

Accuracy of Q_{VEM}^{pk} fit for UB and UUB

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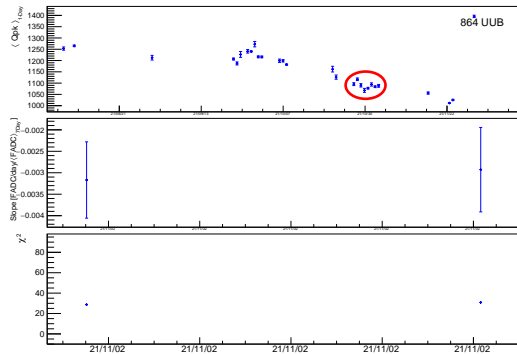
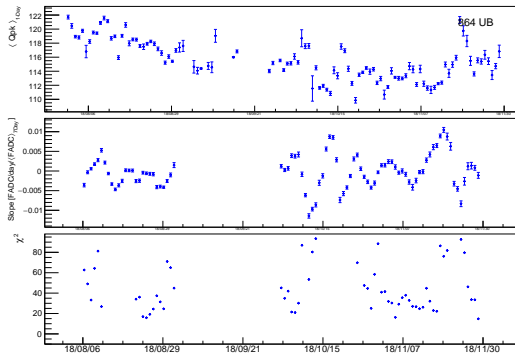
IIHE-ULB

February 14, 2022



Cross Check: Q_{VEM}^{pk} , slope/ $\langle FADC \rangle$, χ^2 as function of time

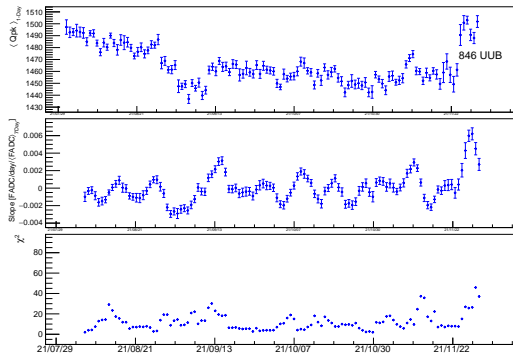
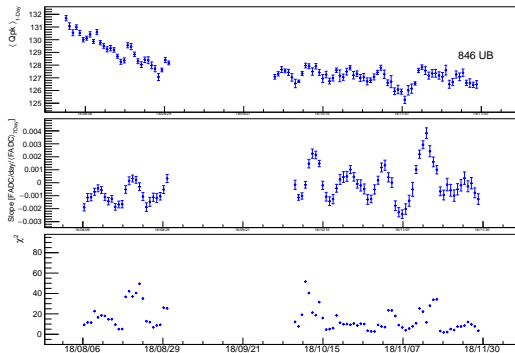
PMT1



The moving window is over 7-days in a row. For UUB, red circle enclose the only 8-days in a row available for fir, i.e. only two fits.

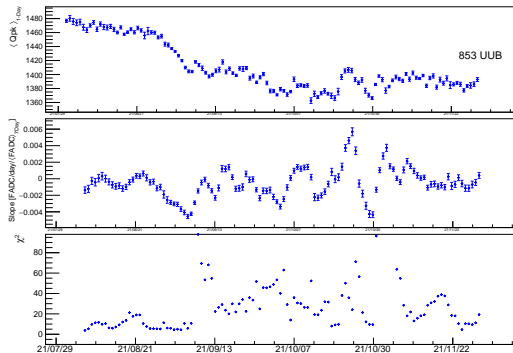
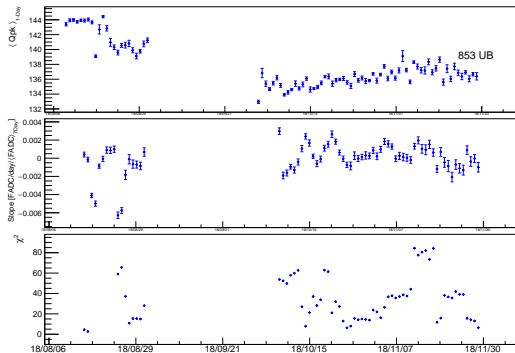
Cross Check: Q_{VEM}^{pk} , slope/ $\langle FADC \rangle$, χ^2 as function of time

PMT1



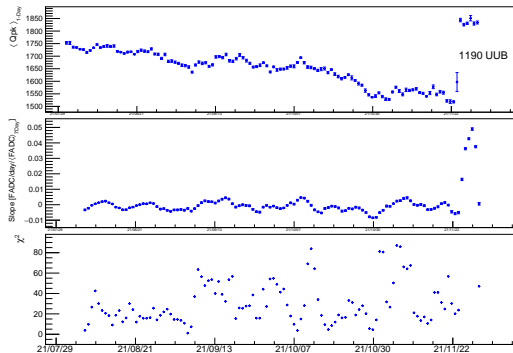
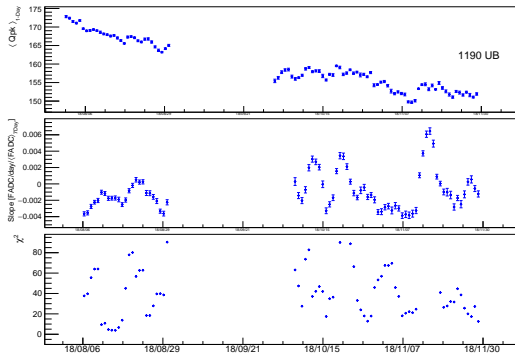
Cross Check: Q_{VEM}^{pk} , slope/ $\langle FADC \rangle$, χ^2 as function of time

PMT1



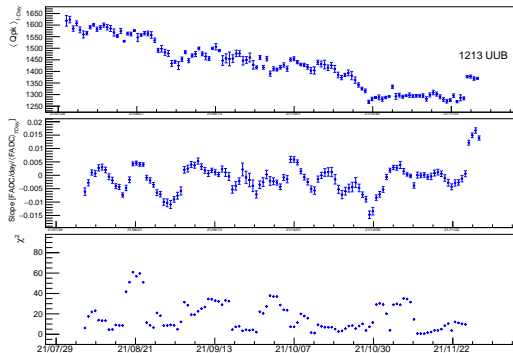
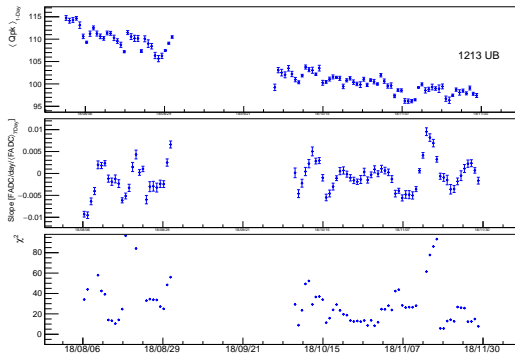
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PMT1



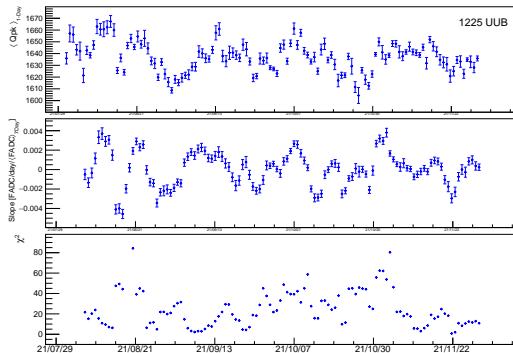
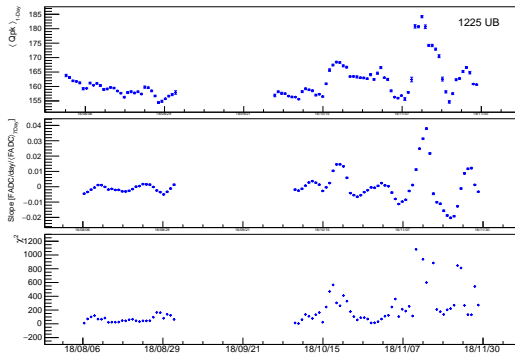
Cross Check: Q_{VEM}^{pk} , slope/ $\langle FADC \rangle$, χ^2 as function of time

PMT1

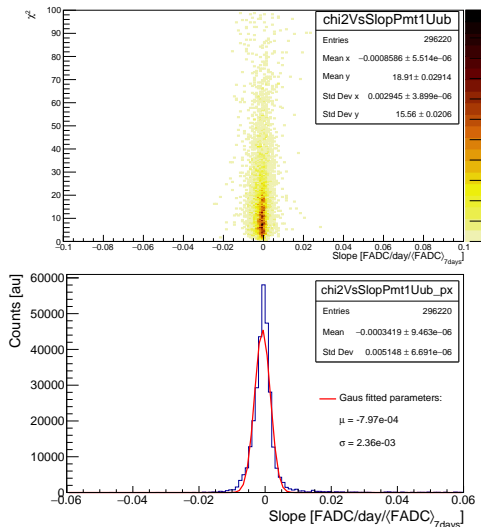
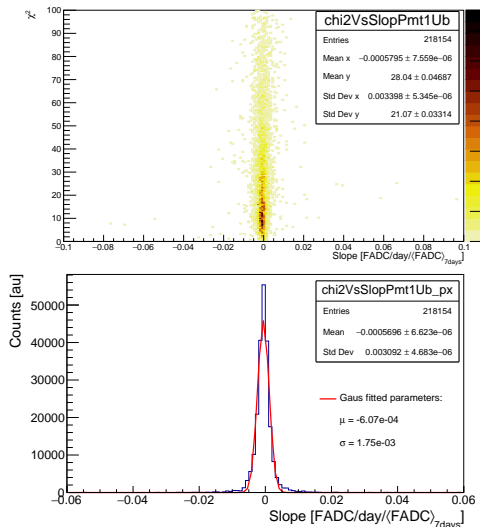


Cross Check: Q_{VEM}^{pk} , slope/ $\langle FADC \rangle$, χ^2 as function of time

PMT1

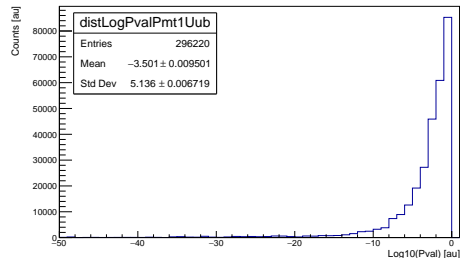
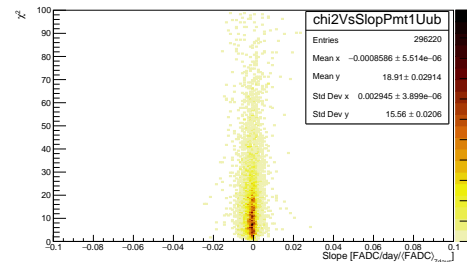
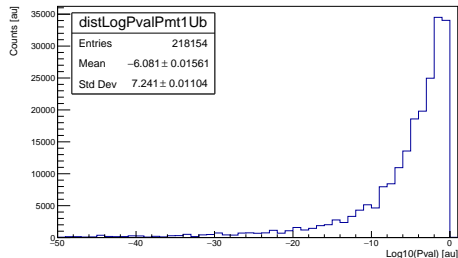
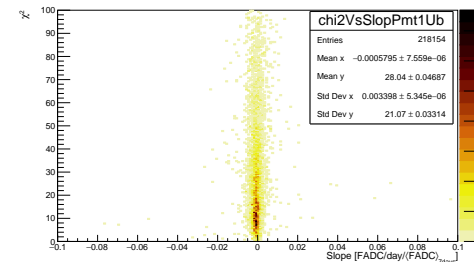


Moving window algorithm results



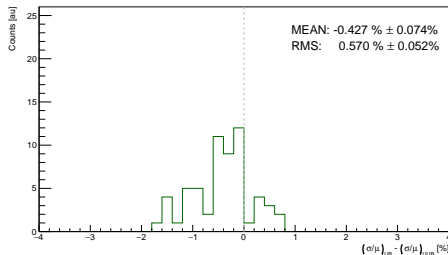
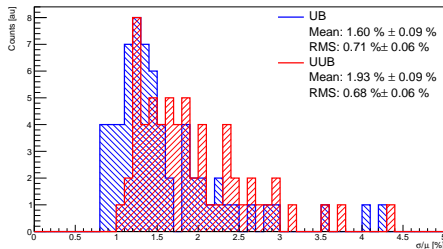
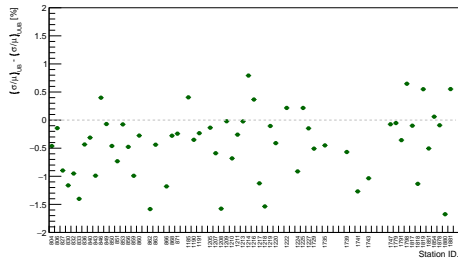
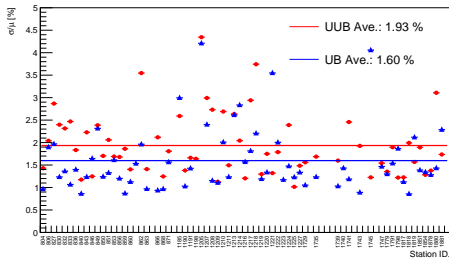
Fits with slope between $\mu \pm \sigma$ were considered.

Moving window algorithm results



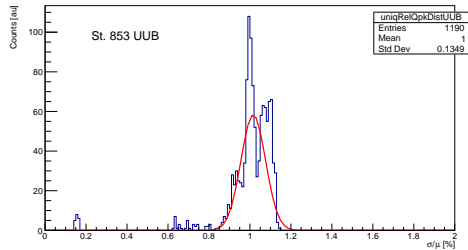
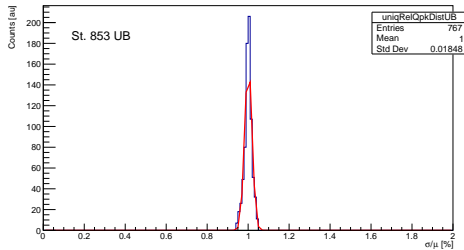
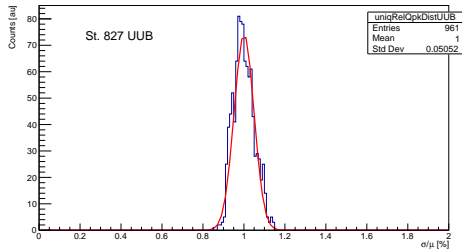
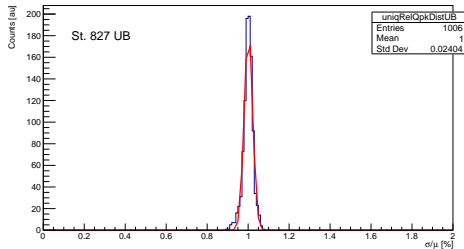
Fits with $\log_{10}(\text{Pval}) > -10$ were considered.

Accuracy results

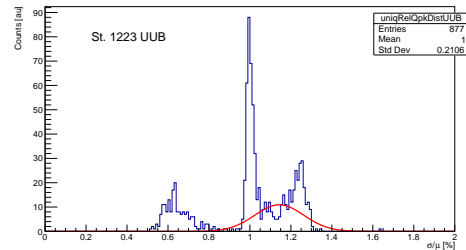
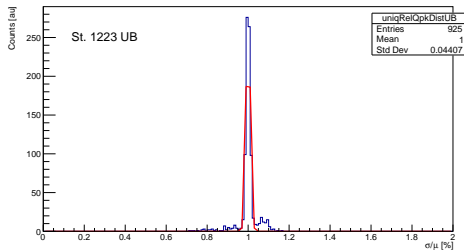
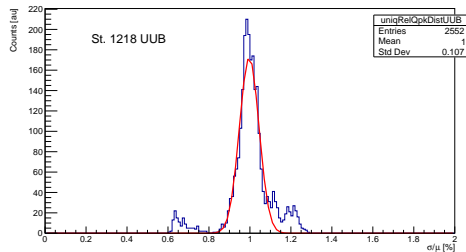
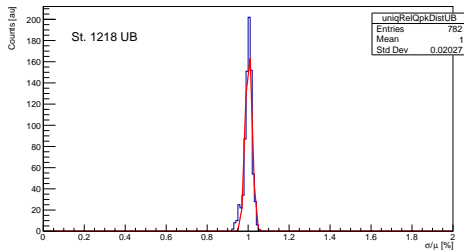


For accuracy distribution, only $\sigma/\mu < 5.0$ considered. For difference, $(\sigma/\mu)_{UB} - (\sigma/\mu)_{UUB} > -2.0$.

Outliers, $(\sigma/\mu)_{\text{UB}} - (\sigma/\mu)_{\text{UUB}} > -2.0\%$



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