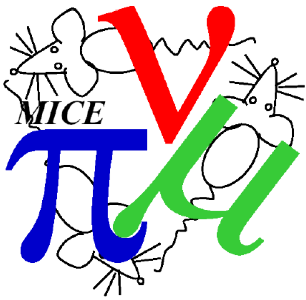


Field On Scattering

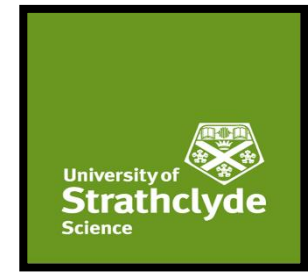
Alan Young

Department of Physics,
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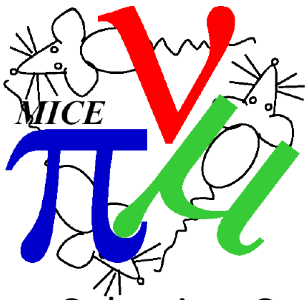
12th February 2020



Current Objectives



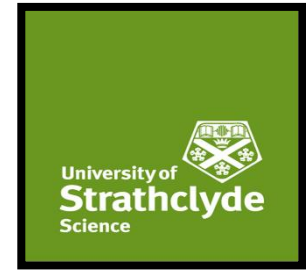
- Data Selection Check
 - Move selections from Phase 1 to Phase 2
 - Move analysis fully to MAUS v3.3.2, including Monte Carlo Data
 - Comparison of Monte Carlo to measured data and study effect of cuts



Selection Cuts

- Phase 1 Cuts
 - Require exactly 1 TOF1 space point
 - Require exactly 1 TOF0 space point
 - Require exactly 1 track in Upstream Tracker
 - Upstream tracker Chi2/dof<10
 - Upstream tracker max radius < 150mm
 - Diffuser max radius < 100mm
 - TOF01 consistent with Muon Peak
 - Extrapolated TOF01 consistent with muon hypothesis
 - Successfully extrude track from Upstream tracker back to TOF0
- Phase 2 Cuts
 - Fiducial cut - require the track from the upstream tracker, when projected downstream to be within 140mm radius at station 5 of downstream tracker
 - Select narrow range of muon momentum to allow study of scattering as a function of momentum

Rearrangement of Data Selections



Selection Cuts

- Phase 1 Cuts
 - Require exactly 1 track in Upstream Tracker
- Phase 2 Cuts
 - Require exactly 1 TOF1 space point
 - Require exactly 1 TOF0 space point
 - Upstream tracker Chi2/dof<10
 - Upstream tracker max radius < 150mm
 - Diffuser max radius < 100mm
 - TOF01 consistent with Muon Peak
 - Extrapolated TOF01 consistent with muon hypothesis
 - Successfully extrude track from Upstream tracker back to TOF0
 - Fiducial cut - require the track from the upstream tracker, when projected downstream to be within 140mm radius at station 5 of downstream tracker
 - Select narrow range of muon momentum to allow study of scattering as a function of momentum