Initial Beam tuple definition

This is a description of the initial ntuple Benoit defined from the beamline simulation step. Until this is absorbed into a beamtest tuple, SLAC farm-generated have the beam tuple merged with merit.

Quantity	Description
e_silicon[4]:	energy deposited in the silicon strip detectors in MeV. 0,1: detectors in front of the magnet 2,3: detectors behind the magnet
positionx[4]:	positions along the beam axis of the 4 silicon detectors in mm.
positiony[4],positionz[4]	transverse positions measured by the silicon detectors in mm. y is horizontal, z is vertical
eg_tot	sum energy of gamma-rays in MeV
ee_tot	sum energy of electrons in MeV
eg_1	energy of highest-energy gamma-ray in MeV
eg_2	energy of second highest-energy gamma-ray in MeV
ee_1	energy of highest-energy electron in MeV
ee_2	energy of second highest electron in MeV
M_gam	number of gamma-rays with E > 20 keV
M_e	number of electrons with E > 20 keV
E_rec	reconstructed energy of the electron in MeV using the initial/final angles of the trajectory with respect to the beam axis
dir_rec_x,y,z	projections of gamma-ray "reconstructed" direction, assumed to be the initial electron direction (as measured with detectors 0 and 1).
E_annihilator	Energy deposited in the Annihilator (if no annihilator in the run, set to 0)
E_dump	Energy deposited in the Dump (if no dump in the run, set to 0)
E_plastic0	Energy deposited in the First Plastic Detector in the beam (useful to require an Energy deposit which corresponds to triggering plastic0)
E_plastic1	Energy deposited in the Second Plastic Detector in the beam 2 cm away from the first (useful to require an Energy deposit which corresponds to triggering plastic1)
E_plastic2	Energy deposited in the Veto Plastic Detector in the beam
E_posx, E_posy, E_posz	Position of the highest and second highest electron arriving at the reporting plane (array of 2 doubles)
E_px, E_py, E_pz	Momentum of the highest and second highest electron arriving at the reporting plane (array of 2 doubles)
Gam_posx, Gam_posy, Gam_posz	Position of the highest and second highest gamma arriving at the reporting plane (array of 2 doubles)
Gam_px, Gam_py, Gam_pz	Momentum of the highest and second highest gamma arriving at the reporting plane (array of 2 doubles)
E_si0, E_si1, E_si2, E_si3	Energy deposited in the first (si0), second (si1), third (si2), fourth (si3) silicon detector
E_vol0	Energy deposited in the first volume (i.e. the Cherenkov volume in the case of PS and SPS runs)
E_vol1	Energy deposited in the second volume (i.e. the second Cherenkov volume in the case of PS and the vacuum volume in the case of SPS runs)
E_win0, E_win1, E_win2, E_win3	Energy deposited in the mylar windows around the first volume (E_win0 and E_win1) and the second volume (E_win2 and E_win3)
nPositrons	Number of positrons arriving at the reporting plane (for the positron runs)