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Subject: problem with TPC recotasks

Posted by [Anonymous Poster](#) on Wed, 26 Mar 2008 14:48:43 GMT

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Dear All,

I tried to read the output from recotasks/demo/runDemo.C which gives the TPC reconstruction informations. Looking at the output, I couldn't understand what these means? Maybe Sebastian can clarify.

I did the following:

I generated an ASCII file using EvtGen where Lambda0 -> p + pi- i.e. I have two tracks in each event. Then I processed this ASCII file using recotasks/demo/runMC.C and did the reconstruction using recotasks/demo/runDemo.C. When I read back the output, I found in some events more than 2 tracks. I could not understand how will there be more than 2 tracks, although I checked in my ASCII file that every event has 2 daughter particles (see below event # 7,17,18,21)

. Is it because of a problem in track finding or somewhere else?

Also I found that sometimes the charge of the track has not been assigned properly. Although I have two tracks with different charge, after reconstruction I got both the tracks have minus charge (see event # 2, 11). Below I have attached some of the sample events which I got reading back the output from runDemo.C

Regards,  
Dipak

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oot [0] .x readCov.C

PSaid instance created... access via gSaid->f()

- RTDB container factory CbmBaseContFact
- RTDB container factory PndFieldContFact
- RTDB container factory PndPassiveContFact
- RTDB container factory PndMvdContFact
- RTDB container factory PndEmcContFact
- RTDB container factory PndDrcContFact
- RTDB container factory PndTpcContFact

\*\*\* # of events are\*\*\* 100

Event number 0 # of Tracks \*\*\* 1

Tra 0 Charge 1 X -16.747 Y 16.3506 Z -39.5 px 3.88465 py -0.00267863 pz 3.87558

Event number 1 # of Tracks \*\*\* 2

Tra 0 Charge -1 X 14.5493 Y 10.6037 Z 34.7928 px 0.0324572 py 0.0902873 pz 0.0277852

Tra 1 Charge -1 X 2.28539 Y 15.3968 Z 104.689 px -0.0112328 py -0.0318623 pz 0.0144723

Event number 2 # of Tracks \*\*\* 1

Tra 0 Charge 1 X 3981.27 Y -4620.87 Z 59.4363 px -0.0764374 py -0.0364256 pz 3.99768e-07

Event number 3 # of Tracks \*\*\* 2

Tra 0 Charge -1 X 18.1297 Y -7.88997 Z 102.701 px -0.0199871 py 0.0731697 pz 0.0550785

Tra 1 Charge 1 X -8.04357 Y -13.8328 Z 79.8354 px 0.313145 py -0.467045 pz 0.00729652

Event number 4 # of Tracks \*\*\* 0

Event number 5 # of Tracks \*\*\* 1

Tra 0 Charge 1 X 14.4932 Y 20.3164 Z -39.5 px 0.0732066 py -0.215354 pz 0.190899

Event number 6 # of Tracks \*\*\* 2

Tra 0 Charge 1 X -16.2875 Y 22.2164 Z -39.5 px 0.109447 py 0.0529493 pz 0.0757195

Tra 1 Charge -1 X 16.5778 Y 13.4451 Z -19.0417 px -483.726 py -36.3041 pz 43.8332

Event number 7 # of Tracks \*\*\* 5

Tra 0 Charge 1 X -28.1871 Y 21.4809 Z -22.6166 px 0.653211 py 0.0789349 pz 0.228374

Tra 1 Charge -1 X -22.0976 Y 12.753 Z -39.5 px 0.028882 py 0.0178201 pz 0.0400436

Tra 2 Charge -1 X -26.4371 Y 10.2303 Z 109.5 px -0.00493088 py -0.021641 pz 0.0125179

Tra 3 Charge -1 X -2309.91 Y -905.189 Z -18.5144 px 0.0682634 py -0.103502 pz

6.62992e-07

Tra 4 Charge -1 X -28.5562 Y -19.799 Z -22.1854 px 0.14157 py 0.033315 pz 1.22712e-05

Event number 8 # of Tracks \*\*\* 2

Tra 0 Charge 1 X -10.1476 Y 11.5454 Z -39.5 px -0.0135848 py 0.0937649 pz 0.041209

Tra 1 Charge -1 X -150.194 Y -313.167 Z -21.3325 px 2.28237 py -2.28031 pz 0.00143165

Event number 9 # of Tracks \*\*\* 2

Tra 0 Charge -1 X 14.2827 Y 5.94202 Z 2.96579 px -0.09945 py 0.00658903 pz 0.00336191

Tra 1 Charge 1 X 4.76285 Y -14.1177 Z -9.91527 px 0.976674 py 0.705377 pz 0.0704686

Event number 10 # of Tracks \*\*\* 1

Tra 0 Charge -1 X -16.4429 Y -6.00127 Z -39.5 px 0.015696 py 0.0314541 pz 0.060695

Event number 11 # of Tracks \*\*\* 2

Tra 0 Charge -1 X -20.6108 Y 1.22641 Z 68.7282 px -0.0620658 py -0.0548972 pz 0.0512449

Tra 1 Charge -1 X -18.8106 Y 5.02412 Z 109.5 px -0.03703 py -0.0383048 pz 0.0425949

Event number 12 # of Tracks \*\*\* 1

Tra 0 Charge -1 X -20.8971 Y 3.83608 Z 109.5 px -0.0281832 py -0.0573962 pz 0.0723641

Event number 13 # of Tracks \*\*\* 1

Tra 0 Charge -1 X 14.7031 Y -4.89719 Z 59.3778 px -0.0284968 py 0.0582575 pz 0.0761729

Event number 14 # of Tracks \*\*\* 0

Event number 15 # of Tracks \*\*\* 0

Event number 16 # of Tracks \*\*\* 2

Tra 0 Charge 1 X 25.4481 Y -8.10828 Z -39.5 px -0.06413 py -0.0963606 pz 0.0835151

Tra 1 Charge -1 X 39.8213 Y -18.8374 Z -36.1188 px 0.488333 py -0.466666 pz 0.000520475

Event number 17 # of Tracks \*\*\* 8

Tra 0 Charge 1 X -24.7435 Y 9.13317 Z 32.776 px 0.0554125 py 0.0365731 pz 0.00527998

Tra 1 Charge -1 X -17.954 Y -8.7067 Z 49.0195 px 0.0141519 py 0.0127211 pz 0.0018827

Tra 2 Charge -1 X -19.6235 Y -5.91746 Z 109.5 px 0.0102983 py -0.0179815 pz 0.0287956

Tra 3 Charge -1 X -158.237 Y 265.351 Z 19.3713 px -2.00015 py -1.45596 pz 0.00351872

Tra 4 Charge 1 X 114.633 Y 81.1705 Z 38.2012 px -9.72854 py -4.38871 pz 0.0122738

Tra 5 Charge 1 X 74.1155 Y 211.621 Z 40.2999 px 2.27595 py -0.956916 pz 0.000188292

Tra 6 Charge -1 X 1.65834 Y -34.0729 Z 35.0441 px 2.01065 py -3.10046 pz 0.0518665  
Tra 7 Charge 1 X -39.1129 Y -119.495 Z -22.5994 px -2.00464 py -3.3732 pz 0.000357283

Event number 18 # of Tracks \*\*\* 3

Tra 0 Charge -1 X 524.857 Y -561.08 Z -24.2246 px -8.39686 py 5.90047 pz 0.040944  
Tra 1 Charge 1 X 15.3793 Y 4.40764 Z -30.7709 px 0.178252 py -0.11522 pz 0.0536989  
Tra 2 Charge -1 X 160.747 Y 79.0774 Z 4.13246 px -0.498641 py 0.250221 pz 4.41802e-05

Event number 19 # of Tracks \*\*\* 0

Event number 20 # of Tracks \*\*\* 1

Tra 0 Charge 1 X 4.24132 Y -21.0757 Z -38.4338 px -0.0525996 py -0.0854074 pz 0.0178459

Event number 21 # of Tracks \*\*\* 4

Tra 0 Charge -1 X 29.4911 Y 11.6045 Z -1.98651 px -0.112404 py -0.0652394 pz 0.00529879  
Tra 1 Charge -1 X -3.1149 Y 20.0906 Z 109.5 px -0.0270426 py -0.0866046 pz 0.0193046  
Tra 2 Charge -1 X -16.6252 Y -13.8053 Z 80.0767 px -1.69861 py 0.657633 pz 0.0002828  
Tra 3 Charge -1 X -352083 Y -14380.7 Z 33.5896 px 0.0547047 py -0.023798 pz 1.12696e-08

Event number 22 # of Tracks \*\*\* 1

Tra 0 Charge -1 X 15.377 Y 2.02839 Z 31.0931 px -0.0864643 py 0.0339366 pz 0.0356229

Event number 23 # of Tracks \*\*\* 2

Tra 0 Charge -1 X 14.0861 Y -10.9138 Z 104.748 px -0.0129369 py 0.0742157 pz 0.0548745  
Tra 1 Charge 1 X 17.614 Y 6.86181 Z 88.4475 px -0.0218323 py 0.118866 pz 0.044237

Event number 24 # of Tracks \*\*\* 0

Event number 25 # of Tracks \*\*\* 1

Tra 0 Charge 1 X -11.1533 Y -8.5945 Z -29.378 px -0.101102 py -0.0127427 pz 0.0278101

Event number 26 # of Tracks \*\*\* 1

Tra 0 Charge -1 X -8.33865 Y -16.6349 Z -39.5 px -0.00618449 py 0.0409256 pz 0.0649452

Event number 27 # of Tracks \*\*\* 1

Tra 0 Charge 1 X 3.81983 Y 25.1401 Z -39.5 px 0.142333 py -0.12799 pz 0.157421

Event number 28 # of Tracks \*\*\* 3

Tra 0 Charge -1 X -5.88547 Y 19.7997 Z 78.5993 px -0.0757957 py 0.03218 pz 0.0586249  
Tra 1 Charge -1 X -13.5205 Y 8.66591 Z 109.5 px 0.0197955 py -0.0234335 pz 0.0616484  
Tra 2 Charge -1 X -30.5821 Y 35.2416 Z 37.4274 px 1.59898 py 5.04504 pz 0.00398372

Event number 29 # of Tracks \*\*\* 1

Tra 0 Charge -1 X 8.83989 Y -19.5796 Z -39.5 px -0.0409138 py 0.0384549 pz 0.0747907

root [1] .q