Updating system tests

The aim of this page is to keep track of the work done trying to update the system test (more details on the systests code and its usage can be found in: System test overview and instructions).

I managed to run the system tests to compare GR_20-04-10 and GR_20-11-00 (with some caveat, see below).

Some script needed to be updated (changing some paths, and other minor things). Everything is committed in CVS.

Results can be seen on the web interface, while the code is located in /nfs/farm/g/glast/u17/systests

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Running the system tests:

log in as user glastsys (this is not strictly necessary, but is needed to have write permission in the systest directory)

```
bash
export  SYSTESTS=/nfs/farm/g/glast/u17/systests
cd $SYSTESTS/src/exec
tcsh setModePass8.csh (to be done just once)

./runSysTests_SCons.sh  Config_testSCons.txt
```

refer to Instructions for Running with SCons   for the explanation about the config_file content

Config file example:

```
#version to be tested
pversion 20-10-04
# reference
sversion 20-10-04
ksthresh 0.5
instdir   /nfs/farm/g/glast/u52/ReleaseManagerBuild/redhat6-x86_64-64bit-gcc44/Optimized/GlastRelease/20-10-04
bldtype  redhat6-x86_64-64bit-gcc44
systests /nfs/farm/g/glast/u17/systests/src/GRtests_SCons/
output   /nfs/farm/g/glast/u17/systests
glastext /afs/slac/g/glast/ground/GLAST_EXT/redhat6-x86_64-64bit-gcc44
subset AllGamma, VerticalGamma100GeV, VerticalGamma100MeV, VerticalMuon1GeV, VerticalProton1GeV,
VerticalGamma300GeV,  VerticalGamma1GeV, Vertica
lGamma10GeV, flightData
#subset VerticalGamma100MeV
#set debug flag to 1 to run only the root scripts (generating histograms)
```

Loading the histograms and comparison results to the database:

```
> cd $SYSTESTS/src/exec
> source setup.sh
> python insert_metadata_version_sequence.py -b <version_name>
```

(where <version_name> is the version that is tested (the "pversion" entry in the configuration file))

Some open issues:

some sets of simulations/reconstructions are not working (in red):

- AllGamma
- VerticalGamma100MeV
- VerticalGamma1GeV
- VerticalGamma100GeV
- VerticalGamma10GeV
- VerticalGamma300GeV
- VerticalProton1GeV
- VerticalMuon1GeV
- AllGammaOverlay
- BackGndMixDC2
- BackGndMixDC2Overlay   related to the fluxes definitions and path to overlay files???

## Conversion from ADCRecon to ACDRecon2:

For many variables the old/new conversion was not clear to me, I just commented those lines :) .

So some ADC histograms are just empty.

The related code is in file: systests/src/root/ReconAcdFragment.cxx
(http://www-glast.stanford.edu/cgi-bin/viewcvs/systests/src/root/ReconAcdFragment.cxx?revision=1.3&view=markup)

Comparison between GR_20-04-10 and GR_20-11-00 always fails for two variables:
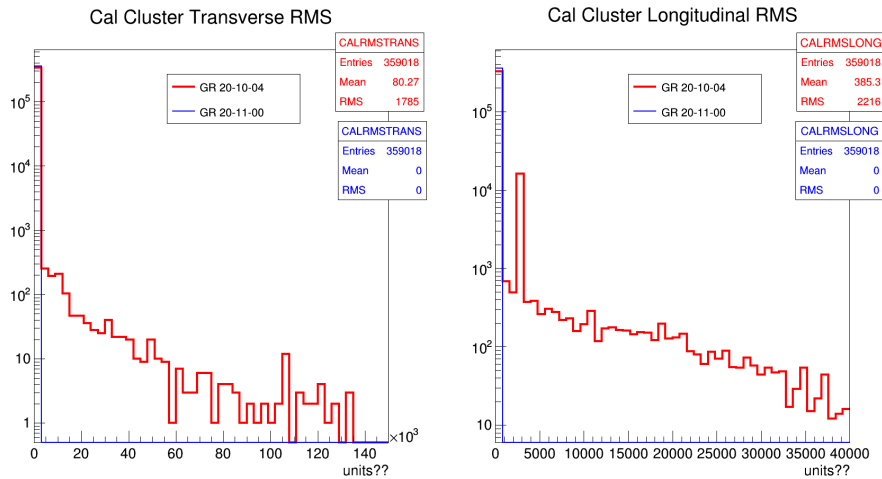
CALRMSTRANS = ReconEvent.CalRecon.CalCluster->getRmsTrans()

CALRMSLONG   = ReconEvent.CalRecon.CalCluster->getRmsLong().

for GR 20-11-00 these two variables are always 0

 I also tried to run the comparison staring from the digi file of a LPA run (instead from a simulation), getting the same result (flightData row in the systests page).

 is this is something expected??