

ptarmigan MC (from Tom)

Oleksandr Borysov

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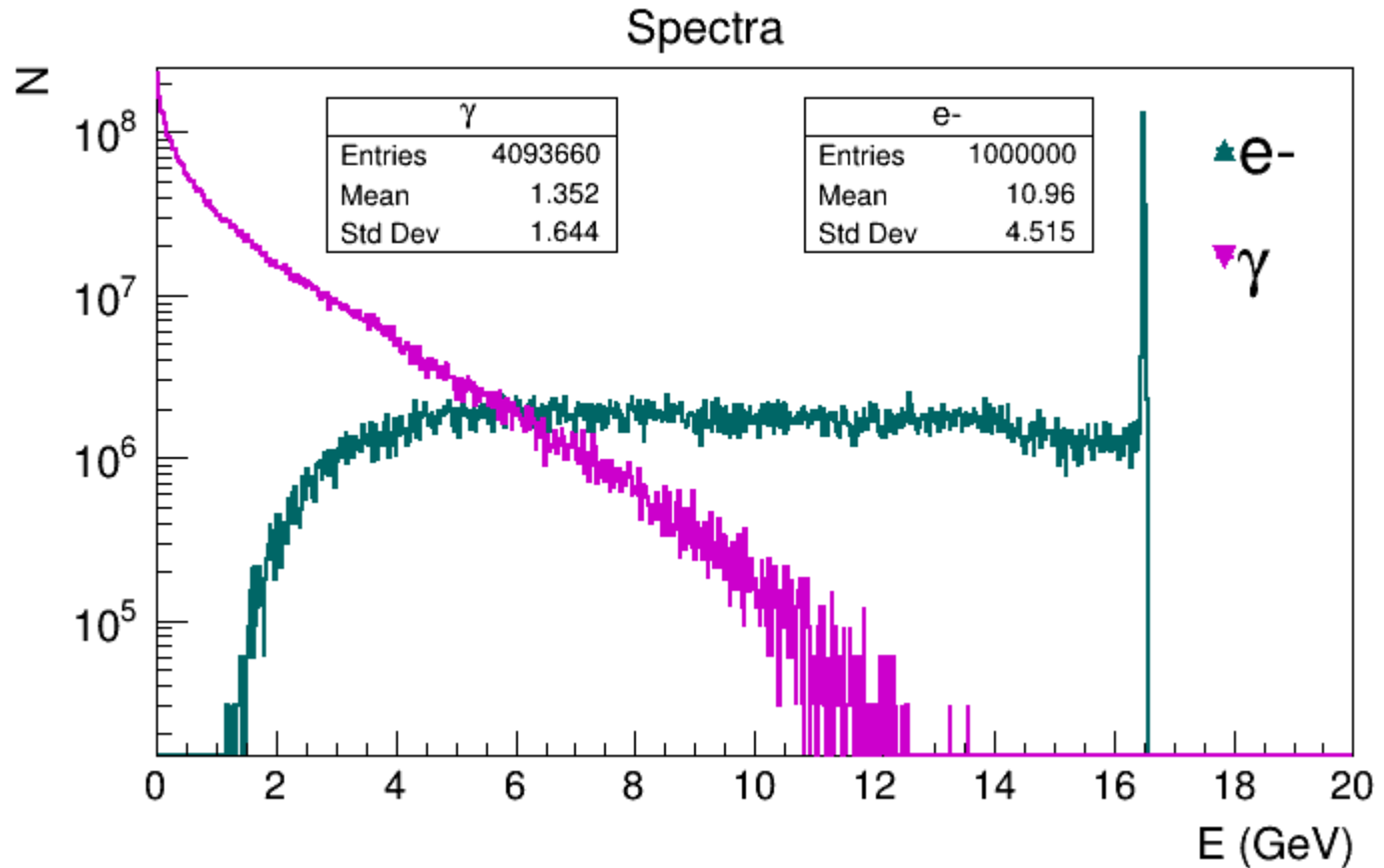
/nfs/dust/luxe/group/MCProduction/Signal/uncompressed/ptarmigan/phasell/photon_spectra

```
#-----  
# Particle properties when tracking stops  
#-----  
# First interacting species: electron      Second interacting species: laser  
# First initial particle energy = 16.5000 +/- 0.0165 GeV, Sigma_xyz = 5.00 5.00 24.00 microns  
# Laser peak intensity = 39.61 x 10^18 W/cm^2, wavelength = 800.00 nm, pulse length = 210.00 fs, beam waist = 6.00 microns  
# Pulse peak xi = 4.3015, chi = 0.8237  
#-----  
# E (GeV)      x (micron)    y (micron)    z (micron)    p_x (GeV/c)   p_y (GeV/c)   p_z (GeV/c)   PDG_NUM MP_Wgt  MP_ID  t (um/c)     xi  
#-----  
1.350405e1    -5.596252e0   -3.273857e0   9.450393e1    1.357526e-4   -6.131413e-5   1.350405e1    11      1.500000e3   0      1.002544e2   0.000000e0  
1.651749e1    7.152274e0    -5.089271e0   7.440056e1    6.841431e-5   1.510103e-6   1.651749e1    11      1.500000e3   1      1.156988e2   4.882812e-4  
7.549796e0    4.444196e0    7.232737e-1   8.753323e1    2.570326e-5   -6.477642e-5   7.549796e0    11      1.500000e3   2      1.039595e2   0.000000e0  
1.235205e1    -6.492485e0   -1.277611e0   9.254871e1    -3.588367e-6   6.773397e-5   1.235205e1    11      1.500000e3   3      1.023934e2   0.000000e0  
1.306756e1    5.478405e0    3.721133e0    1.031337e2    2.413316e-4   -1.969924e-4   1.306756e1    11      1.500000e3   4      8.873157e1   0.000000e0  
4.445755e0    5.585085e0    -1.024479e0   1.012968e2    7.094857e-4   6.652855e-4   4.445755e0    11      1.500000e3   5      9.047591e1   1.220703e-4  
1.464297e1    -1.070520e1   -6.912939e0   8.215617e1    1.185761e-4   -1.897788e-4   1.464297e1    11      1.500000e3   6      1.135597e2   0.000000e0  
8.233312e0    -4.405524e0   1.688262e0    9.080852e1    1.969226e-4   -1.268362e-4   8.233312e0    11      1.500000e3   7      1.034248e2   0.000000e0  
1.258808e1    6.423626e-1   4.193715e0    1.051258e2    1.267001e-4   2.901243e-4   1.258808e1    11      1.500000e3   8      8.827320e1   0.000000e0
```

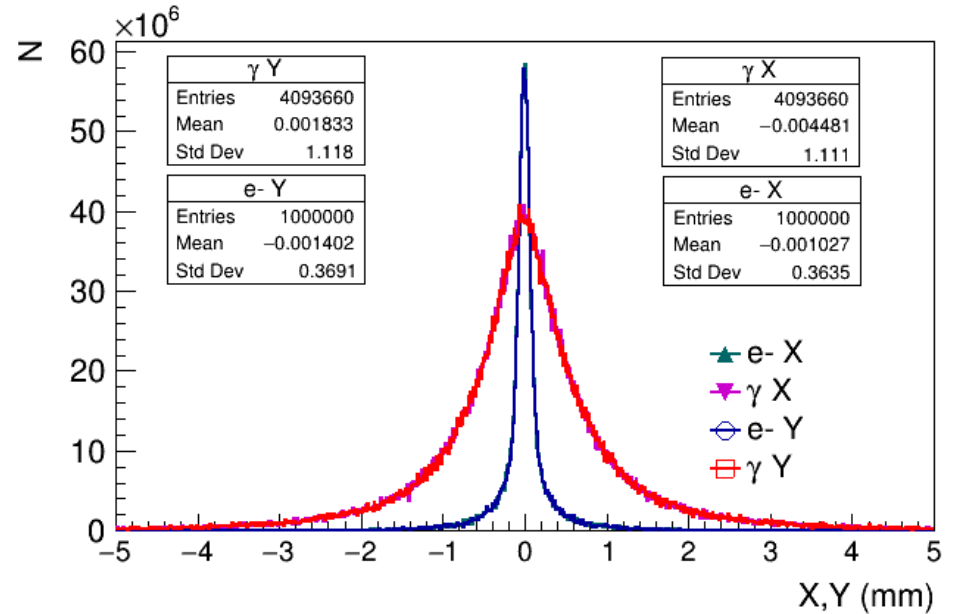
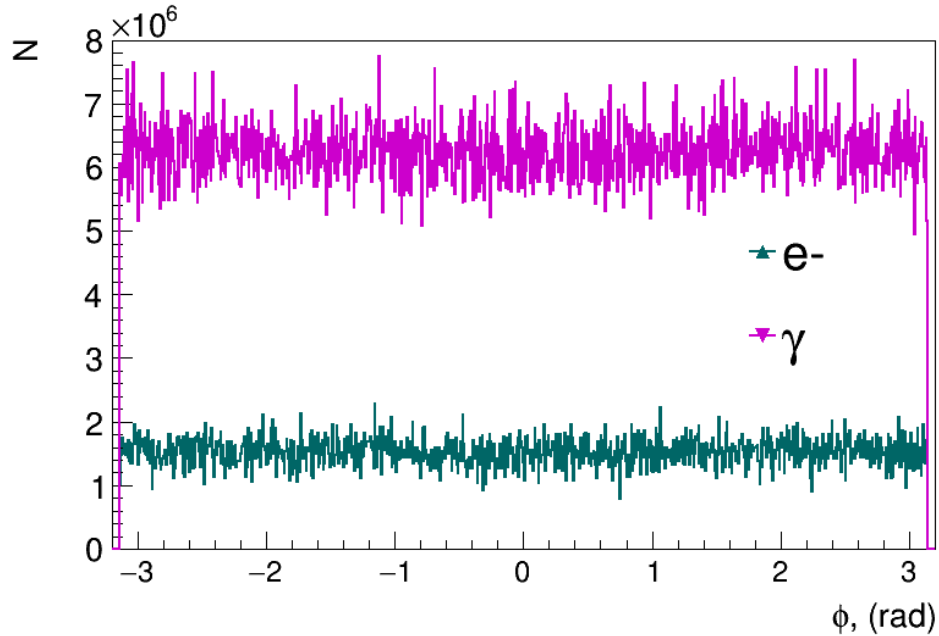
IPStrong output (from Tony)

```
#-----  
# Final state particles.  
#-----  
# First interacting species: electron      Second interacting species: laser  
# First initial particle energy = 16.5000 +/- .16 GeV, Sigma_xyz = 5.00 5.00 24.00 microns, Emit_xy = 1.401.40 mm mrad  
# Laser Intensity = 40.74 x 10^18 W/cm^2, Wavelength = 800.00 nm, pulse length = 25.00 fs, spot size = 78.54 micron^2  
# Pulse peak xi = 3.1061, Pulse peak chi = .5502, Misalignment = .0000 microns  
#-----  
# E (GeV)      x (um)        y (um)        z(um)         beta_x         beta_y         beta_z         PDG_NUM  MP_Wgt  MP_ID  
#-----  
16.500997     -3.9970888    -0.52055507   35.575449    0.1212924137921525E-04  -0.5370264736035026E-05  0.99999999943251977974  11      750000.  1  
16.510431     8.2063837     -2.5342610    49.882725    0.9187015739817455E-05  -0.3733788123292119E-05  0.99999999947187550448  11      750000.  2  
16.506999     -6.2252013    -11.992403    17.662663    0.7030170966331263E-05  -0.2856340016107881E-05  0.99999999949205656372  11      750000.  3  
16.499268     -4.4129576    0.37078337    21.127648    0.2671219527960735E-05  -0.1072754950965103E-04  0.99999999945929054720  11      750000.  4
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Particles spectra (ptarmigan MC)



Particles angle and position (ptarmigan MC)



Particles angle and position (ptarmigan MC)

