



Preliminary energy resolution plots



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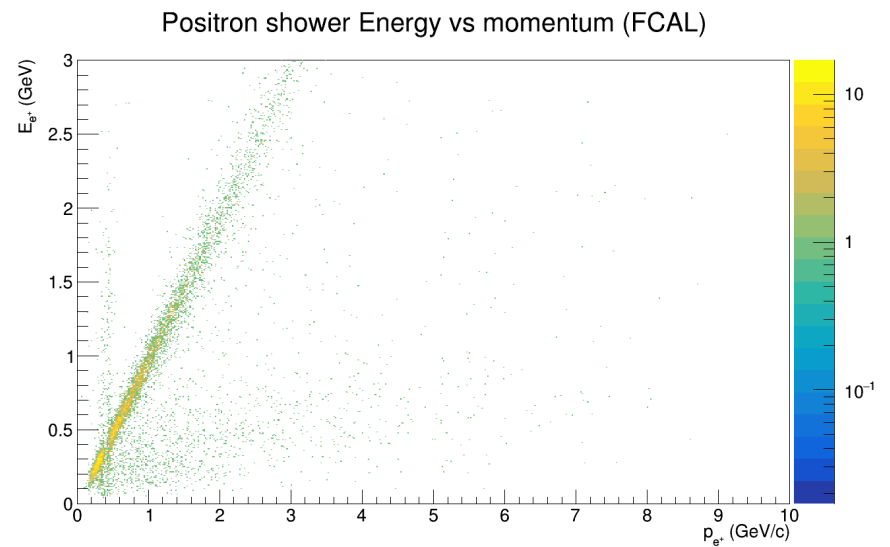
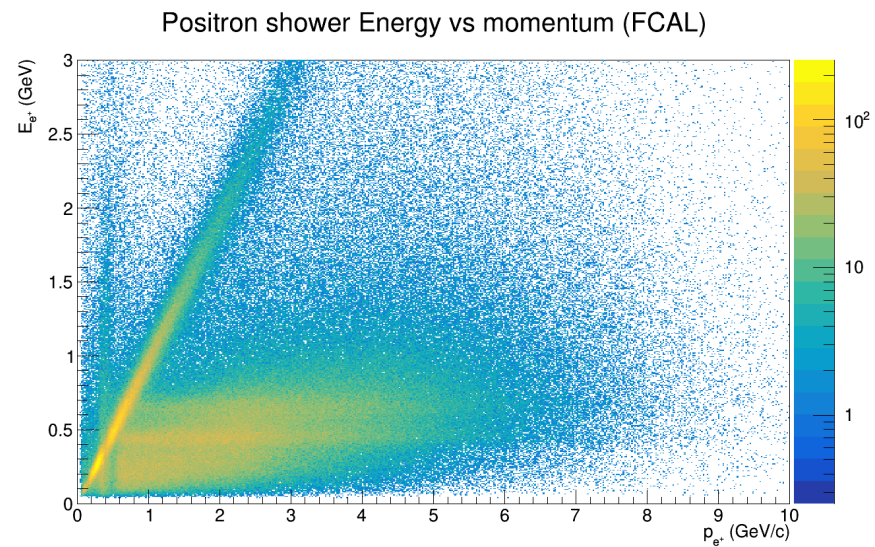
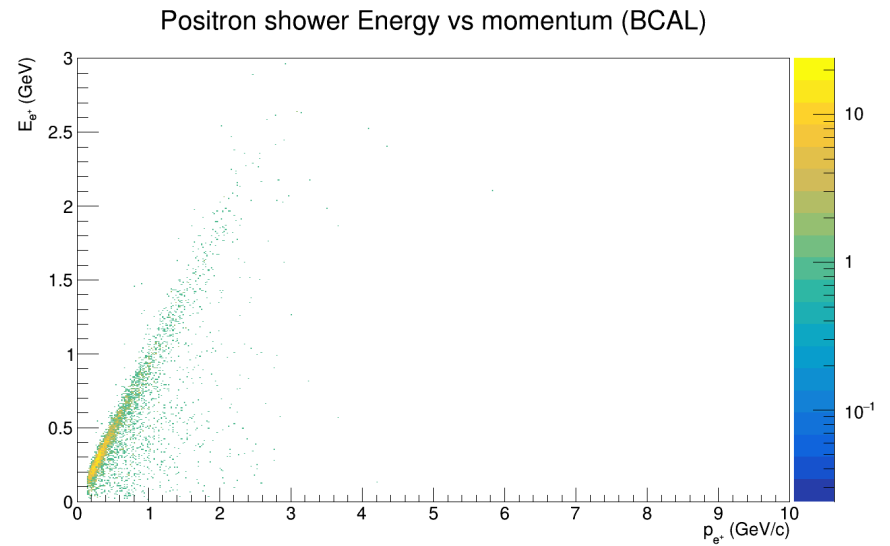
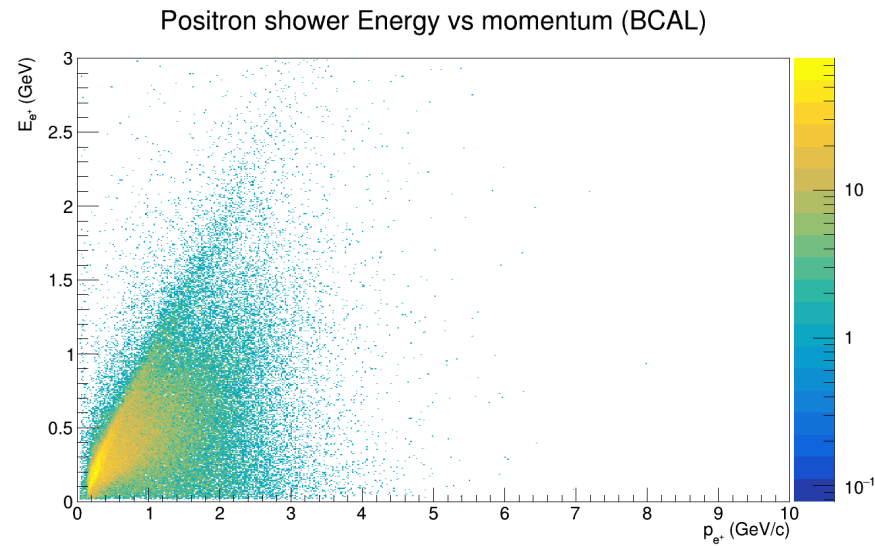
Comments

- Reminder: we want to extract the energy resolution using the π^0 Dalitz decay products
- We removed the E/p cuts in order to avoid biasing the following plots. Background is larger due to this
- We placed an additional cut in θ angles in order to exclude the FCAL hole and/or the beam contamination around it ($\theta_e > 2^\circ$)
- Definition of dE/E for electrons/positrons:

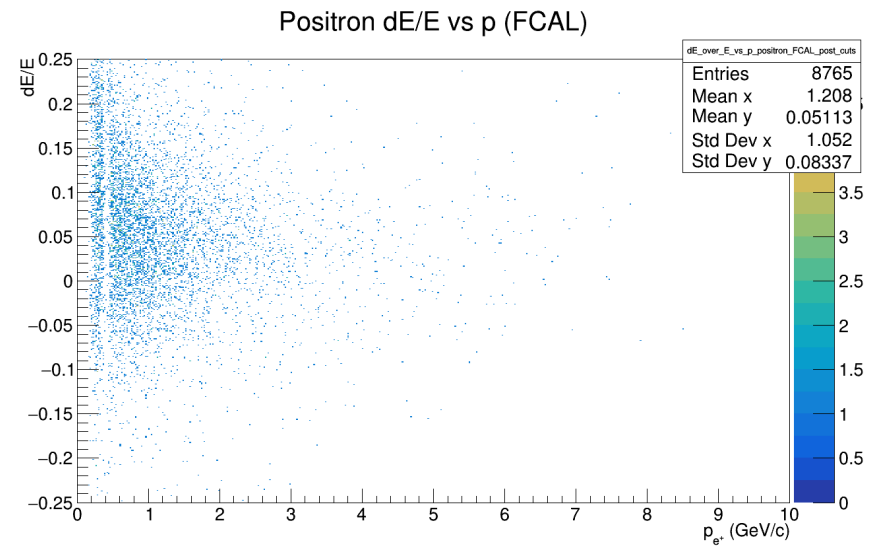
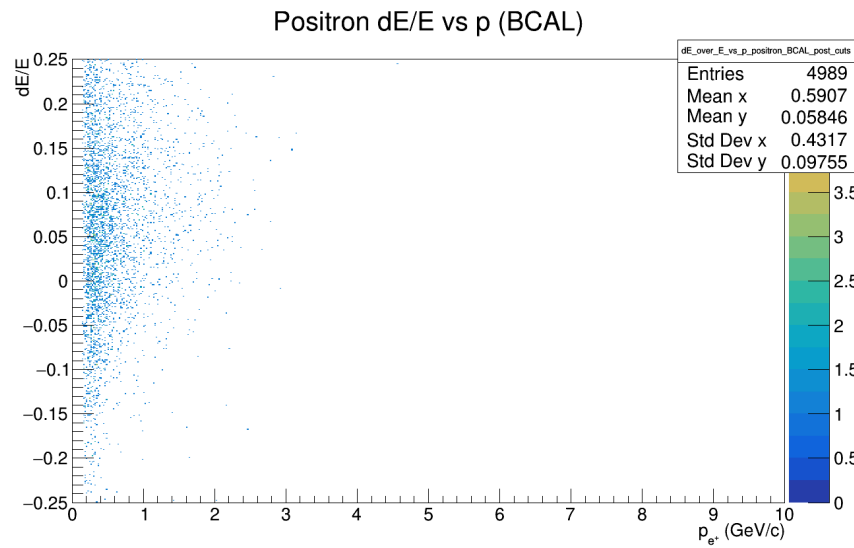
$$\frac{dE}{E} = \frac{p_e - E_e^{shower}}{p_e} \quad (1)$$

- The plots that follow are preliminary in the sense that further cut optimization is necessary, as well as better Monte Carlo studies of this channel
- We probably need more statistics for the Dalitz-determined energy resolution.

Positron E vs p in BCAL and FCAL (before and after the cuts)

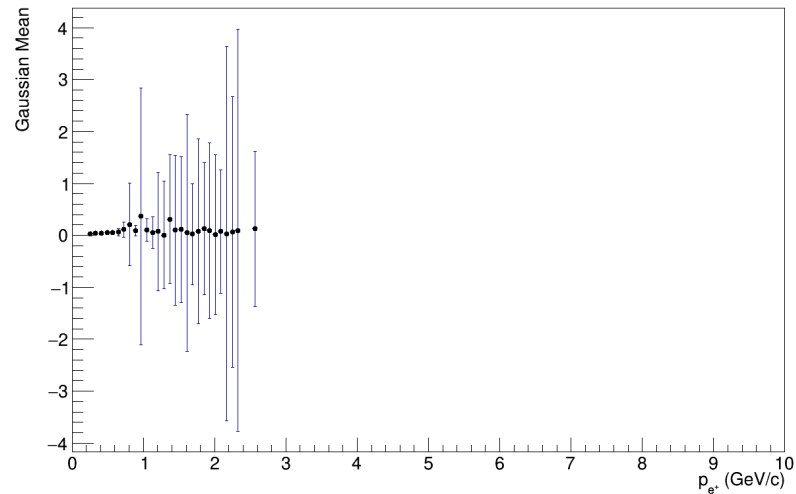


Energy Resolution vs Momentum for positrons

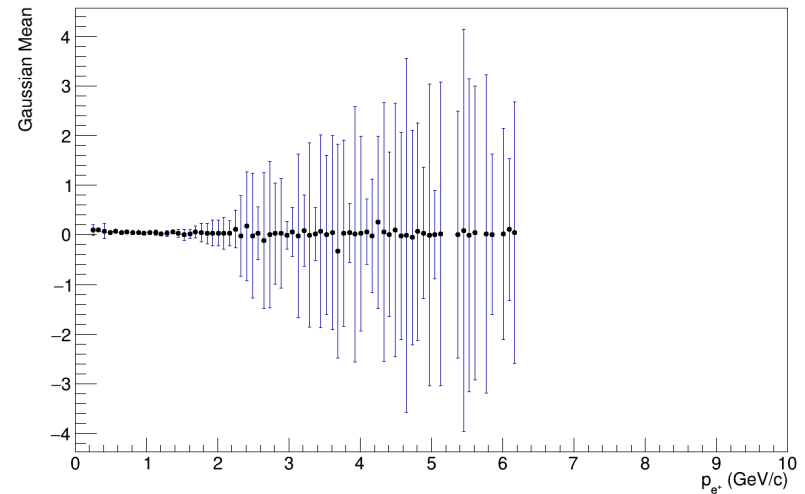


Gaussian Mean vs Momentum for positrons

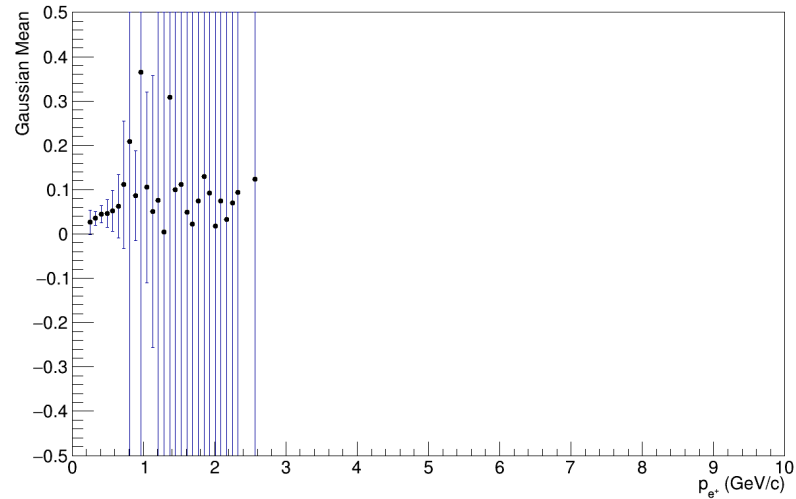
Fitted Mean vs p (BCAL)



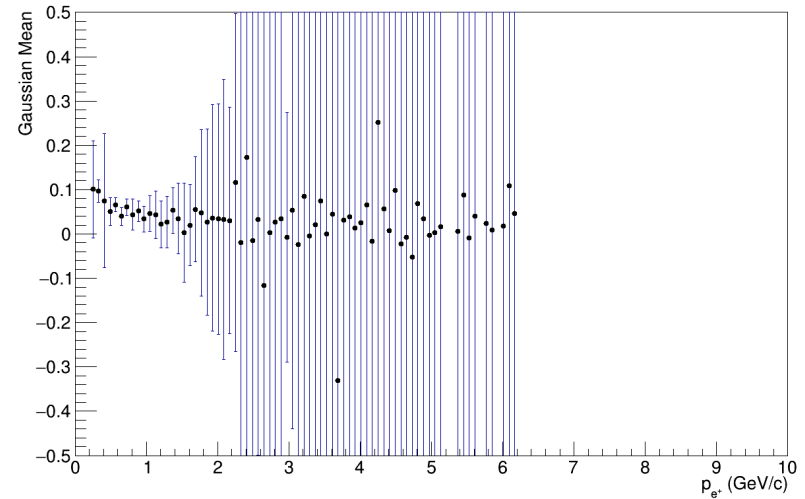
Fitted Mean vs p (FCAL)



Fitted Mean vs p (BCAL)

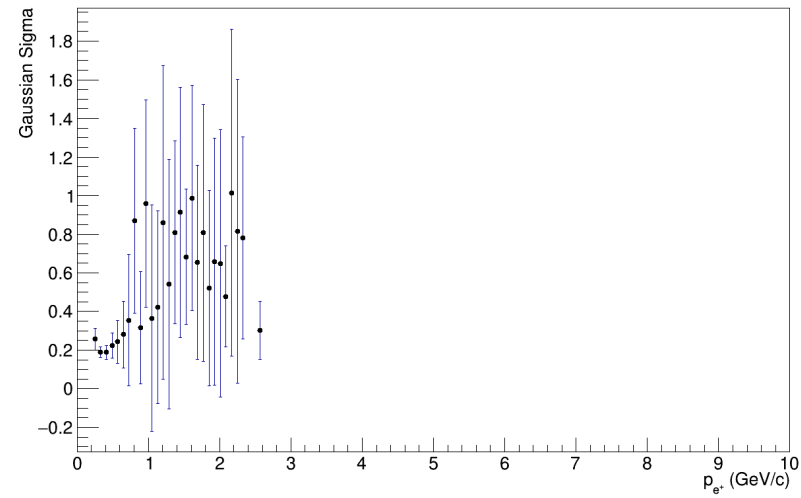


Fitted Mean vs p (FCAL)



Gaussian Sigma vs Momentum for positrons

Fitted Sigma vs p (BCAL)



Fitted Sigma vs p (FCAL)

