Overarching Analysis strategies, light detection systems and external detectors (Topic III)

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Topic includes …

- Strategies, (large-scale to individual events)
- Other detectors, (cosmic ray taggers etc.)
- Data and Dataset management
- Meta-data management
- Analysis techniques
- Analysis toolkits
- Analysis workflows
- Real-time/Data Acquisition

Guidelines

- Reminder:
  - Our goal is to collect information that will be used to fill in the section for topic III.
  - Under our topic are subsections with clusters of requirements.
- Keep in mind …
  - The primary roles: Algorithm developer, tester / validator, and data analyst.
  - That open discussion about this topic is most important
  - Refinement will be an ongoing project
- Timeline:
  - Discuss use cases and scenarios. (1 hour)
  - Move from use cases to requirement statements. (1 hours)
- Notes for running a session are here
  - https://cdcvs.fnal.gov/redmine/projects/lartpc-requirements/wiki/General_session_instructions

Already identified requirement areas

- Data collection system
- Calibration
- Purity analysis
- Design studies

We can start with issues of …

- What is expected of the “DAQ event”? (The starting point)
- How will ancillary data be acquired, processed, and used?
- What are some of the expected “workflows” between online filtering / analysis, offline production stages, and analysis?
- How will improvements be fed back to improve production processing stages?
- What attributes must be available between stages and how are they used?
- Is there a useful hierarchy of data product contains that can be defined? (LarSoft art has a fixed hierarchy)
- Are there important interactions between program configuration and overall job / campaign configuration that should be considered?
- What processing algorithm and ancillary data must be available at the analysis stages?

Identified use cases to discuss

- B.5.2 Use Case: Fast monitoring of detector and electronics characteristics
- B.5.3 Use Case: Comparisons using different MC techniques against the detector data
- B.5.4 Use Case: Analysis and characterization of detector, electronics and read-out conditions
- B.7.3 Use cases: Deconvolution of space charge
- B.10.3 Input to the Future – discuss various things in this list.