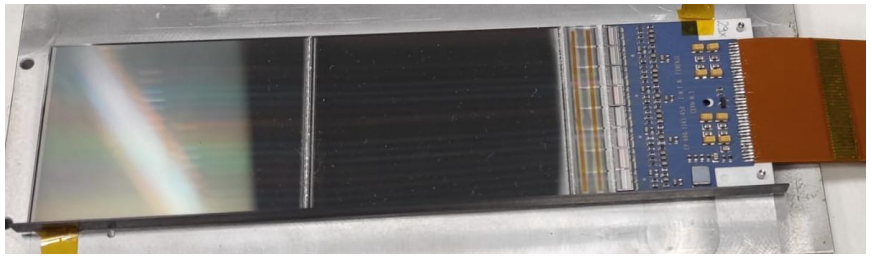
ACROMASS
Moduli tracciantI

25 Febbraio 2025

Piani traccianti

- ADAMO:
  - 3: tra i migliori dopo il primo test, non lavorato, ora non funzionante
  - 4: tra i migliori dopo il primo test, OK
  - 7: un chip con sigma a 0, OK
  - 8: un chip con ped e sigma a 0, OK
  - 2: 2 chip x a guadagno ridotto, metà y con sigma alte e ped strani

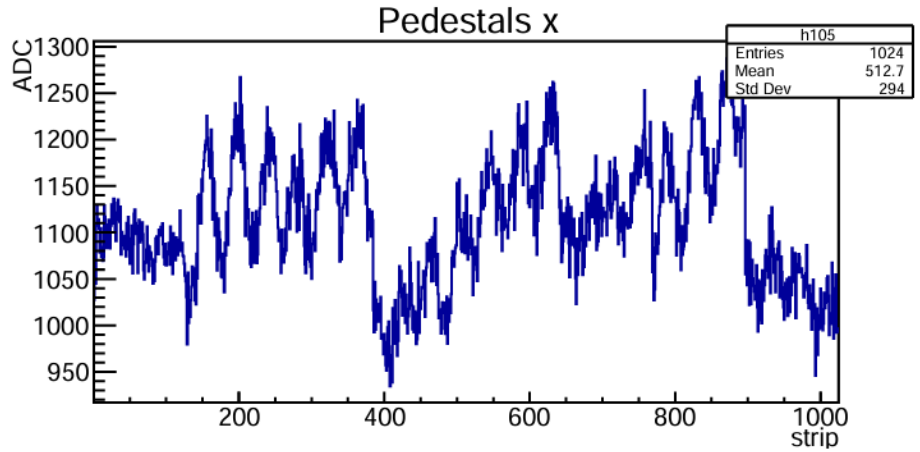
- PAMELA:
  - 29: rottura x dopo 4h di acquisizione continuata
  - 39: OK
  - 22: assemblato nuovo partendo da ibrido, OK
  - C1: non funzionante

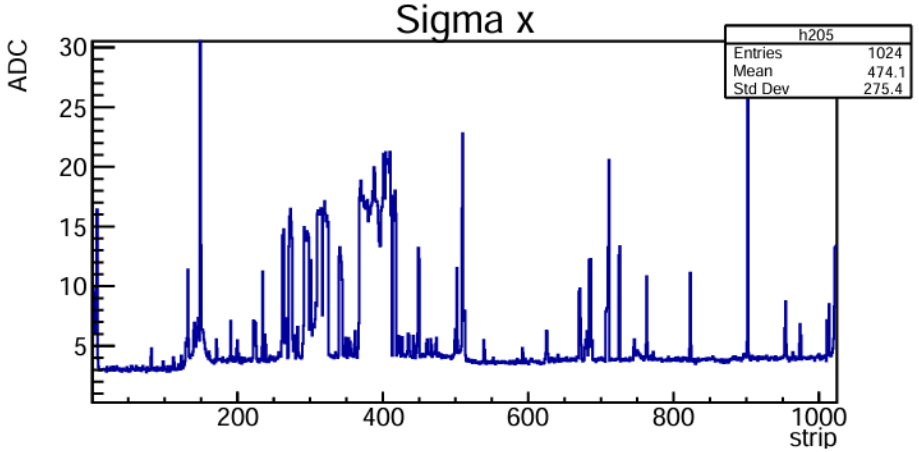


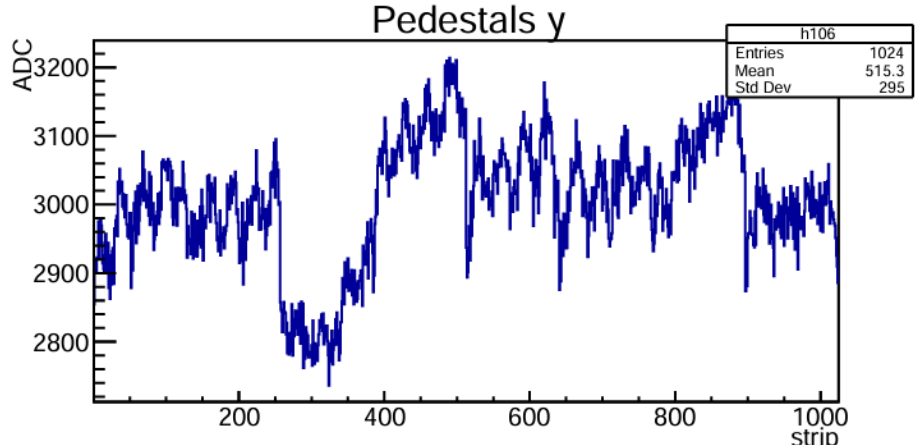
- Ibridi:
  - 40: buono ma molte riparazioni su lato x, OK
  - 20, 23, 28, 30: problemi da test miei o del 2001
  - 41: non funzionante chip 2x
  - 43: non funzionante chip 4y e 8y

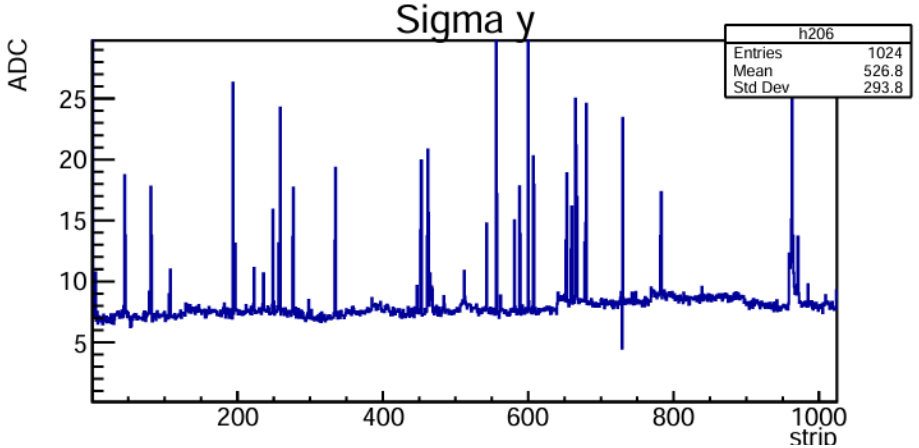
C1, 40, 41, 43 non danneggiati dopo 25 ore di alimentazione

Modulo 3 – pre rotture

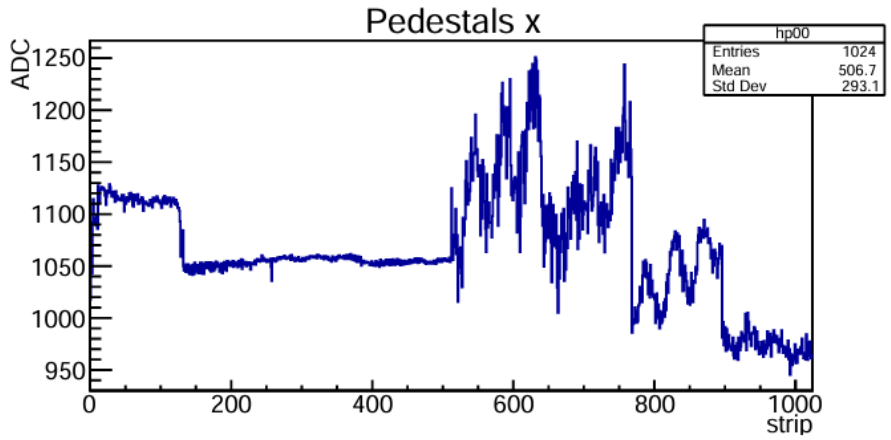


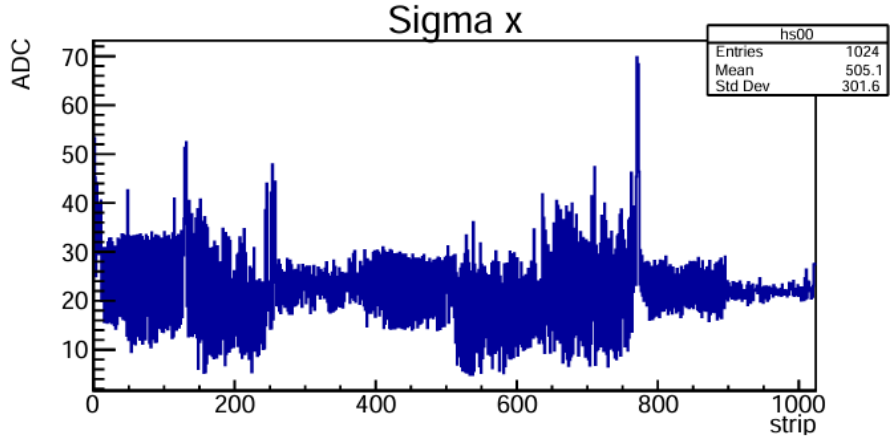


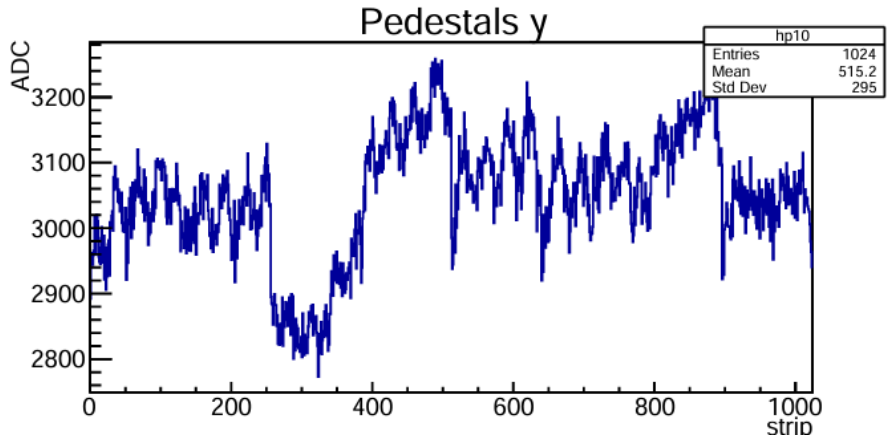


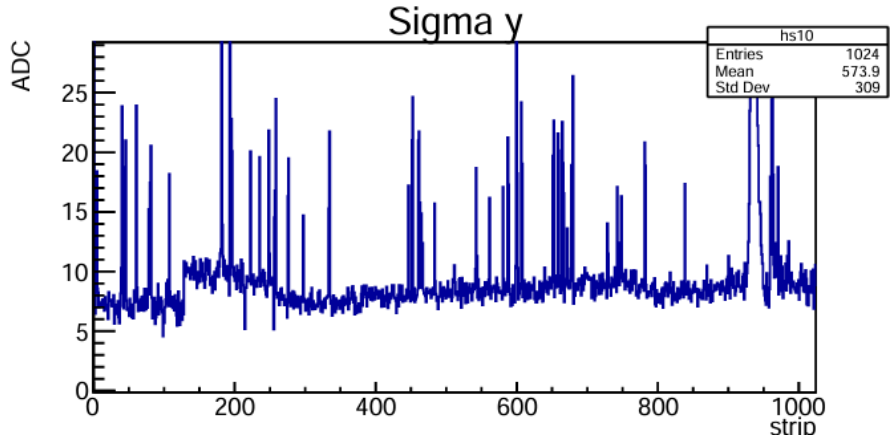


Modulo 3 – 11Feb25

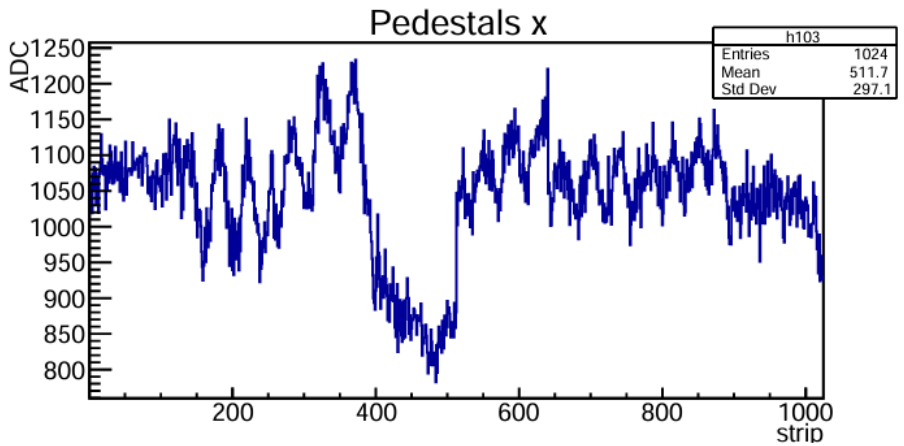


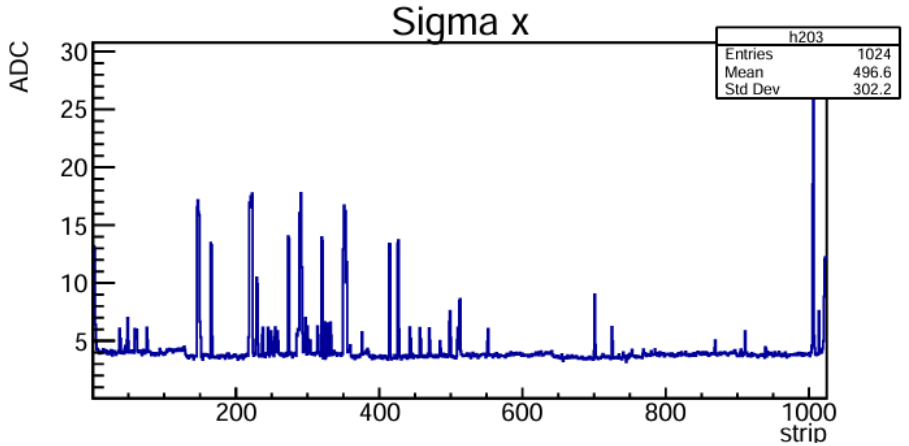






Modulo 4


Pedestals x
h103
Entries 1024
Mean 511.7
Std Dev 297.1
ADC
strip


Sigma x
h203
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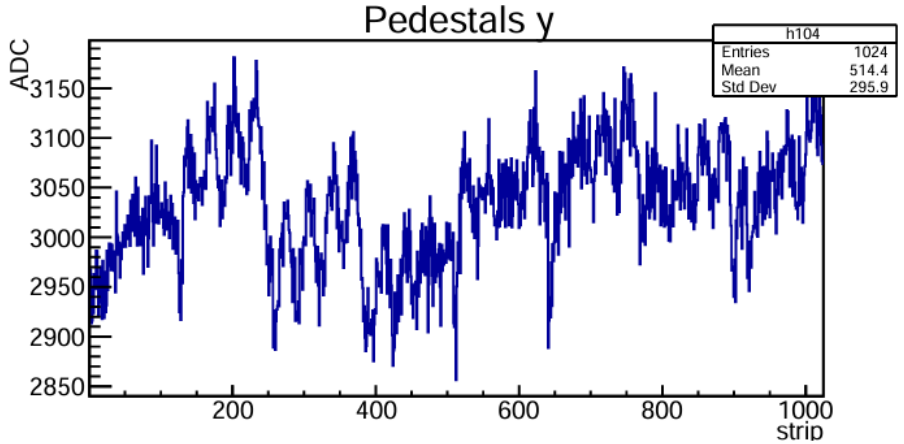
Mean 496.6
Std Dev 302.2
ADC
strip


Pedestals y
h104
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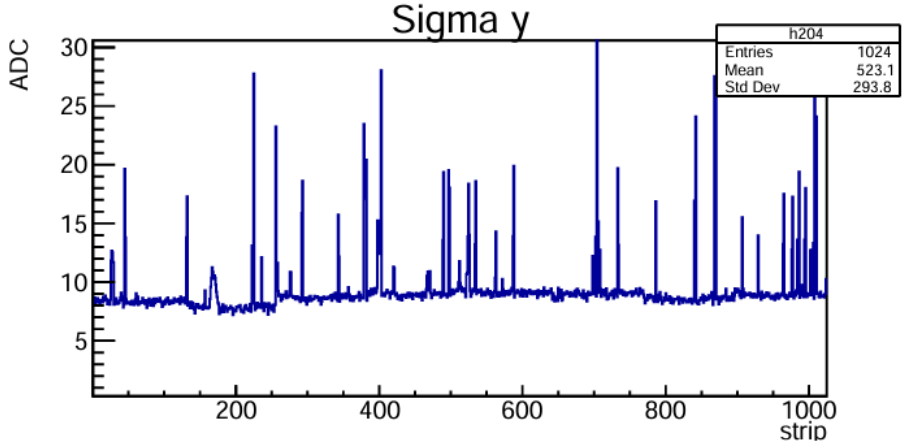
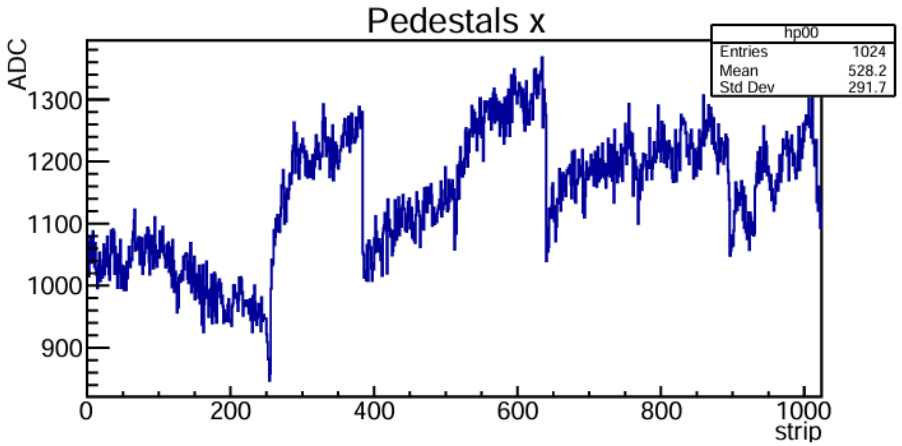
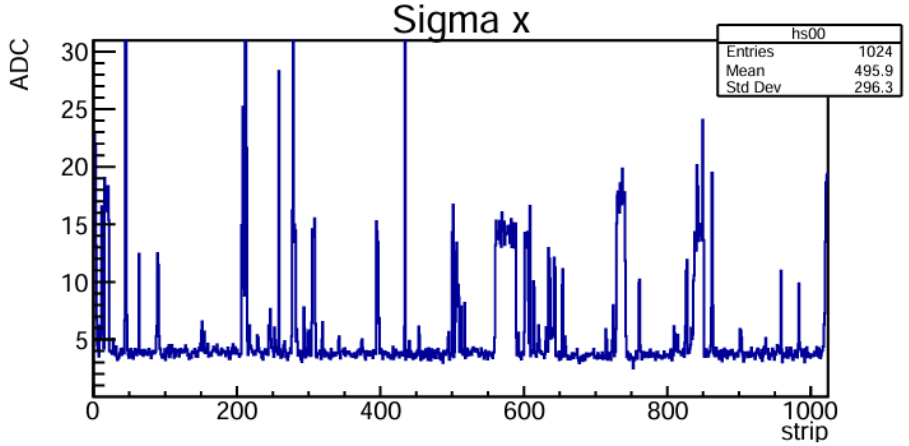
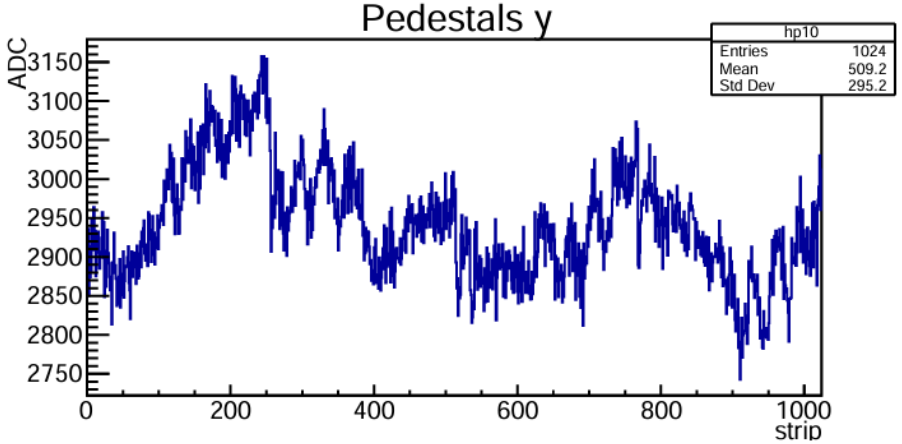
Mean 514.4
Std Dev 295.9
ADC
strip

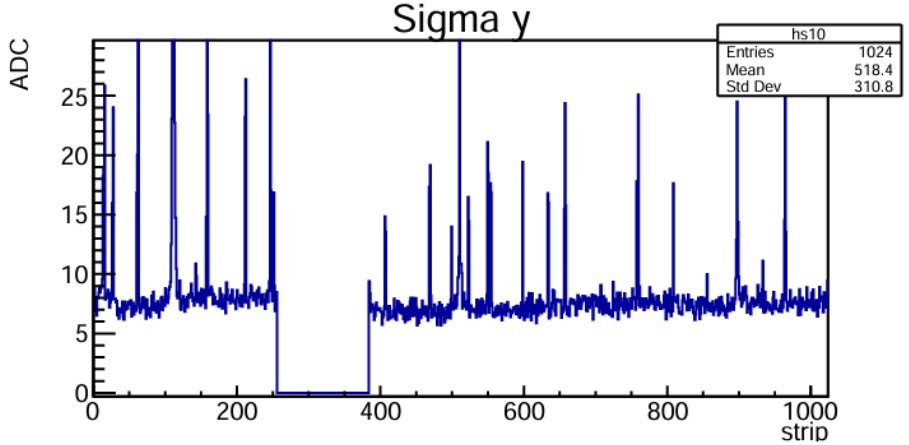

Sigma y
h204
Entries 1024
Mean 523.1
Std Dev 293.8
ADC
strip

Modulo 7

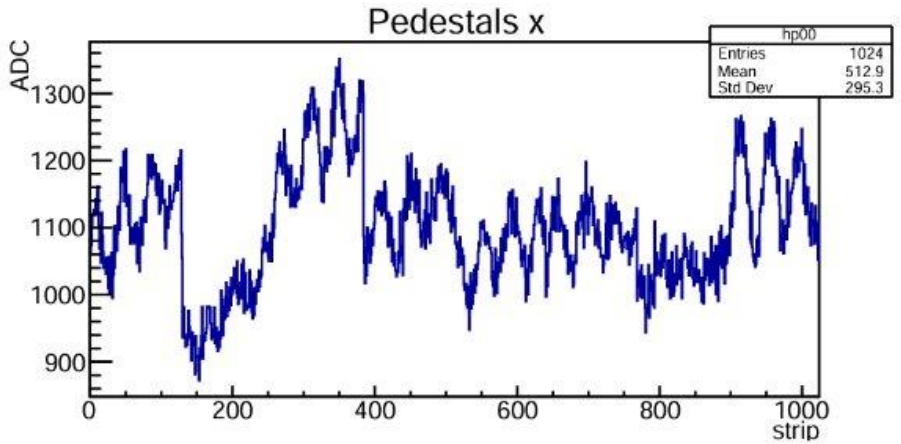

Pedestals x
hp00
Entries 1024
Mean 528.2
Std Dev 291.7
ADC
1300
1200
1100
1000
900
0
200
400
600
800
1000
strip

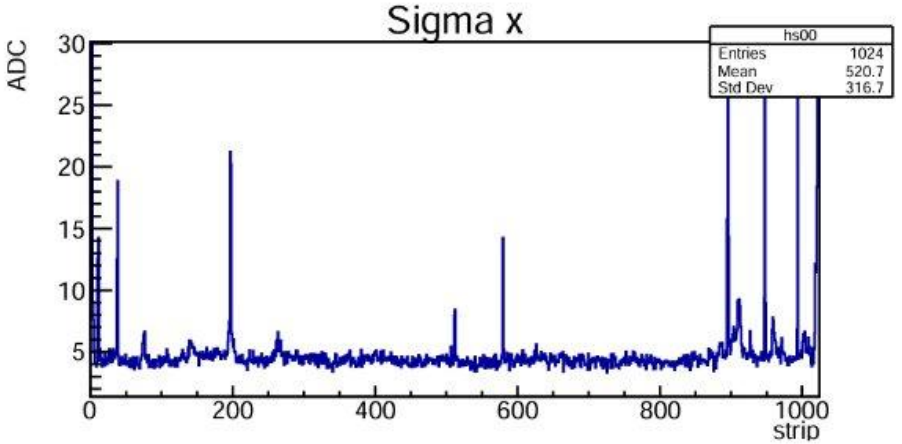

Sigma x
hs00
Entries 1024
Mean 495.9
Std Dev 296.3
ADC
30
25
20
15
10
5
0
200
400
600
800
1000
strip

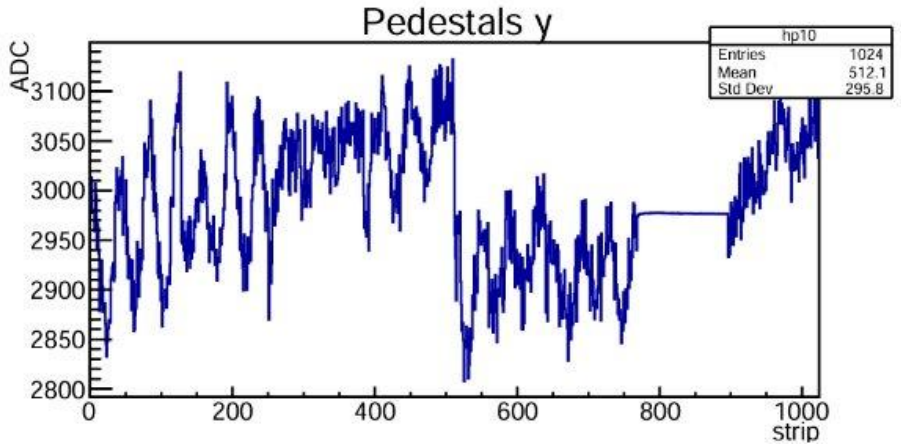

Pedestals y
hp10
Entries 1024
Mean 509.2
Std Dev 295.2
ADC
3150
3100
3050
3000
2950
2900
2850
2800
2750
0
200
400
600
800
1000
strip

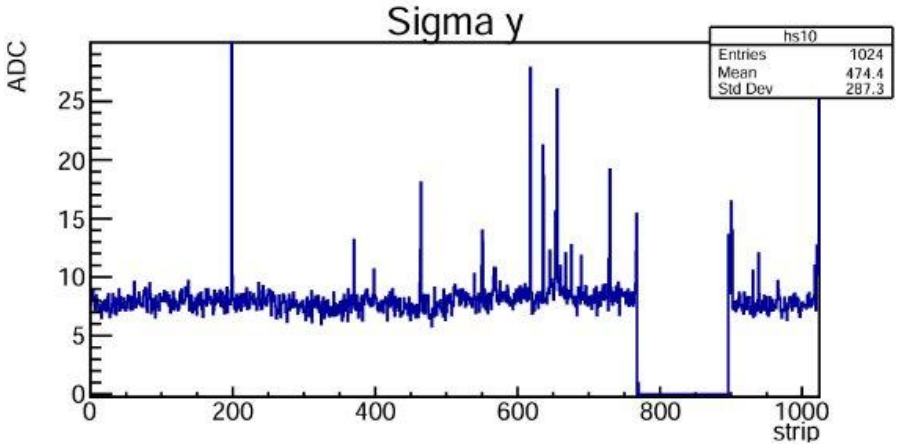

Sigma y
hs10
Entries 1024
Mean 518.4
Std Dev 310.8
ADC
25
20
15
10
5
0
200
400
600
800
1000
strip

Modulo 8


Pedestals x
hp00
Entries 1024
Mean 512.9
Std Dev 295.3
ADC
strip

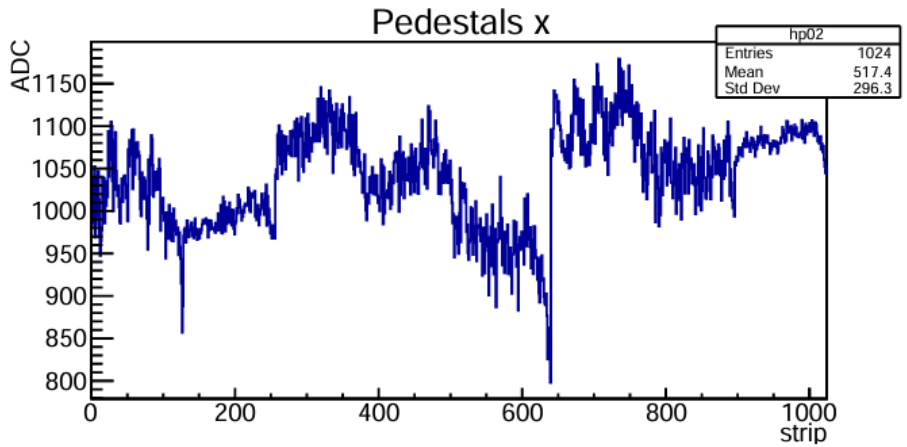

Sigma x
hs00
Entries 1024
Mean 520.7
Std Dev 316.7
ADC
strip

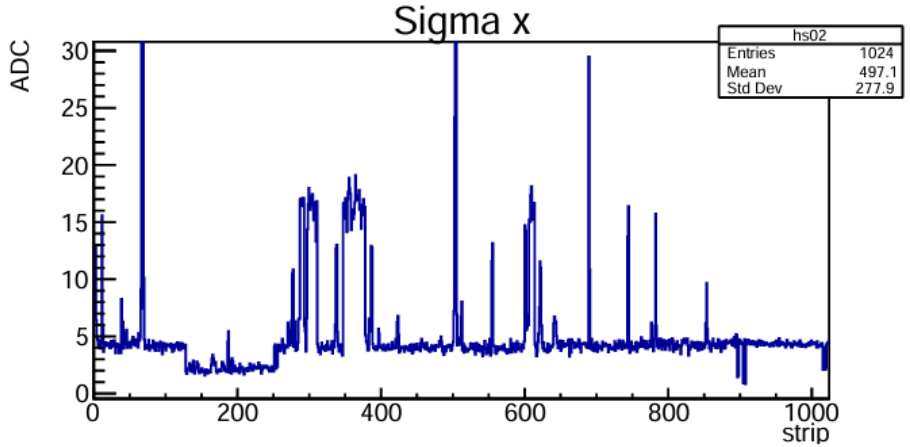

Pedestals y
hp10
Entries 1024
Mean 512.1
Std Dev 295.8
ADC
strip


Sigma y
hs10
Entries 1024
Mean 474.4
Std Dev 287.3
ADC
strip

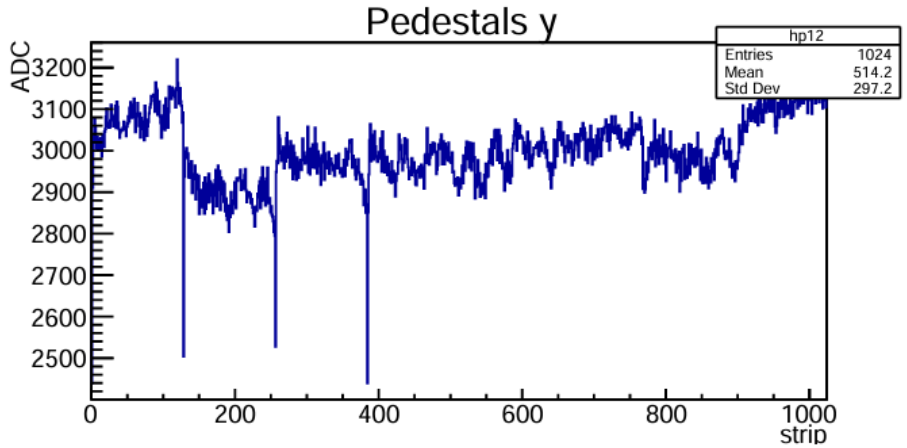
Modulo 2 - 11Feb25

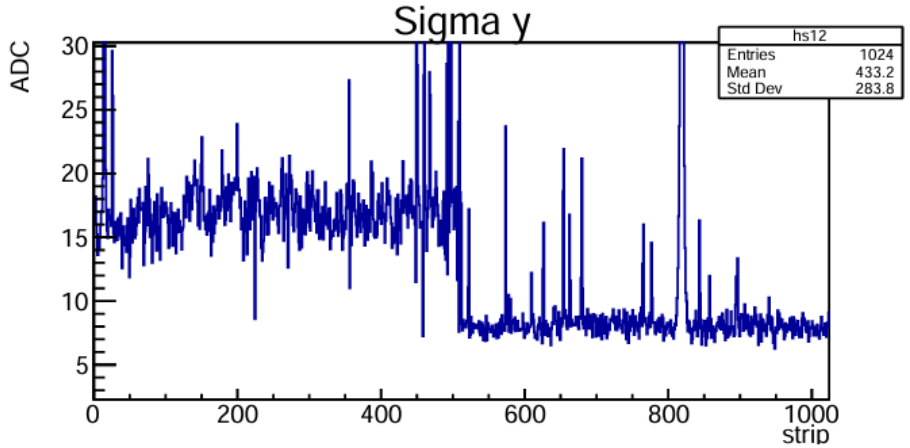
Chip 2 e 8 con ped
e sigma anomali



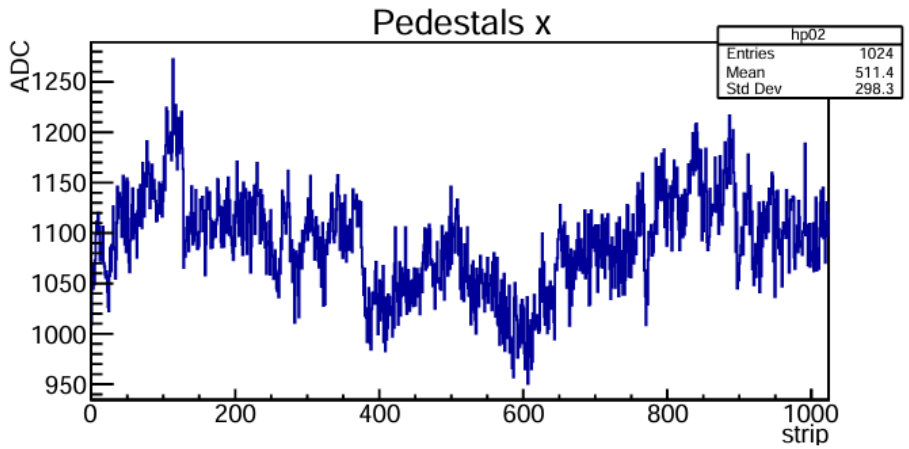


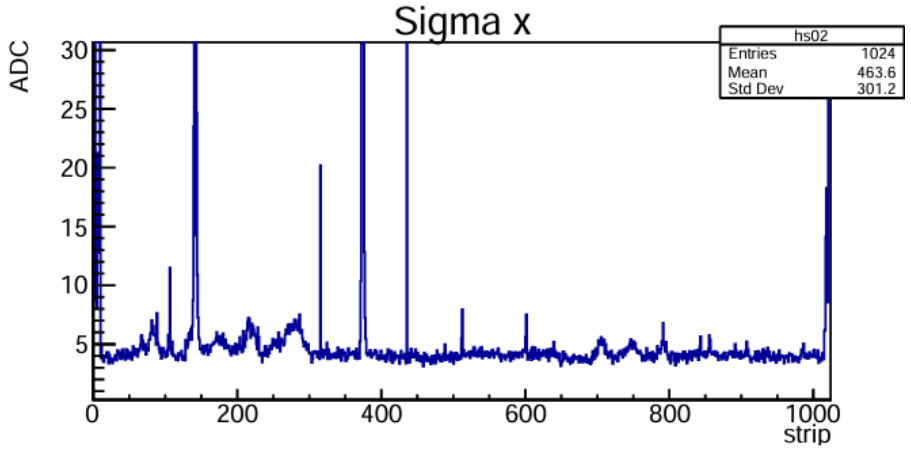
Prima metà con ped
e sigma anomali

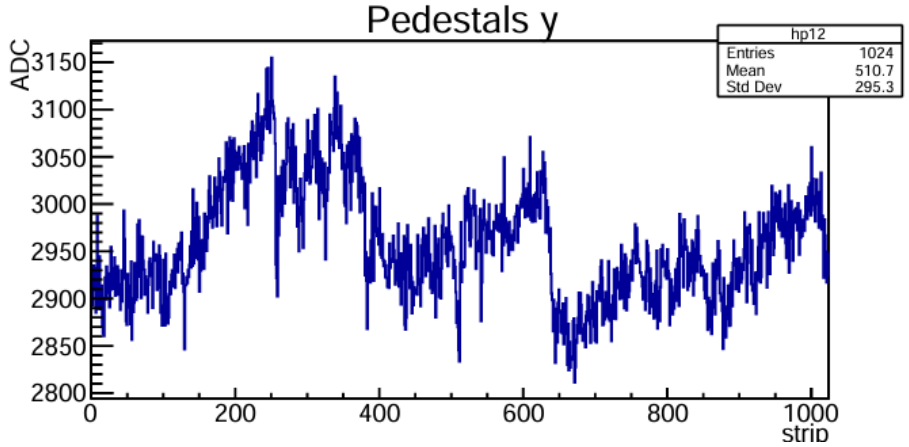


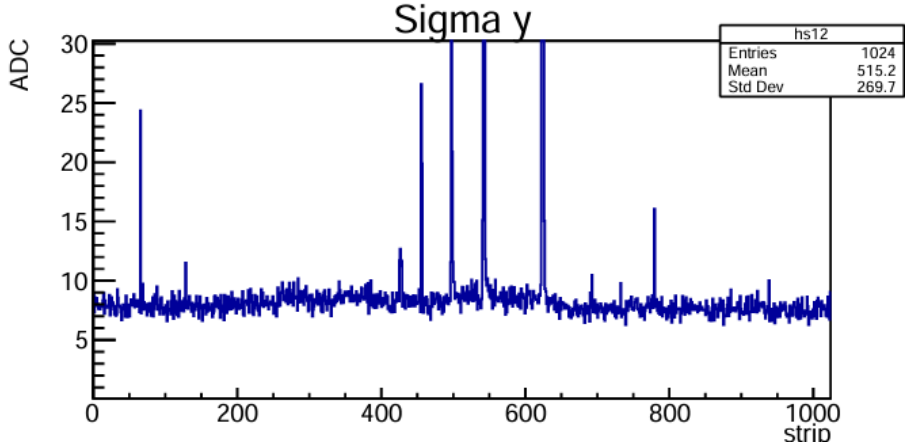


Modulo 29 – pre rottura

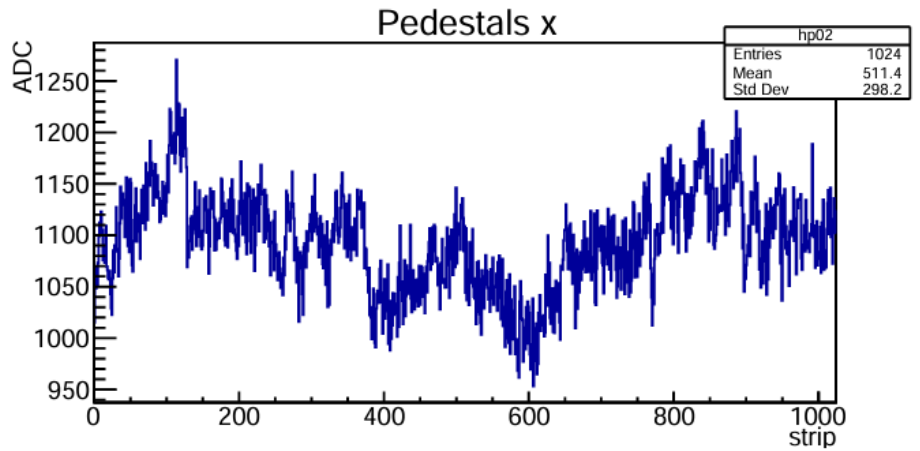


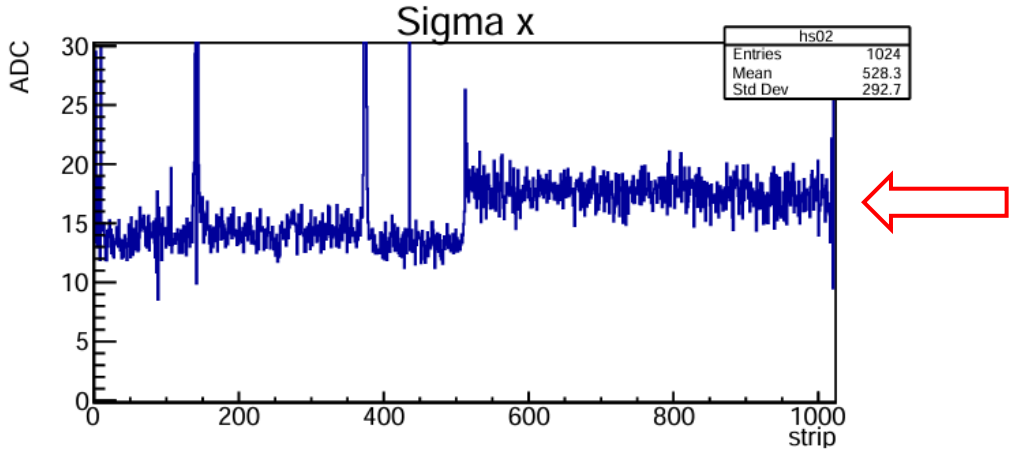


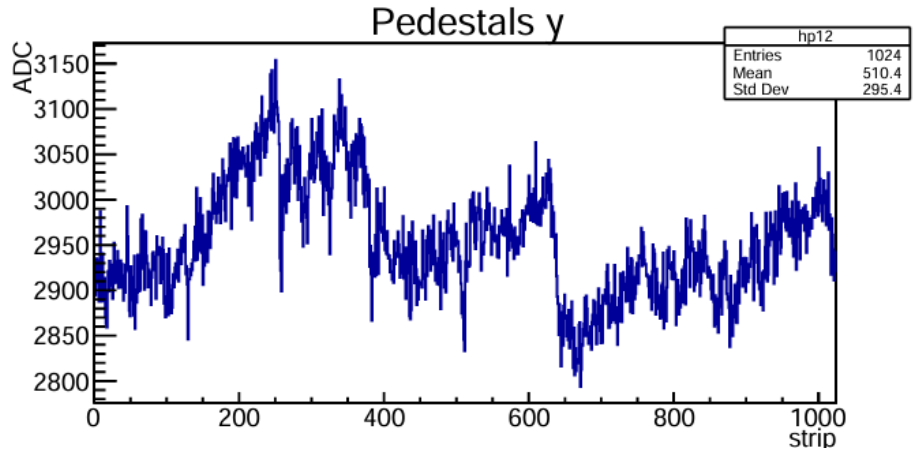


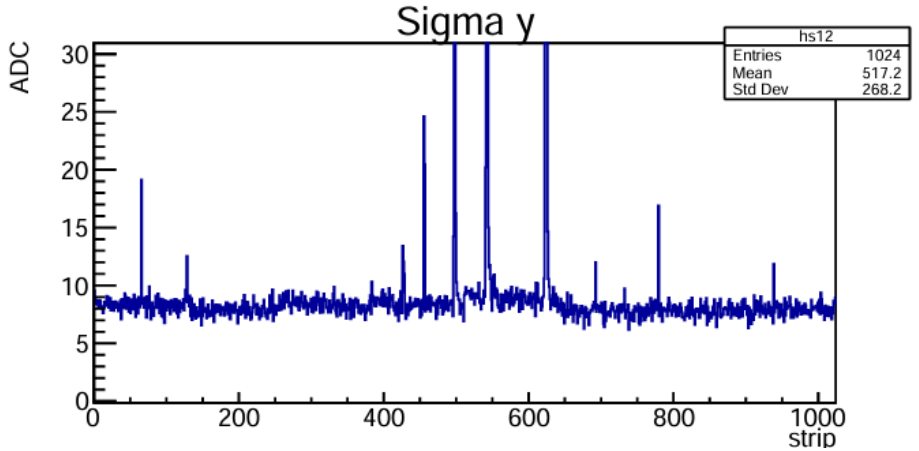


Modulo 29 – post rottura







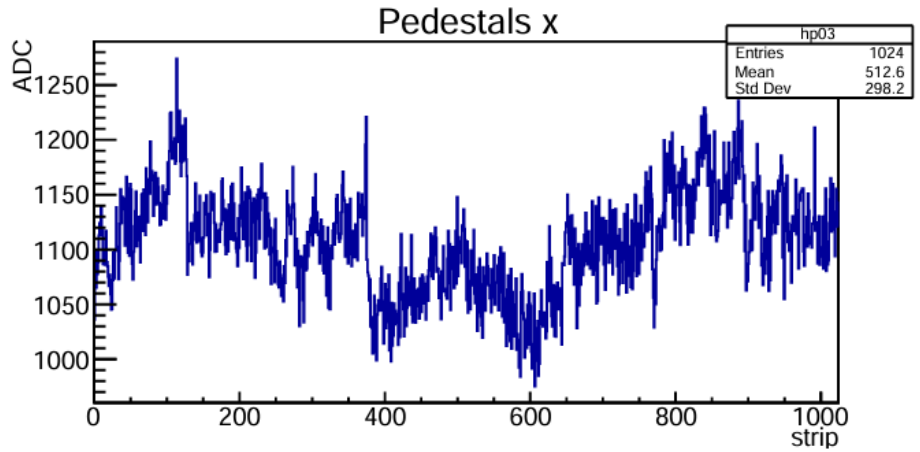


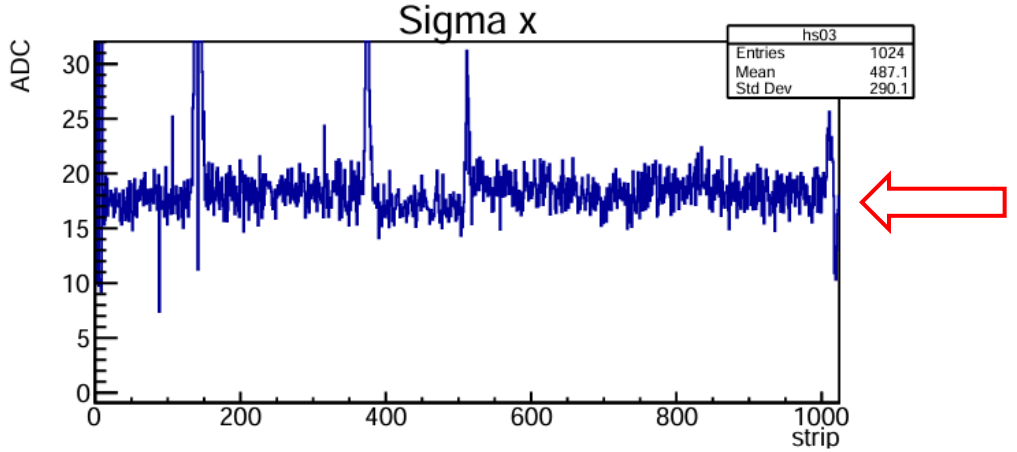
Modulo 29 - 11Feb25

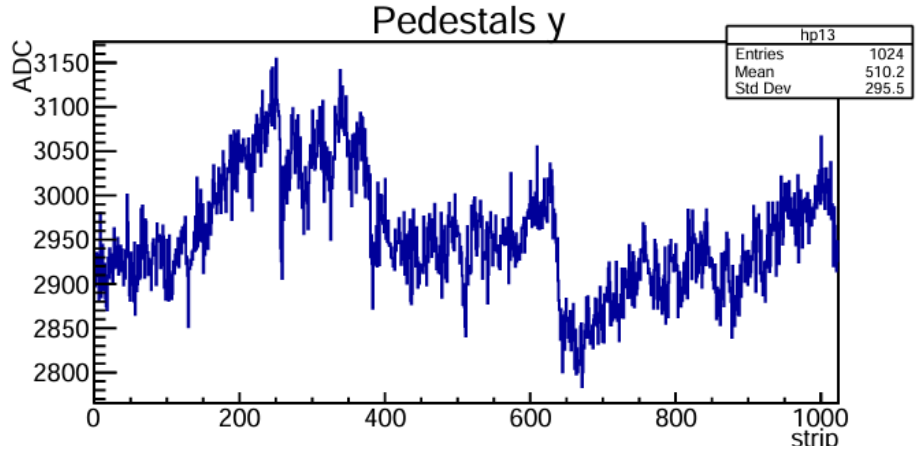
Test elettrico 14/02 lato x

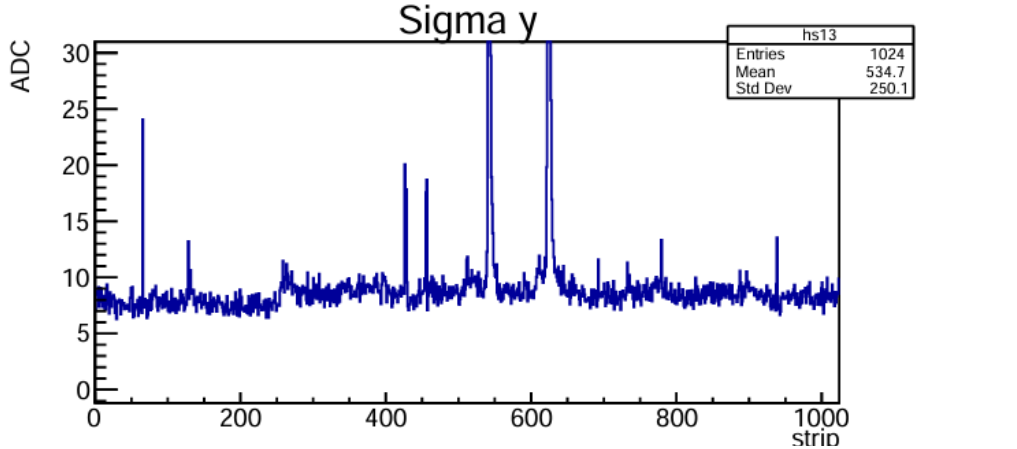
✓ Kapton

X R5, R16, R17, R38 a 2V anziché 0V
(già visto anche su 2 chip del modC1)

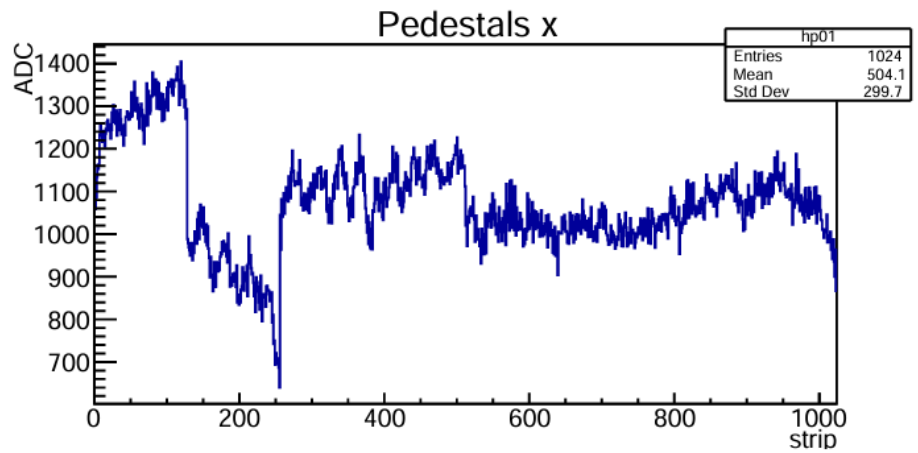








Modulo 39


Pedestals x
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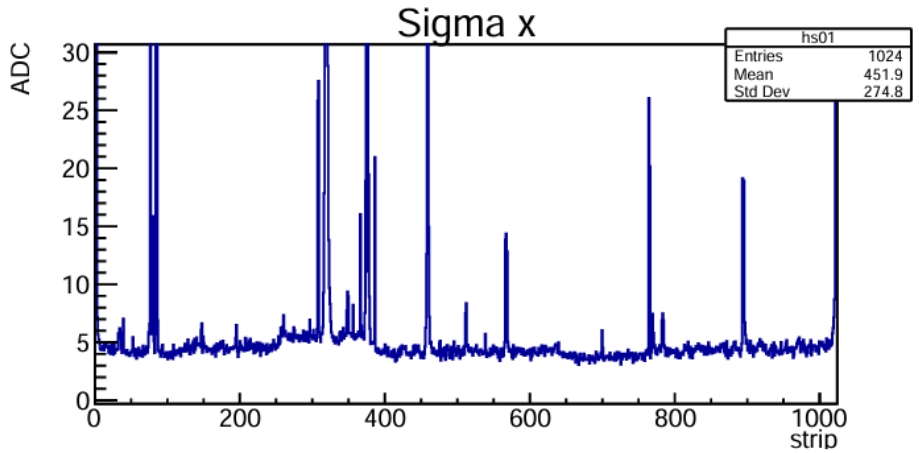
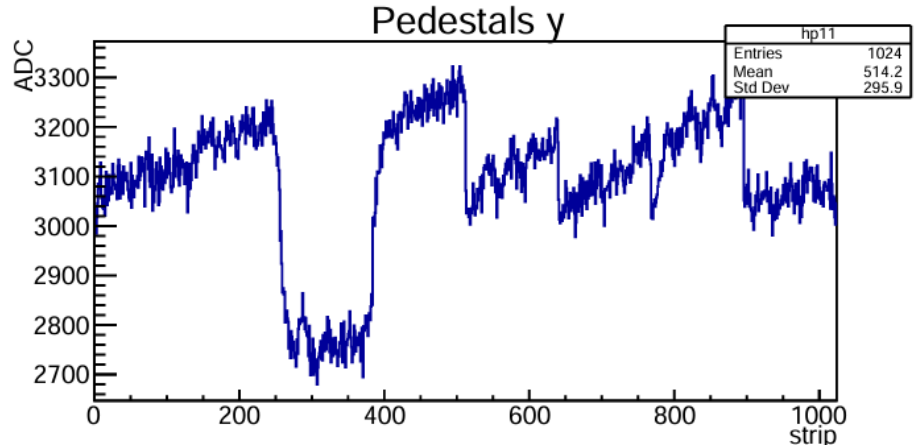
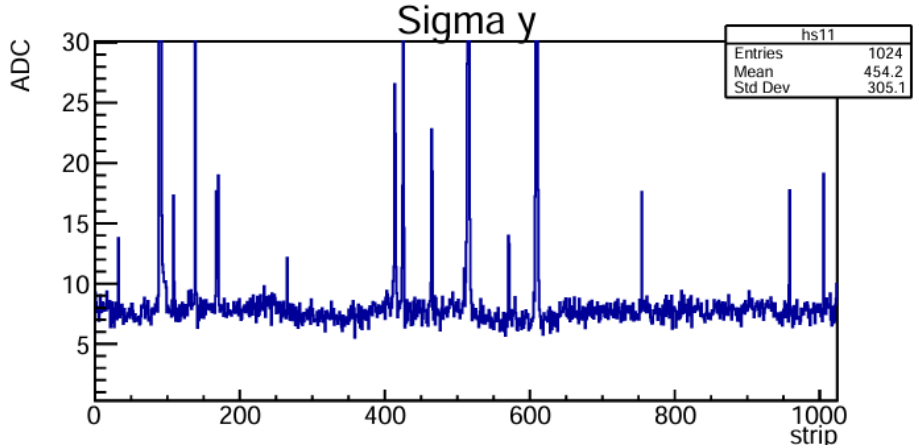
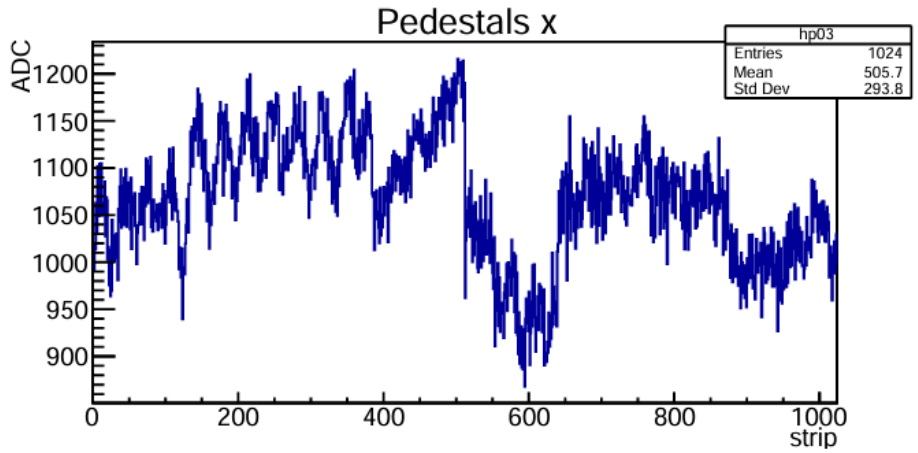
Mean 504.1
Std Dev 299.7
ADC
strip

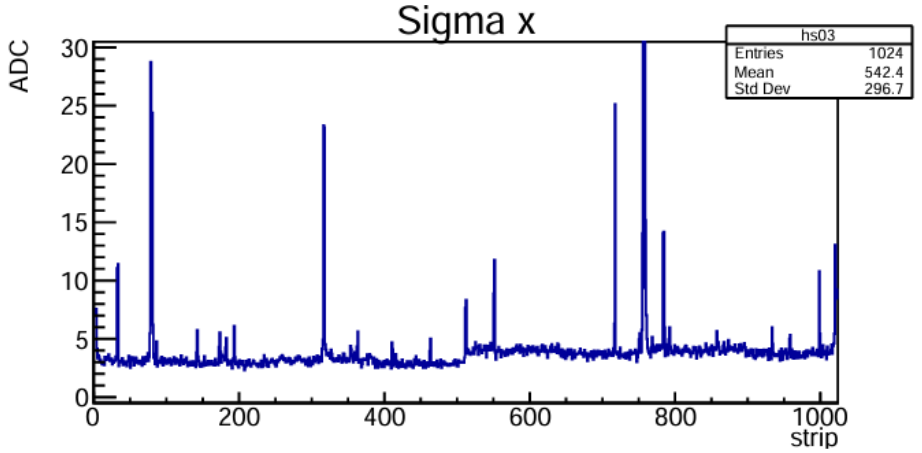

Sigma x
hs01
Entries 1024
Mean 451.9
Std Dev 274.8
ADC
strip

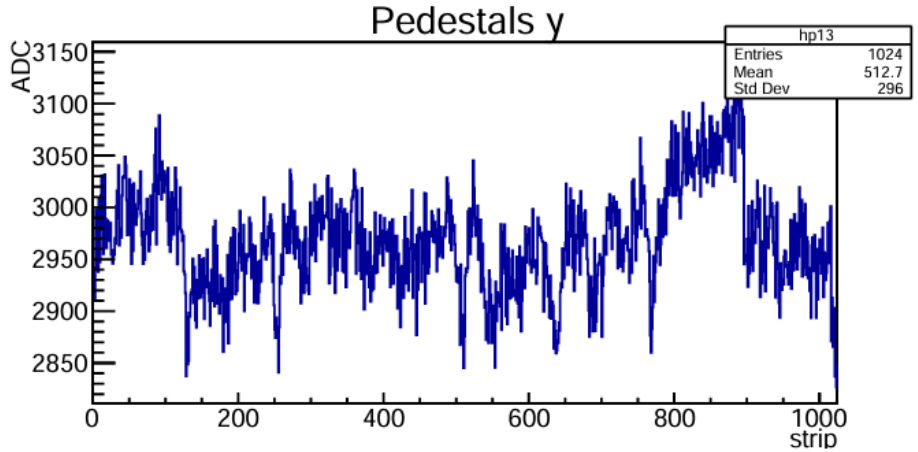

Pedestals y
hp11
Entries 1024
Mean 514.2
Std Dev 295.9
ADC
strip

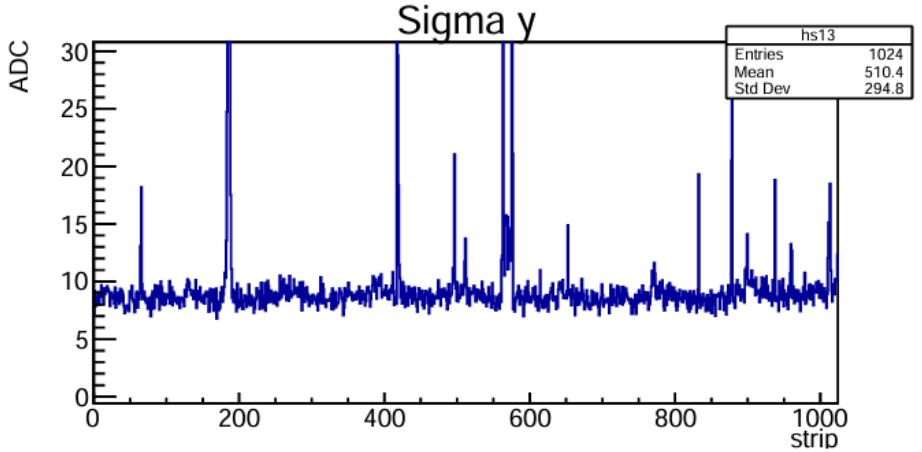

Sigma y
hs11
Entries 1024
Mean 454.2
Std Dev 305.1
ADC
strip

Modulo 22 - 11Feb25



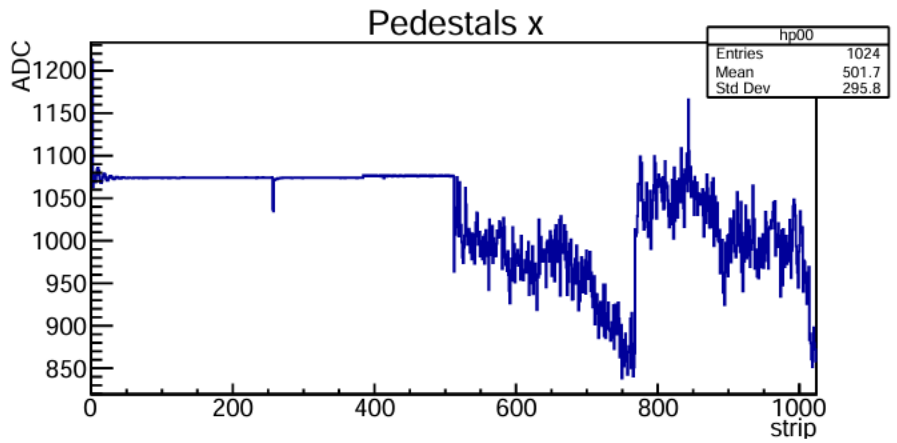


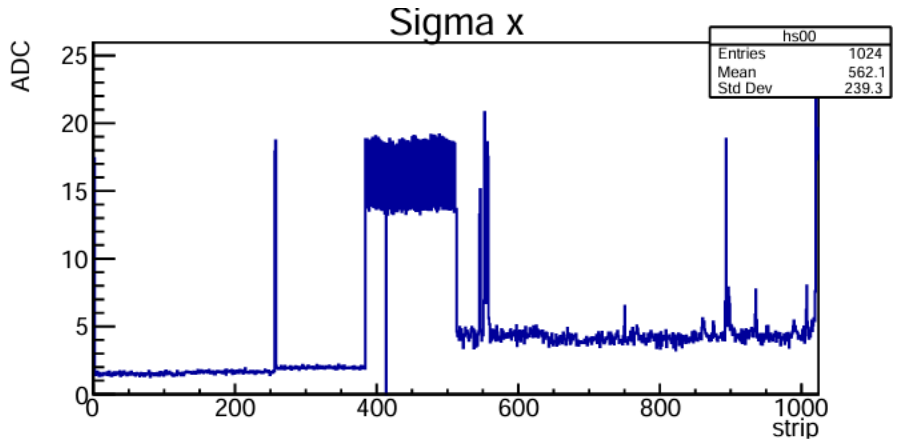


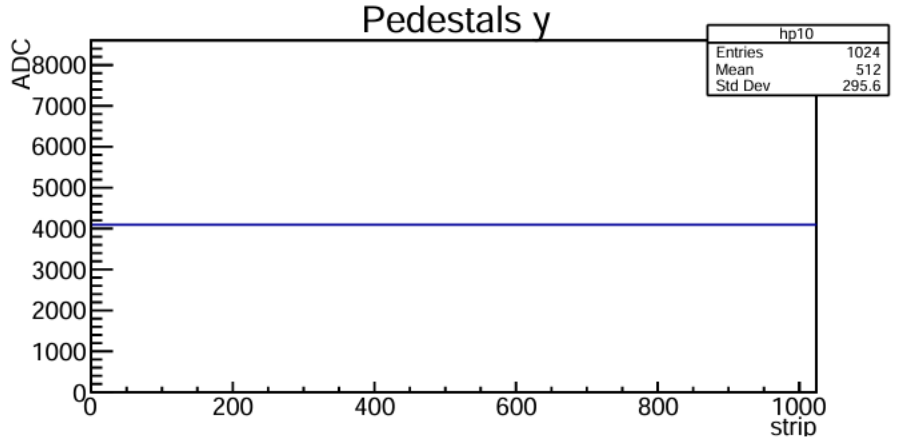


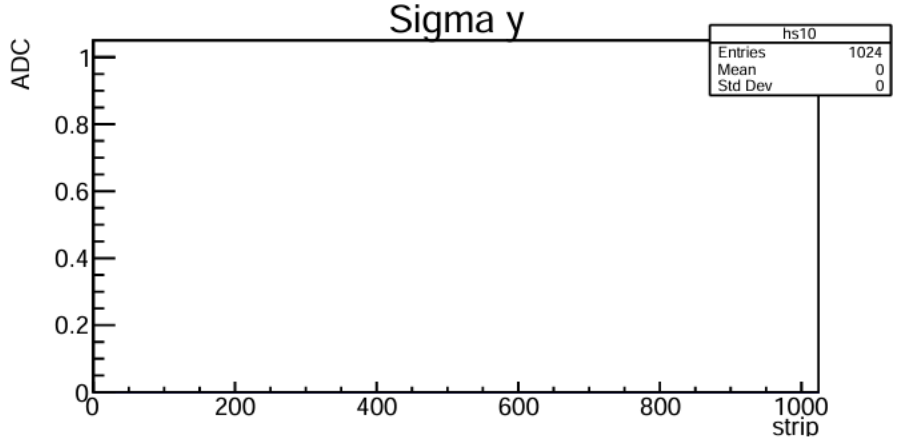
Modulo C1

Solo seconda metà di x funzionante









Efficienze

Tabella 4.2. Efficienze del modulo 29, calcolate prima e dopo la rottura del lato x.

	Silicio esterno		Silicio interno
	Pre-rottura	Post rottura	Post rottura
$\epsilon_x \pm \sigma_{\epsilon_x}$	0.88 ± 0.04	0.24 ± 0.04	0.137 ± 0.013
$\epsilon_y \pm \sigma_{\epsilon_y}$	0.94 ± 0.03	0.94 ± 0.02	0.925 ± 0.010
$\epsilon_L \pm \sigma_{\epsilon_L}$	0.82 ± 0.05	0.24 ± 0.04	0.131 ± 0.013

Tabella 4.3. Efficienze dei moduli 39, 22 e 4 calcolate sui dati della prima acquisizione.

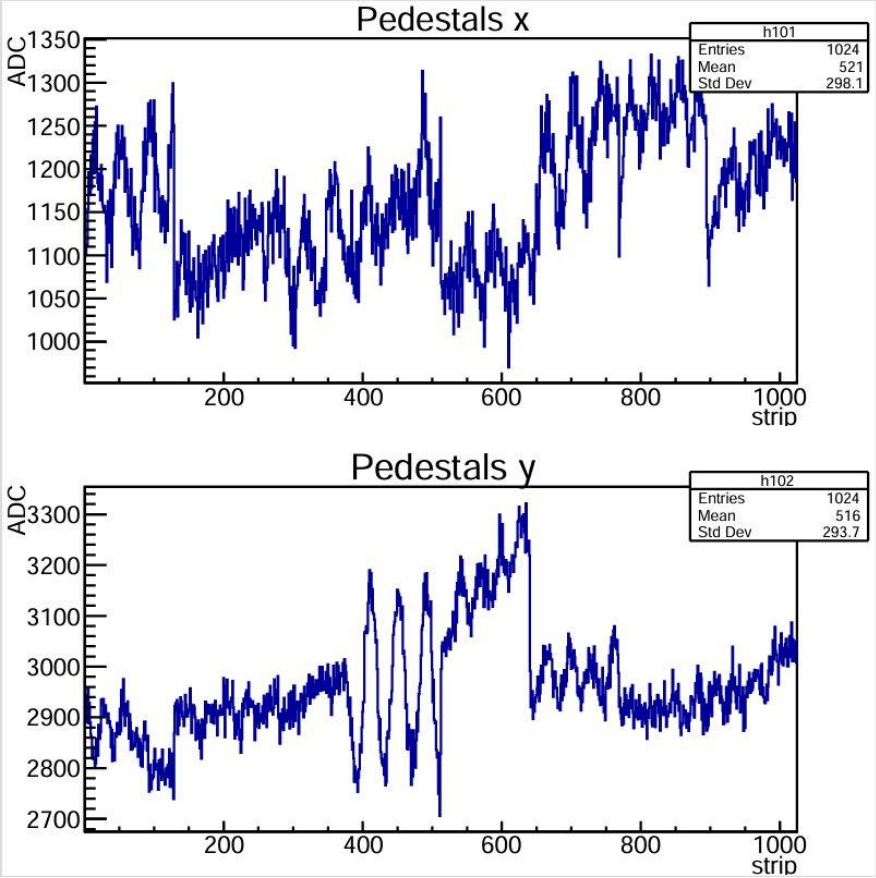
	Silicio	Modulo 39	Modulo 22	Modulo 4
$\epsilon_x \pm \sigma_{\epsilon_x}$	Esterno	0.90 ± 0.03	0.96 ± 0.02	0.89 ± 0.03
	Interno	0.86 ± 0.03	0.91 ± 0.03	0.89 ± 0.04
$\epsilon_y \pm \sigma_{\epsilon_y}$	Esterno	0.90 ± 0.03	0.92 ± 0.03	0.88 ± 0.03
	Interno	0.88 ± 0.03	0.93 ± 0.03	0.90 ± 0.03
$\epsilon_L \pm \sigma_{\epsilon_L}$	Esterno	0.83 ± 0.03	0.88 ± 0.04	0.80 ± 0.03
	Interno	0.79 ± 0.04	0.86 ± 0.04	0.84 ± 0.04

Efficienze

Tabella 4.5. Efficienze dei moduli 39, 22, 4 e 7 calcolate sui dati della seconda acquisizione.

	Silicio	Modulo 39	Modulo 22	Modulo 4	Modulo 7
$\epsilon_x \pm \sigma_{\epsilon_x}$	Esterno	0.917 ± 0.017	0.90 ± 0.02	0.927 ± 0.019	0.86 ± 0.02
	Interno	0.924 ± 0.011	0.917 ± 0.011	0.961 ± 0.008	0.888 ± 0.012
$\epsilon_y \pm \sigma_{\epsilon_y}$	Esterno	0.946 ± 0.014	0.88 ± 0.03	0.90 ± 0.02	0.81 ± 0.02
	Interno	0.916 ± 0.011	0.909 ± 0.011	0.896 ± 0.013	0.720 ± 0.016
$\epsilon_L \pm \sigma_{\epsilon_L}$	Esterno	0.87 ± 0.02	0.82 ± 0.03	0.83 ± 0.03	0.71 ± 0.03
	Interno	0.853 ± 0.014	0.860 ± 0.014	0.864 ± 0.014	0.653 ± 0.017

Ibrido 40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Mean 521
Std Dev 298.1
ADC
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1300
1250
1200
1150
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1050
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200
400
600
800
1000
strip
Pedestals y
h102
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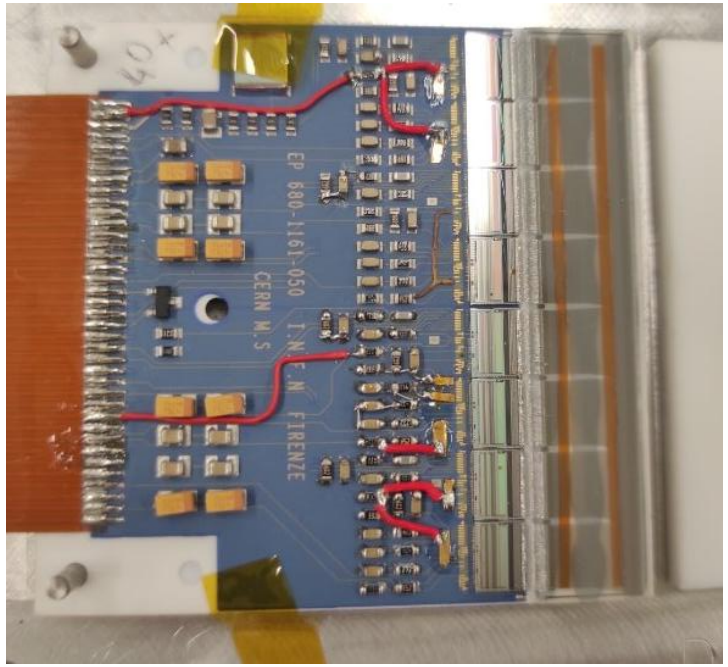
EP 680-1161-050
CERN M.S
T.N.E.N. FIRENZE

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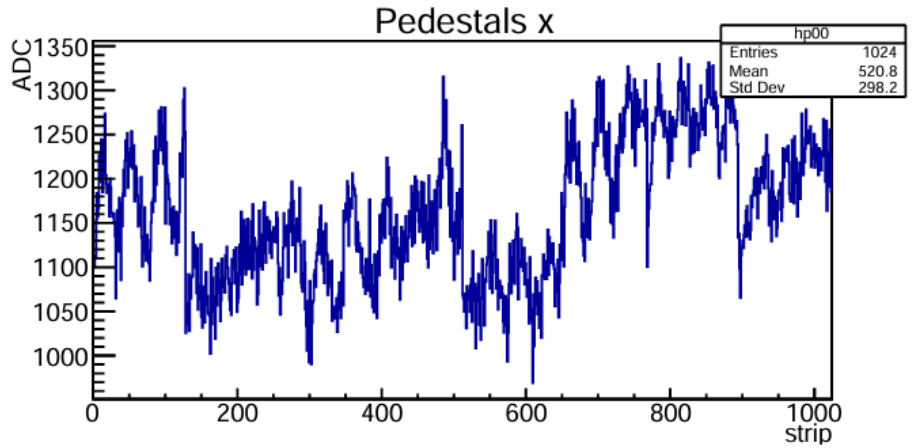

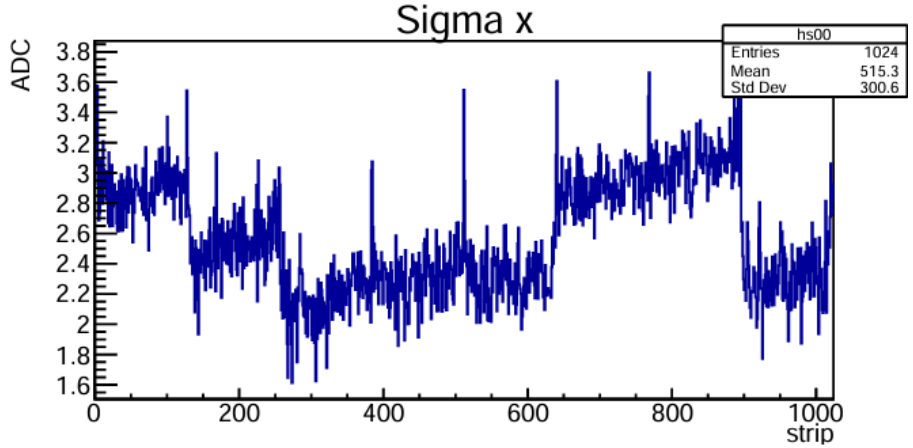

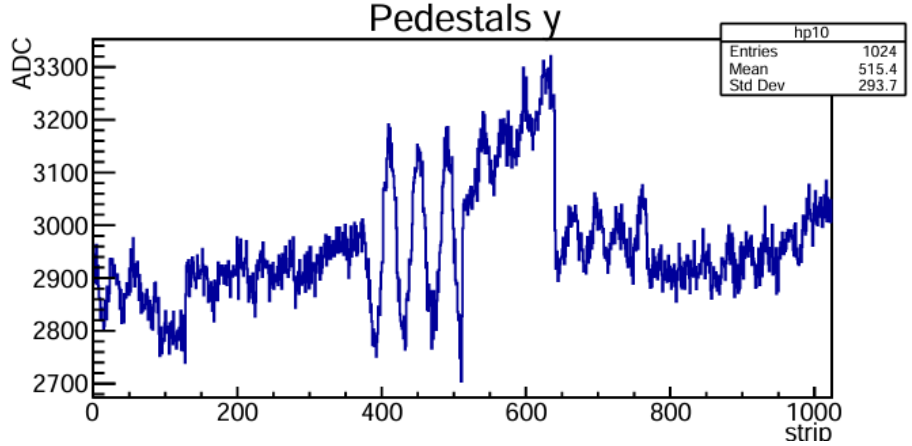

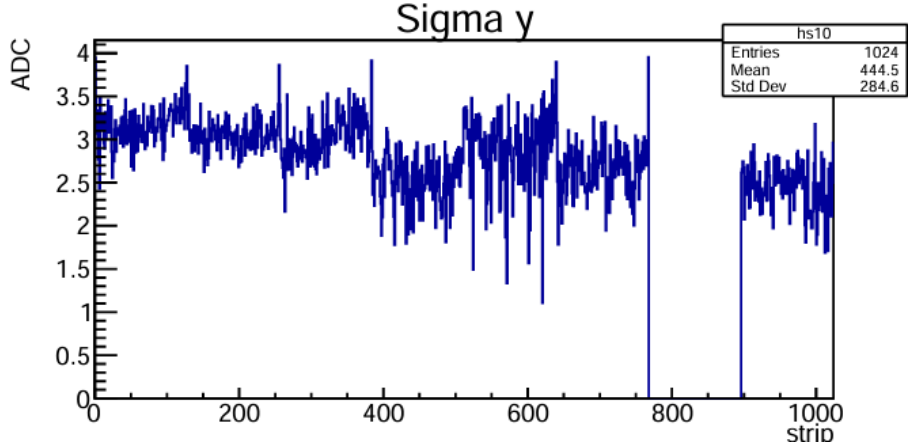

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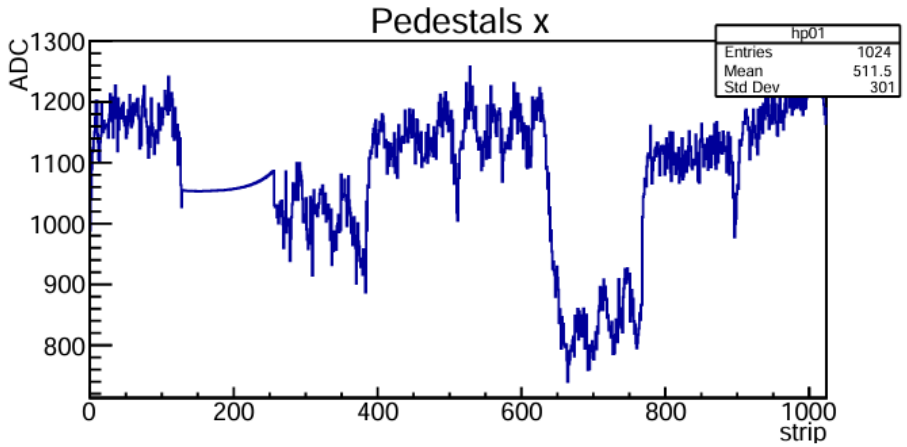

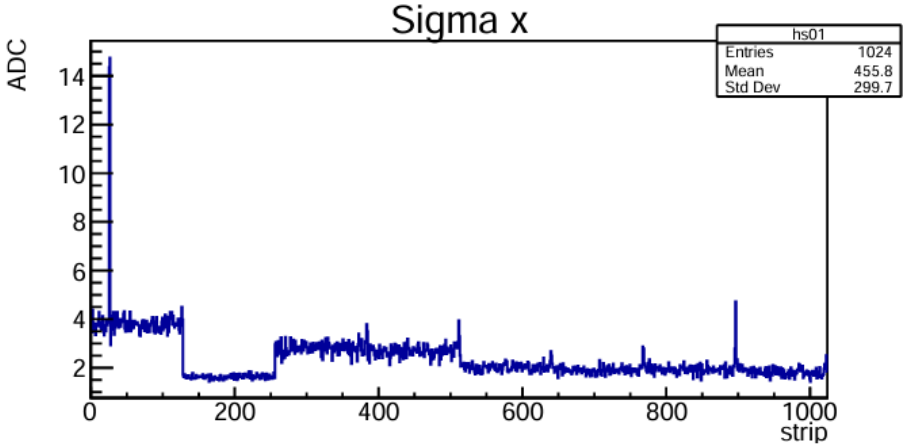

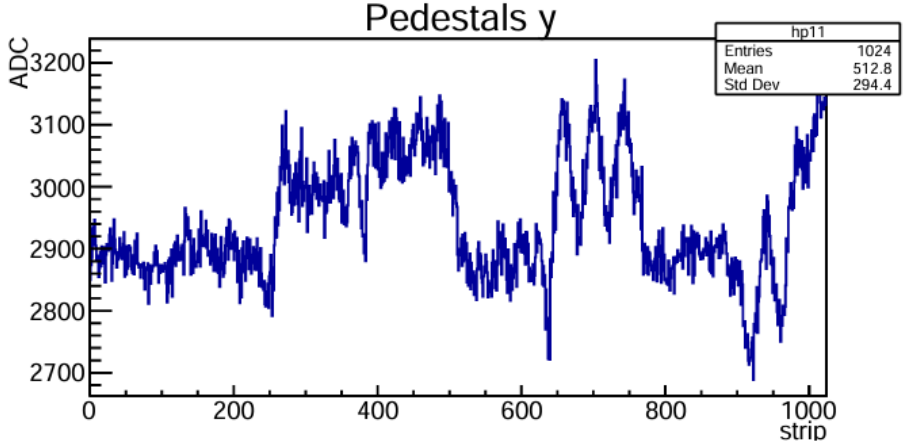

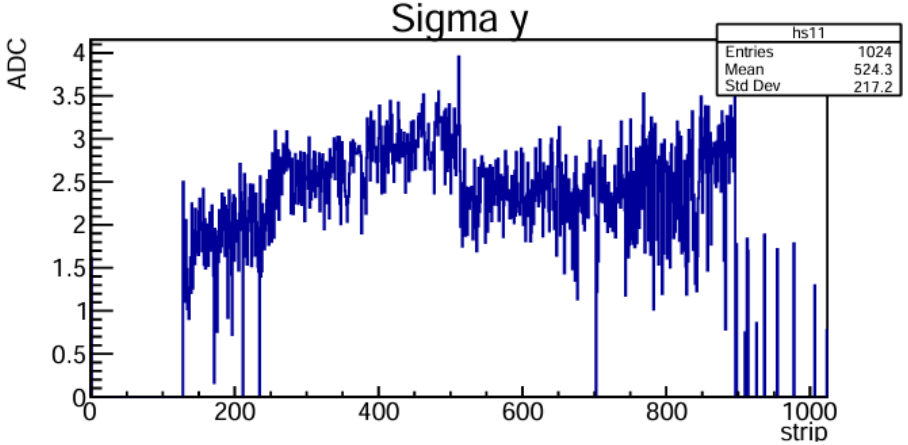

Ibrido 43 – 17Feb