

EUDAQ

Latest Changes in EUDAQ

Emlyn Corrin, University of Geneva



Outline

- Recent Changes
 - RawDataEvent
 - DataConverterPlugin
 - Mimoso26 Readout
- Future Improvements
 - Synchronization: Better Event Merging



RawDataEvent

- Users no longer need to define their own Event class
- RawDataEvent provides a container for arbitrary blocks of bytes, labelled with a type
- One less step for full integration into DAQ



DataConverterPlugin

- Provides a way to convert from RawDataEvent into either:
 - StandardEvent, for online monitoring
 - LCIO, for offline analysis
- Allows users to easily benefit from online monitoring and analysis, keeping their custom code in one location



PluginManager

- Takes care of converting raw events from the telescope+DUT into more understandable StandardEvent / LCIO
- Uses the RawDataEvent's type to find the corresponding DataConverterPlugins for each part of the data



Mimosa26 Readout

- Different EUDRB firmware
 - Changes to Producer
- Different Raw Data Format
 - Changes to Converter Plugin
- Binary Pixels (hit/not hit)
 - Changes to Monitoring



Synchronization

- Occasionally Producers are seeing triggers with TLU event numbers of 0
- Sometimes these replace another number
 - e.g. 101, 102, 0, 104, 105
 - Should be investigated, but doesn't cause problems
- Other times they are extra events
 - e.g. 101, 102, 0, 103, 104
 - Due to simplistic event merging, things get out of sync
- DataCollector needs to take TLU event numbers into account when merging events.

