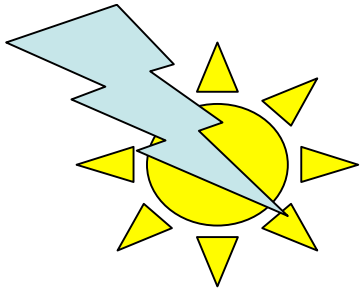


MSC: recent issues
7xx Hz and LC improvements

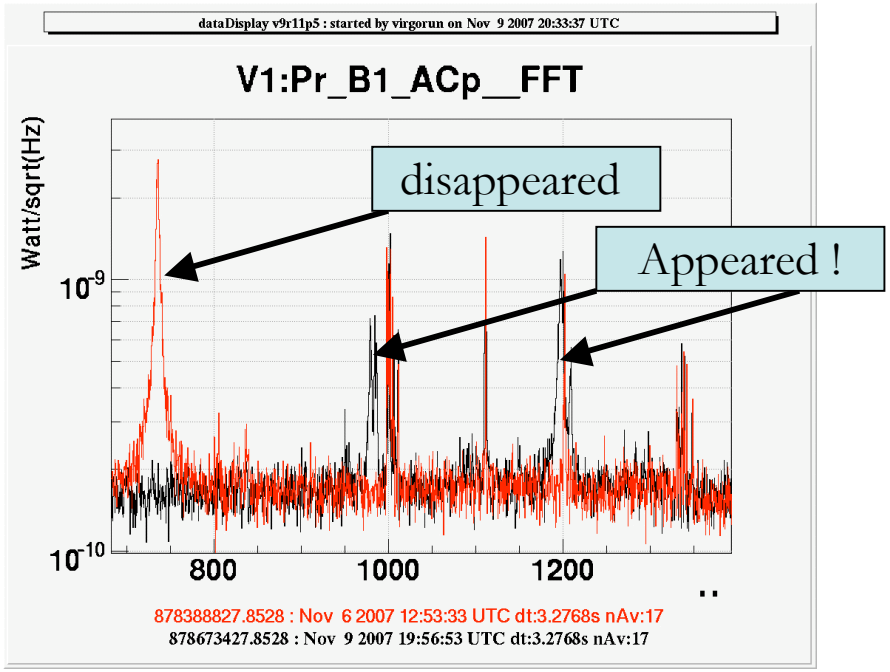
Commissioning meeting 26-11-2007

EM-MSC-100907

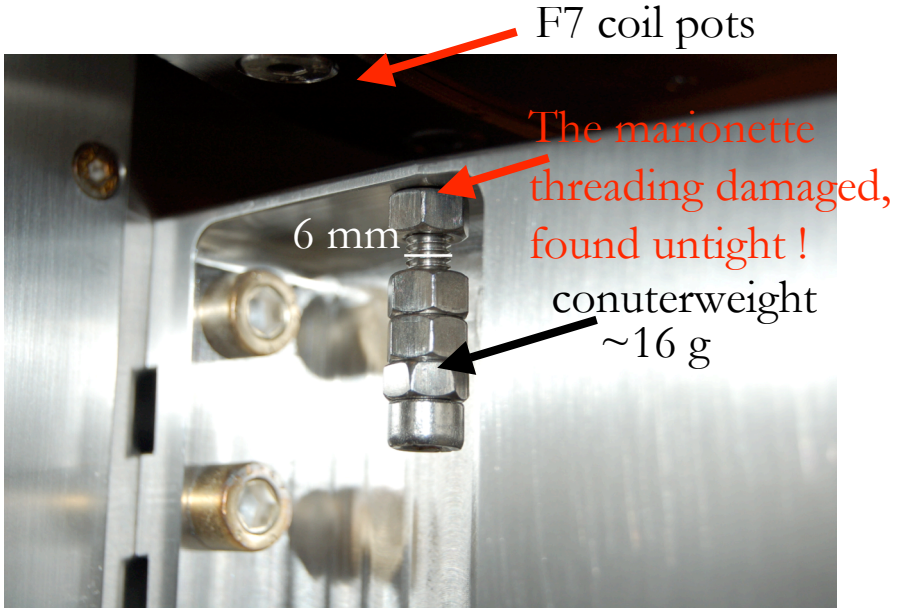
outline

- 7xx Hz
- LC

7xx Hz



Campagna, Marque, Ruggi, Swinkels, Vajente
21:42, Friday 09 November 2007 (19164)



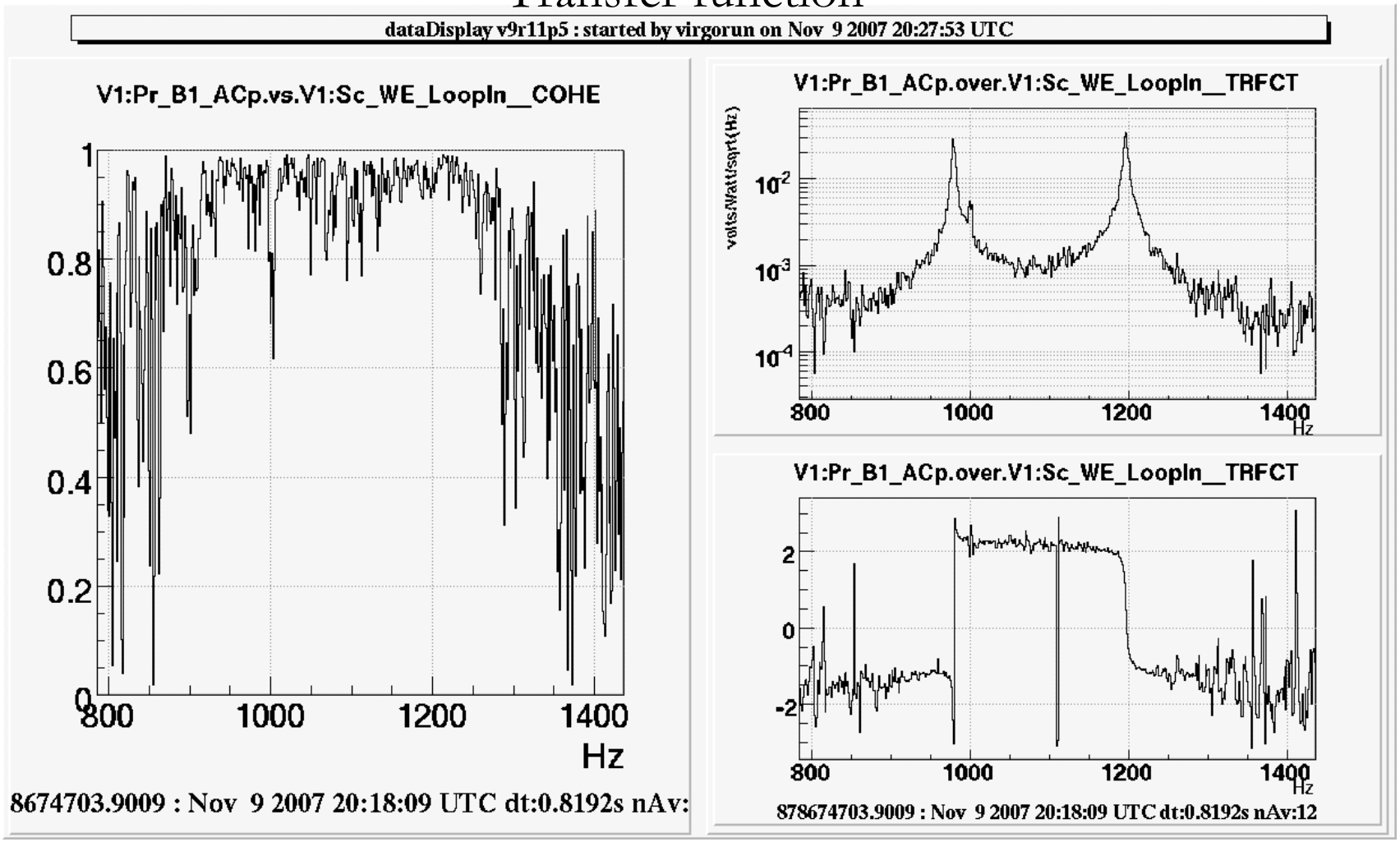
People operating in the towers:
Nicola Menzione, Franco Franconi, Maurizio Perciballi, Michele Punturo, Paola Puppo, Piero Rapagnani:
The conterweight screw was glued to overcome the marionette threading damage.

Note:

the WE marionette was well balanced and a "specific" counterweight was needed

7xx Hz: twin peaks

Transfer function



Campagna, Marque, Ruggi, Swinkels, Vajente
21:42, Friday 09 November 2007 (19164)

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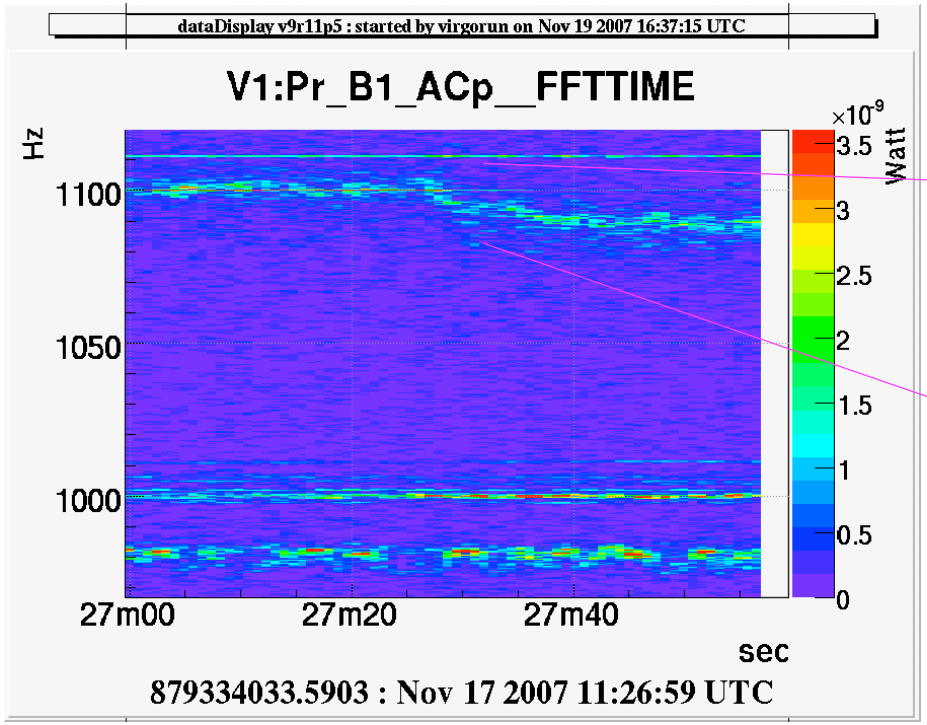
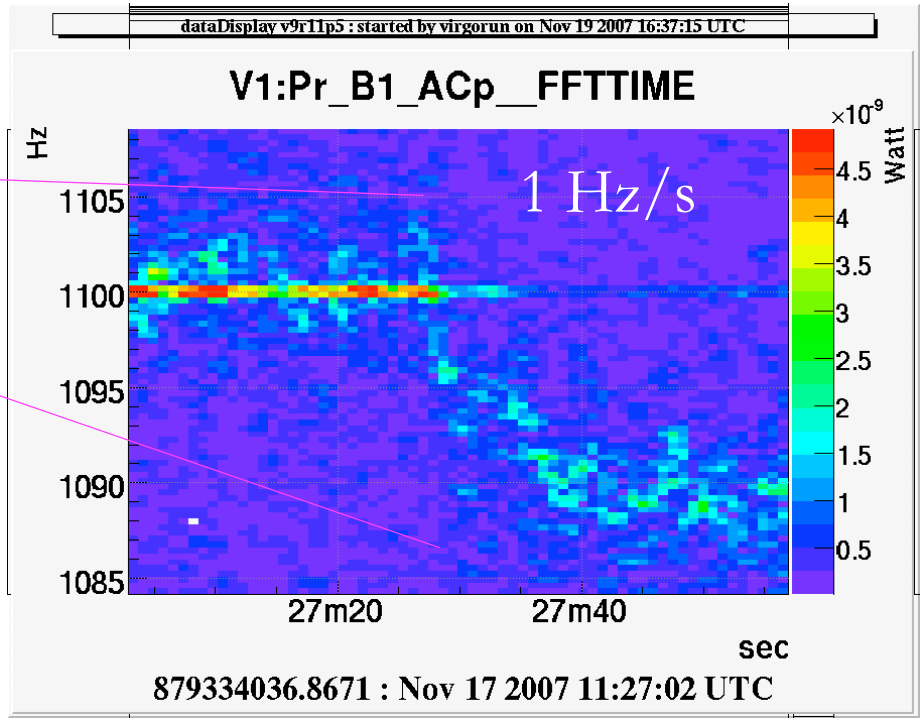
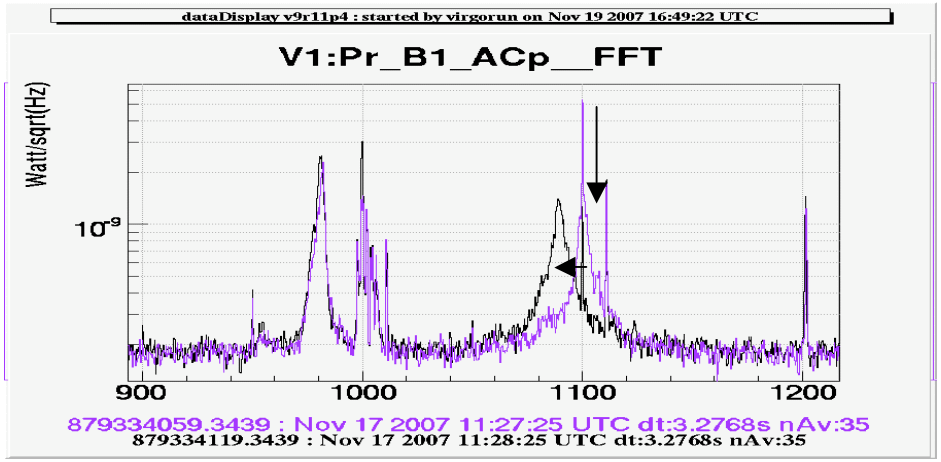
7xx Hz: untightening again ?





11xx twin drifted rapidly on Nov 17th.

Question: can such a mechanical line be coupled with electric power line harmonics ?



7xx Hz: conclusion

Payload crew (Paola Piero and others) will schedule in agreement with Michele:

possible period: 1st week of Dicember

actions:

- **removal of the counterweight through:**

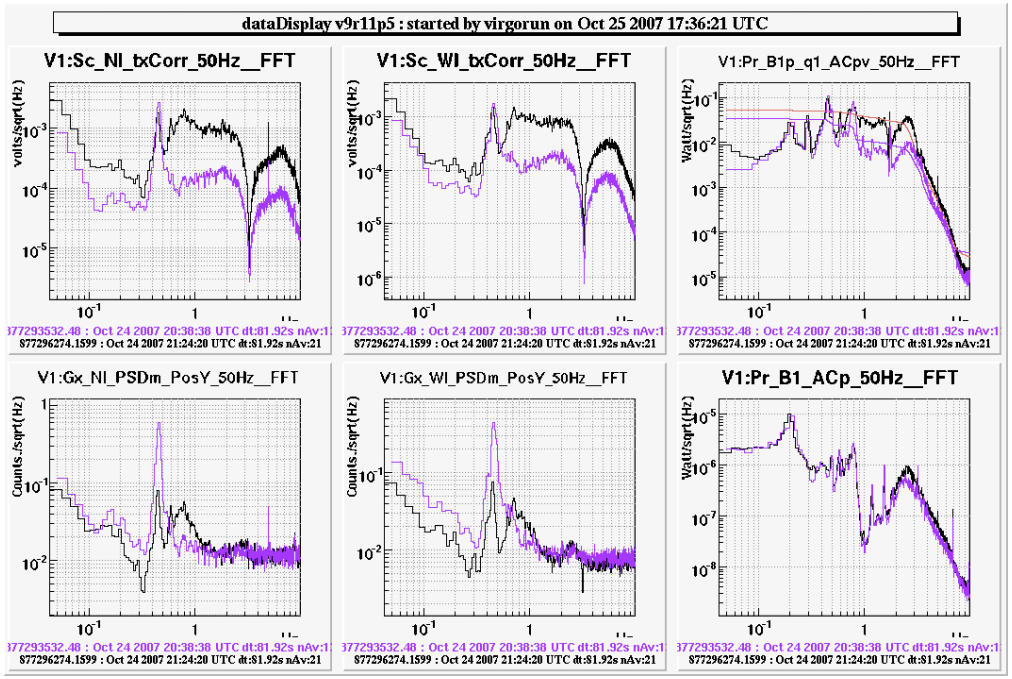
a) preliminar estimation of the actual motor position

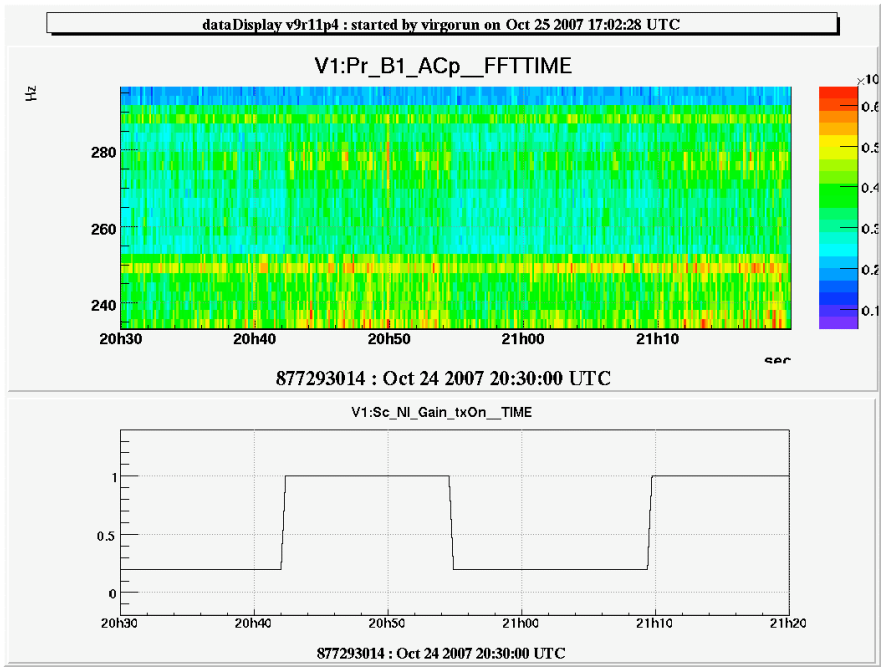
b) use of optical levers to keep the position during the balance.

- **if (and only if) the motor full run position is not "enough"*:**
  a prism shaped, compact counterweigh, machined upon the optimal weight, specifically measured, will be installed (and the thread fixed from the top).

* ± 150 urad random jumps that may occur during big mechanical shakes of the suspension.

LC





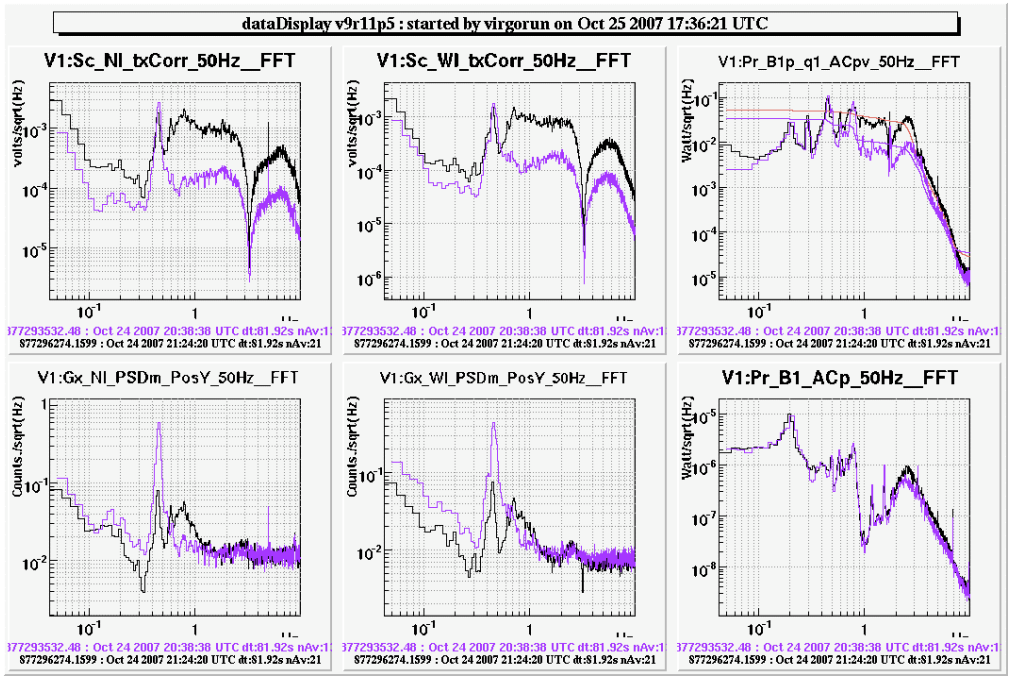
ruggi - 20:26, Friday 26 October 2007 (19059)

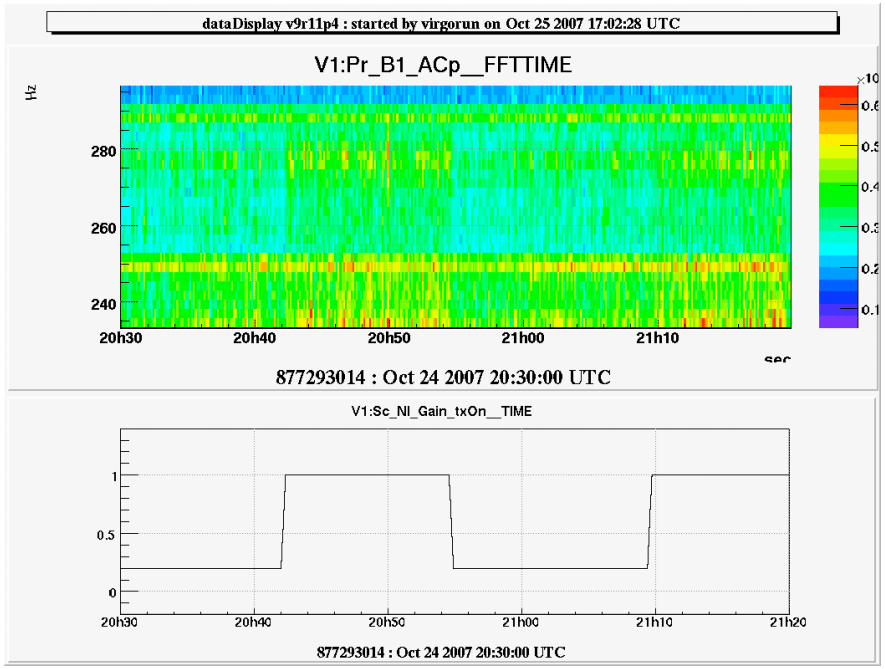
The AA Error signal was affected by LC corrector (bump at 3 Hz)

The the ITF signal was then worsened at higher frequency (200-300 Hz)

EM-MSC-100907

LocalCtrl NI-WI: status in October





ruggi - 20:26, Friday 26 October 2007 (19059)

The AA Error signal was affected by LC corrector (bump at 3 Hz)

The the ITF signal was then worsened at higher frequency (200-300 Hz)

EM-MSC-100907

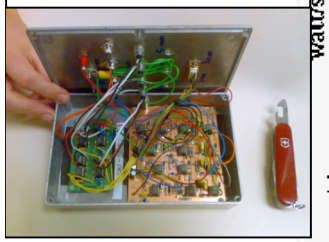
LocalCtrl NI-WI: actions in November

Old (VSR1)

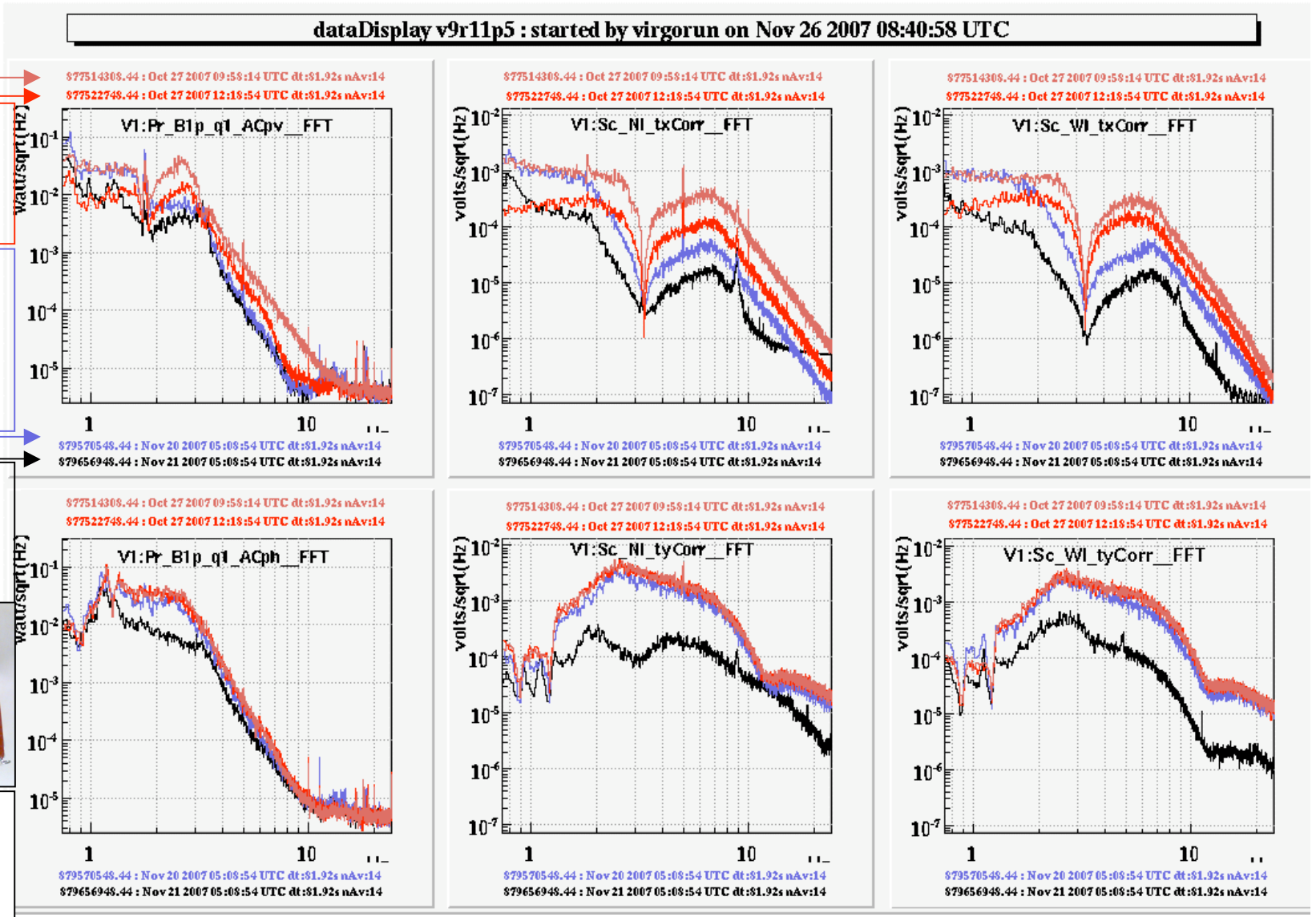
Low gain to reduce coupling with AA signals

New tx flt (reduces AA coupling), keeps accuracy.

New amplifier with dual gain. + new ty on NI

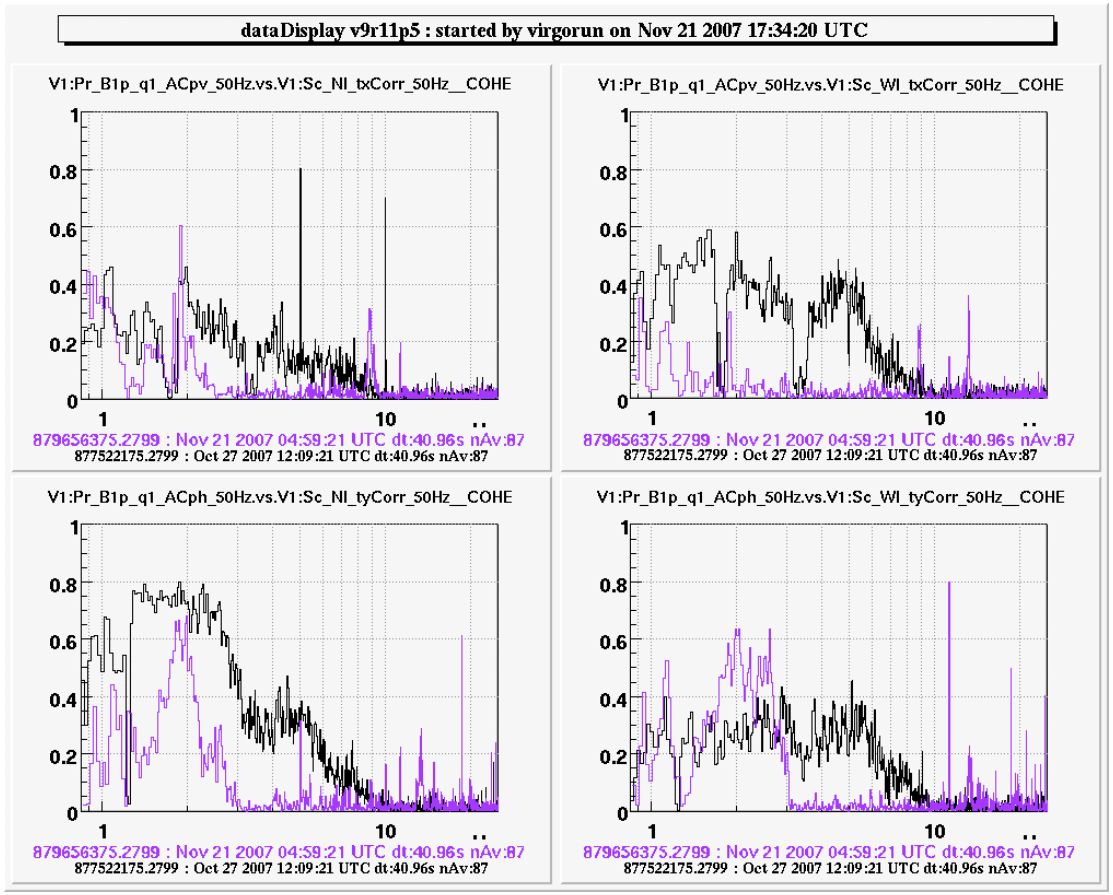


ITF LF sensitivity, residual noise comensated by beam centering.



-100907

LocalCtrl NI-WI: actions in November



Now negligible effect on AA differential signal at present