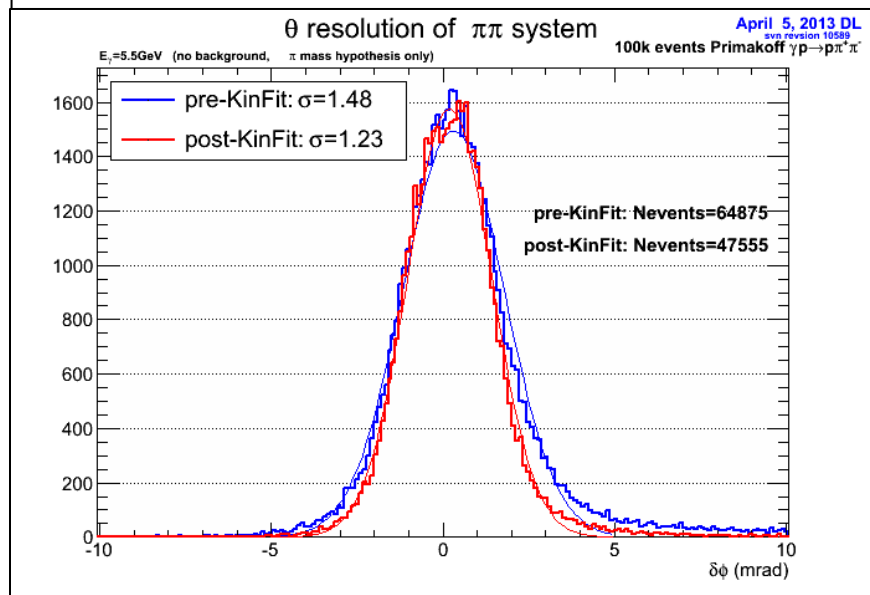
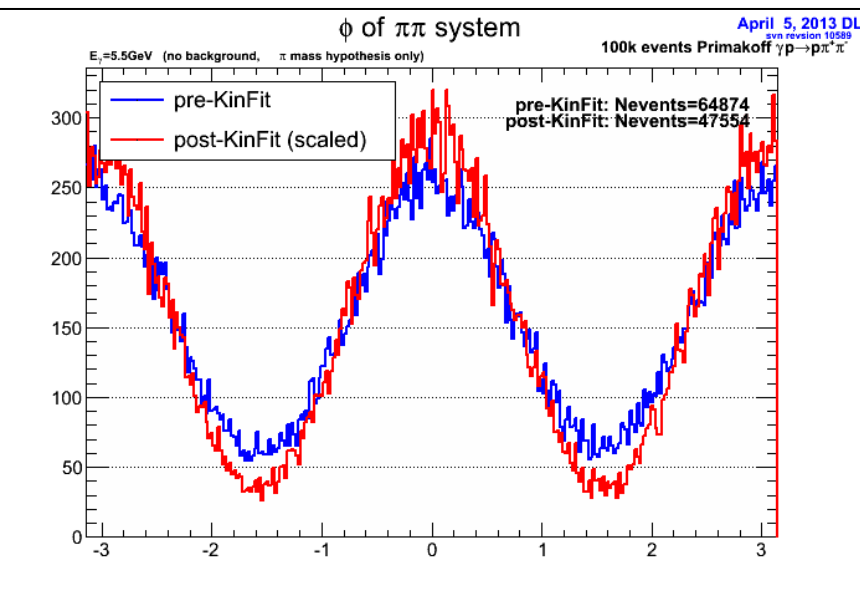
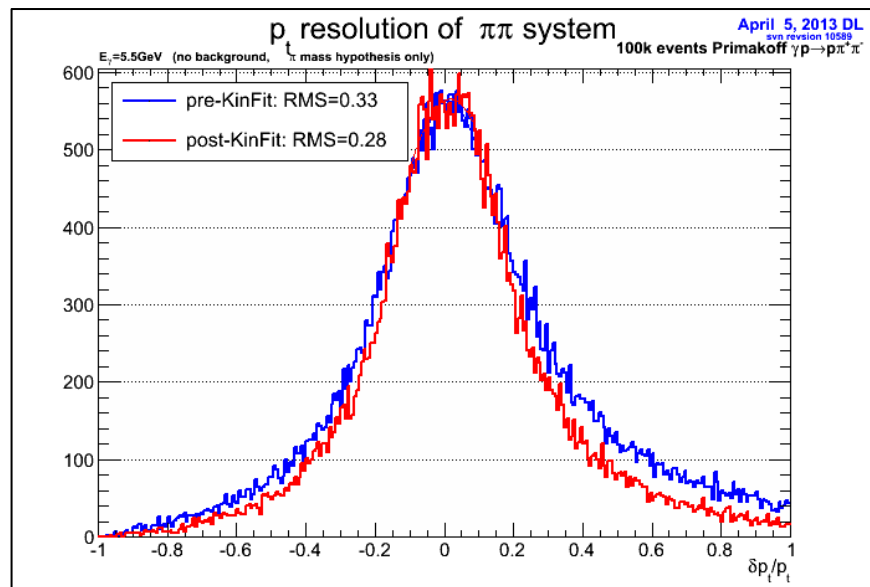
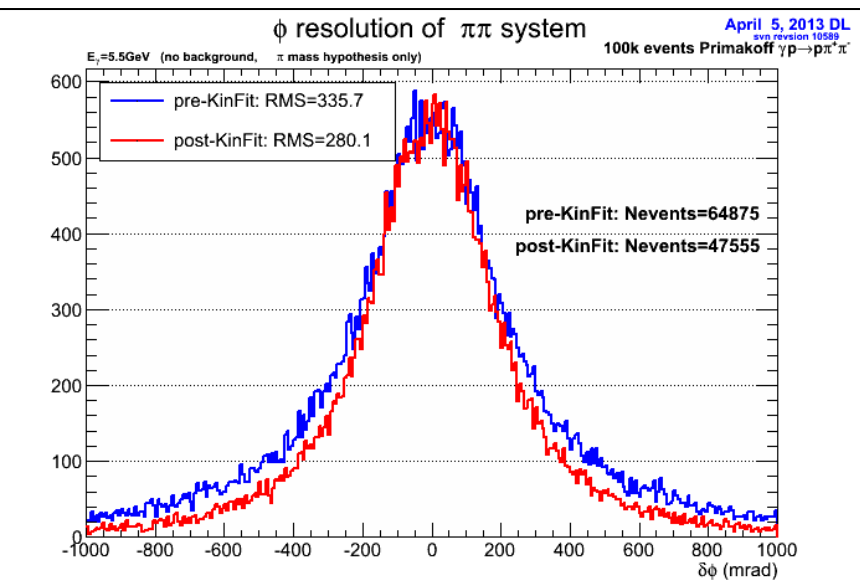


Charged Pion Polarizability Update

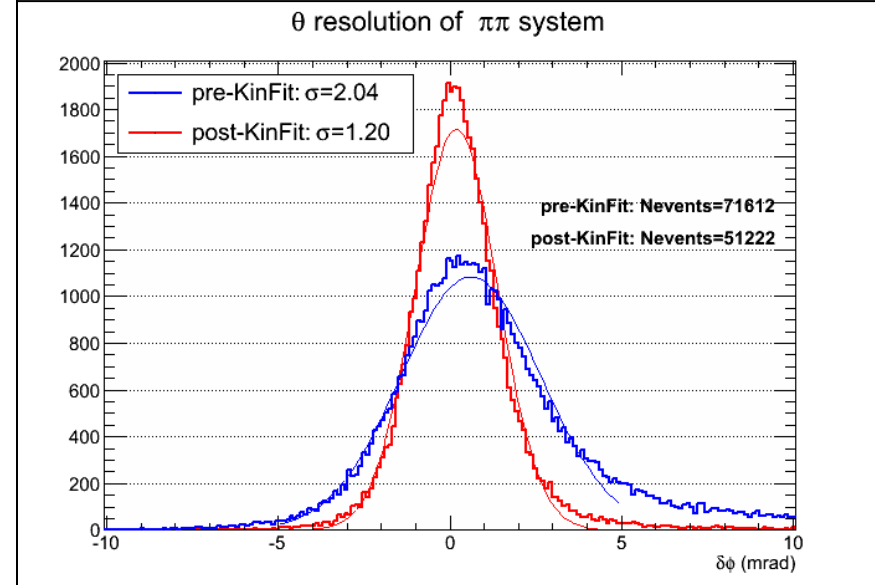
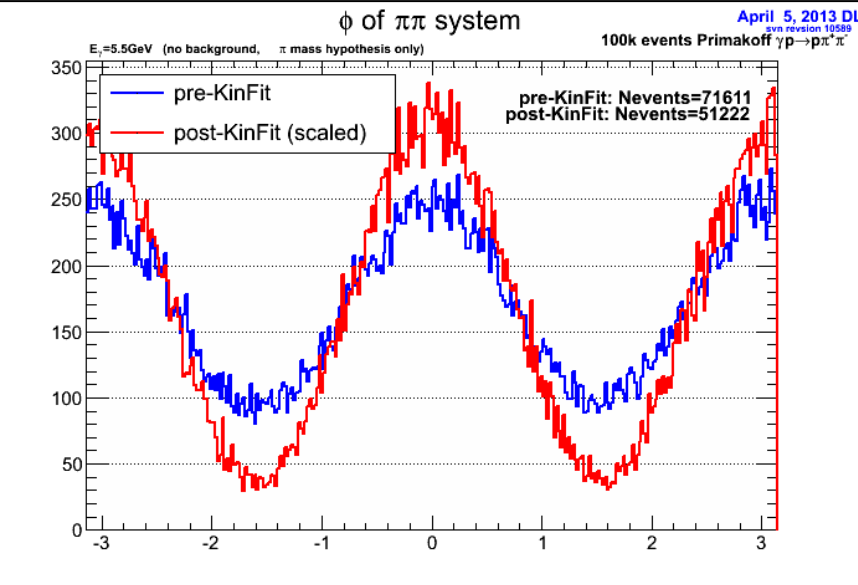
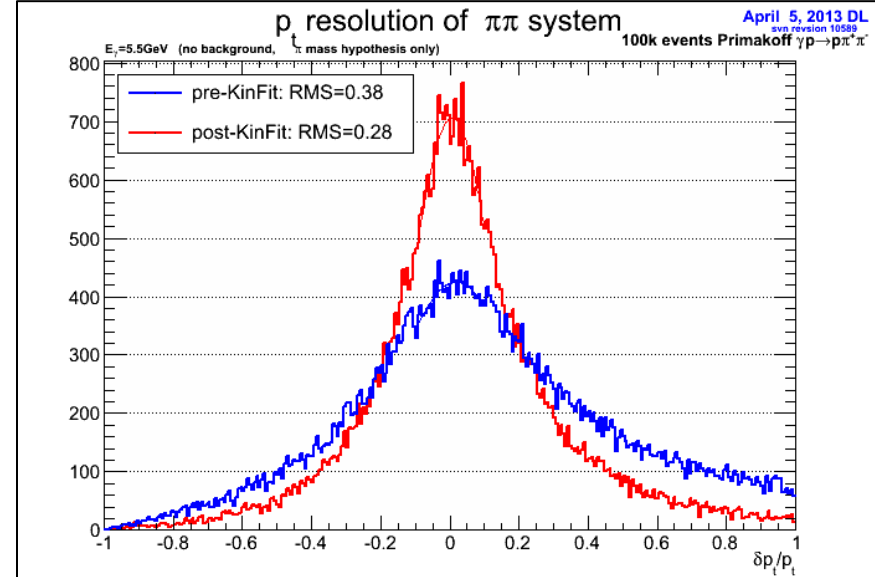
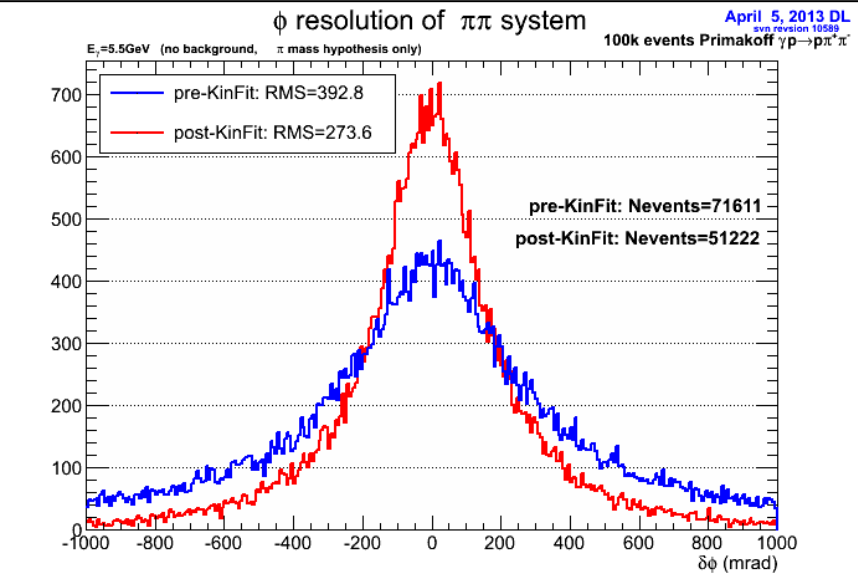
David Lawrence JLab

Apr. 8, 2013

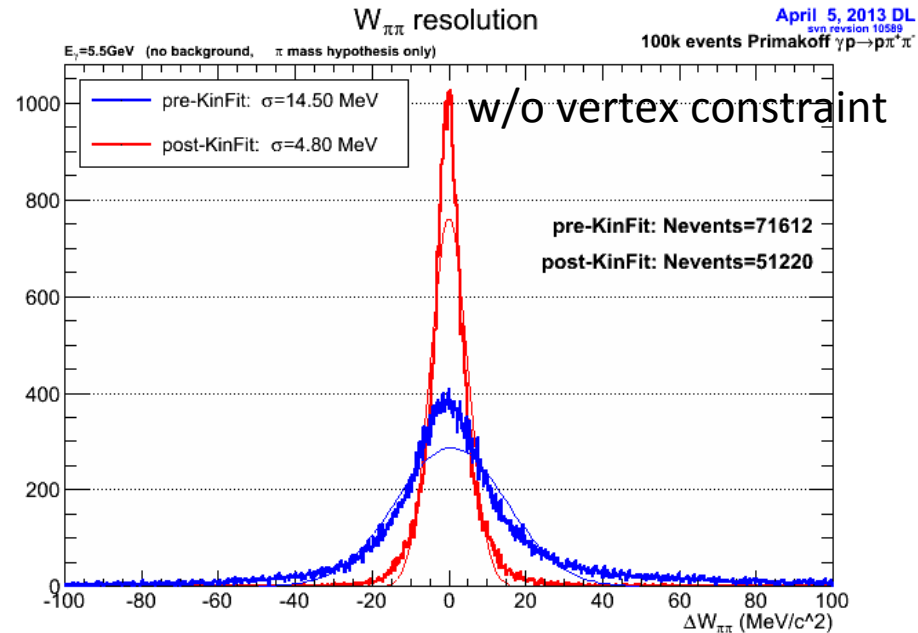
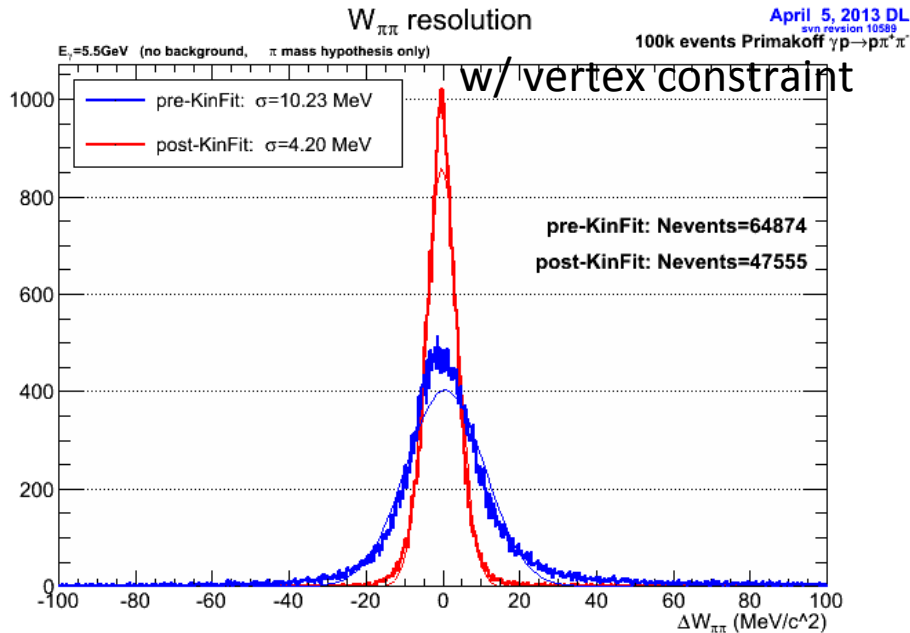
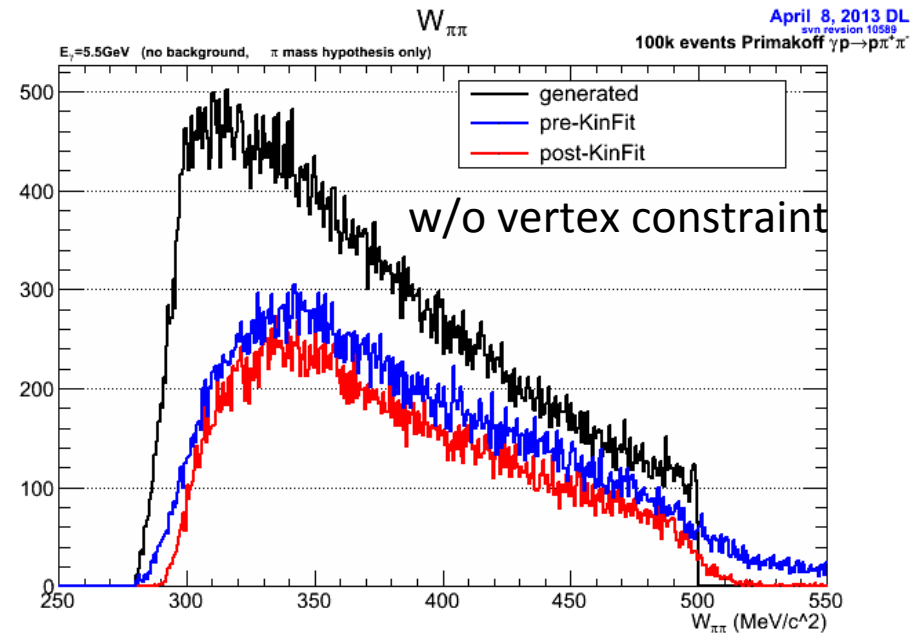
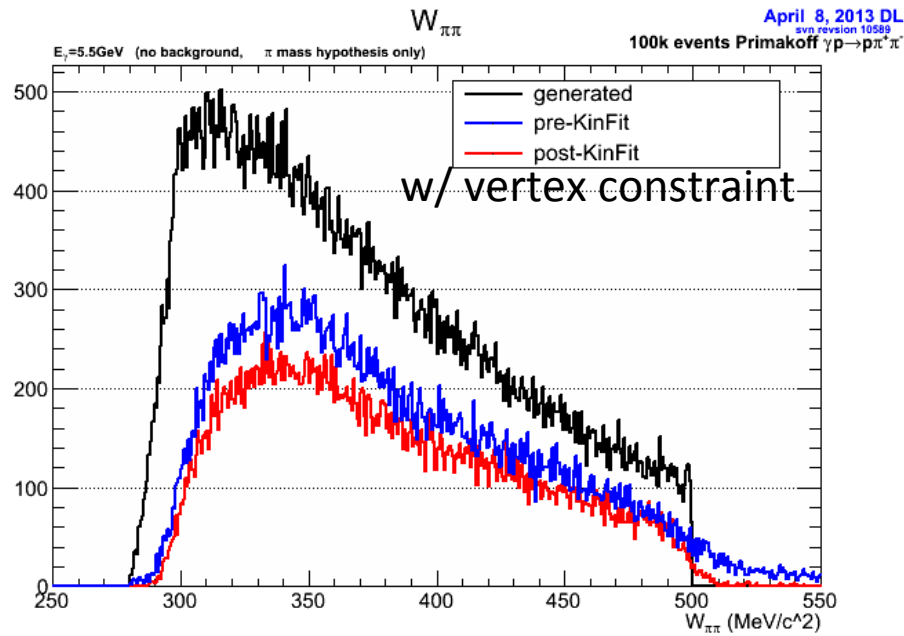
With Vertex Constraint



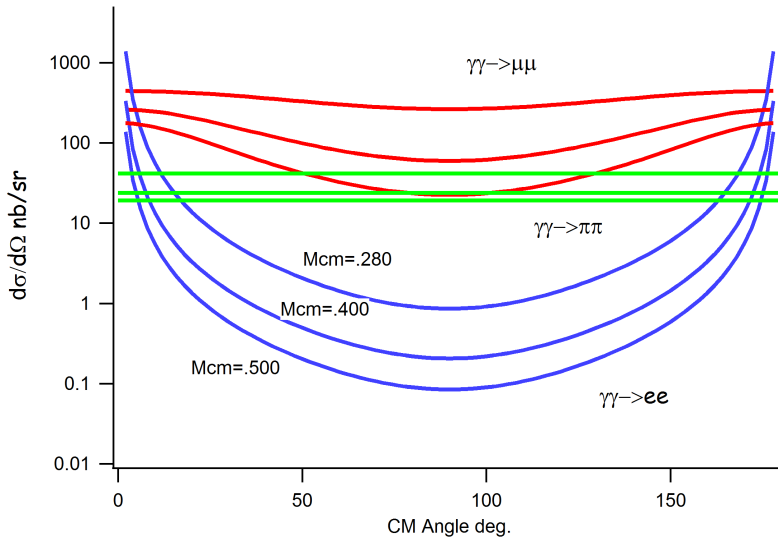
Without Vertex Constraint



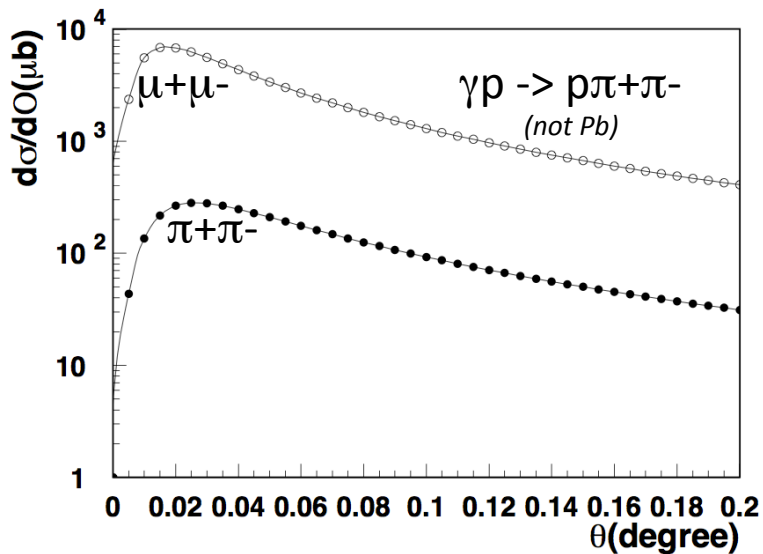
$\pi\pi$ invariant mass

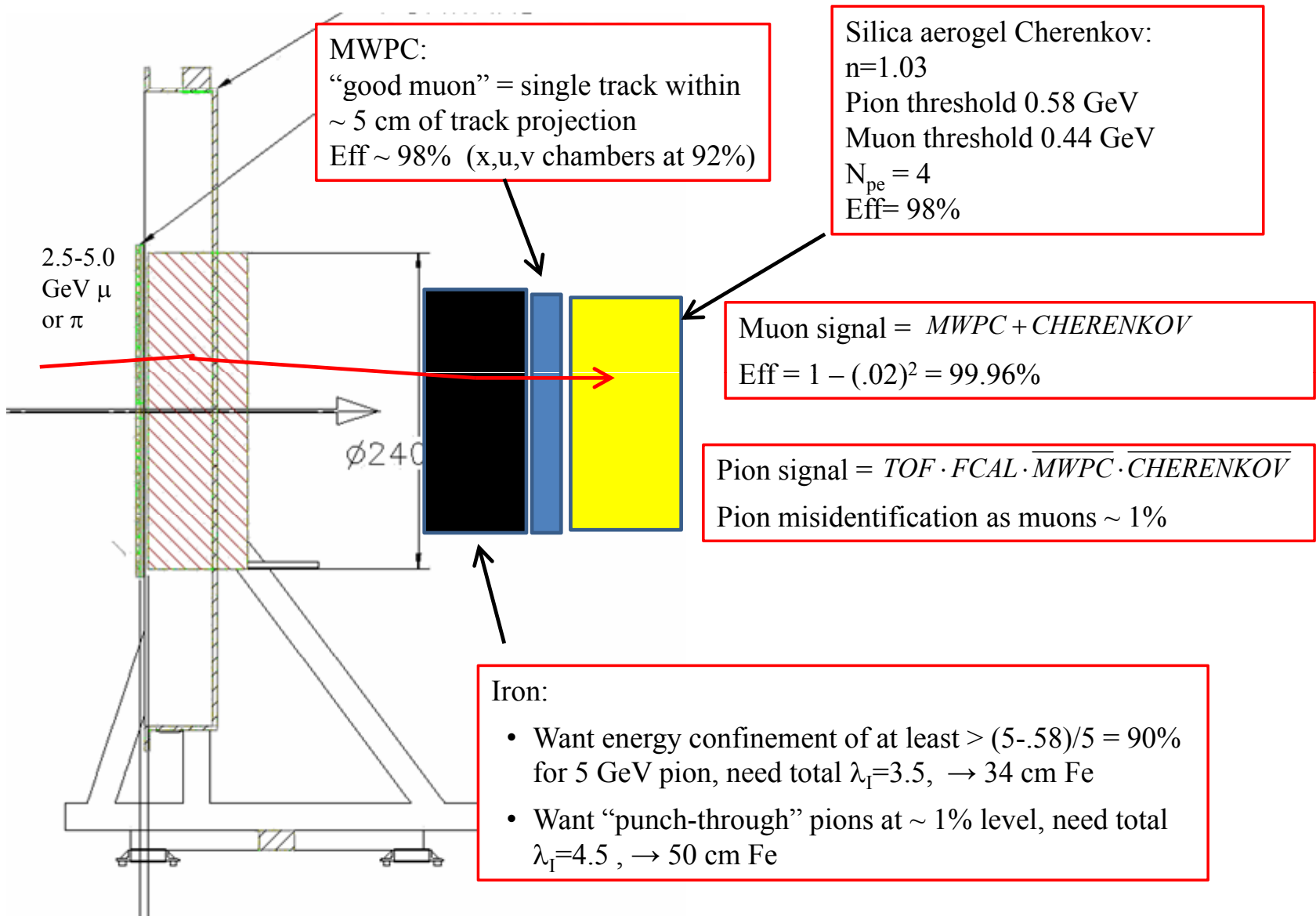


Muon background



- $\mu+\mu^-$ pairs will contribute a large background that must be dealt with
- $\mu+\mu^-$ cross-section is about $\times 10$ larger than $\pi+\pi^-$ cross section
- Measurement aims for few percent in $\pi+\pi^-$ cross section
- $\mu+\mu^-$ background must be suppressed by factor of 1000
($\times 10$ for x-section, $\times 100$ to make μ contamination on order of 1%)





Timeline

- April 8-19: Update LOI into full proposal
- April 20-26: Collaboration review
(next physics group meeting is April 22nd)
- April 27-May 2: Incorporate collaboration comments and draft final proposal
- May 3: PAC Proposal Due