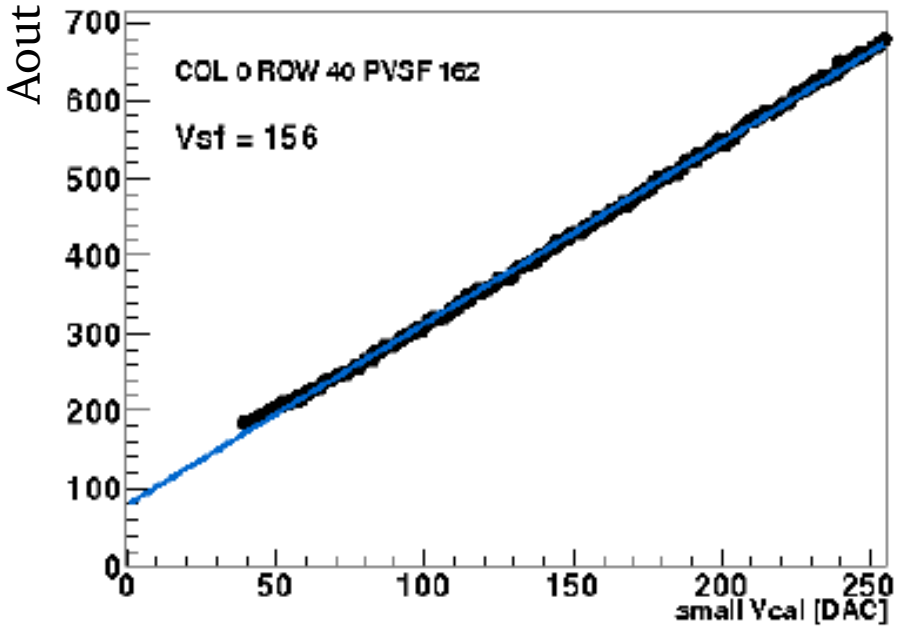
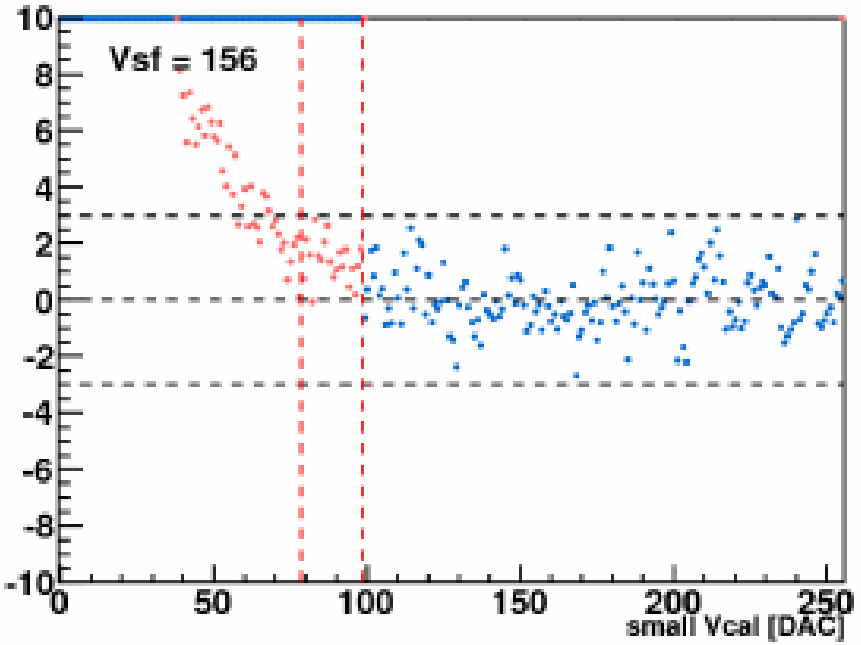
CALibratOR

Habib / Pitzl / Petrukhin

We've assembled two FOMs to tune in order to get the best parameters for the chip:

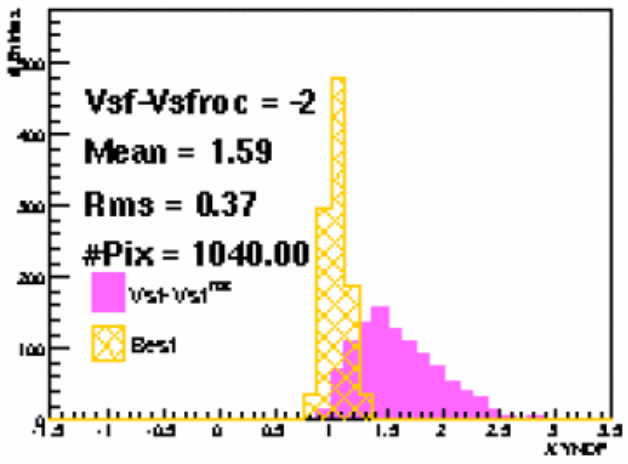
- X^2/dof over full Vcal range
- Number Lost Points

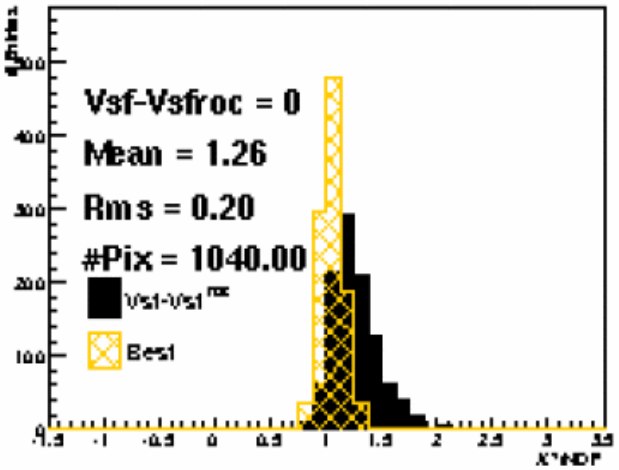


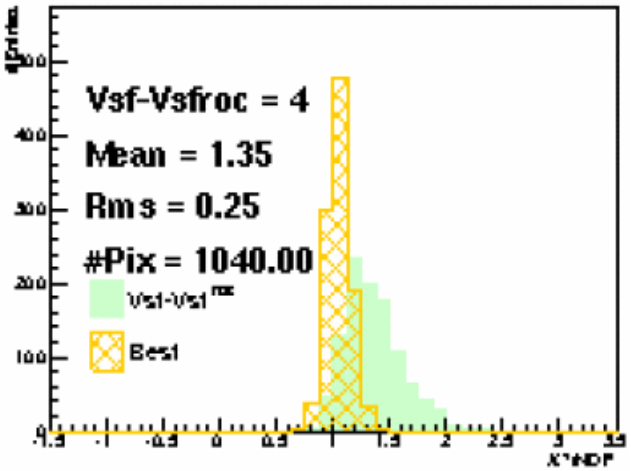


red shows points lost where there are 16 consecutive pulls of the same sign.

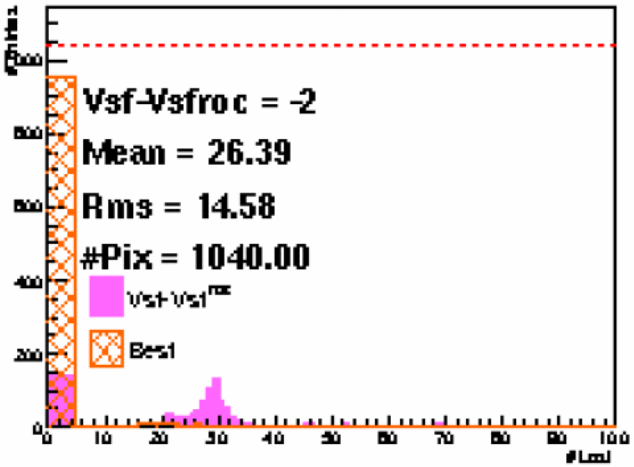
best chi2/dof scan over chip [1040 pix] :

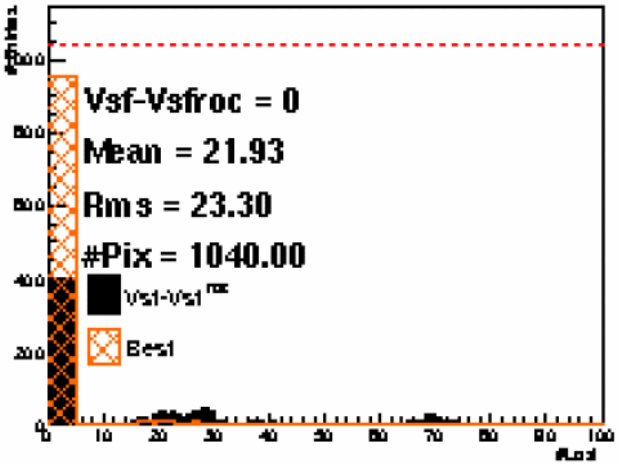


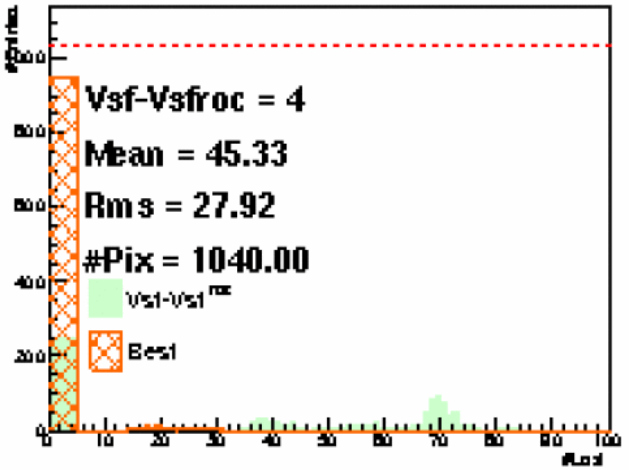




least lost points scan over chip [1040 pix] :







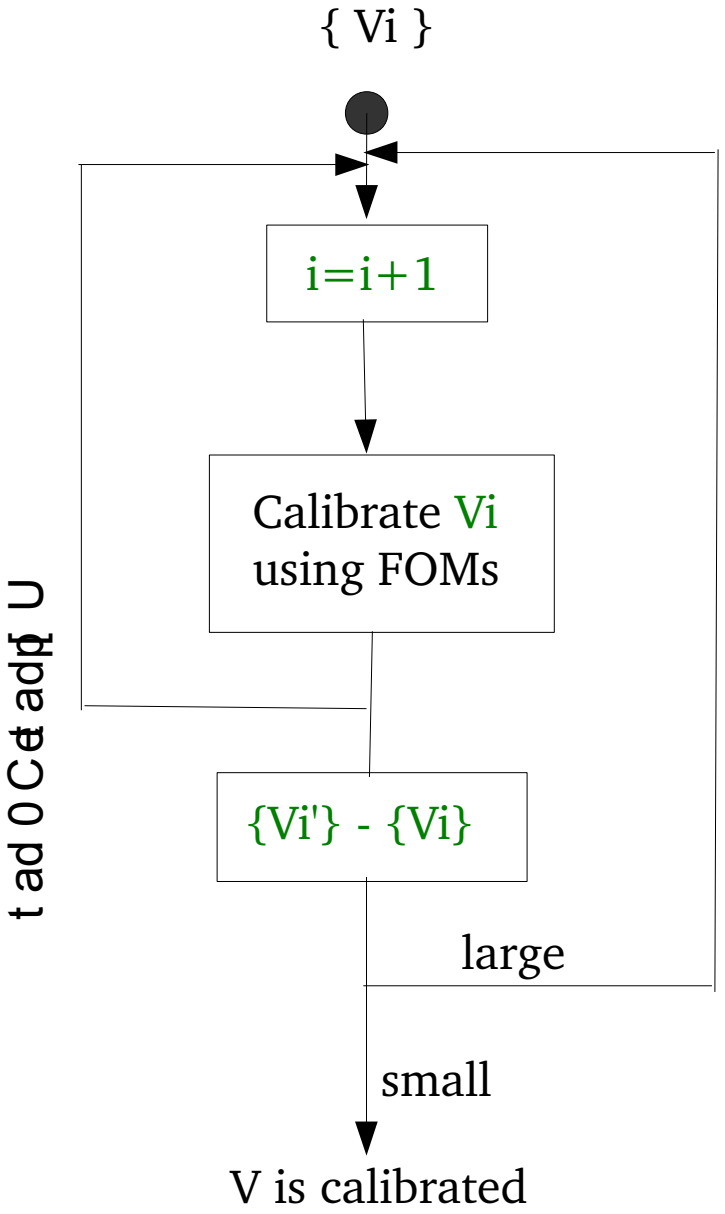
Calor C++ Class

dacParameters_C0.dat

```
1        Vdig   6
2        Vana 150
3         Vsf 156
4       Vcomp  10
5 Vleak_comp   0
6       VrgPr   0
7      VwllPr  35
.
.
.
27  RangeTemp  0
```

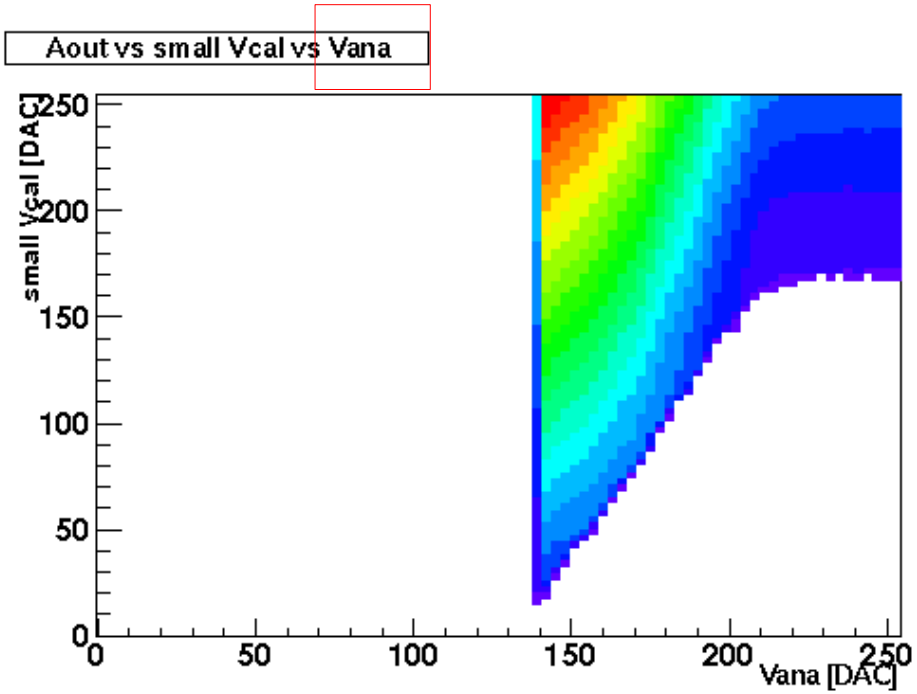
Starting Value of V can also be determine from the Ridge as for Vsf.

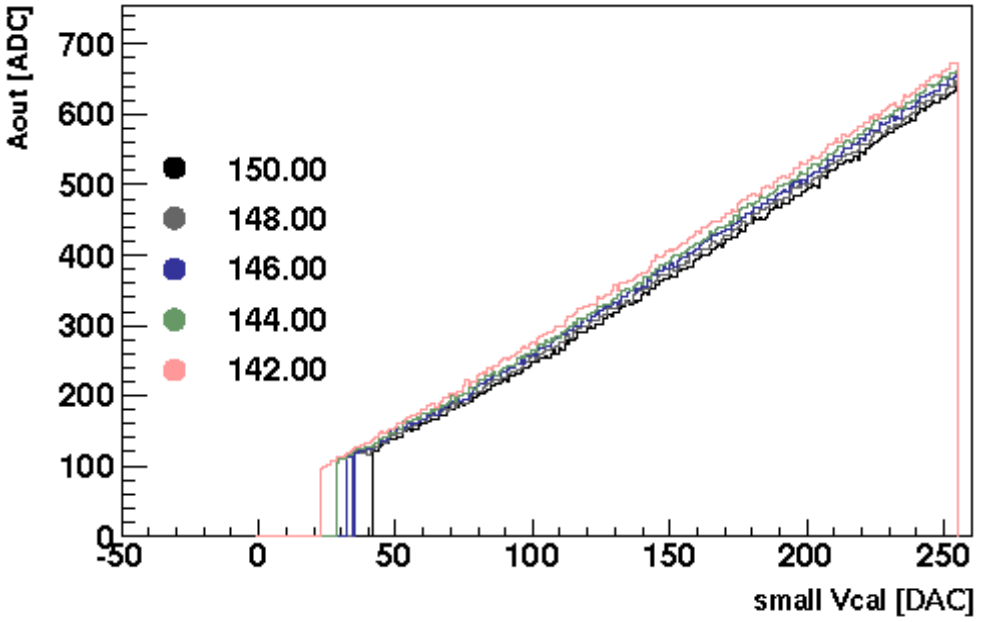
Status : Code is currently being coded.

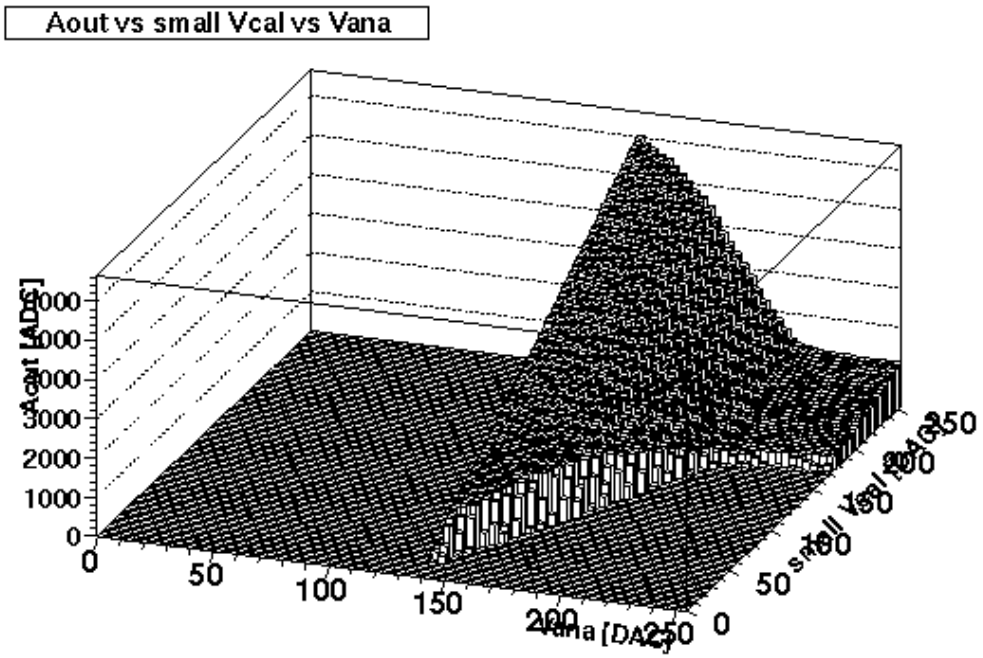


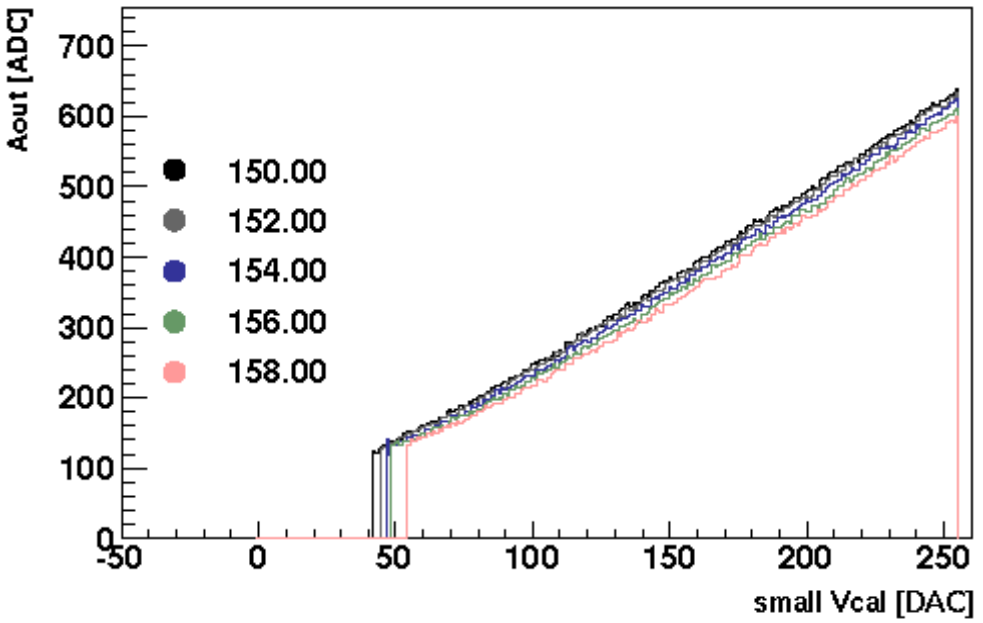
From the literature [various web sources from all over the place] it seems that the 3 main parameters to calibrate are: Vsf , Vana, VhldDel

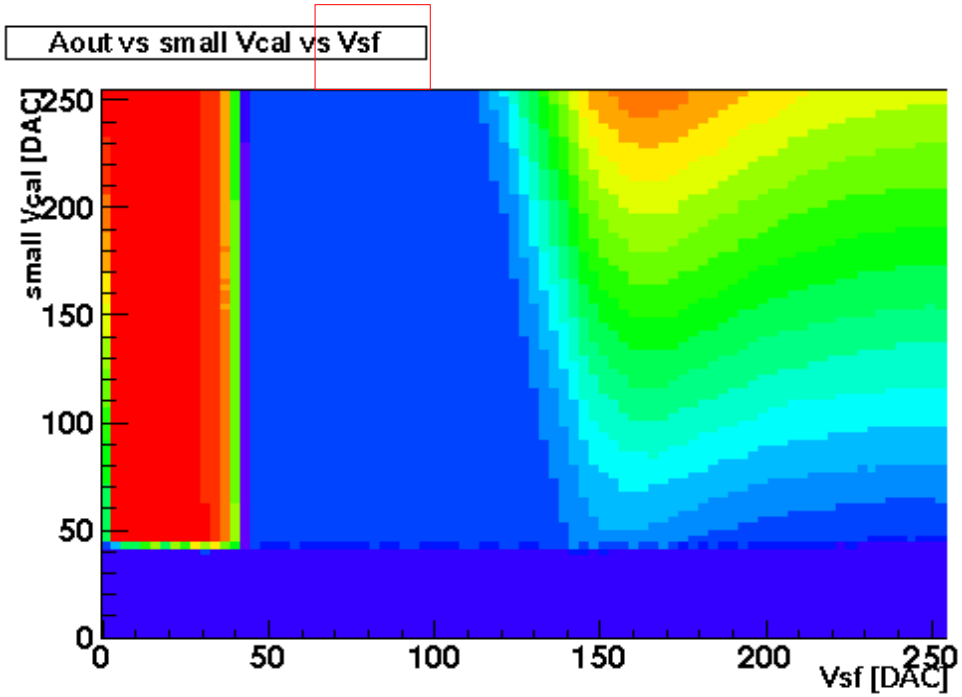
I scanned all 27 parameters to have a feeling if there ought to be other dependencies.

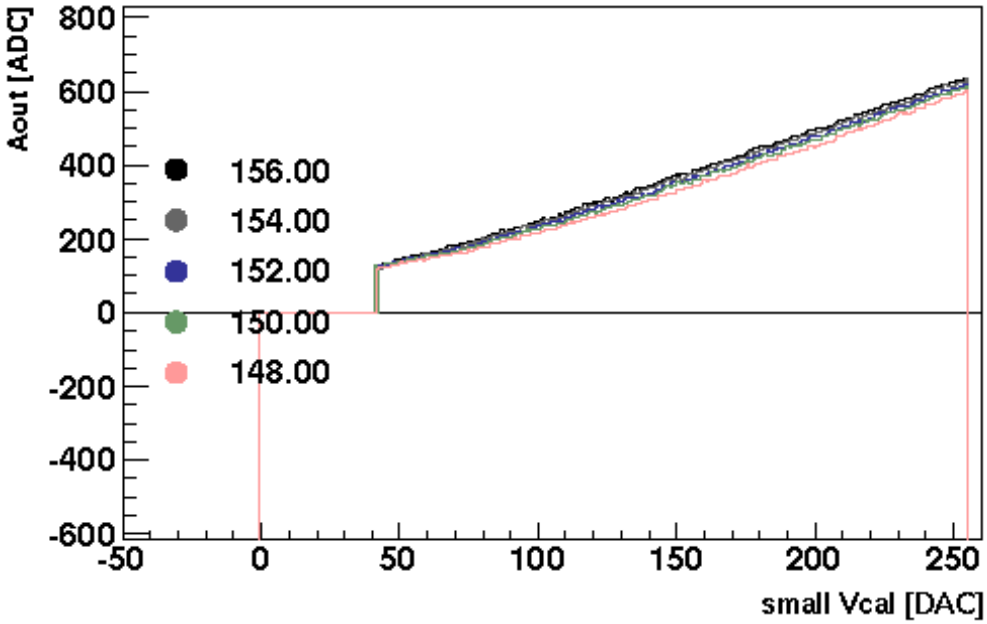

Aout vs small Vcal vs Vana
small Vcal [DAC]
Vana [DAC]

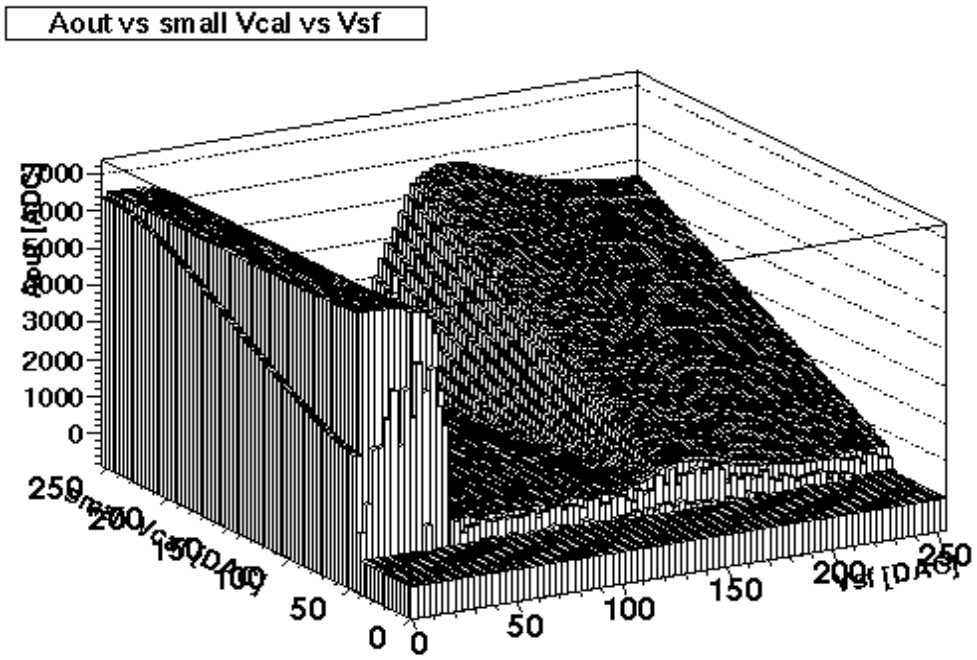

Aout [ADC]
small Vcal [DAC]
150.00
148.00
146.00
144.00
142.00

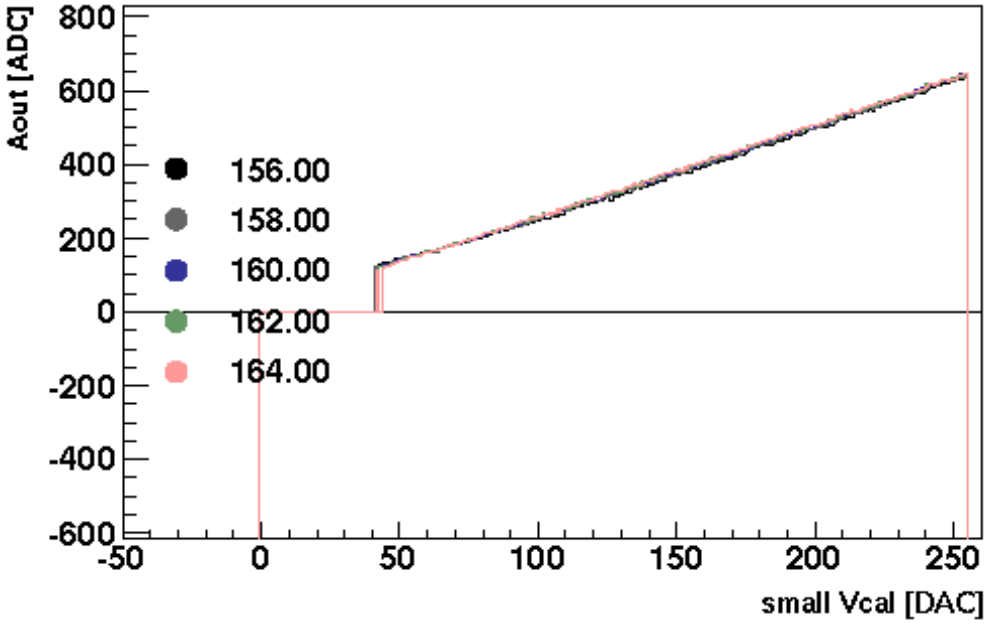

Aout vs small Vcal vs Vana
Aout [ADC]
Vana [DAC]
small Vcal [DAC]

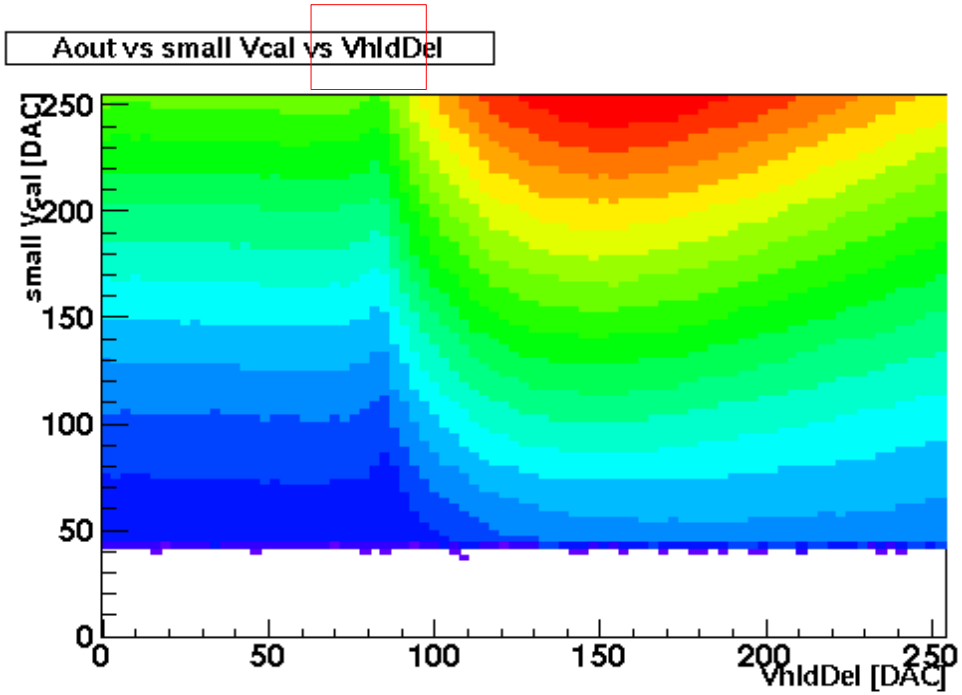

Aout [ADC]
small Vcal [DAC]
150.00
152.00
154.00
156.00
158.00

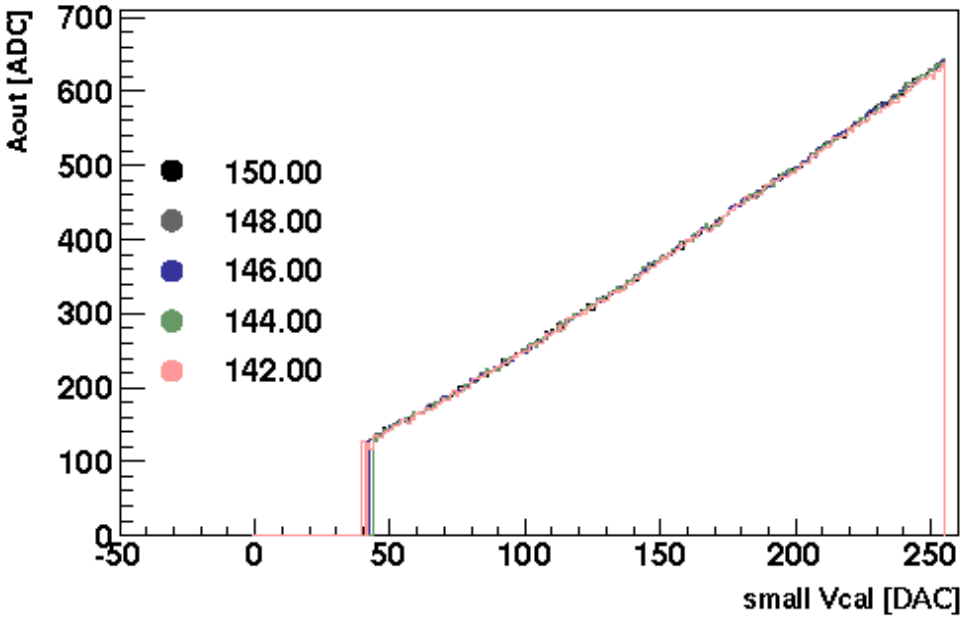

Aout vs small Vcal vs Vsf
small Vcal [DAC]
Vsf [DAC]

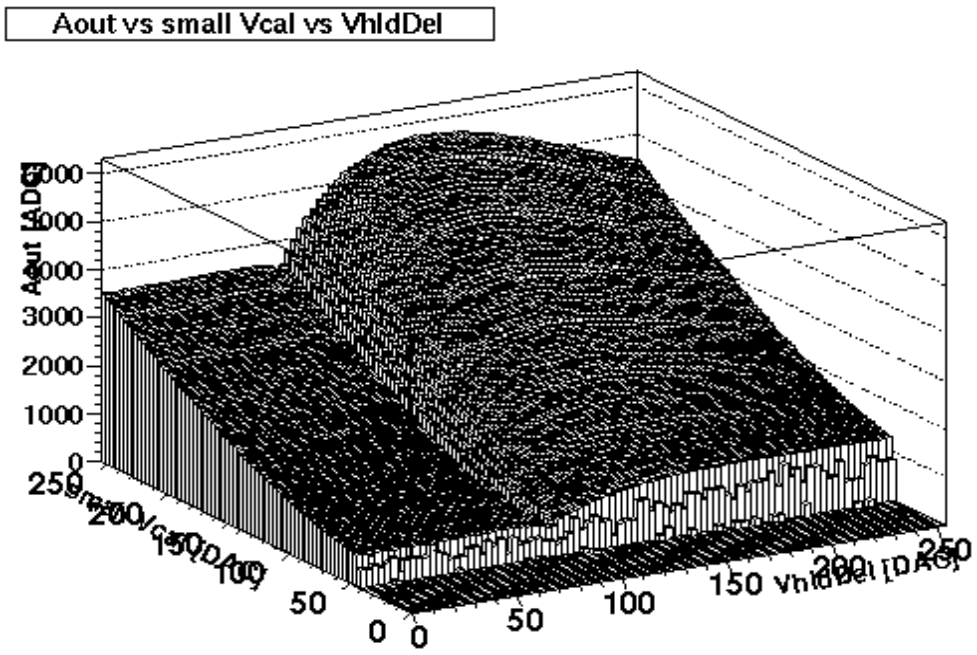

Aout [ADC]
small Vcal [DAC]
156.00
154.00
152.00
150.00
148.00

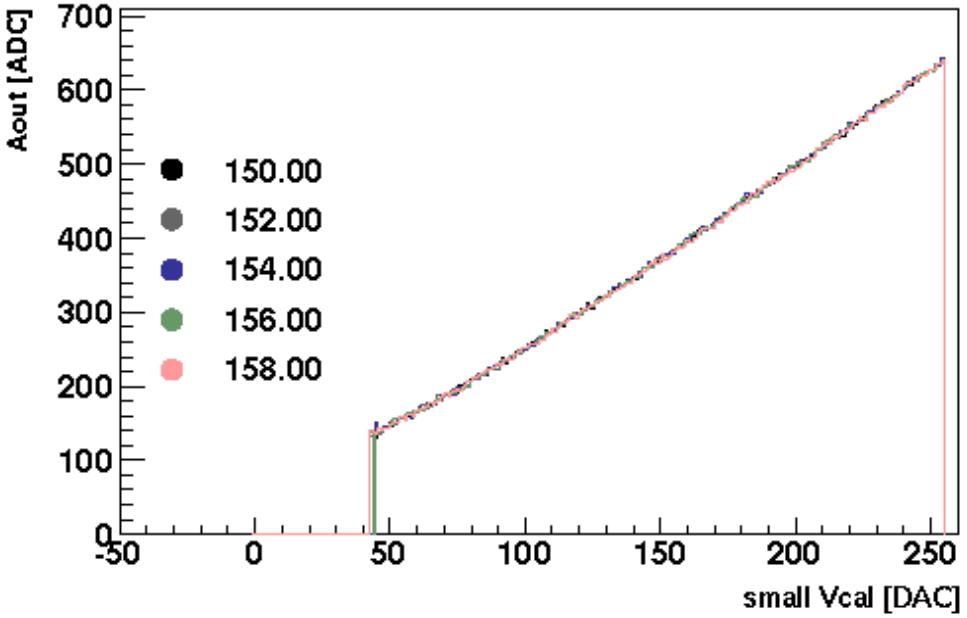

Aout vs small Vcal vs Vsf

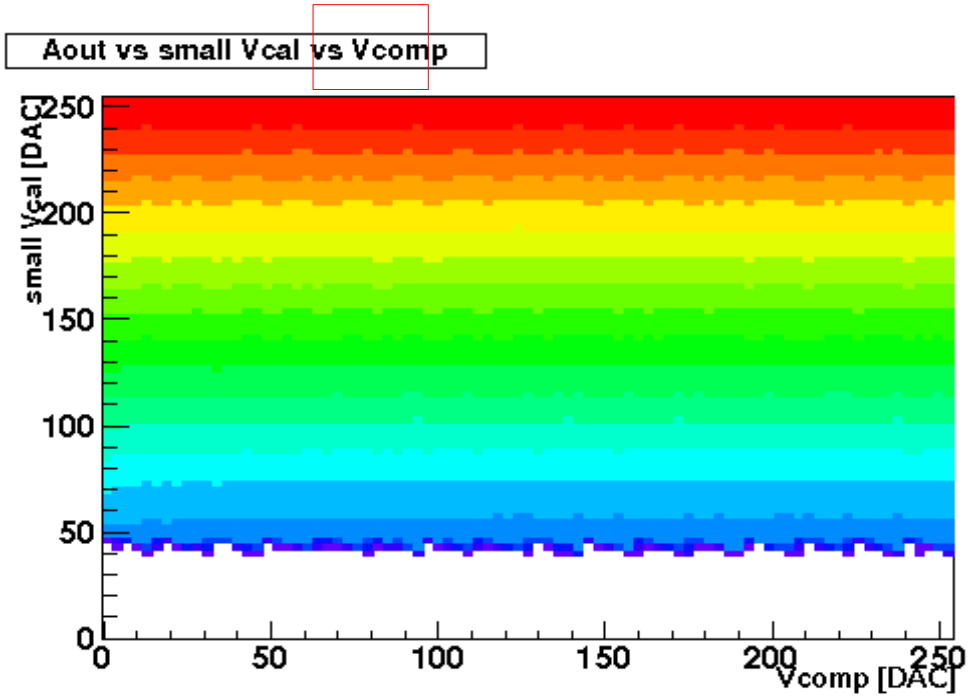

Aout [ADC]
small Vcal [DAC]
156.00
158.00
160.00
162.00
164.00

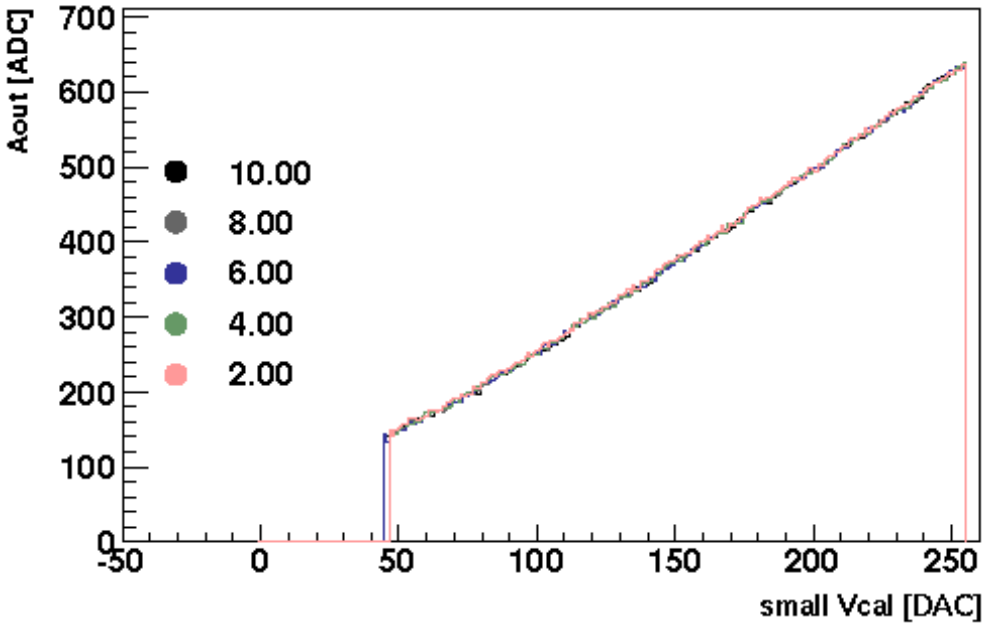

Aout vs small Vcal vs VhldDel
small Vcal [DAC]
VhldDel [DAC]

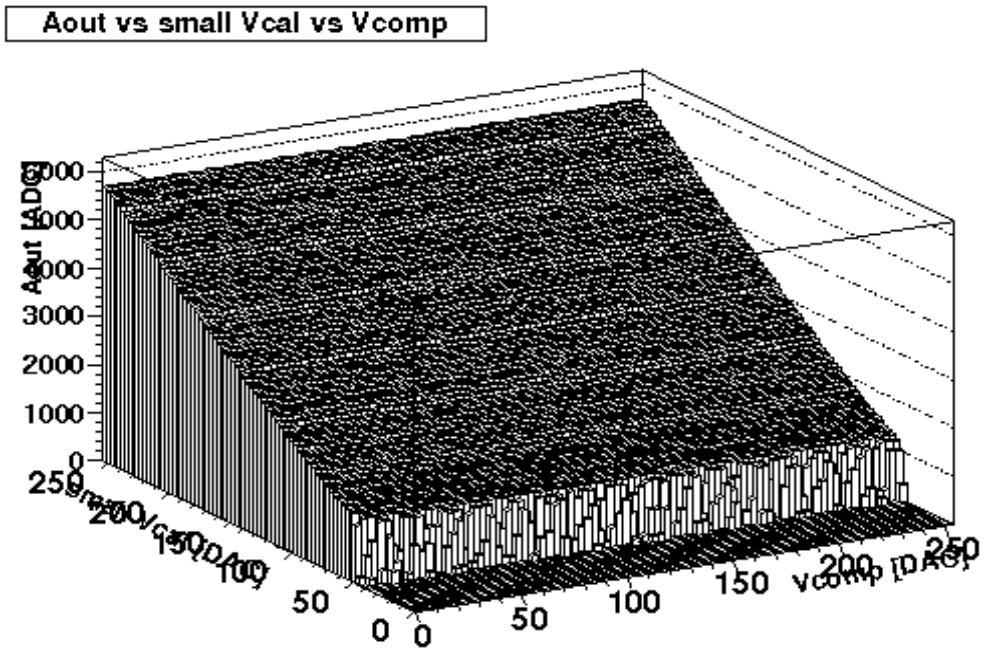

Aout [ADC]
small Vcal [DAC]
150.00
148.00
146.00
144.00
142.00

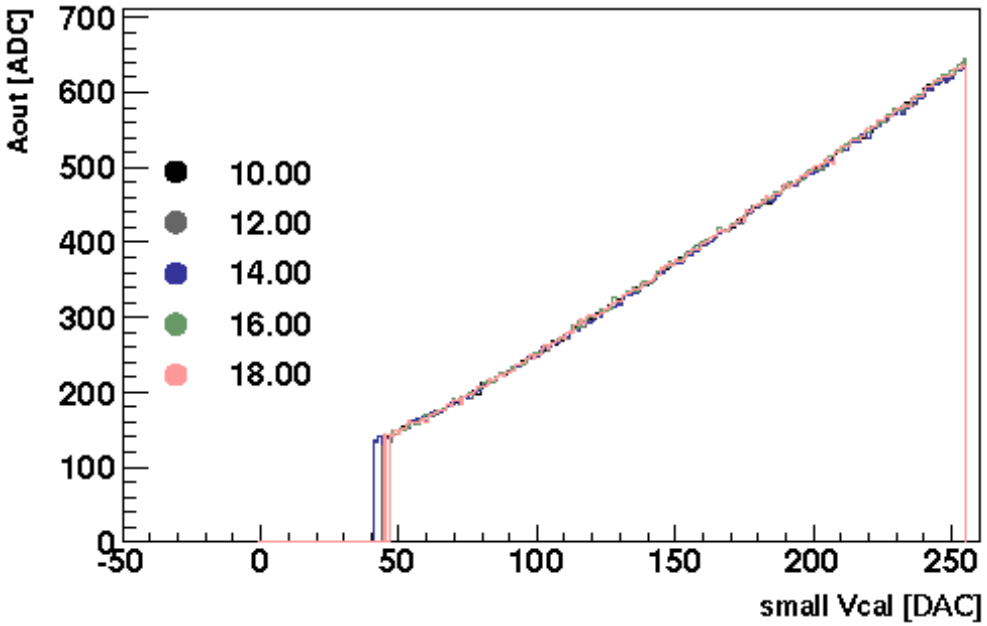

Aout vs small Vcal vs VhldDel
Aout [ADC]
small Vcal [DAC]
VhldDel [DAC]


Aout [ADC]
small Vcal [DAC]
150.00
152.00
154.00
156.00
158.00


Aout vs small Vcal vs Vcomp
small Vcal [DAC]
Vcomp [DAC]


Aout [ADC]
small Vcal [DAC]
10.00
8.00
6.00
4.00
2.00


Aout vs small Vcal vs Vcomp
Aout [ADC]
small Vcal [DAC]
Vcomp [DAC]


Aout [ADC]
small Vcal [DAC]
10.00
12.00
14.00
16.00
18.00

Conclusions :

Code is being written to calibrate ROC for user specified set of DAC Parameters using Chi2/DOF, Number of Lost Points and Ridge Value. [I hope ready by next week]

First look shows tuning variables to be Vsf , Vana and VhldDel.