

# Cherenkov Counter Update #2

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Physics

Mechanical Prep

Electronics

Gas Fill

# Physics

Initial analysis of Cerenkov physics suggests that electron/pion discrimination is possible in the Cerenkov head.

- ▶ Critical Momenta:
  - ▶ Electron: 20MeV
  - ▶ Pion: 7.8 GeV
  - ▶ Muon: 4.3 GeV
  - ▶ Kaon: 20 GeV
- ▶ Critical momentum scales, to first order, with  $M^{-1/2}$  and  $p^{-1/2}$
- ▶ Average photoelectron yield for electron at 300MeV - 1GeV:  
15

# Mechanical Prep

- ▶ Moveable stand built for us by the folks at MTest (Thanks Todd and Bill)
- ▶ Preparing to mount the PMT

# Electronics

Built and tested two-level and three-level coincidence circuits on a moveable stand.

# Gas Fill

Much still to be done:

- ▶ Submit safety documentation for vacuum windows
- ▶ Size relief valves for MTest and final installation
- ▶ And more...