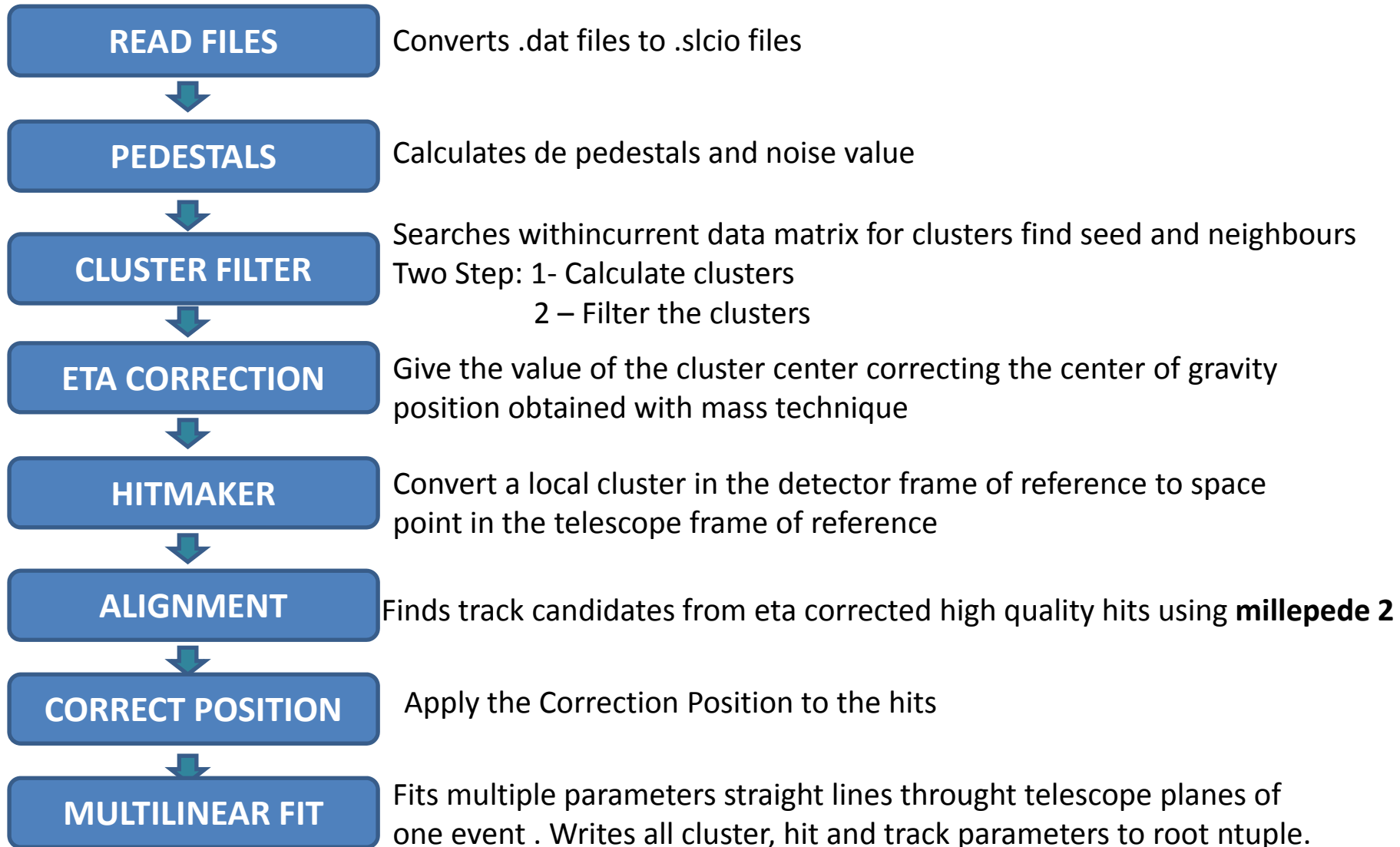




PRELIMINARY RESULTS OF TB ANALYSIS

J. Caride, C. Iglesias, P. Vazquez
USC – Dpto. Fisica Particulas

Analysis Chain for TB DATA





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- OUR ANALYSIS CHAIN
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- CONCLUSION



FIRST RESULTS

DETECTOR	HITMAP	RESIDX(μm)	SIGMAX(μm)	RESIDY(μm)	SIGMAY(μm)
0	24057	0,095	2,500	0,020	1,530
1	19525	0,064	2,680	0,020	1,500
2	14219	-0,100	2,340	-0,020	2,040
3	18684	0,100	4,000	-0,070	2,510
4	18396	0,100	3,000	0,042	2,100
5	18496	-0,038	2,300	-0,055	1,660

USED CHRISTIAN JULIA FILES

PROBLEMS

A LOT OF HITS IN 1º DETECTOR

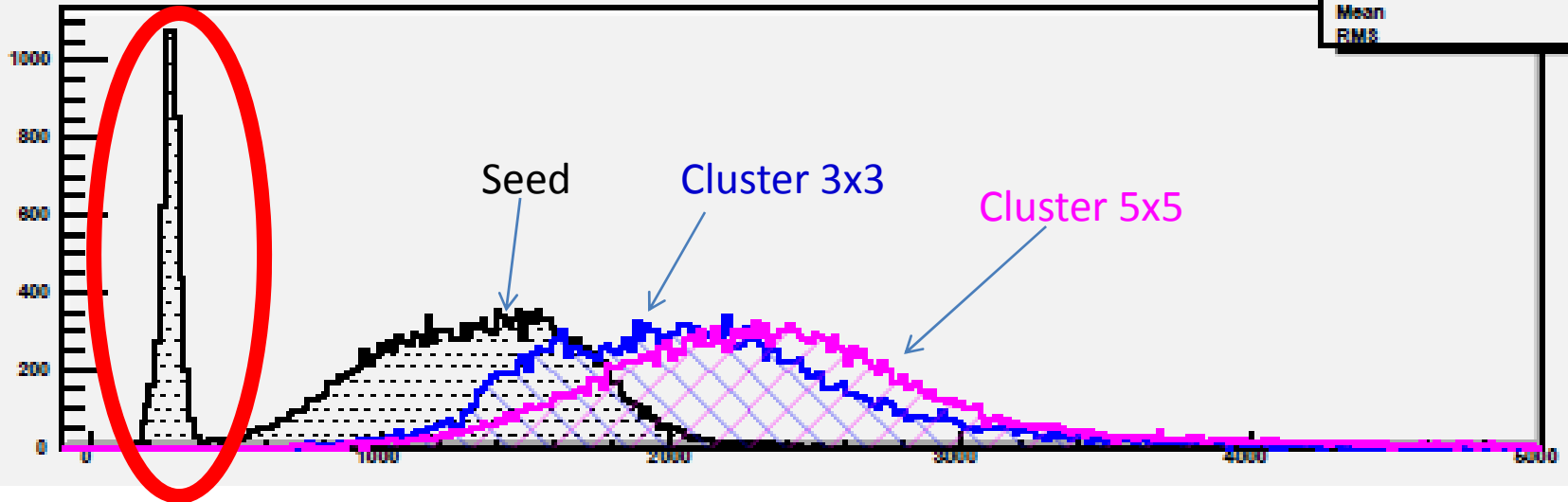
WE HAVE 1º Y 2º DETECTOR WITH SEED < 500

EXPLICATION

PRAGA PEOPLE NOISE

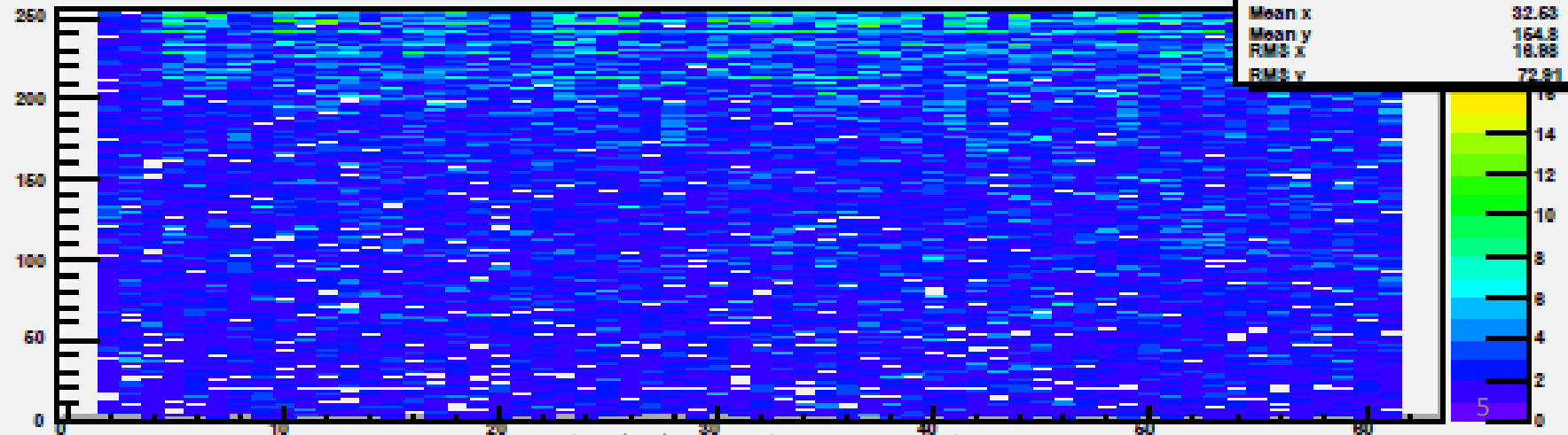
PROBLEM SEED < 500 ADU

Seed pixel spectrum

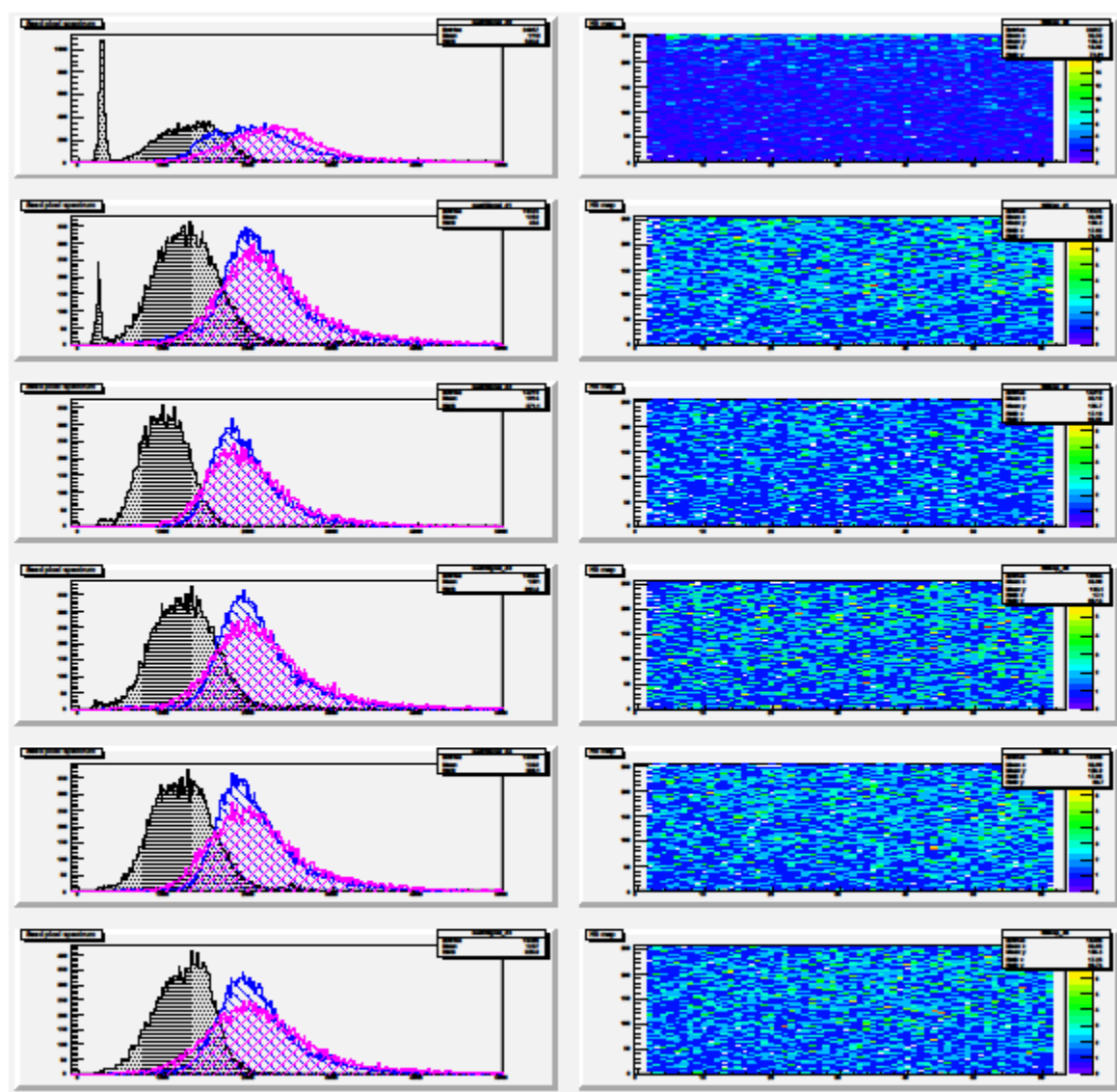


seed@linal_d0	
Entries	24057
Mean	1110
RMS	533.8

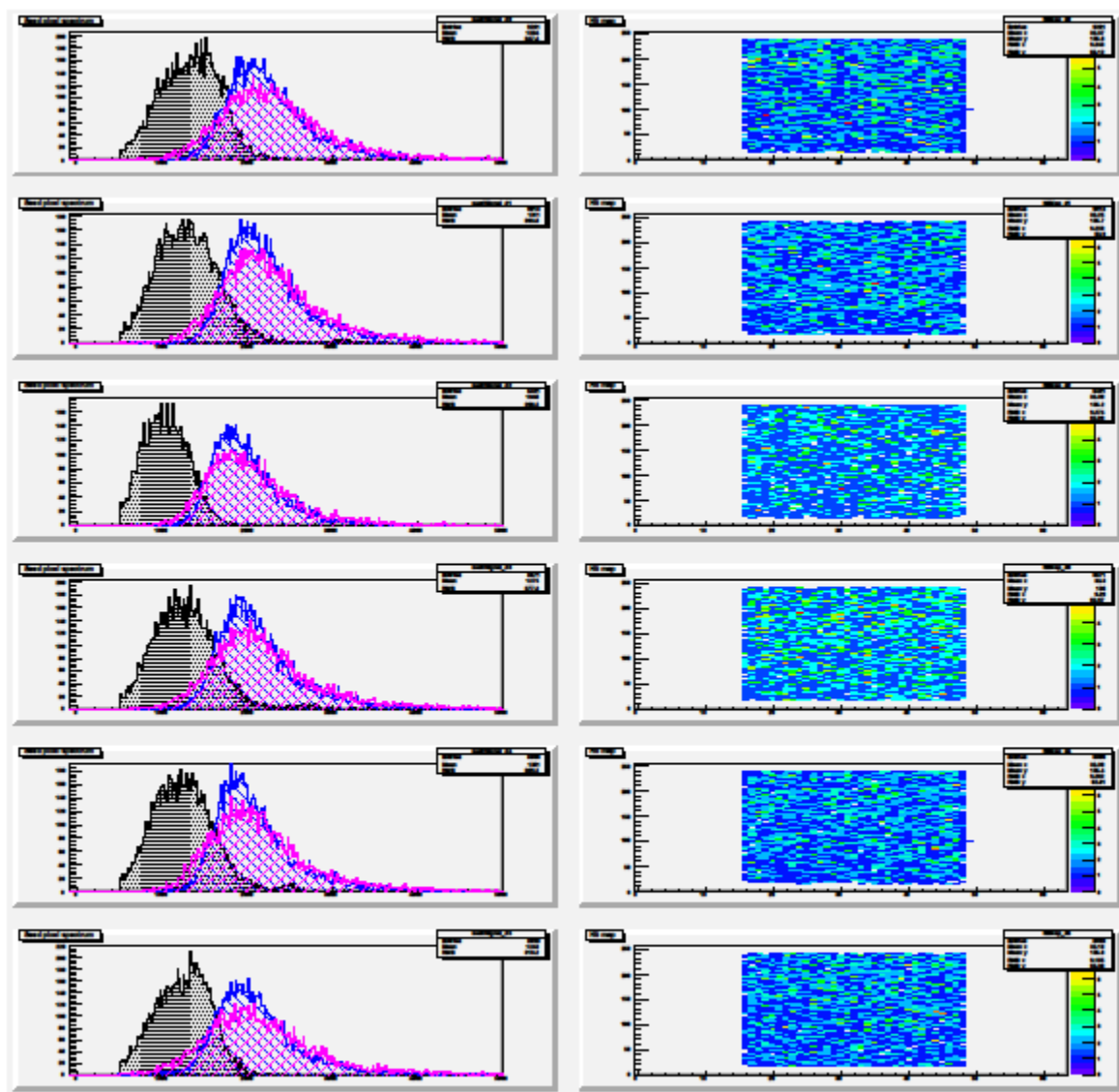
Hit map



ALL DETECTORS



CUT 500 ADU AND ROI IN CENTRE ALL MATRIX



- DELETE PEAK < 500 ADU
- CoG = FULL
- SIZE CLUSTER = 5 X 5
- Take as REGION OF INTEREST (ROI) the central part of the matrix in all detector



DELETE SEED < 500 CoG = FULL FF5X5

DETECTOR	HITMAP	RESIDX(μm)	SIGMAX(μm)	RESIDY(μm)	SIGMAY(μm)
0	9206	0,025	2,880	0,090	2,720
1	9039	0,088	3,170	0,070	3,330
2	6491	-0,062	2,340	0,004	3,570
3	8866	0,006	4,620	-0,133	5,570
4	8789	-0,155	3,220	-0,143	3,290
5	8703	0,055	2,380	0,057	2,580

FF =Fixed Frame



CoG ALGORITHM NxM PIXEL 3X3

NO ETA CORRECTION

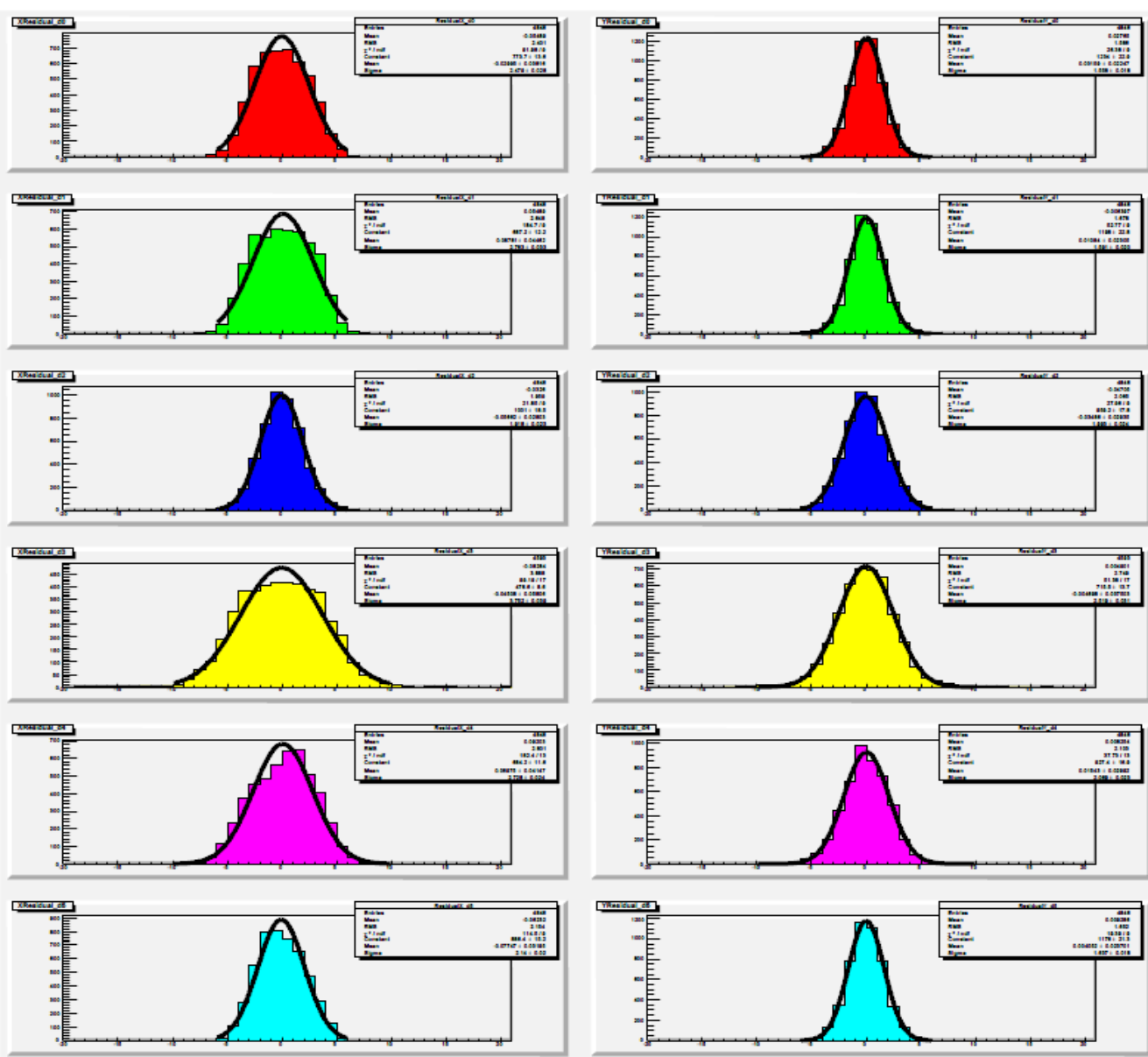
DETECT OR	HITMAP	RESIDX (μm)	SIGMAX (μm)	RESIDY (μm)	SIGMAY (μm)
0	9206	-0,030	2,500	0,030	1,600
1	9039	0,080	2,800	0,010	1,600
2	6491	-0,060	1,900	-0.030	2,000
3	8866	-0,040	3,700	-0,004	2,500
4	8789	0,070	2,700	0,010	2,000
5	8703	-0,070	2,100	0,004	1,600

WITH ETA CORRECTION

DETECT OR	HITMAP	RESIDX (μm)	SIGMAX (μm)	RESIDY (μm)	SIGMAY (μm)
0	9206	-0,030	2,500	0,030	1,600
1	9039	0,080	2,800	0,010	1,600
2	6491	-0,060	1,900	-0.030	2,000
3	8866	-0,040	3,700	-0,004	2,500
4	8789	0,070	2,700	0,010	2,000
5	8703	-0,070	2,100	0,004	1,600

- DELETE PEAK < 500 ADU
- CoG = Centre of gravity
- SIZE CLUSTER = 3X 3
- Take as REGION OF INTEREST (ROI) the central part of the matrix in all detector

RESIDUALS 3X3 CoG ALGORITHM = NxM PIXEL ETA CORRECTION



Common Mode Algorit=RW
 Hit rejection cut =7
 BadPixelMask =NoiseDistri
 PixelMaskUpperNoiseCut=2
 FF ClusterCut=3
 FFSeedCut=7
 FF=5x5
 ROI=(All 16 16 48 256)
 CoG Algorit= NxM Pixel=3x3



CoG ALGORITHM NxM PIXEL 5x5

DETECTOR	HITMAP	RESIDX(μm)	SIGMAX(μm)	RESIDY(μm)	SIGMAY(μm)
0	9206	-0,030	2,825	-0,042	2,980
1	9039	0,085	3,167	-0,029	3,379
2	6491	-0,028	2,322	-0,028	3,706
3	8866	0,035	4,657	-0,179	5,63
4	8789	-0,041	2,978	-0,029	3,153
5	8703	0,030	2,367	0,002	2,515

WORSE RESULTS WITH CLUSTER SIZE 5X5 THAN FROM 3X3 CLUSTERS

CONCLUSION

CHRISTIAN

DET	RESIDX (μm)	SIGMAX (μm)	RESIDY(μm)	SIGMAY (μm)
0	0,038	2,148	0,064	1,782
1	0,013	,114	-0,042	1,799
2	-0,074	2,292	0,027	2,060
3	0,017	2,464	-0,067	2,157
4	-0,092	2,545	-0,042	2,261
5	0,064	2,217	0,094	1,950

CoG Algo NxM 3x3

HITMAP	RESIDX (μm)	SIGMAX (μm)	RESIDY (μm)	SIGMAY (μm)
9206	-0,030	2,500	0,030	1,600
9039	0,080	2,800	0,010	1,600
6491	-0,060	1,900	-0.030	2,000
8866	-0,040	3,700	-0,004	2,500
8789	0,070	2,700	0,010	2,000
8703	-0,070	2,100	0,004	1,600

Christian use 13 partitions of the run 2169, while we use only one partition



NEXT STEPS

- Apply as Common Mode Algorithm inside the EutelPedestalNoiseProcessor the **RowWiseMediam** algo as Christian → advised by Praga's people in the last TB EVO Meeting
- Calculate the **gain modulation/correction by pixel** using the row data from the characterizations done in Munich :
http://www.hll.mpg.de/~ninkovic/data_ch/