

Data Quality Checks for PID Detectors

Melissa Cummings

03/21/13

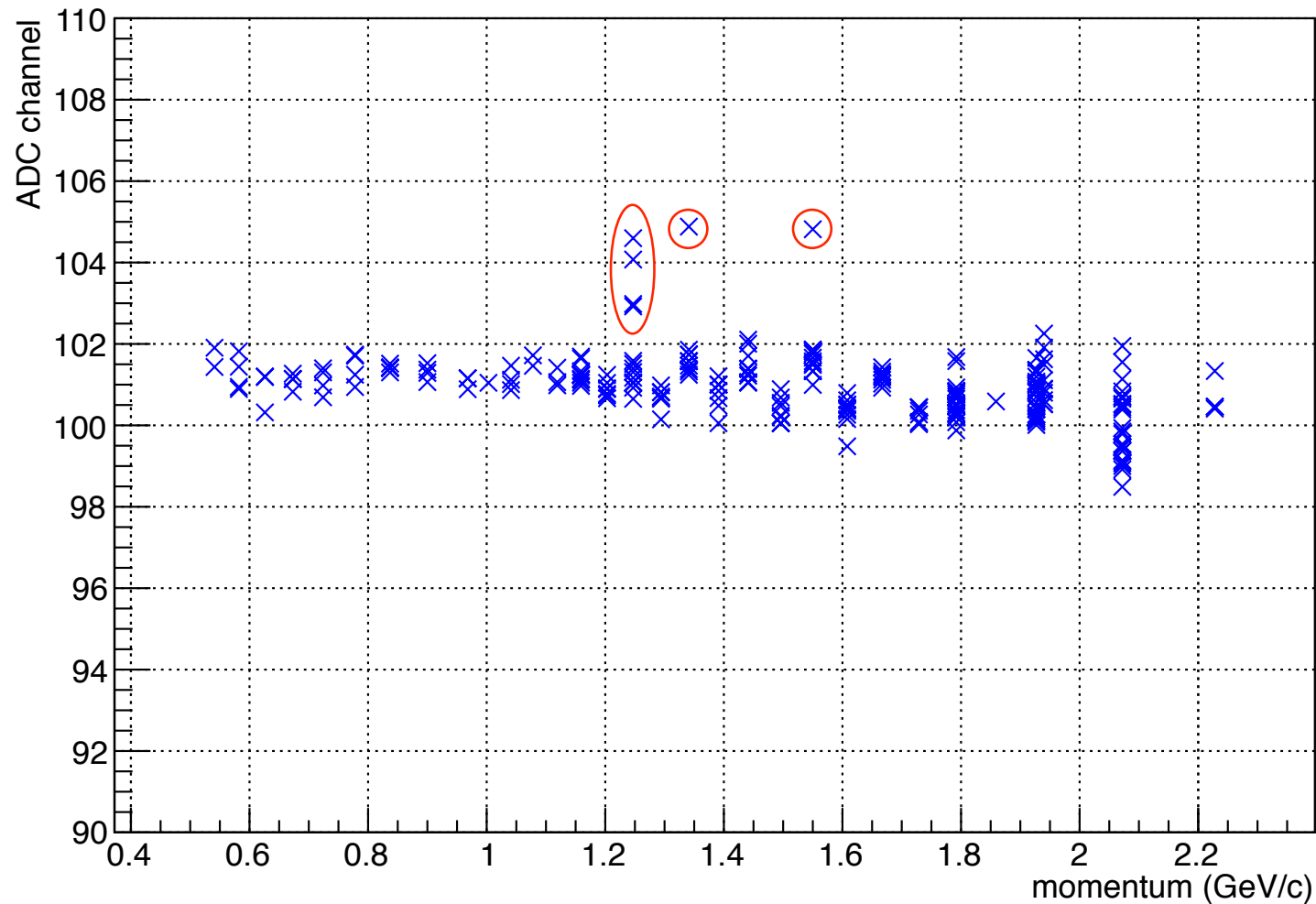
What to Check

- Cherenkov
 - single photoelectron peak location
 - main peak location
 - detector efficiency
 - cut efficiency
- Pion Rejectors
 - mean of E/p distribution
 - detector efficiency
 - cut efficiency
- Pion Contamination

Cherenkov Single Photoelectron Peak

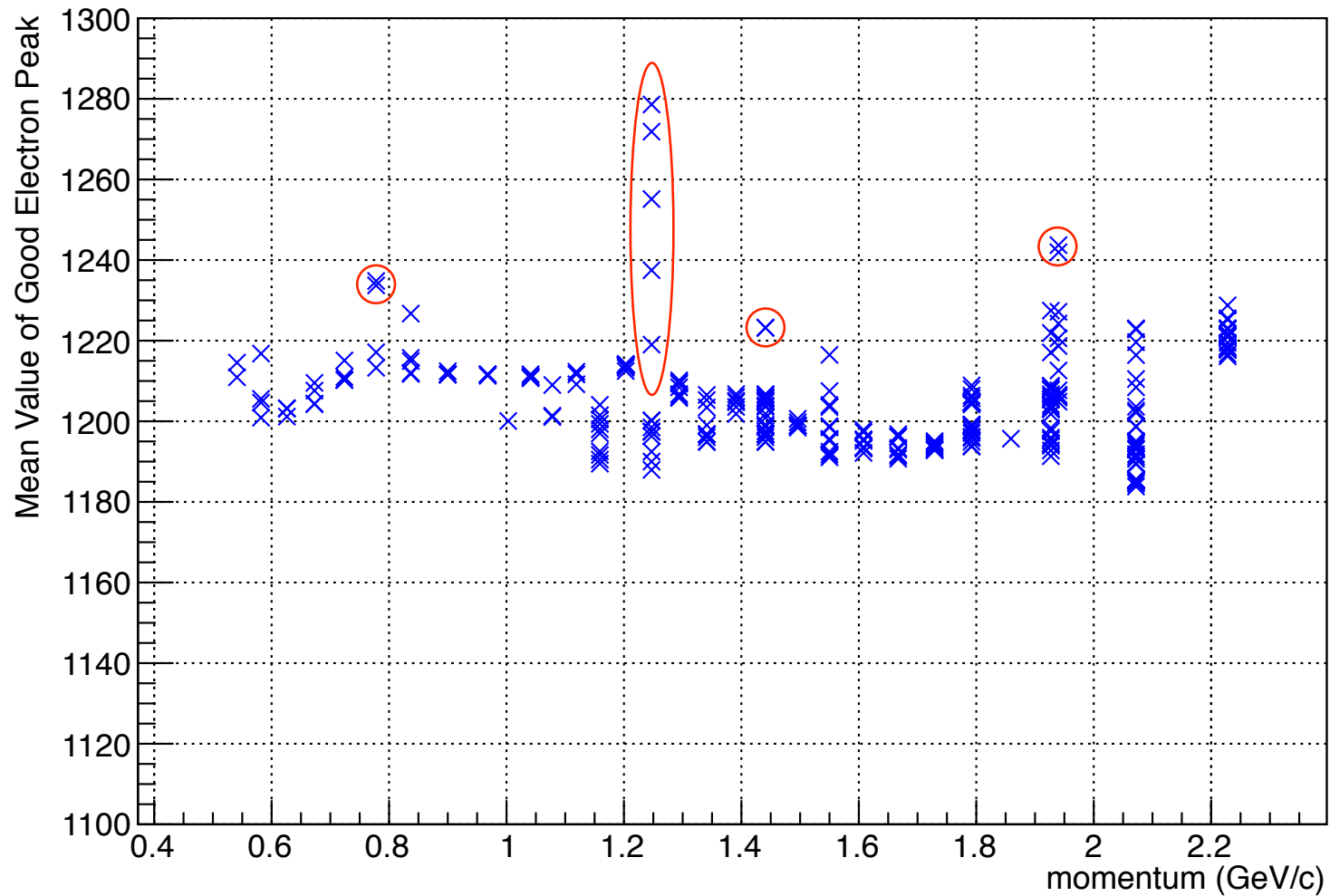
(average of 10 channels)

LHRS Gas Cherenkov Single Photo-electron Peak Location for 2.2 GeV, 2.5T, 90deg



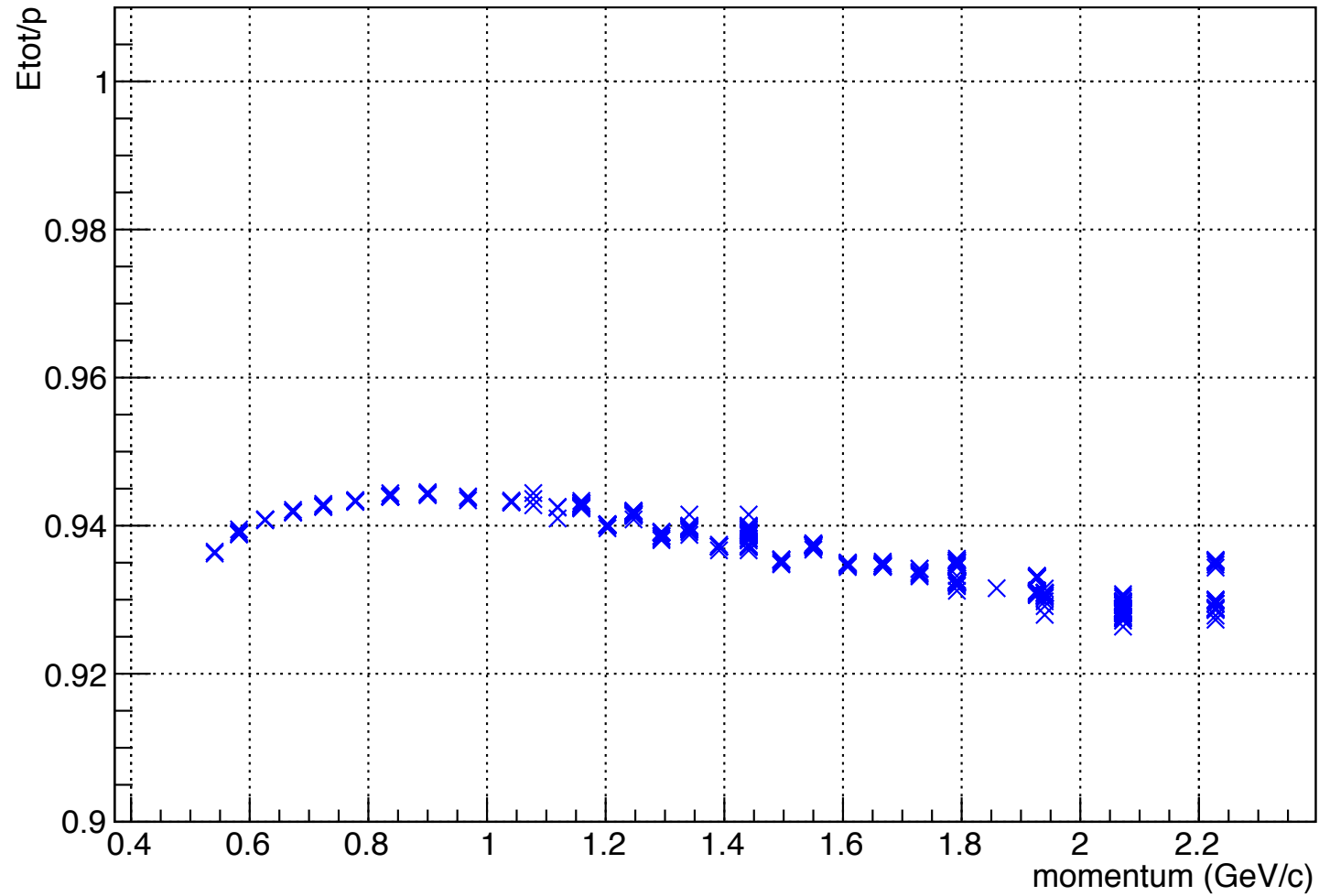
Cherenkov Main Peak

LHRS Gas Cherenkov for 2.2 GeV, 2.5T, 90deg



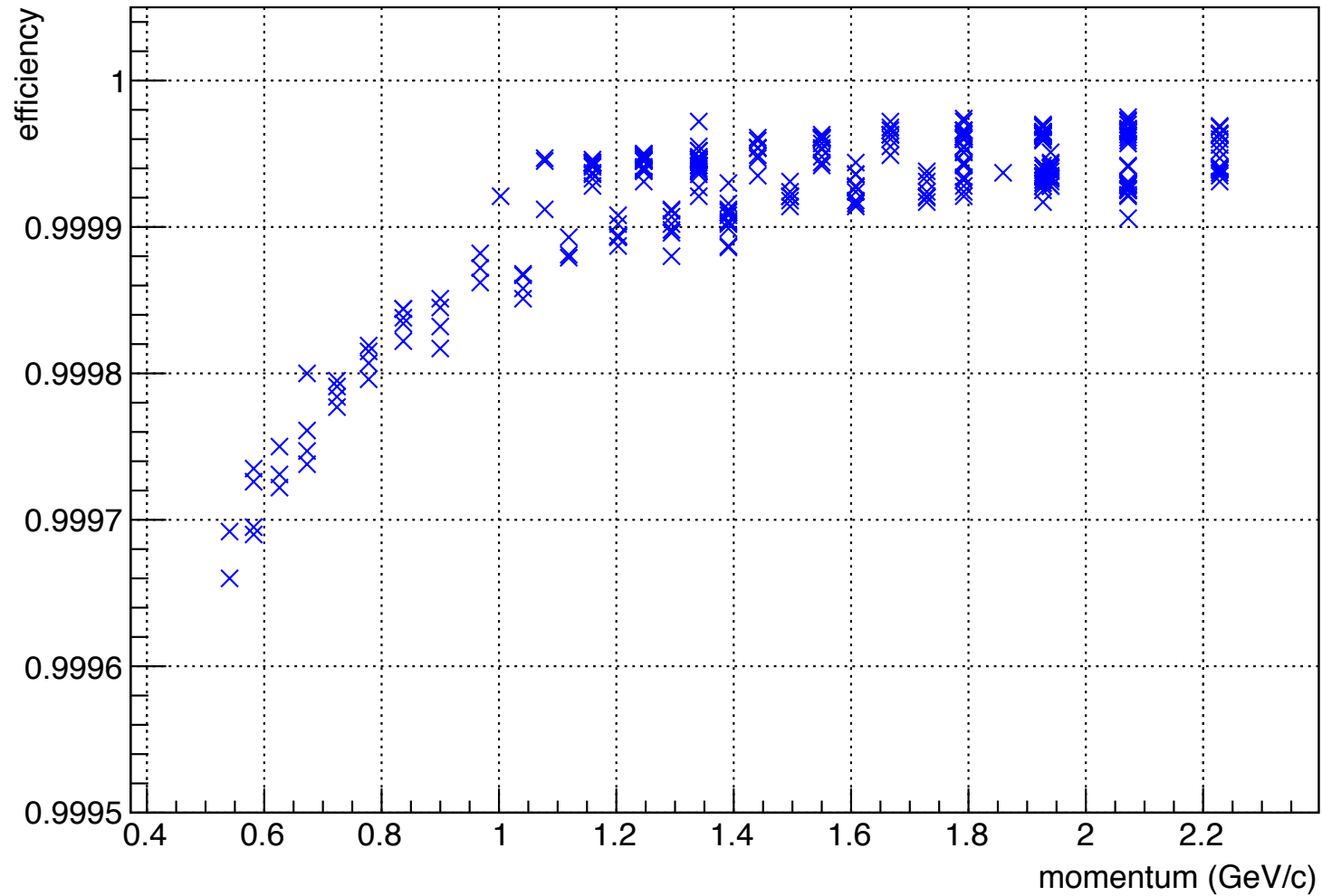
E/p

LHRS Pion Rejector for 2.2 GeV, 2.5T, 90deg



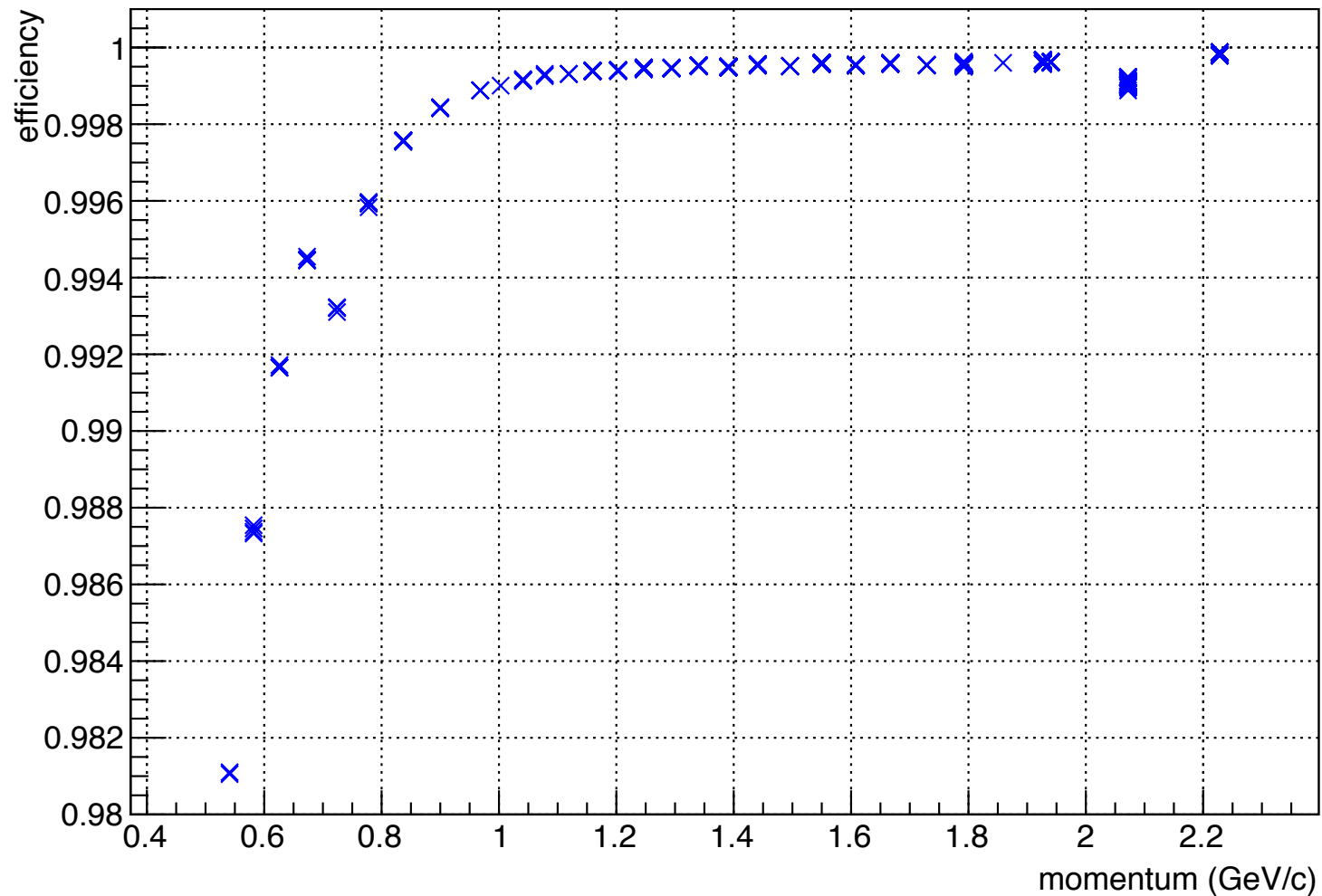
Cherenkov Detector Efficiency

LHRS Gas Cherenkov Detector Efficiency for 2.2 GeV, 2.5T, 90deg



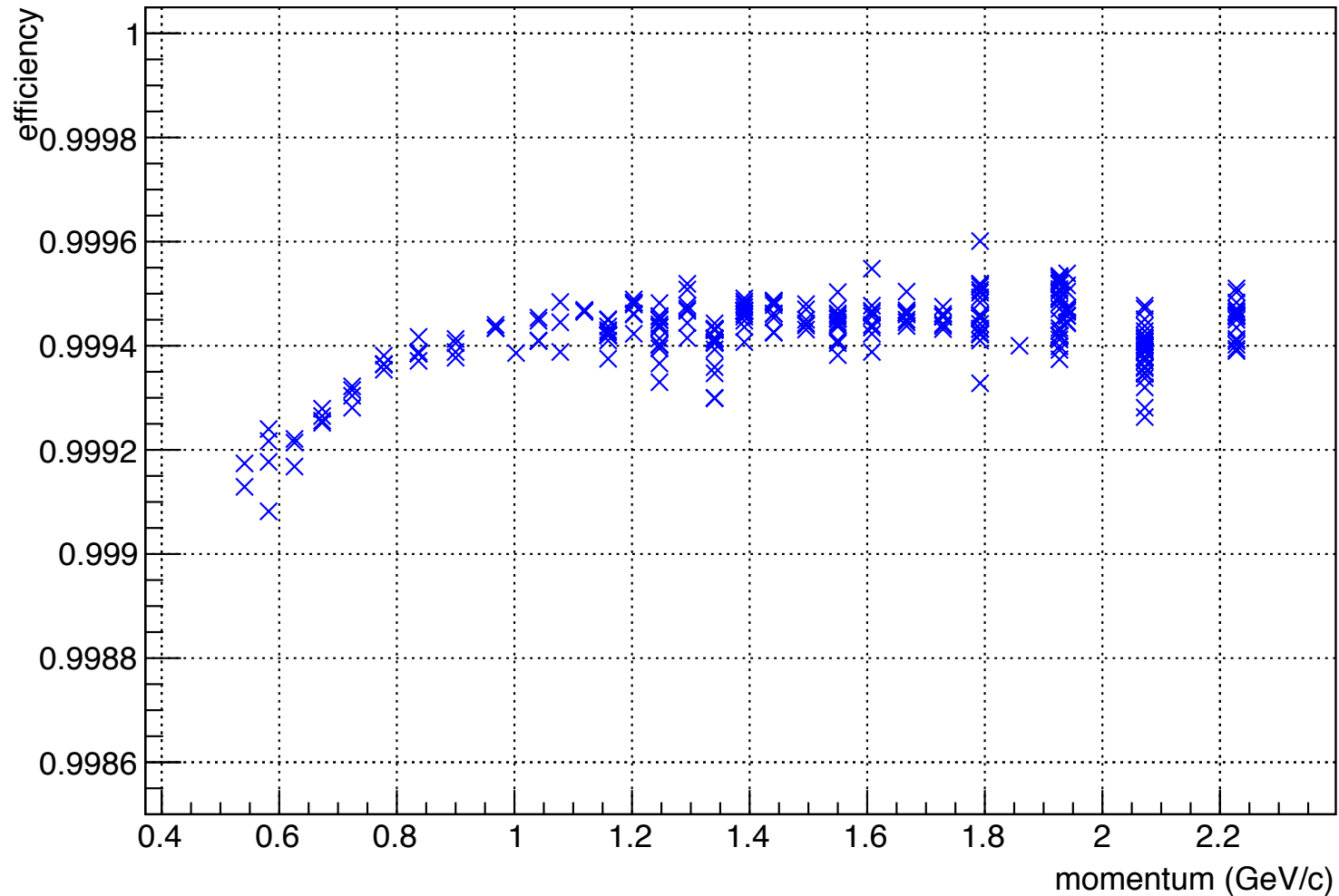
Pion Rejector Detector Efficiency

LHRS Pion Rejector Detector Efficiency for 2.2 GeV, 2.5T, 90deg



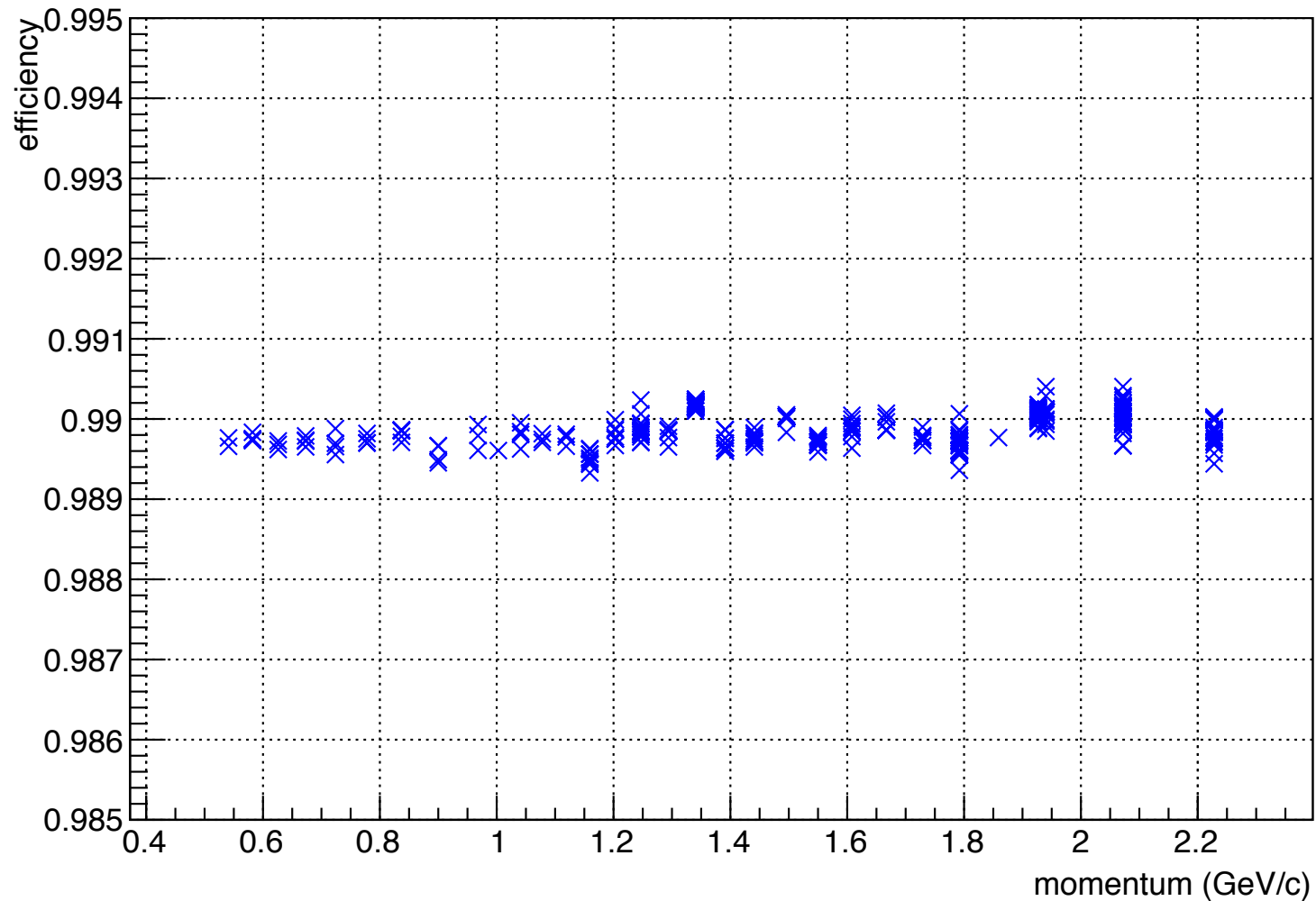
Cherenkov Cut Efficiency

LHRS Gas Cherenkov Cut Efficiency for 2.2 GeV, 2.5T, 90deg



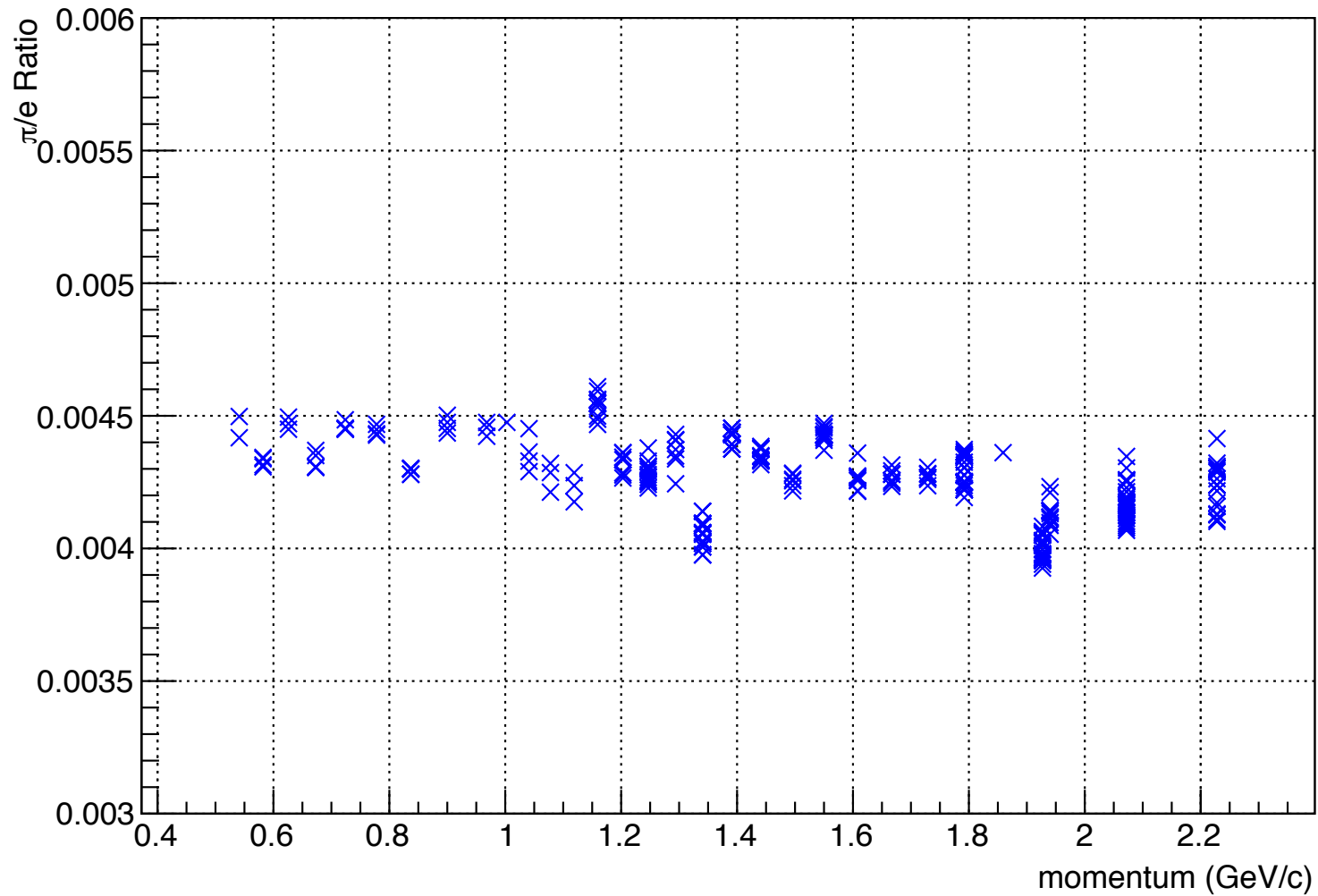
Pion Rejector Cut Efficiency

LHRS Pion Rejector Cut Efficiency for 2.2 GeV, 2.5T, 90deg



Pion Contamination

LHRS π/e Ratio for 2.2 GeV, 2.5T, 90deg



To Do:

- Finish looking at questionable LHRS runs
- Repeat for RHRS
- Any suggestions from this meeting?