Preliminary measurements (current buffer prototype)

Dark pulse measurements

Charge output voltage vs pulse width for different gain settings

From the preliminary measurements, for pulse width = 9ns, we have n=115 fired μcells and:

Measurement are in good agreement with the expected results

Jitter measurements at the fast-OR output

One excited channel: slowest case
Average delay μ = 1.77ns
Standard deviation σ = 50 ps

Two excited channels: fastest case
Average delay μ = 1.42ns
Standard deviation σ = 50.5 ps

Worst case dispersion ≤ (μS + 3σS) - (μD -3σD) ≅ 652 ps

Target design value ≅ 1ns