

Irradiated FBK Sensors



ID on Wafer	ID FE-I3	Sensor Type	V_bd	Irrad.	Working?	Comments
3	06051	2E	60	3 10e15	Dead ¹	Dead on 25/06/10 during Threshold scan vs HV
17	09051	2E	-	0	\odot	
18	05051	2E	50	1 10e15	©	
7	07051	3E	65	1 10e15	Dead	Dead after Test Beam
9	07052	3E	60	3 10e15	Dead	Dead on 22/06/10 during Calibrations scan
13	08052	3E	60	5 10e15	\odot	
12	08051	4E	25	1 10e15	\odot	
14	09052	4E	60	3 10e15	\odot	
16	05052	4E	65	5 10e15	Dead	Dead after irradiation

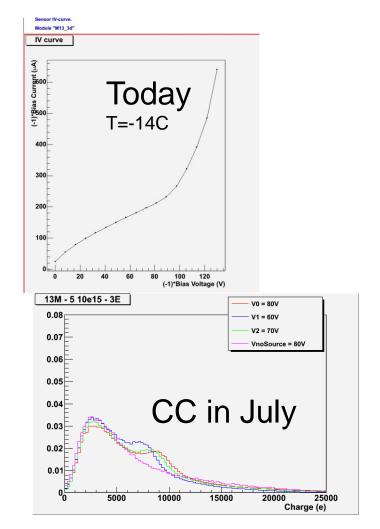
- ✓ Single chip tuned to have:
 - Threshold ~ 3200 e⁻, ~60 TOT @ Q=20ke⁻
- √ 7, 14 sensors tested in the test beam (June)
- √ 13,14 sensors prepared for Sep Test
- √ ¹Dead sensor: the FE-I3 does not work properly



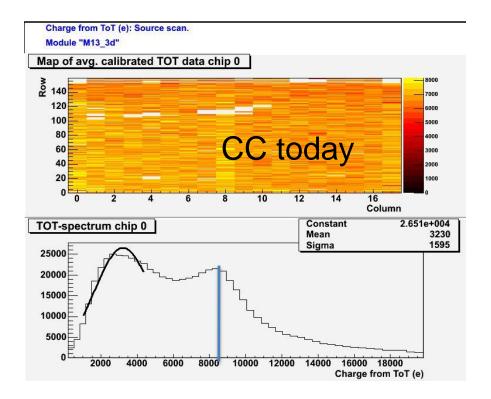
M13_TB_Sep2010



- ✓ Tuned in July. Today just checked out (see root file for configuration files)
 - ✓ Configuration for the source in self-triggering mode need to have the mask applied also to the preamplifiers. If not extremely noisy. Should not be an issue in the TB setup but to let you know.

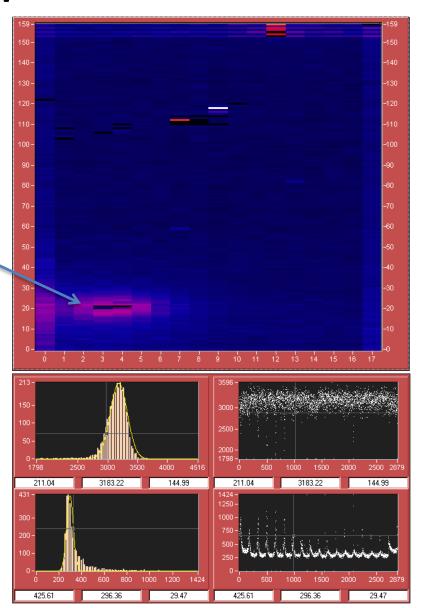


- √ Vbd ~100 V but suggested working point is 80V. If voltage is higher -> `spot of noise', see next slide.
- ✓ Am peak at ~8.5ke (instead of 14ke)



M13_TB_Sep2010

- ✓ Noise map at 90 V.
- ✓ Spot of current/noise in the bottom part.
 (The top central damage is there at any bias voltage)

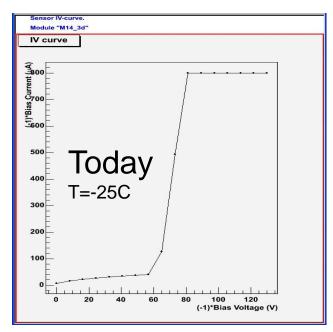


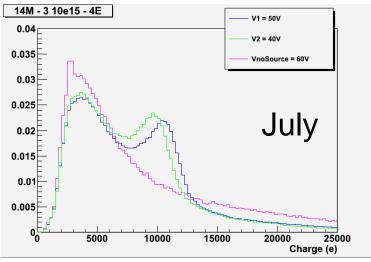


M14_ TB_Sep2010



✓ Tuned in July. Today just checked out (see root file for configuration files)





- √ Vbd ~60-> Suggested working point is 60V
- ✓ Am peak at ~11ke (instead of 14ke)

