

	# short ints (2)	# ints (4)	# floats (4)	# bytes/objects
<u>EventInformation</u>				
MC Type [0]	1			2
Event Number		1		4
Run Number		1		4
MC Weight			1	4
Beam Energy			1	4
Total				16
<u>DMCThrownVertex_Compact</u>				
Spacetime Vertex [1]			4	16
Expected Multiplicity				2
Total				32
<u>DMCThrown_Compact</u>				
PID (PDG) [2]		1		4
MyID	1			2
ParentID	1			2
MCThrownVertexIndex	1			2
Momentum			3	12
Total per Object				22
Expected Multiplicity				8
Total				176
<u>TaggerHits_Compact [3]</u>				
Energy			1	4
<u>DNeutralShowerCandidate_Compact</u>				
Hit Spacetime Vertex [5]			4	16
Energy			1	4
Uncertainties [5]			5	20
Correlations (x, y, z, E) [5]			6	24
Total per Object				64
Expected Multiplicity				9
Total				576
<u>DChargedTrackHypothesis_Compact</u>				
ChargedTrackID [6]	1			2
NeutralShowerCandidateMatchIndex [7, 8]	1			2
PID [2]	1			2
FOM [9]			1	4
Momentum			3	12
Position (POCA to beamline) [10]			3	12
Projected Time [11]			1	4
Path Length [12]			1	4
Flight Time [12]			1	4
Tracking dEdx [12]			1	4
Timing dEdx [13]			1	4
Matched Detector [14]	1			2
Tracking Uncertainties (q/pt,phi,tanI,D,z)			5	20
Tracking Correlations			10	40
Projected Time Uncertainty			1	4
Total per Object				120

Expected Multiplicity

6.1

Total

732

GRAND TOTAL:

1536

Comments:

[0]: What is this for? Is this necessary?

[1]: May have generator decay with a detached vertex, e.g. custom Lambda polarized decay

[2]: Yields Track Mass and Charge

[3]: I'm not familiar with how we plan on simulating tagger hits, so I'm leaving this alone for now [4].

[4]: For CLAS the tagger is not simulated by gsim, the generated energy is just saved directly to the output.

Additional photons can be added later (gpp), but most users do not do this. Instead, to account for incorrect photon selection they do yield correction studies directly with the experimental data, rather than simulation.

Again, I don't know what GlueX has planned.

[5]: Lab coordinate system for uniformity: post-reconstruction, so no BCAL/FCAL-specific info.

[6]: Hypotheses with the same ID are from the same DChargedTrack.

[7]: For matching to DNeutralShowerCandidate

[8]: Different DChargedTrackHypothesis objects of the same DChargedTrack may match to different DNeutralShowerCandidates, so may not be able to identify as neutral if user performs own particle-id.

[9]: If the user is going to accept the PID from the reconstruction, then only the FOM is necessary. If the user wants to perform his/her own PID, then I don't think they want ChiSq or NDF.

[10]: Not common vertex, in case user wants to perform own vertex reconstruction.

[11]: Time from FCAL/BCAL/TOF projected to track position (POCA to beamline).

[12]: In case user wants to perform own PID algorithm.

[13]: From BCAL/FCAL/TOF, for user PID.

[14]: (BCAL/FCAL/TOF/ST/NULL) (essentially a timing status flag).

Possible Additions????

Comments

Start Counter / Pair Spectrometer Info?

?

TOF and/or Tagger(?) Scintillator?

In case user wants to reject bad scintillators from the analysis