Test of the PAMP8v2

Smal Signal Respose.

The PAMP8v@ is installed on slot7 of the MBPAMP, current consumption at 5.0V is 0.1A.

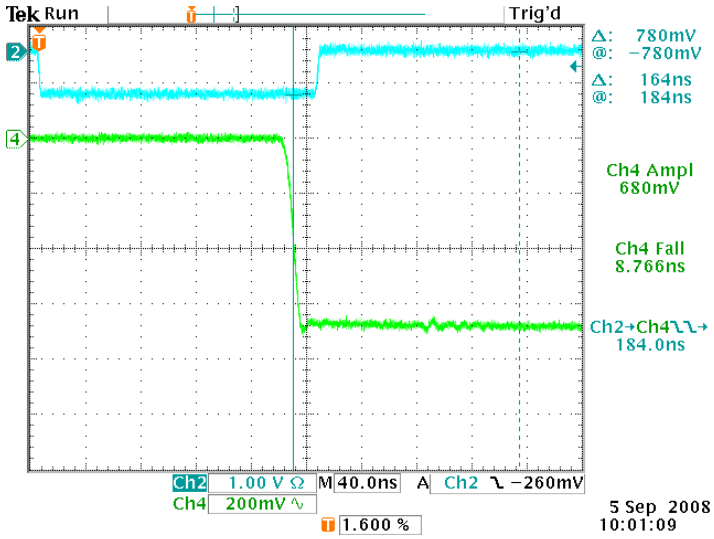

Fig. 1: Input pulse Test3 with fastest rise time 12.7ns at the calibration capacitor 2pF.

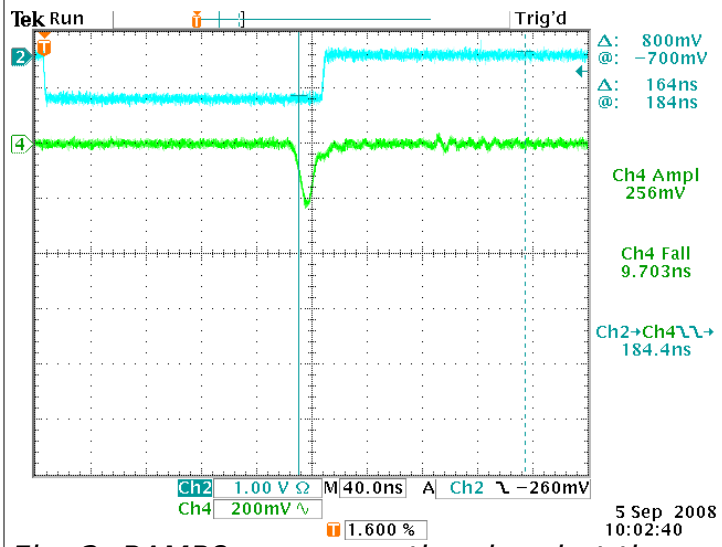

Fig. 2: PAMP8 response, the signal at the OUT+.

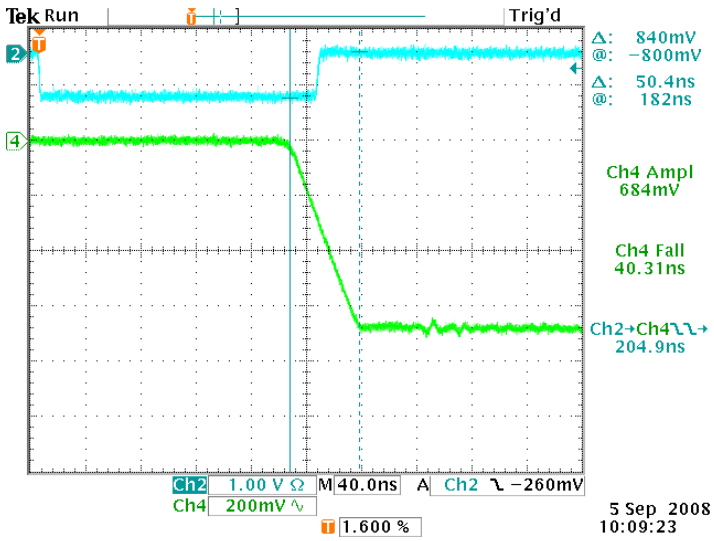

Fig. 3: Input with longer rise time, 50 ns.

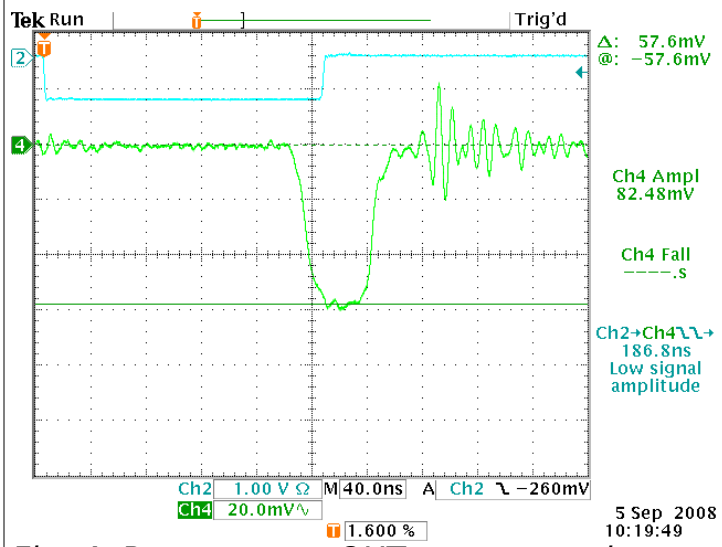

*Fig. 4: Response on OUT+ to step pulse (640mV, 50ns rise time), averaged for 32 samples. The dQ/dt = 2pF*630mV/50nS=25.2uA. The amplitude of the output signal = 58mV, therefore the gain is 58mV*2/25.2uA=4.6KOhm*

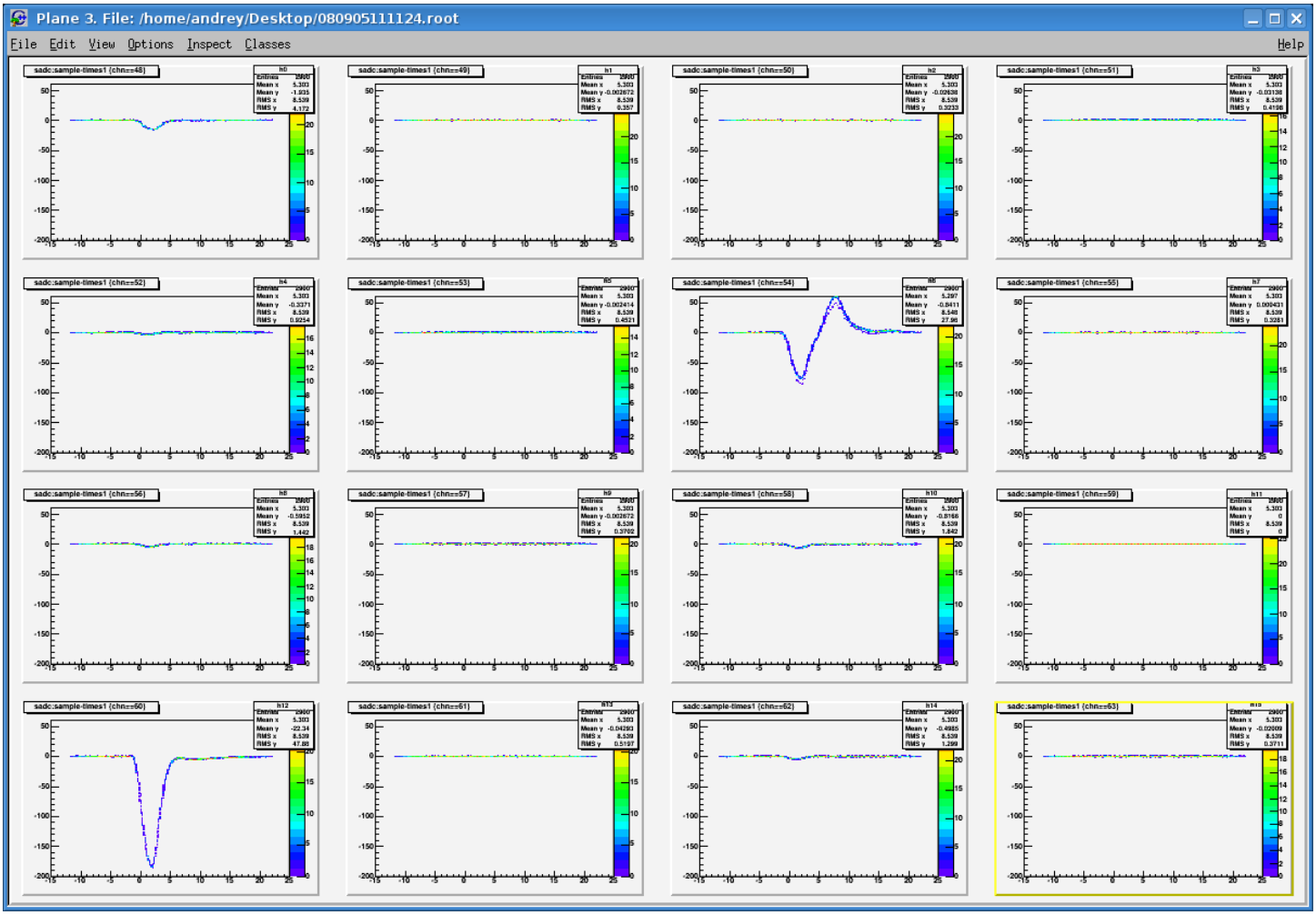

Fig. 5: Test3, the ADC cable on MBPAMP misplaced 1 position down.

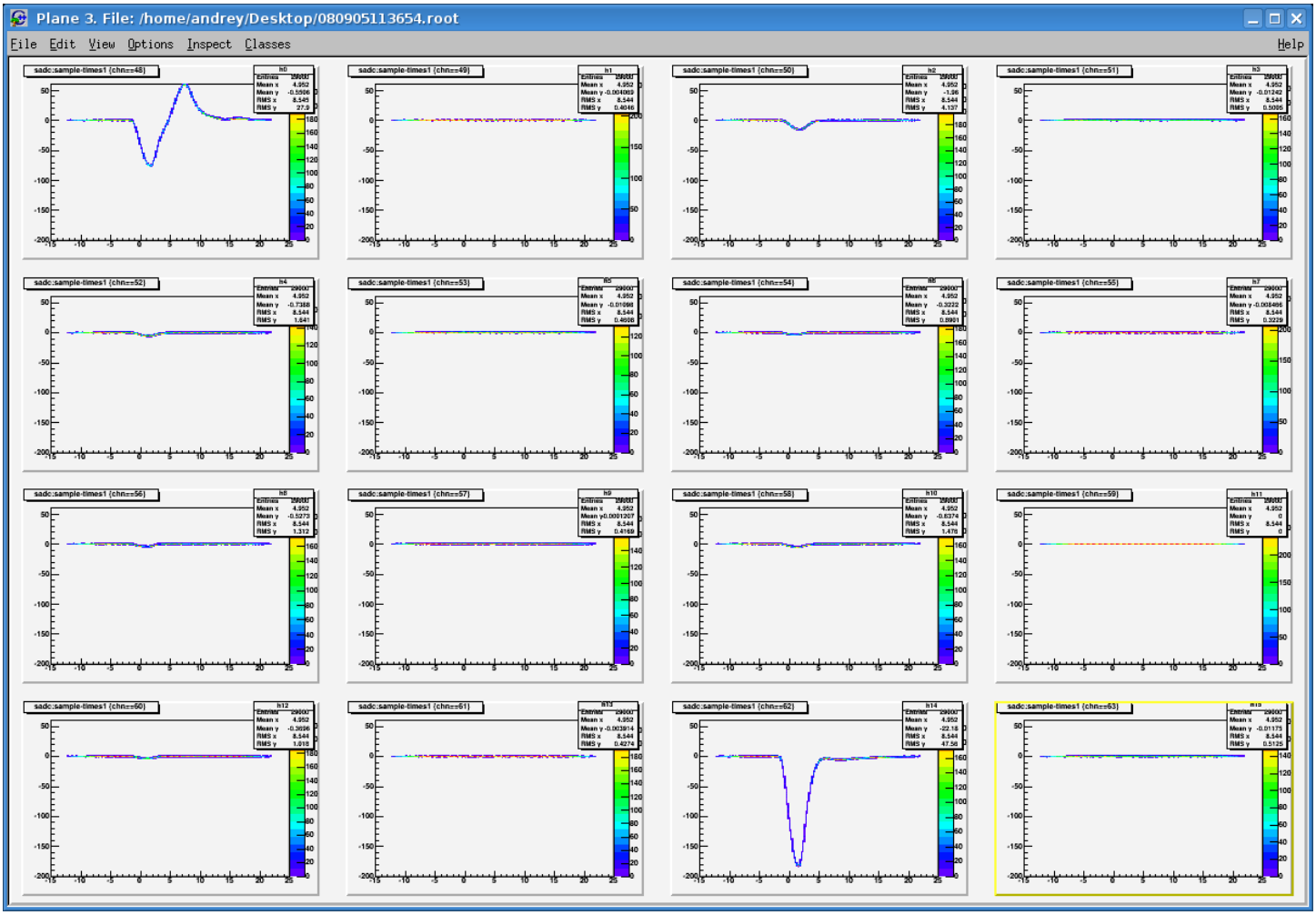

Fig. 6: Test3 pulse. The channel 0 of this preamplifier is bad. The OUT+ is significantly delayed relative to OUT-.

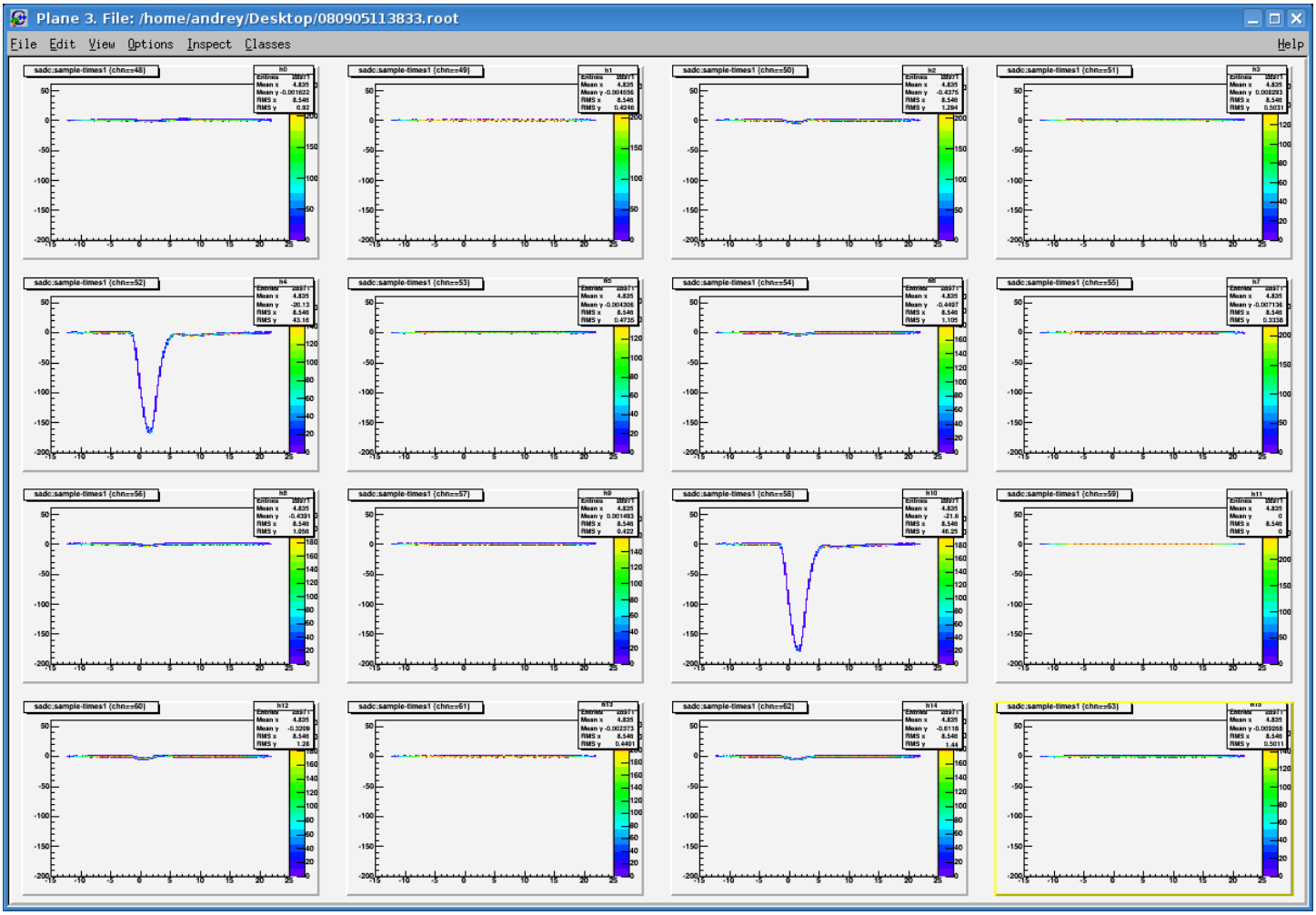

Fig. 7: Test1 pulse.

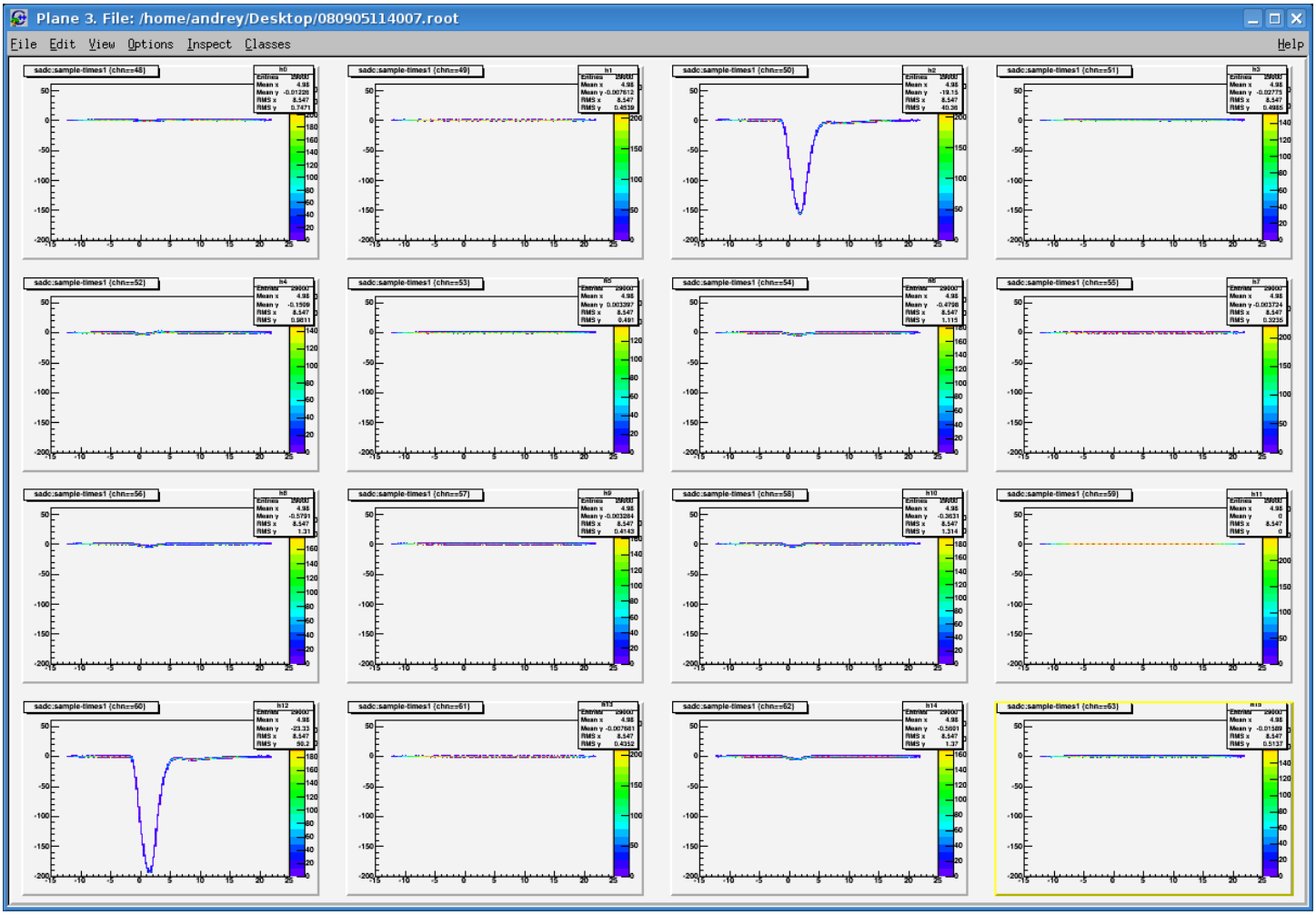

Fig. 8: Test2 pulse

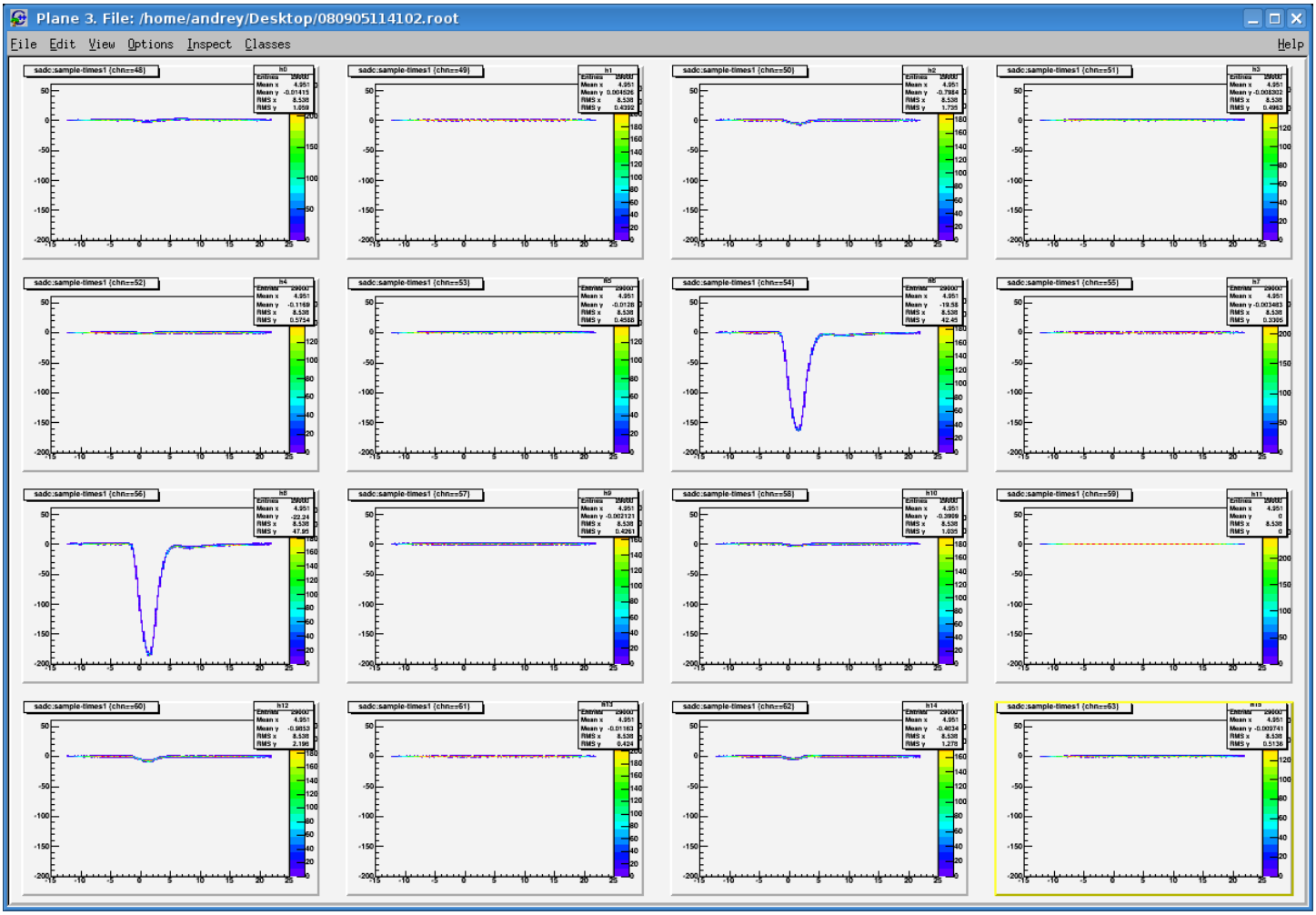

Fig. 9: Test4 pulse.

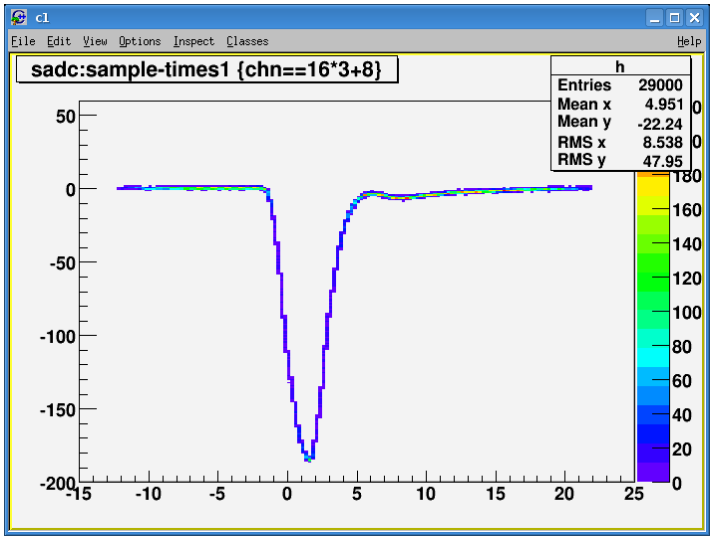

*Fig. 10: Waveform of the channel 8. Integral = 2549. Scale= 2pF*630mV/2549 =0.494 fC/ADC.*

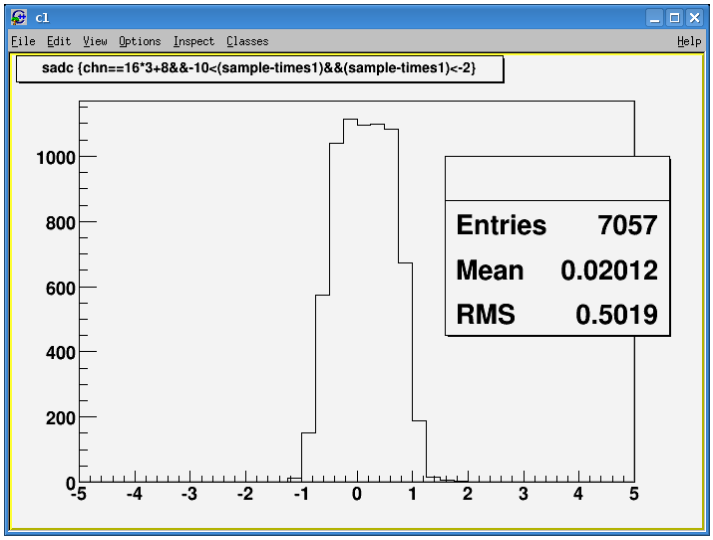

Fig. 11: Amplitudes of the pedestal area, samples from -10 to -2.

Large Signal Response

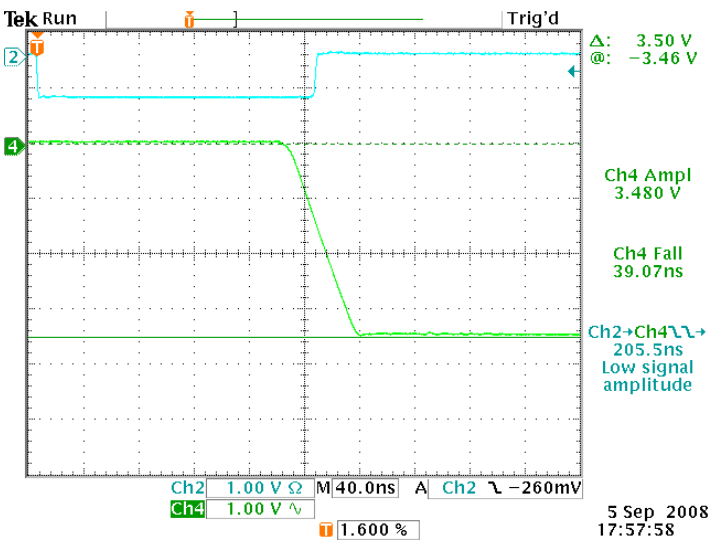

Fig. 12: Large signal input pulse.

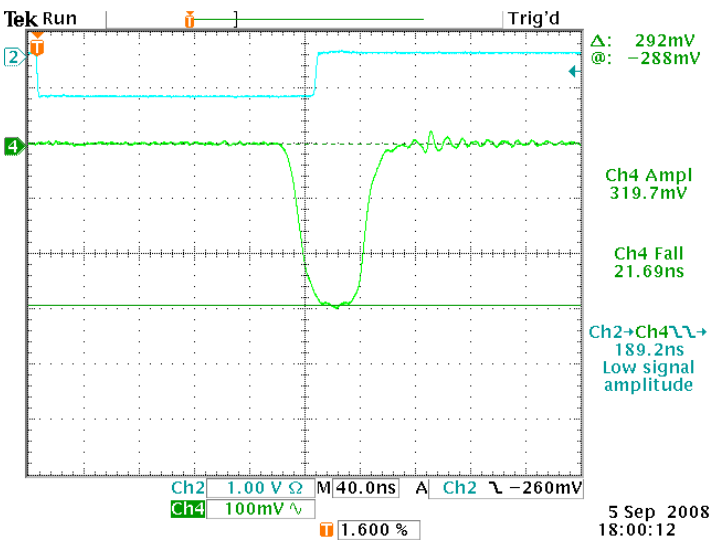

Fig. 13: Large signal output.

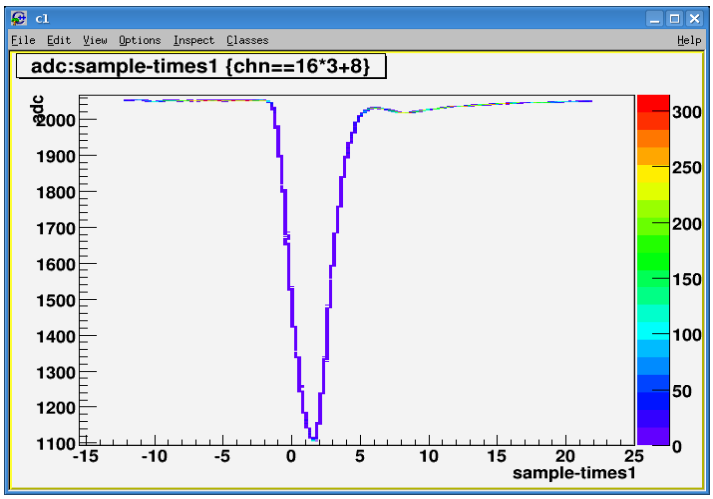

*Fig. 14: Signal integral = 12921 counts, Signal charge = 2pF*3500mV = 1260pC. Scale = **0.541 fC/ADC**. This is to compare with **0.494 fC/ADC** for small signals. I.e there is some nonlinearity in the system.*

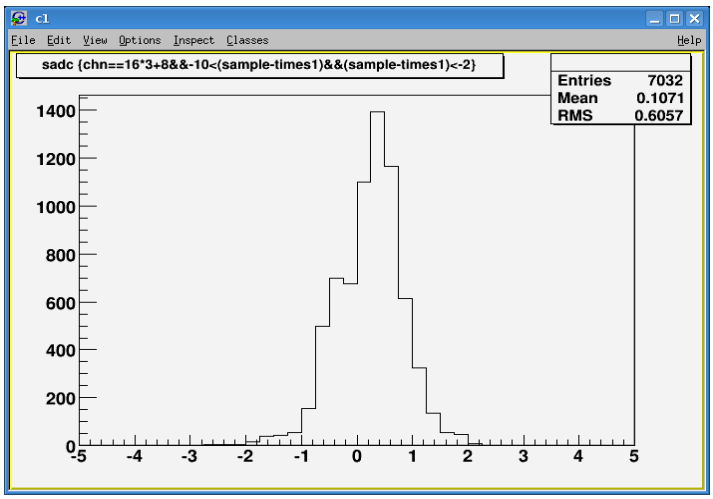

Fig. 15: Amplitudes of the pedestal area, samples from -10 to -2.

Two preamps are installed in slot 7 on top and slot7 on bottom.

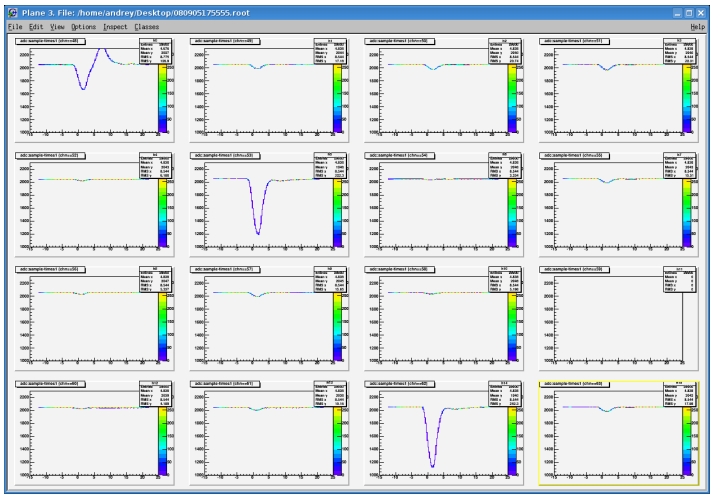

Fig. 16: Test3 pulse. Channel 0 is bad. ADC ch. 11 is not working.

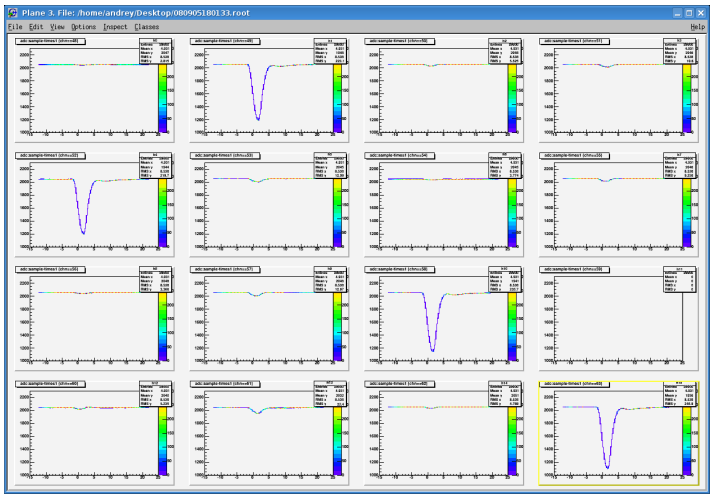

Fig. 17: Test1 pulse

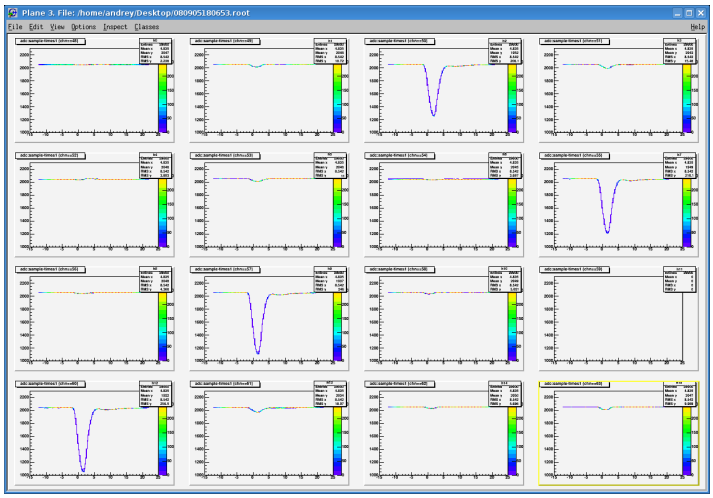

Fig. 18: Test2 pulse.

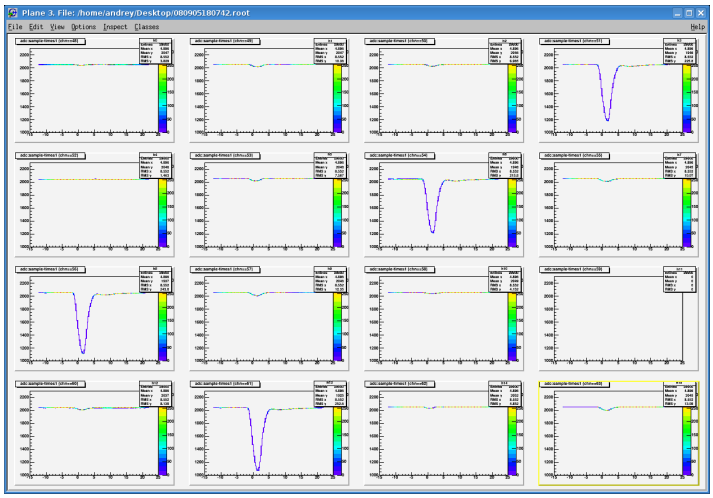

Fig. 19: Test4 pulse.