



# APEX preparation

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# Overview

Learning Hall A analyzer through old APEX and newer tritium scripts

- Understanding process of analyzer, including tracking and PID w.r.t. various detectors
- Producing 'online' plots through tritium replay scripts and manipulating their output

# HRS layout overview

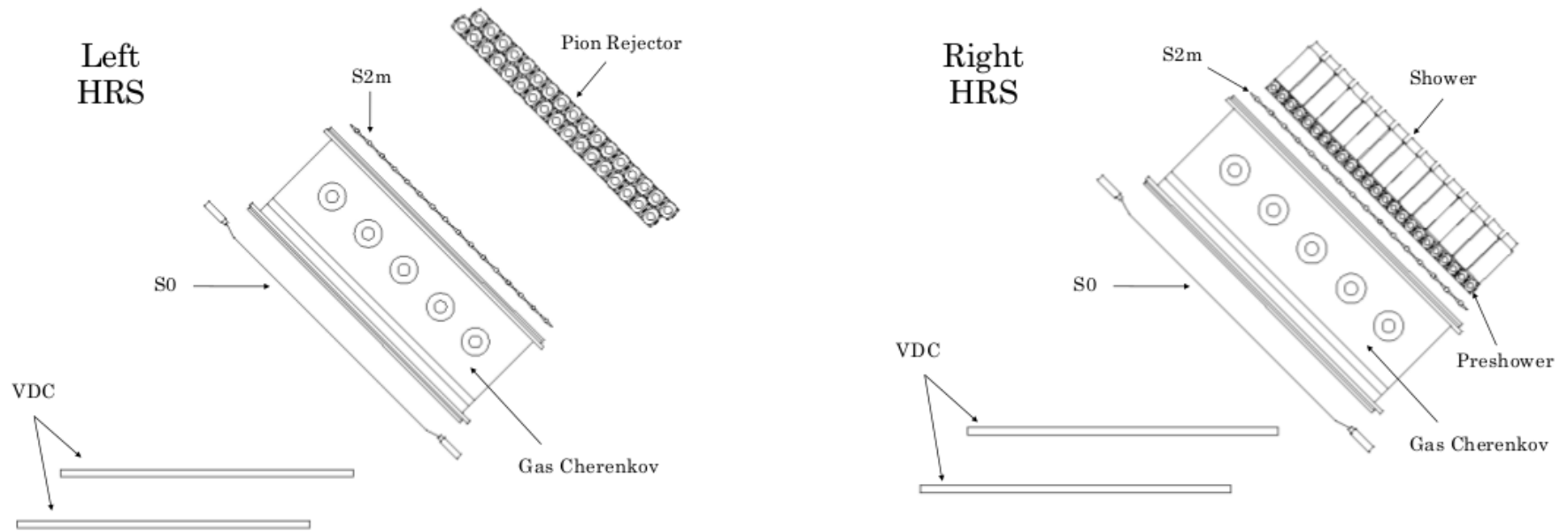
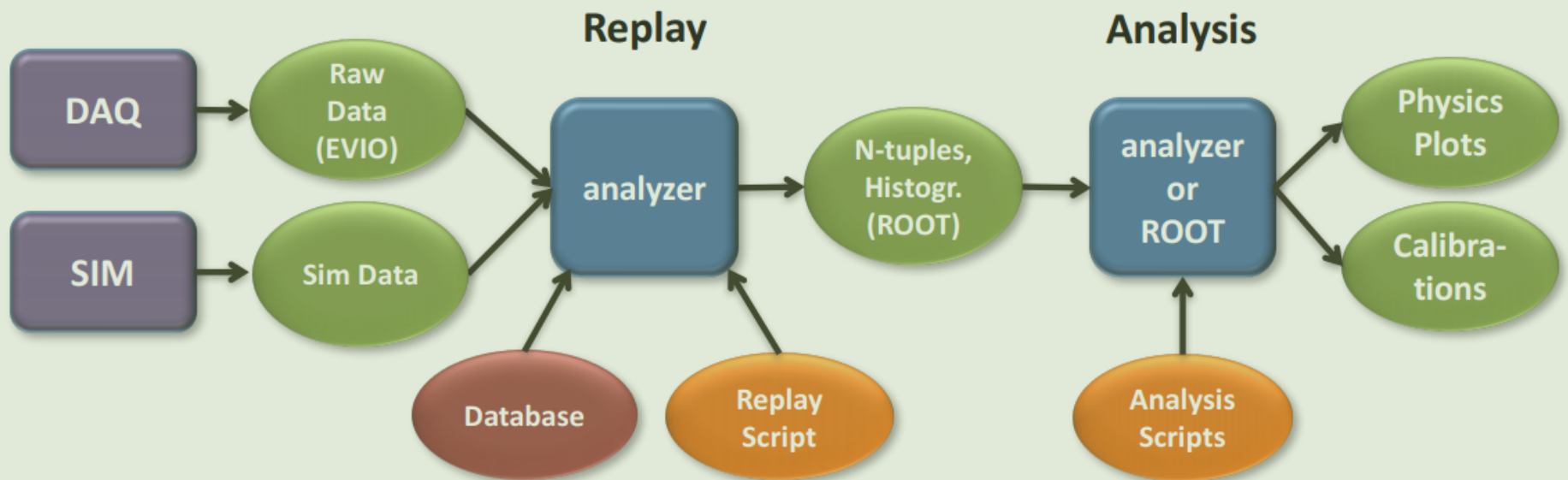


Figure 12: Sideview of detector stack for the left and right HRS. Individual elements of the detector system are indicated in the configuration used for APEX. The position of the data-acquisition (DAQ) electronics and of the VDC support frame are not shown.

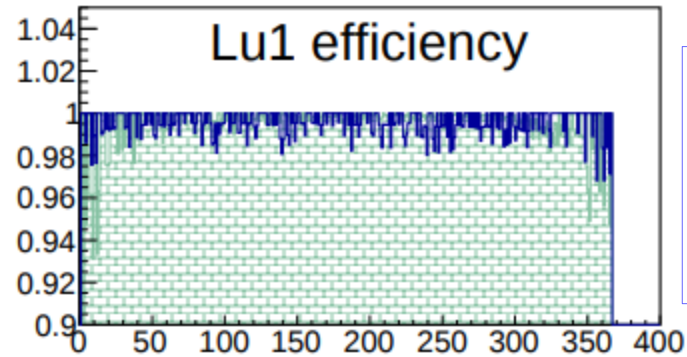
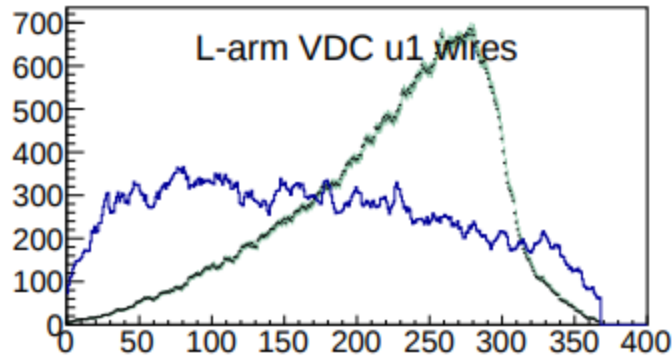
# Hall A Analyzer overview



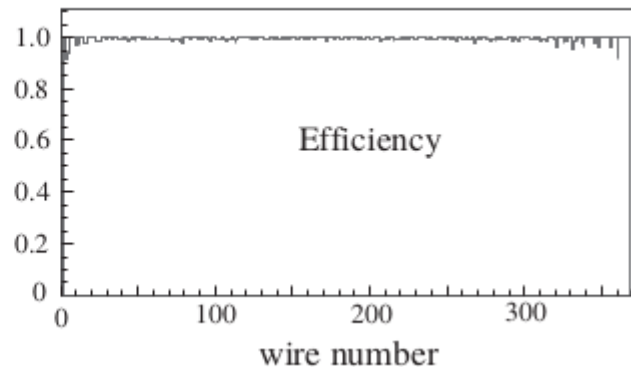
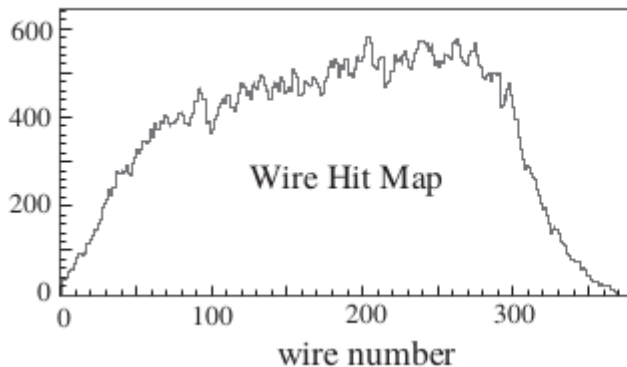
- Following online plots produced by scripts which initiate analyzer and display or create and display (analysis) output histograms

# Online replay plots

Produced during experimental run with 50k events to continuously check various detector components against 'golden run'



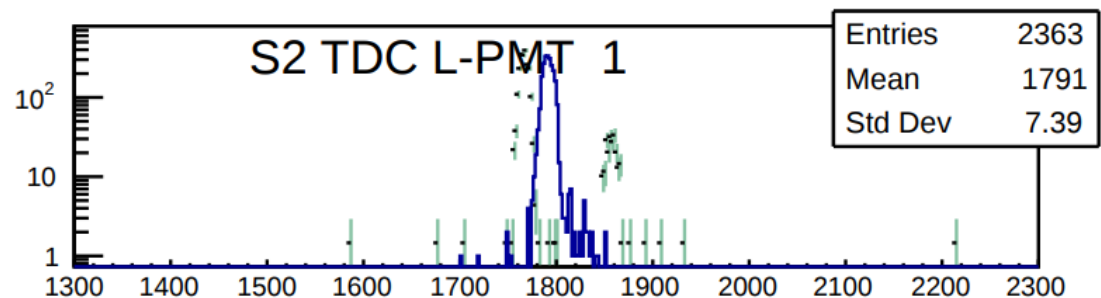
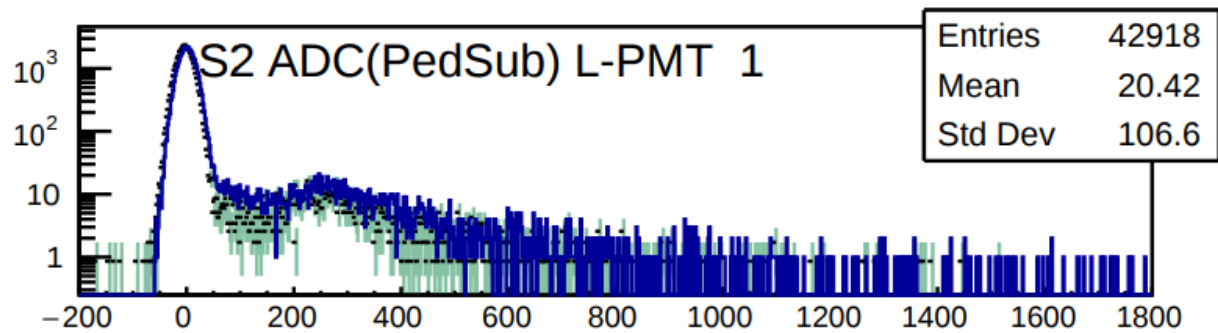
Key  
Blue = run 2309  
Green = Golden run



Top: run 2309 online plots, Bottom: Hall A NIM paper 'typical' online results

# Overview

- Run 2309 result for a single S2 LHRS scintillator PMT



# Next steps

- Better understand online output plots: their meanings/significance and what they 'should' display
- Learn more of how analyzer works w.r.t. future tasks
- Try to get old APEX scripts working (older database issues)
- Potentially look at apex replay script and/or including scifi

- SciFi – John, test cosmic, online analysis