

# binary file to ART Root

21-Nov-2012, Eric Church, Yale

# strategy

- Need to get binary data output from DAQ into LArSoft ART Root format.
- We once talked about the DAQ producing ART Root data out of the box. This requires more artdaq:: code and overhead that brings
- Alternatively - the solution we'd been leaning toward lately - is writing out the data and sucking it up later in another process and swizzling it to ART Root at that point.

# LArSoft

- It turns out there is a LArSoft module `RawData` that handles precisely this.
- ArgoNeut swizzles their data just this way. Their input binary data are simple, unserialized version-less structures...that are cut and pasted into this module.
- We instead will include the relevant DAQ `projects/datatypes/*.h` files.

# LArSoft cont'd

- The job will run one simple module and dump out RawDigits, the first module in the LArSoft chain.
- It uses Huffman decompress code, if necessary first.
- Jonathan Asaadi is on board for this work.

# Complications

- The complication is that LArSoft is now coupled to the DAQ code.
- Should we have our own LArSoft install on the DAQ machines?
- Should we have a MicroBooNE LArSoft install?
- speed?

# First steps

- To start, Jonathan will merely use the dev LArSoft release and drag over the needed .h files from the DAQ into his usual LArSoft test area and build there.
- We're close to being ready to hand him a serialized binary data file.
- It will be easy to show that this works (or doesn't)