

ePIC Electronics and DAQ WG Meeting

1. Introduction, news, & recent activities/progress
2. Timing measurements – William Gu (Jlab)
3. AOB / Planning Discussion

Relevant Reviews / Meetings

- RHIC Run is over early (relevant for me and Jin, and others)
 - Done for this year but planned to start again at start of January
 - STAR operations moving to shutdown activities, sPHENIX commissioning activity ongoing throughout (at least) August
- August 29-30 – EIC Detector Comprehensive Design Review
- August 28,31 – DAC Review of detector R&D
- Sept 4th, Labor day
- Sept 20-22 – In person software and computing (UIC)
 - <https://indico.bnl.gov/event/20159>
- October 10-13 – SRO XI (Hawaii)
 - <https://indico.bnl.gov/event/20010/>
 - Jo Schambach, overview of ePIC DAQ
- October 10-12 – EIC CD-3A Director's Review (BNL)
- October 19-20 – ePIC Software and Computing Model Review
- November (???) – EIC CD-3A Independent Cost Review
- November 14-16 – EIC CD-3A OPA Independent Project Review (BNL)
- December (week of 4th)– Computing Model presentation to EIC Resource and Review Board

Recent Progress, Activity and Plan Forward

- Channel / RDO / Fiber / DAM document always being updated
 - https://www.dropbox.com/sh/5oeo78o10ddlr4l/AACiMn27CUxjdvLbqX__3BrYa?dl=0&preview=Channels.230823.pdf
- Data Volumes, Backgrounds, Radiation
 - Background group has been very active
 - Thresholds are being cleared up
 - Active component hit definitions (e.g. the mapping of incident particles to the light in a scintillating fiber)
 - Channel thresholds (e.g. the threshold applied to a channel in a calorimeter which might be a sum of multiple SiPM readouts)
 - Incident particle thresholds (e.g. the clustering definition of a hit in the same calorimeter)
 - The software group/background group is clarifying the definitions and implementation of these... as well as planning how to get quick feedback from detector experts and quick implementation.
 - expected to impact (at least) synchrotron radiation results
 - Once these are defined need to bring this to the level of ASIC/Channel/RDO
- Lots of discussion and clarification regarding the ASICs – in particular HGCROC & EICROC variants
- Lots of discussion and clarification regarding the readout chains for various detectors
- Timing group
 - Devkits distributed to ORNL, BNL, JLAB
 - FELIX boards finally being shipped (many issues with the purchase between JLAB/BNL + illness)
 - First results today from William
- Will need to incorporate timing results & plans for integration of DAQ to:
 - Define our fiber protocol
 - Begin coming up with the detailed requirement documents for GTU & RDO
- Need to make sure this is all documented and complete
 - Design and costing reviews
 - Need to start making concrete progress towards TDR next year