CCB request 20051129

CCB Request for EngineeringModel v5r0703p3

AcdRecon v1r12p6
Heather Kelly and Eric Charles

- Add Corner DOCA
- Add AcdTkrIntersectTool
- Patch AcdTkrIntersectTool to protect from negative arclengths.

CalXtalResponse v0r7p6
Zach Fewtrell

- Fixed bug reported by philippe: only visible in ideal-mode high-asymmetry xtal deposits near 1050 MeV
- Support new intNonlin data w/ optional per-channel dac values.
- Removed local caching of TDS RangeBase pointers in order to simplify the code.
- Fixed bug, found by Richard Dubois. when few lines of code were moved from computeEnergy function to execute function, the return when below_threshold flag is set became invalid, because it caused skipping of all subsequent digis - now replaced by continue statement.
- Fixed bug where wild hit positions were not clipped to xtal boundaries.
- XtalRecTool combins EneTool & PosTool. FLE & FHE triggers now calculated.
- ULDs are now properly checked against ped *subtracted* adc values.
- Inserted patch for instances where one might access NULL pointers in cases of incomplete LAT geometries

GlastSvc v9r17
Heather Kelly

- Add new algorithm which will print out the event and run ids for each event processed..helpful for debugging purposes.

GlastPolicy\RootcintPolicy v5r0p3
Heather Kelly

- Update to vc_proj_library fragment for creating rootcint files for packages where there are more than one library created. Specifically for RootAnalysis' Leaning Tower library

AcdDigi v1r14p2
Heather Kelly

- Patch to edge effects for faces 1 and 3

LatIntegration v2r43
Anders W. Borgland

- Added full LAT surface muon MC system test.
- Limit some system tests to 100k events to avoid time out
- Correct sequence for the new Cal Recon

RootAnalysis v8r8p1
Michael Kuss, Heather Kelly Johann Cohen-Tangui

- Add johann's mergeFiles macro
- Updates to LeaningTower geometry
- Patches for windows

Em1 v2r5p1
Heather Kelly

- Update JO file for test routine by removing old FluxDisplay

Em2 v1r5p1
Heather Kelly

- Update JO file for test routine by removing old FluxDisplay

calibGenCAL v3r8p3
Zach Fewtrell and Dan Wood

- Added tools 'adc2nrgVal' and 'biasVal' and 'adcsmooth','genGainSettings'
- Python scripts now support new intNonlin format (calCalib_v2r3.dtd)
- Extrapolate all ciFit splines to saturation point.

calibGenTKR v2r7p4
Hiro Tajima

- Some histograms are added for easy diagnostics of charge scale.
- Default charge scale value is changed from 1.0 to 1.12.

These were picked up as part of GR v7r3

IExternal/GaudiInterface v0r120p8
Toby Burnett

- Patch to allow VC8 release builds

IExternal/ldfExt v0r561p2
Navid Golpayegani

- Patch to allow VC8 release builds

xmlGeoDbs v1r25p4
Joanne Bogart

- Updated ACD geometry to include tile shrinkage at operating temperature

astro v1r11p4
Toby Burnett and James Chiang

- Move to use the tip packages and upgrades associated with HEALpix facilities v2r12p3
  Joanne Bogart
- Added two new methods unsigned to string and string to unsigned.

idents v2r15
Heather Kelly

- Add support for N/A in the AcdIds: JIRA ACD-4

detModel v2r18p2
Joanne Bogart

- Updates to handle ACD screws

Event v11r8
Tracy Usher, Heather Kelly and assorted others

- Move to new CalRecon
- Updates to ACD TDS structures

GlastSvc v9r16
Joanne Bogart

- Fix to pushShape to handle ACD screws

commonRootData v2r4
Heather Kelly

- support NA in AcdId: JIRA ACD-4

mcRootData v2r19p0
Tracy Usher

- Add McTrajectory

digiRootData v8r7
Heather Kelly

- Store AEM header parity bits
- Modification of AcdDigi methods after consulting Alex Moiseev (GSFC).

reconRootData v8r6p1
Tracy Usher and Heather Kelly

- Updates for new CalRecon
- Updates for AcdRecon - ribbon active distance, corner DOCA, etc

RootIo v17r9p1
Tracy Usher and Heather Kelly

- New CalRecon, updates to AcdRecon

Trigger v4r2
Toby Burnett

- Enable Ritz throttle

flux v8r21p2
Toby Burnett

- Include improvements to Earth from Dirk Petry
- Limit chime to 1 TeV

celestialSource v1r0p5

- Jim Chiang
- Tag for GRBobsmanager

FluxSvc v6r28p1
Toby Burnett

- Fix bug to StartTimeEnvVar
- Provide access to ScienceTools sources

OnboardFilter v1r1p8gr0
Julie McEnery

- Change the calorimeter calibration constants to match those used in
  ideal flight mode digis (i.e. to compensate for changes in CalDigi).

calibUtil v1r5p2
Joanne Bogart

- Add per-range sdacs attribute to <intNonlin>

CalibData v0r12p3
Joanne Bogart

- Allow for array of dacs per channel for intNonlin

CalibSvc v0r21p6
Joanne Bogart

- Bring main branch up to snuff wrt intNonlin calibs

CalDigi v2r3p1
Zach Fewtrell

- Save GltDigi Cal trigger info per xtal-face instead of per tower.
  Save FLE &FHE trigger info to TDS. Uses CalXtalResponse >=v0r7

CalRecon v6r1p15
Tracy Usher

- New Cal Recon

TkrDigi v2r4p7
Leon Rochester

- Bug-fix in GeneralHitRemovalTool
- Changes for compatibility with modified IGeometry interface for ACD screws
- Add GeneralHitRemovalTool, and associated changes Does all hit
  removal (except for noise) including hit truncation
- SiStripList: check if both coordinates are inside active area

TkrUtil v3r5p8
Leon Rochester

- Make towerFactor a Property for TkrQueryClustersTool
- Changes for compatibility with modified IGeometry interface
- Fix TkrSplitsSvc, and test program
- TkrSplitsSvc now handles hit truncation consts

TkrRecon v10r8p1
Leon Rochester and Tracy Usher

- Update default cluster cut from 500 to 2000
- New code for truncated hits
- Changes for compatibility with modified IGeometry interface for ACD screws
- Add protection in Combo Pat Rec against "bad" cal axes
- Add alignment correction to recon
- Tag to go with new CalRecon output
- ComboFindTrackTool: implement MC energy and pointing option
- Cancel hit-limiting for poorly measured Cal tracks
- New method to provide limit and position prediction
- Remove tabs (I meant to do this earlier!)

- FindTrackHitsTool: fix minor radlen bug
- Utilities: implement TkrPoints wrt a reference point
- ComboFindTrackTool: use new TkrPoints
- Limit CAL finding to cone around CAL-track
- Fix minor radlen and layer-numbering bug

DetDisplay v3r1p7
Joanne Bogart

- Change to IGeometry interface to support ACD screws
- G4Generator v5r11p2
  Tracy Usher and Joanne Bogart
- New McPositionHits, order McTrajectories by generation
- Updated IGeometry interface for ACD screws

ntupleWriterSvc v3r8
Toby Burnett

- Add access function to an existing tuple item.
- Make a table of bad values; provide property to allow bad entries anyway
- Have RootTupleSvc reject tuple entries with non-finite values

G4Propagator v2r1p11
Tracy Usher

- Fix the problem with ray parallel to surface
  Addresses JIRA GEANT-5

merit v6r27p2
Toby Burnett

- Support for new GlastClassify trees
- Add new Doxygen documentation for inclusion in the user workbook

Gleam v6r7p3
Toby Burnett

- Add FT1Alg to triggered sequence
- Turn on CalMipFinder
- Add AcdUtil for new geometry service

AnalysisNtuple v2r9p1
Leon Rochester

- Updated Doxygen documentation for inclusion in the user workbook
- TkrSurplusHitRatio: #hits outside/#hits inside energy/angle-dependent cone
- TkrSurplusHCInside: #hits inside cone
- TkrUpstreamHC: #hits inside a cylinder upstream of the track
- Tkr1CoreHC: total # extra hits in small circles around each hit on track 1
- Deprecated: TkrTotalHits – same as TkrSurplusHCInside
- Add new ACD variables for 3D Active Distance and CornerDOCA.

userAlg v6r4p6
Toby Burnett

- Minor fix for merit properties

CRflux v1r5
Toby Burnett

- Adjust date from 2000 to 2001 for solar flux

ldfReader v2r5
Heather Kelly

- Handle AEM header parity bit (CMD/Data error)

LdfEvent v2r13p2
Heather Kelly

- Fix compiler warnings in EventSummaryData

LdfConverter v1r17p1
Heather Kelly

- Set n/a for AcdIds
- Handle ACD Header Parity from AEM contribution

rootTestData v3r4
Heather Kelly

- New CalRecon

HepRepSvc v0r14p7
Leon Rochester and Joanne Bogart

- Update IGeometry interface for ACD screws
- Upgraded information for clusters and track hits
- Bullet-proof TrackFiller for bad TkrIds

rdbModel v2r2p3
Joanne Bogart

- Support for unsigned auto_increment fields

svac/EngineeringModelRoot v1r8p4
Anders W. Borgland

- Updated the SVAC ntuple to work with the new CAL Recon
- Added new CAL MIP finder variables: SVAC-79
- Added ACD digi and recon variables: SVAC-77
- Added TKR_ACD intersection variables: SVAC-78
- Store histograms for TKR in a separate tree in the SVAC root file
  to speed up TKR calibrations: SVAC-81
- Increased max files size for SVAC ntuple to 500 GB.
- Removed duplicate variable in the ntuple.

Code Versions

Engineering Model (sim/recon): v5r0703p3

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) **Changed**

svac pipeline code and tasks:

code/tasks v3r3p4 (Moved code to AFS) **Changed**
pipelineDatasets v0r3

ISOC code and tasks:

v0r5p0

Apps that run in pipeline:

eLog: v2r2p8 (Moved code to AFS) **Changed**
ConfigTables: v3r2p0 (Added ACD information) **Changed**
TestReport: v3r4p3 (digi & recon reports) (Added ACD histograms) **Changed**
EngineeringModelRoot: v1r8p4 (SVAC tuple) (See above) **Changed**

Approval: unanimous 12/1/05