

# GlastRelease v15r51p1LPM

Run Manager Summary

System Tests v15r51p1LPM

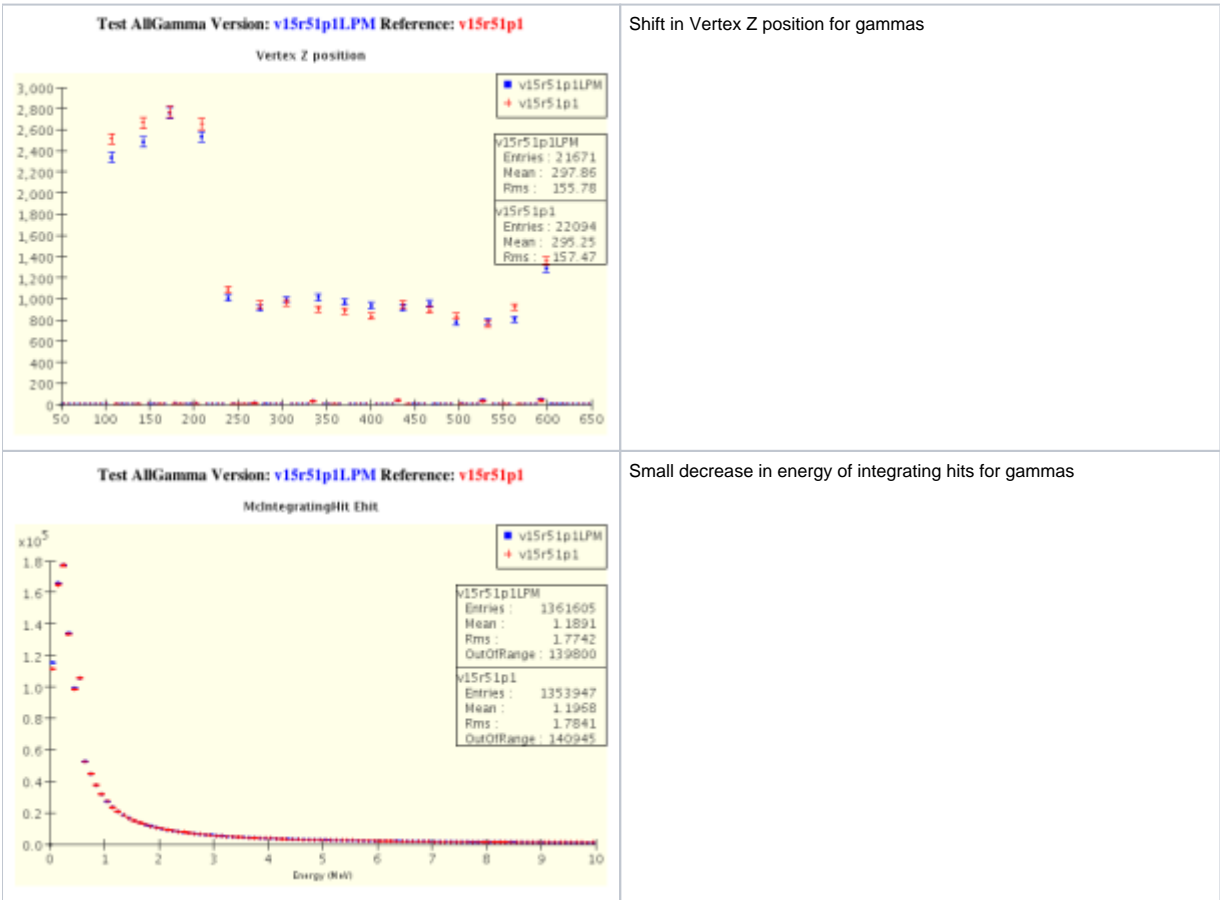
## System Tests Report Summary

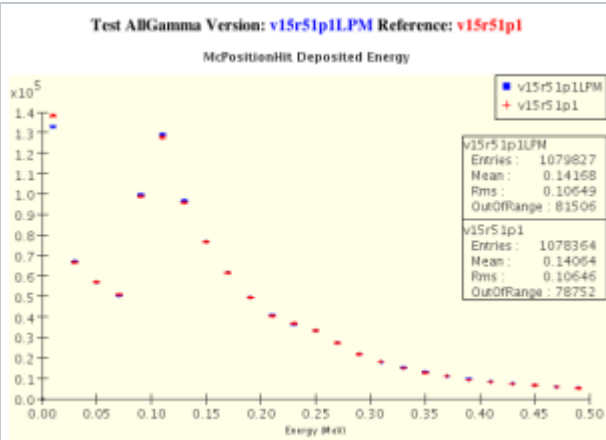
This is a special run of GR v15r51p1 using the GLEAM job options to select the LPM physics list (G4Generator.physics\_choice="QGSP\_BERT\_LPM").

There are many differences for comparison with [GR v15r51p1](#) (standard systest job options). There are at least three reasons for this. One is that the physics generation has changed and so distributions dependent on specific secondary particles will fluctuate. Two is that the LPM option should cause some changes in the tracks and energy deposits. Third is that the systests use by default Physics List = GLAST, which does not use QGSP. This means that we should also see some difference in the hadronic interactions, likely the reason why the 1 GeV protons look different.

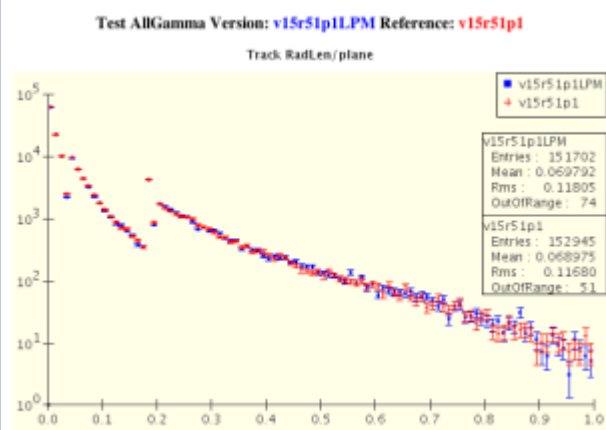
## Changes

- CRflux - test program generates complete spectrum
- G4Generator - updates for LPM option
- G4HadronSim - include LPM, but leave alpha interactions off

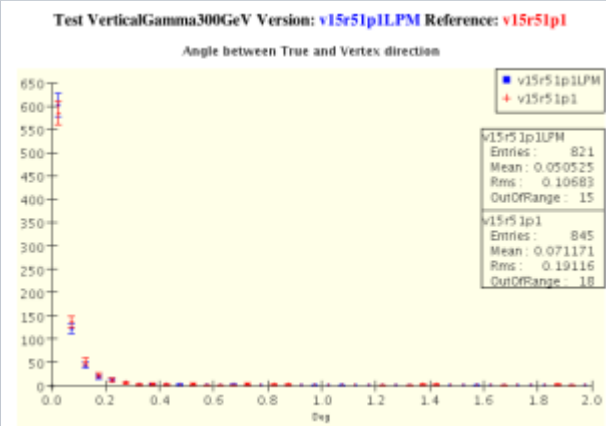




Energy of position hits for gammas



Track radiation length/plane for gammas



Angle between vertex and true direction decreases for 300 GeV gammas