Software Update & Schedule

HPS Collaboration Meeting

June 18, 2014

Announcements

- DAQ and Software readiness review after coffee break.
  - Can't go over time this session.

- Software Work Days: Thursday (19th) and Friday (20th)
  - **F228 for morning sessions** (8am to noon)
  - **F226 for afternoons** (1pm to 5pm) of June 19th and 20th
  - Some participants have indicated what they would like to do. If you haven't yet, email me or Norman.
  - Yes, you can "just show up".
  - No formal presentations planned, this is one-on-one problem solving time.

Update

- Since the January Software Workshop:
  - A number of new people up to speed with the software.
  - Much better use of the JIRA tool.
  - Tasks completed:
    - ECAL Clustering using “Jlab” algorithm.
    - ECAL Single event display integrated with Monitoring App
    - Updated Monitoring App, strip chart option added, many other features.
    - ECAL Histograms for Monitoring App defined.
    - Conditions System implemented
    - Trigger code updated to reflect FPGA, tests started.
    - Tracking updates
    - DST/LCIO output debugging

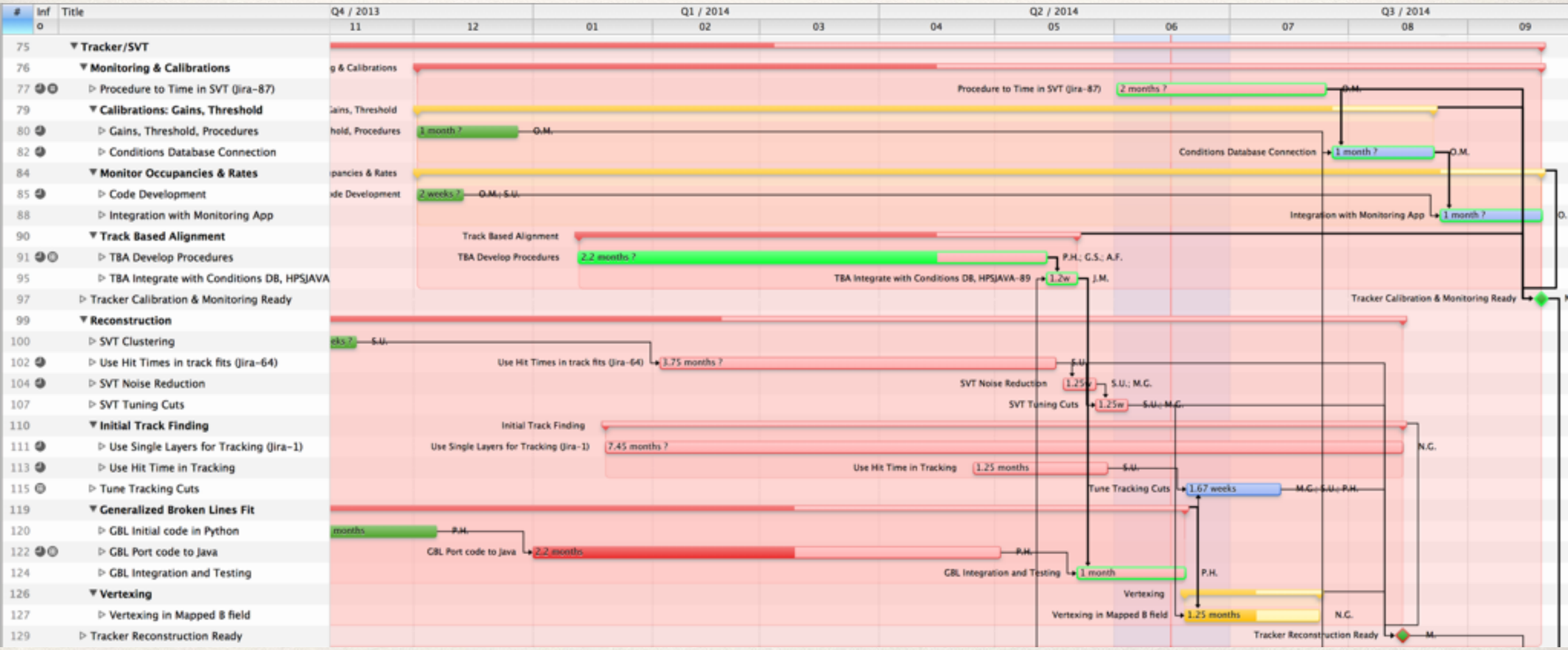
  - **So much is done, I probably failed to mention a bunch.**

Update 2 - Progress

- Tasks with lots of progress:
  - Determine the sampling fraction & cluster position dependence in ECAL
  - Cosmics calibration
  - Single beam energy e- calibration
  - Data Quality Monitoring
  - Mock Data Challenge
  - Alignment code
  - Trigger Studies
  - Full B-field integration
  - Conditions Database integration
  - Data Catalog
  - …
- Tasks that need attention:
  - ECAL Pi-0 calibration
  - ECAL Track based calibration
- Tasks upcoming:
  - SVT latency determination
  - Tracker monitoring update & single event display
  - Use timing in tracking, tuning tracking

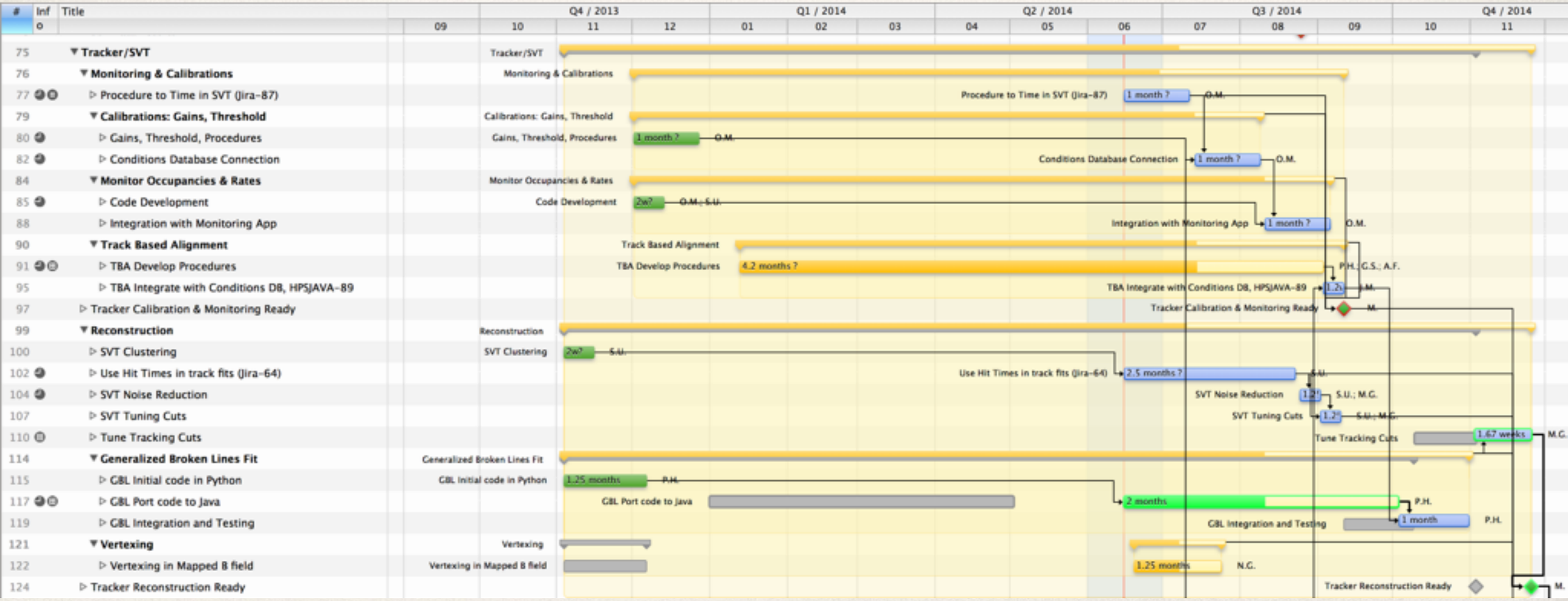
Tracker Schedule, previous

- Several tasks falling behind originally planned schedule.
  - Hardware development takes precedence, same people.
- Track finding using single layers is de-scoped, postponed for later.
  - Note essential, but would give small tracking efficiency improvement.
- GBL code is working in C++, port to Java is delayed.



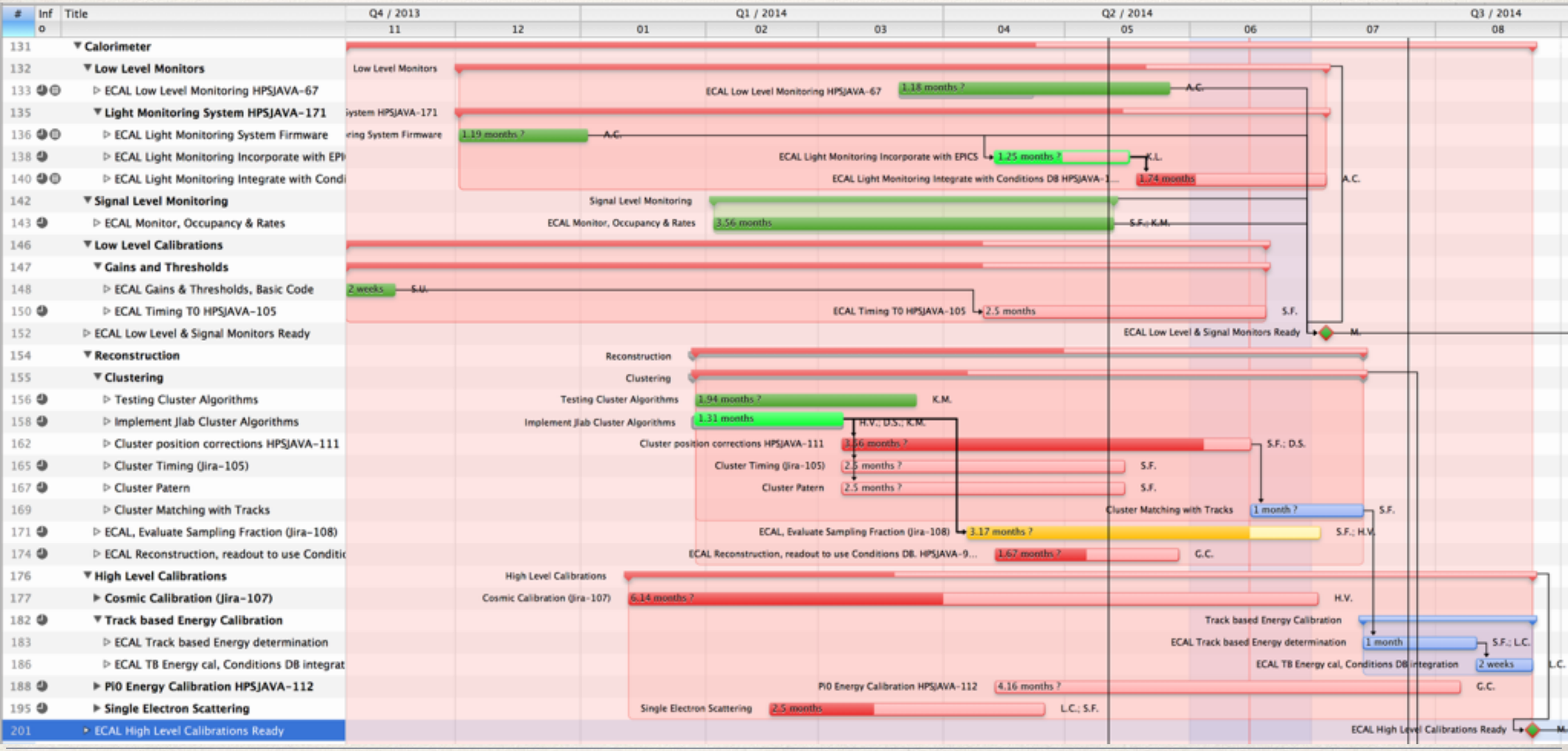
Tracker Schedule, updated

- Using hit times in tracking, GBL to Java, are delayed.
- Tracker calibration and monitoring ready stays at mid September.
- Tracker reconstruction ready moves from Sept 19 to November 25.
  - Biggest contribution to shift is GBL port.



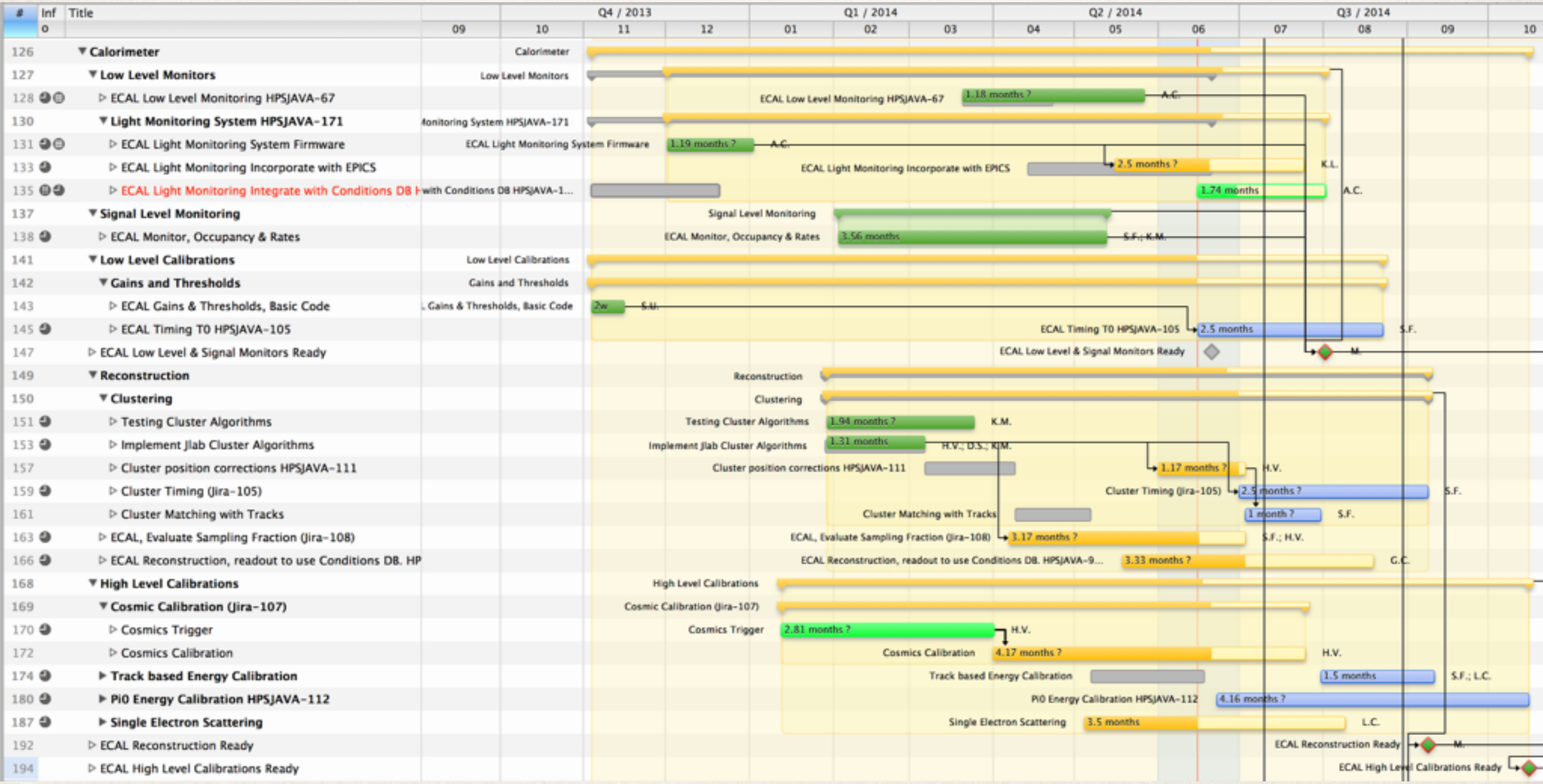
Calorimeter Schedule, original

- Schedule was too optimistic about completion dates for calibrations.
- January Software workshop got a number of new people up to speed.



Calorimeter Schedule, updated

- Several tasks take longer or are started later.
- Calorimeter software ready moves from Aug 25 to Oct 16th.



Accelerating the Schedule

- We can realistically do better on this schedule!
- Bottlenecks for readiness are:
  - GBL to Java port.
    - This is not essential for alignment, the C++ code works.
    - With some (real) effort, could be finished by early September.
  - Tracker alignment codes
    - We have a working system, but would like something better, easier to use.
    - Could be finished by early September.
  - Pi-0 & Tracking based calibration of Ecal.
    - We really do want this component.
    - It is not trivial, but development can be accelerated: finish early September.
    - Already, more people are contributing to this task.
    - We also have track based ECAL calibration.
- ➡ Software can be ready on October 1st.
  - And then we keep improving on it…

Conclusions

- The Software team is working quite well
  - Productive meetings, usually.
  - Lot of progress.
- We cannot let up on the pace yet
  - Lots more to do
  - A lot of desirable, but not critical, tasks

Please do:

- USE JIRA!!!
- COMMENT YOUR CODE!!!
- REPORT PROGRESS AT SOFTWARE MEETING!!!
- ASK QUESTIONS TO SOFTWARE LIST!!!

- And join us on Thursday and Friday for the software workshop.