

Square : Cs137 (previous)

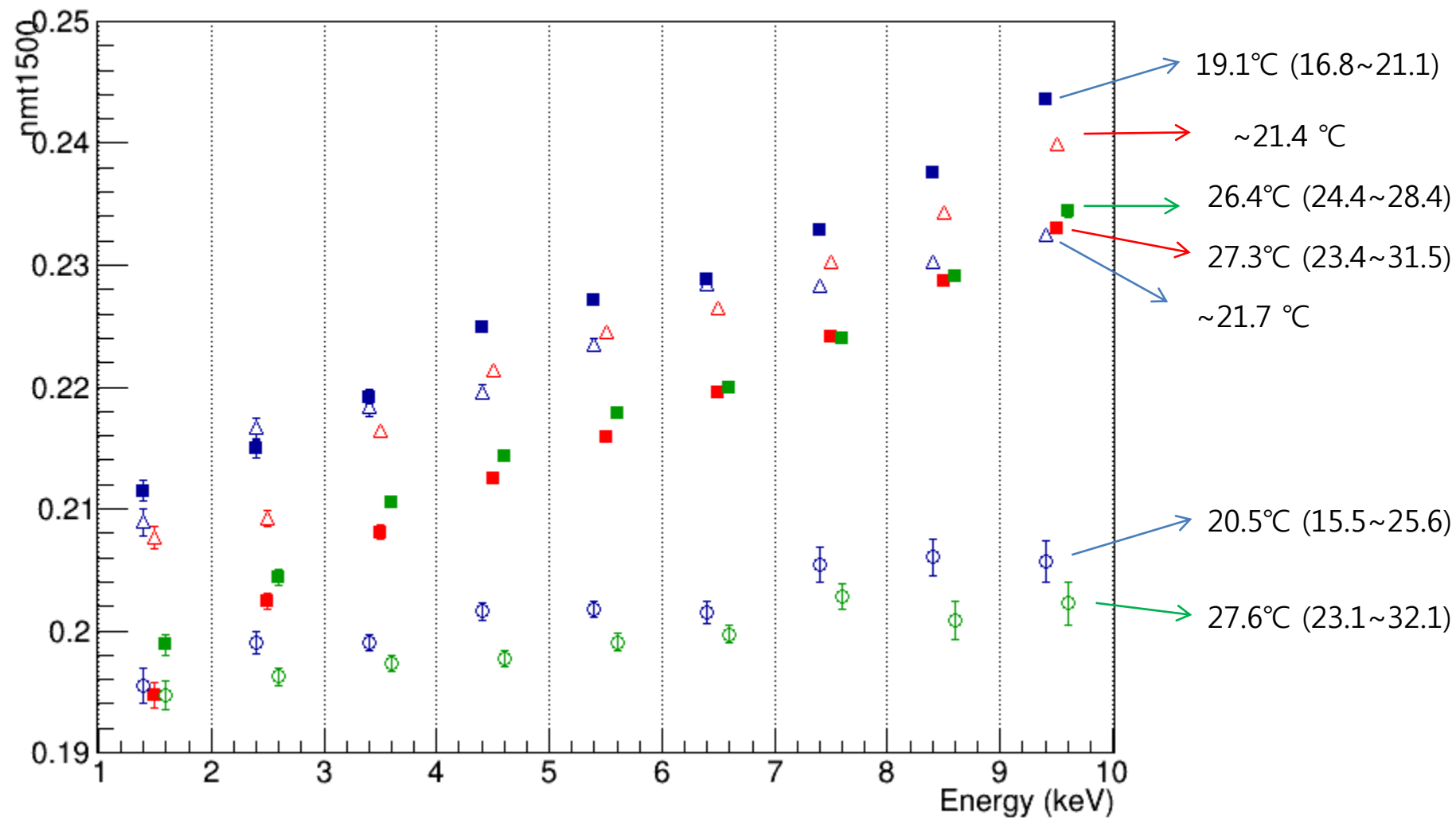
Triangle : Cs137 (new)

Circle : neutron

Blue : powderC

Green : WSIII

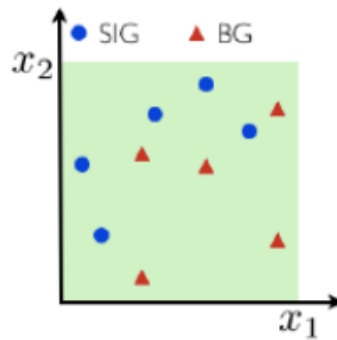
Red : WSII



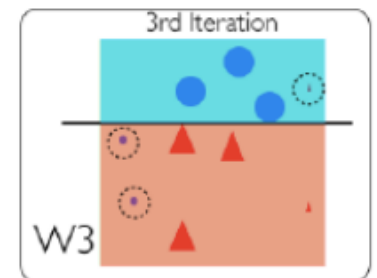
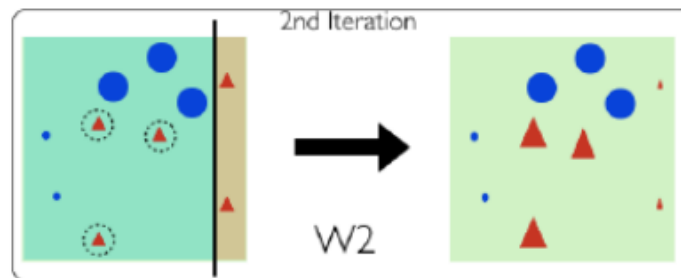
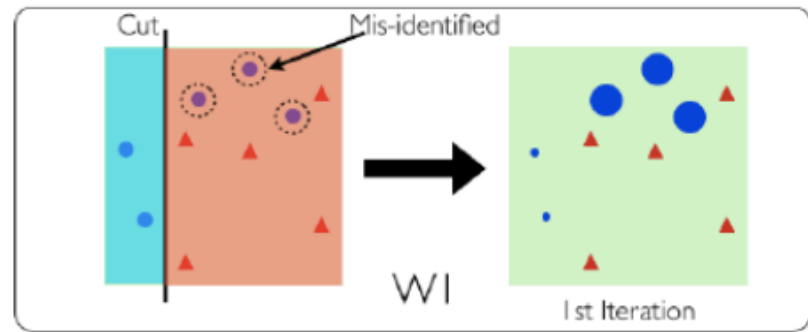
Boosted Decision Tree (BDT)

As the iteration goes on, the weights on the previous event sample are updated and the subsequent learner is trained on the weighted data set.

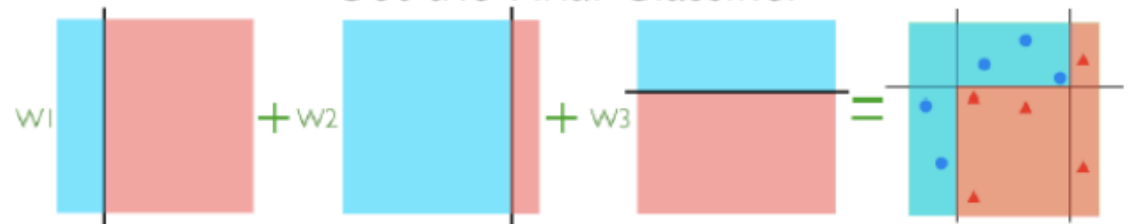
Eventually, a single classifier is obtained by combining the weak hypotheses with corresponding weights.



<Simple 2-D toy example>
Hypothesis : Straight Cuts
Multiple Iterations
Boosting : Give different weights when (mis)classified

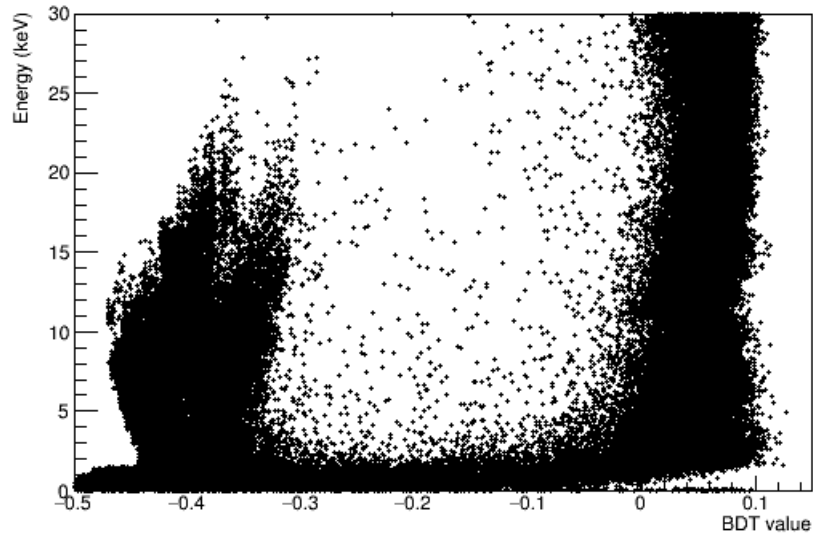


Get the Final Classifier

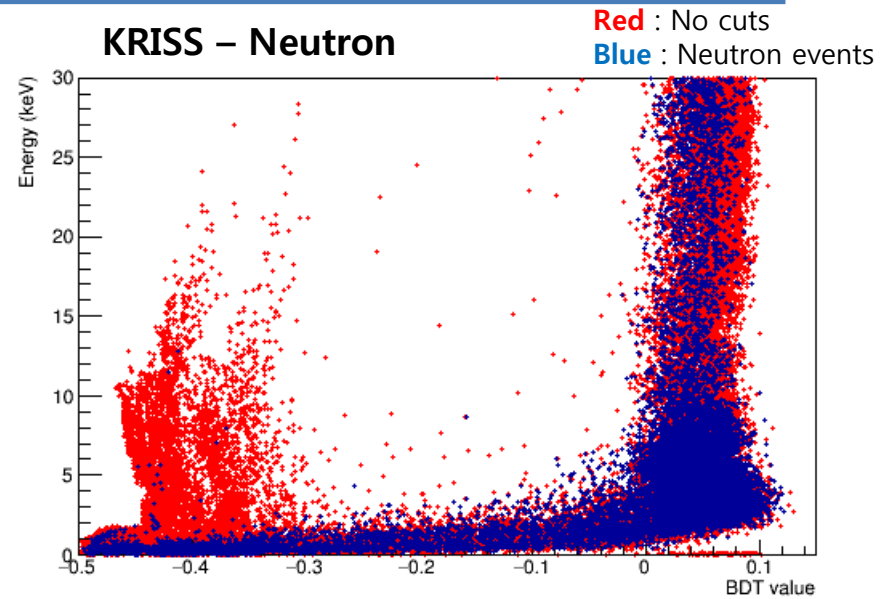


BDT analysis

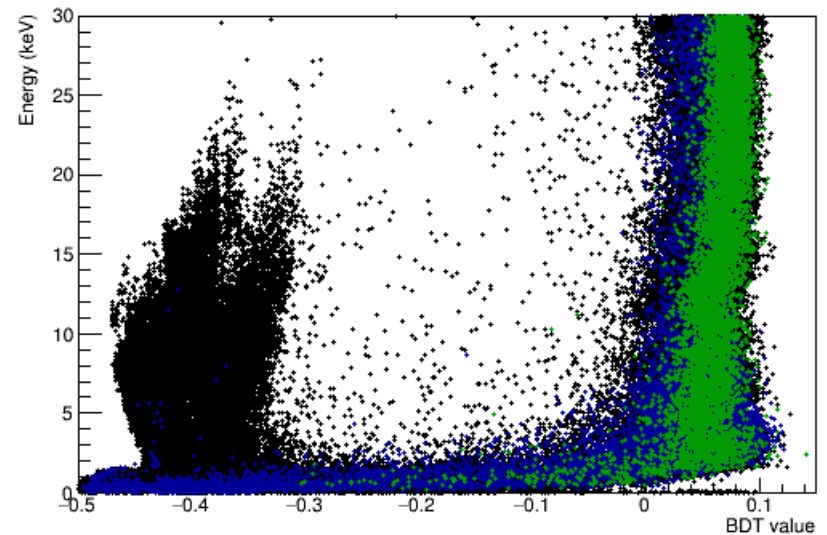
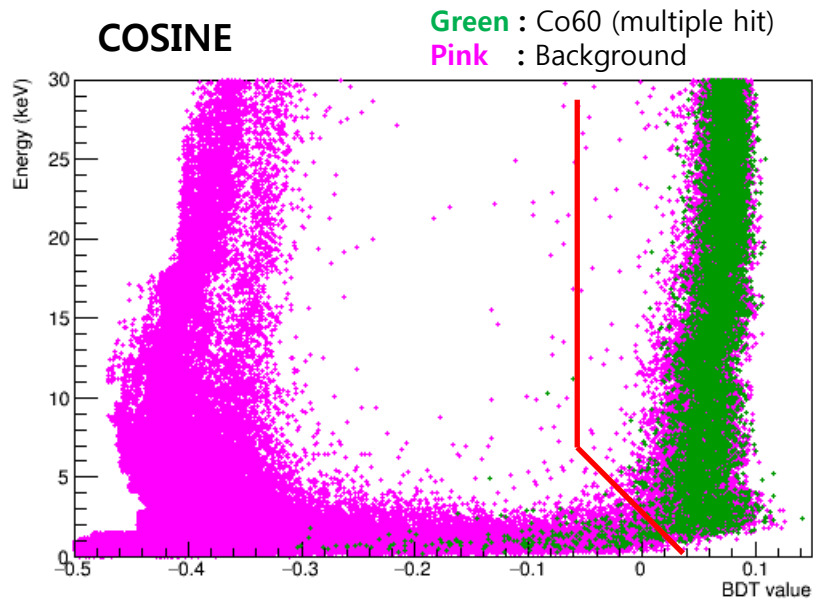
KRISS – Cs137



KRISS – Neutron

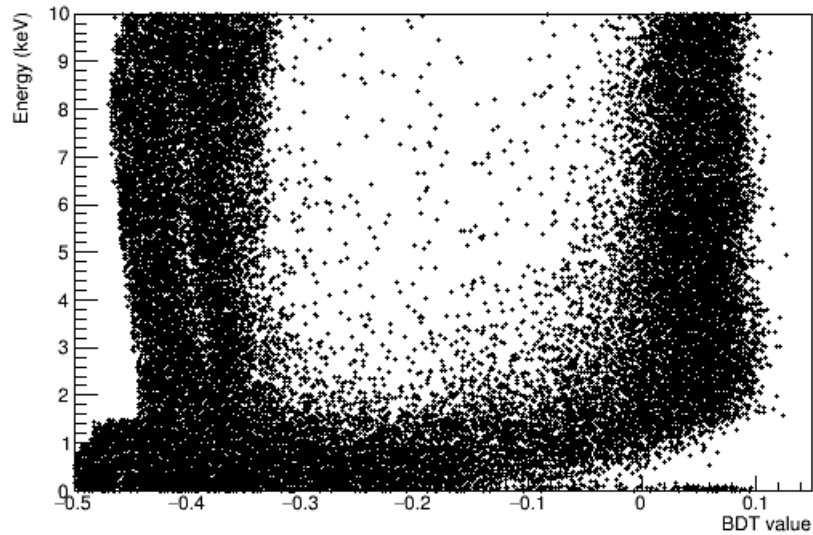


COSINE

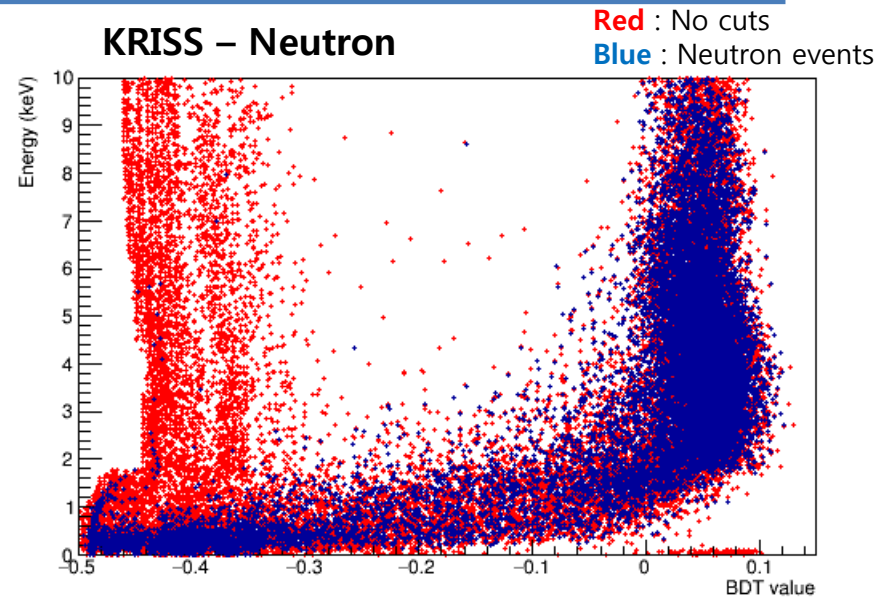


BDT analysis

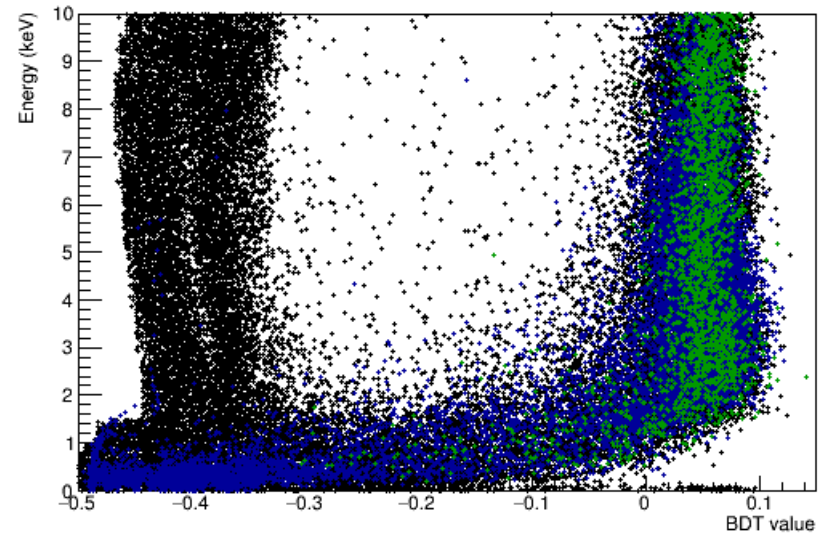
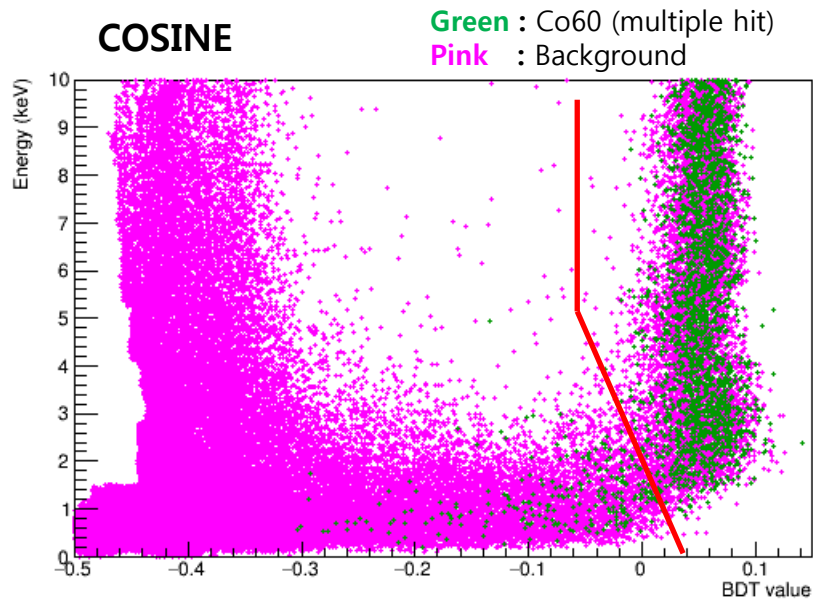
KRISS – Cs137



KRISS – Neutron

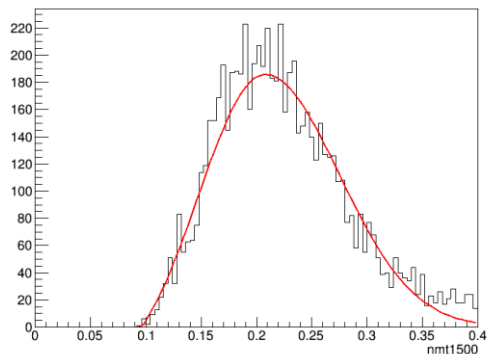


COSINE

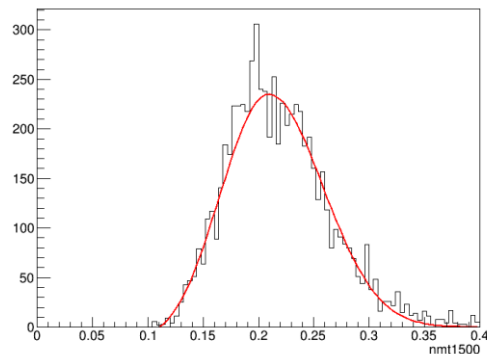


nmt1500 distribution (WSII)

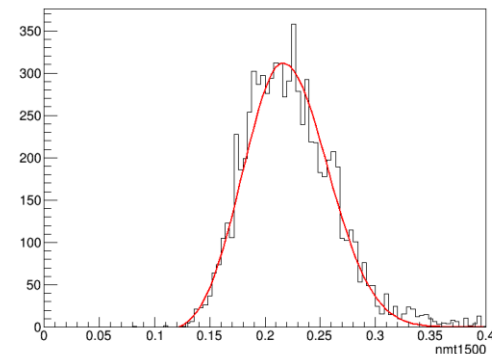
1~2 keV



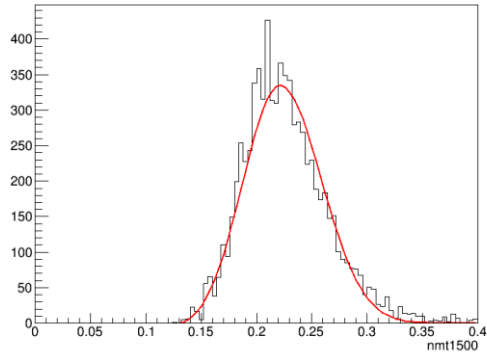
2~3 keV



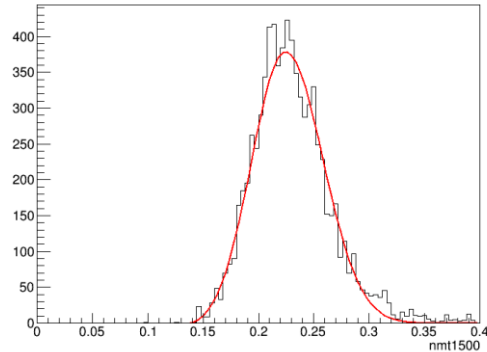
3~4 keV



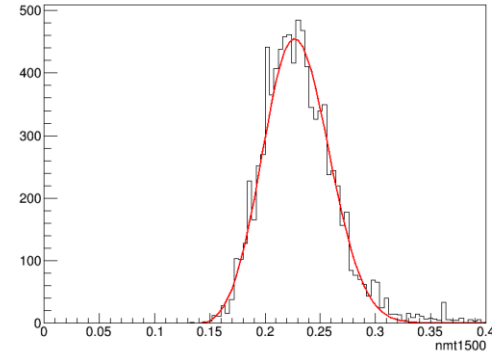
4~5 keV



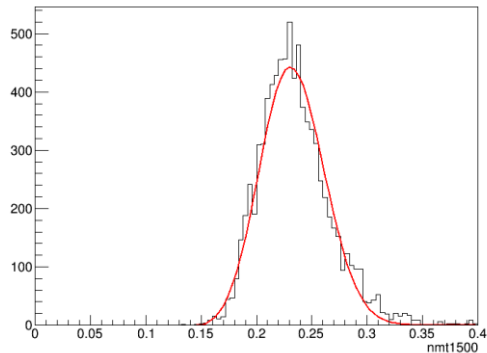
5~6 keV



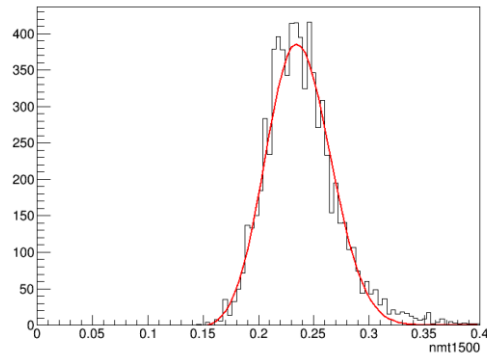
6~7 keV



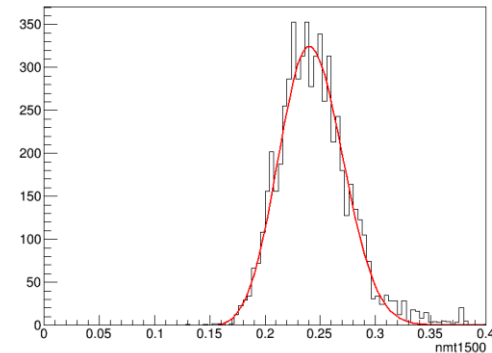
7~8 keV



8~9 keV

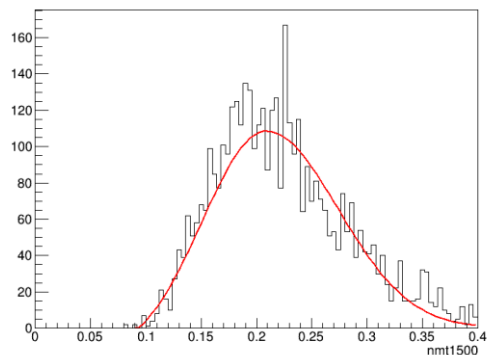


9~10 keV

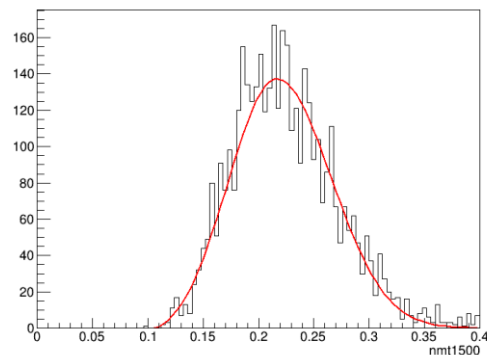


nmt1500 distribution (powderC)

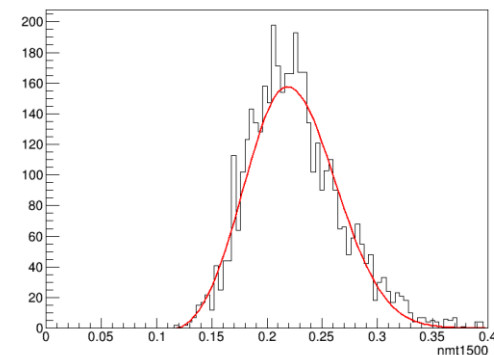
1~2 keV



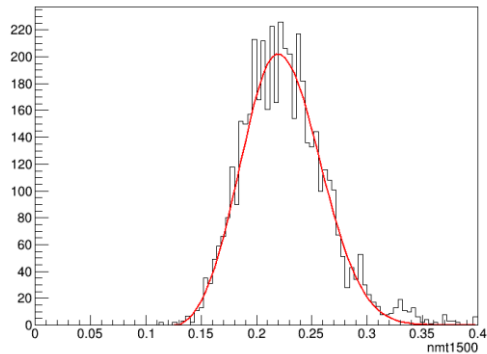
2~3 keV



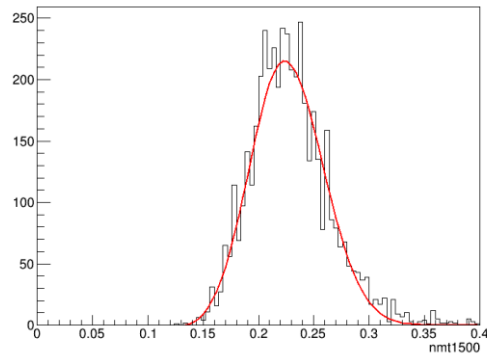
3~4 keV



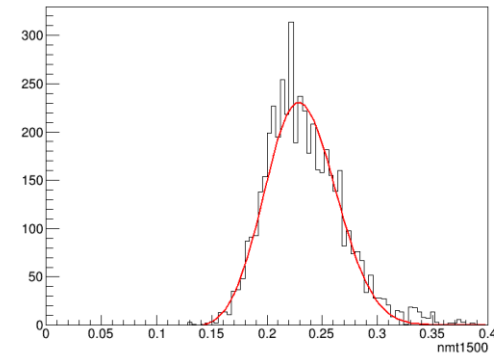
4~5 keV



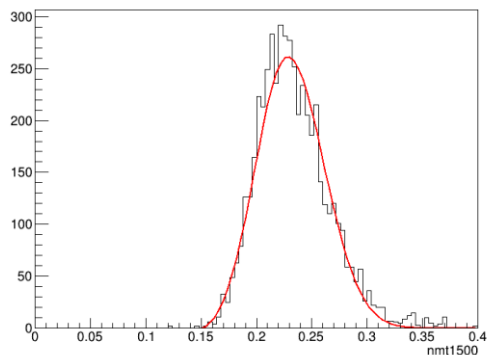
5~6 keV



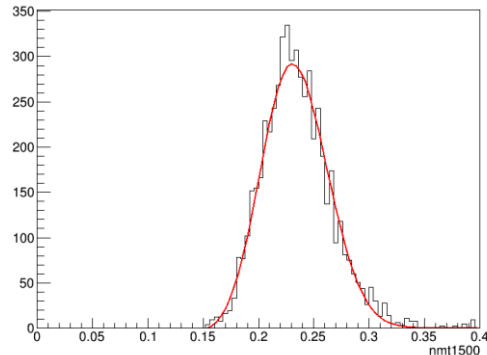
6~7 keV



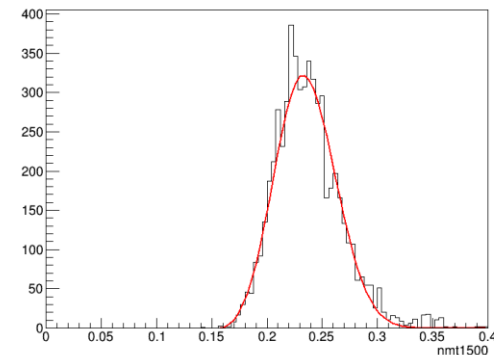
7~8 keV



8~9 keV



9~10 keV



NaI energy spectrum (Cs137)

