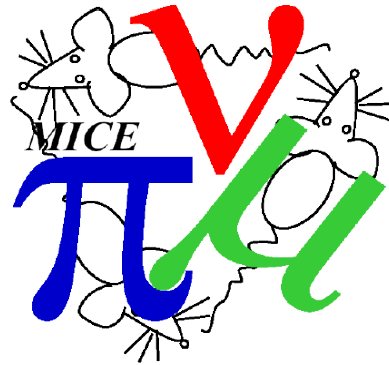


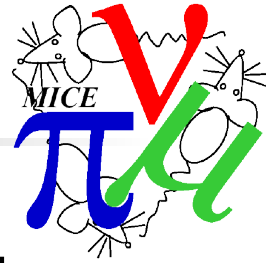


Analysis requirements for online



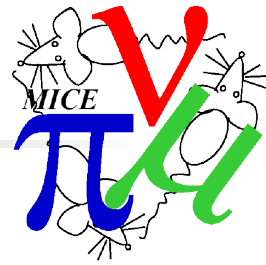
Chris Rogers,
ASTeC,
Rutherford Appleton Laboratory





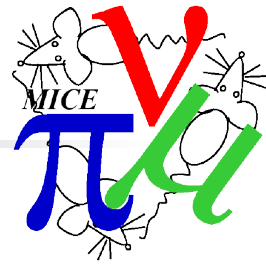
- For each detector subsystem we ask what plots they want to provide
 - Aim is to create a common infrastructure that detector groups can fill
 - Chris Tunnell needs to know what they want so we can provide common infrastructure
- Group we have not addressed this to is Analysis group
 - Analysis group have responsibility for understanding the accelerator
 - Validating the accelerator hardware is functioning correctly (from beam)
 - Providing feedback to users of the accelerator (experimenters, not shifters)
- How much of this is online?
- How does this want to be served?

Online Histograms



- Propose a list of plots, to be shot down by analysis group
- 1D plots
 - x, y, t, p_x, p_y, p_z , energy at u/s, d/s tracker
 - pid in u/s, d/s detector system
 - delta energy between u/s, d/s tracker -> assess
 - 4d amplitude
- 2D plots
 - Correlations between data at each tracker
 - Correlations between u/s, d/s tracker

Online Graphs



- I believe analysis group have requested facility to tune lattice online
- This means we want to look at data across multiple runs
 - Beam moments, correlation, standard deviation vs e.g. magnet currents
 - Beta/alpha function vs slow controls parameters?
 - Emittance vs magnet currents?
 - PID vs magnet currents? vs proton absorber material?
- Probably want to select a bunch of run numbers, pull down the data and make the plots
- Requires new infrastructure, needs to be planned in