

DBD sample (for Icfiplus training)

nPrimaryTracks	=	4845286
nPrimaryTracksInSecVtx	=	11234 (0.2 %)

nBTracks	=	2901676
nBTracksInSecVtx	=	1683847 (58.0 %)
nBTracksInSecVtxCorrectDecayChain	=	1667652 (57.5 %)
nBTracksInSecVtxCorrectParent	=	999507 (34.4 %)

nCTracks	=	2825299
nCTracksInSecVtx	=	1697957 (60.1 %)
nCTracksInSecVtxCorrectDecayChain	=	1588121 (56.2 %)
nCTracksInSecVtxCorrectParent	=	1052934 (37.3 %)

n0Tracks	=	715640
n0TracksInSecVtx	=	21363 (3.0 %)
n0TracksInSecVtxCorrectDecayChain	=	21240 (3.0 %)
n0TracksInSecVtxCorrectParent	=	12536 (1.8 %)

Latest ILD_I5 sample

nPrimaryTracks	=	913039	
nPrimaryTracksInSecVtx	=	2023	(0.2 %)

nBTracks	=	561479	
nBTracksInSecVtx	=	334663	(59.6 %)
nBTracksInSecVtxCorrectDecayChain	=	331960	(59.1 %)
nBTracksInSecVtxCorrectParent	=	204521	(36.4 %)

nCTracks	=	542794	
nCTracksInSecVtx	=	340029	(62.6 %)
nCTracksInSecVtxCorrectDecayChain	=	318598	(58.7 %)
nCTracksInSecVtxCorrectParent	=	215529	(39.7 %)

n0Tracks	=	113128	
n0TracksInSecVtx	=	1412	(1.2 %)
n0TracksInSecVtxCorrectDecayChain	=	1403	(1.2 %)
n0TracksInSecVtxCorrectParent	=	730	(0.6 %)

Latest ILD_s5 sample

nPrimaryTracks	=	889603	
nPrimaryTracksInSecVtx	=	1967	(0.2 %)

nBTracks	=	556241	
nBTracksInSecVtx	=	332900	(59.8 %)
nBTracksInSecVtxCorrectDecayChain	=	330234	(59.4 %)
nBTracksInSecVtxCorrectParent	=	203824	(36.6 %)

nCTracks	=	538712	
nCTracksInSecVtx	=	338856	(62.9 %)
nCTracksInSecVtxCorrectDecayChain	=	317558	(58.9 %)
nCTracksInSecVtxCorrectParent	=	215088	(39.9 %)

n0Tracks	=	108402	
n0TracksInSecVtx	=	1424	(1.3 %)
n0TracksInSecVtxCorrectDecayChain	=	1413	(1.3 %)
n0TracksInSecVtxCorrectParent	=	767	(0.7 %)

Vertex track information in a strange event

Evt = 65

vtx position = (311.457, 704.794, 693.036)

1) Vertex position

vertex track 0 pdg = 211 parent pdg = 10523

Nearest reference point = (39.995, 147.879, 130.868)

start_x = 0 start_y = 0 start_z = 0

end_x = 1169.62 end_y = 1527.56 end_z = 1780.09

distance = 836.603

2) track 1 associated to the vertex

Nearest reference point to vertex position.

start-point of the track

end-point of the track

distance between vertex position and the nearest reference point

list of all the reference points in this track

of track states for trk 0 = 4

state 0 : (x,y,z) = (0, 0, 0)

state 1 : (x,y,z) = (39.995, 147.879, 130.868)

state 2 : (x,y,z) = (959.04, 1390.43, 1549.9)

state 3 : (x,y,z) = (1079.3, 1473.07, 1681.74)

vertex track 1 pdg = -211 parent pdg = -421

Nearest reference point = (5.46534, 15.975, 13.4809)

start_x = 3.02906 start_y = 13.4378 start_z = 10.3741

end_x = -623.99 end_y = 1872.43 end_z = 2129.67

distance = 1014.84

3) track 2 associated to the vertex

of track states for trk 1 = 4

state 0 : (x,y,z) = (0, 0, 0)

state 1 : (x,y,z) = (5.46534, 15.975, 13.4809)

state 2 : (x,y,z) = (-288.302, 1760.68, 1815.76)

state 3 : (x,y,z) = (-390.559, 1804.8, 1933.66)

1) Why vertex point is so far from the start-point?

2) Why the nearest reference point is not really “nearest” among the reference points (of track state 0 ~ 3)