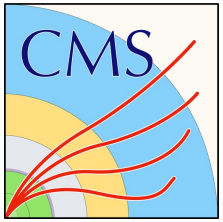
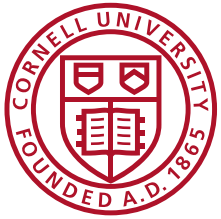
V11 Test Procedures Comparison

Xuan Chen





Procedures

Method 1 (Current benchmark) :

1) IV curve
2) pixel alive
2a) *Noise*
3) thradj @3500 e-
4) threqu
5) Scurve
6) [Noise]
7) thradj @2000
8) Scurve
9) [Noise]
10)thradj @1500
11) [Scurve]
12)Noise
13) *Scurve*

*steps in [ ] were skipped

Method 2 :

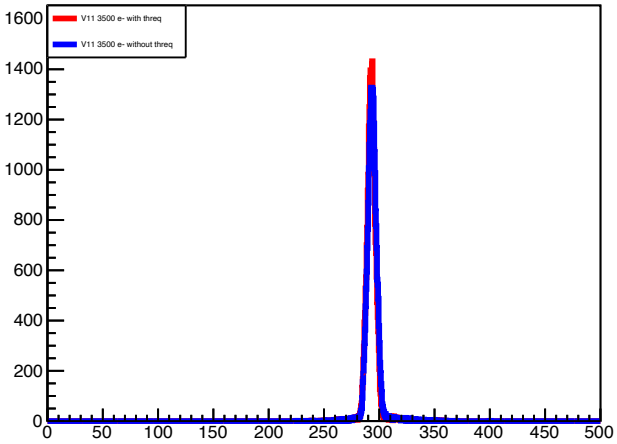
1) IV curve
2) pixel alive
2a) *Noise*
3) thradj @3500 e-
4) threqu
5) Scurve
6) thradj @2000
7) threqu
8) Scurve
9) thradj @1500
10) threqu
12)Noise
13) *Scurve*

Procedures

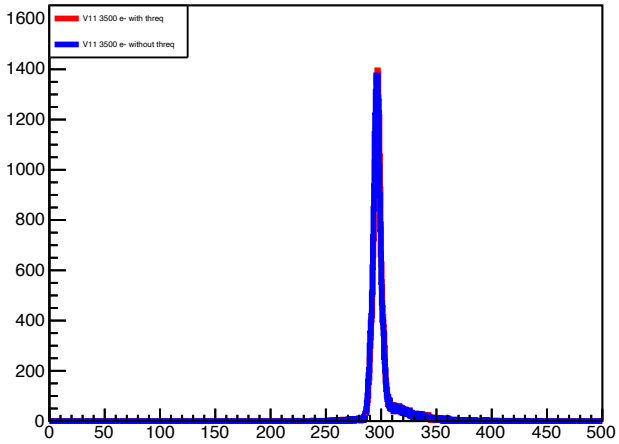
- Managed to trim down to 1000 e- in both case
- Files:
  - /nfs/cms/fpixmech/module_tests/data/cmspixel/runDir_server/xuan/trim_f5_v11_w_threq_0406/
  - /nfs/cms/fpixmech/module_tests/data/cmspixel/runDir_server/xuan/trim_f5_v11_wo_threq_0405/

Results – 3500 e-

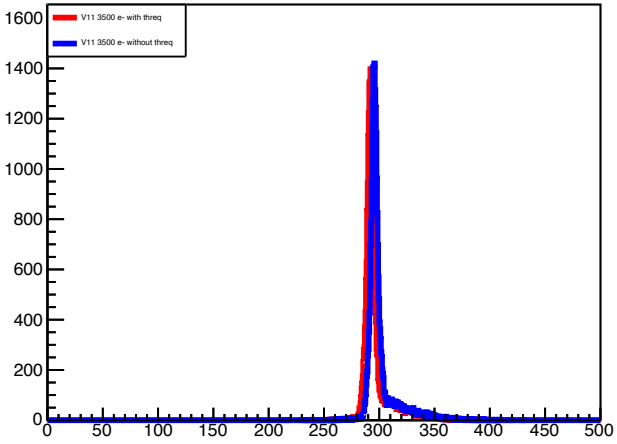
Chip 4



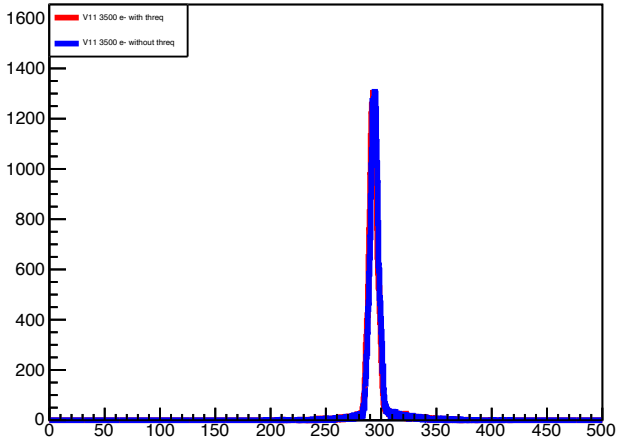
Chip 5



Chip 6

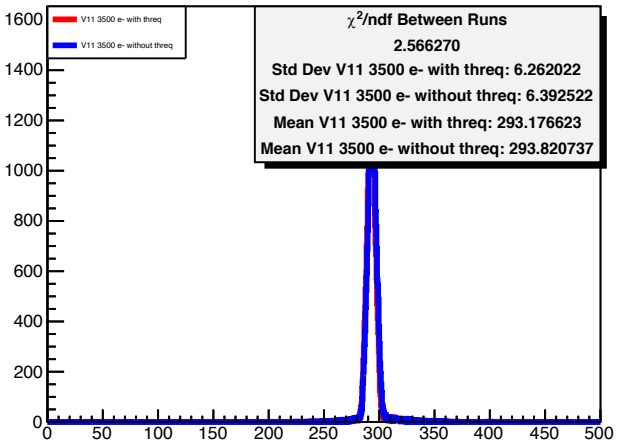


Chip 7

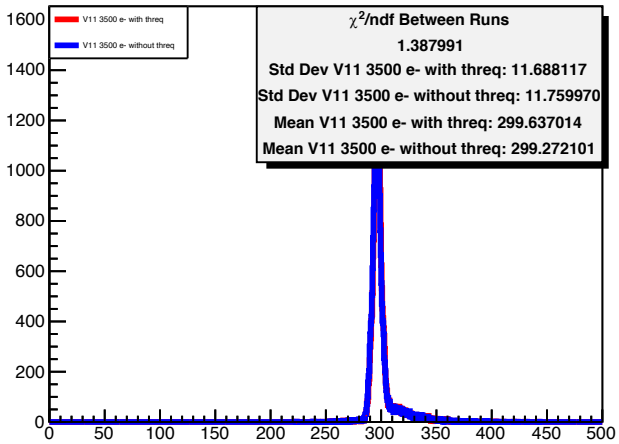


Results – 3500 e-

Chip 4



Chip 5



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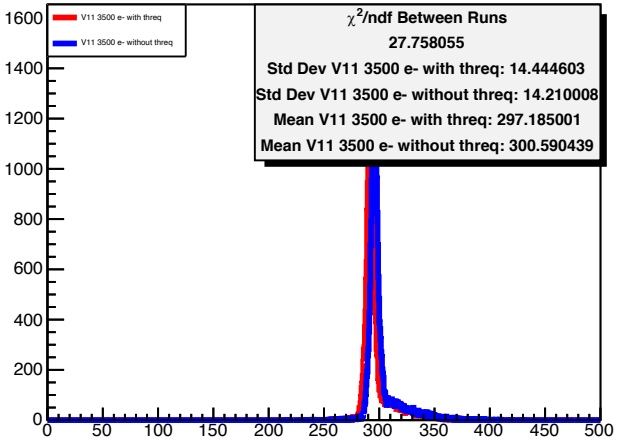
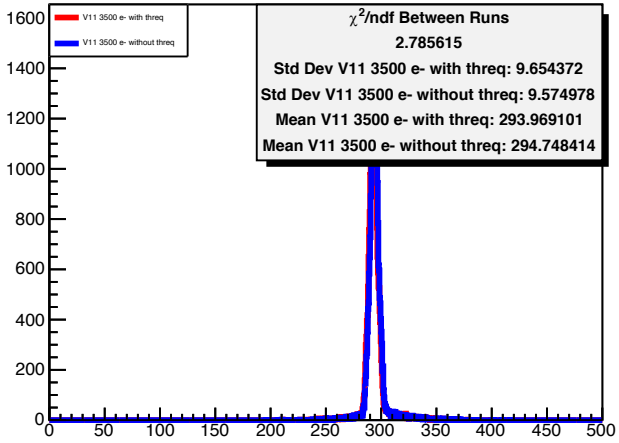
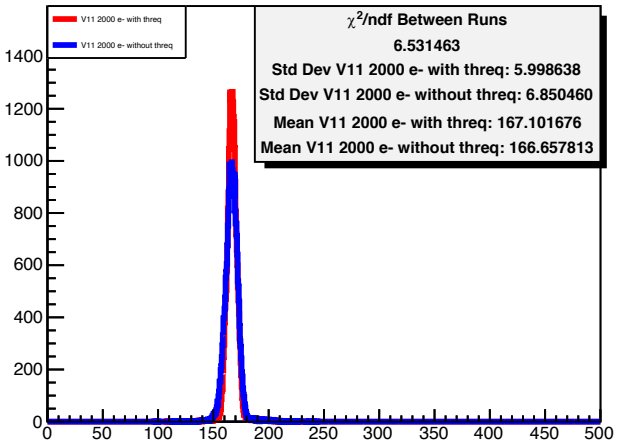


Chip 7



Results – 2000 e-

Chip 4



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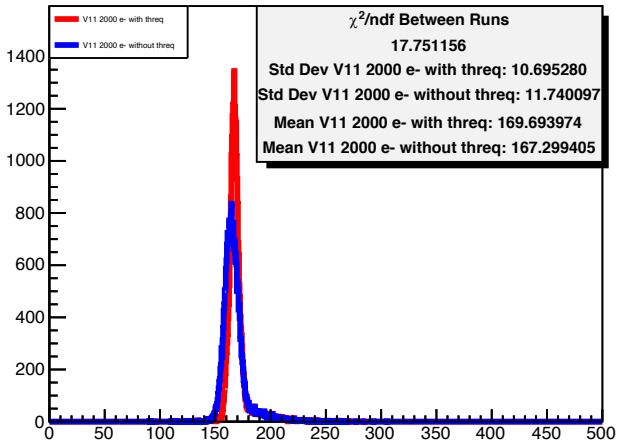

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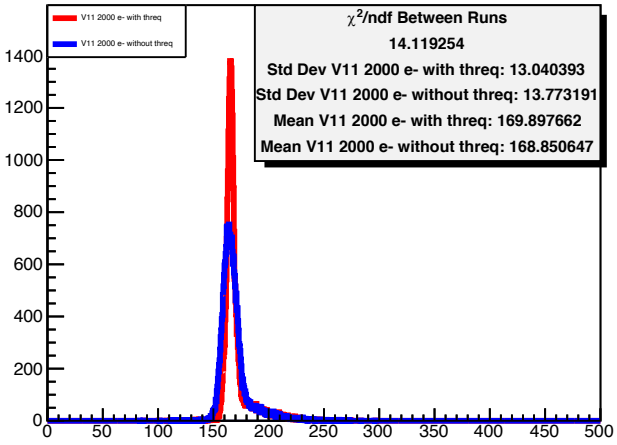
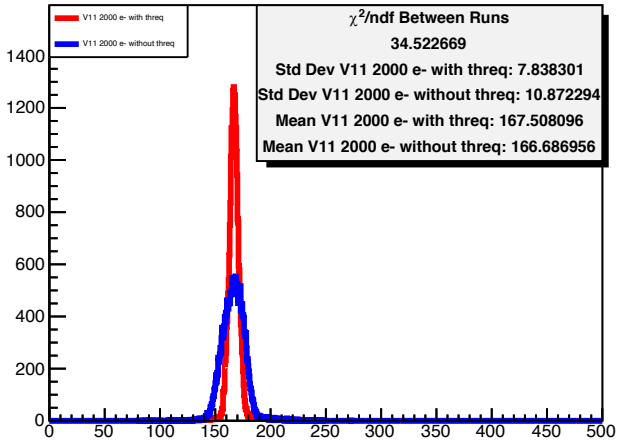
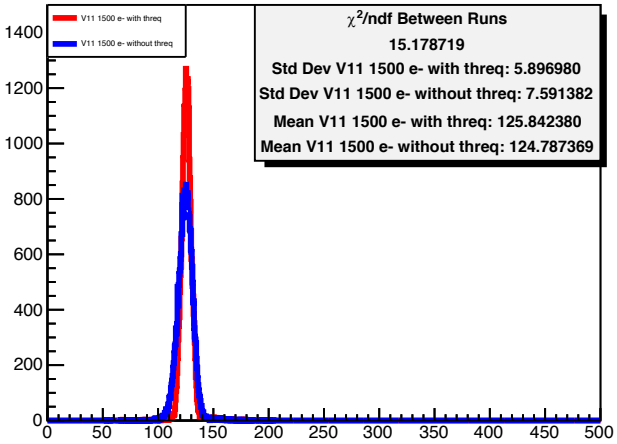


Chip 7

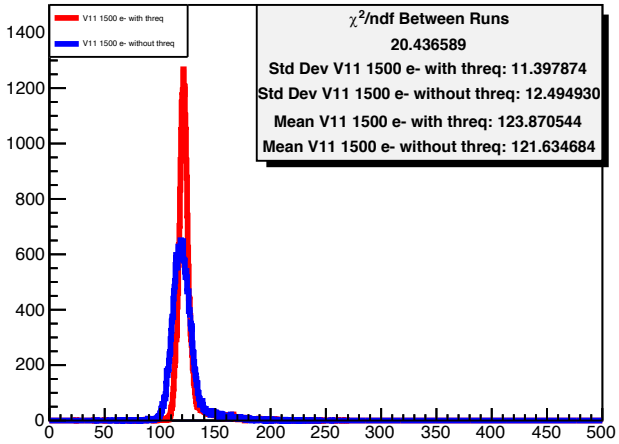


Results – 1500 e-

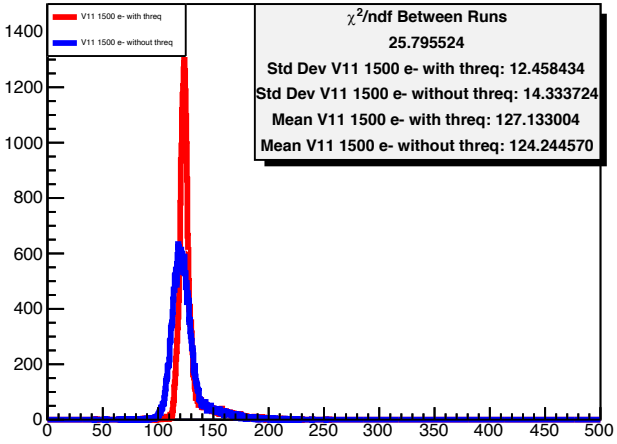
Chip 4



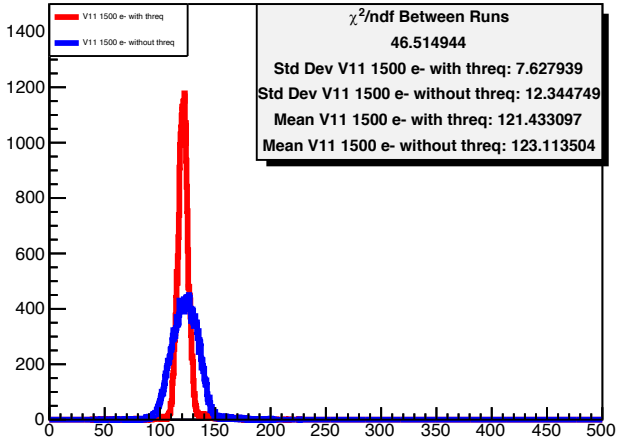
Chip 5



Chip 6

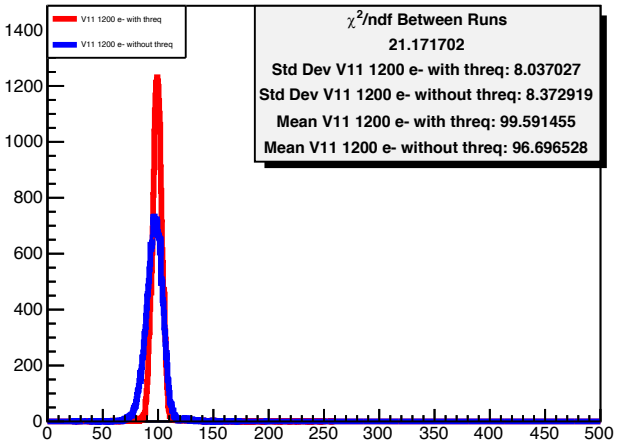


Chip 7

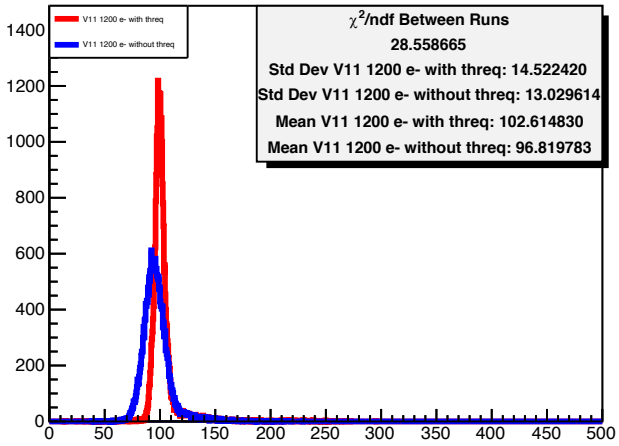


Results – 1200 e-

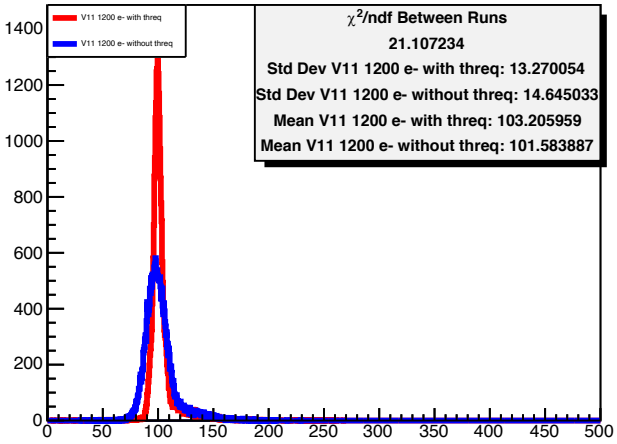
Chip 4



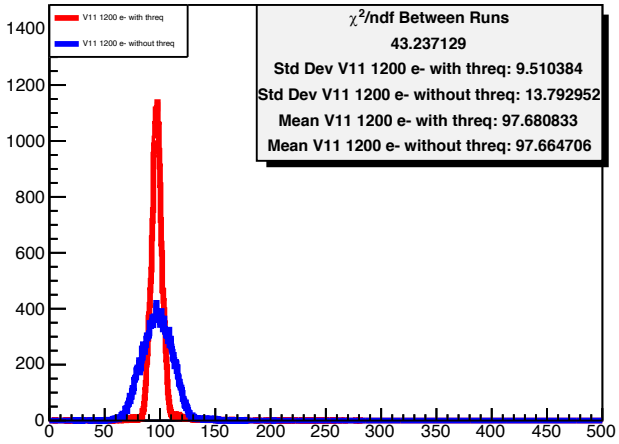
Chip 5



Chip 6

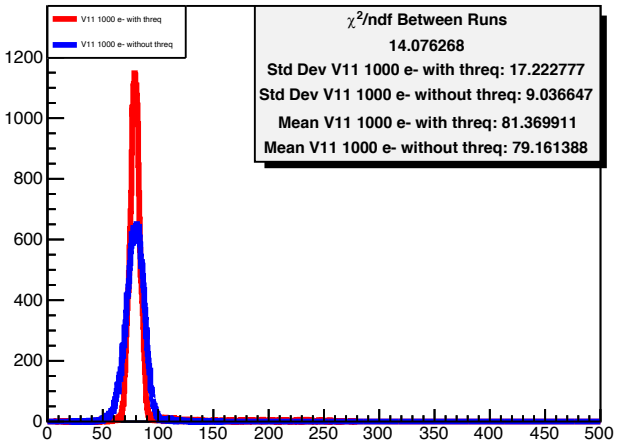


Chip 7

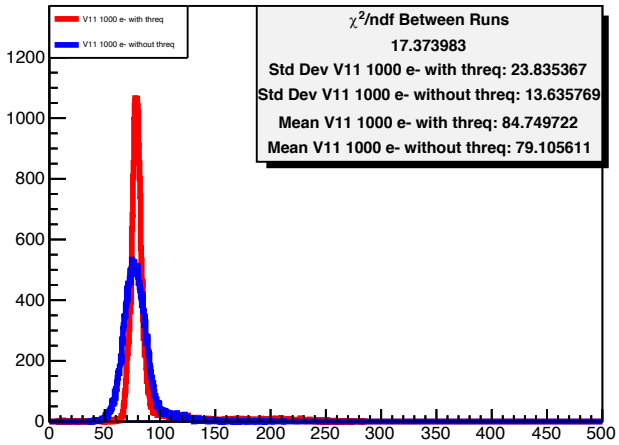


Results – 1000 e-

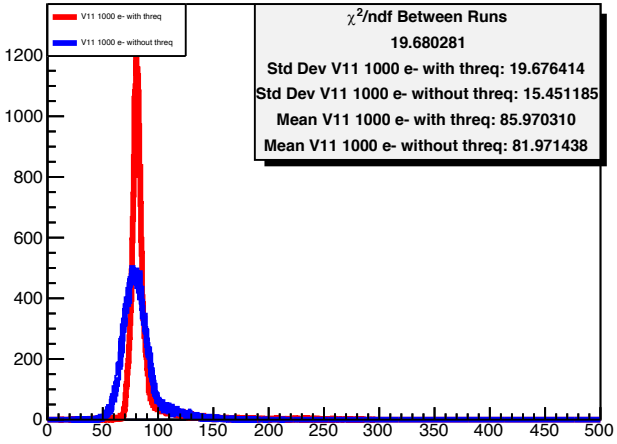
Chip 4



Chip 5



Chip 6



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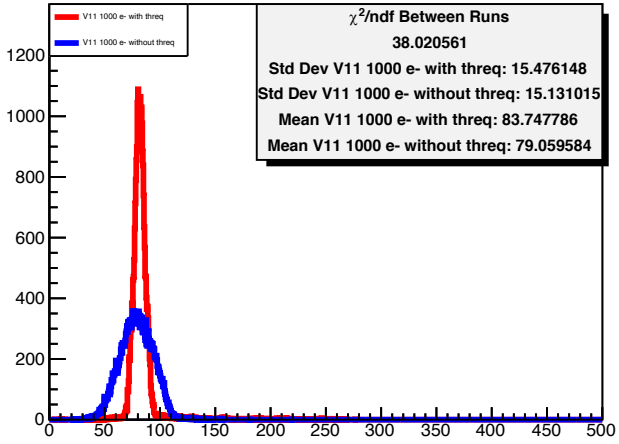

Results

- With threq the thresholds seem to be significantly better
- However, the number of masked pixels also increased significantly

Chip 4:

Masked Pixels	Without threq	With threq
1500 e-	0	0
1200 e-	14	84
1000 e-	91	674

Chip 5:

Masked Pixels	Without threq	With threq
1500 e-	4	76
1200 e-	41	343
1000 e-	693	1360

Chip 6:

Masked Pixels	Without threq	With threq
1500 e-	0	6
1200 e-	3	130
1000 e-	125	531

Chip 7:

Masked Pixels	Without threq	With threq
1500 e-	0	11
1200 e-	11	141
1000 e-	139	533