

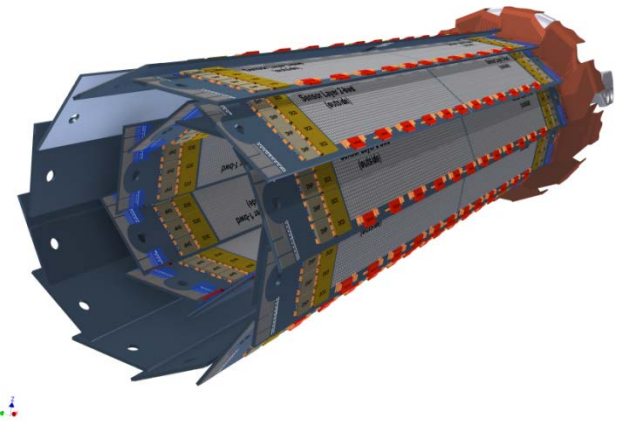
Gated Mode



W31-OF1 at 76.33MHz



Christian Koffmane & Felix Mueller
Lab Meeting 15.02.2017



Layout Change

Change Sw-Vref Routing from Alu1 to Alu1 + Copper and widen traces:

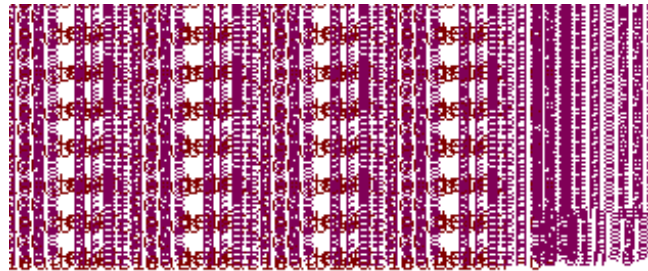
- from Sw-Vref sense to first switcher: **~10.5Ohm** (old layout: ~54.5Ohm)
- from Sw-Vref sense to first switcher: : **~26.54 Ohm** (old layout: ~172.0Ohm)

The current of Sw-sub net is ~29-35 mA

The current of Sw-Vref net is 0 mA

The sense line of Sw-Vref is connected to the Sw-Vref force net close to the switcher which is located closest to the DCDs.

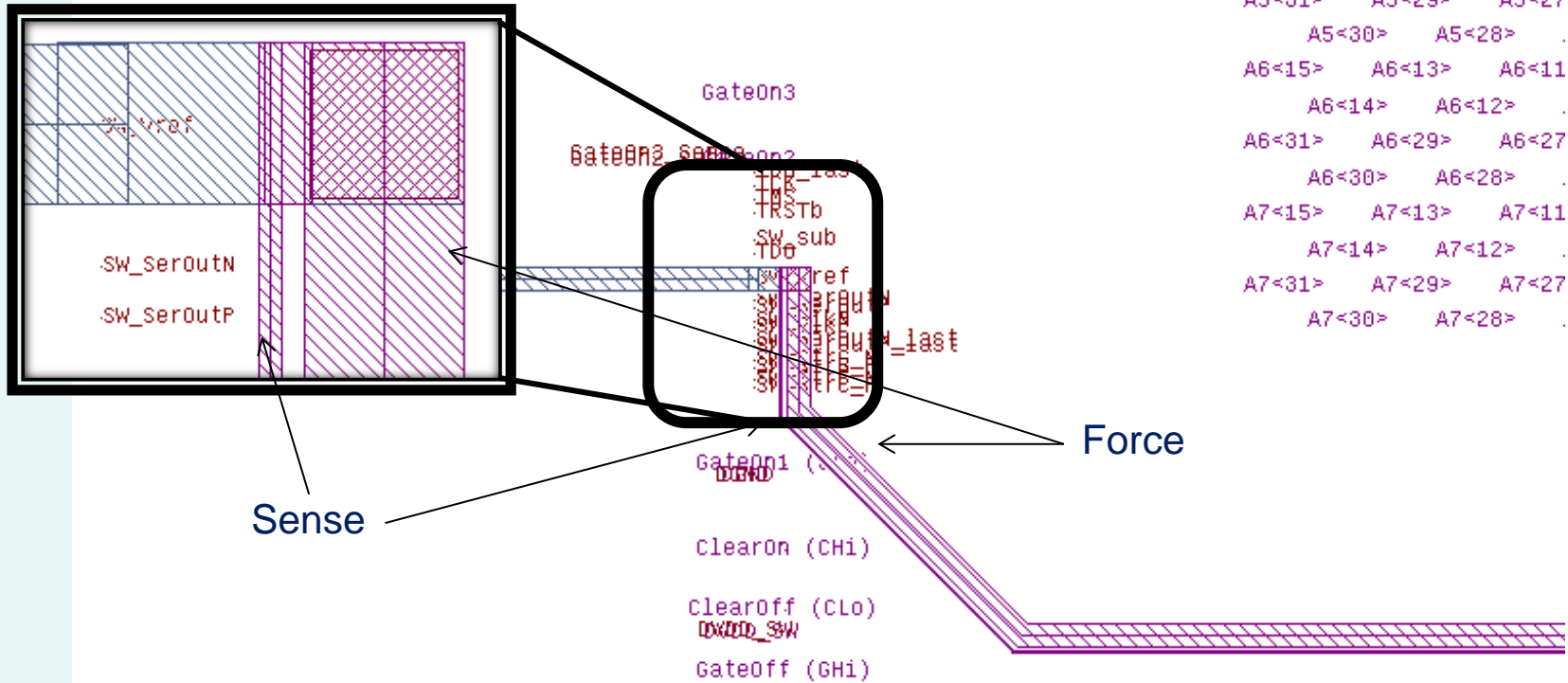
Sw-vref net (Force and sense)



Gate<188> Gate<189> Gate<190> Gate<191>

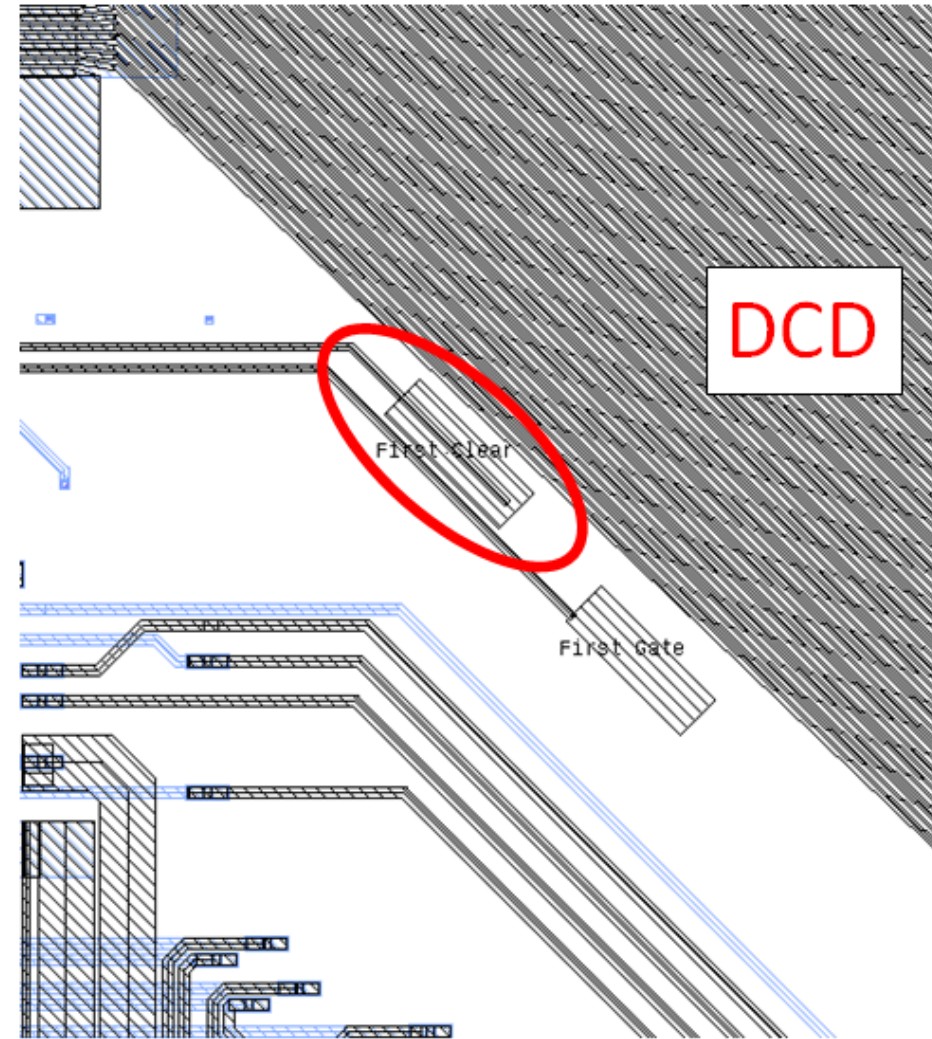
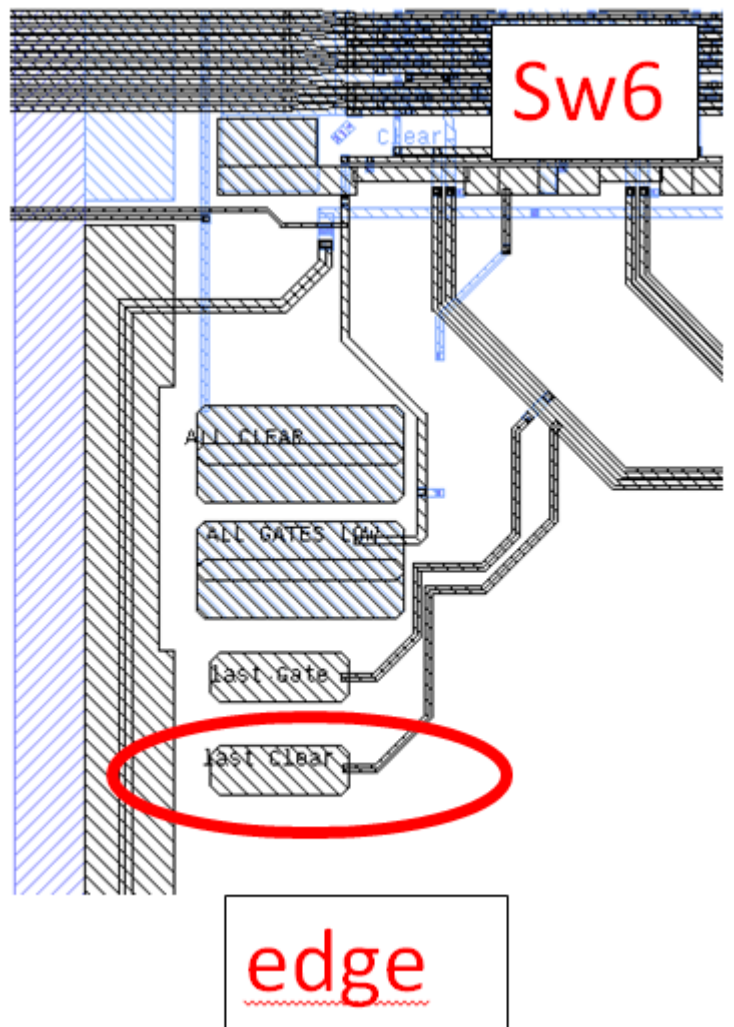
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A7<31>  A7<29>  A7<27>
      A7<30>  A7<28>  .
    
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Probe pads of Switcher Outputs

Only two Clear outputs of the Switchers can be probed

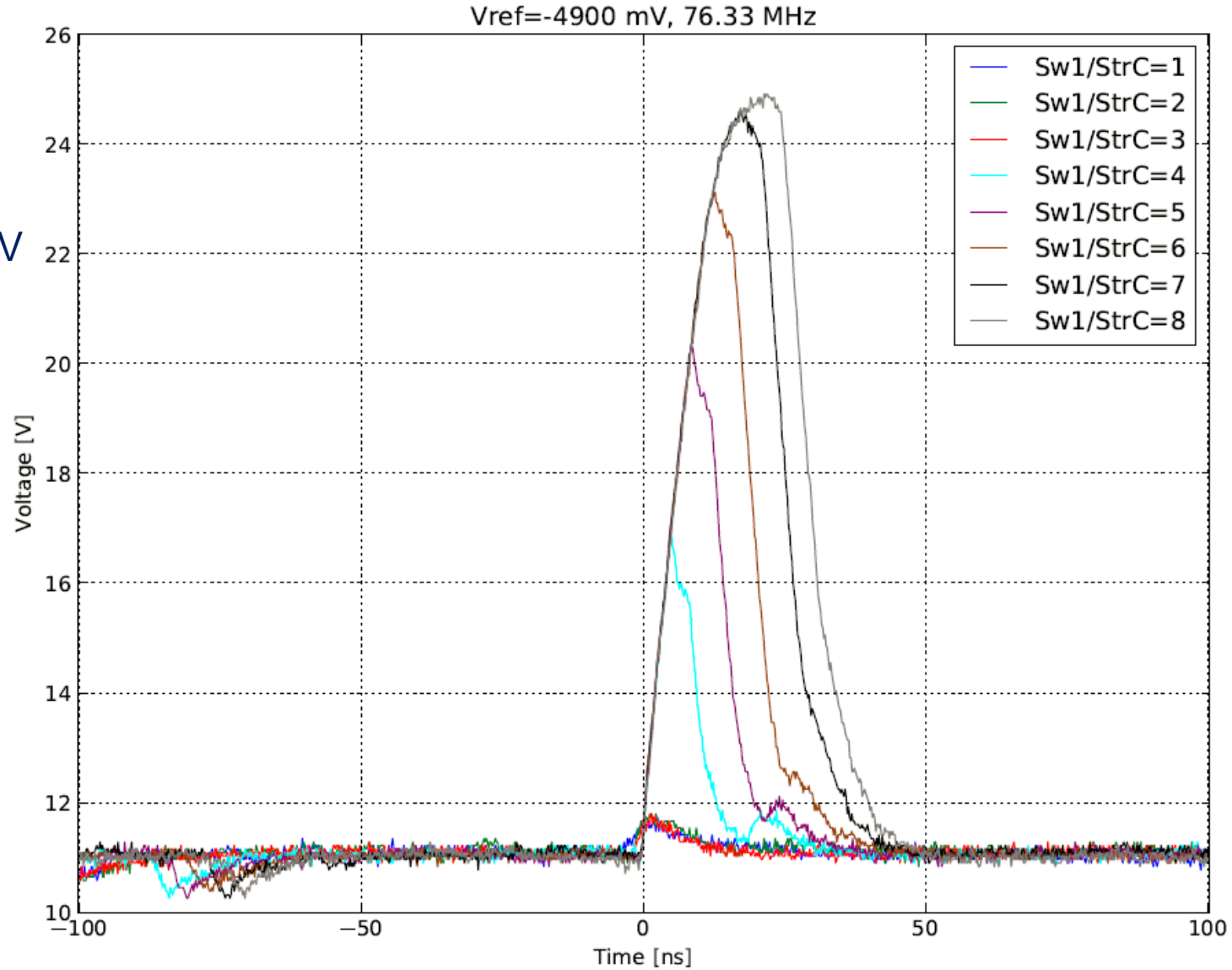


StrC – number of ticks – Sw1

Source = 6V

ClearOn = 20V

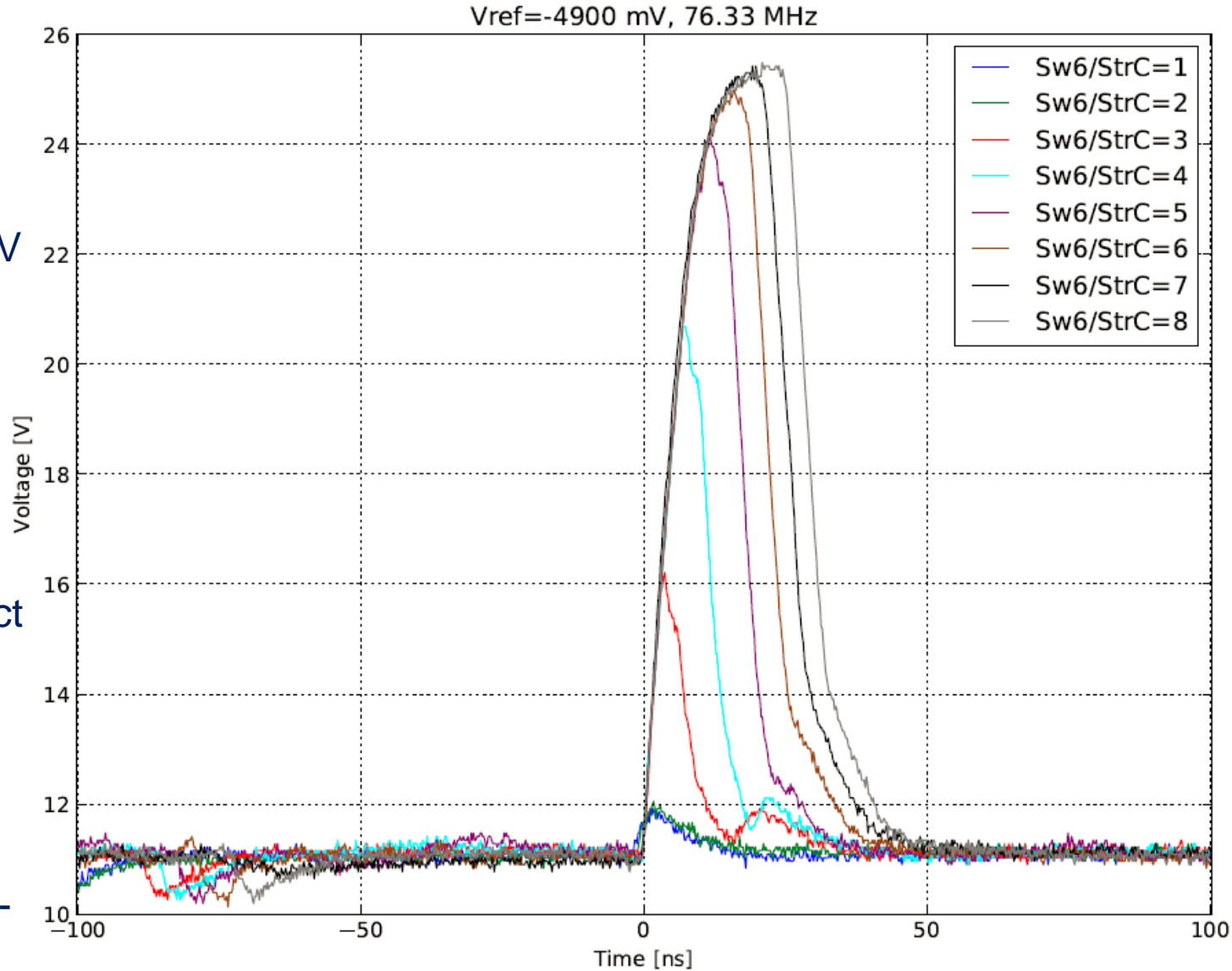
ClearOff = 5V



StrC – number of ticks - Sw6

Source = 6V
 ClearOn = 20V
 ClearOff = 5V

Needle contact
 could be bad!
 This could
 result in a
 decrease of 1-
 2V.



StrC – sw-Vref – Sw1

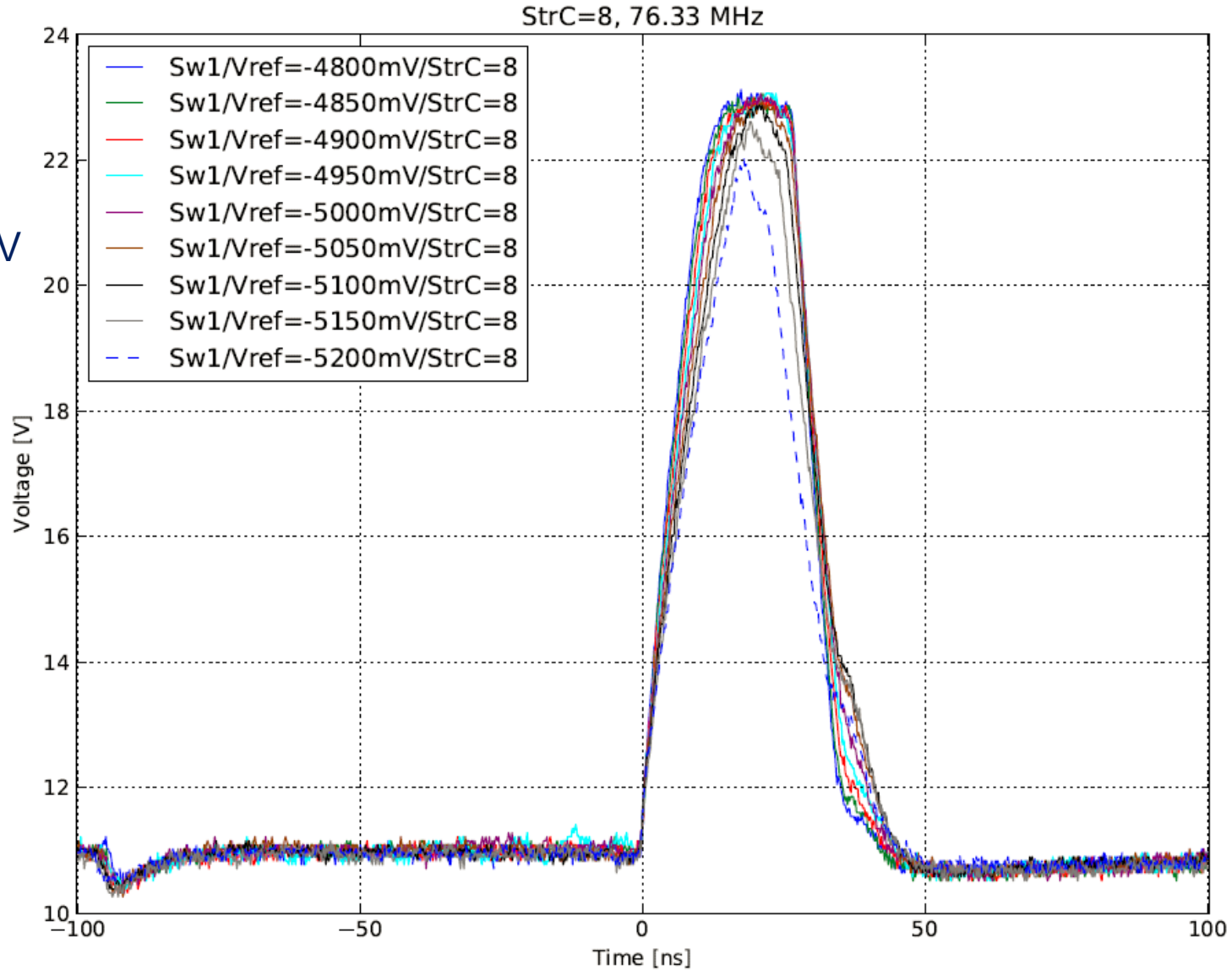
Source = 6V

ClearOn = 20V

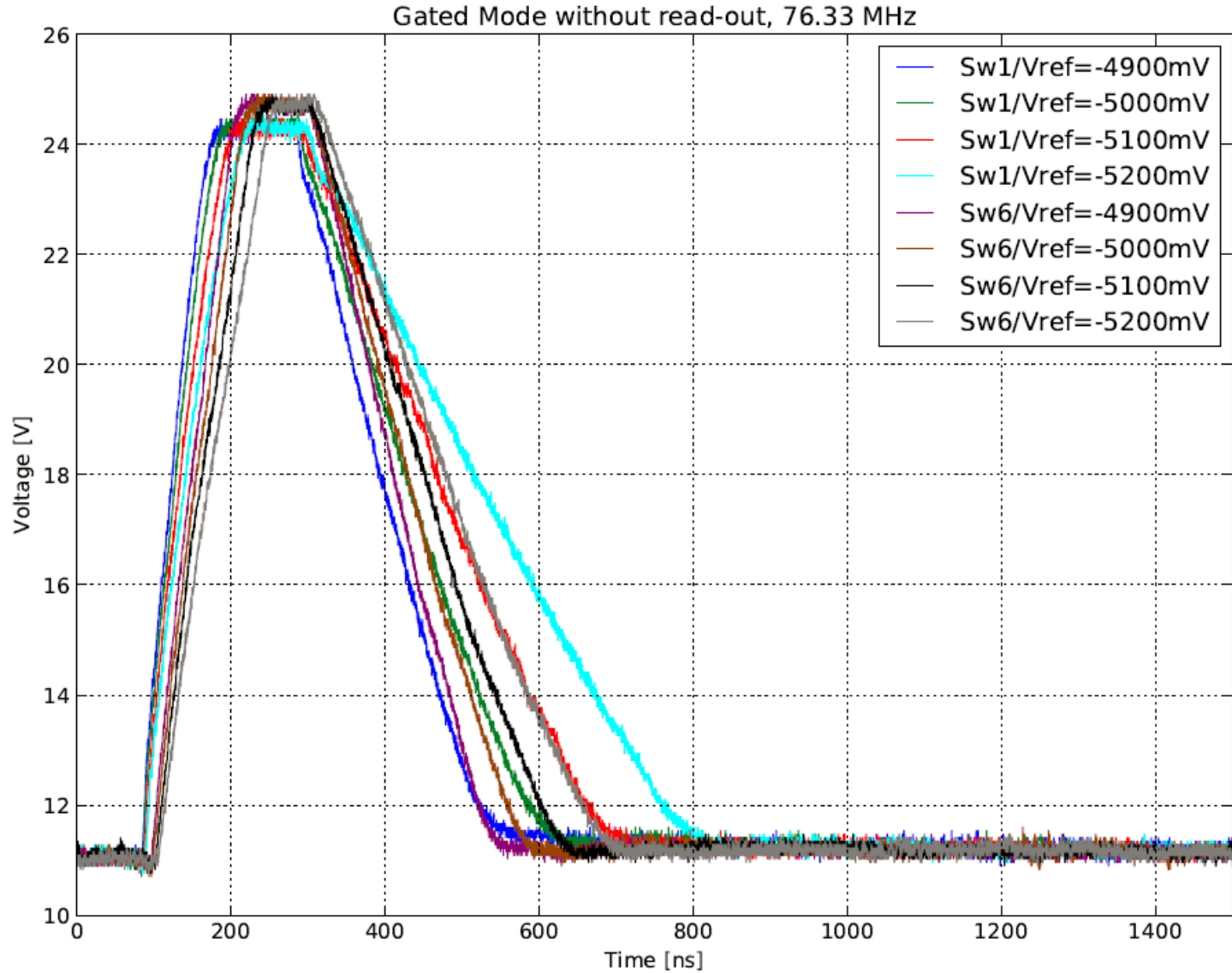
ClearOff = 5V

sw-sub = -7V

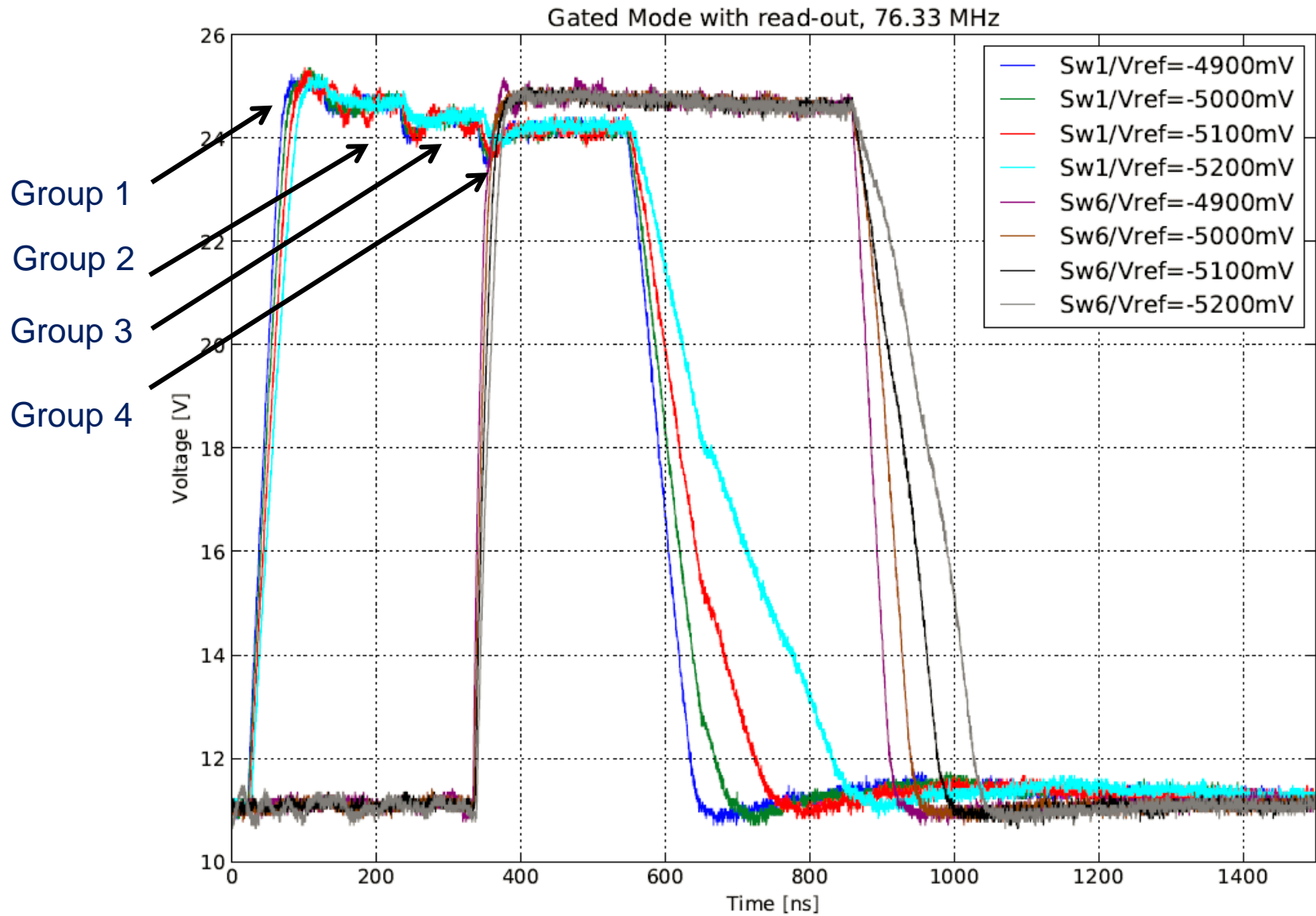
sw-vref= X



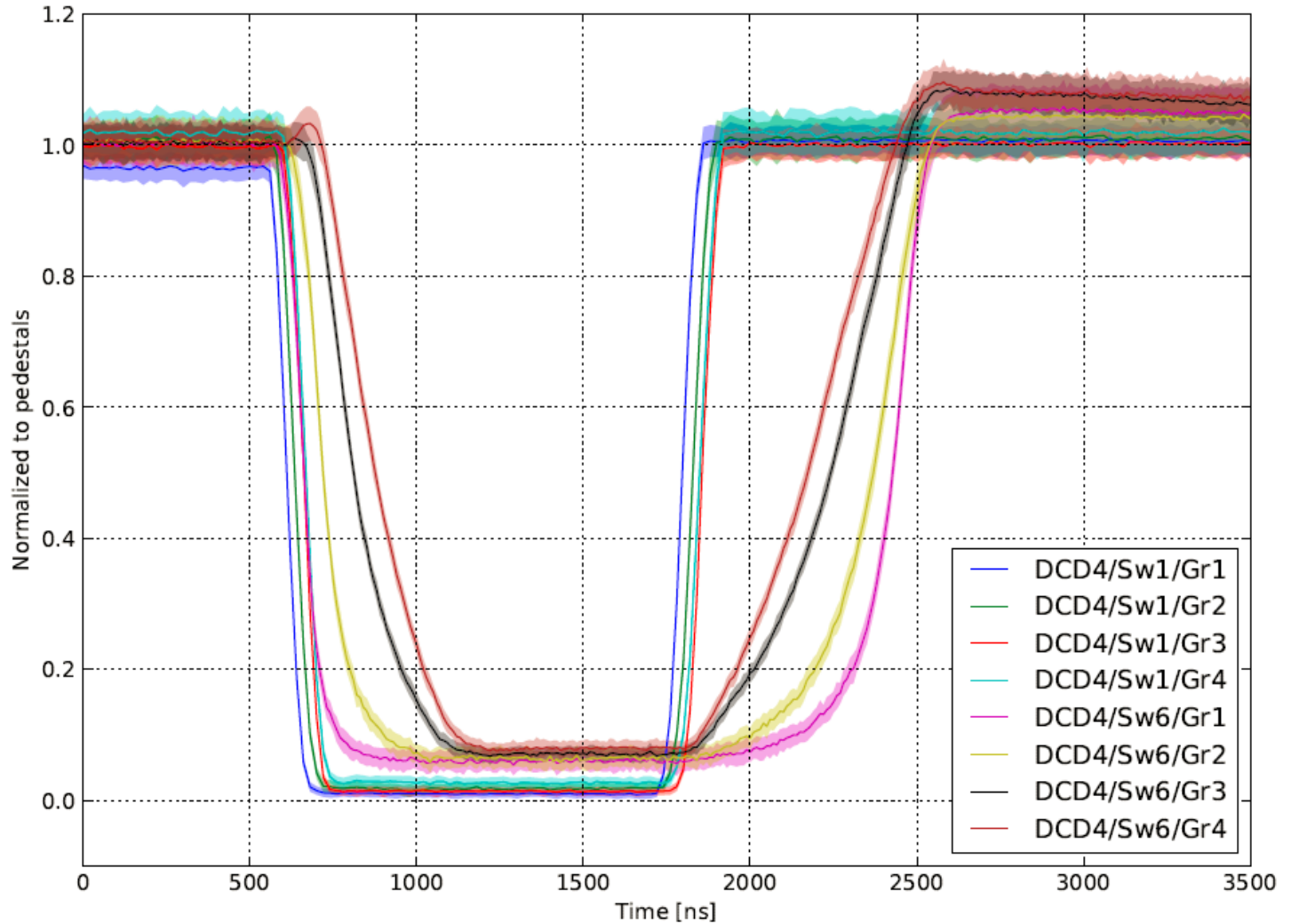
Gated Mode without read-out



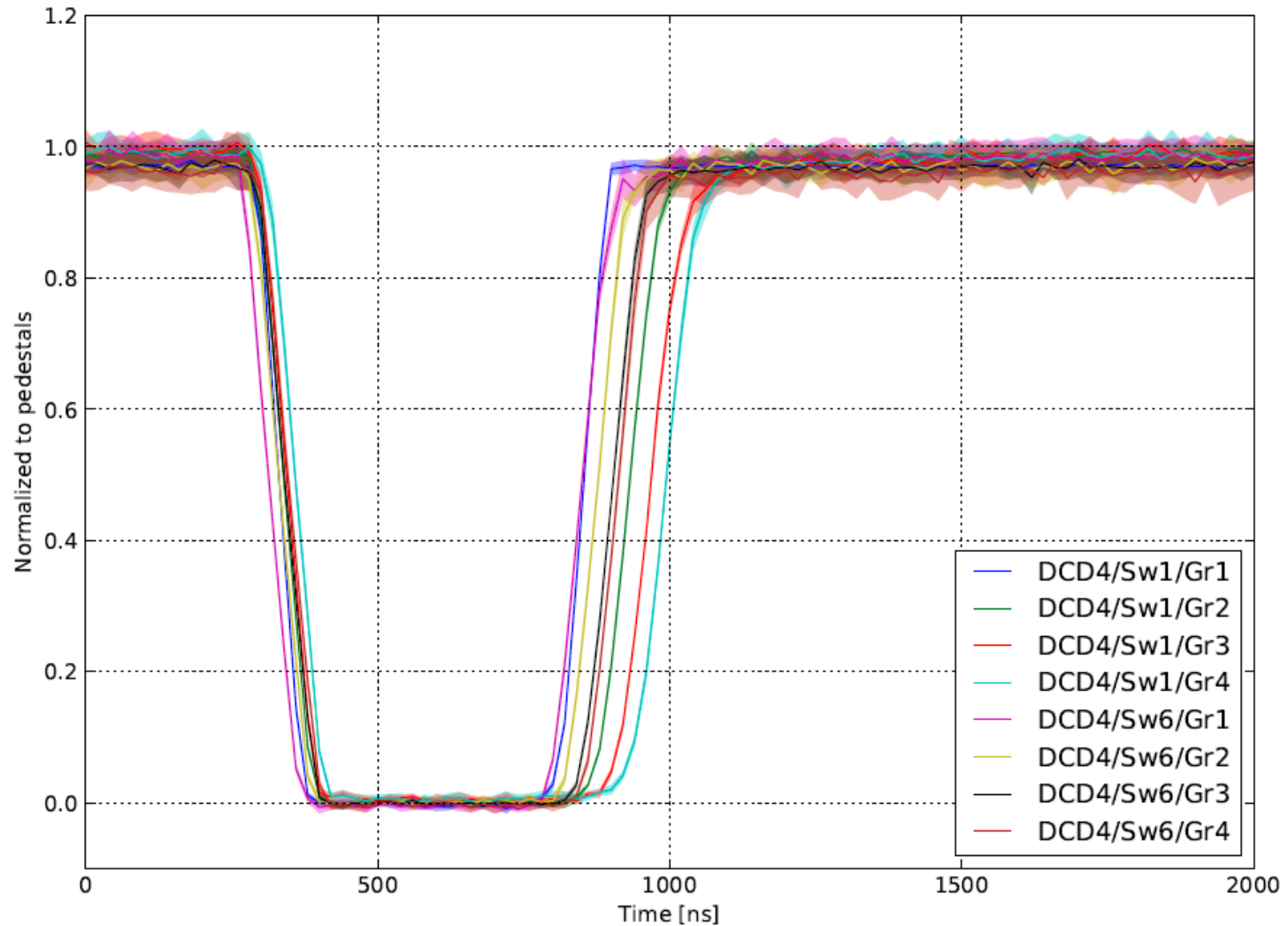
Gated Mode with read-out



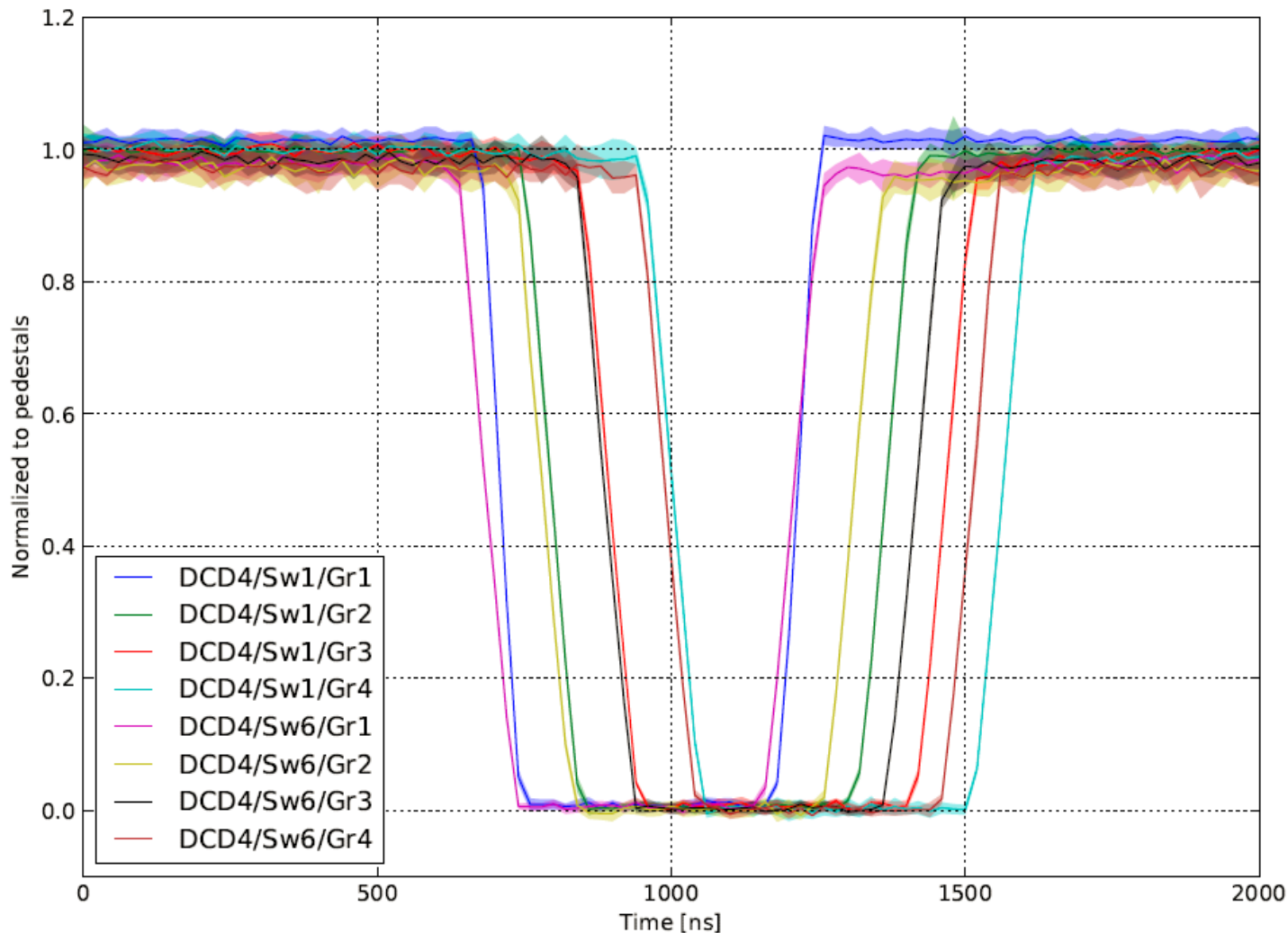
Gated Mode without read-out (old W30-OB1)



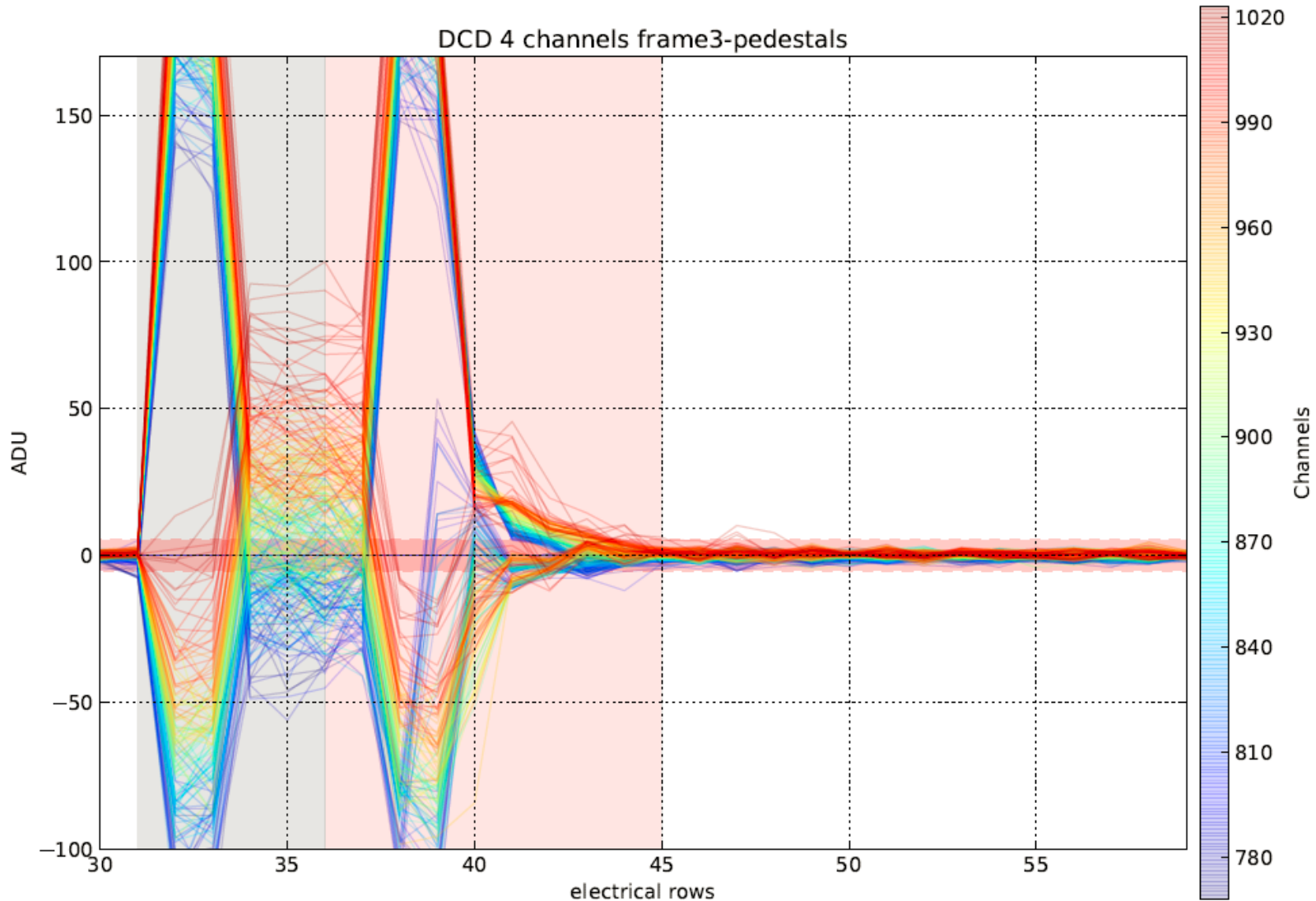
Gated Mode without read-out (W31-OF1)



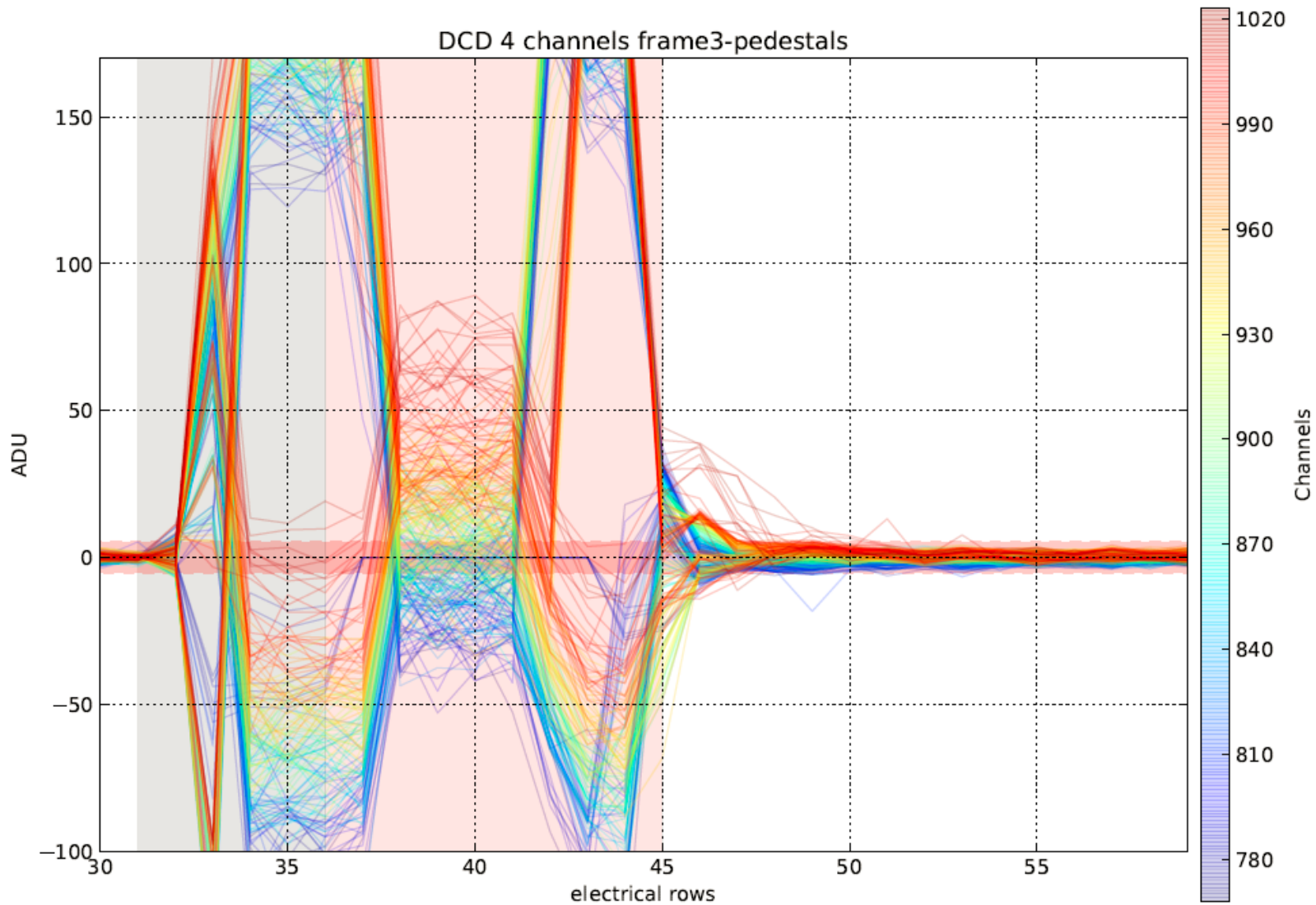
Gated Mode with read-out (W31-OF1)



Gated Mode without read-out (W31-OF1)



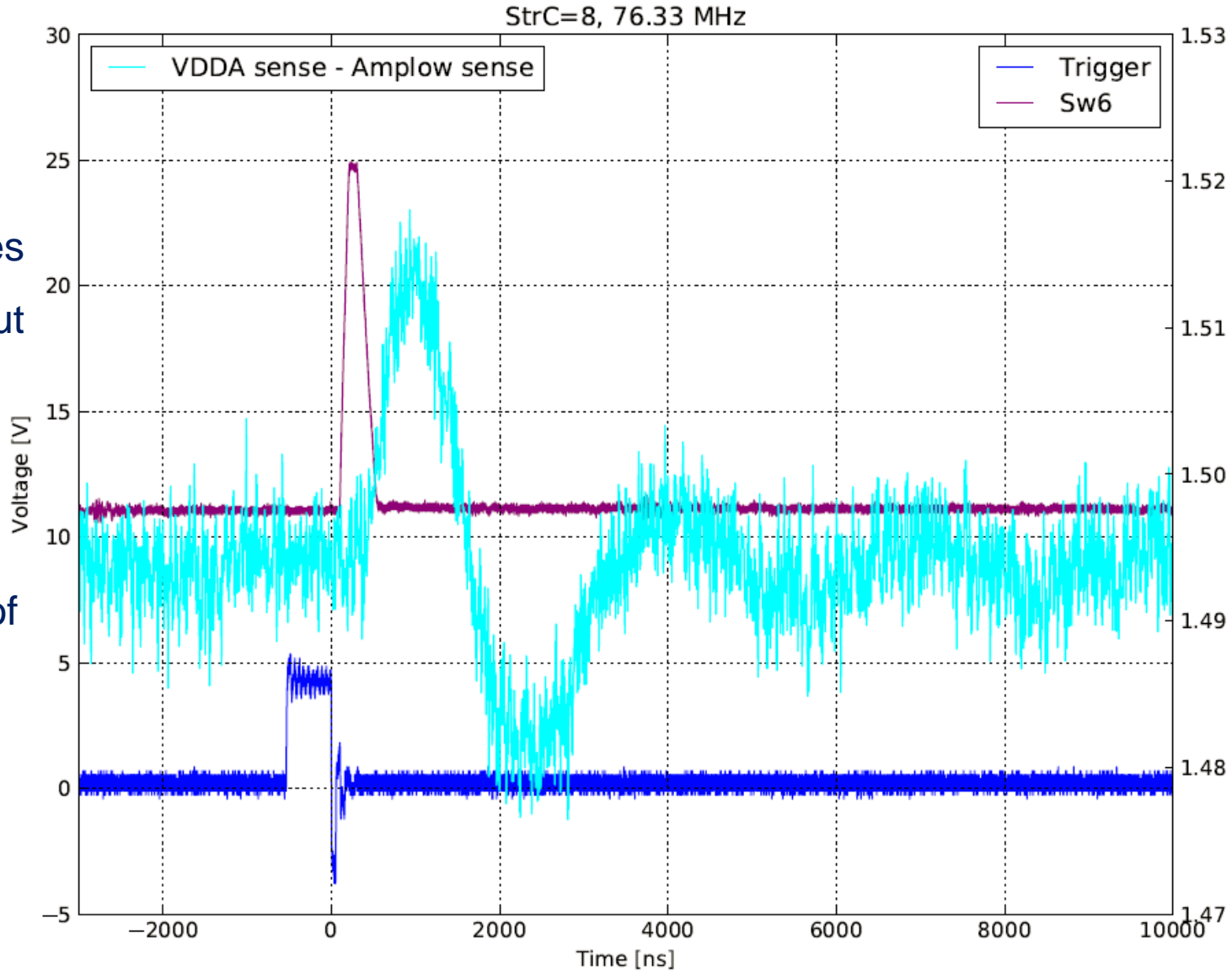
Gated Mode with read-out (W31-OF1)



Gated Mode without read-out (W31-OF1)

Probe on the sense voltages at the breakout board

purple:
ClearOutput of Sw6



Gated Mode with read-out (W31-OF1)

Probe on the sense voltage at the break board

purple:
ClearOutput
Sw6

