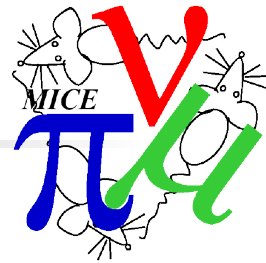
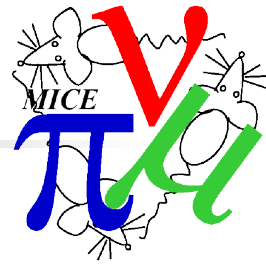


How to turn on MICE Step IV



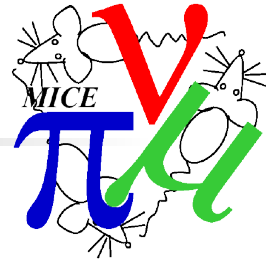
- Turn on Q1-3, D1, DS, D2
- With no field
 - Check TOF0-TOF1 alignment
- Turn on Q4-6, Q7-9
- Check beamline detectors report sigma x, sigma y consistent with Step I running
 - Re-optimize if things have moved
 - Check TOF1-tracker0-tracker1 alignment
- Turn on Spectrometer Solenoid 0 and run as a focus into tracker 1 (to make good beam rate)
 - Check tracker1-TOF2-KL-EMR alignment
- Ramp coils in FC and each SS individually
 - Check sigma x, sigma y moves in the expected manner
- Turn on SS0, SS1, FC
 - Check flat sigma x, sigma y in the spectrometer solenoids
- Nb: can use pion mode for improved rates

Step IV operations



- What software do we need online for **Step IV operations**
- Straight tracks => alignment
- To check magnet focus strength + alignment
 - **Either** fit beam envelope to ≥ 3 planes in tracker/TOF
 - **Or** track fit to ≥ 2 planes in tracker/TOF
 - **Then** propagate tracks/envelope between trackers
 - Assume offline field mapping makes this unnecessary? Ass+u+me
- Additional thoughts
 - PID probably not req'd (pions upstream, electrons downstream)?
 - Tracker momentum important if we have a large p_z spread
 - Need to cut on p_z to reduce to linear optics
 - Or just do full track fit

What do we need?



- User interface
 - Visualisation
 - **No one assigned**
 - Existing prototype code but needs clean up and some new functionality
 - ~ 50 % done
 - Online reconstruction/data quality plots