

Results of the P3-4 batch W06_OB1 module

Philipp Wieduwilt, Harrison Schreeck, Benjamin Schwenker

Universität Göttingen

philipp.wieduwilt@phys.uni-goettingen.de

December 13, 2017



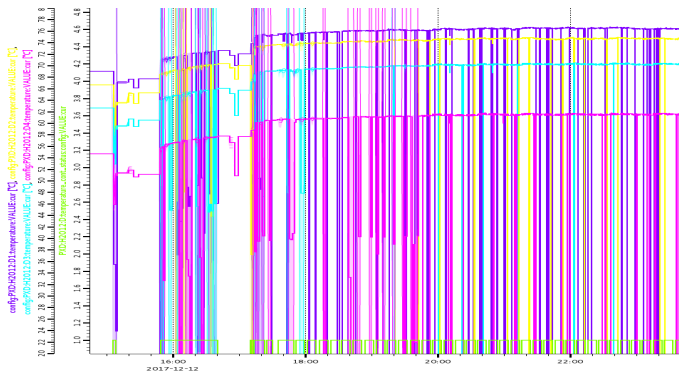
W06_OB1 - Setup

- from P3-4 batch
- using **plastic clamp** to press module on the base jig
- **vacuum** applied
- **water chiller** set to 15 °C
- module fully powered, gate-on voltages at -2000 mV

W06_OB1 - HS Links - Stability

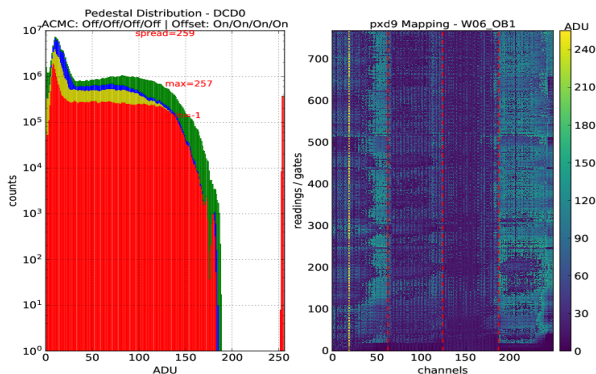
- link 4 instable also with optimized parameters in STANDBY
- links 1-3 stable in STANDBY
- link stability improves when powering matrix and going to negative gate-on voltages/higher DCD_AVDD currents

W06_OB1 - Temperatures



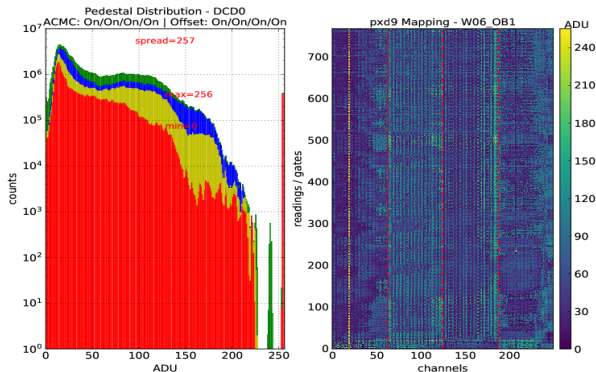
- mean temperatures around 62 – 76
- 2 – 12 units difference among DHPs

W06_OB1 - Pedestals with offsets



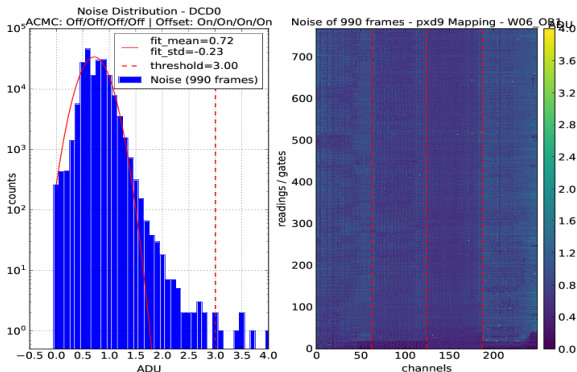
- gate-on voltage –2000 mV
- no **ACMC** , **offsets** calibrated

W06_OB1 - Pedestals with offsets and AMCM



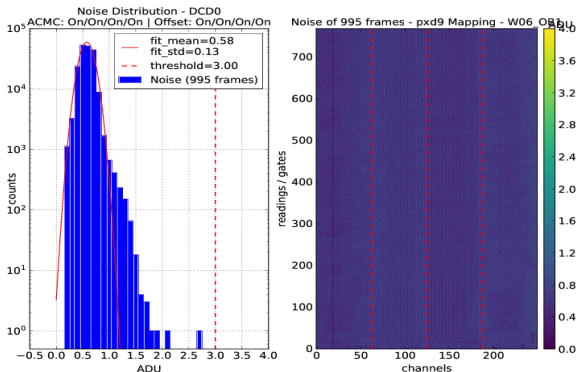
- gate-on voltage –2000 mV
- **ACMC** , **offsets** calibrated

W06_OB1 - Noise with offsets



- gate-on voltage –2000 mV
- no **ACMC** , **offsets** calibrated

W06_OB1 - Noise with offsets and APMC



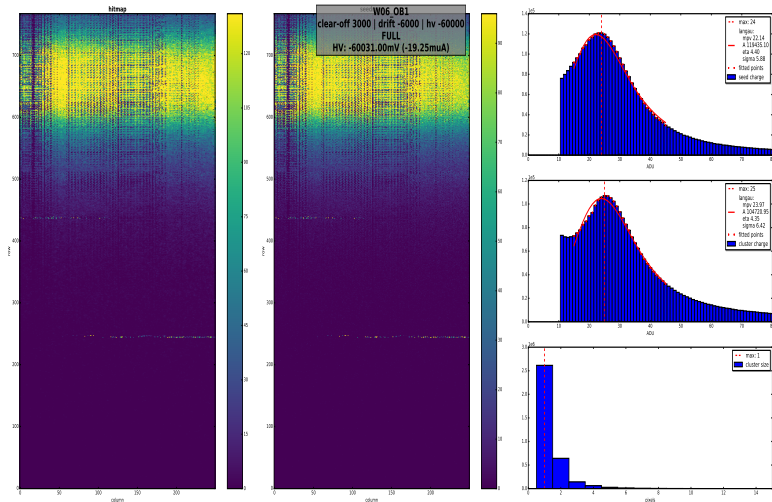
- gate-on voltage –2000 mV
- **ACMC** , **offsets** calibrated

W06_OB1 - ADC Optimization

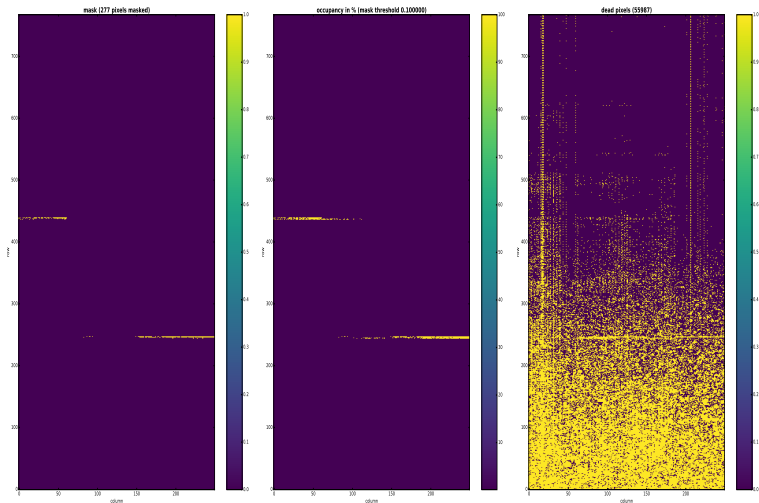
variable	range	optimal	grade
IPSource	55-75	75	A
IPSource2	60-80	65	
RefIn	650-800	725	A
AmpLow	200-400	300	
IFBPBias	60-90	75,65,65,65	A
IPSourceMiddle	70-80	76,72,78,72	A

→ 4 dead channels \Leftrightarrow 4 hot drain lines

W06_OB1 - Source Scan



W06_OB1 - Source Scan - Dead and masked pixels



Backup