

# LArSoft Coordination Meeting

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# Today's agenda and speakers

- Releases and project report (Erica)
- Laser data object (Wes Ketchum for Christoph von Rohr)
- Status of architecture work (Erica for Gianluca Petrillo)
- Space charge distortion map update (Michael Mooney)
- Electric field non-uniformities (Tyler Alion)
- Updates to TrackKalman3DHit and related algorithms (Herb Greenlee)
- AOB

# Announcements

- Please use the LArForum: <http://www.larforum.org/forum/>
- cvmfs
  - The oasis instance of cvmfs is going offline permanently TODAY!!
    - /cvmfs/oasis.opensciencegrid.org/fermilab/products/larsoft
    - May already be gone...
  - New path
    - /cvmfs/fermilab.opensciencegrid.org/products/larsoft
    - Will need to change anything that refers to file paths on cvmfs
  - No changes needed to local client configuration

Should have already received email notifications about all this

# Releases

- Released v04\_20\_00 last week
  - Production release for DUNE / 35T MCC
  - Uses new version of art: v1.15.02
    - Incorporates changes needed by LArIAT
- This week
  - Plan only for normal weekly integration release based on changes approved today

# Status of on-going sub-projects

- Architecture report (Gianluca)
- LArLite integration project
- Profiling and optimization project
- CI system upgrade project
- Common document repository

# Short reports

- LArSoft / LArLite integration project

Leaders: Chris Jones and Marc Paterno

- Work has resumed
- Recall: initial report issued
  - Posted to June 30, 2015 LArSoft Coordination Meeting indico page: <https://indico.fnal.gov/conferenceDisplay.py?confId=10108>
  - Included a list of recommendations for art, LArSoft and LArLite
- Current effort (Dave Dagenhart)
  - Document possible solutions to implement the recommendations
  - Work being carried out by Dave Dagenhart

# Short reports

- Profiling and optimization

Leader: Jim Kowalkowski

- Evaluate the use of GEANT4 in LArSoft using LARIAT simulation as a model
  - 1) physics lists
  - 2) geometry use and energy deposition
  - 3) stepping and other GEANT4 parameters
  - 4) code speed
  - 5) upstream detector integration (if time)
- Held a kick-off meeting yesterday (Aug 24)
  - Plan is to devote 40 to 60 hours over the course of four weeks
  - Final report due Sept 21
  - Work to be carried out by Krzysztof Genser and Hans Wenzel

First recommendation:

- G4 team **strongly recommends** migrating to GEANT4 **v4.10.1p02** ASAP
- Suggest doing this **before optimization work begins**
- Currently at v4.9.6, which has inferior low energy physics, among other things

Comments??

# Short reports

- CI system upgrade and operations

Vito di Benedetto

- CI system interface improvements continue under a new phase of work
- Targeted at implementing features and improvements identified during the v2 CI upgrade project
- A number of new commands and features already available
  - Vito will present these at an upcoming LArSoft Coordination Meeting

- Common document repository

- Have initiated contact with INSPIRE support
  - Will be meeting with them within the next week
- Expect progress in time for the next meeting

The end