

LArSoft Coordination Meeting

Release and project report

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Fermilab

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Today's agenda and speakers

- Release and project report (Erica)
- Updated Ar³⁹ decay spectrum (Jason Stock)
- Using new Geant4 features in LArG4 (Hans Wenzel)
- Simulation of optical boundaries in LArSoft (Diego Garcia-Gamez)
- Documentation templates for C++ files in LArSoft (Erica)
- Discussion of handling floating point exceptions in LArSoft (Herb Greenlee)
- AOB

Releases

- Last week
 - v06_41_00 released on June 22
 - Changes for dual-phase TPC raw hit finding
 - Updates to TrajCluster vertex and shower finding
 - See [the release notes](#) for details
- This week
 - Two merge requests

Genie and Geant4 migration

- Latest production Genie release:
 - 2.12.6 released May 23 (See <http://releases.genie-mc.org/>)
 - LArSoft needs this to address cling errors reported by a number of people
 - No physics changes that affect LArTPCs on top of 2.12.4...
...which we also never migrated to!
- Latest Geant4 release:
 - 10.3.p01a
 - Patch 01 of Geant4 10.3 + addition of optical code and changes needed for LArG4 re-factoring, as discussed at previous meetings

Both are in a LArSoft test release: **v06.38.00.01** from June 2

Propose adopting with July 10 LArSoft release

- Still need all experiments to sign-off

Geometry moving to larcorealg

- **larcorealg** is a new “shared” repository
 - Recall that “shared” repositories in the larsoftobj suite:
 - Do not depend on art framework
 - Have a minimum of other dependencies aside from fhicl, root, etc.
 - Ex: larcorealobj, lardataobj
- Plan to move **geometry service providers** to larcorealg:
 - Allows use of full geometry functionality within gallery jobs
 - This is why we created service providers (so can expect more in the future)
 - **This will be a breaking change** due to change of header locations
 - **No interface changes anticipated**
 - All that work has already occurred

Geometry moving to larcorealg

- The plan
 - Expect the work to take about a month
 - Work to be performed by Gianluca Petrillo
 - Will provide more details on the work and schedule as needed
 - Note: may not work out-of-the-box for all experiments due to detector-specific customizations
 - Will work with experiments to fix any problems

Comments, concerns? Email larsoft-team@fnal.gov

LArSoft Workshop close-out

- Had almost 30 people in the room + 15 on zoom at the start,
 - Sustained those numbers throughout the day
 - **Thank you everyone who attended / participated !!**
- Lots of good discussion
 - Multi-threading seemed particularly interesting to people
 - This and **all** of the others will be on-going topics of discussion, experimentation
- If you attended, please fill out the survey we sent
 - **These provide vital feedback** to make sure we have the information people want in a format that is well suited to their needs
 - May have supplementary sessions based on this feedback also
 - Have only received a couple so far

Announcements

- Change to git configuration
 - git push operations trigger garbage collection on central repositories
 - Goal is to have clean repositories, which significantly speed up git clone
 - Success!!
 - Cost is that git push operations are a bit slower
- No LArSoft integration release the week of July 4 (next week!!)
- The next LArSoft Coordination meeting is in 3 weeks, July 18

Status of on-going sub-projects

- LArG4 re-factoring project
 - No report this week
- CI system operations
 - Vito di Benedetto
- Usability: associations
 - Saba Sehrish
- Profiling and optimization project
 - No report this week
- LArSoft documentation
 - Katherine Lato

The end