

4P: 4 SiPMs in parallel

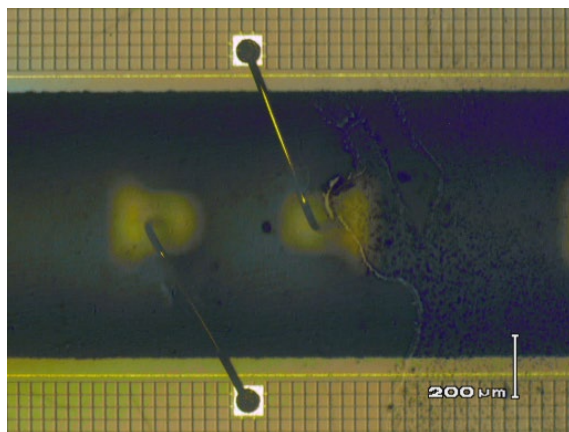
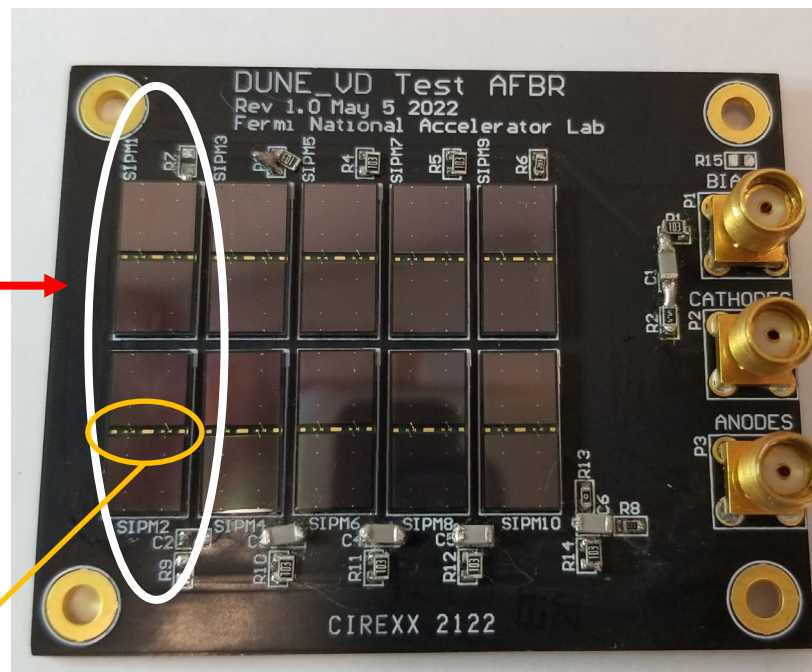
6x6 mm²/each

Total: 1.44 cm²

N_{cell}/each=22428

C_{terminal}(RT)~4.38 nF
~3 nF/cm²

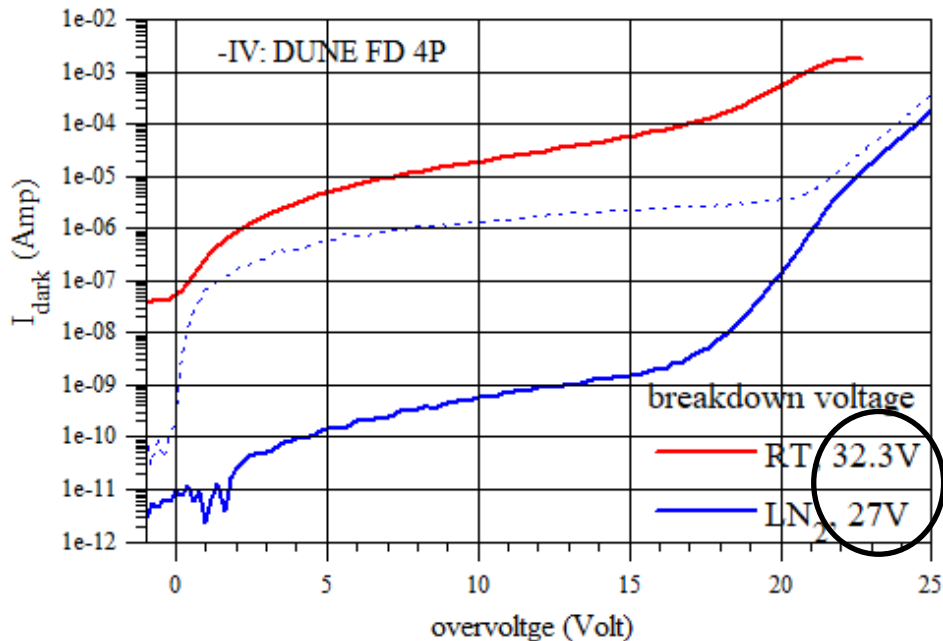
C_{terminal}(LN₂)~same
no change in cold !



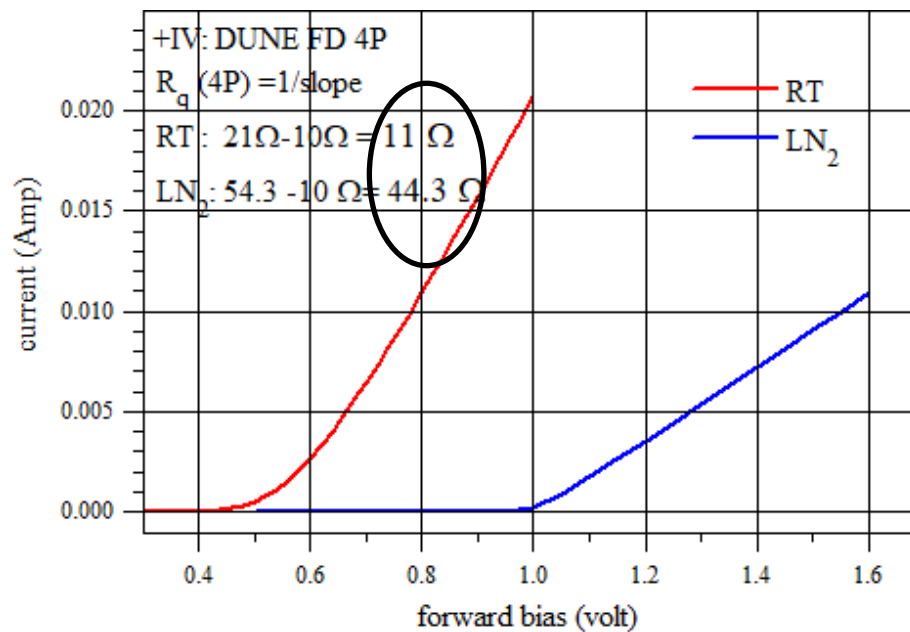
N_{cell}=22428

pixel size: 40 μm

reverse IV



R_{quench} : forward IV



Direct pulse shape: 1 or n-pe

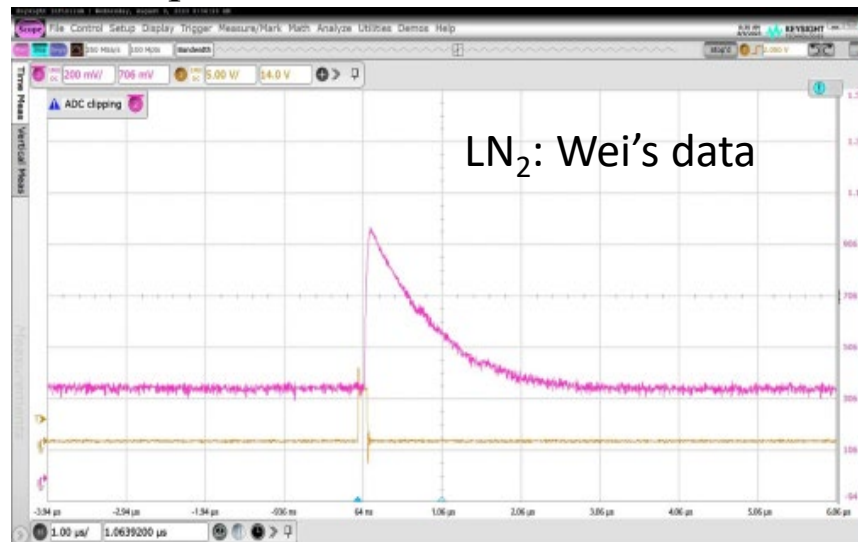
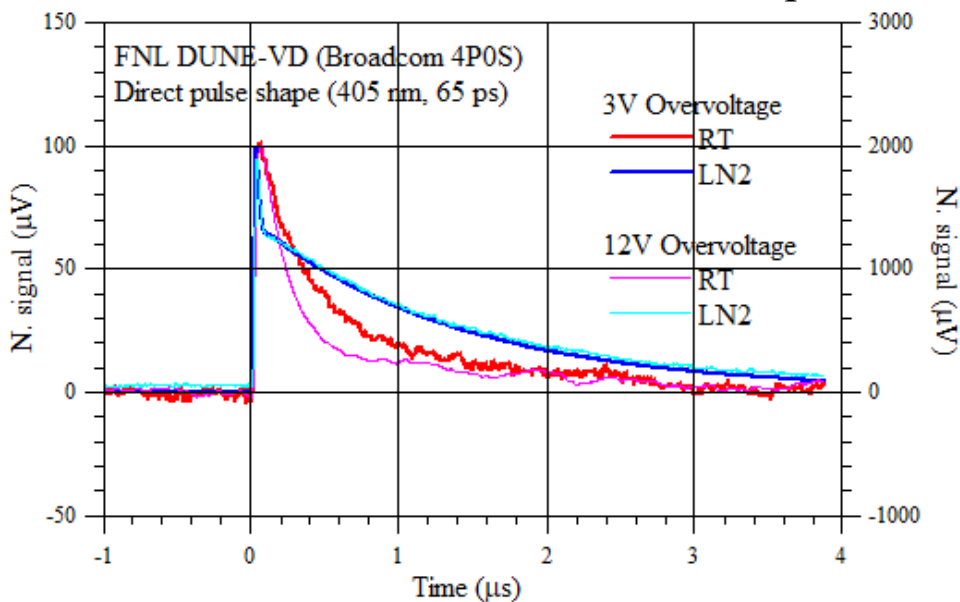
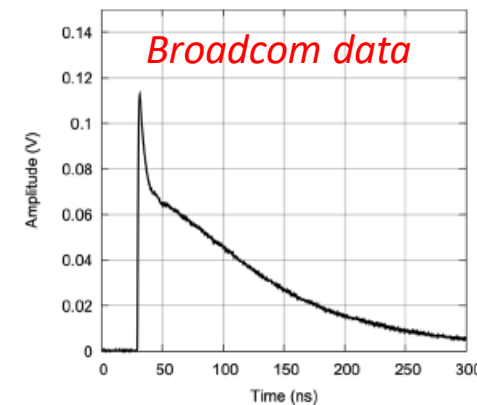
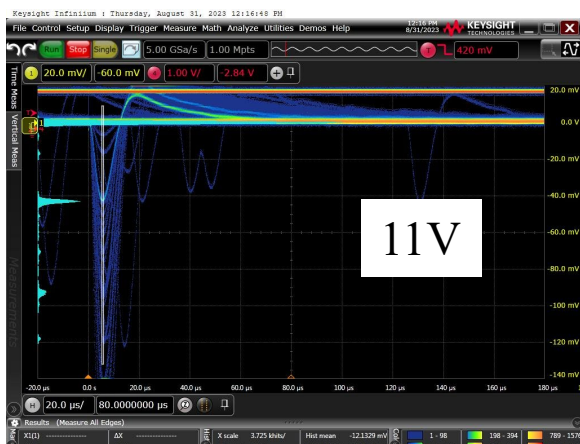
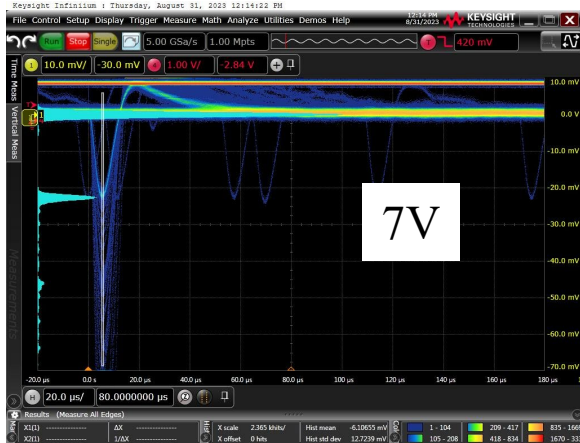
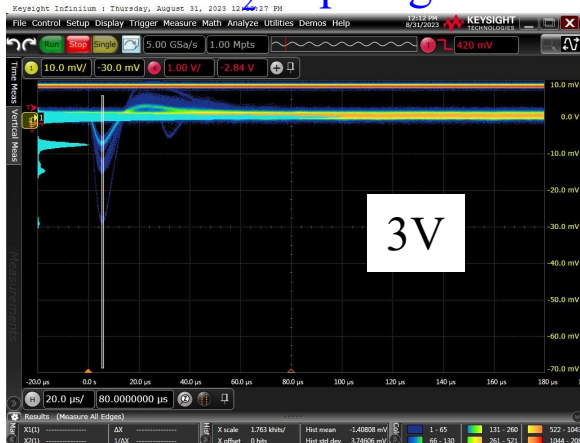


Figure 12: Typical Pulse Waveform in Response of a Picosecond Laser-Pulse on a Load Impedance of 25 Ω and Applied Bias of 12V above Breakdown

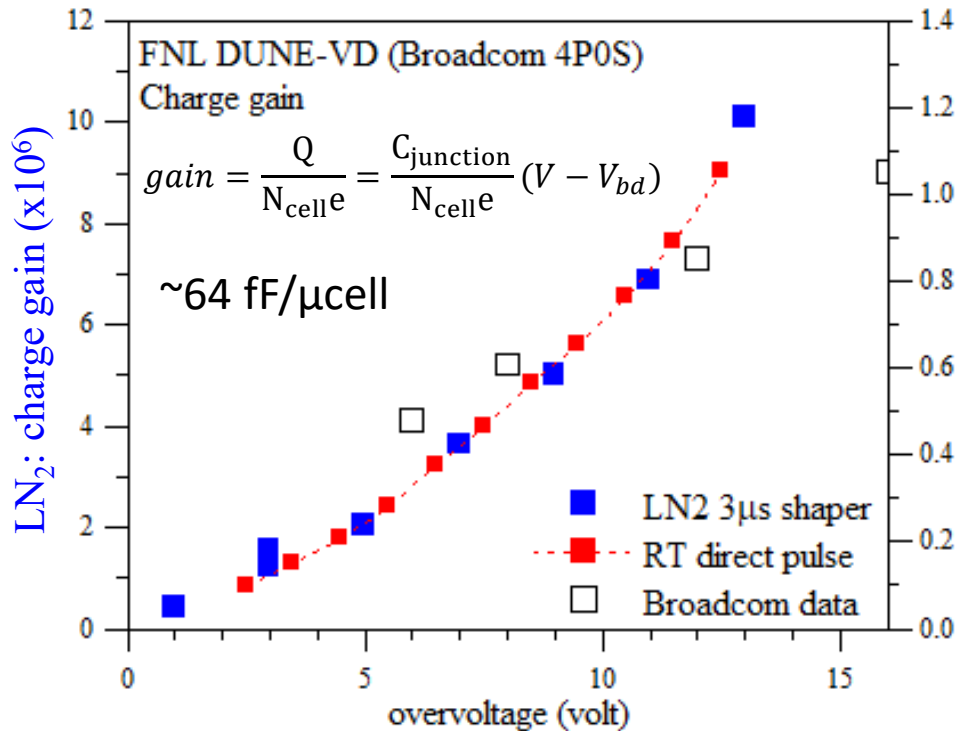


recovery time >1 μs (3 μs shaper is used)

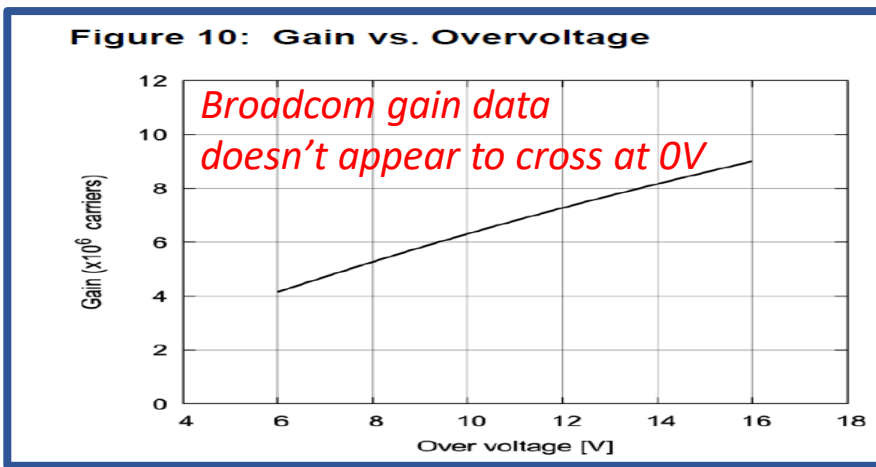
LN₂: 1-pe signal



Preliminary results



charge gain appears nonlinear, RT or LN₂



RT: direct signal pulse amp. (mV)

RT: n-pe signal

