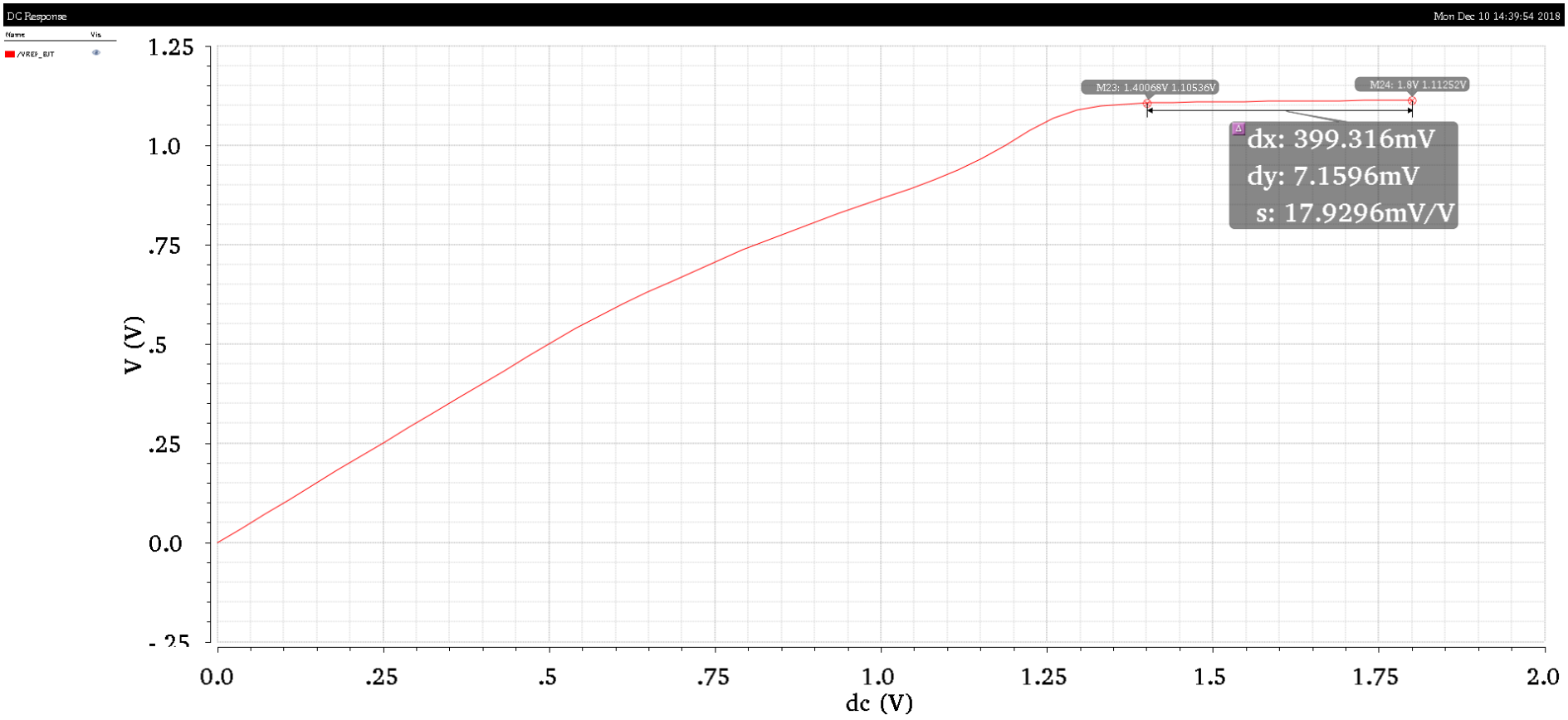
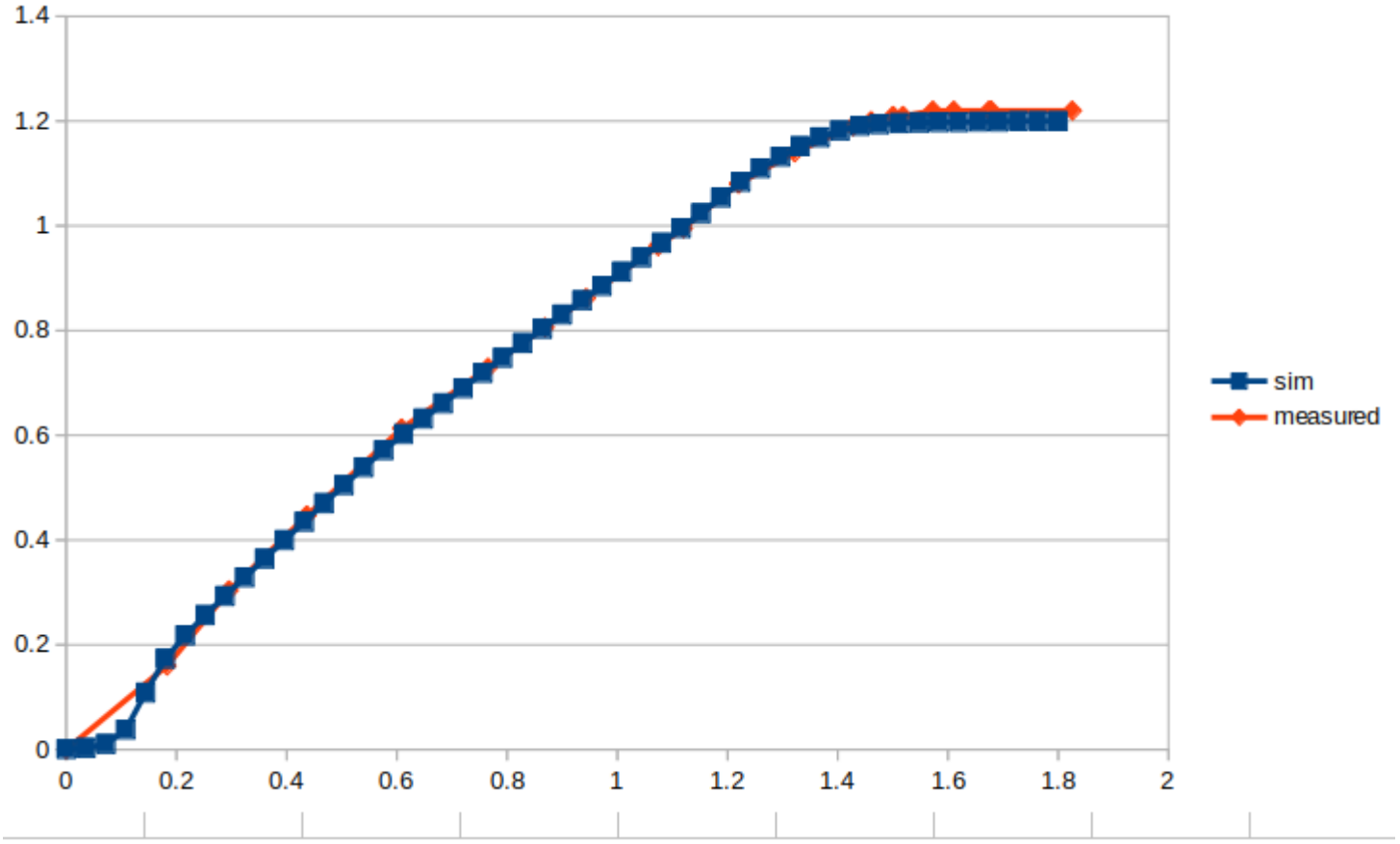
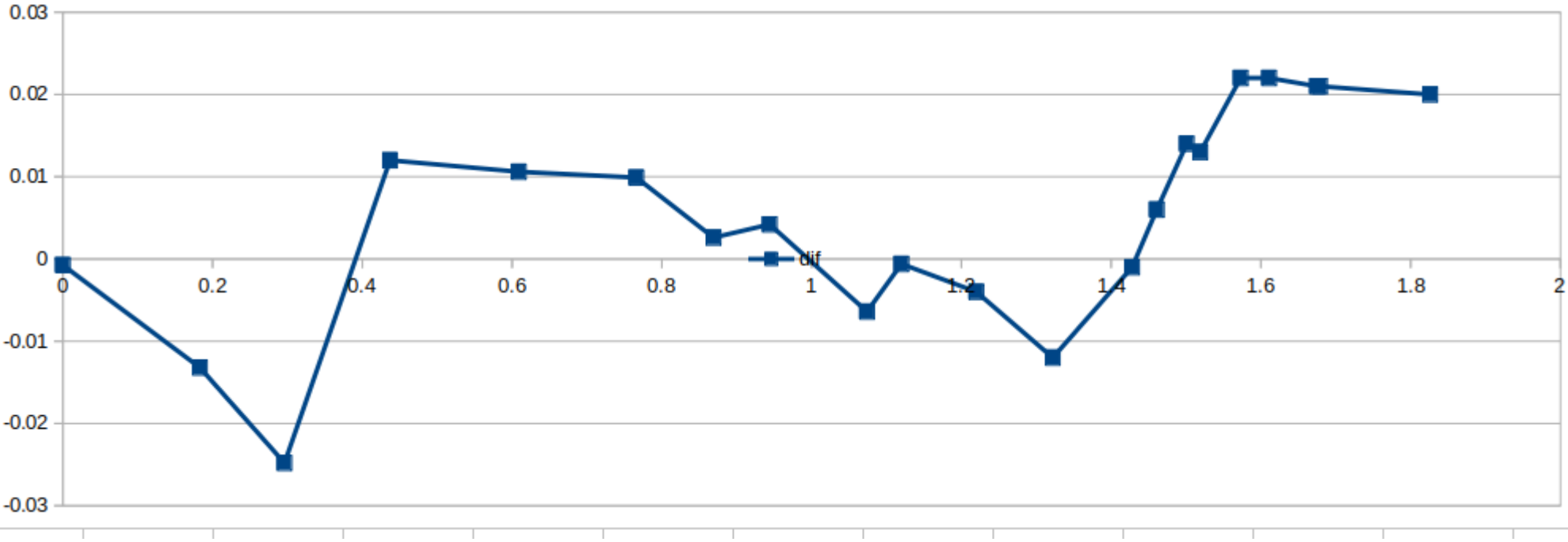
# Bandgap Simulation – Vout vs Vin



# Bandgap Results – Vout vs Vin

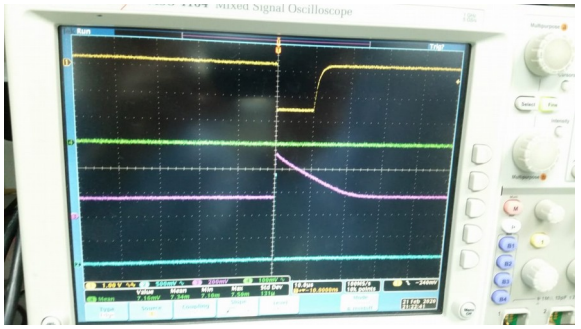


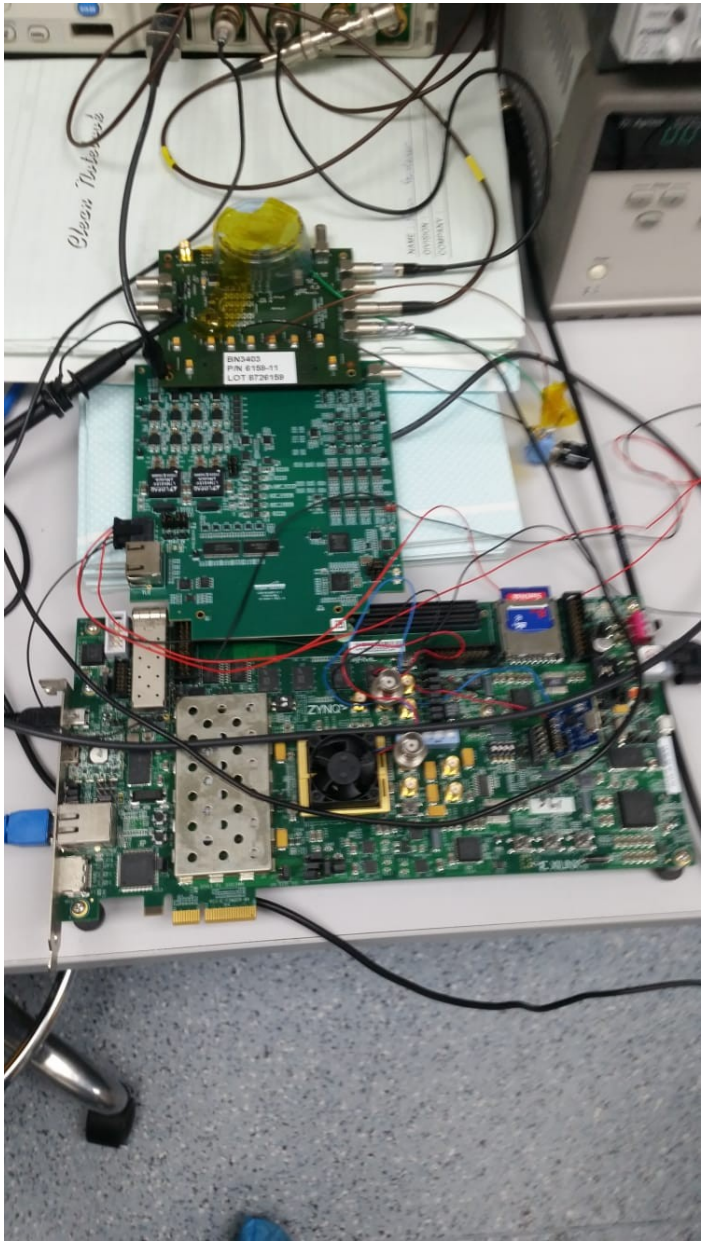
# Bandgap Results – Difference between simulation and Measuremtns Vs Vin




- Bandgap shows a maximum variation from simulation of ≈ 25mV
- Maximum variation from simulation of ≈ 20mV over operating range (1.4 to 1.8V)

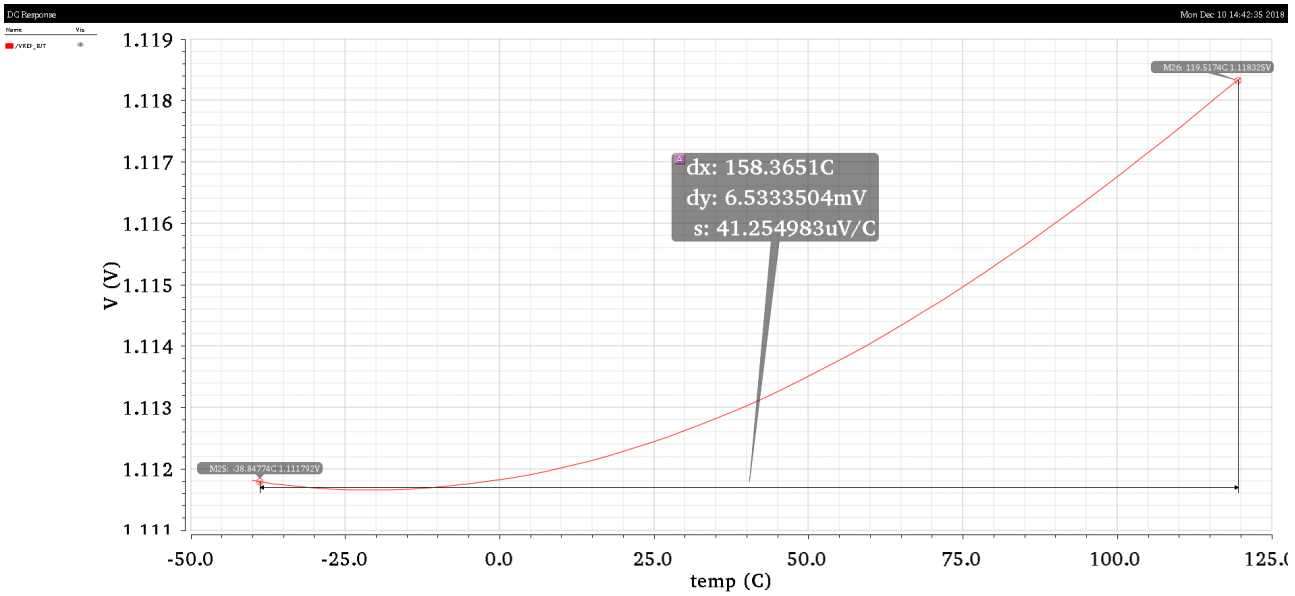
# RD50 – MPW2 DAQ

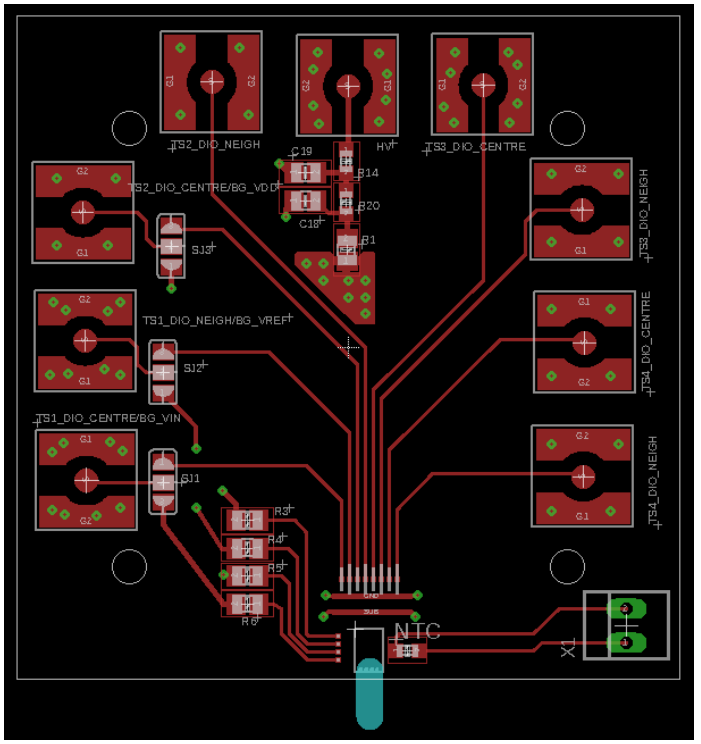




- RD50 – MPW2 DAQ assembled
  - Firmware is tested but contains bugs
  - Analogue output measured
  - Compartator output measured
  - Bandgap voltage scan performed
- Helmut has noticed some issues with his firmware and is correcting the bugs
- Attempting to fix broken Caribou board and assemble second DAQ for use with MPW1 in parallel
- Attempt to improve firmware by adding delays had no effect for RD50-MPW1

# Bandgap Results – Temperature Scans




Further Testing

- Testing the bandgap over temperature with be the next step
- We could do this with the existing setup and the climate chamber however this would mean monopolising the DAQ and putting ≈ £4500 worth of equipment in an oven at 160 $^{0}$C
- For this reason the TCT board has also been designed to function as a testing platform for the bandgap, this will require only the relative cheap and simple TCT board be tested at extreme temperateues