

# CCB request 20051121

CCB Request for EngineeringModel v5r0703p2

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

AcDigi v1r14p2

Heather Kelly

Patch to edge effects for faces 1 and 3

LatIntegration v2r43

Anders 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

CalXtalResponse v0r7p5

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 combines EneTool & PosTool. FLE & FHE triggers now calculated. Also ULDs are now properly checked against ped *subtracted* adc values.

There were picked up as part of GR v7r3

IEExternal/GaudiInterface v0r120p8

Toby Burnett

Patch to allow VC8 release builds

IEExternal/IdfExt 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

Rootlo 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

calibUtil v1r5p2  
Joanne Bogart

Add per-range sdacs attribute to <intNonlin>

CalibData v0r12p3  
Joanne Bogart

Allow for array of sdacs 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

AcidRecon v1r12p5

Heather Kelly and Eric Charles

Add Corner DOCA

Add ActTkrIntersectTool

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 Glashow trees

Add new Doxygen documentation for inclusion in the user workbook

Gleam v6r7p3

Toby Burnett

add FT1Alg to triggered sequence

Turn on CalMipFinder

Add AcidUtil 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

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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 AcclDs  
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 TkrlDs

rdbModel v2r2p3  
Joanne Bogart

Support for unsigned auto\_increment fields

svac/EngineeringModelRoot v1r8p3  
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.

## Code Versions

**Engineering Model (sim/recon)**[v5r0703p2](#)

**System Tests for this [version](#)**

**System Tests [Result](#)**

System tests:

anders

**FRED version**

[0.98](#)

**Pipeline tag**

v1r0p2

**GRITS tag (web browsing and task configuration)**

glst-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: v2r3p0

svac pipeline code and tasks:

code/tasks v3r3p3 **\*\*changed\*\***  
pipelineDatasets v0r3

ISOC code and tasks:

v0r5p0

Apps that run in pipeline:

eLog: v2r2p7  
ConfigTables: v3r1p5  
TestReport: v3r2p7 (digi & recon reports)  
EngineeringModelRoot: v1r3p20(SVAC tuple)

Approval: