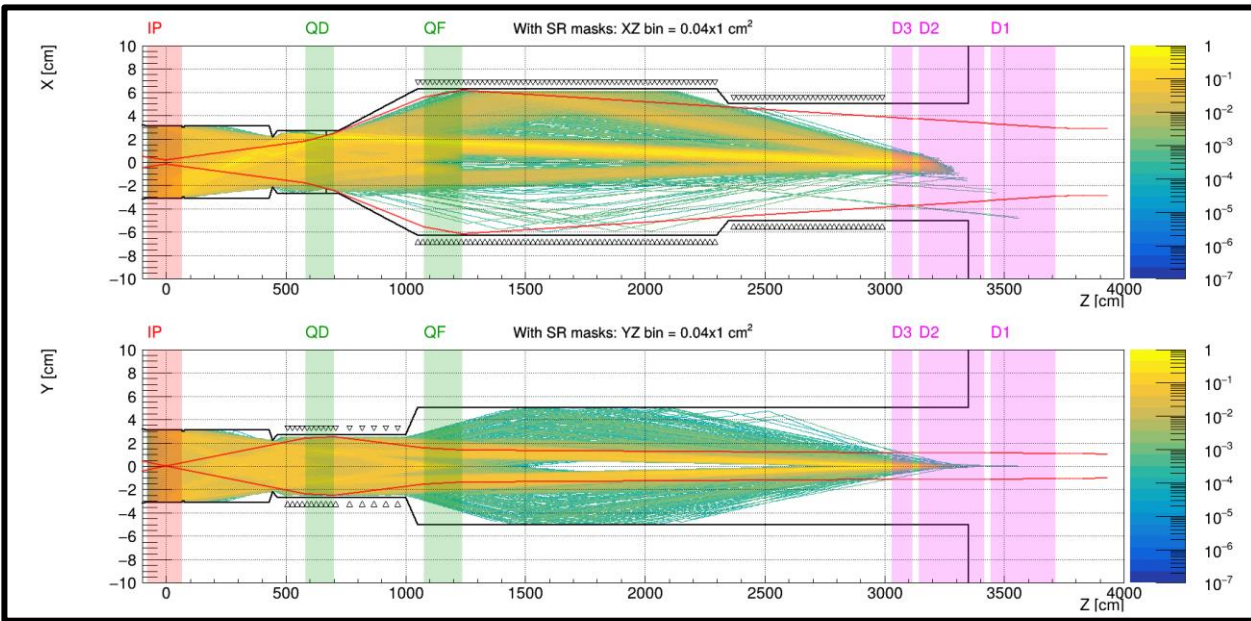
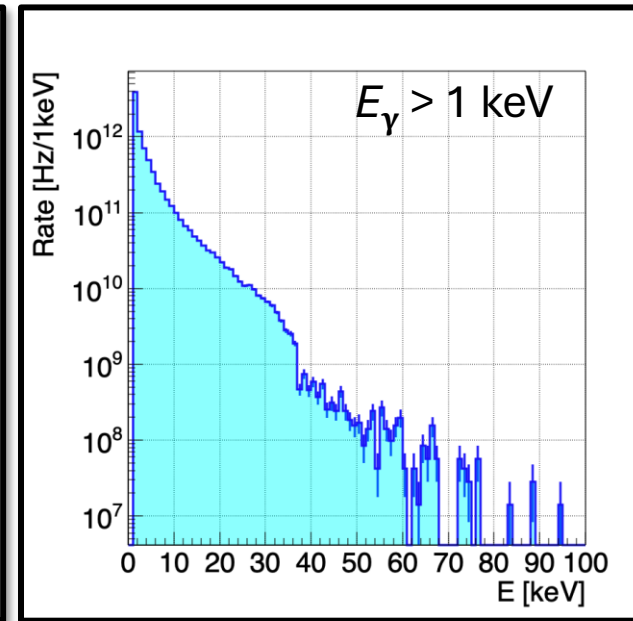


ESR SR Sample in HepMC3ROOT files for 18 GeV v6.3.1

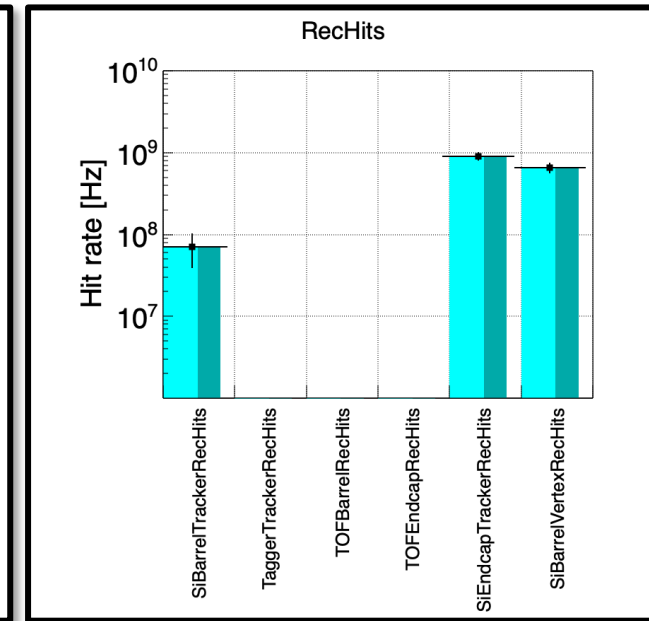
Statistics: 10^{11} electrons simulated at 18 GeV for the ESR lattice v6.3.1
Setup: IR6 vacuum from Charles Hetzel with SR masks
MC Sample: SR photons absorbed on the inner surface of the IP6 beam pipe (-80;+67)cm above 1 keV



SR photon tracks that hit the IP6 beam pipe ($E_\gamma > 10$ keV)



Spectrum of SR photons hitting the inner surface of the IP6 beam pipe



ePIC detector RecHit rate

HepMC3.ROOT: /gpfs/mnt/gpfs02/eic/anatochii/SynradG4_HepMC_Files_SR_on_IP6/ on SDCC

SR Rate/Weight: At 18 GeV, the ESR beam current is 0.227 A, which means $N_e = 0.227/(\text{elem_charge}) = 1.4 \times 10^{18}$ electrons/sec and $W = N_e/10^{11} = \mathbf{14 [MHz]}$ - the weight of one file.

Code Repository: https://github.com/eic/EIC_SR_Geant4

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