TPAC1.2 Results

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1st June 2009

Status

- TPAC1.2 received
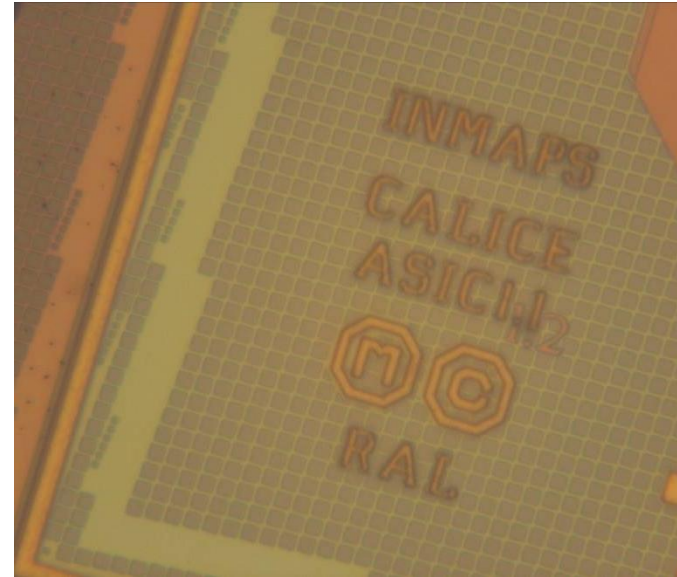
| WAFERS	EPI	SUBSTRATE	DPW	DICED QTY
3	12	STD	YES	75
3	12	STD	NO	75
3	12	HI RES	YES	75
3	18	HI RES	YES	75

Status

- 7 chips now bonded, 5 more in progress
  - 0 power-ground shorts ☺
  - 5 usable sensors today

| PCB	WFR	VARIANT	ALIGNMENT	TEST	NOTES
50	3	12u +DPW	LASER	**Configuration errors (all cols)**	
29	3	12u +DPW	LASER	**Ok**	Paul/CALICEDAQ1
43	3	12u +DPW	LASER	**Ok**	Marcel/55Fe
41	3	12u +DPW	LASER	**Ok, with configuration errors (col 53 only)**	
21	9	12u HIRES + DPW	LASER	**Ok, with configuration errors (col 148 only)**	
44	2	12u +DPW	CENTER	**Ok**	
42	2	12u +DPW	CENTER	**Spill fails**	
47		12u +DPW	CENTER		
46		12u +DPW	CENTER		
45		12u +DPW	CENTER		
23		12u +DPW	CENTER		
48		18u HIRES + DPW	LASER		

Per-Pixel threshold scans (noise)

- Randomly selected single pixel in each region
- Noise is Gaussian ☺
  - Pixel shielding added on metal 2 appears to help
  - Coupling/oscillation at low thresholds is not evident
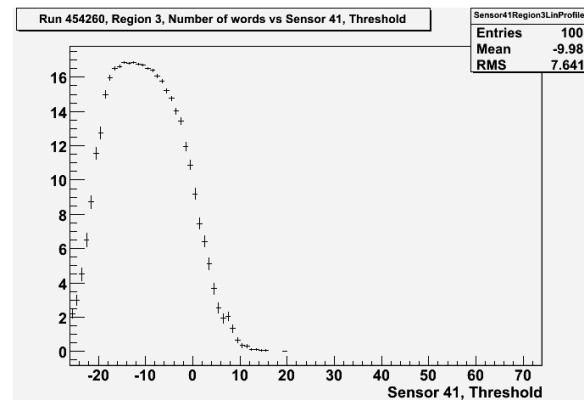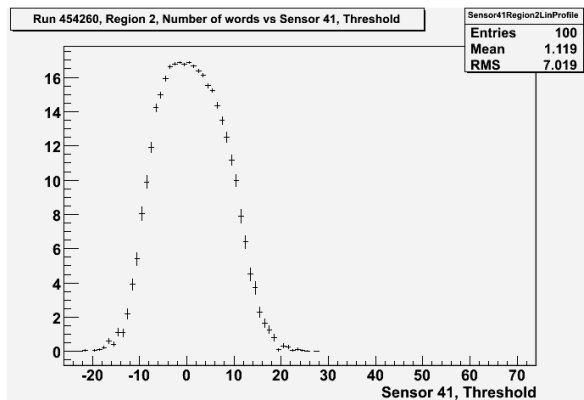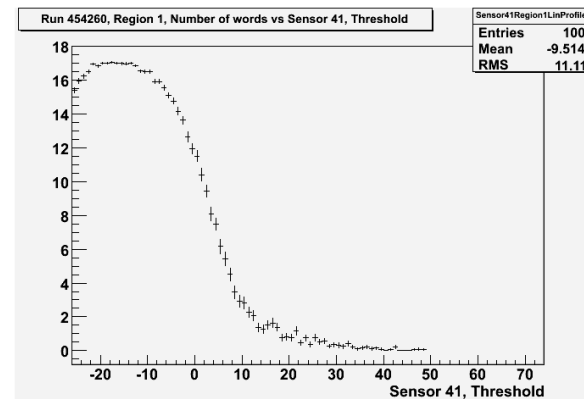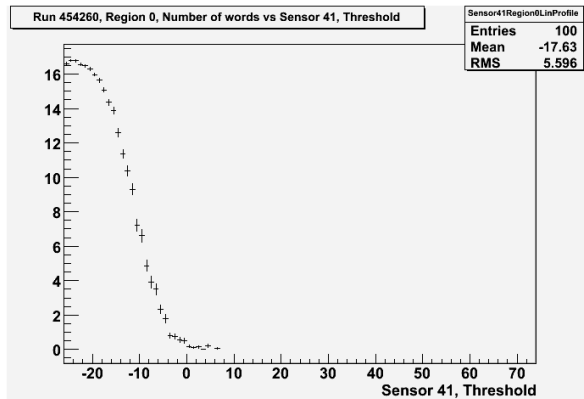
Single pixel trim scan

- Trims 0,2,4,6,8,10,12,14,16,18,20,22,24...

- The trim <u>range</u> still needs to be set up correctly
- Was never done for TPAC1.1 which had the larger #bits
- May involve a resistor value change
- Once per-pixel spread is known I can set this
- Sooner the better (for modifying PCBs)
- Currently the range should be twice that on TPAC1.0 with 4x resolution

Run 454224, Region 2, Number of words vs Sensor 41, Threshold
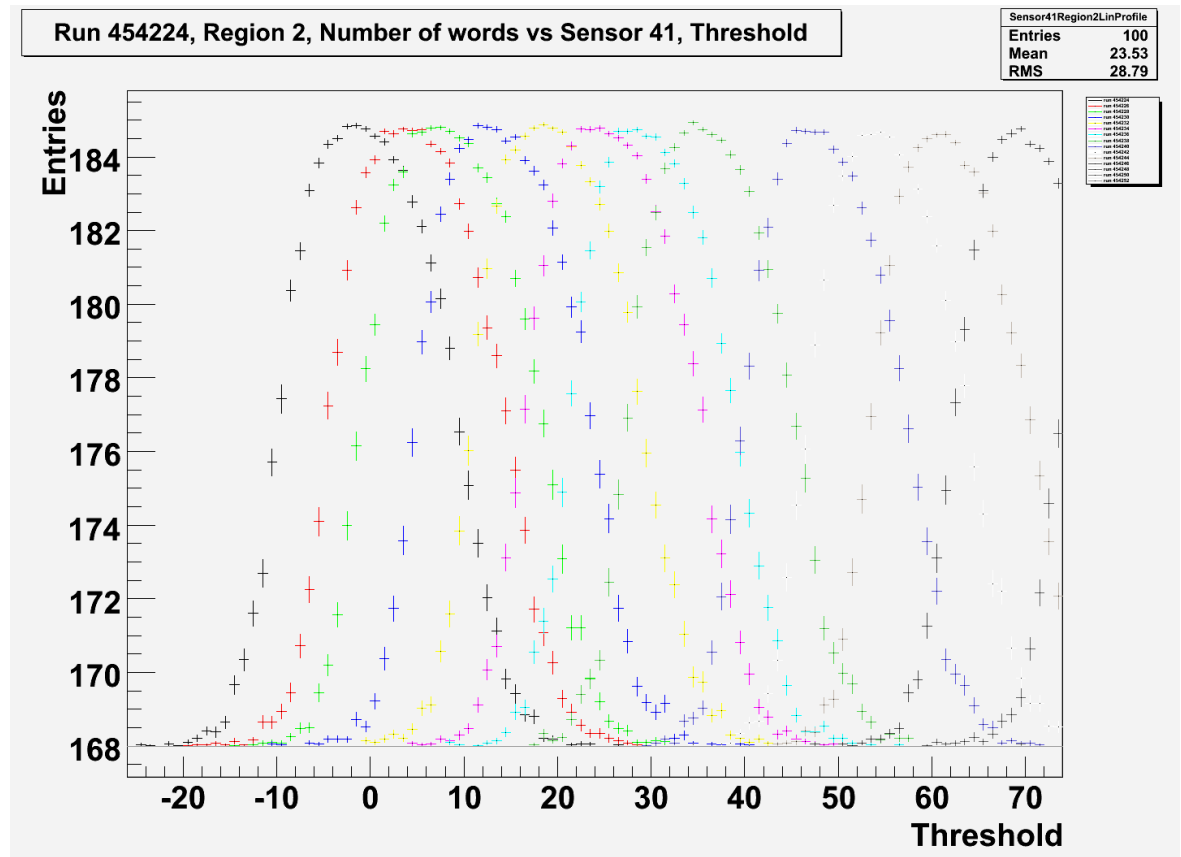
Pixel addresses (noise)

- TPAC1.1
  - Addressing bug

- TPAC1.2
  - Full addresses restored