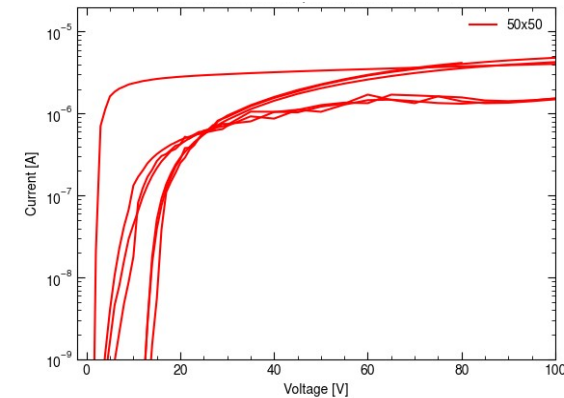


Update 3Ds:



- Various Problems at the moment:
 - Multiple Timing Boards "breaking", after swapping sensors no signal detectable
 - 3D specific (13C80):
 - Very small (smaller than hole in boards) resulting in issues with securing to boards and especially bonding
 - Very high leakage current --> sensor has to be cooled to -20°C even unirradiated, with two bonded pixels ~20 uA at 100V (Timing boards developed for 1-2 uA)
 - Measurements conducted so far (with multiple trigger settings) show no voltage dependency

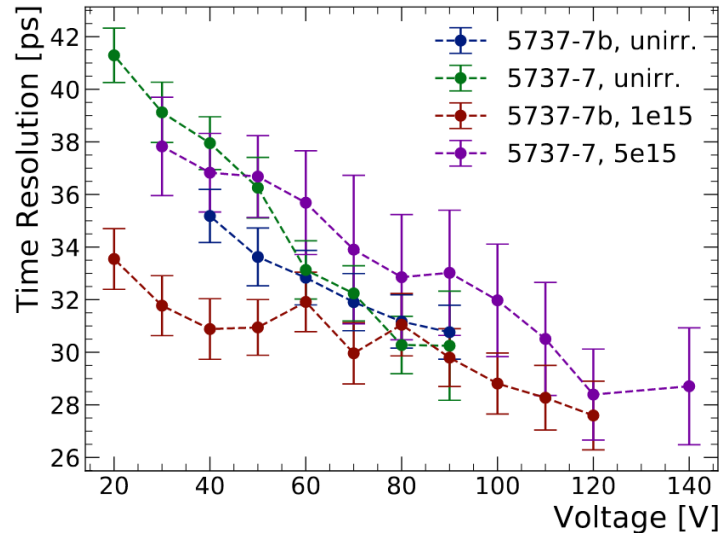
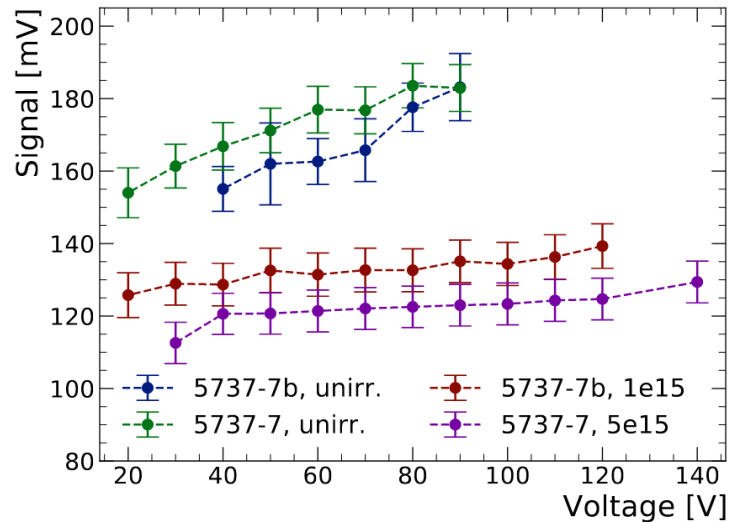
IVs of single pixels on same detector



Revision irradiated 3D



- Irradiated sensors measured cold --> less Jitter, so better time res. for 1e15
- 5e15 sensor overall slightly worse than 1e15, as expected



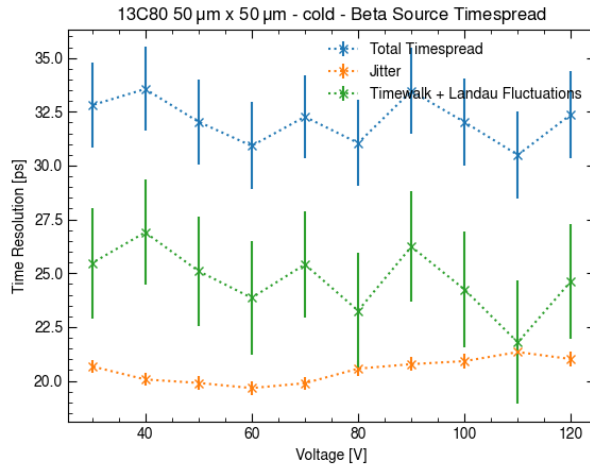
Backup

Albert-Ludwigs-Universität Freiburg



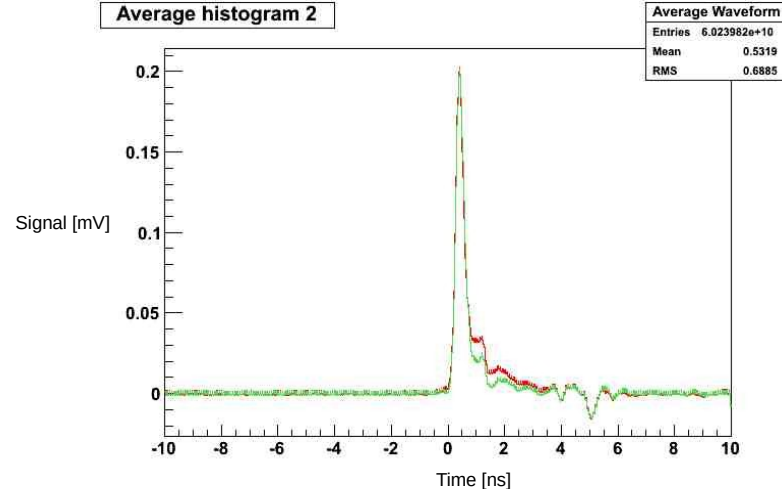
**UNI
FREIBURG**

Update 3Ds



Jitter and Timewalk preliminary,
Trigger on REF, 3D and PMT
(Similar for 2 Trig setup)
Time resolution fluctuates slightly but within fit
error and no tendency visible

Average histogram 2



Average Waveform for 120V (red) and 40V,
Trigger on REF and 3D (~40mV)
(Similar for 3 Trig setup)
Peak of signal is basically identical for all
voltages, only second peak shows voltage
dependency (not certain why we see a second
peak)

Revision irradiated 3D



- Risetime similar for all 3D, except for strongly irradiated sensor--> Higher E-Field
- Jitter lower for both irradiated 3D --> Lower Temperature = less noise

