



IMPORTING TB_RECON TO GLASTGAUDI

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Import Tracker Reconstruction

Import ROOT tree IO into GAUDI algorithms

Plan: Move Tb_recon to GAUDI (or part of it!)

- 1) Move the Tracker Reconstruction of tb_recon code to GAUDI
 - 1.1) without any 'improvements' added into the code
- 2) Move the IO ROOT trees of tb_recon to GAUDI
 - 1.2) keep the possibility of read/creating the IO ROOT trees of the testbeam

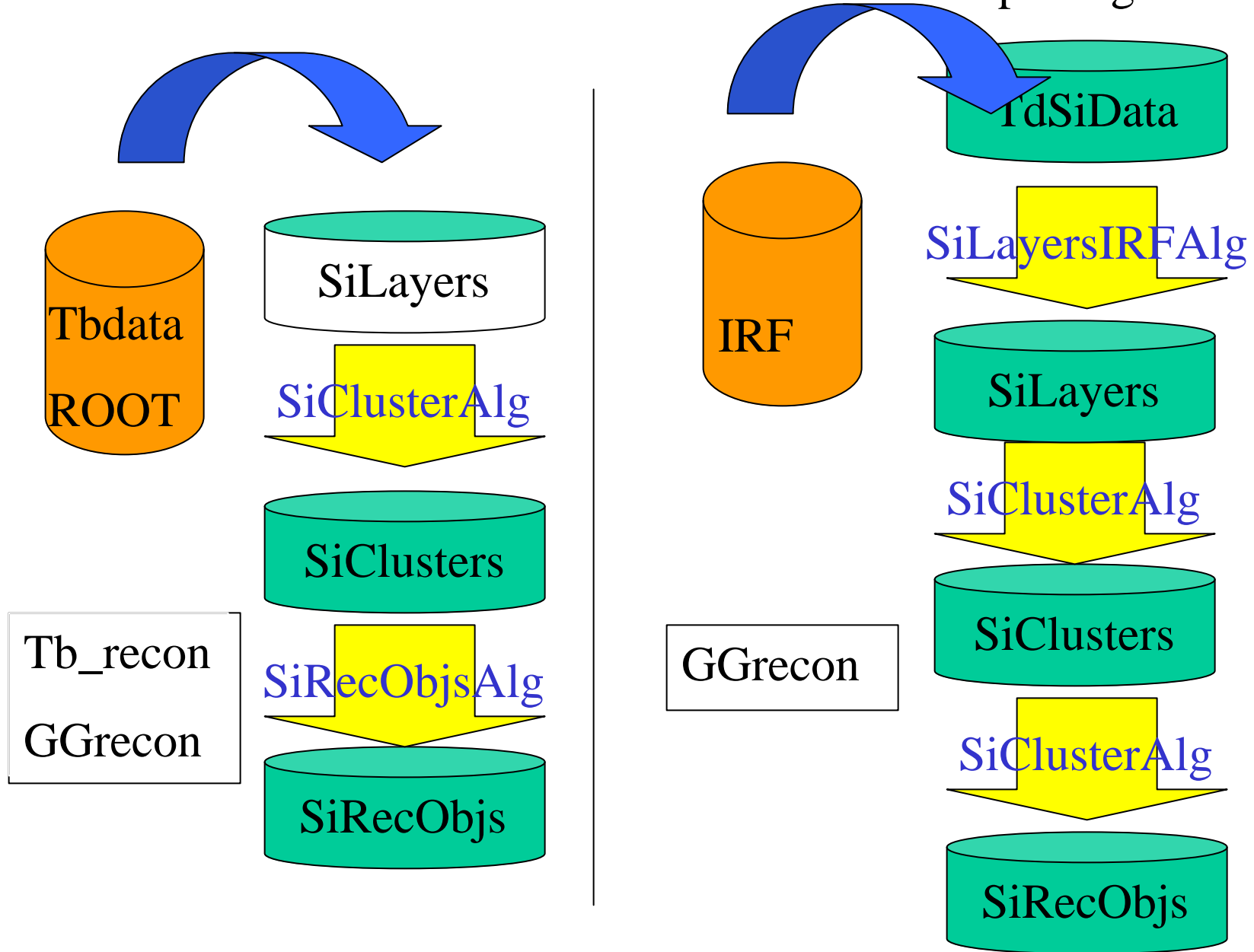
Porpoise:

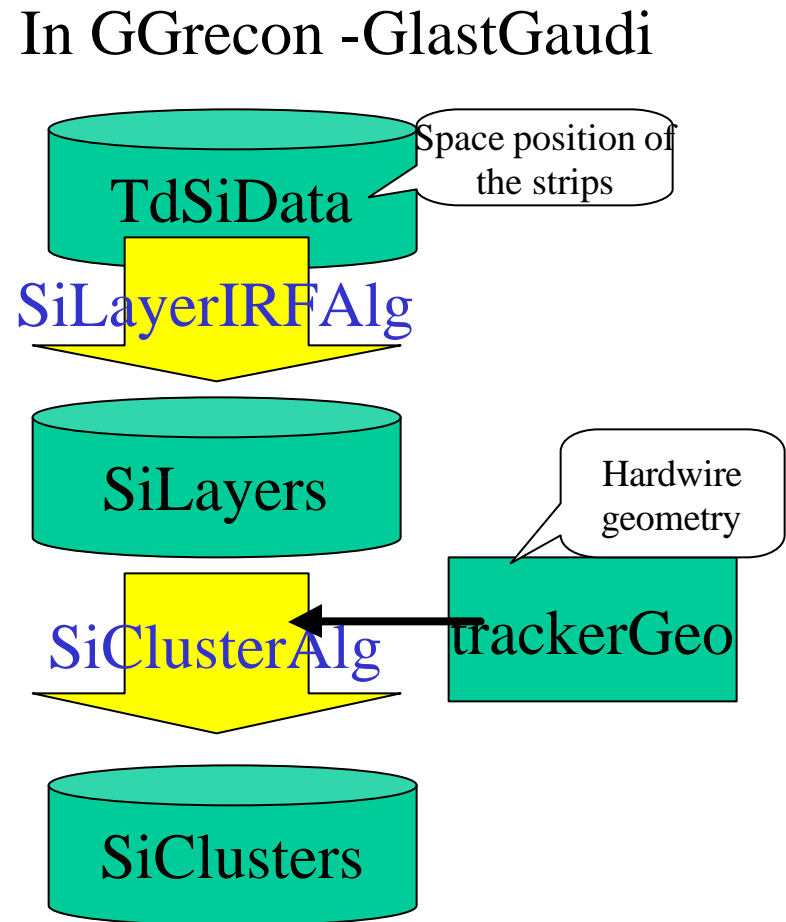
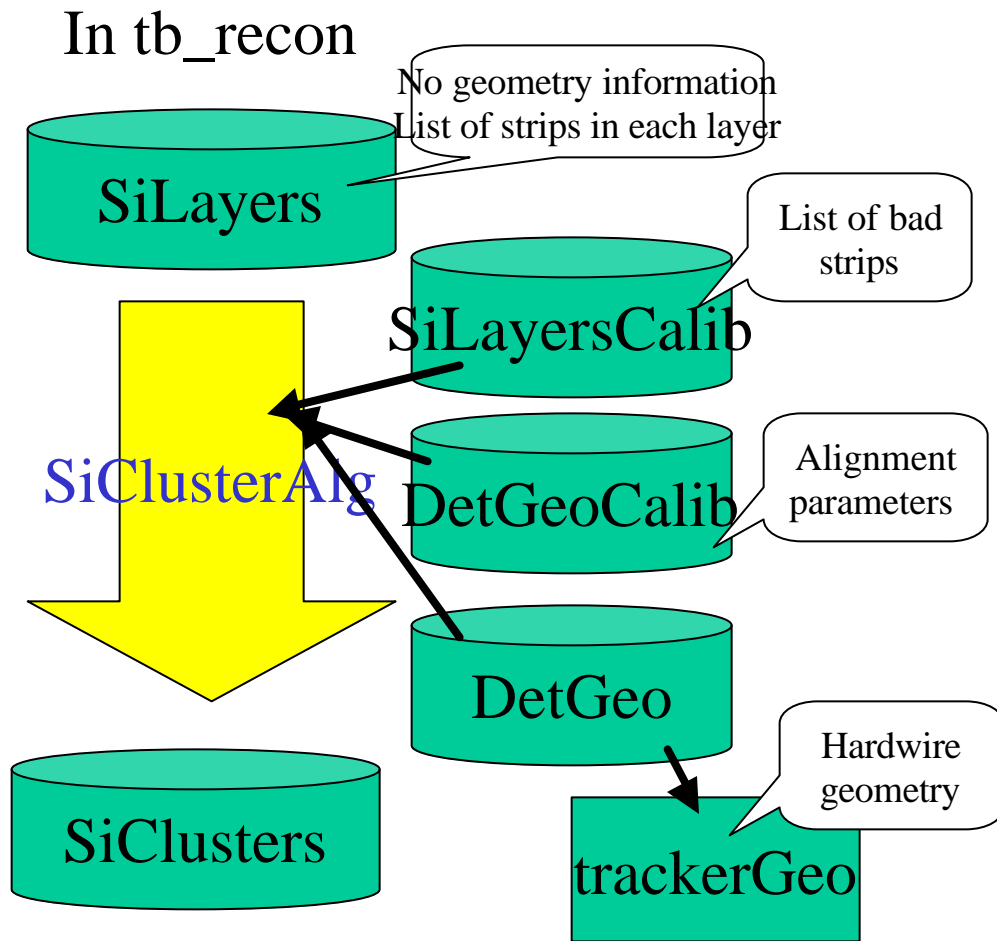
- 1) Last Tracker Reconstruction code available in GAUDI.
- 2) Recuperate the possibility of reconstruct the testbeam data
 - 2.1) cross check with previous studies
 - 2.2) useful for the balloon flight analysis.
- 3) IO ROOT of the test beam available in Gaudi
- 4) Extent as input to the tracker reconstruction IRF files
 - 4.1) possibility of reconstruction MC files (from GEANT or GLASTsim)

Method:

- 1) tb_recon was already structured into transient data classes and algorithms
- 2) Add TD and Algorithm into [TkrRecon](#) to perform the test beam TkrRecon.
- 3) Add a (temporally) a [TBIOROOT](#) package with algorithms to read/write TB ROOT Trees

GGRecon - GlastGaudiRecon - TkrRecon package





GGRecon - GlastGaudiRecon - TBIOROOT package

Idea:

1) As 1st Step use the ROOT Trees as algorithms:

Names: `rTreeRawServer`

`rTreeReconServ`

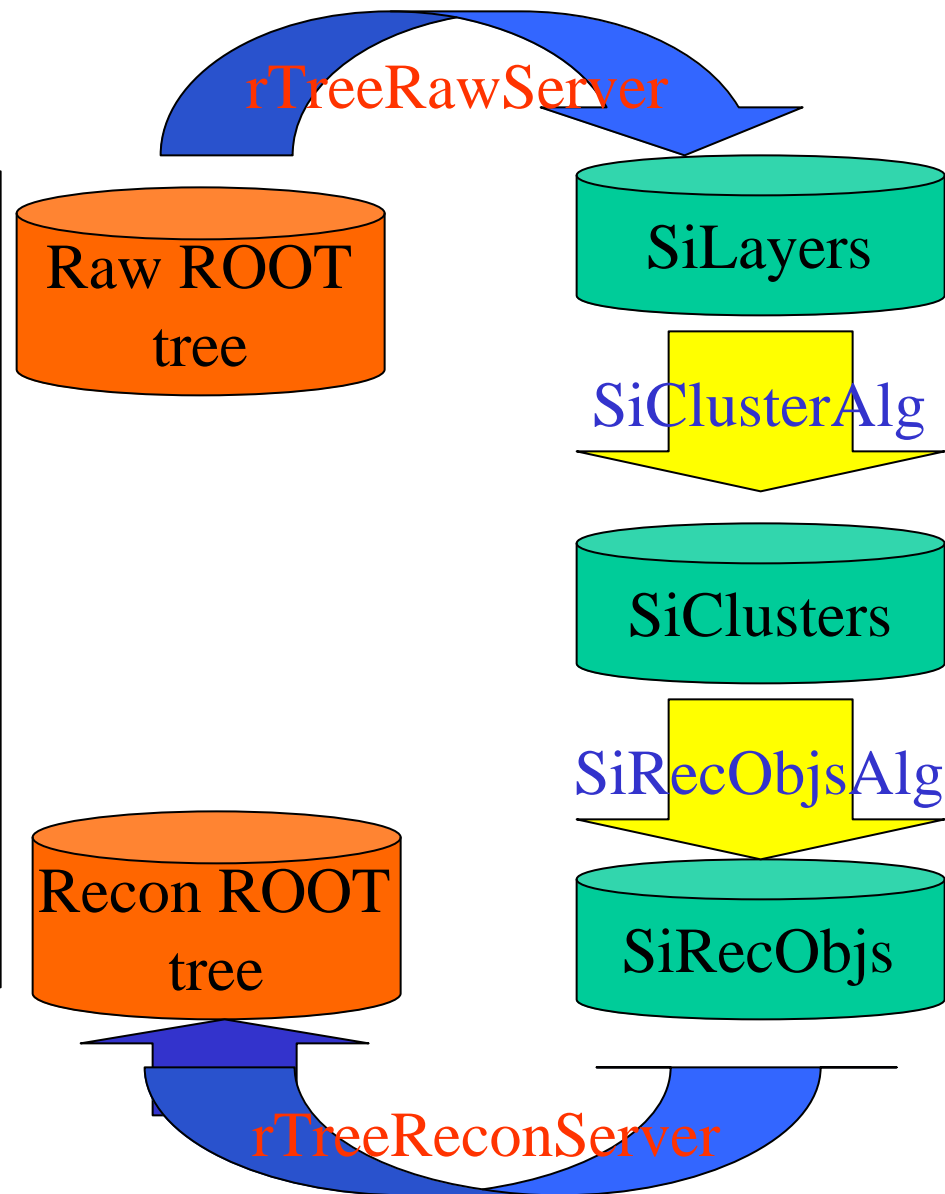
Methods:

`initialize()` { open ROOT Tree file }

`execute()` { read event, call converters }
 { call converter, write event }

`finalize()` { close ROOT Tree file }

2) We will refine later using the transient to persistency provided by GAUDI



What we have improved:

- 1) We can feed TdSiData into the tracker reconstruction flow used in the test beam
We can go from IRF files created in the *simulation to the reconstruction!*
- 2) We have the latest Tracker reconstruction, used in tb_recon, into GlastGaudi

What we have lost:

- 1) There is no geometry classes to ask for positions (hardwire for the moment)
- 2) There is no calibration data classes (List of bad strips, Alignment of the Si detectors)
- 3) The SiRecObjsAlg do not use any transient data from the CalRecon (*yet*)
- 6) We have lost (*temporally*) the possibility of print out the tracker classes information

But We already added:

- 1) the Event Display (DisplayRep class)
- 2) the ROOT IO TREES of the testbeam (IO for the testbeam)

We can go from ROOT (data/simulation) *to the reconstruction*

Plans for the next week:

- 1) **Check into the Repository TkrRecon and TBIOROOT packages**
- 2) *Try to reconstruct events* (we will try at least):
 - 1) from the testbeam (use IO ROOT)
 - 2) from the IRF files
- 3) We are trying to *define a tentative Interface* for the reconstruction classes