Automated Installation

- LArSoft **1.00.02** built from **worch** on RACF. Release notes: https://cdcvs.fnal.gov/redmine/projects/lbne-software/wiki/Larsoft-10002_build-2
- Can be tried elsewhere. Instructions: https://cdcvs.fnal.gov/redmine/projects/lbne-software/wiki/Software_Installation_From_Source
- Will attempt to forward-port this to newer releases but given the historical moving target of the Fermilab scripts I will not push on this much.

```
$ source /afs/rhic.bnl.gov/lbne/software/products/setups
$ setup larsoft v1_00_02 -q e4:prof
```

Exercise binary UPS product tarball installation on RACF

- Use binary scripts to provide more recent **larsoft** on RACF (SL6.4)
- **Larsoft 1.00.05** and **1.00.07** (driven partly by μboone)
- Method found to be mostly trivial.
  - Problems with unpacking git tarball due to hard links on AFS. Manual fix easy if annoying to do. Lynn has fixed latest but I've not tested.
  - Lack of version symbols in libcrypto causing run-time warnings due to Fermilab linking against different versions. Warnings are expected to be harmless. RACF will likely fix at next planned upgrade.
  - Missing `lsb_release` needed by Fermilab prerequisite scripts not installed on RACF. Can hack script to still run the check. (script checks for devel packages, not run time packages which is weird, but whatevs). RACF will add this next upgrade cycle.

UPS-free Installation

- Ben Morgan and I proposed to prototype an upgrade to the **art**/larsoft CMake build system which is free of UPS encumbrances.
- This approach was agreed to by **art** and **larsoft** team members.
- I made a UPS-free, **worch**-based config for externals.
- Ben has started UPS-free `CMakeLists.txt` files for **art** packages, lowest level "cpp0x" package is done and working.
- Currently externals+cpp0x builds with **worch** and is UPS-free.
- UPS can still be layered on top to allow Fermilab to keep their approach.

In order to make this effort more efficient, and because it is a prototype, work is being done in a GitHub group:

group: `https://github.com/lbne`

config: `https://github.com/LBNE/lbne-build`

first package: `https://github.com/LBNE/fnal-cpp0x`