

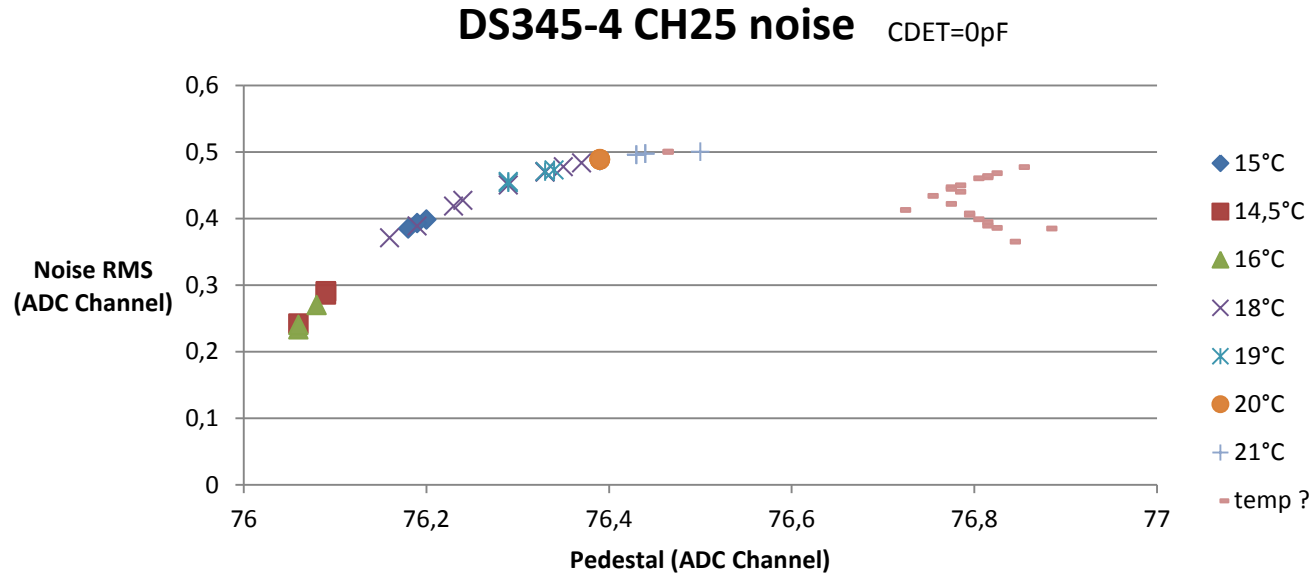
Study of the testbench influence on the DS345-4 noise measurements

preliminary

DS345-4 Channel 25 study

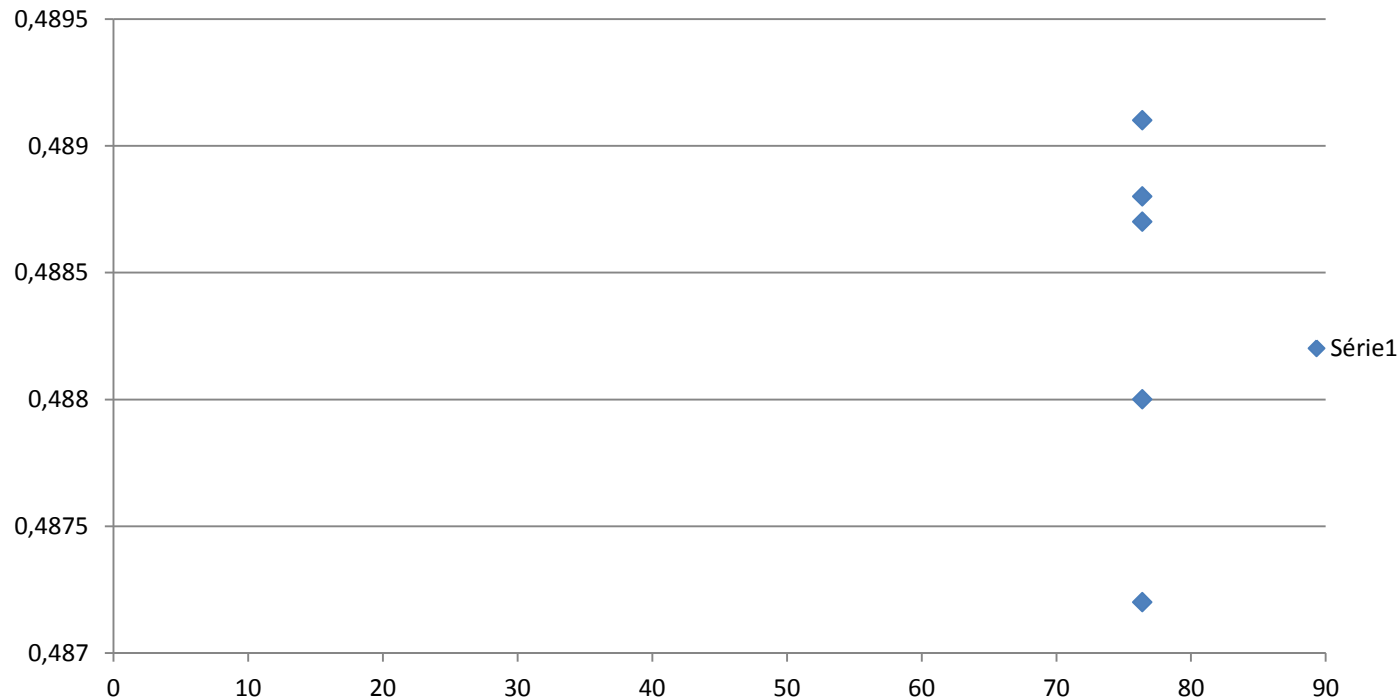
- Very quickly it appeared that temperature effects are dominant over EMC testbench improvements (better grounding, removing possible antennas on the carrier board..)
- Temperature was roughly measured in the room after attempts of stabilizations periods
- The chosen channel 25 (SAMPA 0) seems to be less sensitive to ADC effects reported by the collaboration

Results



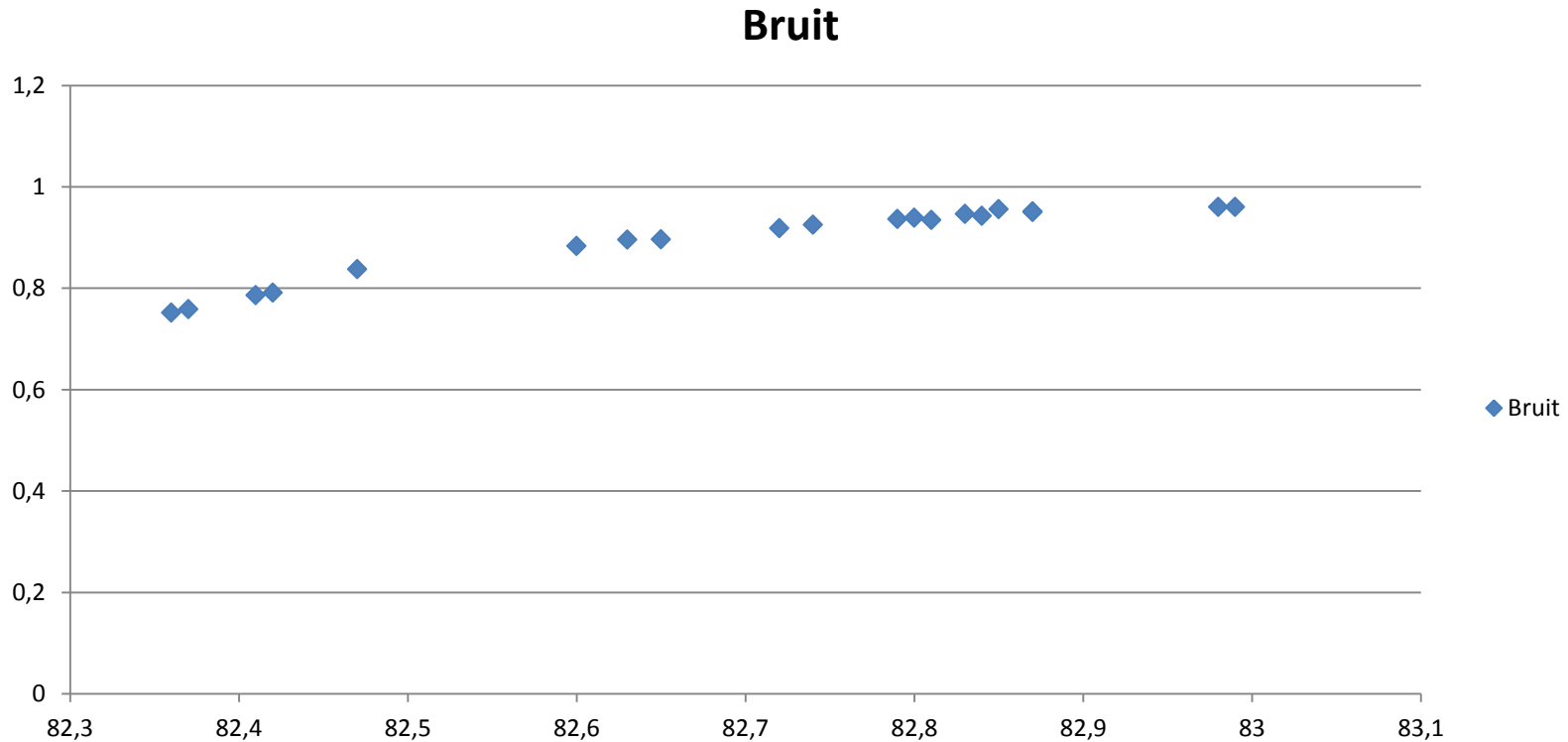
- Noise depends on pedestal value inside one ADC channel in this case from $680e^-$ to $1500e^-$
- Even if the temperature monitoring is a rough one

Noise with constant pedestal



CH 25 Cdet=0pF ped 76,39 all temperatures: noise is less than 1500^{e-} and « constant »

Results for Ch60



DS345-4, Ch60, Cdet=0pF, no temperature monitoring

Preliminary conclusions

- Noise is dominated by temperature effects (in addition of known ADC effects)
- The EMC test bench improvements have a small effect on noise (few e-)
- Without Cdet results are compatible with PCCA results (Ch20 from 680e- to 1500e-)
- Comparing noise measurements requires to monitor the temperature (which one ?, how?...an open discussion)