

LArIAT

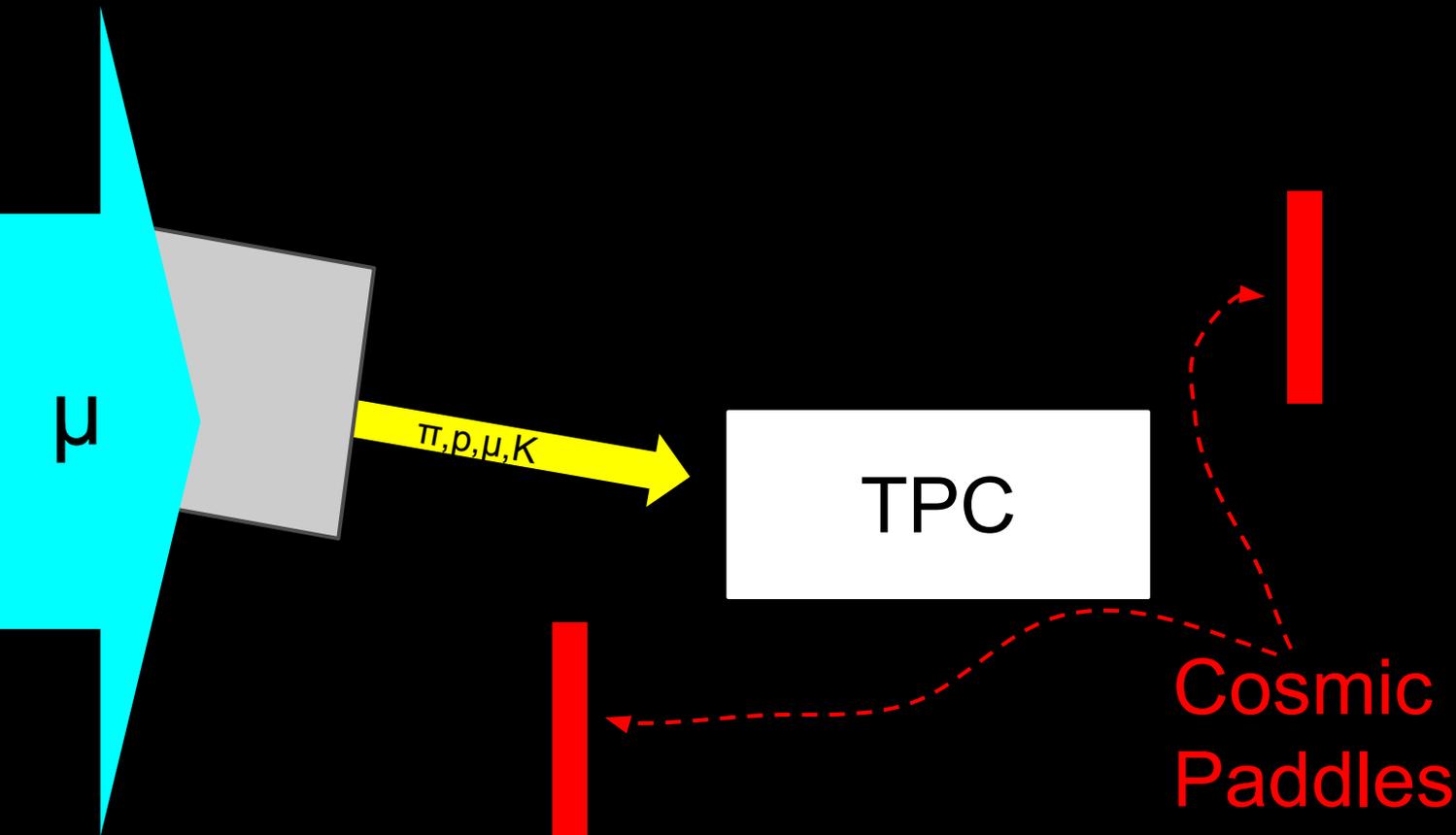
Liquid In A Testbeam

Jason St. John for the T-1034 Collaboration
All Experimenters' Meeting
2015.06.22

The past week

Beam tuning improvements 06/12

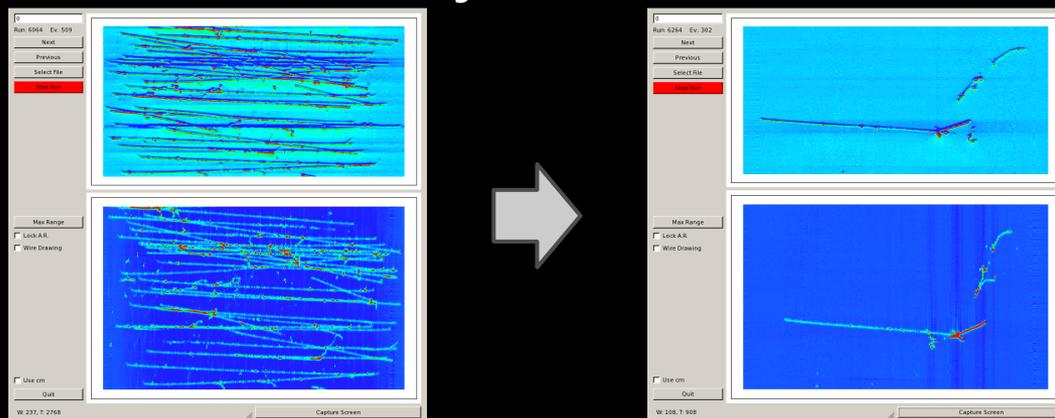
- Halo muons from primary beam hugely reduced. (Accidental cosmic coincidence)



The past week

Beam tuning improvements 06/12

- Halo muons from primary beam hugely reduced. (Accidental cosmic coincidence)
- Trigger count doubled $\sim 8-10$
- TPC Track occupancy better than ever before ($\sim 2-4$ tracks/trigger)
- This is scientifically awesome.



The past week

LArIAT and the Rain of Problems

Saturday midday - Sunday midday:

- Cryo controls crate i/o failed
 - Lost readout of temperatures, N₂, and the PLC of the LAr level interlock → Cathode OFF!
 - Multiple resets attempted
 - Power cycle created havoc with LAr valves, but we recovered.
 - Decided to run with interlock jumpered out (shorted) and paranoid, hyper-attentive shifters

The past week

LArIAT and the Rain of Problems

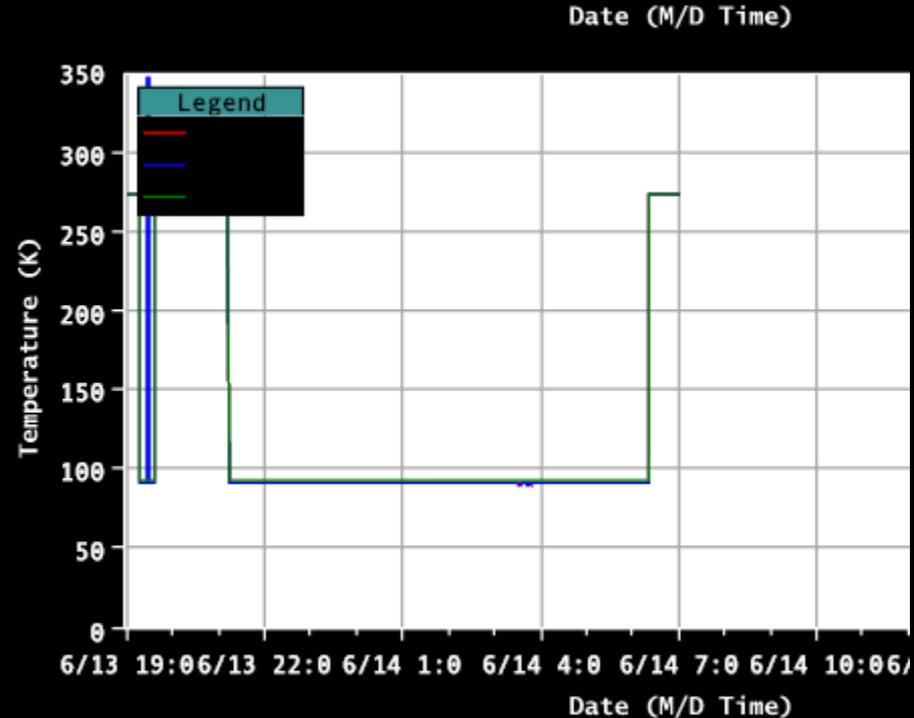
Saturday midday - Sunday midday:

Temperatures (K)

T (top) (E:TE214A): 273.000 K

T (center) (E:TE212A): 273.000 K

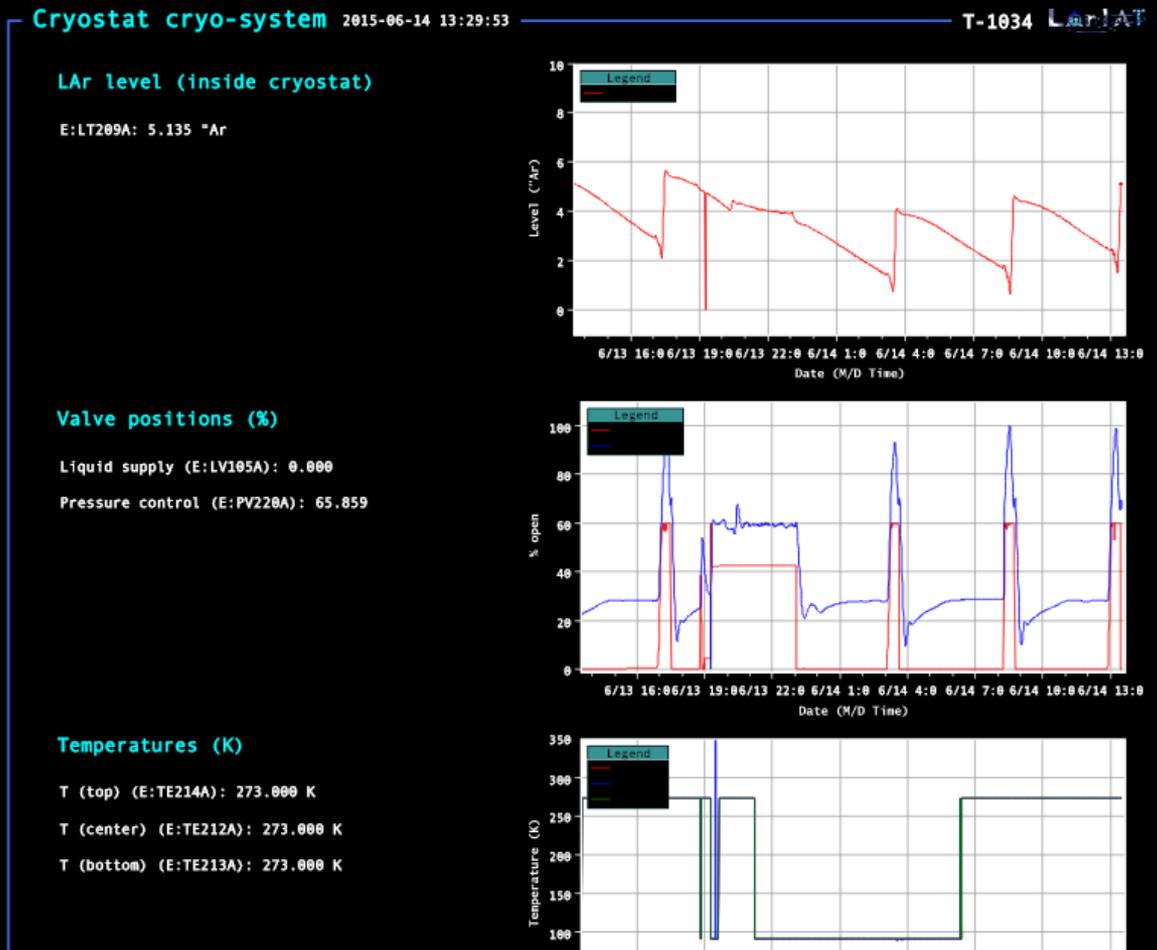
T (bottom) (E:TE213A): 273.000 K



The past week

LArIAT and the Rain of Problems

Saturday midday - Sunday midday:



The past week

LArIAT and the Rain of Problems Part II

Monday

- Cryo controls rack shut off
 - Lost readout of temperatures, N₂, and the PLC of the LAr level interlock → Cathode OFF!
 - Rain leaked under walls, flooded floor, condensed onto A/C ducts, dripped onto Uninterruptible Power Supply. UPS killed the rack it's supposed to support!
 - removed dead UPS
 - Regained readings, cryo valves reset, reset PLC.

The past week

LArIAT and the Rain of Problems

Spoiler:

Cryo controls now has a 24/7 emergency expert.

We are working with FESS

We have a rain shield on the UPC



The data are back to awesome

