CaR Board Testing

- Supply pins of U89 are not connected
  - Half of the power supplies cannot be enabled
- Was fine in v1.3
- Should have been discovered by DRC
Bonding and Chipboard Tests

- Nominal settings: W15-4: ~250kHz oscillation

- Nominal settings:
  - W15-4: ~135mV (p-p) 5µs/div, all 50ohm termination
  - ~130mV (p-p) 5µs/div, 50ohm from scope, other 3 open
  - ~114mV (p-p) 5µs/div, 50ohm from scope, other 3 open, external power

- buff_ibiasn 252mV, 1.8V pulser:
  - ~980ps (~855ps, no light) rise time, 50ohm scope, other 3 open
  - ~880ps (~850ps, no light) rise time, all 50ohm termination
  - 3.3uA on HV without light and 4.8uA with
  - No change in buffer currents
Bonding and Chipboard Tests

- Analog rise times with light

All 4 outputs terminated

Only 1 output terminated
Bonding and Chipboard Tests
Pixel Decoding

- Every pixel discriminator is connected to 3 outputs:
  - OR of all discriminators without delay (fast OR)
  - 2 delay lines running in opposite directions
- ToT is encoded in time between pulses
- Pixel position is encoded in delay between fast OR and delay lines
Pixel Decoding

3.275V attenuation

![Graphs showing pixel decoding and peak width difference](image-url)

- Estimated number of hits
- Pixel position [ns]
- Number of candidates - Estimated number of hits
- Peak width difference [ns]
Pixel Decoding

3.2V attenuation

[Graphs and charts showing pixel position, number of candidates, estimated number of hits, and peak width difference for 3.2V attenuation.]
Pixel Decoding

3.1V attenuation

Estimated number of hits

Pixel position [ns]

Number of candidates - Estimated number of hits

Peak width difference [ns]
Pixel Decoding