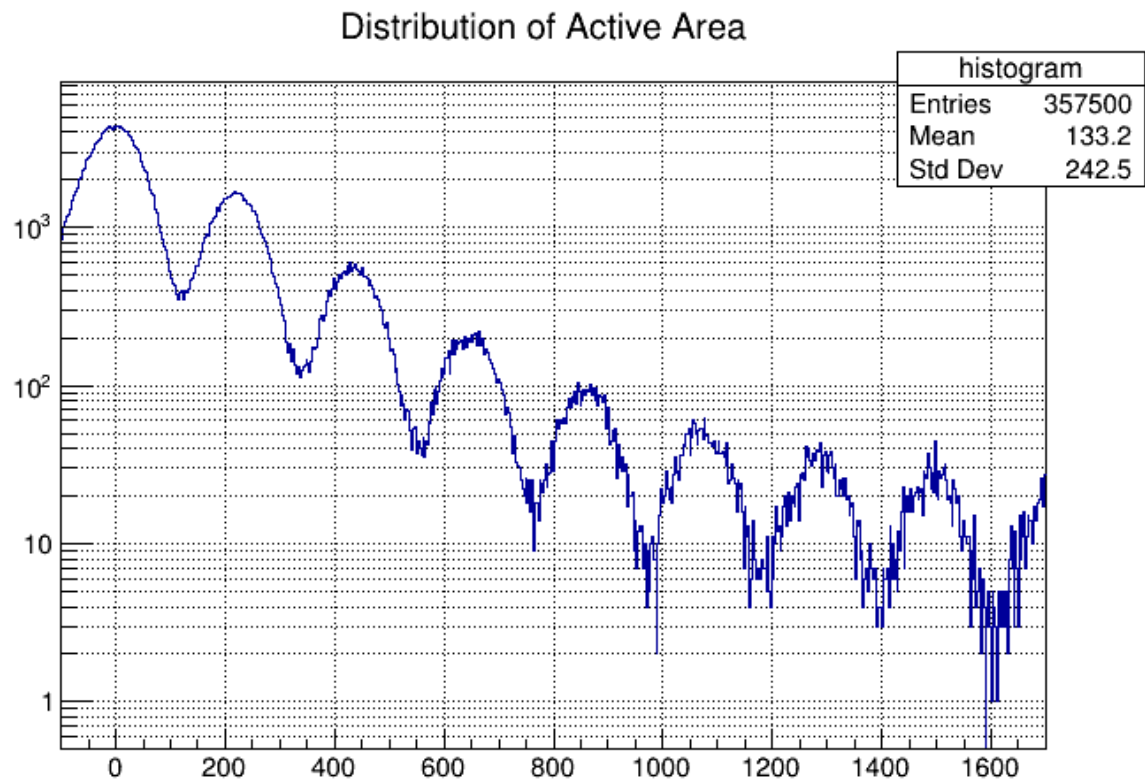


# AVANCES DE TESIS

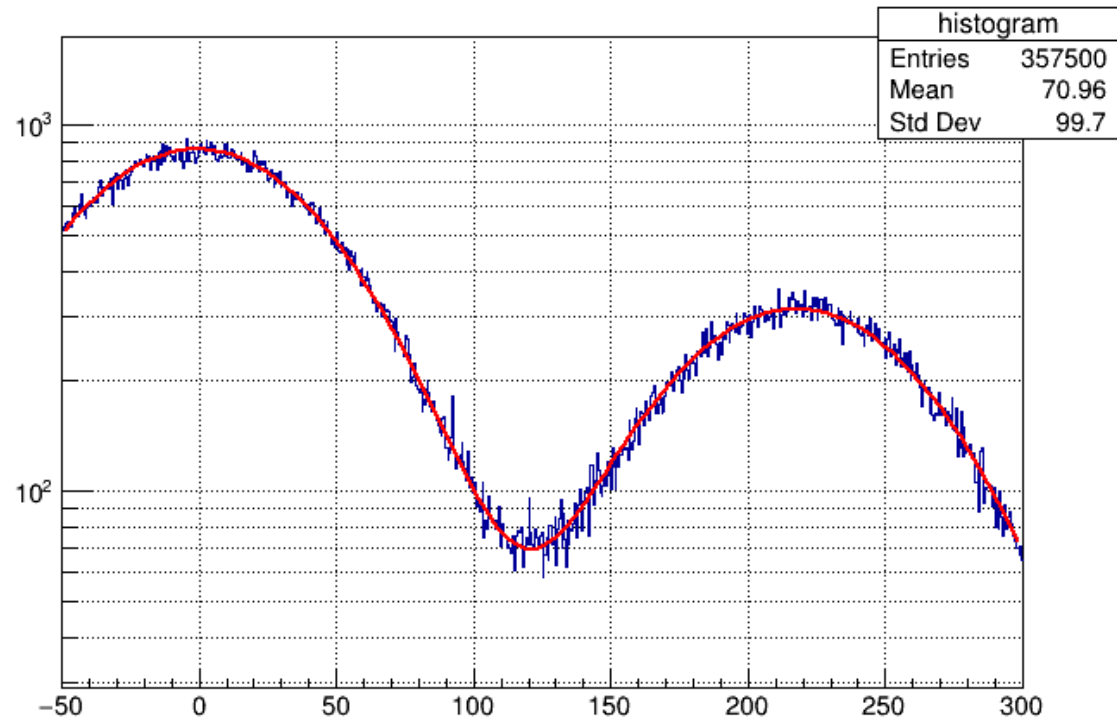
## SEMANA 18/FEB/2025

La simulación de primeros principios ya funciona correctamente en el cluster y tanto los espectros angulares como el de longitudes es el esperado.



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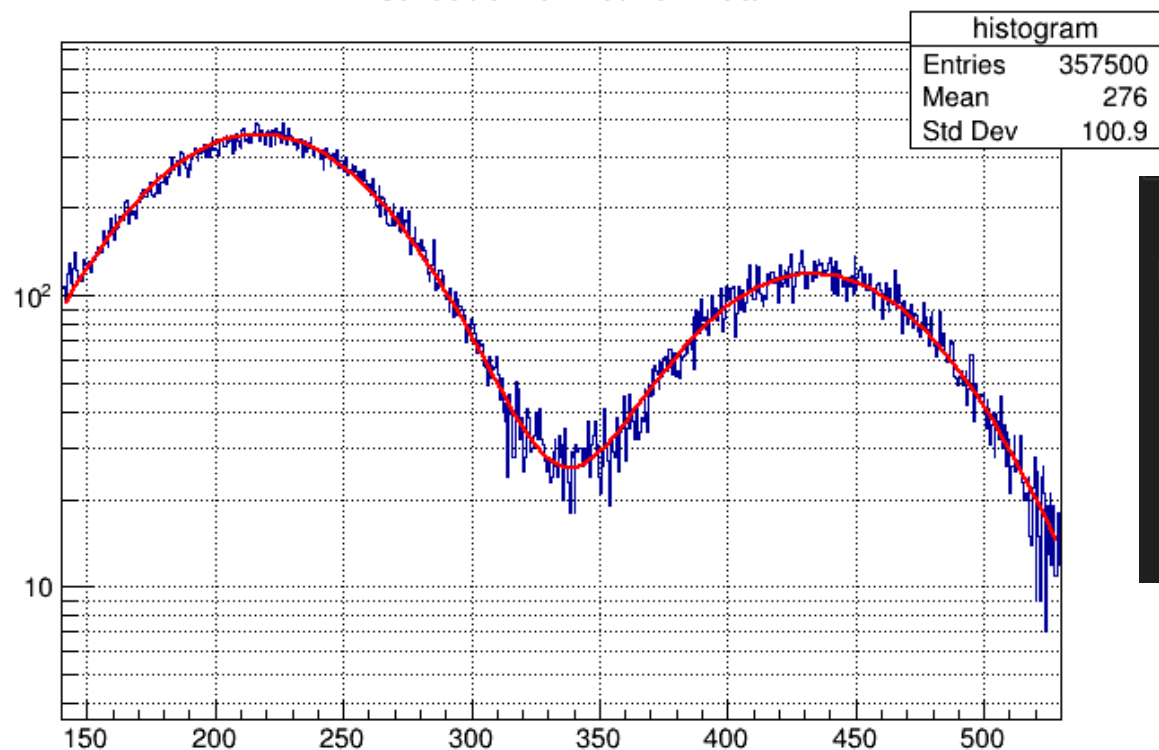
Distribution of Active Area



```
Offset Value: 14920.0 ADUs
Parameters of the Doble-Gaussian Fit
Mean: -0.7504785705212468 +- 0.18707621586172551
Sigma: 47.21552721544298 +- 0.11502714120479024
Gain: 218.44456903345625 +- 0.2891212480741184
First Peak: 856.7670867301733 +- 2.3681895002189597
Second Peak: 313.4632523332622 +- 1.3498370229674255

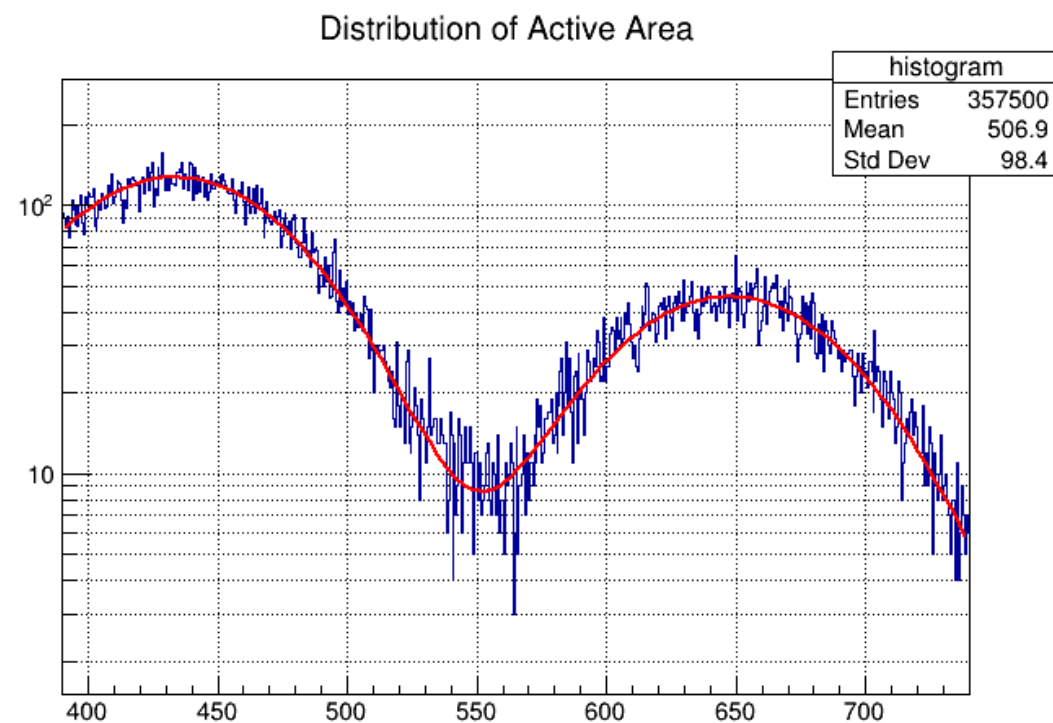
chiSquare: 675.9774089074127
NDegrees of Freedom: 695
chiSquare / NDF : 0.9726293653344068
Prob: 0.6904170085882839
```

Distribution of Active Area



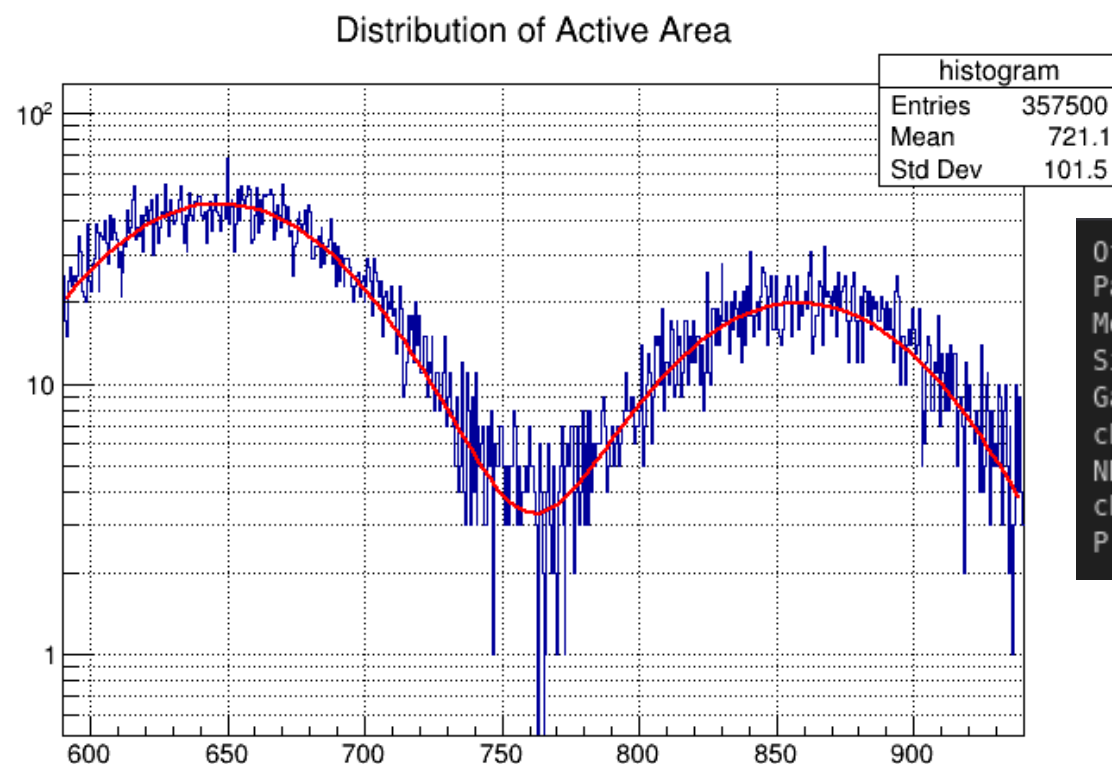
```
Offset Value: 14920.0 ADUs
Parameters of the Doble-Gaussian Fit
Mean: 217.2101176666199 +- 0.21141135958772062
Sigma: 46.148018053968556 +- 0.14278330057010774
Gain: 216.16482732424973 +- 0.382104783117008
First Peak: 355.776201236921 +- 1.593656802961009
Second Peak: 118.48624982046684 +- 0.8478897280396271

chiSquare: 719.2626689997587
NDegrees of Freedom: 695
chiSquare / NDF : 1.0349103151075665
Prob: 0.25424706563425775
```

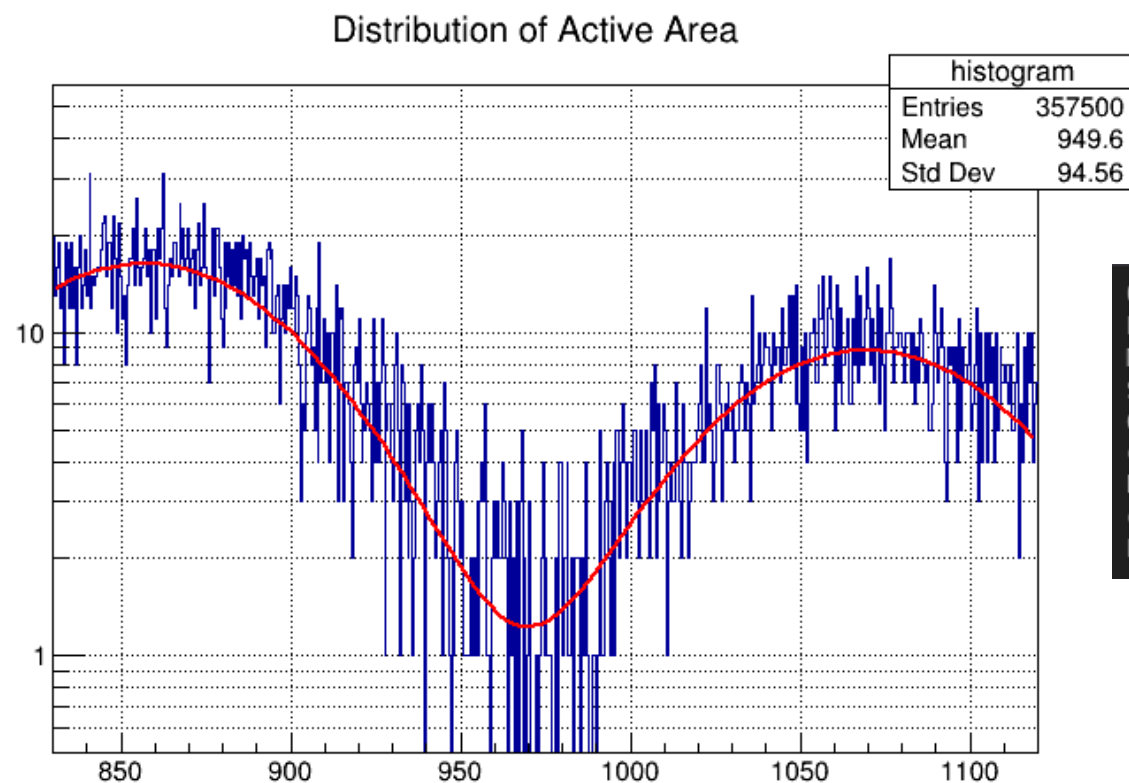


```
Offset Value: 14920.0 ADUs
Parameters of the Doble-Gaussian Fit
Mean: 433.60045105643985 +- 0.5299662086477708
Sigma: 44.81688700484126 +- 0.3008321486588648
Gain: 214.03236114756797 +- 0.7710821735952911
First Peak: 126.63006508999678 +- 1.0048056192510622
Second Peak: 45.50066946728747 +- 0.5665499916199395

chiSquare: 627.3689238290912
NDegrees of Freedom: 595
chiSquare / NDF : 1.0544015526539348
Prob: 0.17333341562749263
```

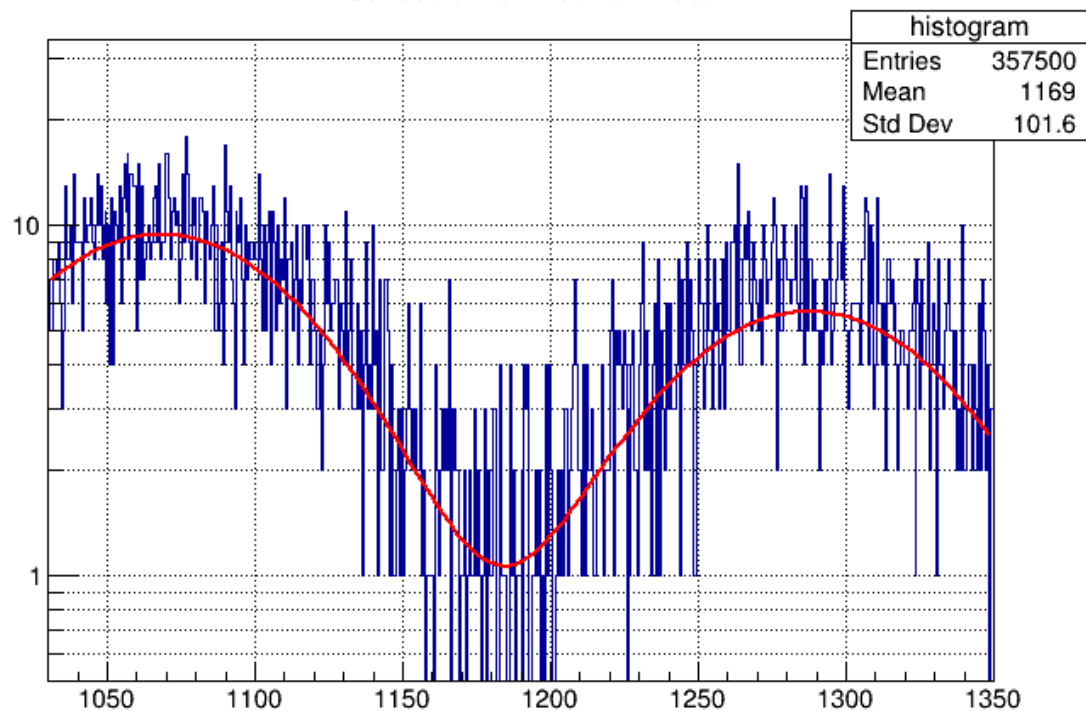


```
Offset Value: 14920.0 ADUs
Parameters of the Doble-Gaussian Fit
Mean: 647.2126403746204 +- 0.7119500457403942
Sigma: 43.92192480792919 +- 0.4341570267205969
Gain: 211.187497704113 +- 1.0907342701955856
chiSquare: 608.1534672016505
NDegrees of Freedom: 593
chiSquare / NDF : 1.0255539075913163
Prob: 0.32432335554435304
```



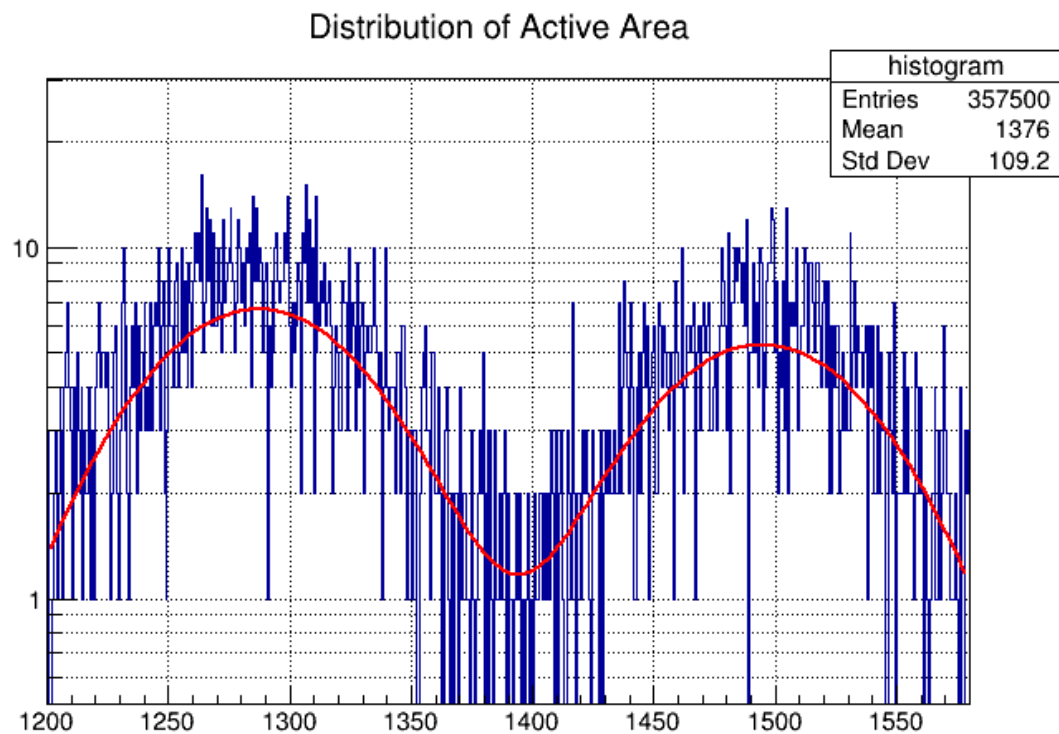
```
Offset Value: 14920.0 ADUs
Parameters of the Doble-Gaussian Fit
Mean: 857.014901448352 +- 1.8691852391090495
Sigma: 43.710502688605324 +- 1.061150897038425
Gain: 212.89974838454248 +- 2.8500215887671176
chiSquare: 575.948580071115
NDegrees of Freedom: 574
chiSquare / NDF : 1.0033947387998519
Prob: 0.46926495329618984
```

Distribution of Active Area

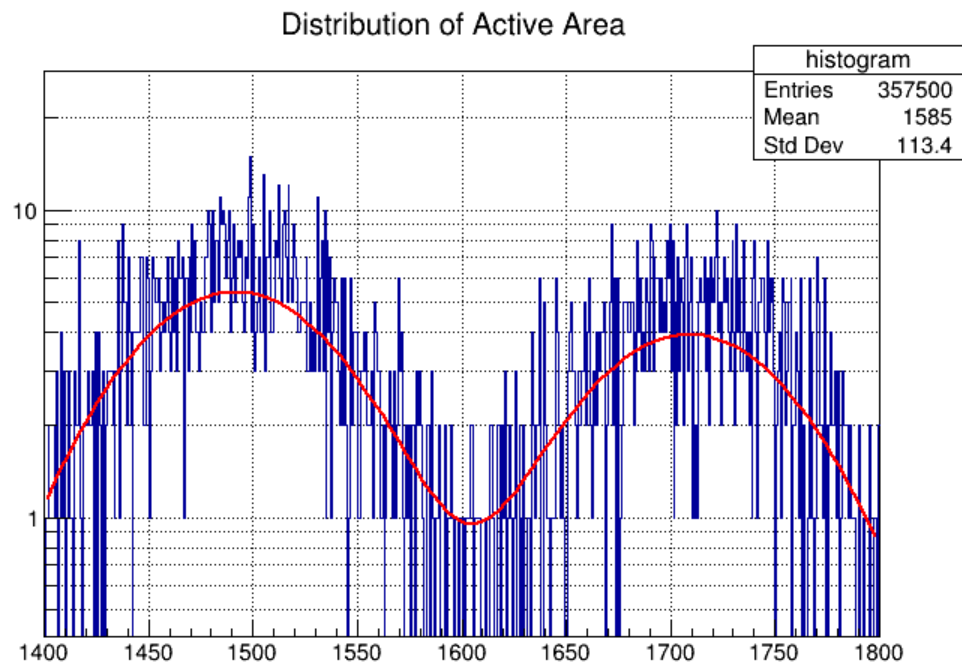


```
Offset Value: 14920.0 ADUs
Parameters of the Doble-Gaussian Fit
Mean: 1068.5032475447056 +- 2.241154413882677
Sigma: -47.90737104282194 +- 1.3789201204616823
Gain: 219.11003955671325 +- 3.2121821830724526
chiSquare: 574.7216154966413
NDegrees of Freedom: 573
chiSquare / NDF : 1.0030045645665644
Prob: 0.4718997271943704
```



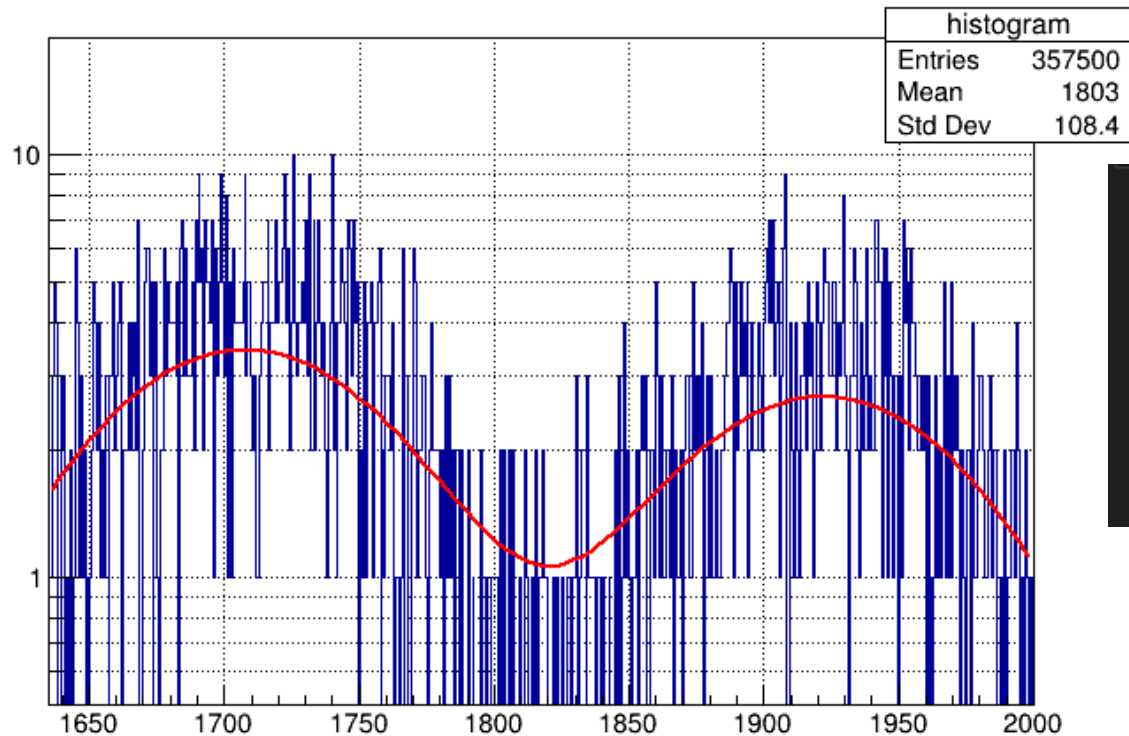


```
Offset Value: 14920.0 ADUs
Parameters of the Doble-Gaussian Fit
Mean: 1287.198673880863 +- 1.6836718915995887
Sigma: 48.22992169412573 +- 1.1830257730599236
Gain: 207.65125491168848 +- 2.473494459279309
chiSquare: 586.6462355109123
NDegrees of Freedom: 557
chiSquare / NDF : 1.053224839337365
Prob: 0.18597278575577394
```



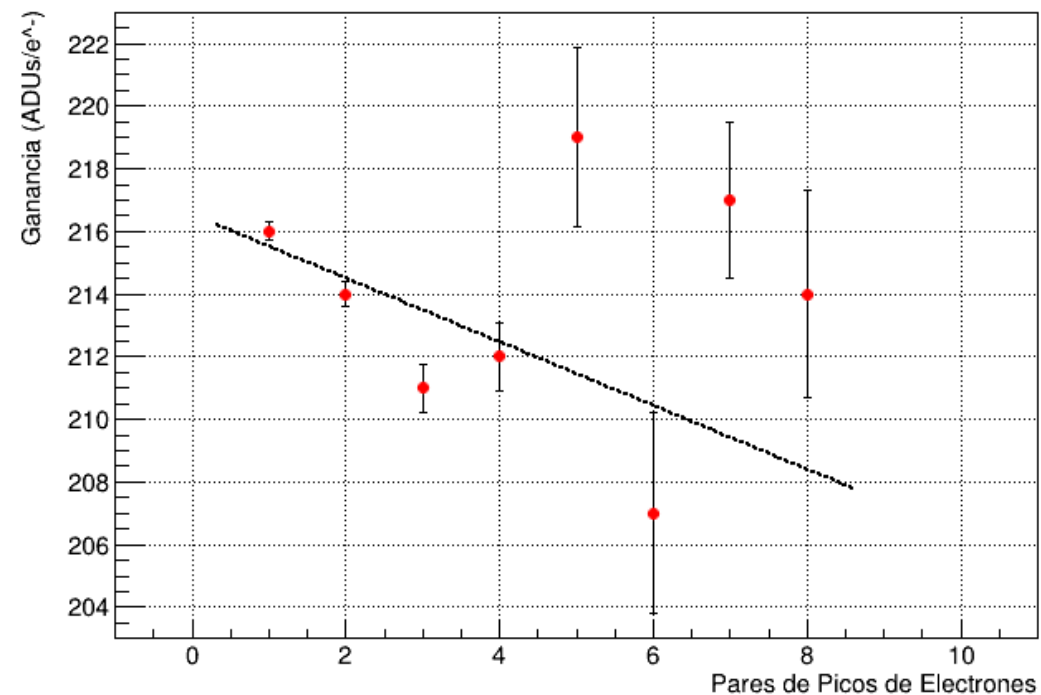
```
Offset Value: 14920.0 ADUs
Parameters of the Doble-Gaussian Fit
Mean: 1491.6534667250064 +- 1.9765238091596495
Sigma: 51.07213533015128 +- 1.5503368838139178
Gain: 217.54349803952695 +- 3.3171719311232986
chiSquare: 473.11244680593217
NDegrees of Freedom: 520
chiSquare / NDF : 0.9098316284729465
Prob: 0.9304618557845058
```

Distribution of Active Area



Offset Value: 14920.0 ADUs  
Parameters of the Doble-Gaussian Fit  
Mean: 1707.5298727349068 +- 3.5971055556342155  
Sigma: 57.59553800573005 +- 2.6141379345090994  
Gain: 214.9123410651628 +- 5.216407115934723  
chiSquare: 382.14183376078444  
NDegrees of Freedom: 496  
chiSquare / NDF : 0.7704472454854525  
Prob: 0.9999546520229895

# Curva de Electrones



## Parameters of the Fit

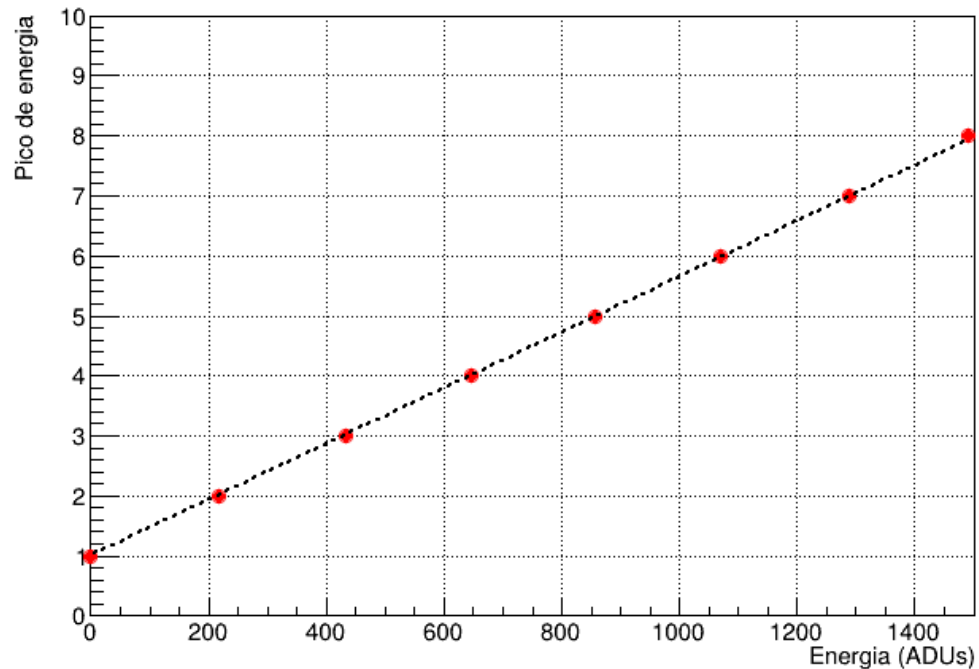
Origen: 216.53946426901 +- 0.40159085233487296  
Pend: -1.0166122100398591 +- 0.19955255966336652  
chiSquare: 35.4808703849618  
NDegrees of Freedom: 6  
chiSquare / NDF : 5.913478397493633  
Prob: 3.4768909385202316e-06

FCN=35.4809 FROM MIGRAD STATUS=CONVERGED 35 CALLS 36 TOTAL  
EDM=5.95235e-20 STRATEGY= 1 ERROR MATRIX ACCURATE

EXT NO.	PARAMETER NAME	VALUE	ERROR	STEP SIZE	FIRST DERIVATIVE
1	p0	2.16539e+02	4.01591e-01	6.31295e-04	1.06926e-09
2	p1	-1.01661e+00	1.99553e-01	3.13694e-04	3.11449e-09

Warning in <TCanvas::Constructor>: Deleting canvas with same name: c2

# Curva de Electrones



## Parameters of the Fit

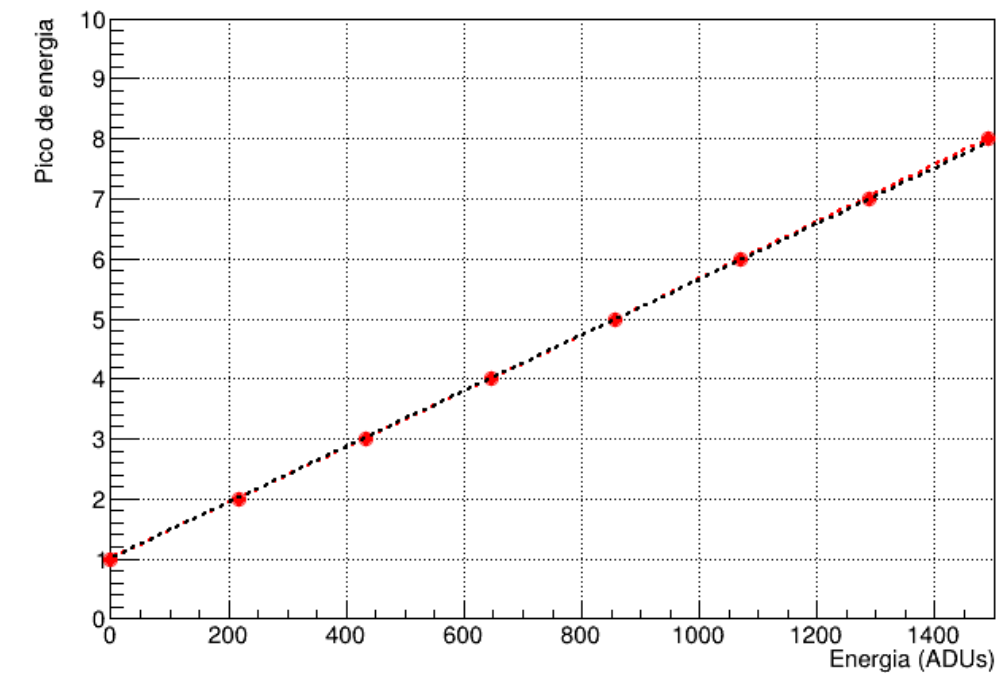
Origen: 0.998342630085829 +- 0.0007290753242036732  
Pend: 0.004642978194825908 +- 2.7706277407006454e-06  
chiSquare: 210.69554981268215  
NDegrees of Freedom: 6  
chiSquare / NDF : 35.115924968780355  
Prob: 1.0011701556693258e-42

FCN=210.696 FROM MIGRAD STATUS=CONVERGED 99 CALLS 100 TOTAL  
EDM=2.95624e-07 STRATEGY= 1 ERROR MATRIX ACCURATE

EXT	PARAMETER	VALUE	ERROR	STEP	FIRST
NO.	NAME			SIZE	DERIVATIVE
1	p0	9.98343e-01	7.29075e-04	4.25916e-06	-1.27427e+00
2	p1	4.64298e-03	2.77063e-06	1.61872e-08	-1.59382e+02

Warning in <TCanvas::Constructor>: Deleting canvas with same name: c2

# Curva de Electrones



```
Parameters of the Non-linear Fit
Origen: 1.003086758999477 +- 0.0007925600226322601
Pend: 0.004576728062600133 +- 5.434066427999075e-06
Non-linear term: -1.6137303445862074e-05 +- 1.158470378035804e-06
chiSquare: 16.80051387232579
NDegrees of Freedom: 5
chiSquare / NDF : 3.360102774465158
Prob: 0.004894086560871949
```