

UUB Charge and Peak histograms

Mauricio Suárez Durán and Ioana C. Mariş

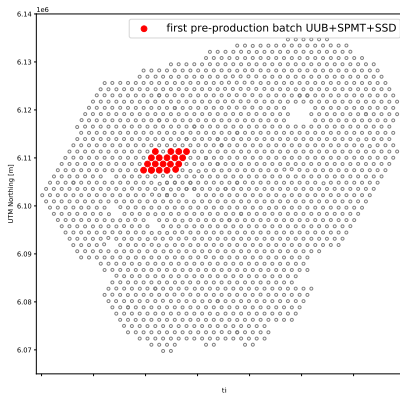
IIHE-ULB

June 18, 2021

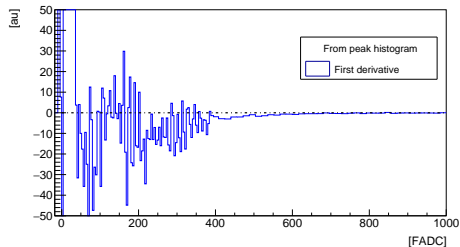
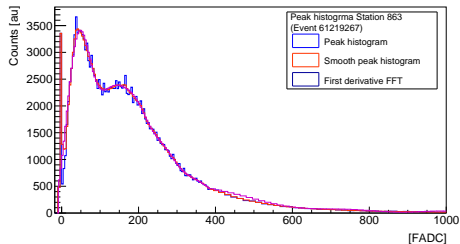


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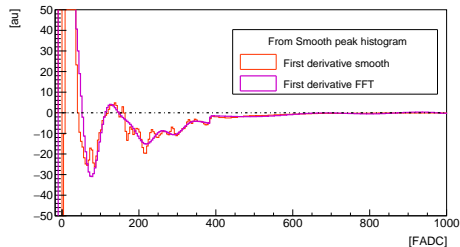
- ▶ Station studied: 863 1222 1219 1211 1740 1743 1221 1223 1217 1747 1741 1745 1818 1851 1729 1735 1746 1819 1791
- ▶ Data from CDAS.
- ▶ Software CDAS, pre-production version.



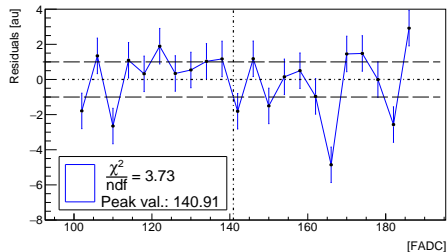
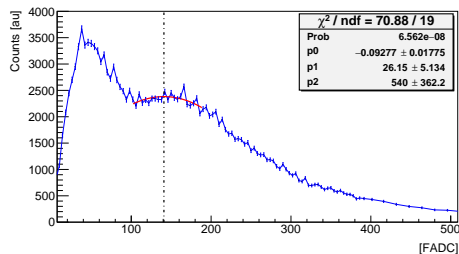
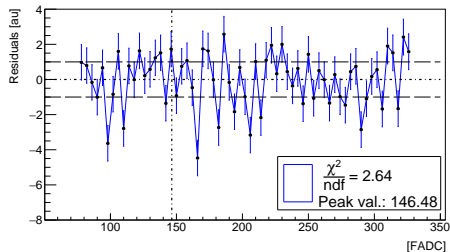
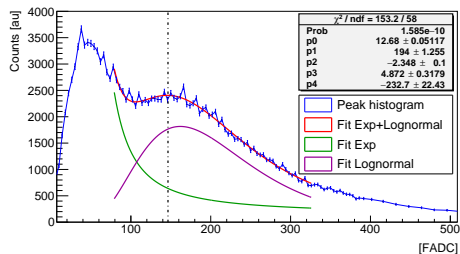
UUB Peak: Derivating histogram



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1. Smooth/FFT Histogram
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 3. Identifying Fit range (Slope changes)
 4. Fitting
- Two function checked:
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 - 2nd order polinomial

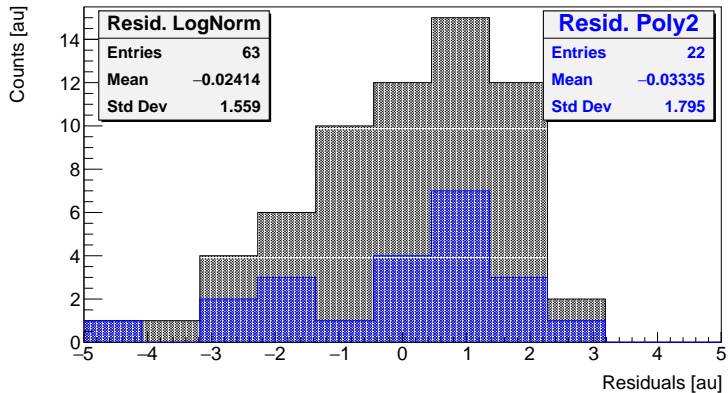


UUB Peak: Fit and Residuals

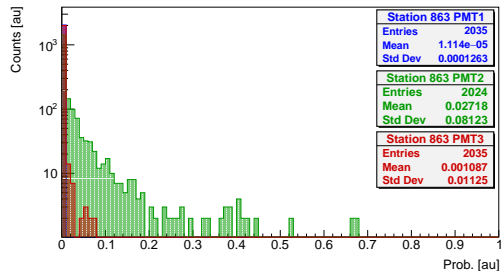
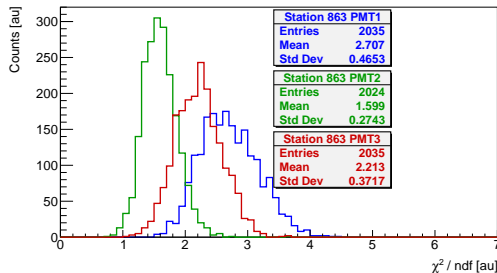


The Exp.+Log-normal fit better than second order polinomial.

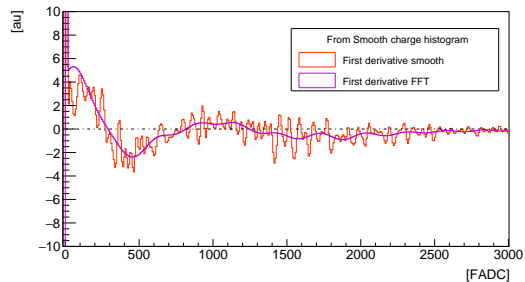
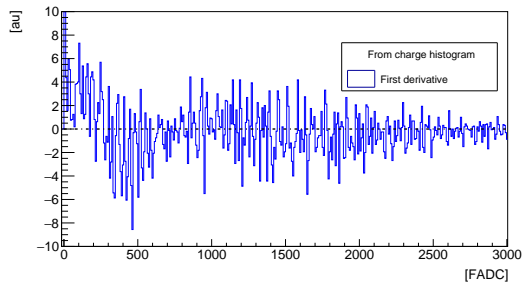
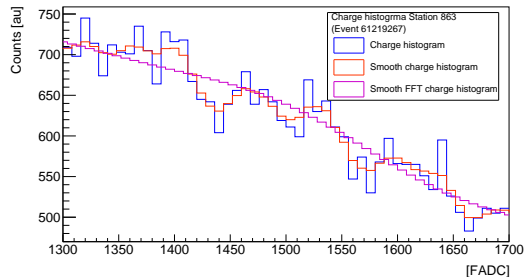
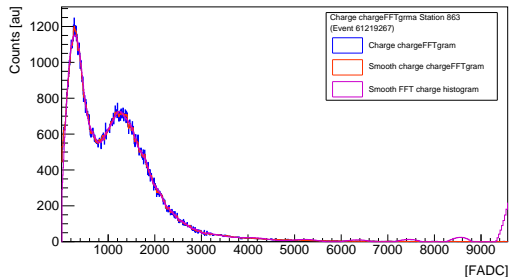
UUB Peak: Residuals distribution



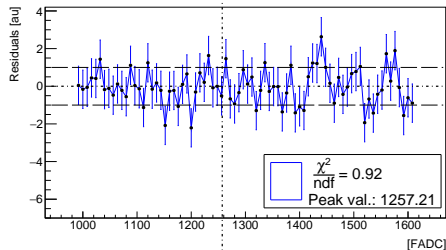
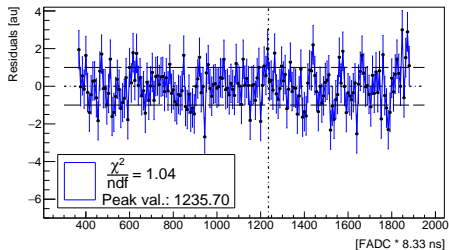
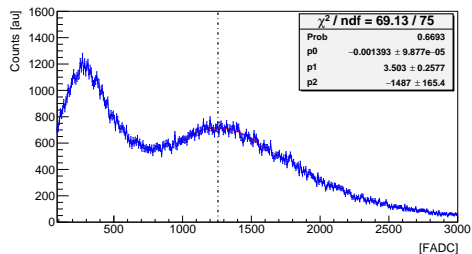
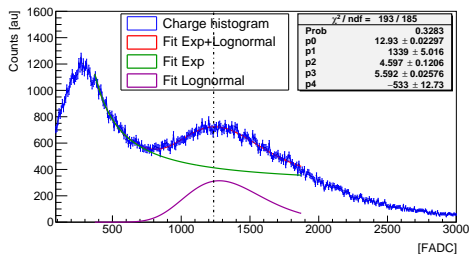
UUB Peak: applying all histograms St. 863, Chi and Prob. distributions



UUB Charge: Derivating histogram

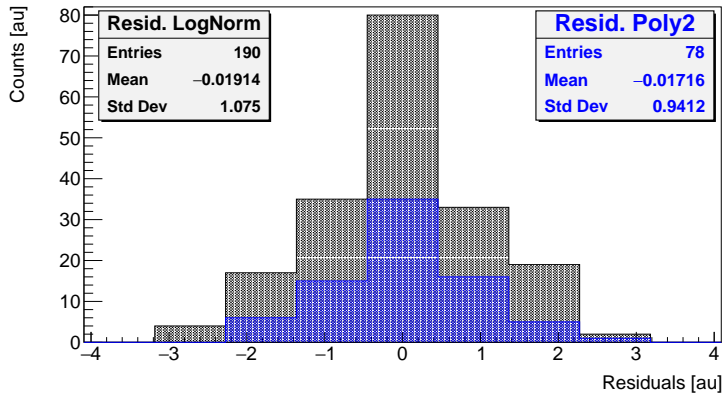


UUB Charge: Fit and Residuals

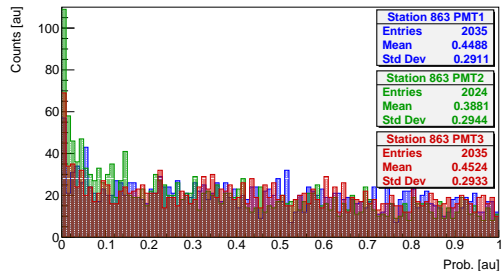
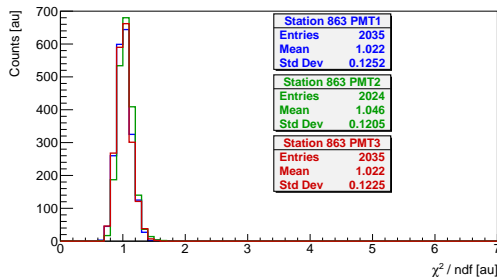


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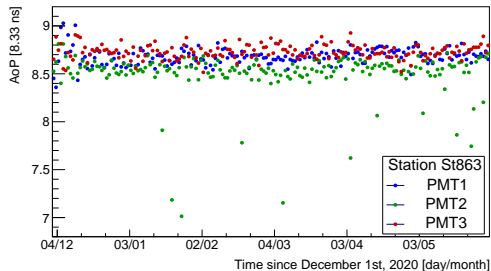
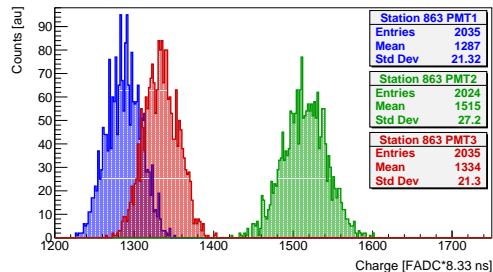
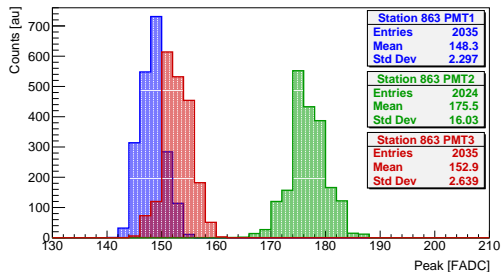
UUB Charge: Residuals distribution



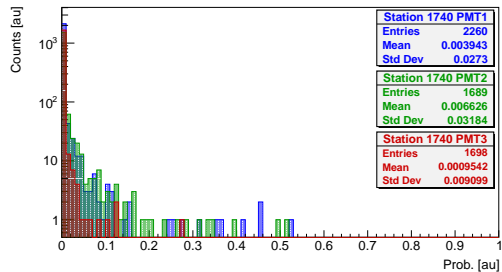
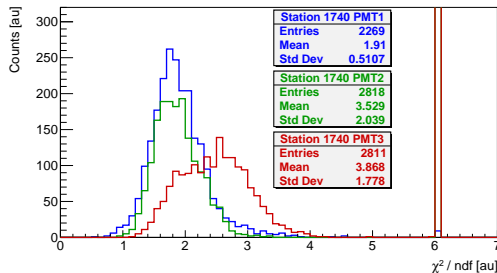
UUB Charge: applying all histograms St. 863, Chi and Prob. distributions



UUB AoP Station 863: Peak, Charge and AoP

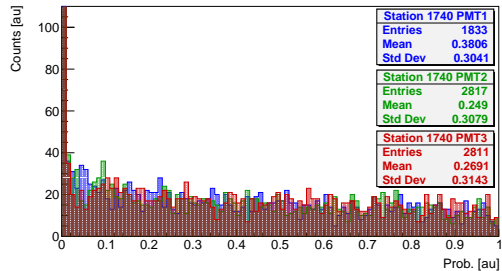
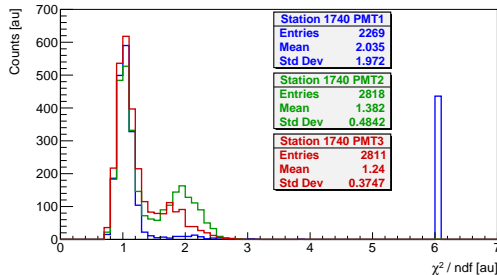


UUB Peak Station 1740: Chi and Prob. distributions all histograms



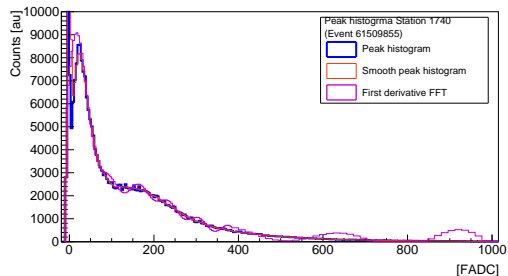
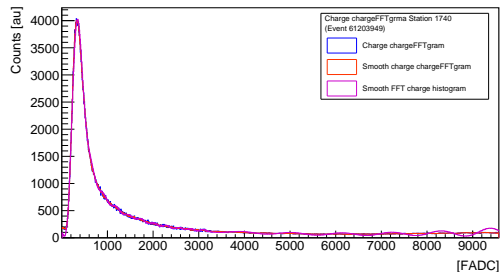
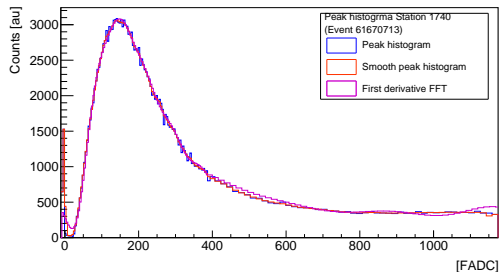
For χ^2 / ndf plot, all histograms with χ^2 / ndf bigger than 6 are counted as 6.

UUB Charge Station 1740: Chi and Prob. distributions all histograms

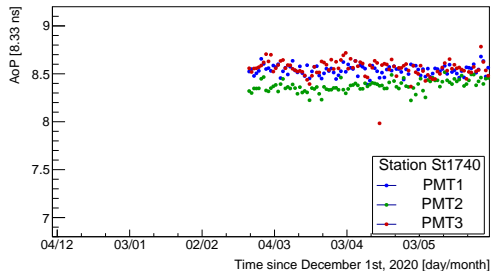
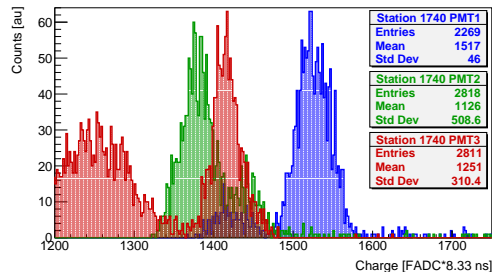
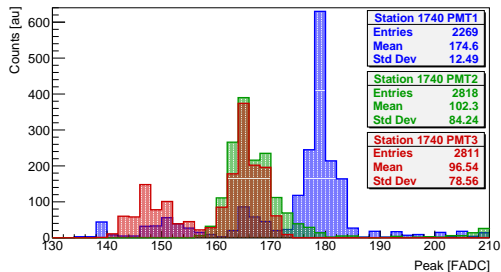


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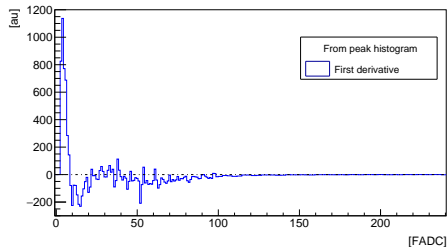
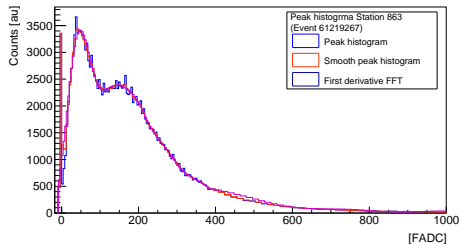
UUB Charge Station 1740: Failed fit



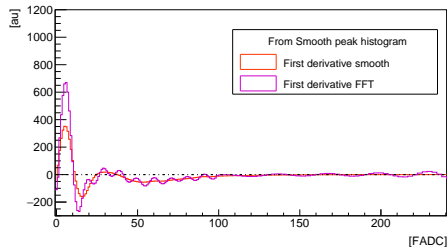
UUB AoP Station 1740: Peak, Charge and AoP



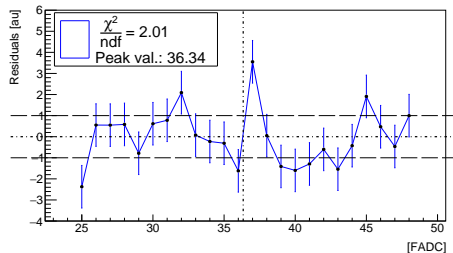
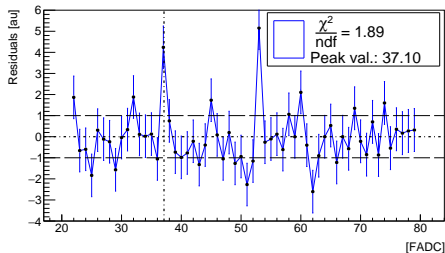
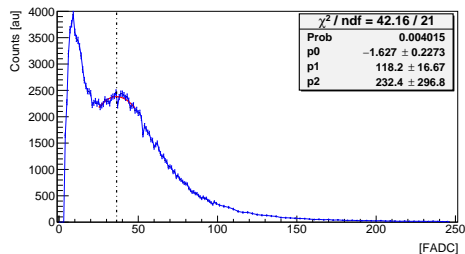
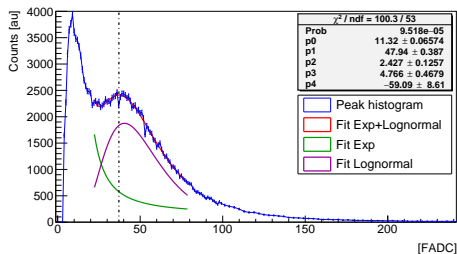
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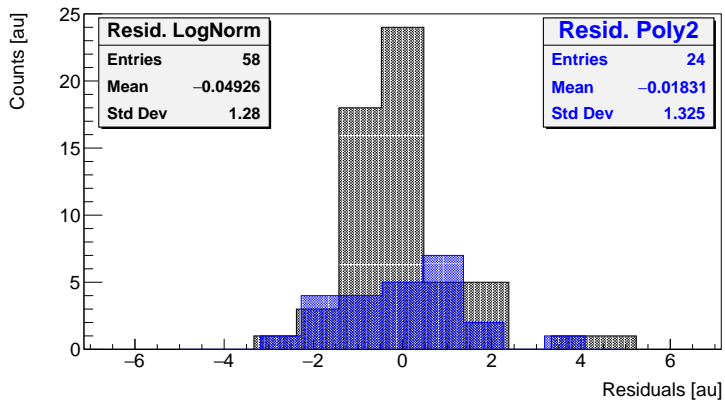


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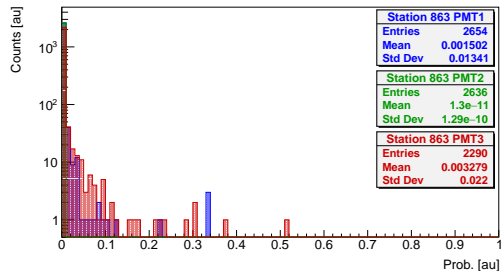
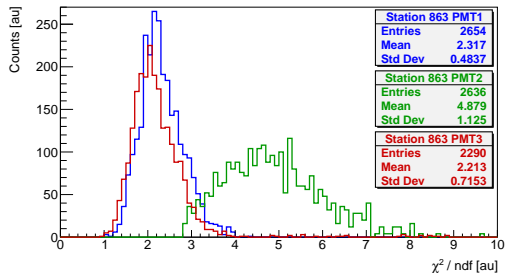


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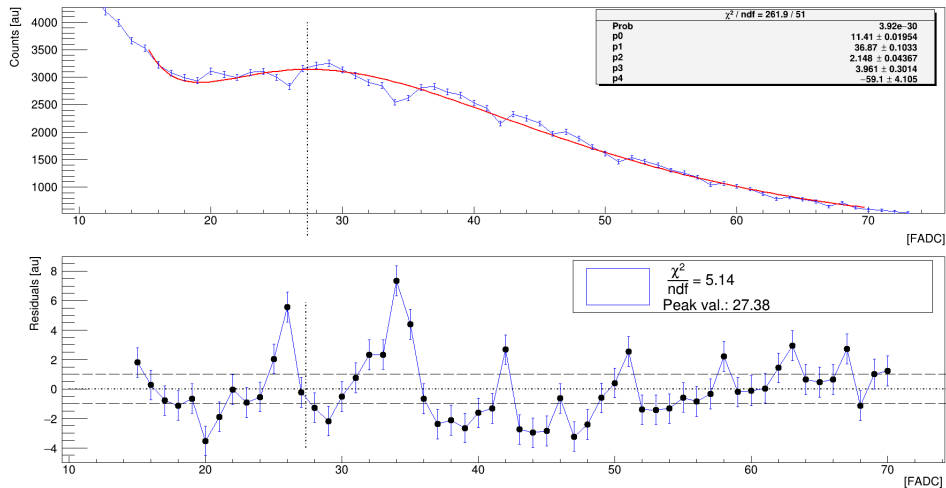
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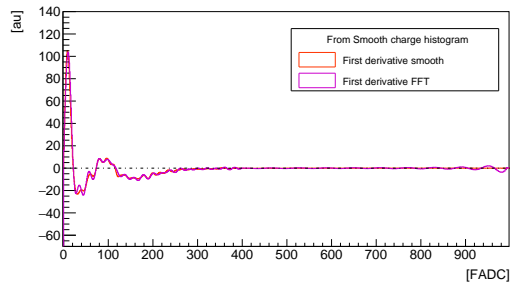
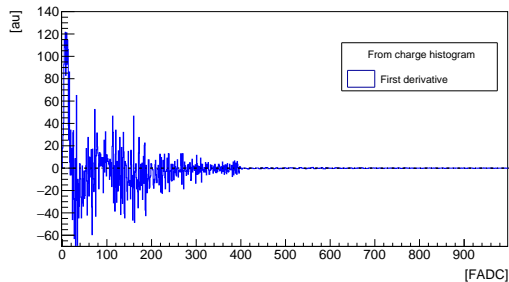
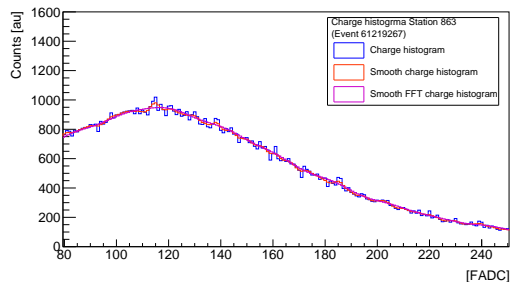
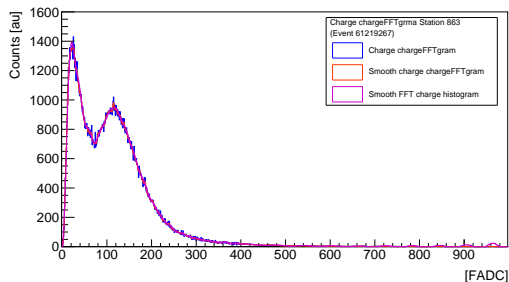
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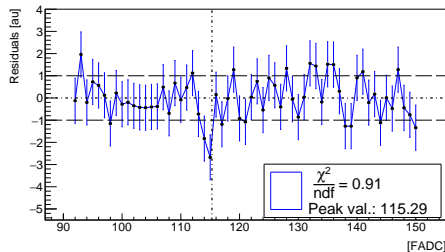
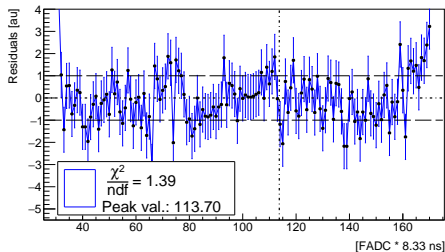
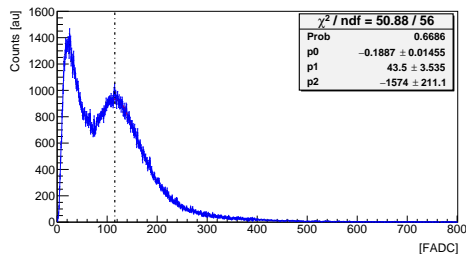
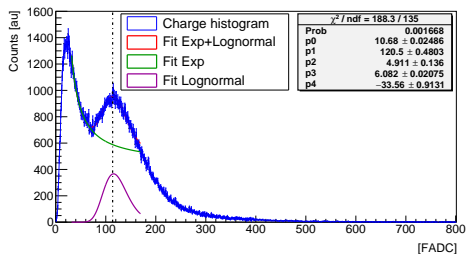
UB Peak Station 863: Failed fit for PMT2



UB Charge: Derivating histogram

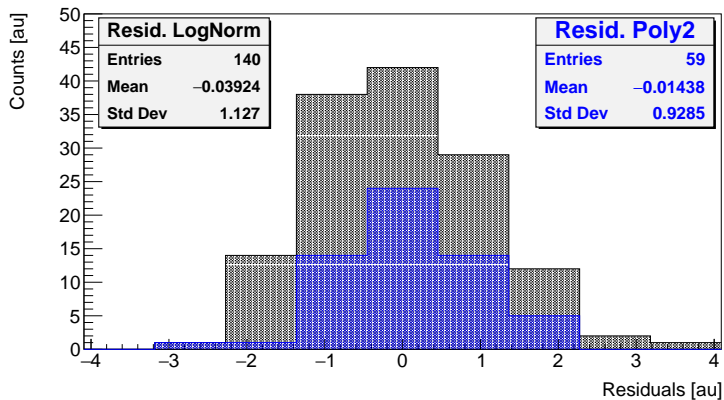


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