

Dream06 Test Beam Analysis

Contributions of Cerenkov Light to the Signals from Lead Tungstate Crystals

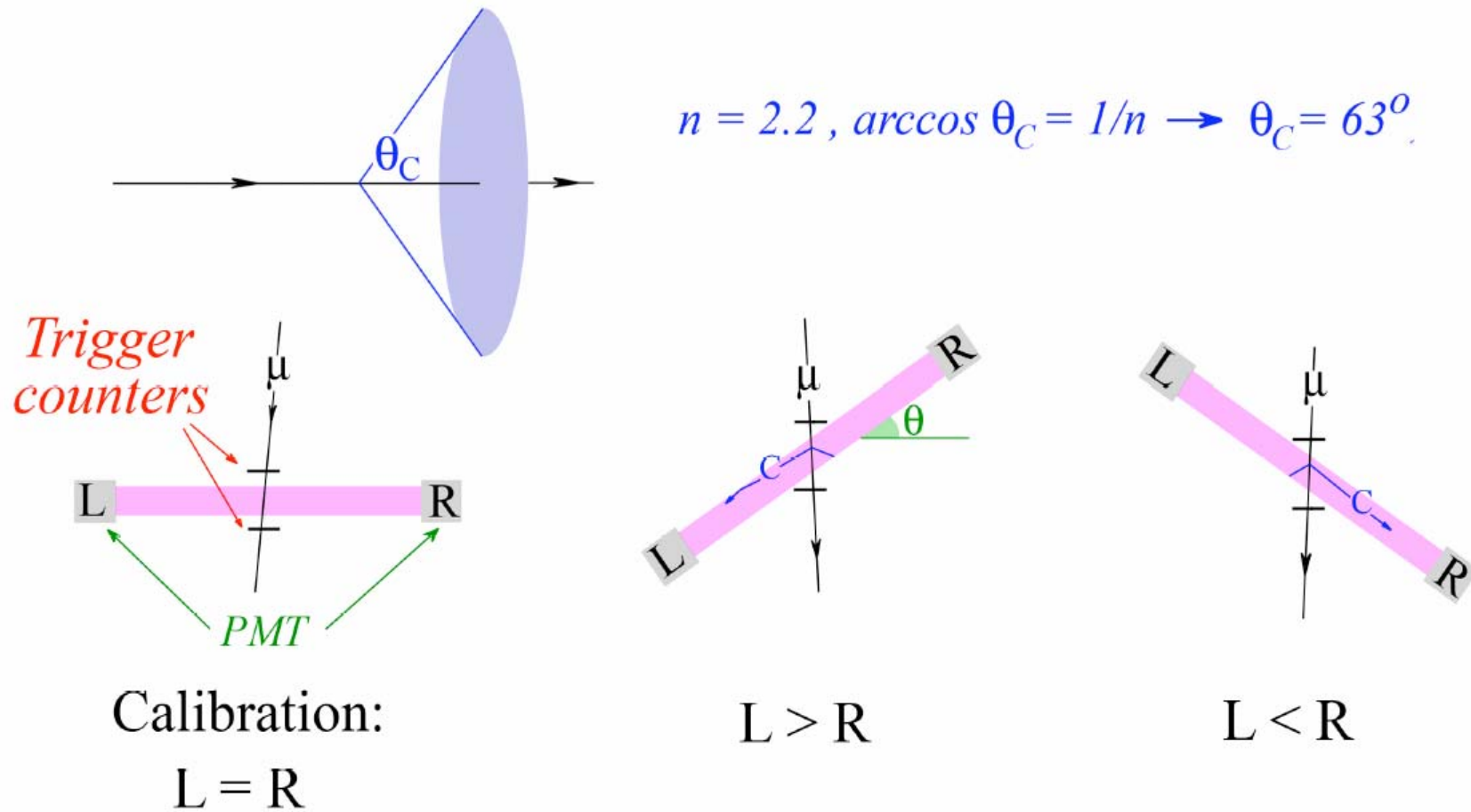
HEP TTU

Richard Wigmans, Heejong Kim,
Youn Roh

Outline

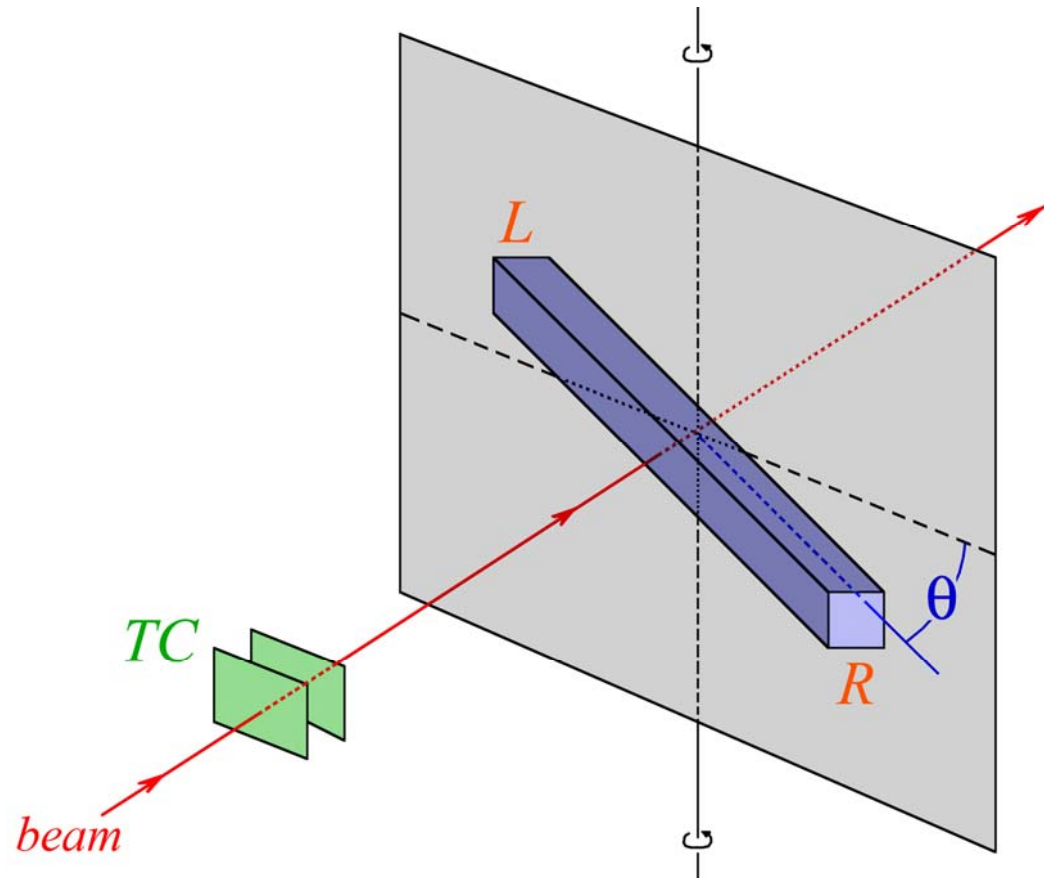
- Theory (Cerenkov Light)
- Setup & Data Sets
- Electron(10 GeV) QADC Signal, Pedestal & Calibration factor
- Electron Corrected QADC Signal & Left-Right Asymmetry
- Muon(150 GeV) QADC Signals
- Muon Corrected QADC Signal & Left-Right Asymmetry

Theory (Cerenkov Light)



Setup & Data Sets

Measurement with one single Tungstate Crystal



Electron (10 GeV)

Run 784, Run 794

(0° Geometry)

Run 785- Run 793

(7.5°~ 67.5° Geometry)

Run 795- Run 803

(-7.5°~-67.5° Geometry)

Muon (150 GeV)

Run 846

(0° Geometry)

Run 847-Run 850

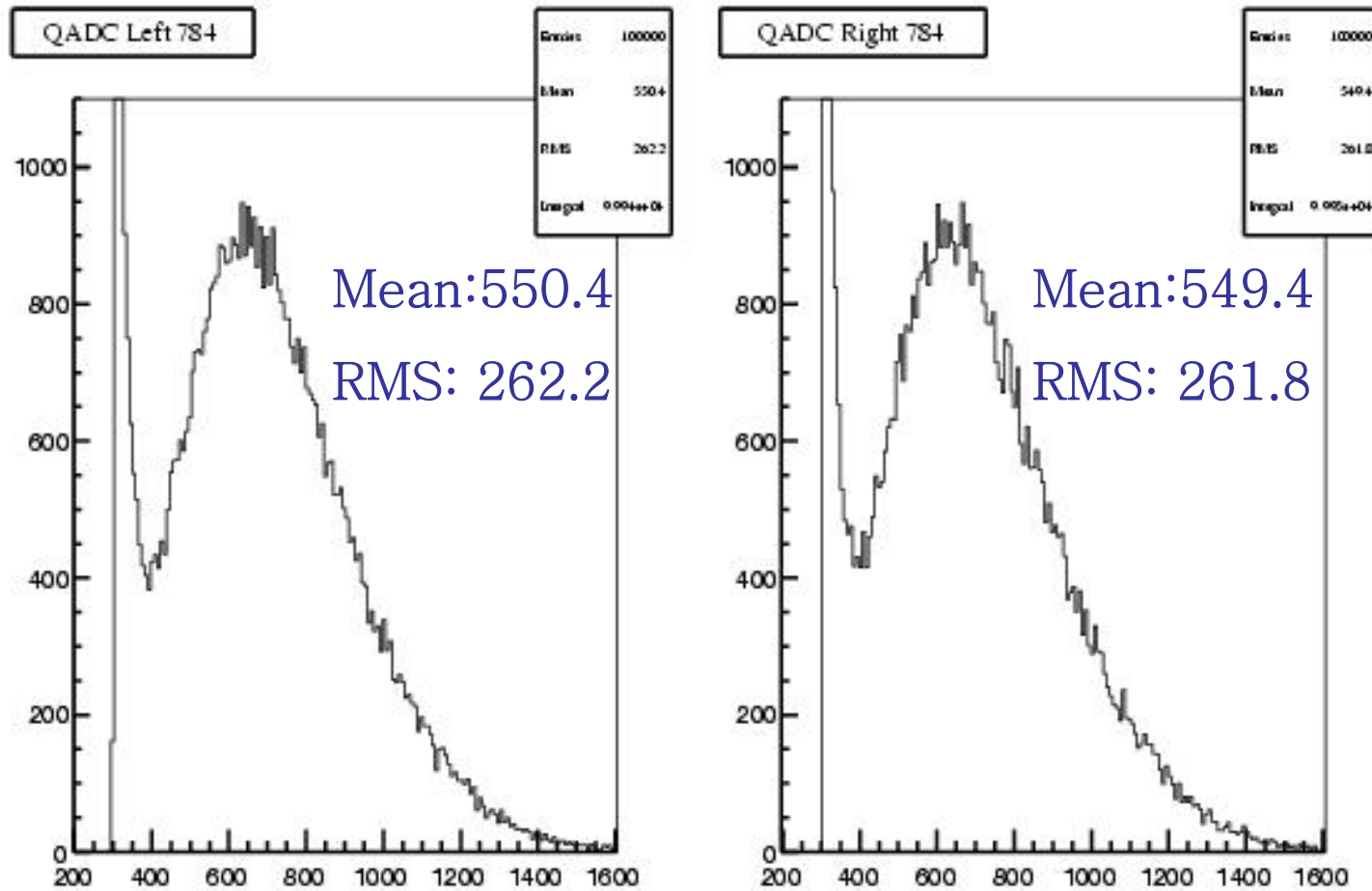
(7.5°, 15°, 22.5°, 30°)

Run 851-Run 856

(-7.5° ~ -45°)

Electron QADC Signal

Run 784 (0° Geometry, 10 GeV)

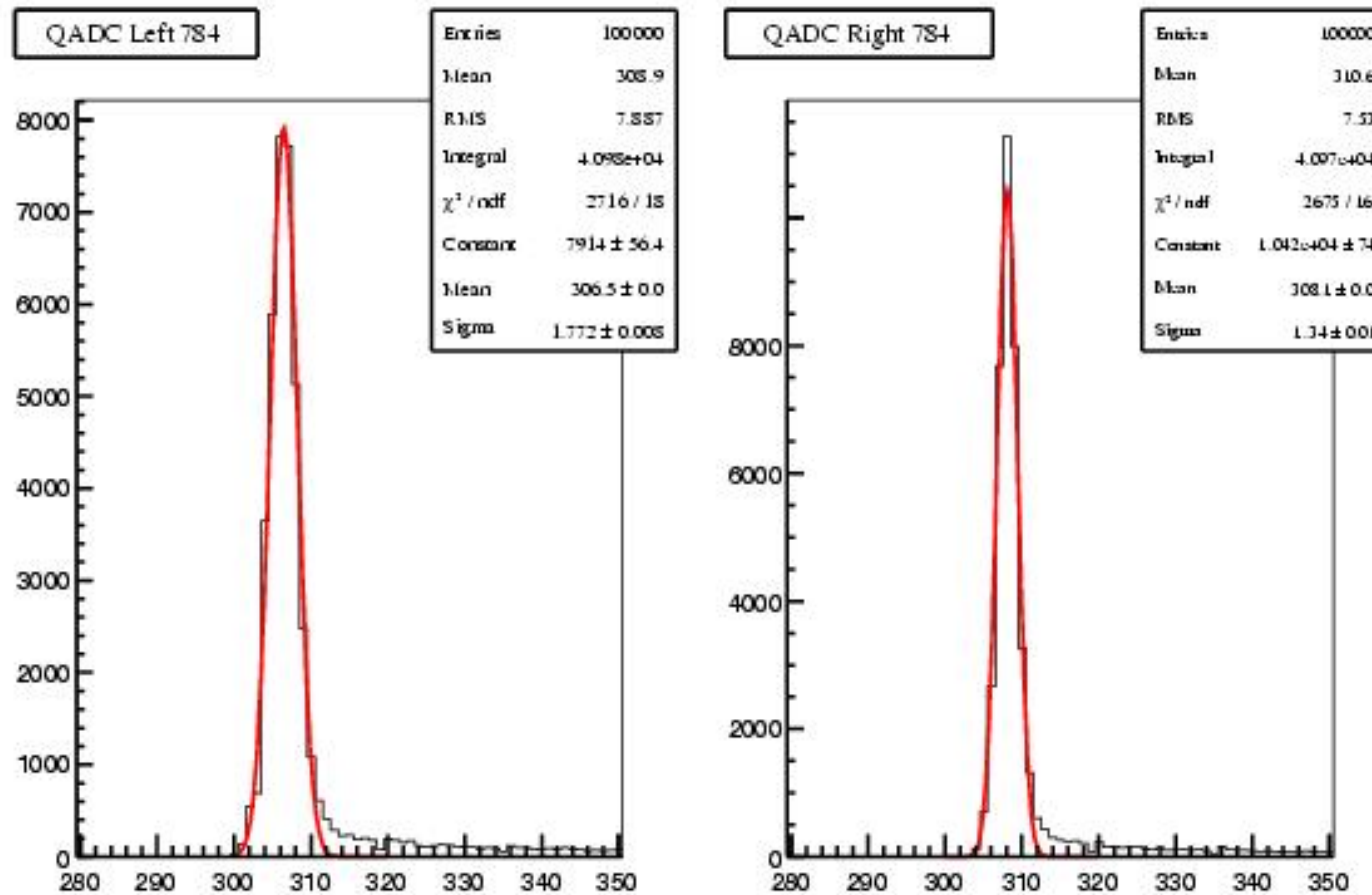


2007-03-13 09:32:49

March 15, 2007

Pedestal

Run 784 (0° Geometry, 10 GeV)

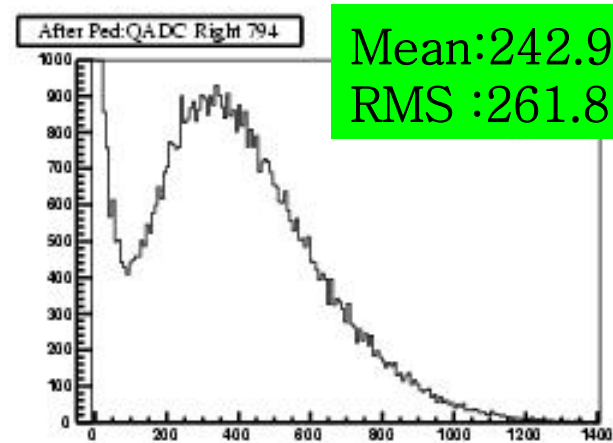
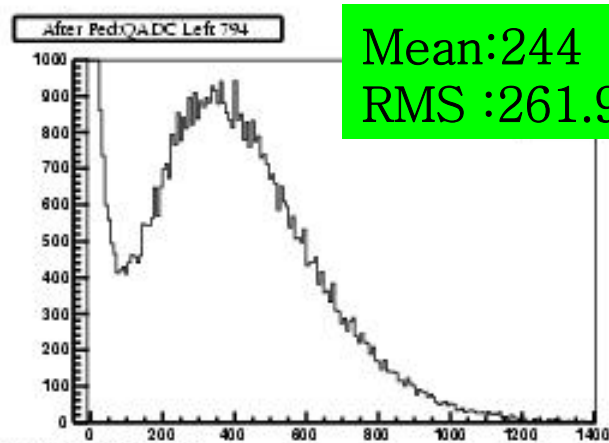
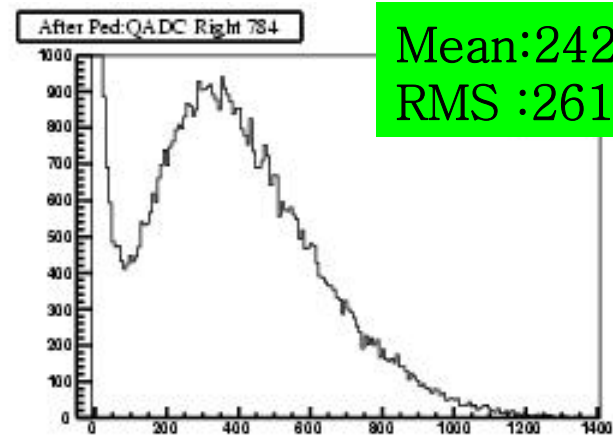
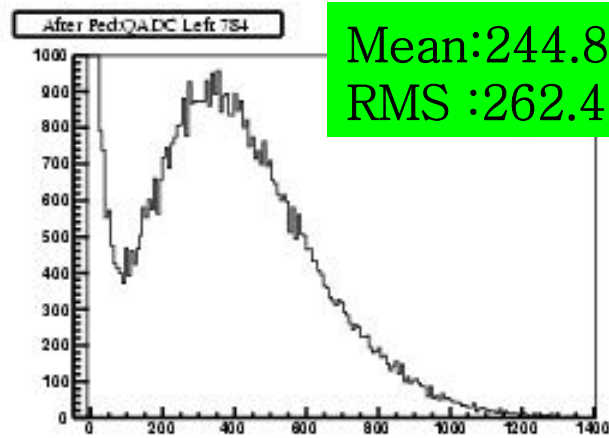


2007-03-13 09:42:06

March 15, 2007

Calibration

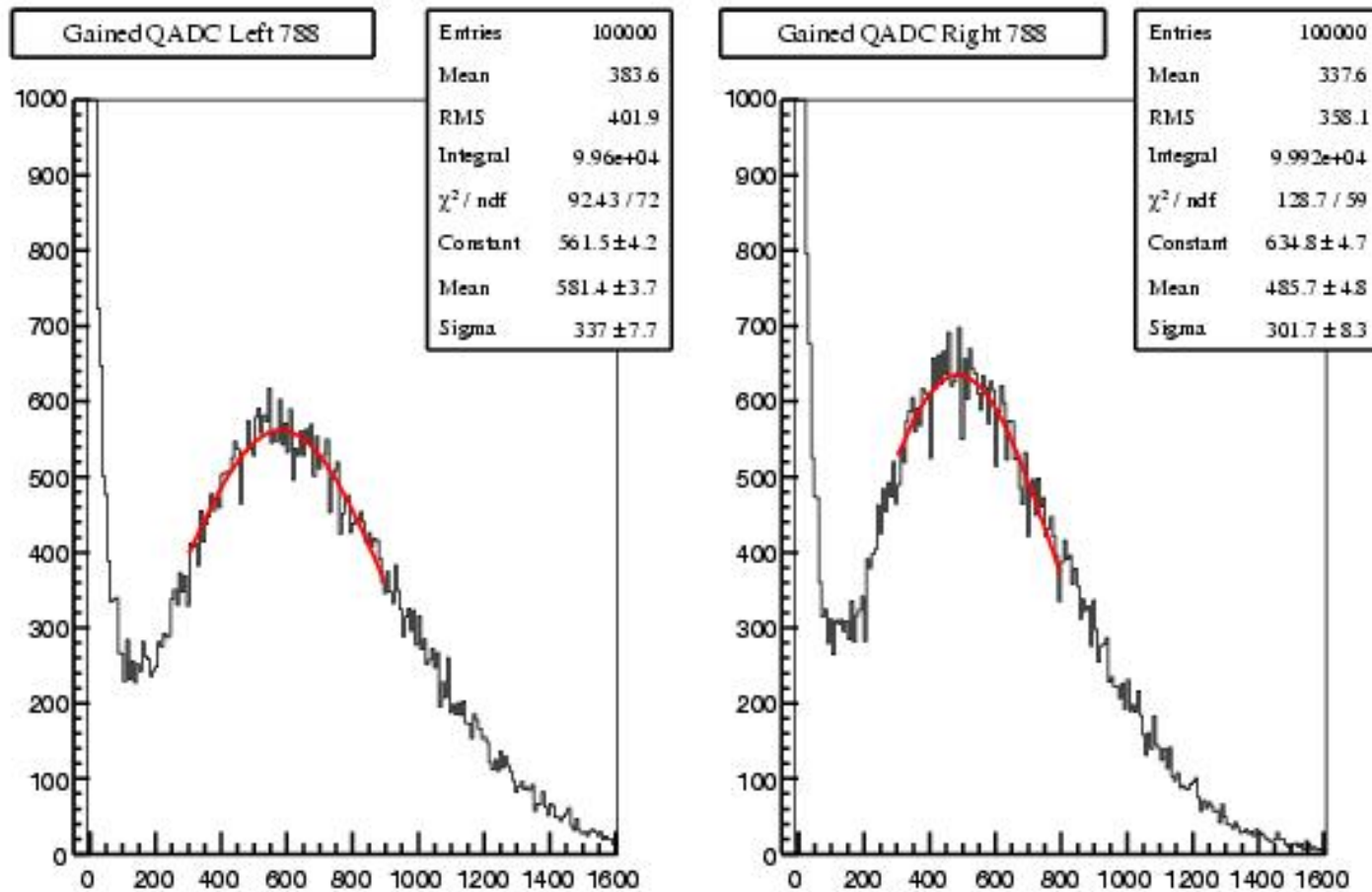
(Electron 10 GeV, 0°)



2007-03-13 10:4:25

Signal Distribution

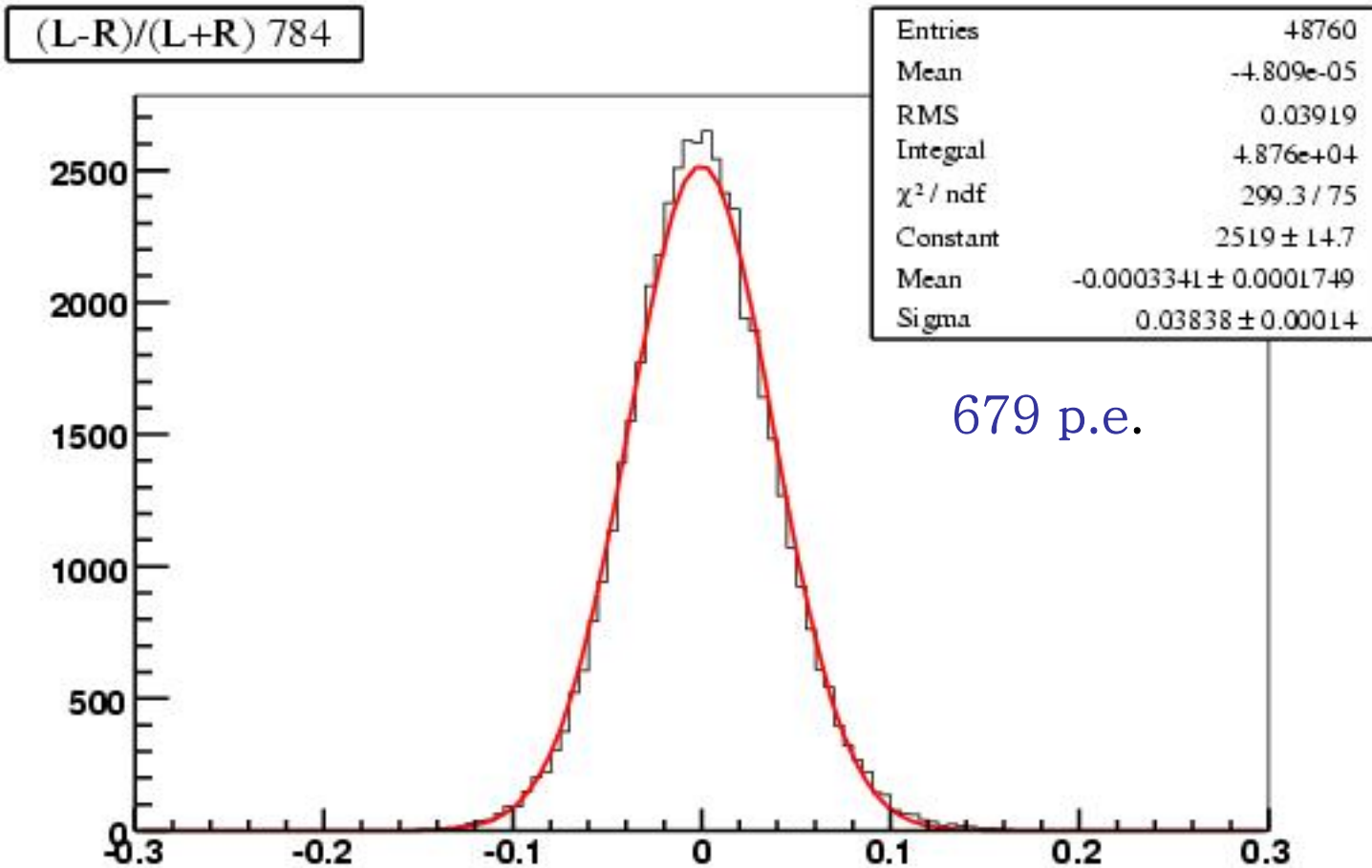
Run 788 (30° Geometry, 10 GeV, e⁻)



2007-03-13 14:57:34

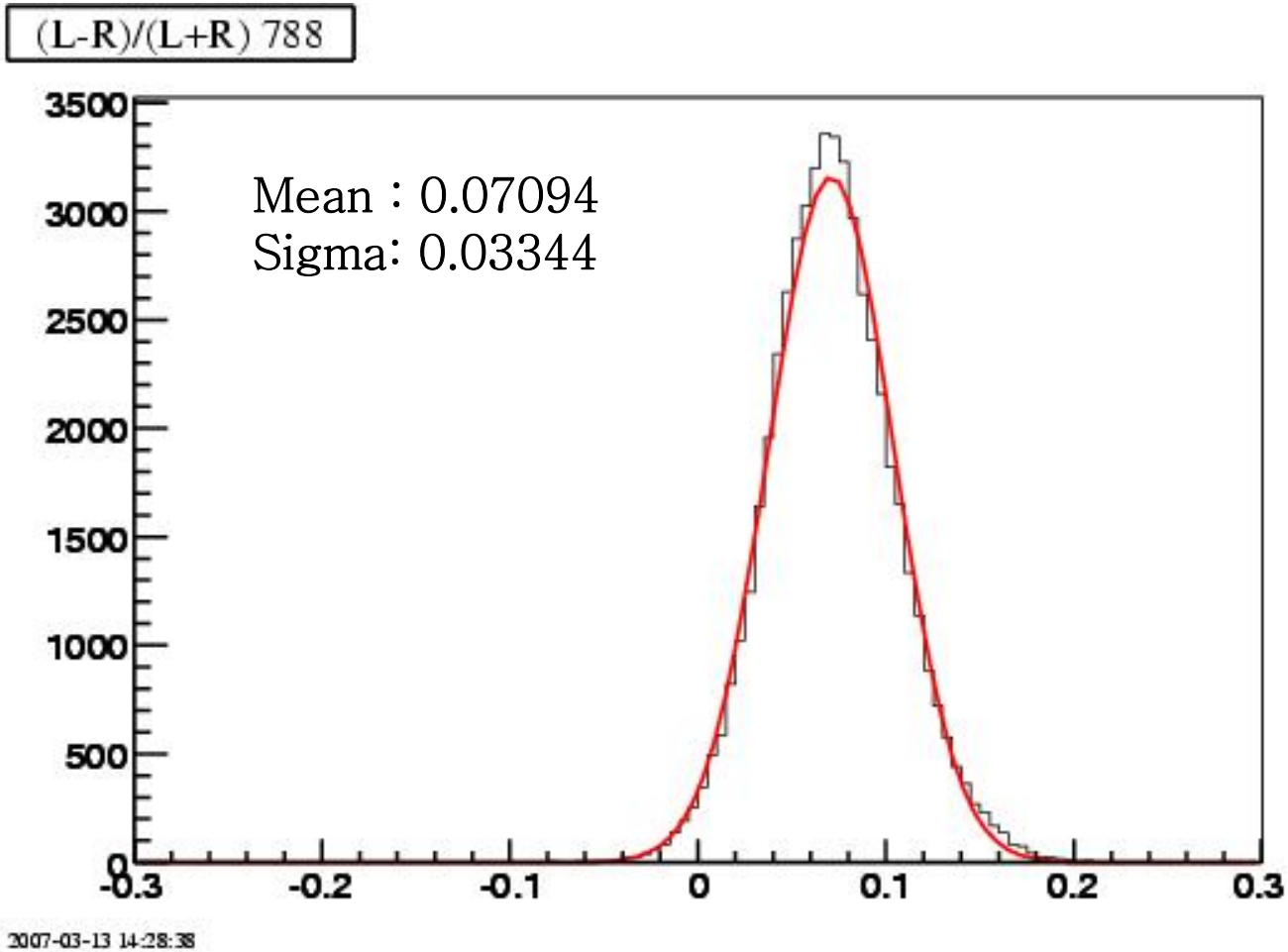
March 15, 2007

Left-Right Asymmetry (Electron, 0° Geometry, 10 GeV)

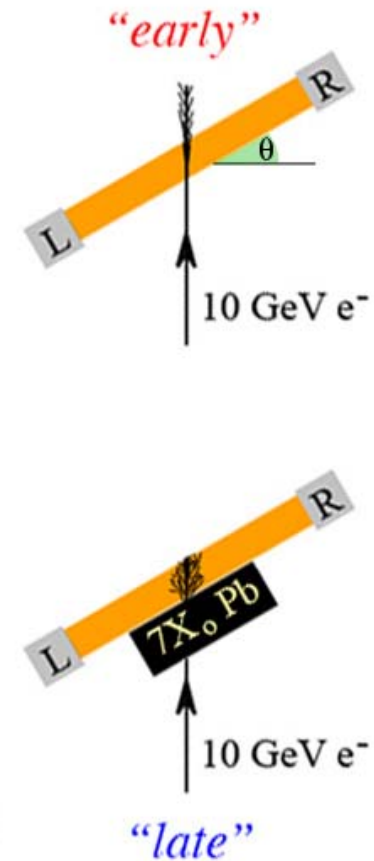
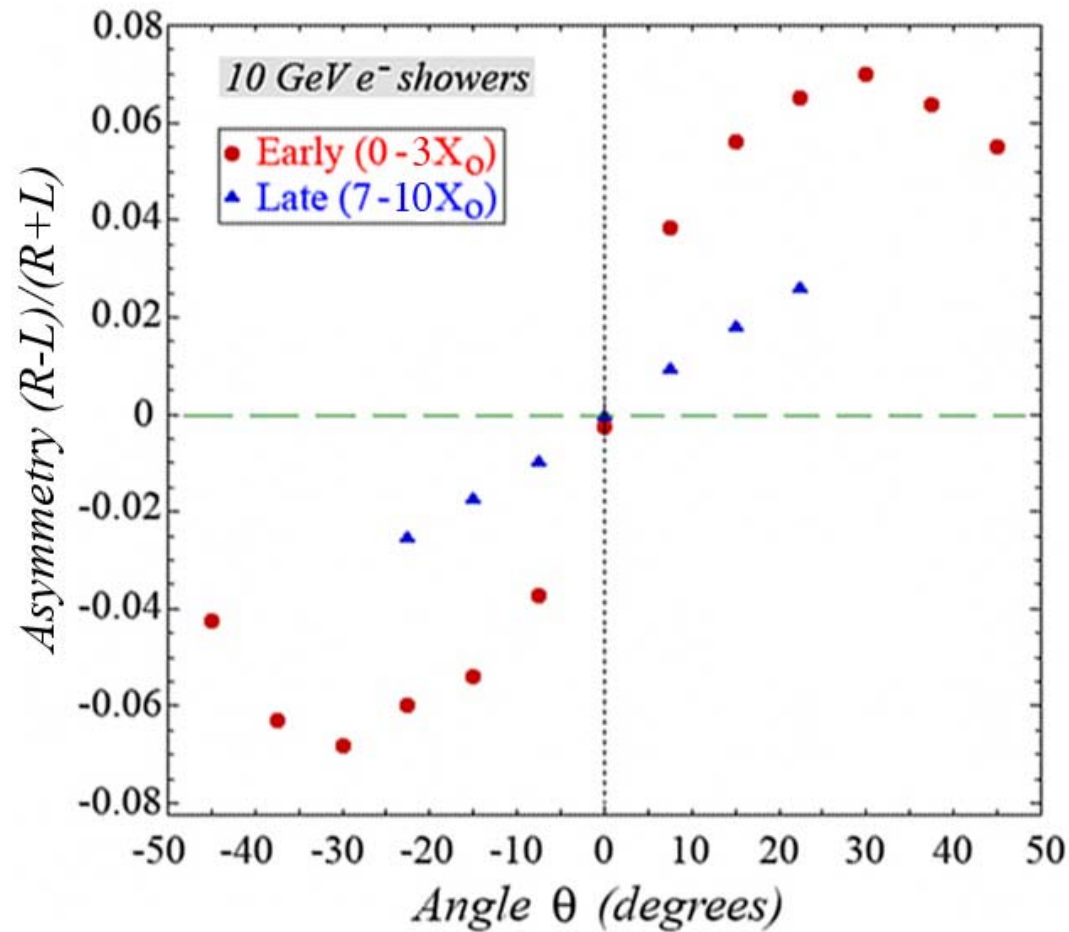


2007-03-14 09:42:21

Left-Right Asymmetry (Electron, 30° Geometry, 10 GeV)

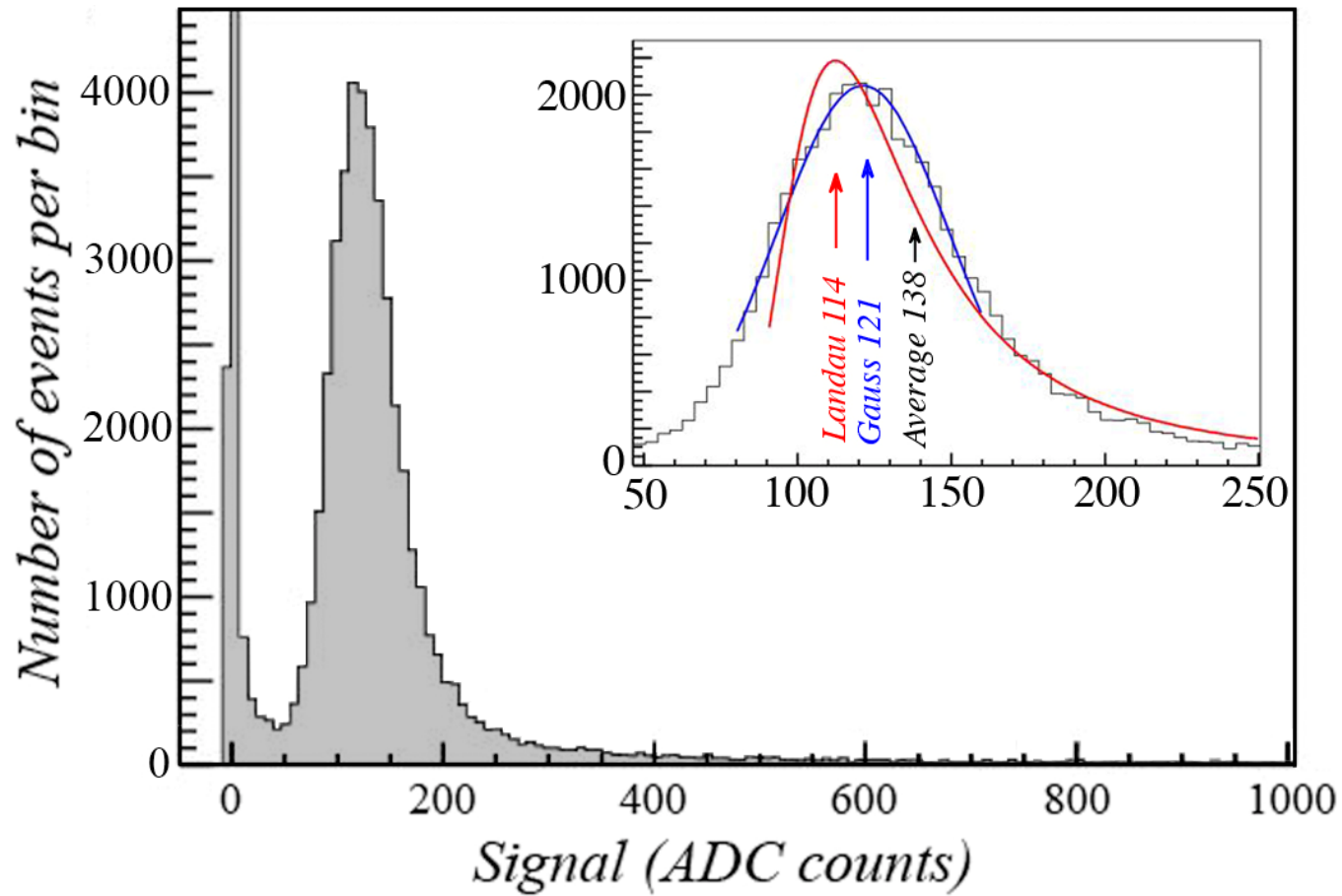


Left-Right Asymmetry (Electron 10 GeV)

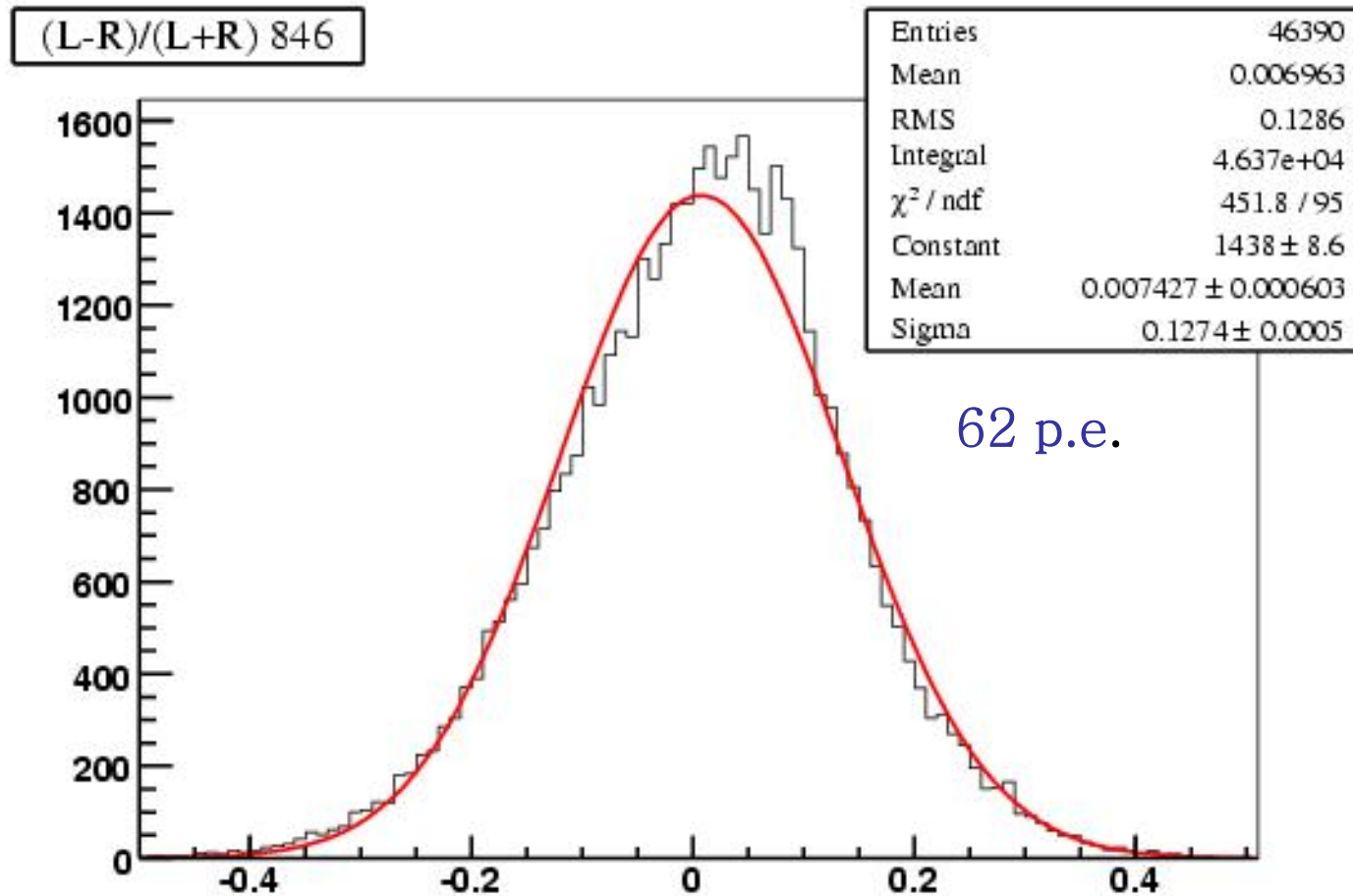


Signal Distribution

Run 846(0° Geometry, 150 GeV)



Left-Right Asymmetry (Muon, 0° Geometry, 150 GeV)

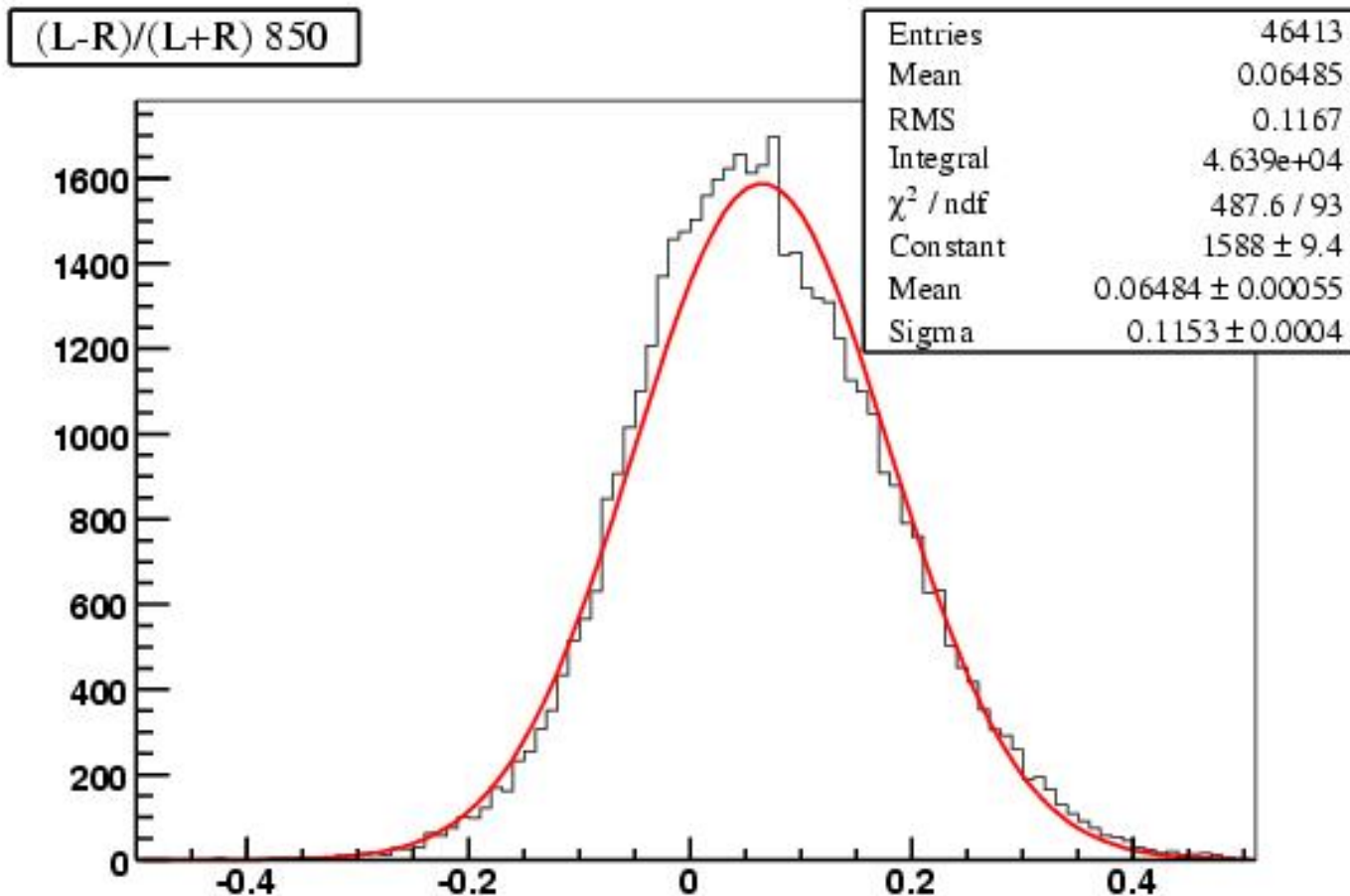


2007-03-14 09:45:37

March 15, 2007

13

Left-Right Asymmetry (Muon, 30° Geomtry, 150 GeV)



2007-03-13 15:18:16

March 15, 2007

Left-Right Asymmetry (Muon 150 GeV)

