

Luminosity and DAQ

Yang Yifan

March 8, 2017

Luminosity

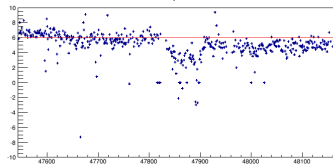
Luminosity

E_{cms}	Online Luminosity	Bhabha Measurement
4190	490.7	518.2
4200	489.7	520.1
4210	491.0	509.0

Online/Bhabha Difference by Run

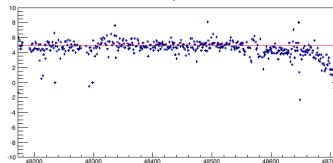
4190

Luminosity Difference

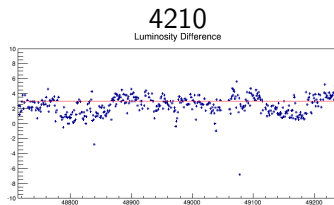


4200

Luminosity Difference



Online/Bhabha Difference by Run

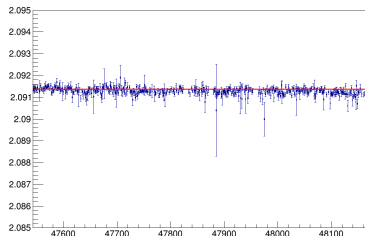


4190 DAQ

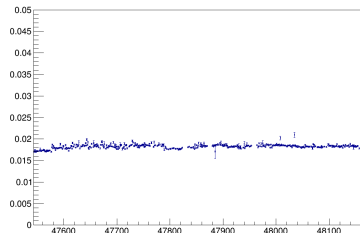
MDC Check

$P, \sigma P$ vs Run

p vs Run



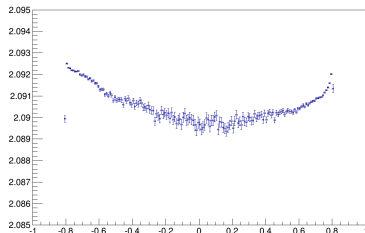
σp vs Run



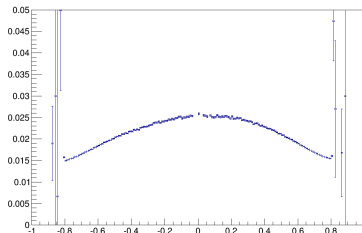
MDC Check

$P, \sigma P$ vs $\text{Cos}(\theta)_{\text{mdc}}$

p vs $\text{Cos}(\theta)$



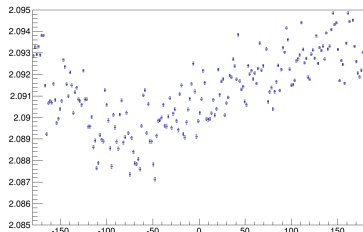
σp vs $\text{cos}(\theta)$



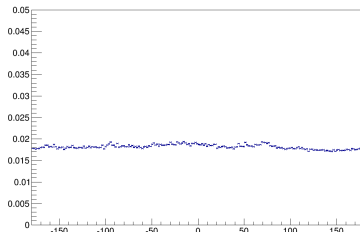
MDC Check

$P, \sigma P$ vs ϕ_{mdc}

p vs ϕ



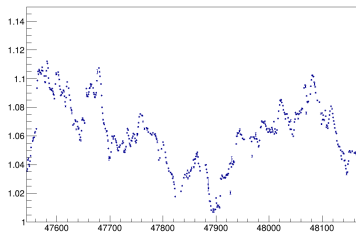
σp vs ϕ



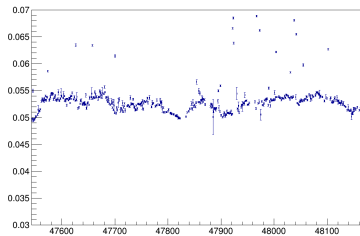
MDC Check

$\text{normPH}, \sigma(\text{normPH})$ vs Run

normPH vs Run



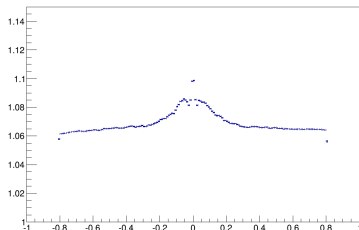
$\sigma(\text{normPH})$ vs Run



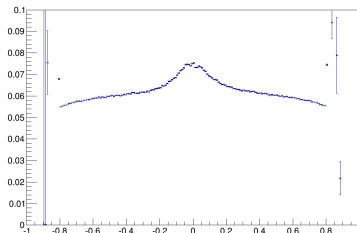
MDC Check

$\text{normPH}, \sigma(\text{normPH}) \text{ vs } \text{Cos}(\theta)$

normPH vs Cos(θ)



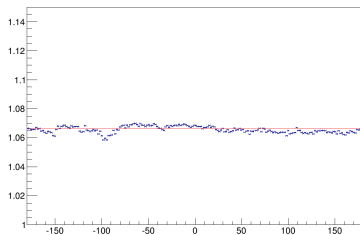
$\sigma(\text{NormPH}) \text{ vs } \text{cos}(\theta)$



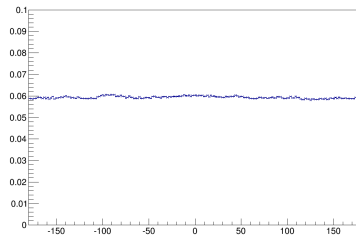
MDC Check

$\text{normPH}, \sigma(\text{normPH}) \text{ vs } \phi$

normPH vs ϕ

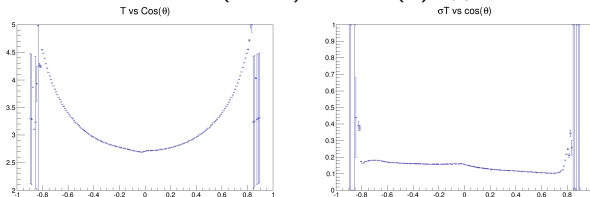


$\sigma(\text{normPH}) \text{ vs } \phi$

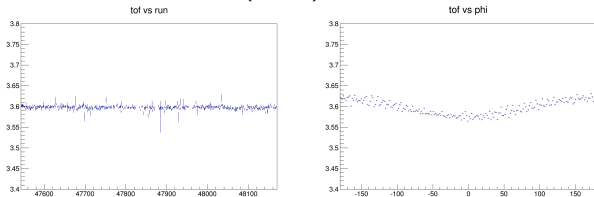


TOF Check

TOF, $\sigma(TOF)$ vs $\cos(\theta)_{mdc}$



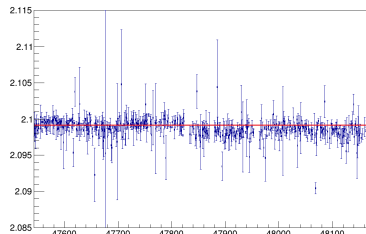
mean(TOF) vs Run, ϕ



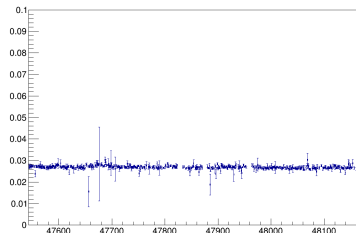
EMC Check

$E, \sigma E$ vs Run

E vs Run

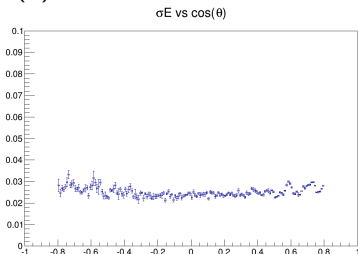
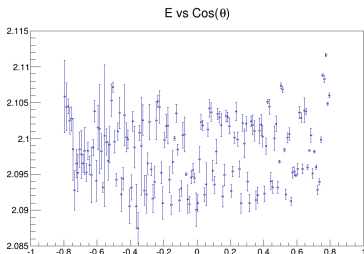


σE vs Run



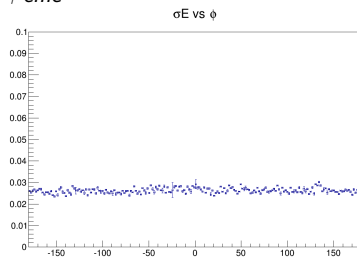
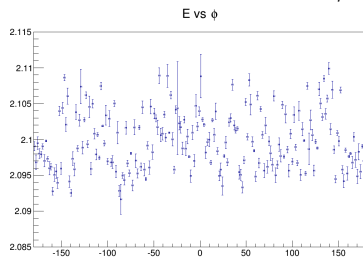
EMC Check

$E, \sigma E$ vs $\text{Cos}(\theta)_{emc}$



EMC Check

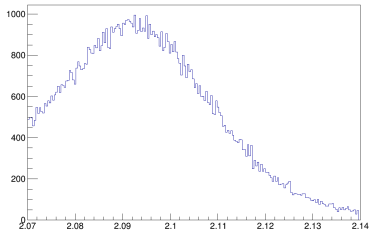
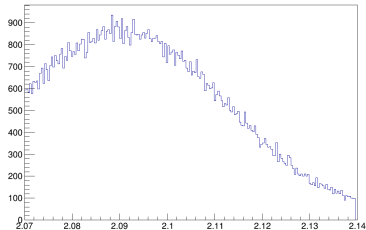
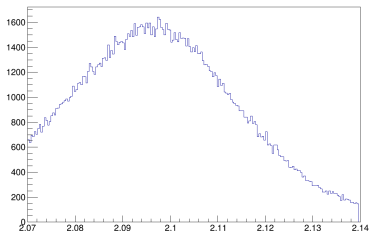
$E, \sigma E$ vs ϕ_{emc}



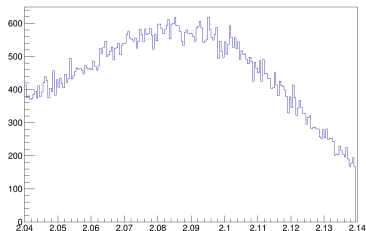
Backup

One-bin distributions.

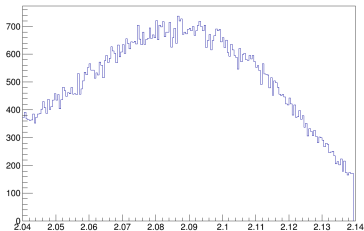
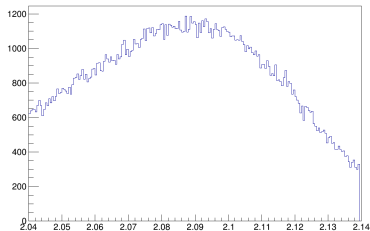
p in a run bin

p in a θ binp in a ϕ bin

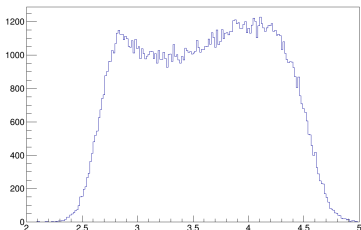
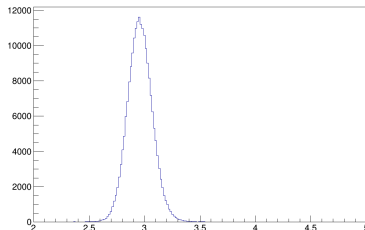
E in a run bin



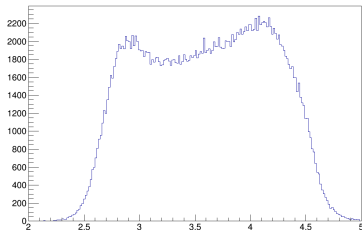
One-bin distributions.

E in a θ binE in a ϕ bin

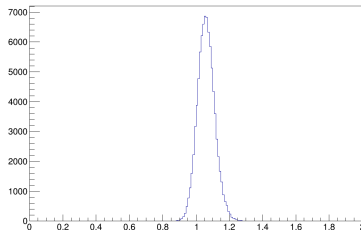
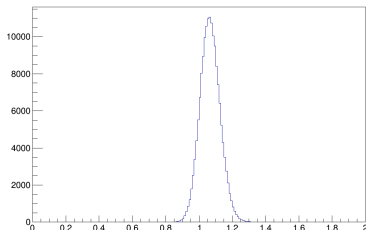
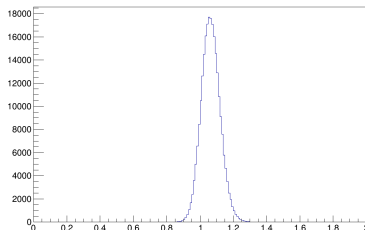
T in a run bin

T in a θ bin

One-bin distributions.

T in a ϕ bin

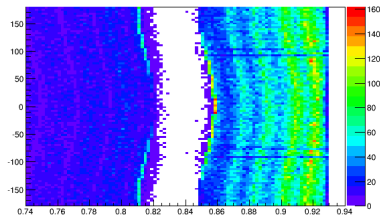
Dedx in a run bin

p in a θ binp in a ϕ bin

Endcap $\theta\phi$ Correlation @4190

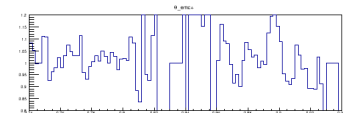
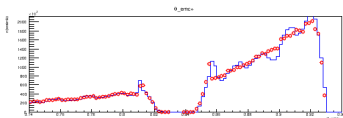
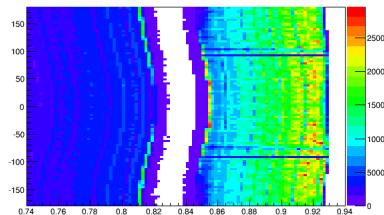
MC

Theta_emc+ vs Phi

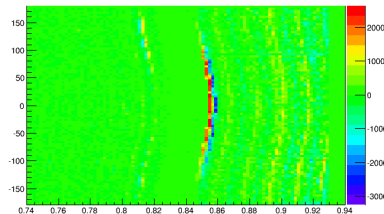


Data

Theta_emc+ vs Phi



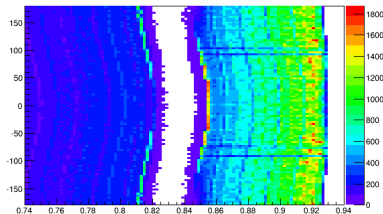
Theta_emc+ vs Phi



Endcap $\theta\phi$ Correlation @4180

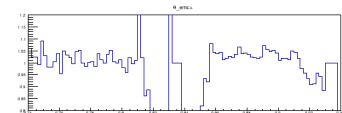
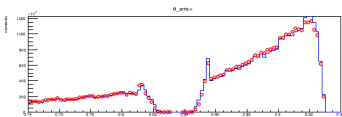
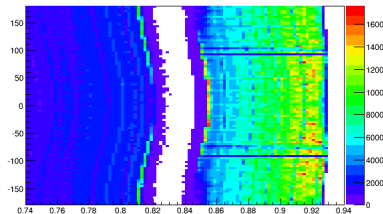
MC

Theta_etc+ vs Phi



Data

Theta_etc+ vs Phi



Theta_etc+ vs Phi

