

# Mugast DSSD Energy Calibration Report

## 1 Calibration Summary

**Experiment :** MUGAST\_LISE23  
**Operator :** test  
**App. Date :** 09/02/24  
**Source :** 3 alpha peaks  $^{239}\text{Pu}$ ,  $^{241}\text{Am}$ ,  $^{244}\text{Cm}$   
**Dead Layer :** Al  $0.3\mu\text{m}$  + Si  $0\mu\text{m}$   
**Comment :** Mugast

**Calibration Method :** ZeroExtrapolation  
**Telescope Treated :** 1  
**Strip Treated :** 1 to 128  
**DSSD Side :** X

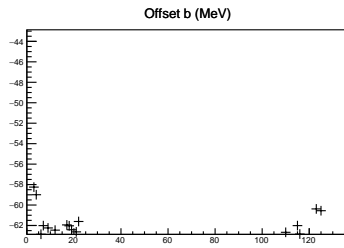
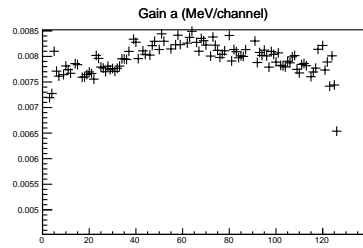
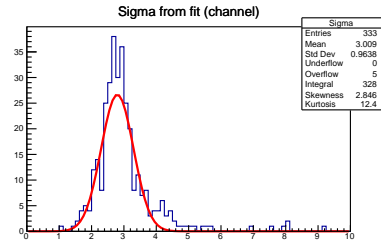
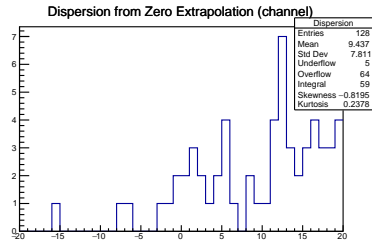
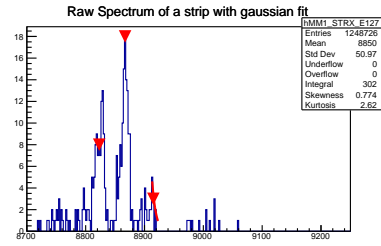
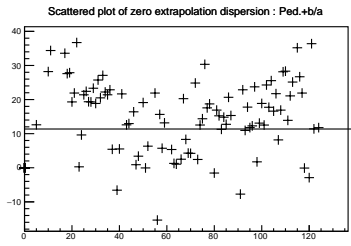
**Source Description :**

Isotope	Original Energy (MeV)	Branching Ratio
$^{239}\text{Pu}$	5.15659	70.77
$^{239}\text{Pu}$	5.14438	17.11
$^{239}\text{Pu}$	5.1055	11.94
$^{241}\text{Am}$	5.48556	84.8
$^{241}\text{Am}$	5.4428	13.1
$^{241}\text{Am}$	5.388	1.66
$^{244}\text{Cm}$	5.80477	76.4
$^{244}\text{Cm}$	5.76264	23.6

## 2 Telescope 1

Bad Strip :

Strip Number	Problem
1	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
2	zero extrapolation too high :-14511.8channels ;
3	zero extrapolation too high :94.7677channels ;
4	zero extrapolation too high :82.0728channels ;
6	zero extrapolation too high :41.2142channels ;
7	zero extrapolation too high :46.8579channels ;
8	zero extrapolation too high :-209.065channels ;
9	zero extrapolation too high :47.675channels ;
11	zero extrapolation too high :34.384channels ;
12	zero extrapolation too high :48.63channels ;
13	zero extrapolation too high :-131.3channels ;
14	zero extrapolation too high :49.726channels ;
15	zero extrapolation too high :49.468channels ;
16	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
17	zero extrapolation too high :33.5847channels ;
22	zero extrapolation too high :36.7217channels ;
38	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
42	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
45	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
49	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
53	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
54	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
60	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
61	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
65	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
71	0 peak(s) found ; zero extrapolation too high :8203.4channels ;
76	zero extrapolation too high :30.3359channels ;
79	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
88	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
89	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
90	2 peak(s) found ; zero extrapolation too high :8203.4channels ;
114	zero extrapolation too high :-100.189channels ;
115	zero extrapolation too high :35.1915channels ;
119	zero extrapolation too high :-172.302channels ;
121	zero extrapolation too high :36.3914channels ;
123	zero extrapolation too high :52.4242channels ;
125	zero extrapolation too high :53.8312channels ;
126	zero extrapolation too high :205.622channels ;
127	zero extrapolation too high :534.037channels ;
128	0 peak(s) found ; zero extrapolation too high :8203.4channels ;



Sigma fit centroid : 2.79672  
Sigma fit sigma : 0.499951