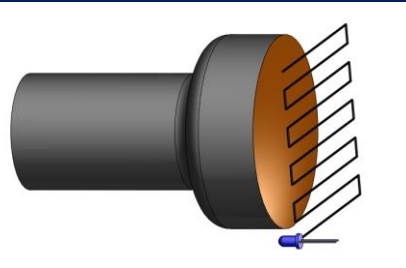
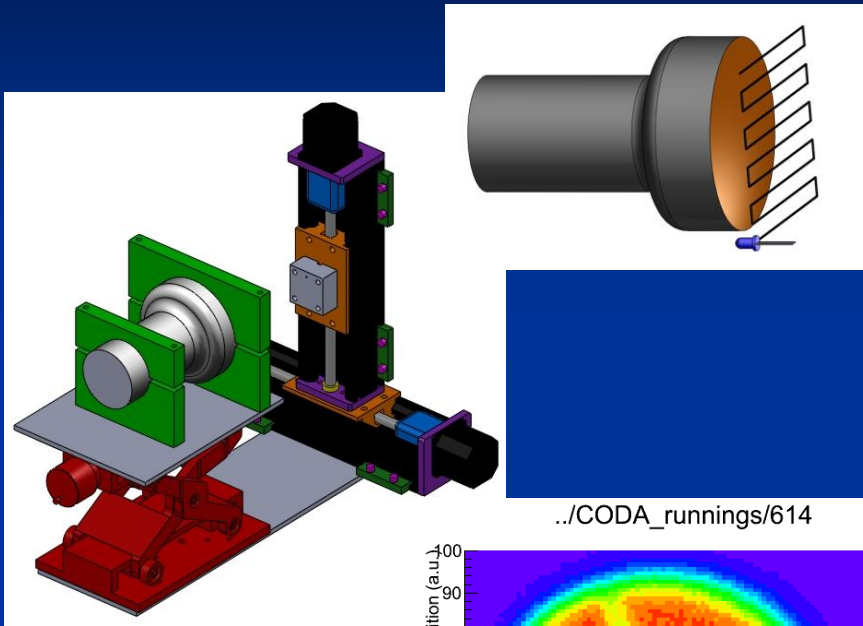
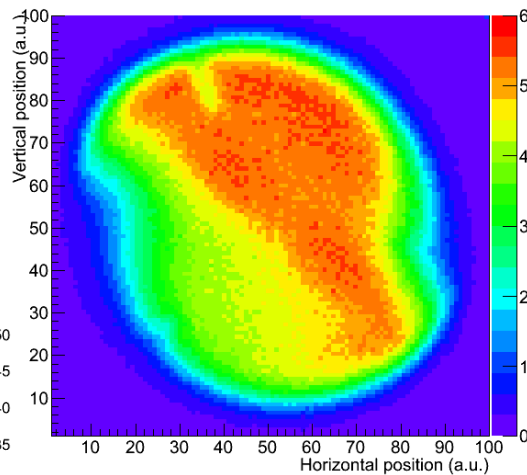


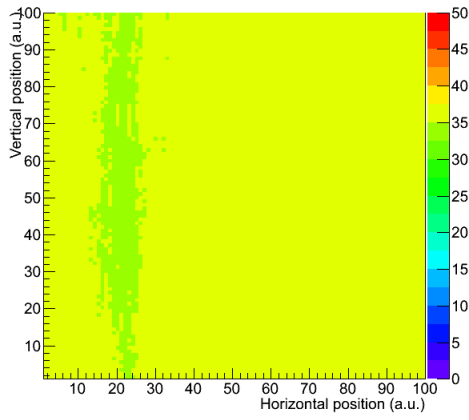
# PMT Uniformity Scanning



../CODA\_runnings/614



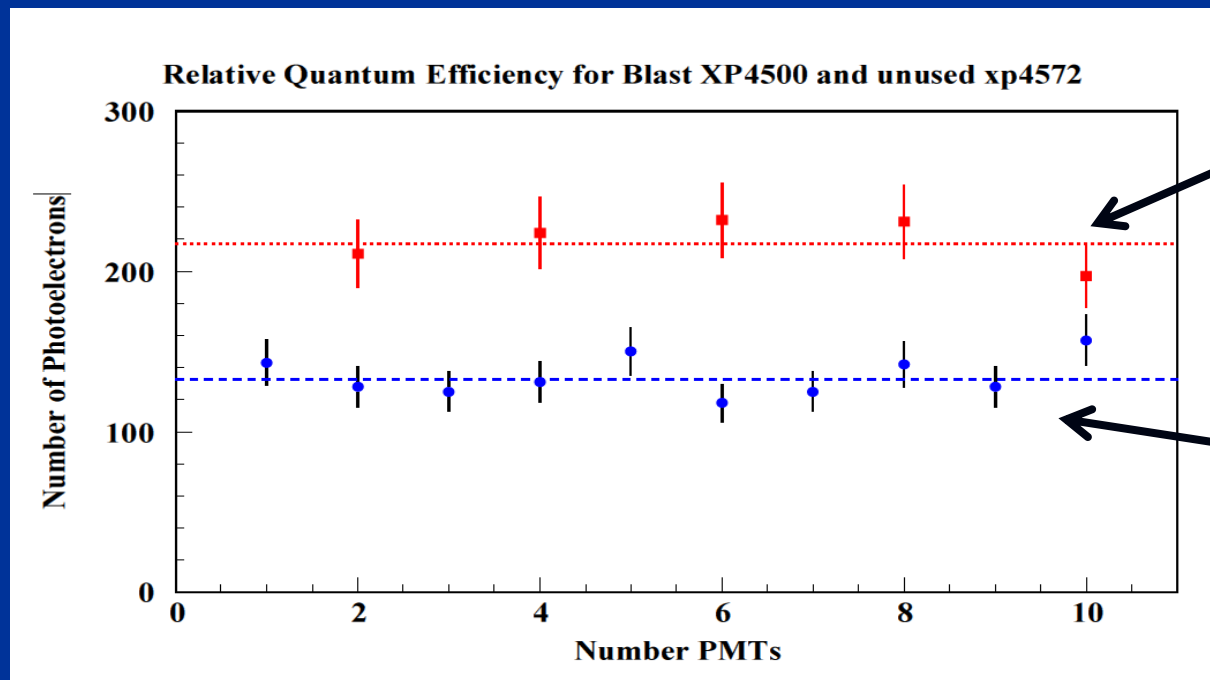
../CODA\_runnings/613



- Stepper motor scanned PMT window with blue LED.
- Showed PMT window uniformity.
  - Apparent irregularity is a feature of the PMT geometry, i.e., the first stage dynode.
- Thanks to Dr. Segal (JLab) for stepper motor.
- Reference PMT used to verify constant light intensity from LED

# Quantum Efficiency Puzzle

- Yerevan Group has made relative tests at JLab with BLAST PMTs to be used in aerogel detector and HMS spare PMTs.
- QE of BLAST tubes consistently  $\sim 40\%$  smaller.



Spare HMS PMTs  
randomly selected

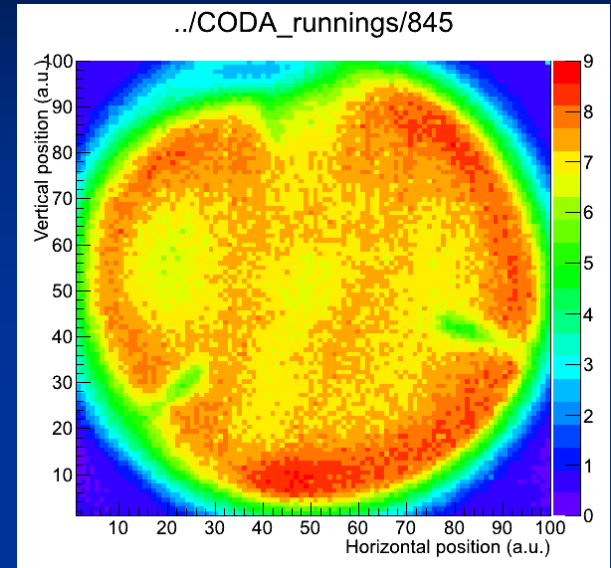
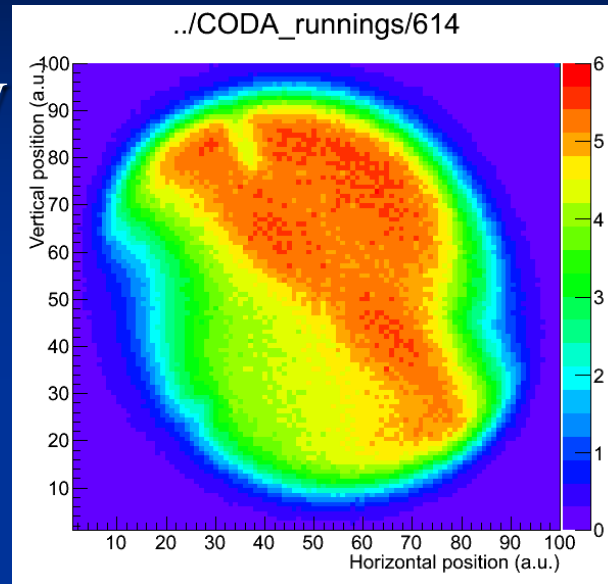
BLAST PMTs

# Puzzle Solutions

BLAST

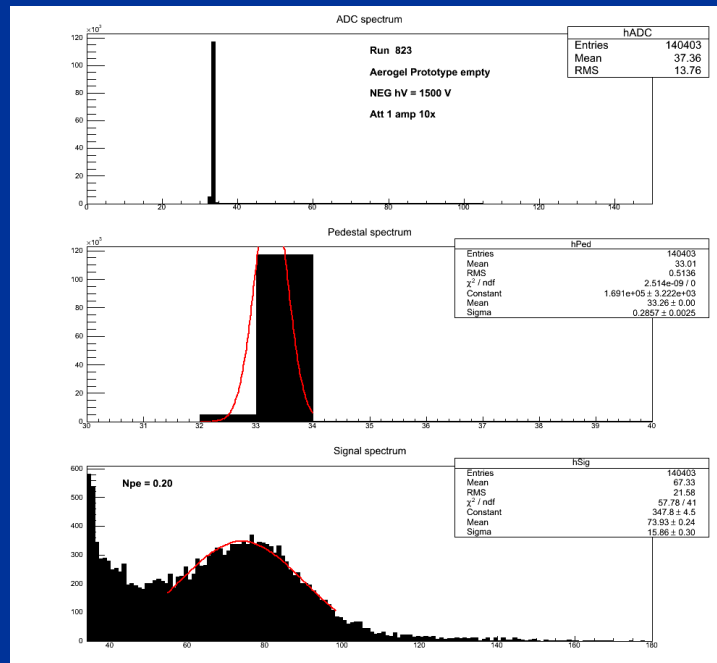
HMS

- HMS Tubes specially designed for higher quantum efficiency, better uniformity.

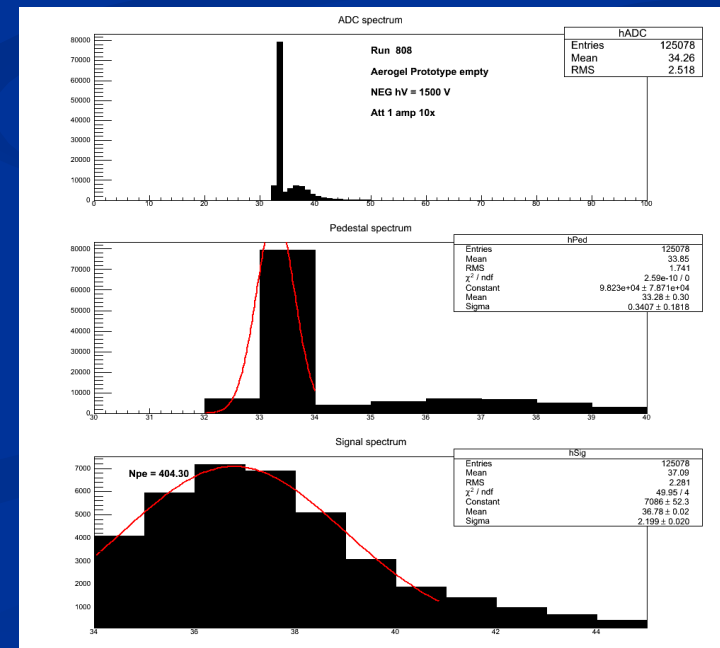


VS.

- However, BLAST tubes seem to have consistently higher gain.

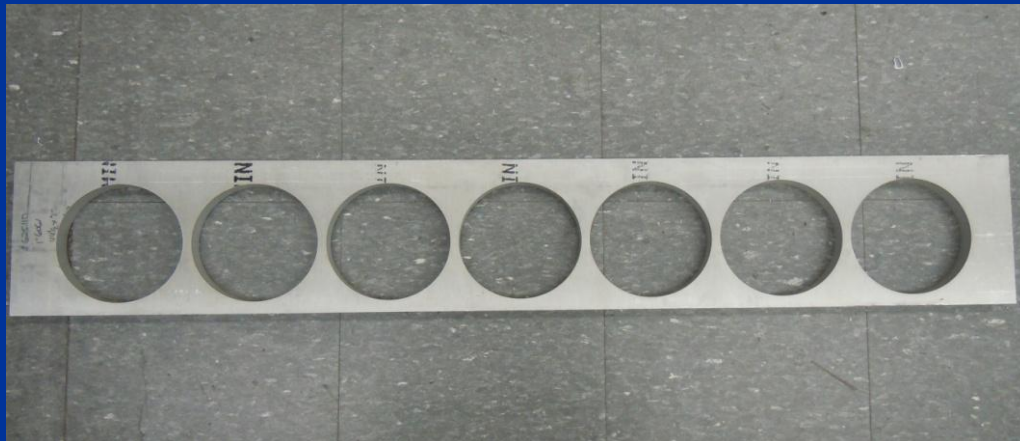


VS.





# Detector Construction



- Detector Construction has been completed by VSL at CUA.
- Dry assembly completed