

CCB Action 20060121

I've gone through the system tests histograms, comparing EM v5r070305p2 to EM v5r0703p6 which we currently use in the pipeline.

Changes are understood - in particular fewer TKR triggers (TriggerAlg) due to the trigger using dead strips and changes in the number of CAL triggers (TriggerAlg) due to it now using calibrated values.

In addition, tiny changes in a few TKR quantities for real data are consistent with EM v5r070305p3 using a different dead strips file than EM v5r0703p6 (for the same data run). I've asked Johann why he did the change in the calibration database. Anyway, it explains the system test differences I see.

There may be an small update to the SVAC ntuple tag I give here.

The tracker people want to piggyback on it again, this time for flare monitoring (flare in the tracker that is). It should be pretty orthogonal to our code. I will verify that as soon as the new tag is ready.

Will look at EM v5r070305p3 when the histograms are available later tonight. The only differences between p3 and p3 are ACD Veto threshold of 0.1 MIP instead of 0.2 and a TKR filler fix for Fred.

EngineeringModel v5r070305p2

Short summary:

- Trigger (TriggerAlg) now uses dead strips in the tracker.
- Trigger (TriggerAlg) CAL uses calibrated values.
- ACD tiles now overlap in the correct direction.
- CalTuple now saves an entry for *every* event regardless of whether there is CAL data or not thus ensuring that it's synchronized with the other root files.
- Added AcdHit and AcdTkrPoca collections to AcdRecon.
- ACD Veto threshold set to 0.1 MIP to match settings in SVAC muon runs.
- New base GR release.

Details:

xmlGeoDbs v1r28p3

- Eliminate allTowers volume in cu06 geometry, allowing freer placement of tiles
- Bring em2 geometry up to date
- Include outermost id field for oneNoTkr volume
- Add ACD tiles in cu06; minor reorg. changes to flight
- Merge new stuff from v1r26 ACD upgrade into latAssembly/latACDDimPrimUnshrunk.xml
- Add cu06 geometry with proper 4x1 (long in X dimension) grid
- Make top tiles overlap in the correct direction.
One row overlaps another. Row 2 is at lowest Z.

ntupleWriterSvc v3r10

- merge with branch, and change interface ID for previous change
- add ability to create multiple ROOT output files

merit v6r28p1

- Use CTB variables in FT1Alg.

flux v8r22p2

- protect against times beyond pointing history
- fix warnings due to no virtual destructor
- Include static start time for sources

f2c v2r2

- up-to-date version of f2c.h, and cmt folder created
- initial version
- place for link stuff and Win32 libraries

commonRootData v2r6

- Other Unit tests utilities for reconRootData
- Unit tests utilities for AcdDigi and collections

celestialSources/genericSources v1r5

- use Spectrum::startTime() offset
- refactor SpectralTransient to use smaller event cache
- add FitsTransient, SourcePopulation classes

celestialSources/eb1Atten v1r1p3

- Include new Stecker's model for EBL

celestialSources/GRBobs v2r1p5

- fix bug in applying launch offset

celestialSources v1r1

- add FitsTransient, SourcePopulation

calibGenCAL v3r8p5

- now supports new intNonlin format
- python: fixed a few dos/unix newline screw ups that were breaking things
- adcsmooth - lengthened lookback for fle2adc extrapolation. this will work better w/ new sparser data. avoids 'knee' in output curve

astro v1r12p4

- Fix computation of longitude from position
- GPS mods to treat history file consistently
- unix fixes
- mods to Healpix to hide healix_base; slight change to interface
- Fix sign of longitude

Trigger v4r3p3

- Update unit test JO file to set up CAL services that are now required.
- Bug fix - setting digi variable too late
- Update setting of ACD Low bit, to use 0.3 MIP thresh
- Update veto calculation
- support new CalTrigTool, drop old/bad cal code entirely. undo impolite whitespace changes in TriggerAlg.cxx
- check for dead strips when checking for a trigger

TkrUtil v3r5p9

- Fix implementation of numberOfHitsNear(view, layer, ...)
- Make towerFactor a Property for TkrQueryClustersTool
- Changes for compatibility with modified IGeometry interface

Rootlo v17r9gr1

- Handle new AcdHit and AcdPoca, and use new RootConvert converter
- Patch to mcRootReader to count daughters of McParticles just once..not twice. Fix AcdRecon MaxActiveDist Id writing

RootAnalysis v8r8o4

- get rid of unix warnings
- more warnings

LatIntegration v2r49

- Added LAT run to system tests.
- Fixed instrument name for Tower A system test ldf2digi.txt JO
- Fix to unit test JO.
- Changed number of events in two tower data system test to avoid batch time out.
- Updated JO to new CAL trigger code.
- Updated JO to new CalTuple code.

HepRepSvc v0r16p1

- Bullet-proof TrackFiller for bad Tkrlid's
- Corrected a very bad bug in rotations of volumes in the geometry filler
- Update to ACD representation, using new colors depending on discriminator settings. Also update McPosHit to include volId and global entry position.
- Fixed decoding of tower in TrackFiller

Gleam v6r8p1

- Needed to make FT1Alg follow GlastClassify.
- Implement Atwood trees (only) in GlastClassify

GlastClassify v3r0

- convert to Atwood trees only
- New trees, special AtwoodLikeTrees class for non-atwood trees

FluxSvc v6r31

- Add pointing info entry for lat_geo.
- Remove obsolete entry to set pointing history file
- Allow partial suppression of ExposureAlg tick message
- fix bug in setting up history file; set startdate for sources

CalXtalResponse v0r9p1

- small edits to remove warnings on linux compile
- New CalTupleAlg is separated out from CalXtalRecAlg, only way to ensure that CalTuple code is called on every event.
- CalTuple now saves an entry for every event regardless of whether there is cal data or not. This is basically a merge from v0r7p7 branch update.
- CalXtalRecAlg.tupleFilename jobOption allows CalTuple to be created in separate file from other tuples.
- new CalTrigTool can be called either by caldigi or by triggeralg.
new unit_test. caltuple is now same format as other tuples, easier to merge.

CalUtil v2r2p1

- few tweaks after building & testing on linux
- new system test. new CalArray.h. broke CalVec.h off of CalDefs.h
- getCol() & getRow() added to TwrNum class

CalDigi v2r3p5

- fixed dummy bug in previous tag.
- Minor change to return codes, shouldn't change any behavior.
- Update to new CalTrigTool separate from XtalDigiTool

AnalysisNtuple v2r9p3gr4

- Add type info to the variable documentation
- Fix the documentation: _intro_XXX.h, 2nd Try
- Fix the documentation: _intro_XXX.h
- Add new var: CalEdgeEnergy ("ACD for the CAL")
- Fix up calculation of Tkr1SSDVeto to match main branch
- Only doc: add bit definitions, TkrSurplusHitRatio defn ⚠
- Fix negative values of Tkr1CoreHC, and some cleanup

AcdUtil v0r2p3

- Patch ribbon handling in getVals
- Update warnings to include volids
- Update req file to create two shared libraries
One Gaudi component library and one non-component library
- Add AcdTileDim and AcdRibbonDim

AcdRecon v2r0p4

- Patch ribbon orientation change
- Protect against NA channels in AcdRecon
- Get AcdReconAlg and AcdPocaTool to include AcdTileDim and AcdRibbonDim from AcdUtil
- Remove AcdTileDim and AcdRibbonDim, which are now in AcdUtil.
- Cleanup a few loose ends on previous commit.
- Re-structure AcdRecon to use AcdPocaTool for calculations. This is a pretty major re-write.
- Added (empty) AcdHit and AcdTkrPoca collection to AcdRecon. This is to test the data structures without actually adding in all the new code.

AcdDigi v1r14p2em2

- Set veto threshold to 0.1 MIP temporarily for I&T

Additional packages:

svac/TestReport v3r4p9

- Added Logz option, used in AcdPha v. tileId plots.
- fixed axis labels in acd plots
- added cut at 500ms in timeInterval plot (some evts had interval > 1s)

svac/EngineeringModelRoot v1r8p9

- Added AcdTkrPoca variables

- TkrCalib updates

svac/svacPipeline v3r4p5

- Add explicit maxTreeSize to account for merged CalTuple > 2 GB. This is necessary to process the recent LAT B13 (non-zero suppressed) runs.

Code Versions

Engineering Model (sim/recon): [v5r070305p2](#)

System Tests for this [version](#)

System Tests results:

Verified by Anders et al.

Fred version:

[v0r99](#)

Pipeline version:

v1.4

GRITS tag (web browsing and task configuration)

glast-ground v0r3p7
grits-gino-web version 0.55 (v0r5p5)
grits-gino version 0.95 (v0r9p5)
grits-gino-xml version 1.42 (v1r4p2)
grits-common version 0.32 (v0r3p2)

online/svac (task defs, scripts):

[pipeline tasks:](#)

online: v2r3p2 (SVAC code moved to AFS)

[svac pipeline code and tasks:](#)

code/tasks v3r4p5 ****changed****
pipelineDatasets v0r3

[ISOC code and tasks:](#)

v0r5p0

[Apps that run in pipeline:](#)

eLog: v2r2p8 (Moved code to AFS)
ConfigTables: v3r2p0 (Added ACD information)
TestReport: v3r4p9 (digi & recon reports) ****changed****
EngineeringModelRoot: v1r8p9 (SVAC tuple) ****changed****

Approved: unanimous Jan 22, 2006