Assembly E08-W0253

1   Detector Settings

Parameter	Value	Reason
Timepix Clock	10	Noise reduction
Ikrum	1	Better energy resolution
FBK	160	Wider energy range in ToT mode
THL Coarse	8	Wider energy range of threshold
Preamp	200	Lower power consumption and heat

2   Digital Test and Bias Test (Leaking Pixels Scan)
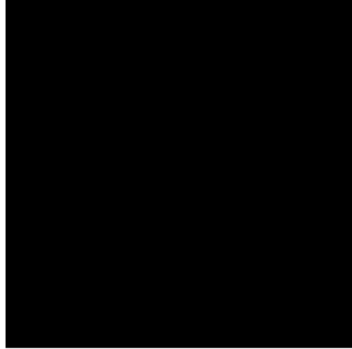
Parameter	Value
Bad Pixels	0
Bad Columns	0

Bias [V]	Leaking Pixels [cnt]
20	0
30	0
40	0
50	0
60	0
70	0
80	0
90	0
100	0

3   Threshold Equalization
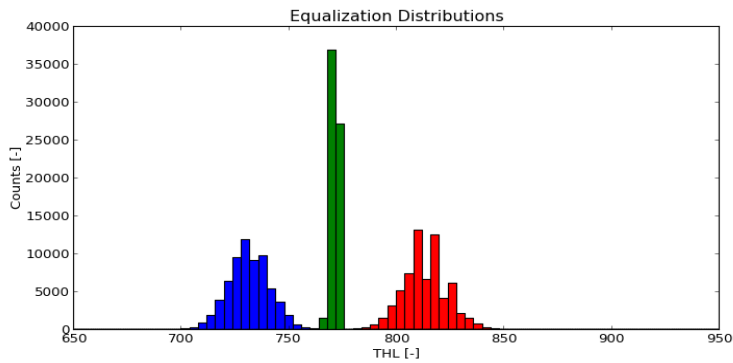
Parameter	Value
Mean THL	769
Std. Dev	2.1348
Masked Pixels	0
Final THL	739

4   Bias Test with Fe XRF (6.4keV)

Bias 20 V	Bias 30 V	Bias 40 V	Bias 50 V	Bias 60 V
Bias 70 V	Bias 80 V	Bias 90 V	Bias 100	
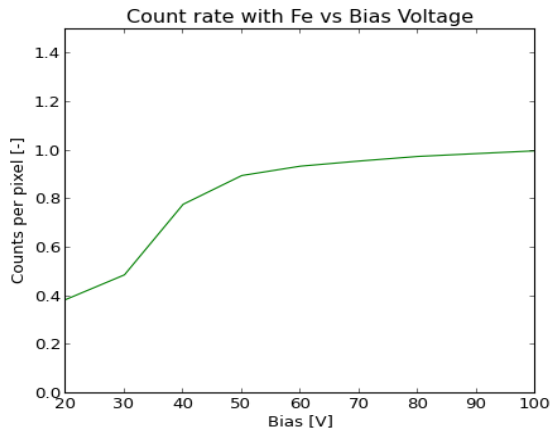
Count rate with Fe vs Bias Voltage

Bias [V]	Cnt/[pix.s]
20	17.48
30	22.07
40	35.21
50	40.56
60	42.30
70	43.25
80	44.11
90	44.64
100	45.15

Parameter	Value
Bias From [V]	50
Bias To [V]	100
Bad Pixels [cnt]	0

5 Threshold Energy Calibration
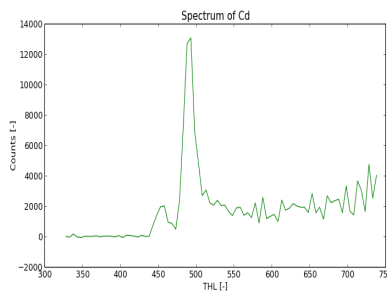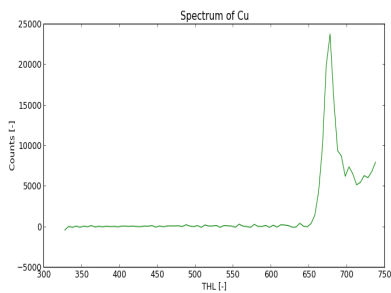
Parameter	Value
A	-12.3687
B	777.852
Min. Threshold	3.14114 keV
THL 5 keV	716.008

6 Energy Calibration in ToT Mode
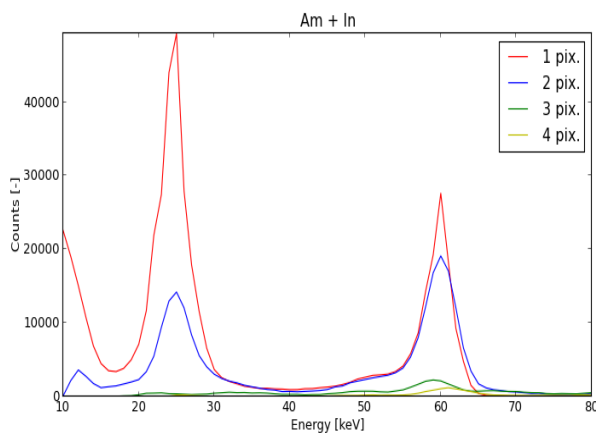
Source	Energy	1	2	3	4
Fe	6.27	6.07	12.18	18.11	2.00
In	23.96	24.11	24.18	30.32	25.43
Am	59.46	59.84	59.89	58.90	60.06

Coefficient	Mean value
A	1.620
B	30.359
C	29.505
T	4.243

7 Summary and Classification

Calibrated for threshold of 5 keV (THL=716)

Criterion	Value	Unit	Class
ROC (Wafer probing result)	-	-	AA
Masked pixels	0	cnt	AA
Bad pixels after test with sources	0	cnt	AA
Largest bad cluster pixel count	0	cnt	AA
Min. threshold Medipix mode	3.14114	keV	AA
Energy resolution ToT at 60 keV	1.525517	keV	AA

Final Statement	Class	Verbal
Imaging applications (Counting mode)	AA	Excellent
Tracking applications (Energy mode)	AA	Excellent