

# LArSoft Coordination Meeting

*Release and project report*

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February 13, 2018

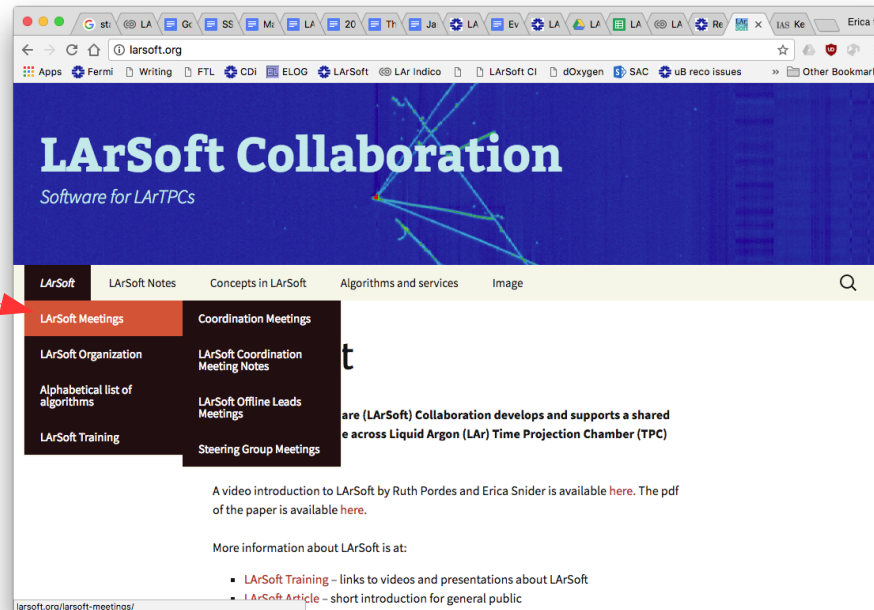
# Today's agenda and speakers

- Release and project report (Erica)
- Using proxies to assess associated data (Giuseppe Cerati)
- SVM-based track/shower identification (Lorena Escudero)
- AOB

# Announcements

- LArSoft Coordination Meeting minutes
  - We post meeting minutes to the respective indico agenda page
  - Received a request to consolidate access to the minutes
  - Will start posting links to minutes on <https://larsoft.org/mt-notes/>
    - As of Jan 16, 2018 meeting

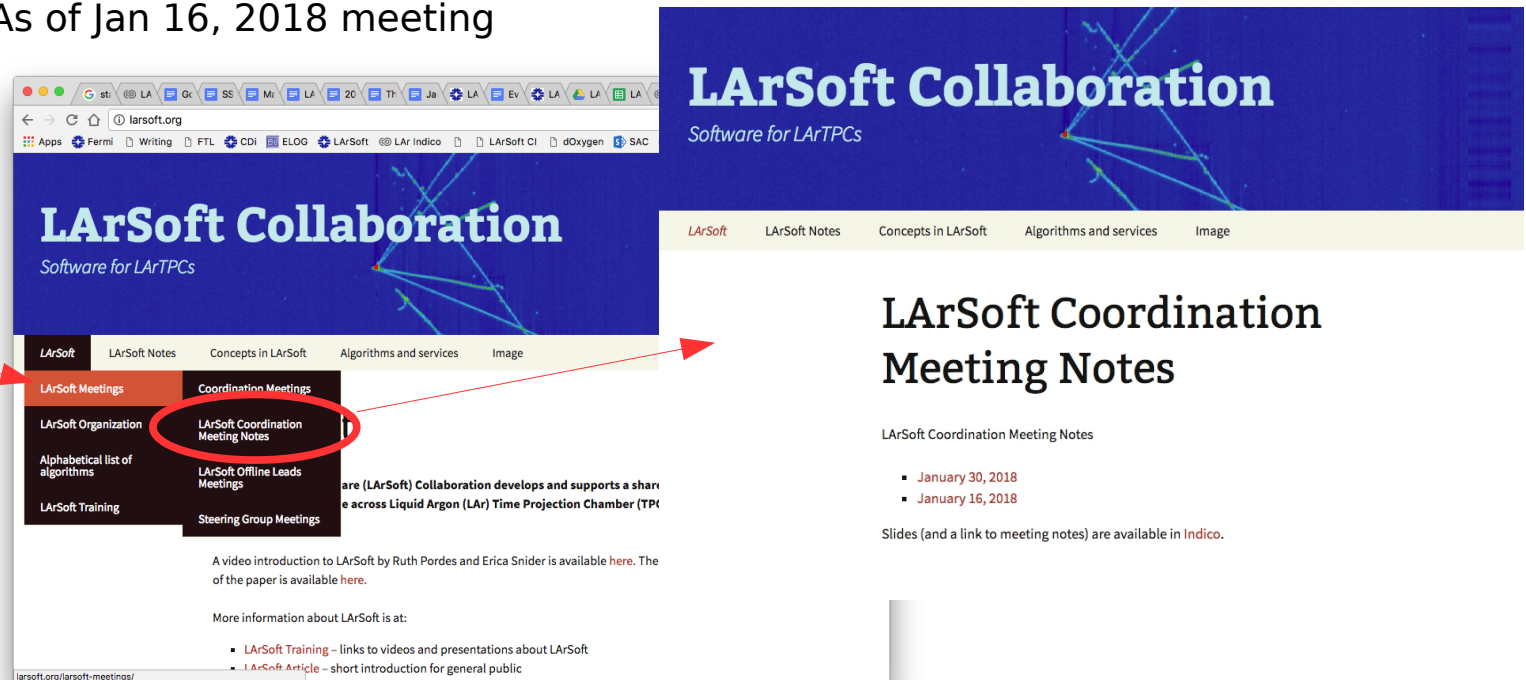
Under “LArSoft”



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The screenshot shows the LArSoft Collaboration website. The main header is "LArSoft Collaboration" with the tagline "Software for LArTPCs". Below the header is a navigation bar with links: LArSoft, LArSoft Notes, Concepts in LArSoft, Algorithms and services, and Image. A red arrow points to the "LArSoft" link in the navigation bar, which has opened a dropdown menu. In this menu, the "LArSoft Coordination Meeting Notes" link is circled in red. Another red arrow points from this circled link to the right, where a separate view of the "LArSoft Coordination Meeting Notes" page is shown. This page lists two meeting dates: January 30, 2018, and January 16, 2018. Below the dates, it states: "Slides (and a link to meeting notes) are available in Indico."

# Releases

- Last week
  - v06\_67\_01 released on Feb 7
    - New ifdhc (v2\_3\_1) to address a build problem under Mac OSX
      - A bug report against v2\_3\_1 has been logged, so may change again...
    - New version of nutools (v2\_17\_03)
    - New “FindManyInChainP” feature (to be discussed a few slides from now)
  
- This week
  - One merge request pending:
    - Resolves issue 18943 - aggregate() function missing from sumdata::RunData
  - A new version of nutools driven by NOvA is coming
    - Will have direct integration of dk2nu generator (ie, similar to that of Genie)
    - No other impact on LArSoft
    - May not be ready for this week's release

# Geant4

- New version of Geant4 is available: 10.4 released Dec 8, 2017
  - LArSoft currently using v4\_10\_3\_p01b
  - v4\_10\_3\_p03 is also available
- Release notes:
  - <http://geant4.web.cern.ch/geant4/support/ReleaseNotes4.10.4.html>
  - Lots of changes, but not clear of the relevance for LAr TPC simulation
- As usual, will require sign-off from all experiments to migrate
  - Now seeking feedback from experiments
  - Should we migrate? If so, when?
  - Might want to migrate to v4\_10\_3\_p03 first? Instead?

## art 2.10 migration

- Per plan, migrated to e15 with v06\_67\_00
- Now working on migration of the product stack for e15, art 2.10
- No ETA at present
- Initial estimate was two to four weeks
  - Will be closer to the long end of that estimate

# Finding missing libraries

- New script to find libraries needed to resolve linking problem
  - `find_global_symbol.sh` in `larutil`
  - Use in response to errors such as “undefined reference to .....”
  - Can work with mangled or demangled symbol names
  - A number of command line options available
- See documentation on LArSoft wiki (under “Developing with LArSoft”)
  - [https://cdcv.sfnal.gov/redmine/projects/larsoft/wiki/Using\\_find\\_global\\_symbolsh\\_to\\_find\\_unresolved\\_symbols](https://cdcv.sfnal.gov/redmine/projects/larsoft/wiki/Using_find_global_symbolsh_to_find_unresolved_symbols)  
(direct link)

Contributed by Robert Hatcher



# Following association chains

- New class available to assist with following chained art::Assns
  - For example:
    - Can find the hits associated to a PFParticle, or a recob::Track
    - Does not require explicitly unwinding all the intervening layers of Assn's
- The code
  - `lar::FindManyInChainP`
  - Lives in `lardata/Utilities/FindManyInChainP.h`
  - **Does not work in gallery** environment
  - Documented in Doxygen:
    - [http://nusoft.fnal.gov/larsoft/doxsvn/html/classlar\\_1\\_1FindManyInChainP.html](http://nusoft.fnal.gov/larsoft/doxsvn/html/classlar_1_1FindManyInChainP.html)

Contributed by Gianluca Petrillo

The end