Ftksim with rawhits

Brief updates
November 27, 2007
Signed 2-dimensional IP (i.e. Only in transverse plane).

**Resolution** = IP[ftk]-IP[truth]

IP[truth] ranges from -2 to +2 mm
Small $|\text{IP}|$ plot: $<0.5 \text{ mm}$

Asymmetry still present!
Ftk tends to reconstruct IP closer to beam axis then ipat. Effect present in SP, too, but is milder. Maybe that's why we didn't notice it before

How often does FTK reconstruct IP with the wrong sign? 300/18k = 2% only!
Why?

- Constants? - see corrgen plot above
- Conversion from:
  - \((x,y,z,px,py,pz) \rightarrow (d,ctheta,z0,phi,curv)\)
  - Done in geopar.c
- Bug in plotting
Ipat seems to be much better in bsmumu compared to training
In central cone 20°
In central cone 65°
On the edges

\[ 60^* \quad \downarrow \quad \downarrow \quad 60^* \]

training

bsmumu

<table>
<thead>
<tr>
<th>( z_0 ) resolution</th>
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</thead>
<tbody>
<tr>
<td>0.08</td>
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<tr>
<td>2.5</td>
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**histo_z0_res_ftk**
- Entries: 7083
- Mean: 0.0476
- RMS: 0.4421

**histo_z0_res_ipat**
- Entries: 9156
- Mean: -0.003446
- RMS: 0.8181

<table>
<thead>
<tr>
<th>( z_0 ) resolution</th>
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</thead>
<tbody>
<tr>
<td>0.06</td>
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<tr>
<td>2.5</td>
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**histo_z0_res_ftk**
- Entries: 3292
- Mean: 0.08947
- RMS: 0.6641

**histo_z0_res_ipat**
- Entries: 5922
- Mean: -0.01697
- RMS: 0.2728