System Tests Report

GlastRelease – v6r4 (new CalRecon/Digi with bugfix), v6r5
Cal Upgrade – multiple bumps

VerticalGamma10GeV  
CalEnergySum

Multiple peaks introduced in GlastRelease v6r3.

Fixed in GlastRelease v6r4

System Tests, Mar28 2005
CAL Range

VerticalGamma10GeV

Now get many xtals read out in highest range

Current “ideal mode” default calibrations are for muon gain, where the high energy gain is a factor of 10 higher than for flight. So HEX8 now overlaps or is lower energy than LEX1. Also means that the xtals will saturate at ~7 GeV. Fake “flight mode” calibrations will be introduced soon.

System Tests, Mar28 2005
Increase in CalHi triggers due to muon gain mode? Why do we see an increase in ACD high (CNO) triggers?
OnBoard Filter

VerticalGamma10GeV

OnBoard filter word has changed.

We are plotting the filter word, not the frequency that each bit was set. This makes it challenging to interpret the plot. It would be nice to add this word to the digi root tree. Since this simulation is not “flight-like” it is probably not useful to worry about the changes in the distributions just yet.
CAL ADC

VerticalGamma100MeV

With the new calibrations the pedestals are now at higher values. There are many fewer hits (more later).
This plot includes data from all readout ranges. I've added new plots to the systests that divide ADC histograms into separate ranges.
CALDIGICOUNT (some history)

VerticalMuon1GeV

Changed the zero suppression threshold from 2 MeV to 1 MeV after GR v4r4.

For the calibration/digi parameters in use at the time this meant that a 2.5 sigma fluctuation was required to be above threshold rather than 5 sigma. So we would expect ~19 noise hits per event with a 1 MeV threshold and <<1 for a 2 MeV threshold, as observed.
We are back to where we were! Either the zero supression threshold has increased or the noise level has decreased. I suspect the latter, but CAL subsystem people should confirm.
Energy Resolution

VerticalGamma10GeV

EvtEnergySumOpt for events with CalCsIRLn>2&&CalEnergySum>5.0

System Tests, Mar28 2005
Energy Resolution

VerticalGamma100MeV

EvtEnergySumOpt for events with CalCsIRLn>2&&CalEnergySum>5.0