# LArSoft Coordination Meeting

## *Release and project report*

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on behalf of
the SciSoft team
*Fermilab*

August 6, 2024

# Today's agenda and speakers

- Release and project report (Erica)

- Stand-alone Project.py in AL9 (Herb Greenlee)

- AOB

# Releases

- Since May 28 LCM

  - v09_90_02 released June 2

    - New features

      - Updates for building with Spack:  larevt#24, lardata#35, lardataalg#50, lardataobj#43, larcore#17, larcorealg#38, larcoreobj#20

      - larwirecell#45:  add components to read OpFlash

  - v08_05_00_24 released June 5:  MicroBooNE MCC9.1 production release

  - v10_00_00rc3 released June 6:  Bug fixes for geometry refactoring

  - v09_91_00 released June 17

    - Update to GENIE v3_04_02

# Releases

- ## Since May 28 LCM

  - v10_00_00rc4 released June 19:  Bug fix for geometry refactoring

  - v09_91_01 released June 26

    - **New features**
      - <u>larpandoracontent#65</u>:  Updates to allow for test beam reconstruction with only two views. Support greater configurability in cone algorithm. No changes to existing workflows.
      - <u>larreco#68</u>:  Reconcile Pandora PFParticle-to-T0 associations and GnocchiCalorimetry Track-to-T0 associations within GnocchiCalorimetry.
    - **Bug fixes**
      - <u>lareventdisplay#23</u>:  Add unit tests for ROOT class name parsing + fix name inconsistency rootmap file and the .so file.

# Releases

- Since May 28 LCM

    - v09_91_02 released July 10

        - Bug fixes
            - [LArSoft/lardataobj#44](#)
                - Move std::sort(...) to .cxx files and add missing include to fix GCC 14 complaints
            - [LArSoft/larbatch#26](#)
                - Add missing import in `larbatch_utilities.py` needed for project.py under AL9
            - larutils
                - add UPS_OVERRIDE to several build scripts

    - v09_91_03 released July 18
        - [LArSoft/larreco#69](#)
            - Reinstate default parameters in Gnocchi. Previous changes remain. See [release notes](#) for details.

# Status of PRs

- **Under discussion**
  - Linked PRs:  Add "ROISummedADC" and "HitSummedADC" to recob::Hit
    - [lardata#34](#)
    - [larreco#64](#)
    - [lardataobj#42](#)

    The pending objection to these have been resolved. Will merge into next release once potential memory growth issues are understood and addressed

  - larsim#140:  Add Penelope EM model to physics list in Legacy LArG4
    - Under review by Hans Wenzel

  - [larwirecel#44](#):  (opened Jan 17)
    - Enable multiple signal response simulation across YZ-plane

- **No approvals in progress**

# Status of coming updates <span>(updated since May 28, 2024 LCM)</span>

- **Geometry refactoring**

  - Current release candidate v10_00_00rc4 based on v09_90_00 + art 3.14.04
    - See last presentation on the new system at  [Feb 20 LCM](#)

  - Feature branches / PRs needed to update experiment code are available
    - See [Release and Project Report, page 6, at Dec 12 LCM](#) for v10_00_00rc0
    - Should work for v10_00_00rc4. If not, contact [scisoft-team@fnal.gov](mailto:scisoft-team@fnal.gov)

  - Requested sign-off from all experiments by March 12 (!!)
    - DUNE has been working on validation. **A number of issues found** / fixed

  - **Strongly recommend that other experiments perform validation!**
    - Otherwise, plan to deploy soon after completion of DUNE validation

# Status of coming updates (updated since May 28, 2024 LCM)

- **GENIE update to v3.04.02**
  - Completed with LArSoft v09_91_00 released on June 17

- **Geant4**

  - Plan to build LArSoft release candidate with Geant v4_11_2_p01
    - The most recent production version recommended by Geant4 group
  - Not yet scheduled

  - Will require experiment sign-off prior to migration

# Status of coming updates (updated since May 28, 2024 LCM)

- **Spack**
  - Current plan and status:
    - Enable LArSoft development using Spack
      - Work focused on the multi-product development (MPD) tools development under spack
    - Establish LArSoft release mechanisms, procedures, policies
      - Iterating on draft document now. Explains SciSoft / experiments division of labor
    - Migrate to Spack-based builds only
    - Until then: SL7 is now beyond EOL. All machines upgraded to AL9
      - Running / building LArSoft with legacy UPS requires SL7 run in a container.
      - See LArSoft wiki and your experiment documentation on working in containers
  - Have Spack builds of LArSoft v09.81.00 under AL9 and SL7
    - To set up in AL9
      ```
      source /cvmfs/larsoft.opensciencegrid.org/spack-packages/setup-env.sh
      spack load larsoft/e3ryycs
      ```
    - To set up in SL7:
      ```
      source /cvmfs/larsoft.opensciencegrid.org/spack-packages/setup-env.sh
      spack load larsoft/2vibnrv
      ```

The end