VTX stability study

Hidemitsu Asano

QA files for stability study

-QA modules

- SvxQAForProduction
- SvxStripClusterQA

histograms are generated segment by segment (not aggregated)

-idea-

calculates number of clusters/event sensor by sensor and finds unstable sensors run by run

datasets : run11 AuAu 200GeV



pixel hit rate = (# of clusters) / (# of bbc events within +- 10cm)
stripixel hit rate = (# of clusters) / (# of bbc events within +-15cm)

B0 west

run 347128



B0 east



B1 west



300 seg #

250

250

300

seg #

B1 east



300

B2 west







ىت ،



<u>_____</u>



1 1 1

#

B2 east







لاساه

0

ladder14

50

100









200

250

300

seg #

150





seg #

B3 west



B3 east



unstable flag for each sensor

1. use segment # 0000 – # 0004 and calculate average hit rate sensor by sensor. (=firsthitrate)

2. scan hit rate for all segment (sensor by sensor) if (hit rate < 0.80*firsthitrate || 1.03*firsthitrate < hit rate) badsegment++;

• • • •

if(badsegment>2) the sensor is marked as "unstable"



marked as unstable sensor

run 347128



segment #0100

segment #0000







segment #0100

outlook

-plan

- optimize threshold for unstable sensor flag and scan all data.
- unstable sensor flag will be determined run by run
- Those unstable sensor flag will be used for RP(VTX) analysis .

backup

bbc events



bbc events +- 10cm cut



bbc events +- 30cm cut

