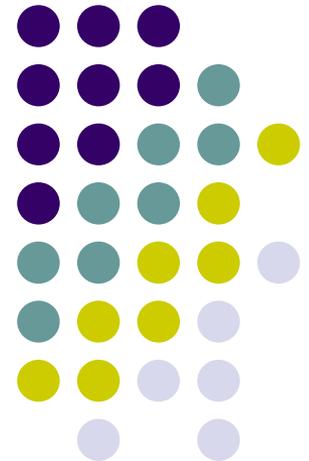
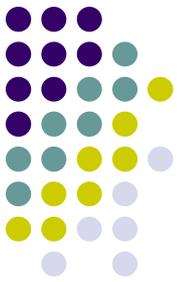


Neutral Mode Status

Elizabeth Worcester
September 10, 2005





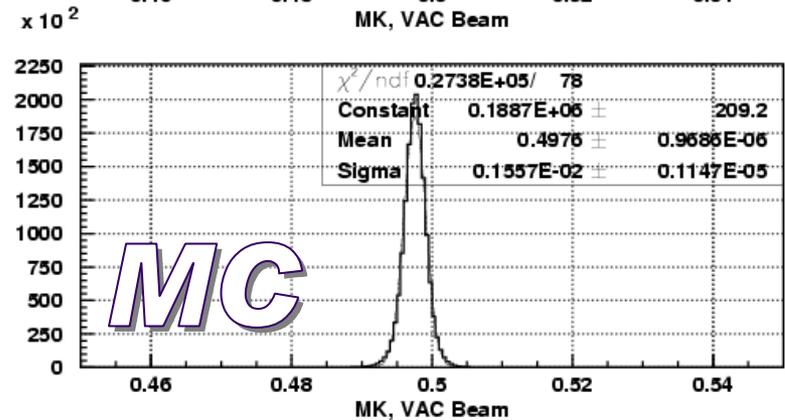
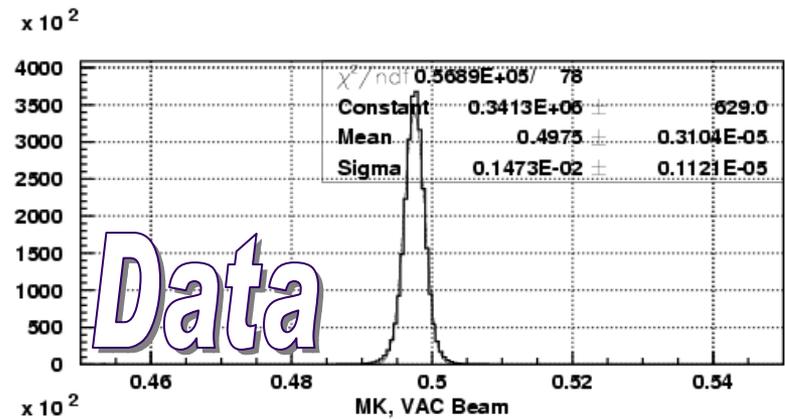
Past & Current Issues

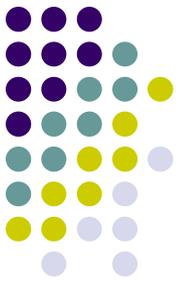
- dcache access
 - now possible to access private files in enstore using `VSNSPC='DCH:/pnfs/ktev/yourpath'`
 - implemented for v7_00
- data-MC position bias mismatch
 - error in z position ruled out
 - back burner for now
- 99 calibration
 - full calibration with energy scale matching is experiencing technical difficulties
- data-MC position resolution mismatch
 - recent effort focused on this issue
 - may improve energy scale mismatch at vacuum window

Position Resolution Mismatch



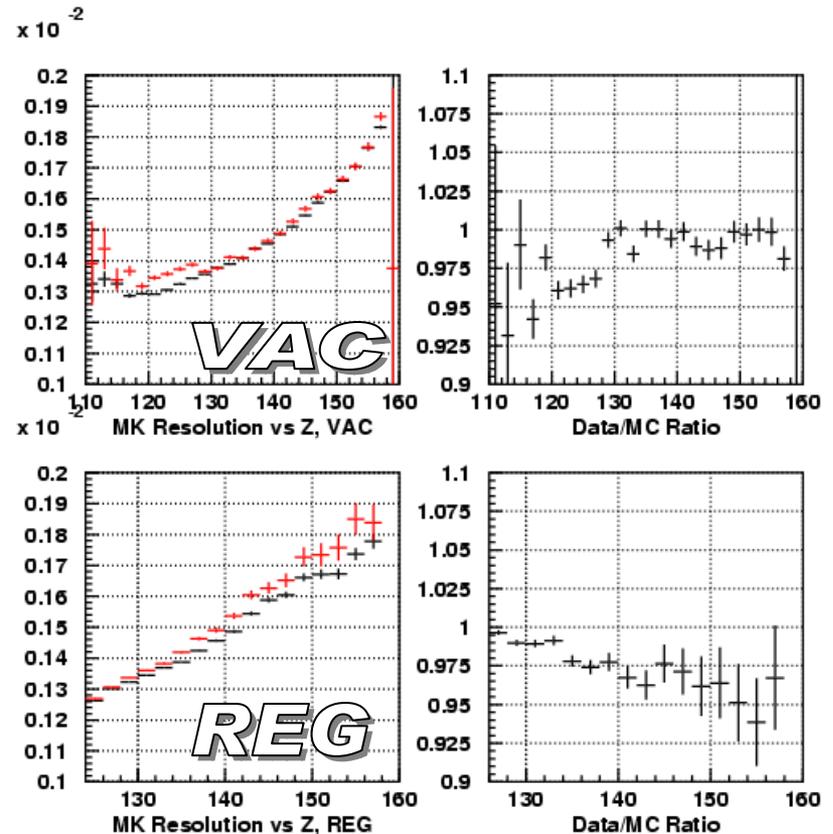
- x/y position resolution (measured using ke3 track-cluster positions) does not match well between data and MC
- $2\pi^0$ mass resolution ~5% worse in MC than in data





Position Resolution Mismatch

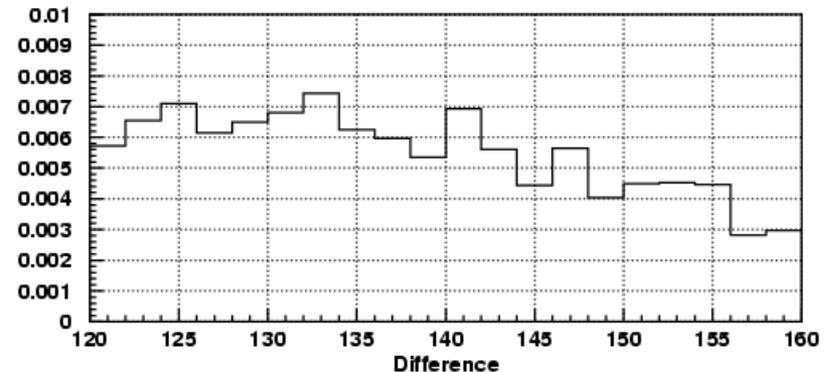
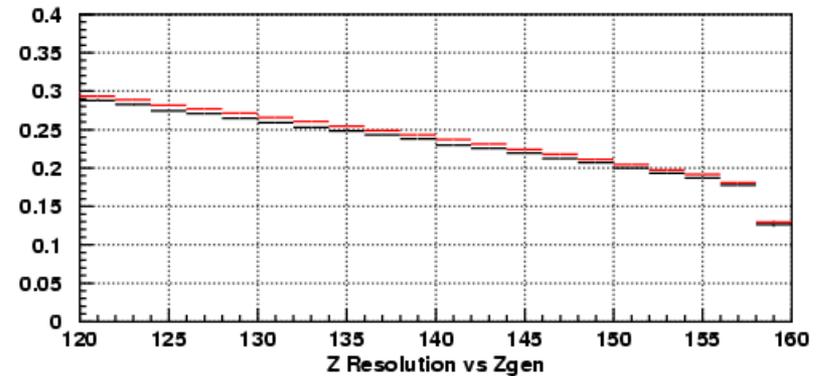
- can force agreement for $2\pi^0$ mass resolution by smearing reconstructed positions in data as function of z
- z dependence not large
- problem with this technique: does not apply different position smearing in small and large blocks even though typical resolutions are quite different





Position Resolution Mismatch

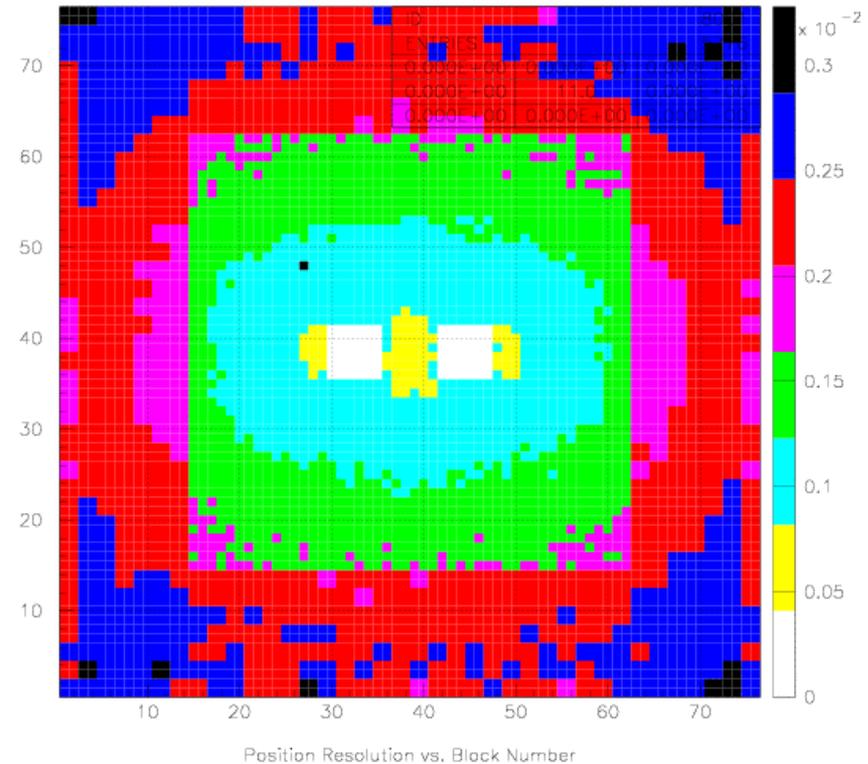
- smearing x/y positions affects z resolution
- increase in z resolution translates directly into upstream shift in measured position of edges
- check effect on z resolution by applying ~4 mm smearing to MC
- z vertex resolution changes by ~7 mm at reg edge and ~3 mm at vac win
- ~4 mm improvement in data-MC energy scale mismatch at vac win

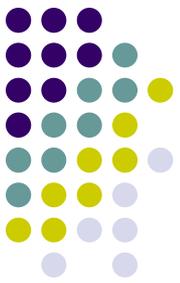


Position Resolution Mismatch



- check channel by channel position resolution using ke3 electrons (track-cluster)
- smear data as function of block ID
- in progress: will need to verify that smearing based on ke3 positions fixes $2\pi^0$ MK resolution mismatch





Near Future

- Finish position resolution studies
 - try channel by channel position smearing
 - possible improvement to MC position resolution from changing generation cutoffs in GEANT
- 99 Calibration
 - find source of mismatch between calibration and analysis jobs – likely a simple bug
 - look at energy scale systematics in 99