

6D emittance  
evolution

Long  
emittance  
evolution

# Other Papers - Techniques



Tracker  
Performance

PID  
Performance

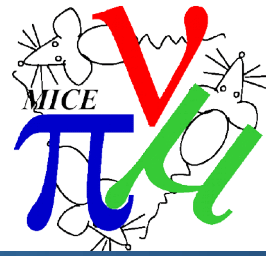
System  
Performance  
Paper

Transfer  
Matrix/Map  
Measurement

Optical  
Heating

Optical  
Alignment  
and Fields

# Sample Analysis Toolsets



**Rogers**  
Emittance  
Evolution

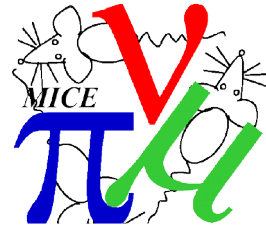
**Blackmore**  
Emittance  
Measurement

**Hunt**  
Emittance  
Measurement

**Bayes/Nugent**  
Scattering



# Comments



- We have a **great data set**
- We have a **great analysis team**
- There are **great opportunities**

Now is the time to make it happen!