stability

Hidemitsu Asano

pixel unstable point

seg # vs sensorid



seg#



seg#

stripixel unstable point



seg#



seg#

Strawman plan

- by using QA histograms

(They were produced during run11 AuAu 200 GeV production)

- calculated # of cluster/events
 pixel: chip by chip
 stripixel : ?
- flag for
 - drop
 - increase

-その他の挙動

- New database table for "unstable flag".

hot dead map database is not changed by this study

 These unstable flag will be used for RP(VTX) modules cluster, tracking ...(?)

documentation

-svx geometry

https://www.phenix.bnl.gov/WWW/offline/wikioff/index.php/SVX_Geometry

-offset calibration

https://www.phenix.bnl.gov/WWW/offline/wikioff/index.php/Coordinate_offset_calib ration

-beam center calibration

<u>https://www.phenix.bnl.gov/WWW/offline/wikioff/index.php/Beam_center_calibratio</u> <u>n</u>



/direct/phenix+zdata04/phnxreco/run12pp510/1206

backup

pixel badpacket fraction for each run



irun

stripixel badpacket fraction for each



irun

module ID

pixel bad packet fraction (after 4th repair)



stripixel bad packet fraction (after 4th repair)



VTX stability study

- by using QA histograms

(They were produced during run11 AuAu 200 GeV production)

- calculated # of cluster/events sensor by sensor for each file segment
- (update)
- tuned threshold to determine the unstable sensor and scanned all data and puts "unstable flag" on unstable sensors run by run.



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

pixel unstable sensor



#of runs : 326

stripixel unstable sensor



summary & outlook

- scanned QA data for after 4th repair and put "unstable flag" sensor by sensor
- The result is written in text file, not database yet.
- will check RP(VTX) is stable or not again for some run.
- plan
- New database table for "unstable flag".

hot dead map database is not changed by this study

- These unstable flag will be used for RP(VTX).

backup slide

original QA outputs





-stripixel





no z-vertex cut for those histograms.

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





















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 < 0.90*firsthitrate || 1.10*firsthitrate < hit rate) badsegment++;

• • • •

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

marked as unstable sensor

run 347128



segment #0000







segment #0100

pixel unstable sensor





