

ICARUS Operations Report

Proton PMG

October 3rd, 2024

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MAGING

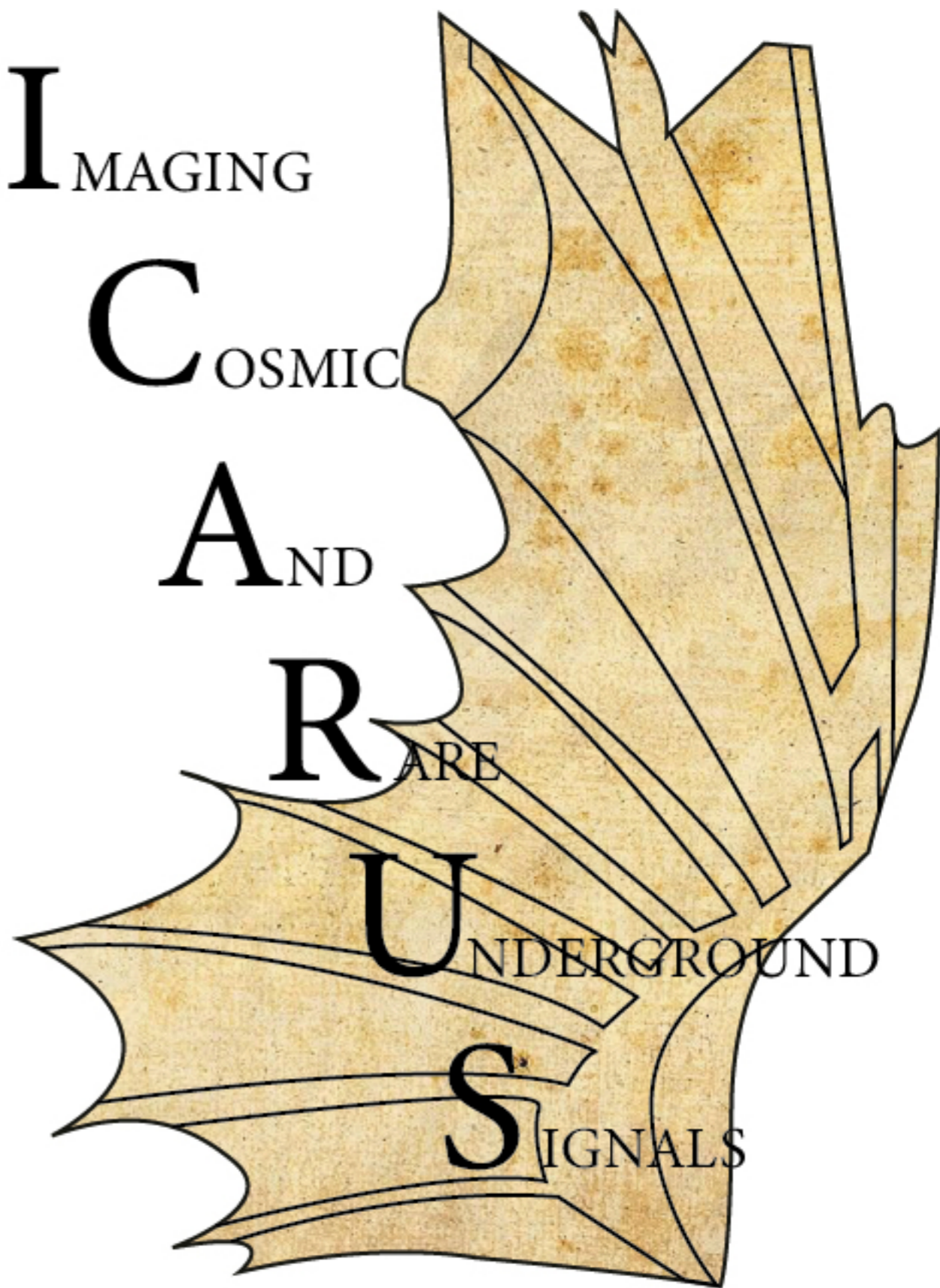
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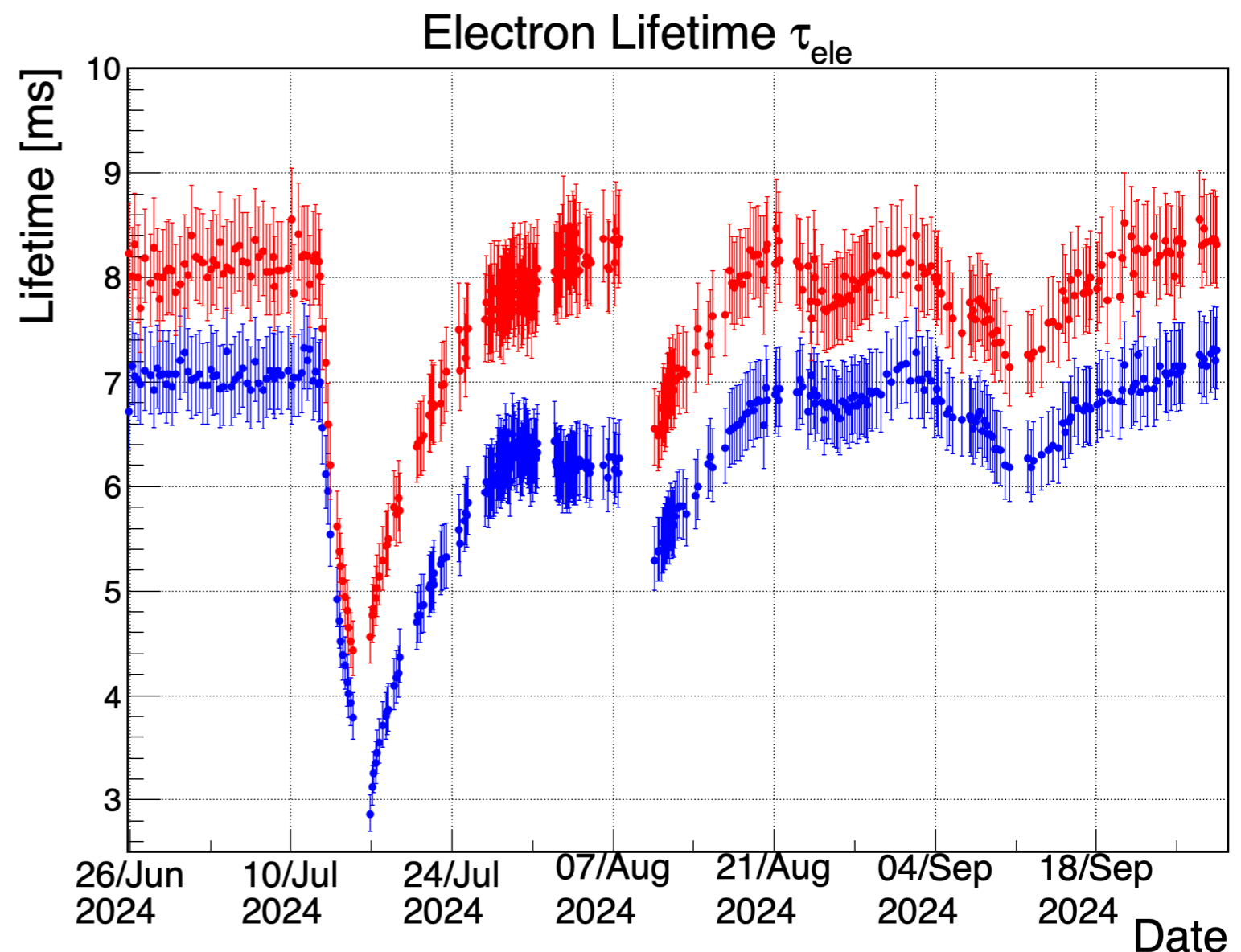
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Summer Shutdown Activity

Power Outage Management

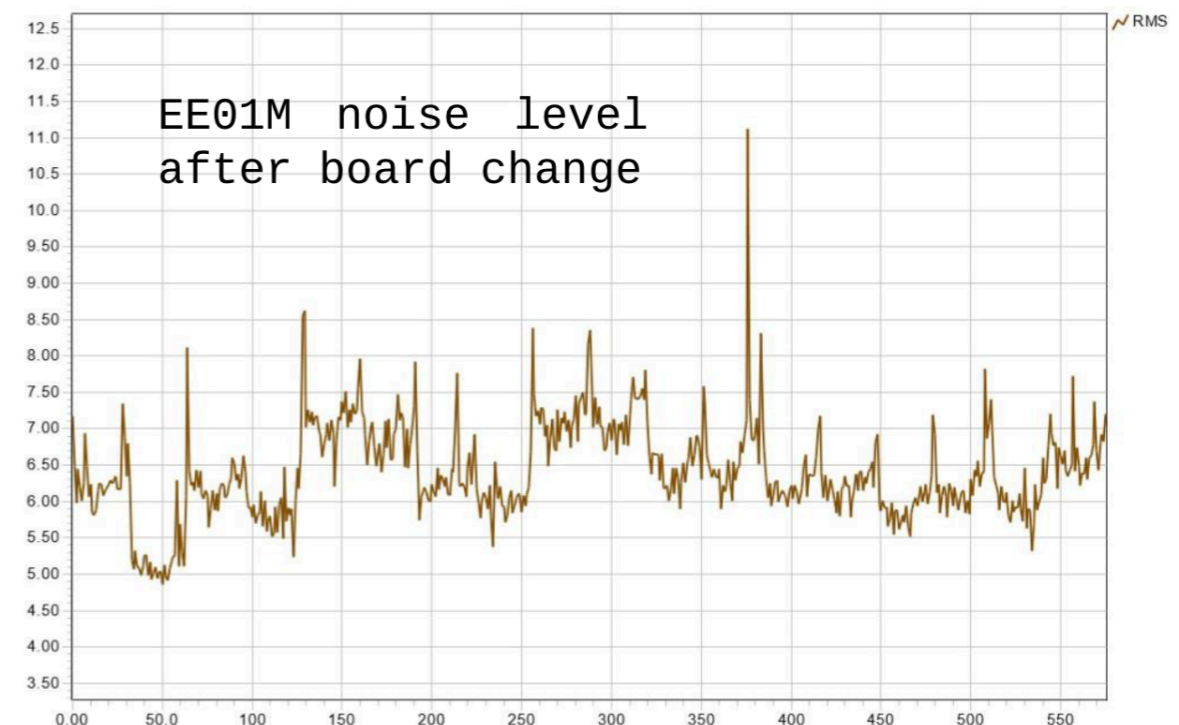
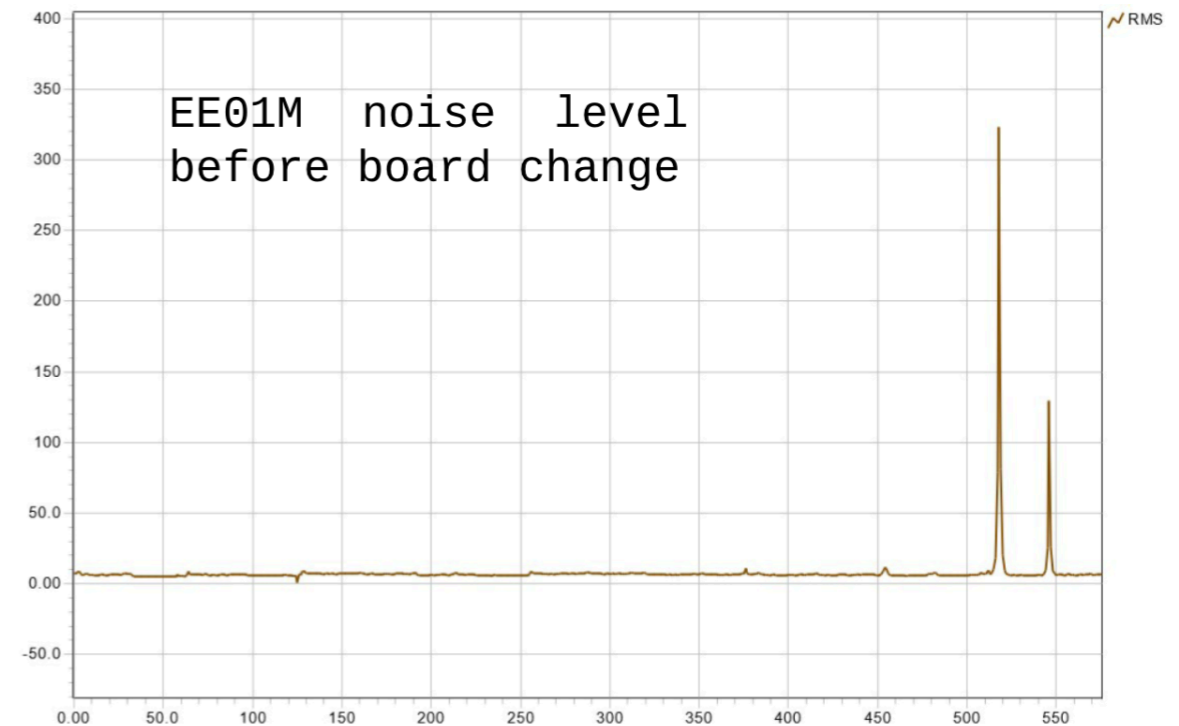
- Had several power outages since our last meeting
- Our argon purity has recovered and the electron lifetime is now higher than it was at the beginning of the summer
- 8.31 ms in the West
- 7.30 ms in the East



Summer Shutdown Activity

TPC Maintenance

- In August experts performed preventative maintenance on our TPC hardware
- We were able to identify several TPC boards which were producing excessive noise
- These boards were replaced and have significantly improved our electronics readout
- More maintenance is expected this month



Summer Shutdown Activity

PMT Recabling

- We have worked to symmetrize our PMT readout system
- Changed the PPS distribution lines
 - Reduced the delays between the East and West PMTs from 30 ns to 0.2 ns
- Modified our server layout to symmetrize the East/West distribution across 4 PMT servers as opposed to mixing East/West PMTs across 3 servers

Summer Shutdown Activity

AL9 Upgrades

- **PMT – DONE**
 - Servers fully migrated
- **Side/Top CRT – ALMOST DONE**
 - Side/Top CRT servers updated today/yesterday
- **TPC – ALMOST DONE**
 - Verified our TPC system functions on AL9 with one server
 - Need time to upgrade the other servers
- **Eventbuilders – In Process**
 - Using an SL7 container for FTS
 - Debugging some remaining issues
- **Trigger – In Process**
 - Ready for testing
- **Bottom CRT – To Be Tested**
 - Currently not planned for transition
- **Dispatcher/DQM – Delayed**
 - Transition is still planned in the future, but is complicated by incompatibilities with Spack

Summer Shutdown Activity

Planned for the Rest of the Summer

- Finish the planned AL9 upgrades
- More TPC electronics maintenance
- Trigger studies to understand some timing issues
- Make sure the detector is in a stable state before the return of beam