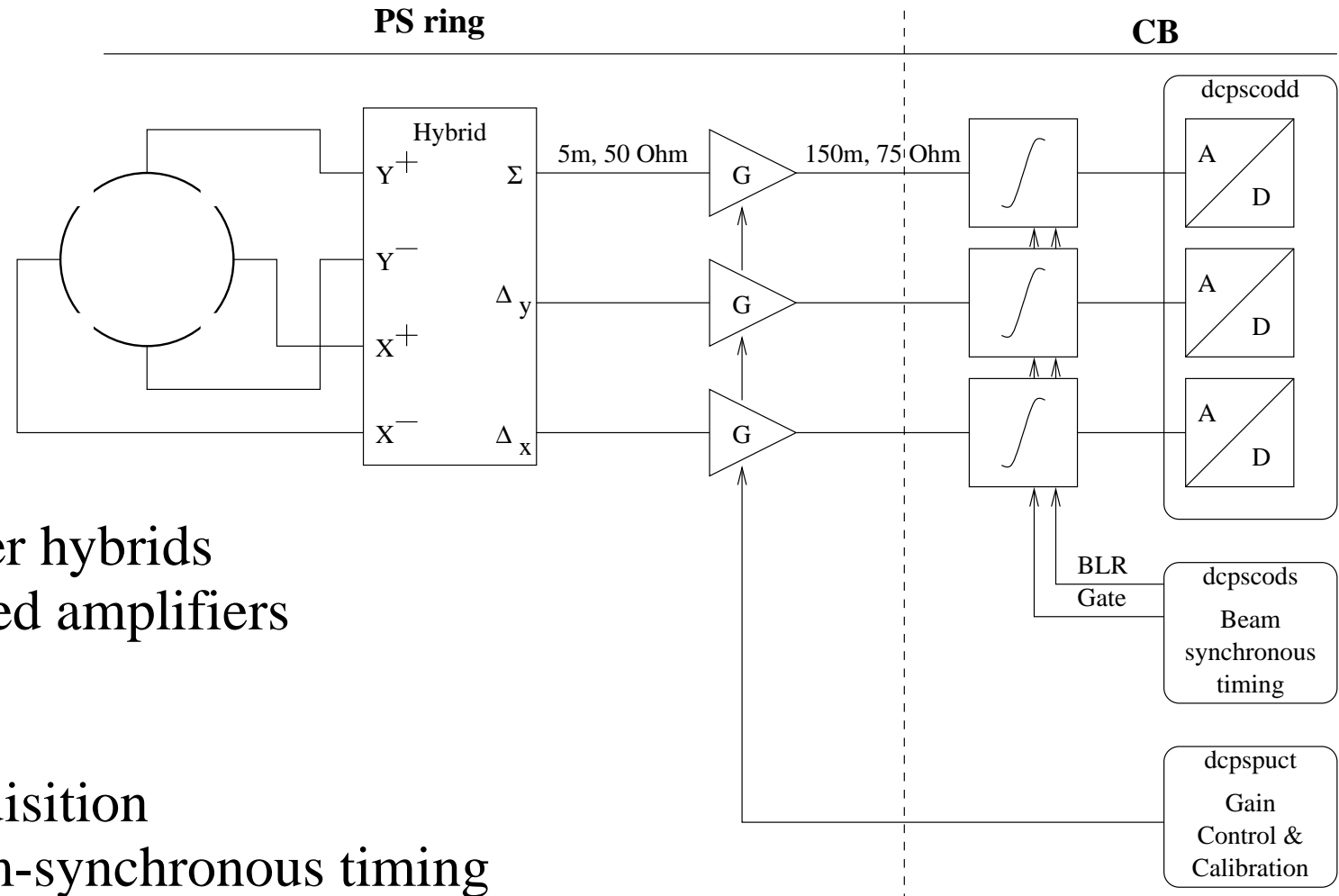
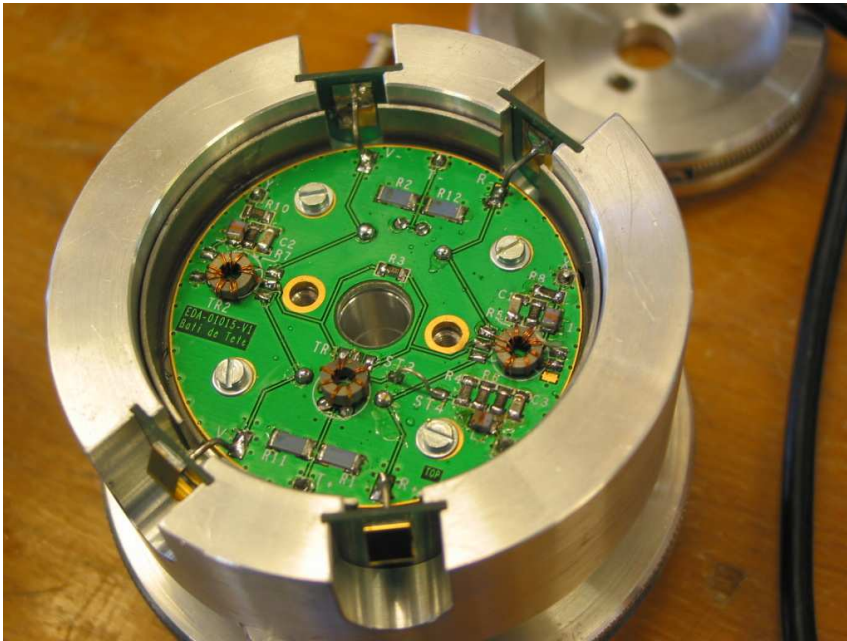




Forty pick-ups

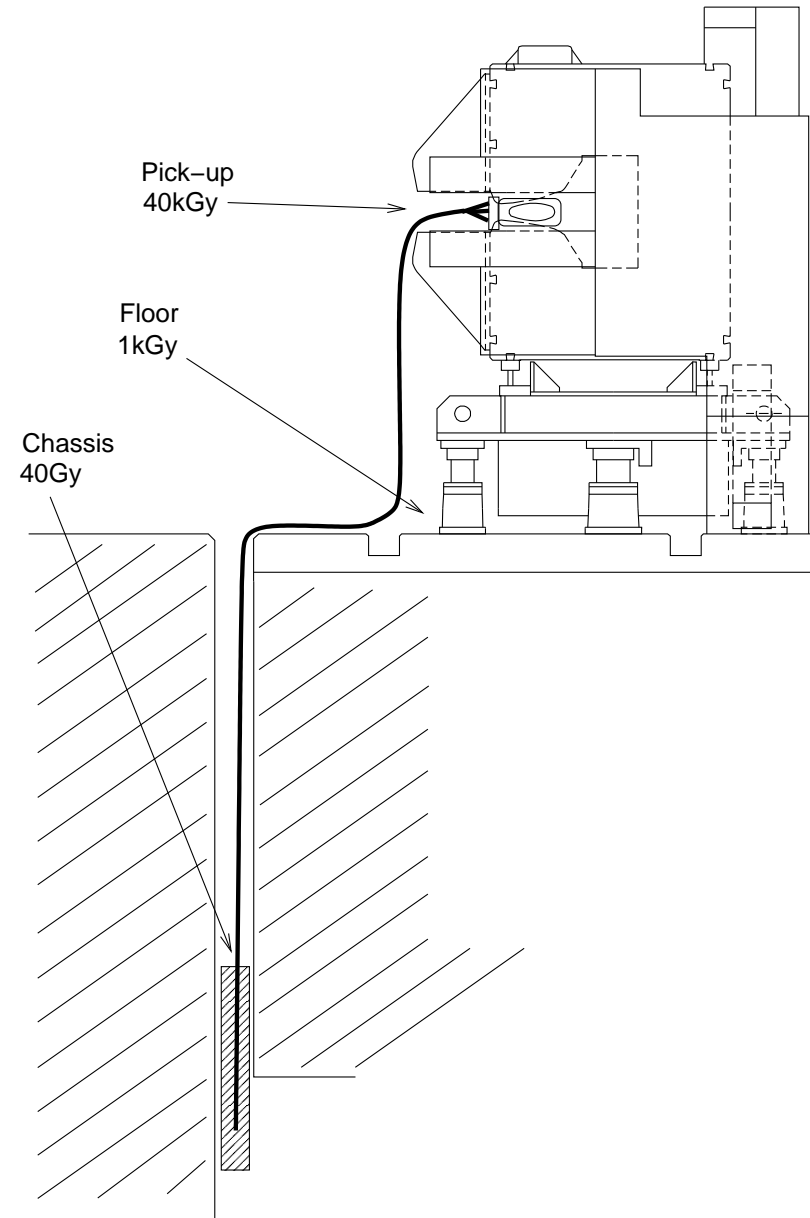


- Passive transformer hybrids
- Remotely controlled amplifiers
- Gated integrators
- Dcpscodd for acquisition
- Dcpscods for beam-synchronous timing
- Dcpspuct for amplifier control & calibration



- Hybrid mounted on PU electrodes
- Five meters of cable to amplifiers
- 150m of cable to reach CB.

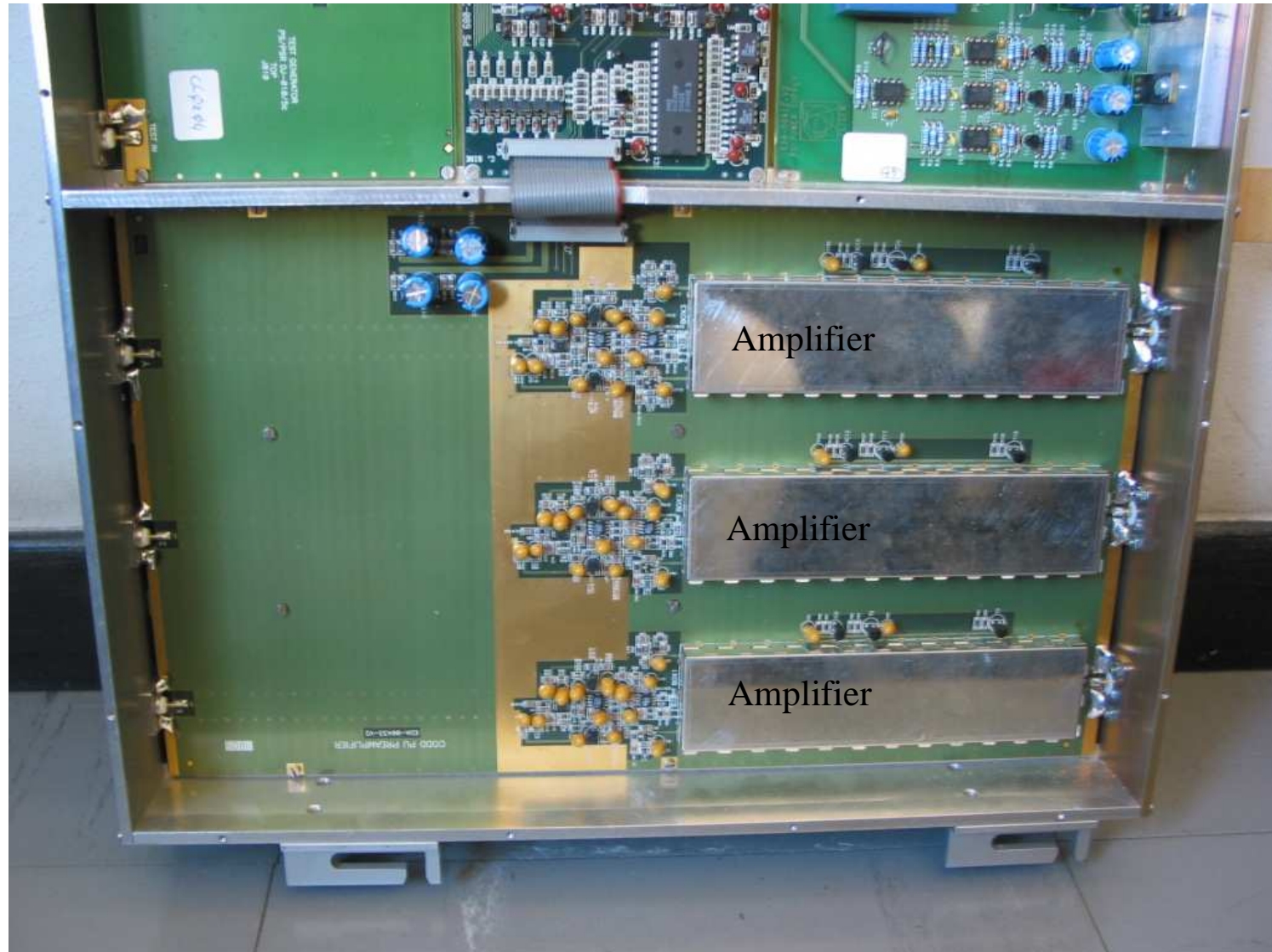
Pre-amplifiers installed in gap
for protection from radiation

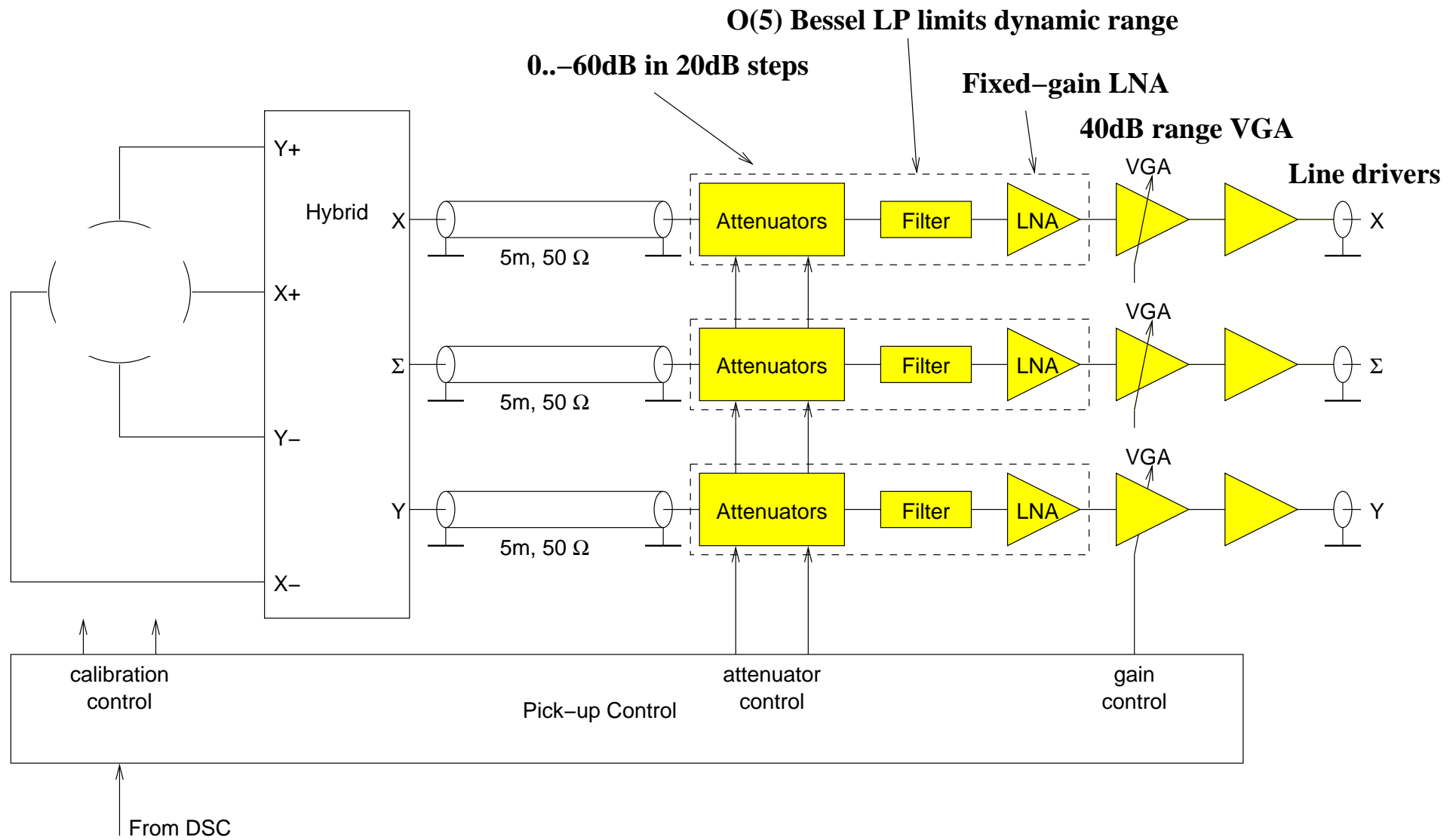


Test signal dist.

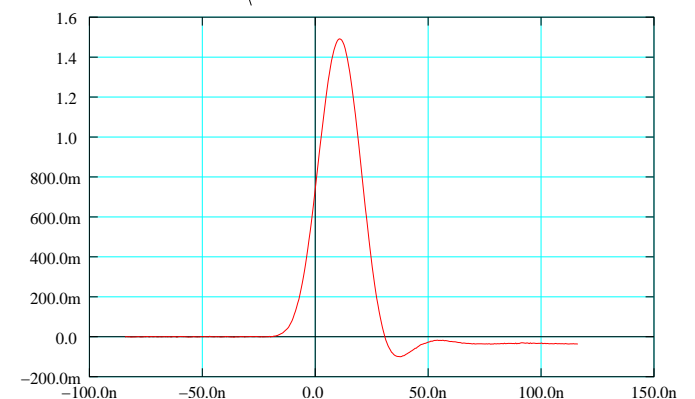
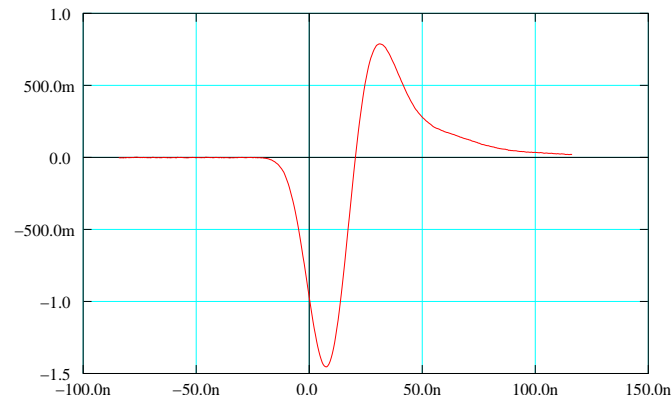
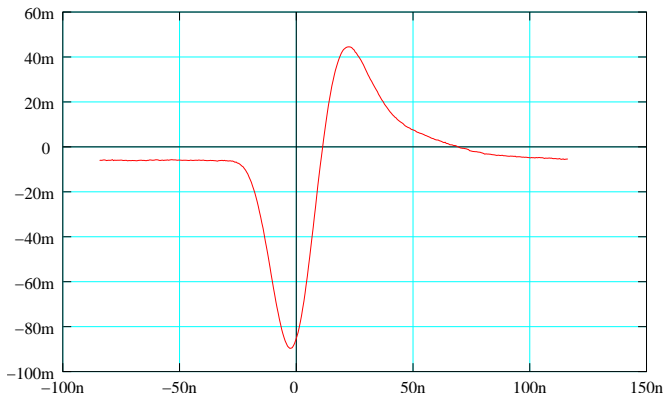
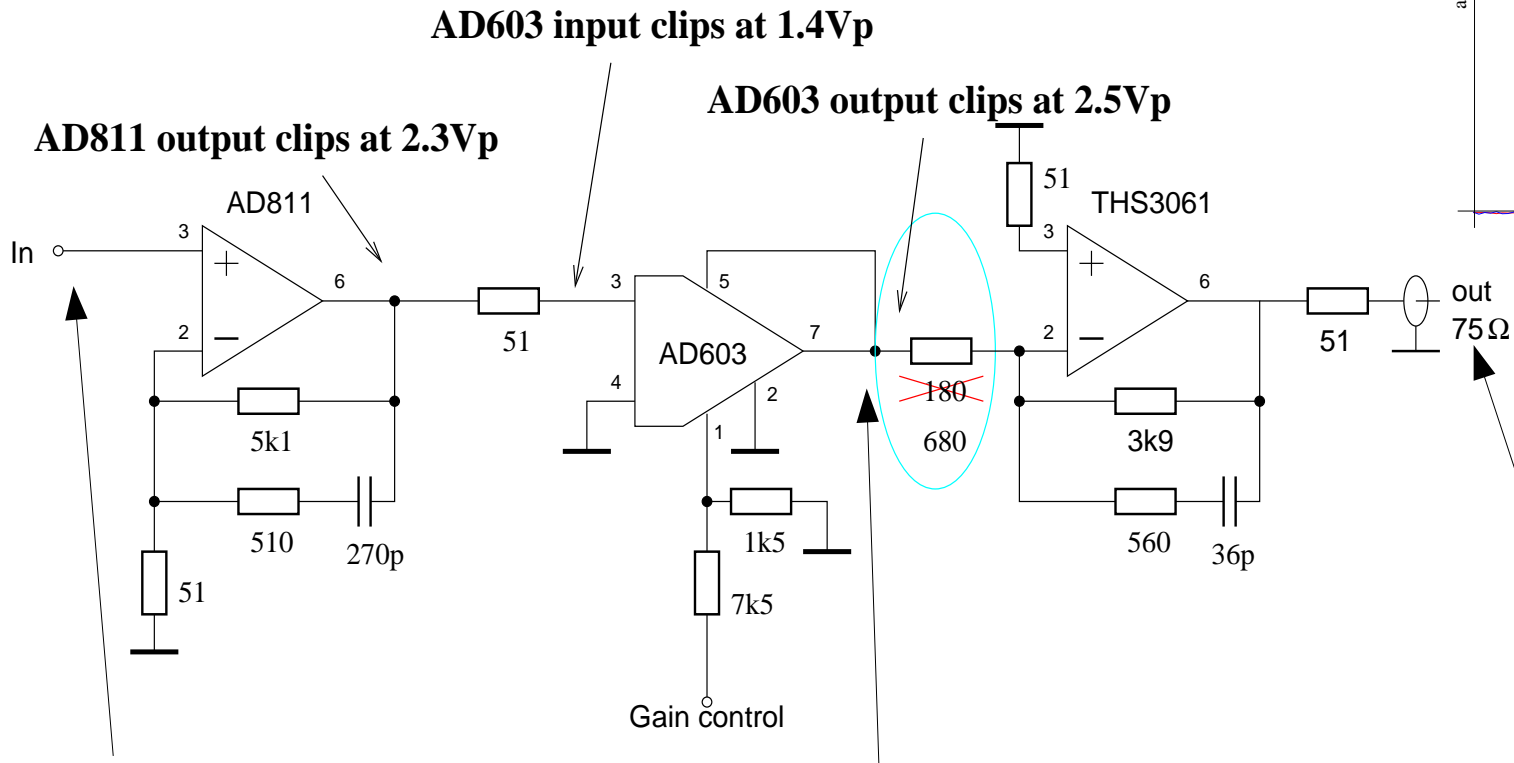
Remote control

Power supply





Variable-gain amplifiers

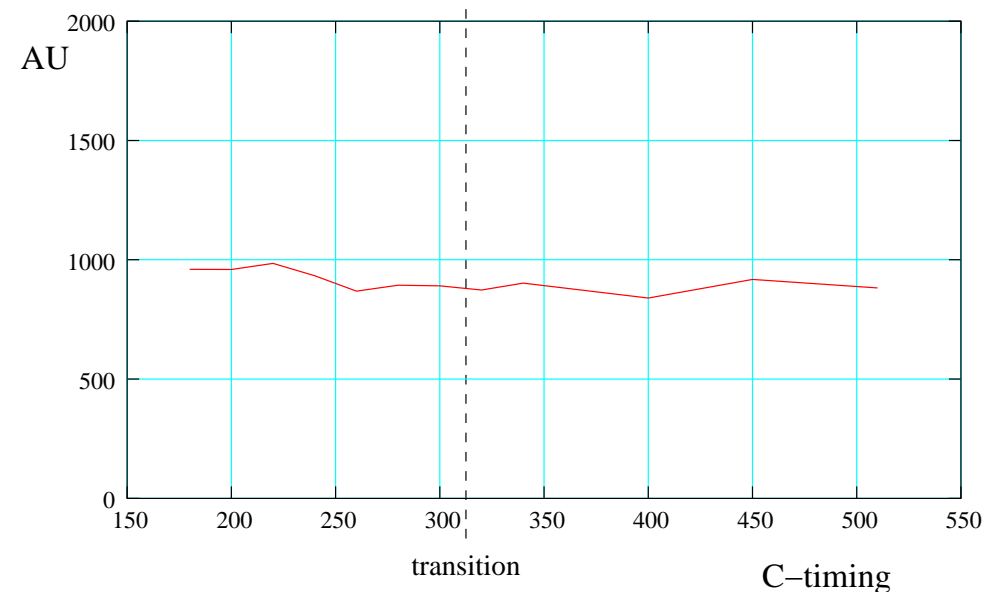
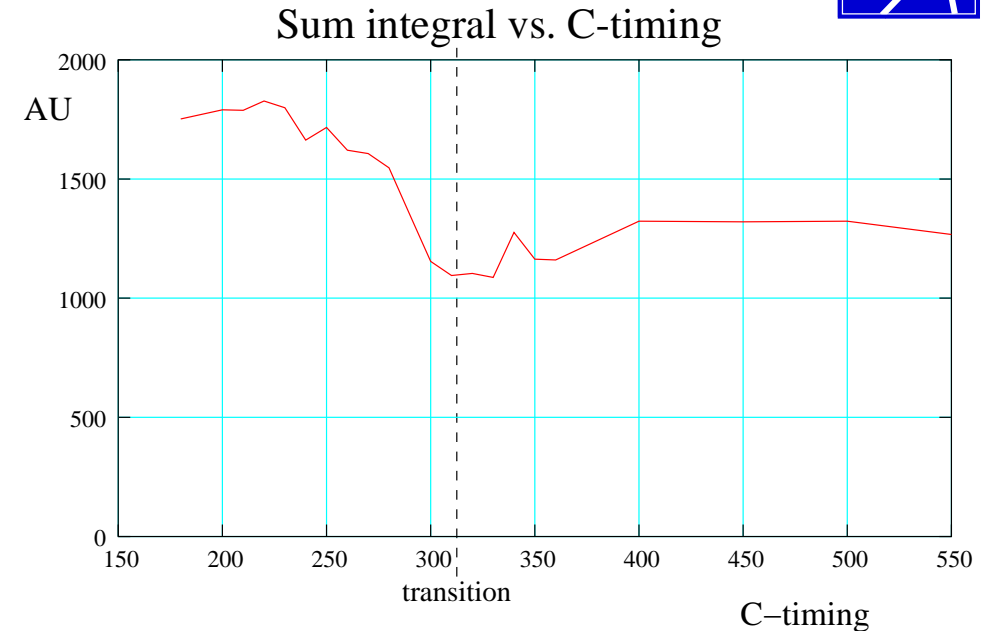




Position calculation:

$$x = S_x \frac{\Delta_x}{\Sigma}$$

Saturation with short bunches caused sum signal to sag (top plot), leading to exaggerated displacement being reported. This problem has been fixed (bottom).



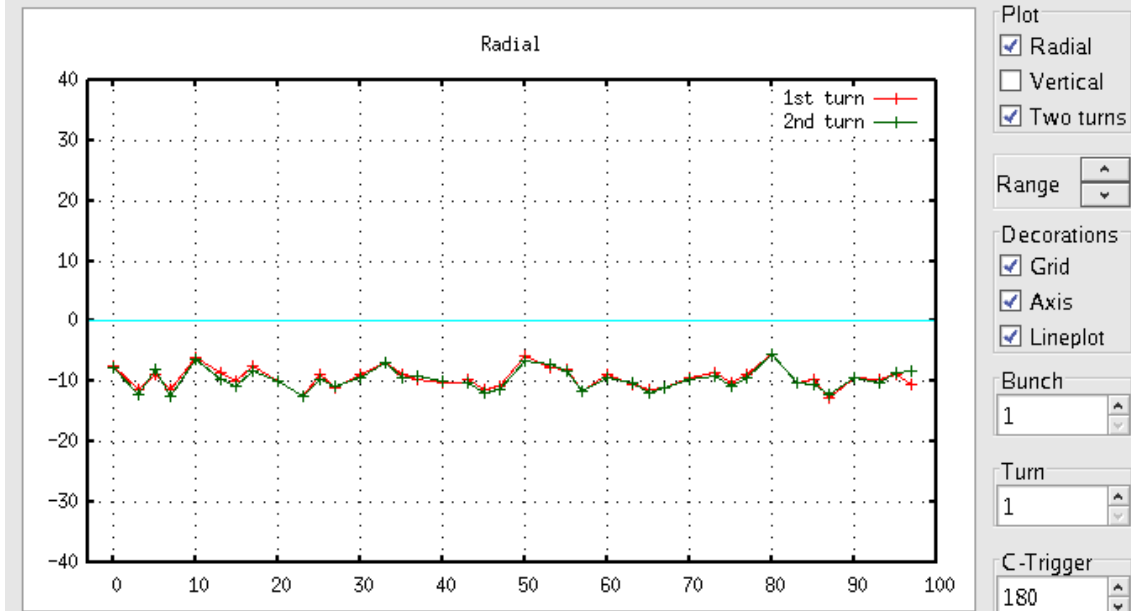
Trajectory pictures



File Edit View PLS Sensitivity Help About

Properties User EASTA Sensitivity 1e11 Date Jun 13, 2008 Time 17:30:21
 Bunch 1 Trigger 180 MRP1 -9.4 MRP2 -9.6
 Turn 1 ADC fill 20% MVP1 0.1 MVP2 0.3

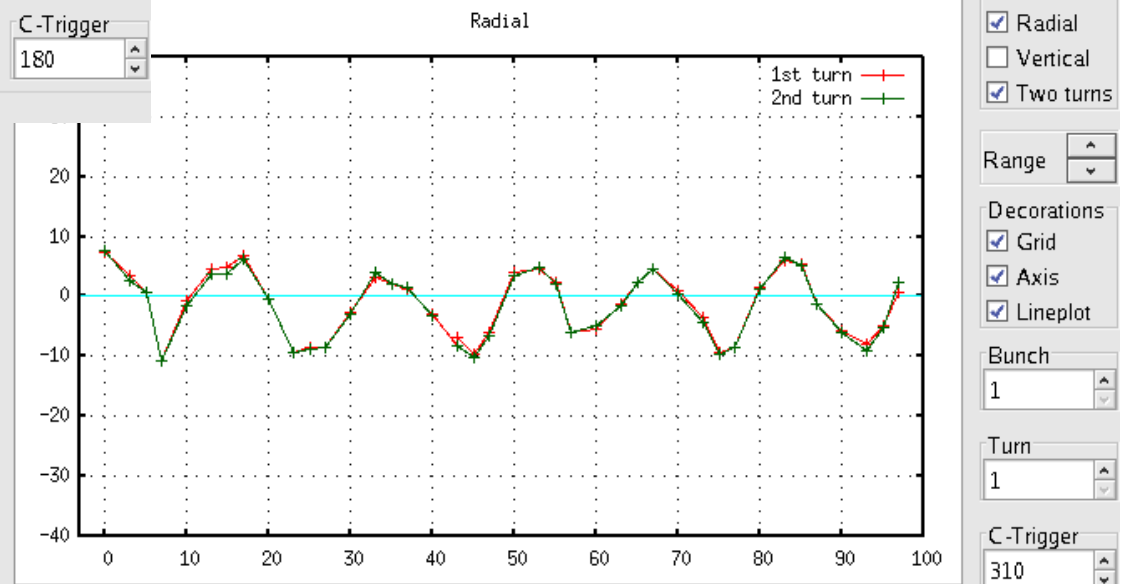
At C180, 10ms after injection



NO ERROR / COMPLETION IS O.K.

View PLS Sensitivity Help About

User EASTA Sensitivity 1e11 Date Jun 13, 2008 Time 17:31:40
 Bunch 1 Trigger 310 MRP1 -1.3 MRP2 -1.5
 Turn 1 ADC fill 18% MVP1 0.3 MVP2 0.0



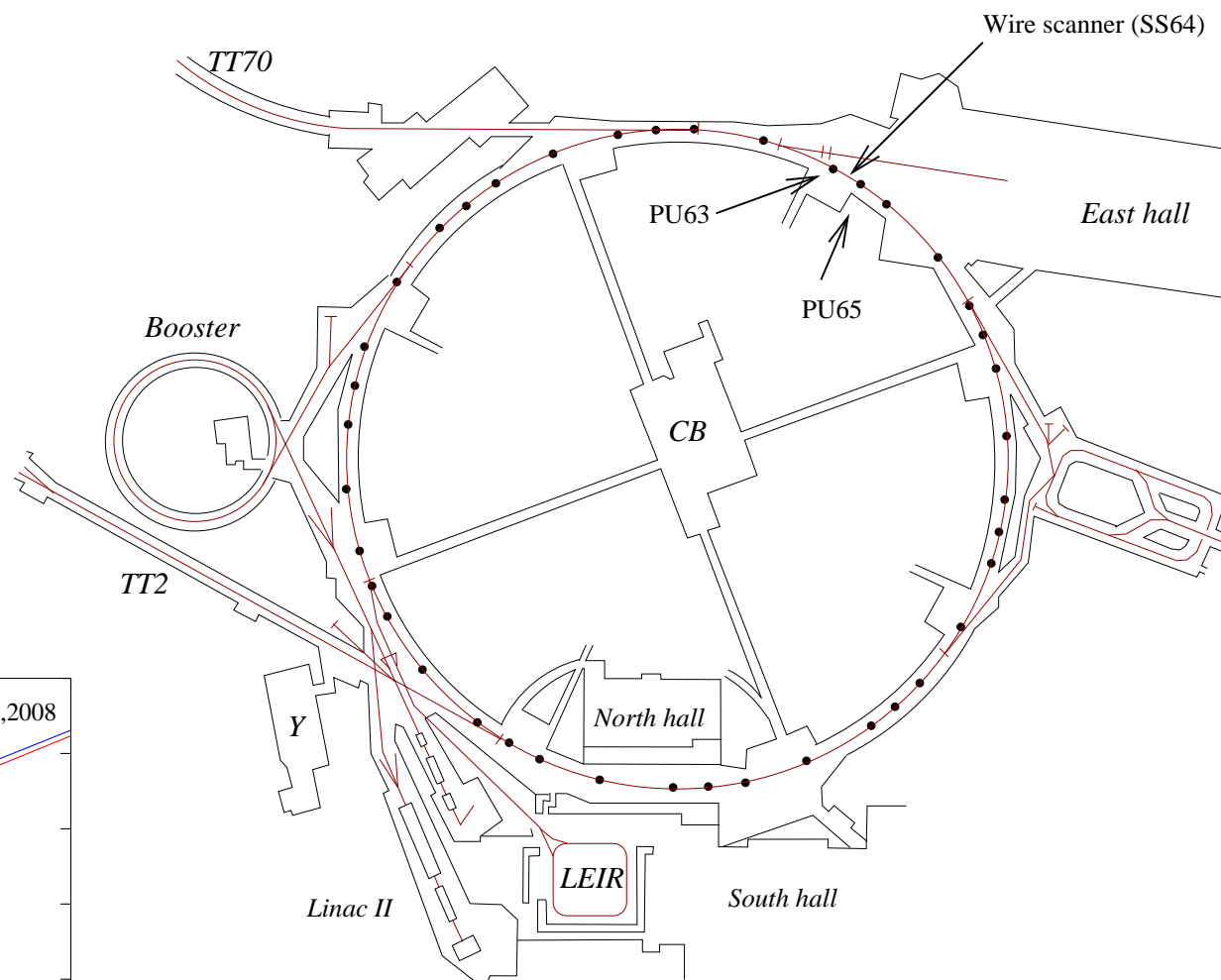
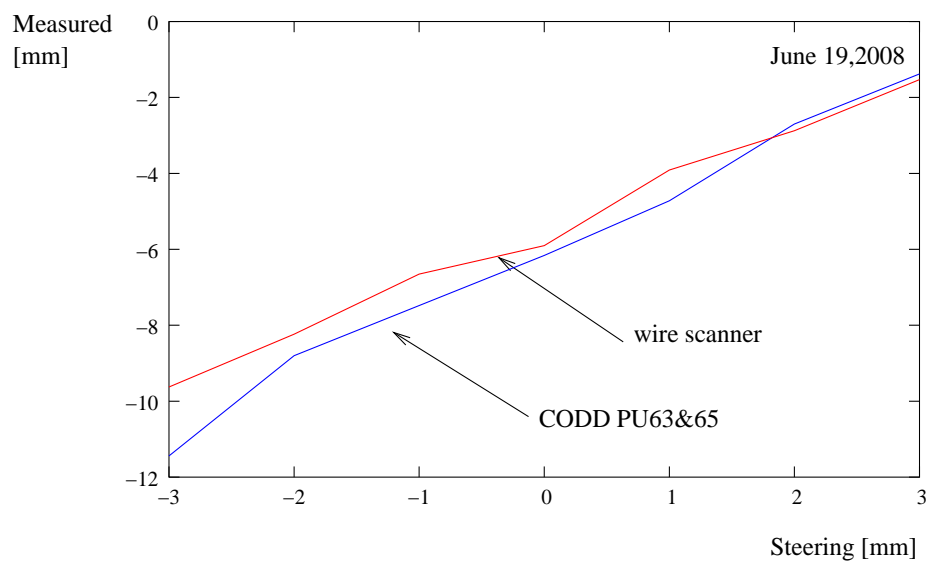
NO ERROR / COMPLETION IS O.K.

At C310, near transition



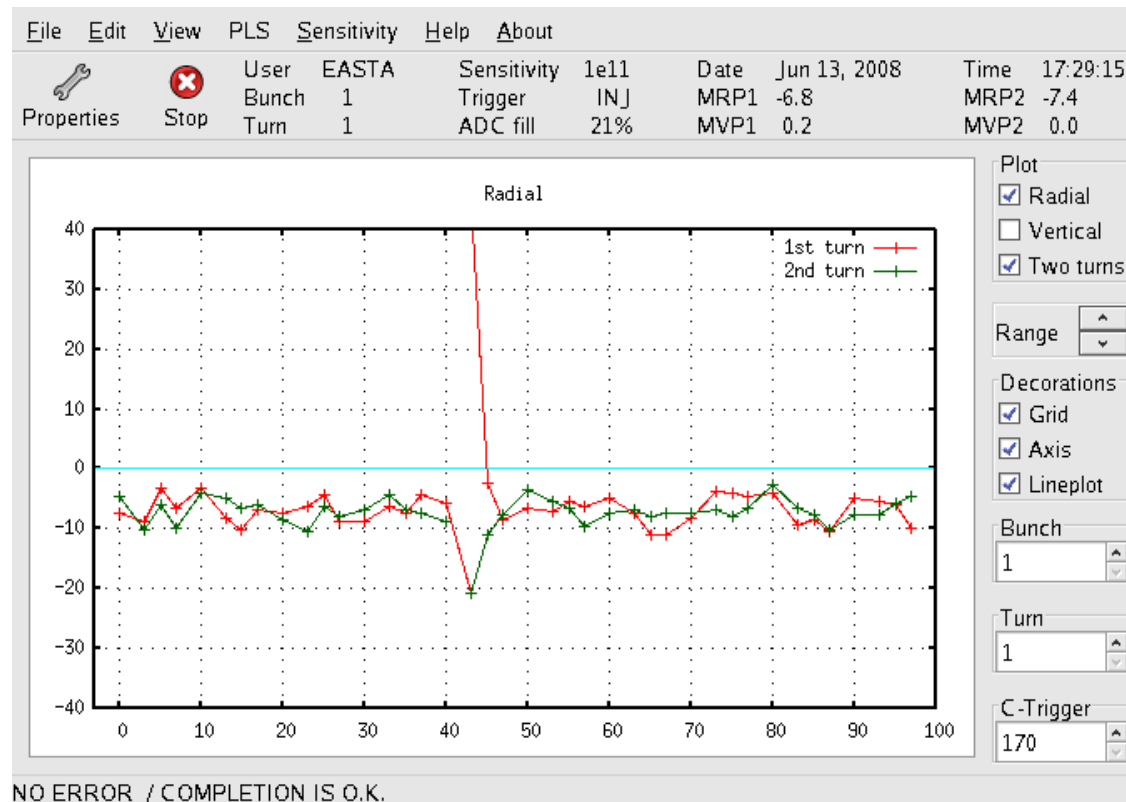
Radial steering applied

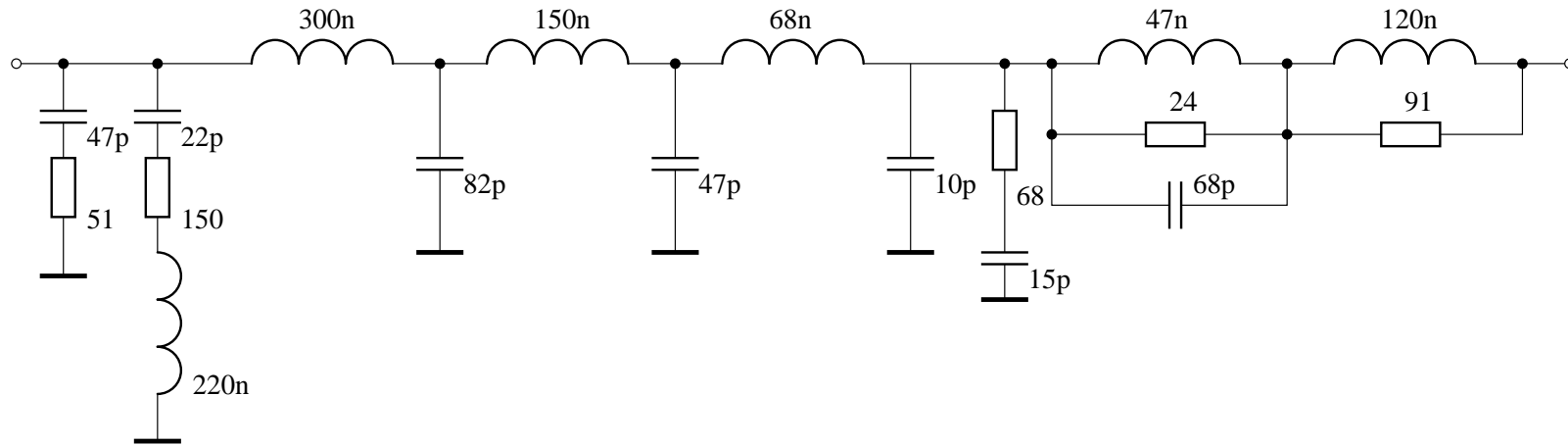
CODD and wire scanner agree!





- Target sum integral in orbit application should be $\sim 70\%$
- Saturation problems are avoided
- Final fix will be put in place next shut-down
- Displacement sensitivity is 40mm for all intensity settings



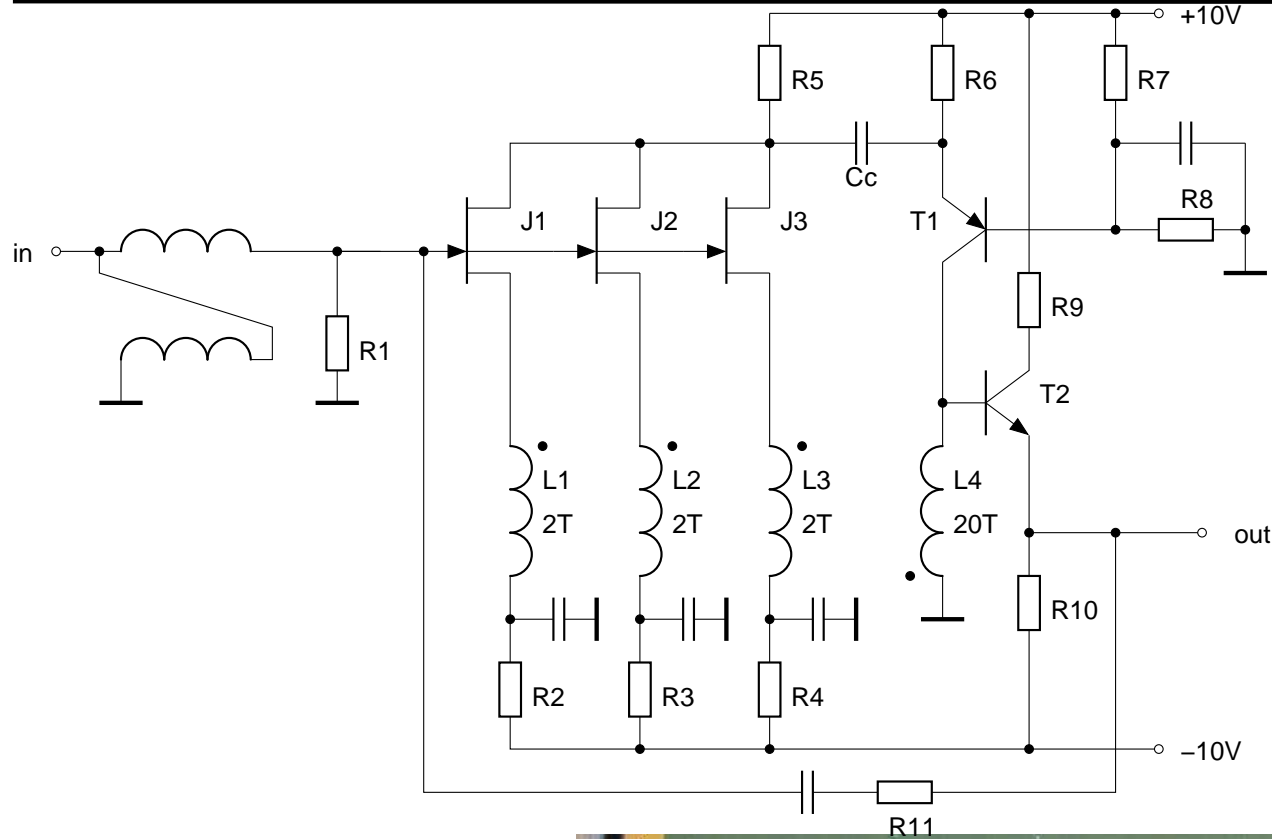


Constant impedance O(5) Bessel low-pass filter

Impedance: 50Ω

Cut-off frequency: 35MHz

Low noise amplifier



Gain: 26dB

Input impedance: 50Ω

Input referred noise: $260 \text{pV}/\sqrt{\text{Hz}}$

Bandwidth: 20kHz..75MHz

