Update on Calorimeters Background

He-3 Calorimeter Group Internal Discussion Cherenkov (Light)



What's new

- LHCb/HERMES preshower, instead full Shashlyk preshower
 - As shown before, the preshower scintillator receive most of the radiation, due to the low energy backgrounds
 - This part radiation dose are now absorbed in 2Xo absorber, and we just see its EM tail now
- New background distribution updated by Zhiwen
 - SIDIS:
 - With target collimator (suppress background by 4)
 - First large angle simulation
 - PVDIS: have option to remove direct photon sight (expected to be removed in the final baffle design)
- Dominating background, photons 1-10 MeV
 - After preshower, which attenuate them a lot, they still penetrate ~10 layers in Shashlyk



Jin Huang, et. al.

PVDIS – current baffle (with direct γ)



PVDIS – preview for a baffle <u>w/o direct γ</u>



4

SIDIS – Forward



5

SIDIS – Large-Angle

