

AGATA Ge-Detectors at GSI

Status Report

I. Kojouharov

Delivered and tested since the beginning of 2012:

- ADC1
- ADC2
- ATC1
- ATC2
- ATC3

Installed:

- ATC3
- ADC1

Deinstalled, but ready for installation:

- ADC2
- ATC2

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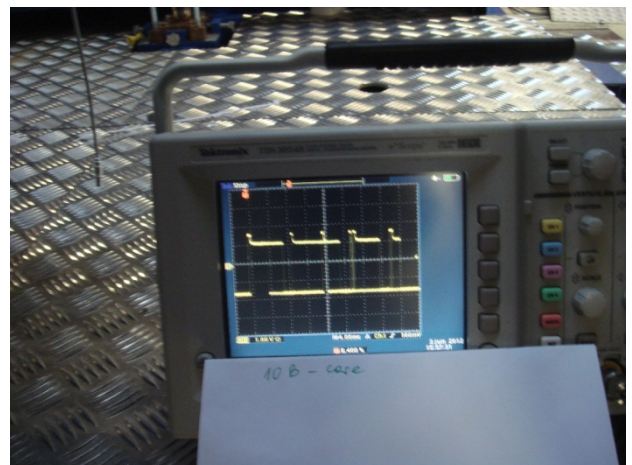
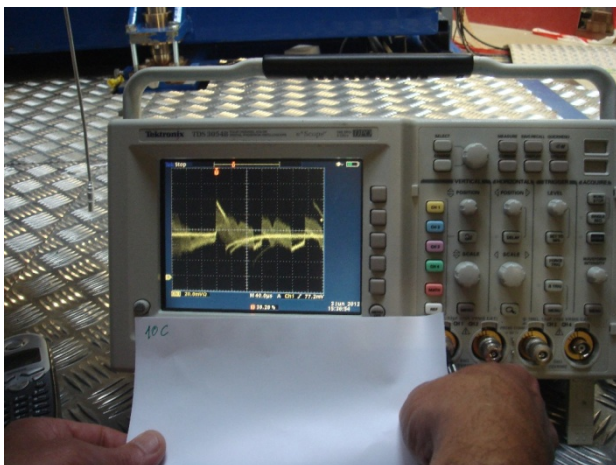
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ADC1:

Shifts the baseline and shifts the gamma-line. In March-April – all the channels were suffered, recently – only the core and in reduced extent.

ADC2:

oddly signals from the core channels of the both crystals, developed the problem within several weeks.



lately not confirmed – "... the detector ADC2 is working nicely with analog electronics out of the frame. The energy resolution is reproduced the detector shows no sign of damage...."

To be inspected reinstalled again.

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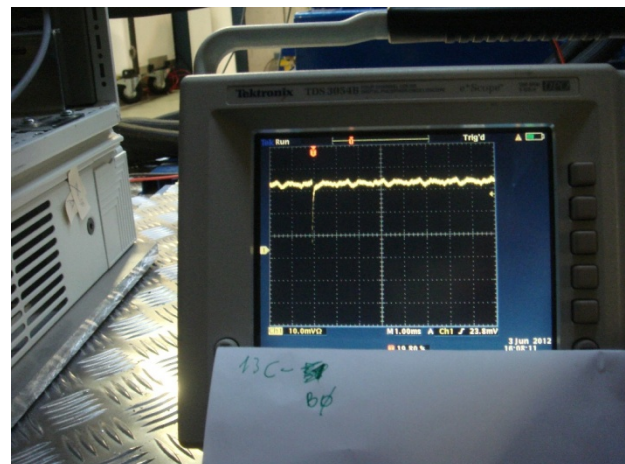
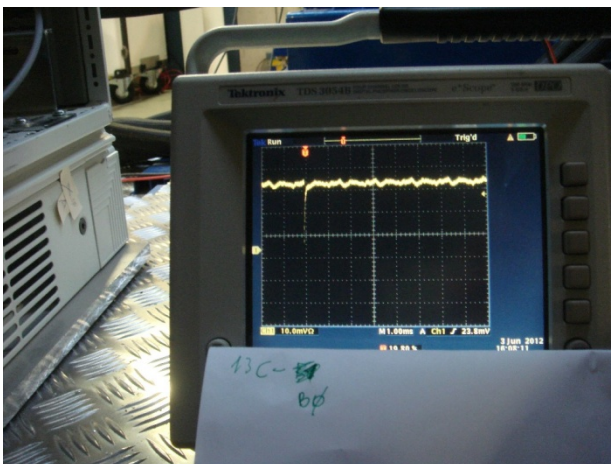
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ATC2:

Crystal C cannot be powered up – current overload of +/-12 V power block of AXIS power supply unit. Lately found faulty segment preamplifier board – "...The problem with the +/- 12V was caused by one faulty segment preamp. The C-detector is now also operational..."

ATC3:

supposed ground loop which caused poor resolution of crystal C. The ground loop most likely comes from the signal cables. When detached a clear baseline was observed. Good chance for Nabil to demonstrate the power of the EMC compatibility diagnostics.

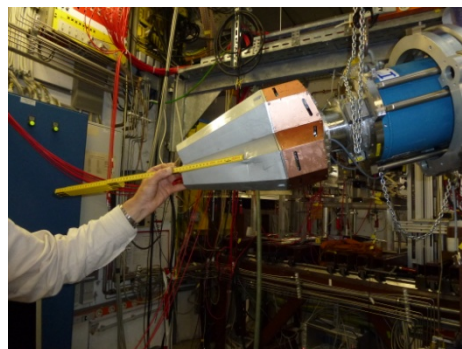
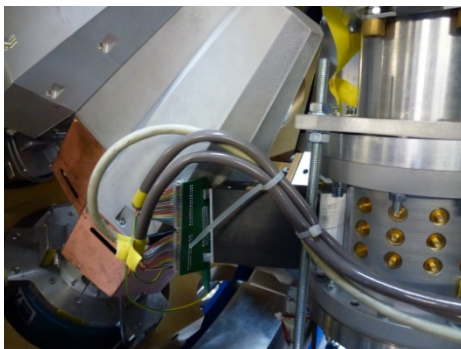


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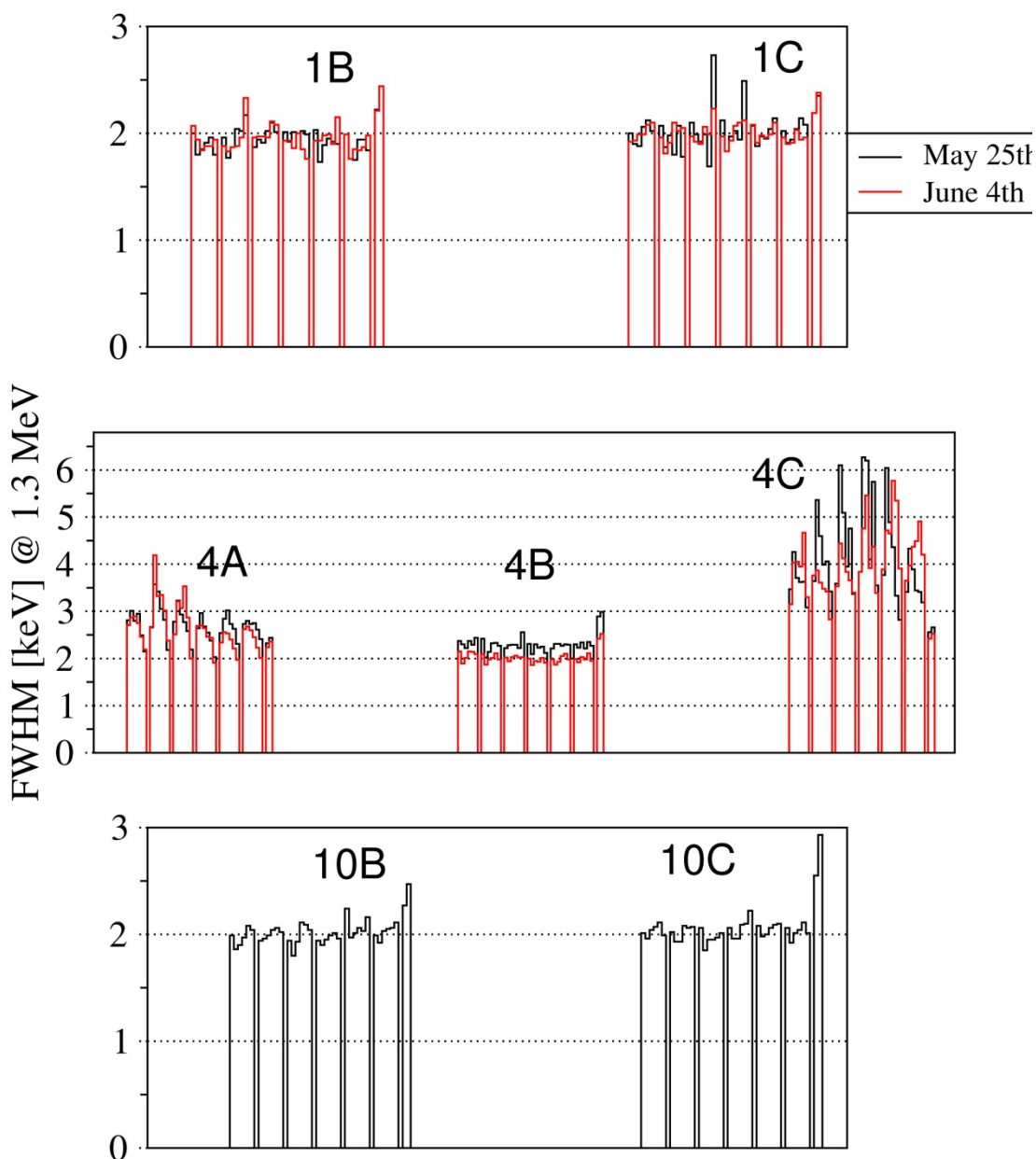
ATC1 accident:

- rotation was ongoing in order to find out the reason for strong vibrations and sudden jumps of the mechanics
- as a rule any work on the frame is being carried out by at least two persons, at this time these were IK and PB
- poor observation field, many items are hidden or difficult to assess their conflict with the detectors, especially by rotation
- the target chamber was not fully implemented and many components have been replaced by provisional (or even makeshift) solutions, some of them conflicting with the detector rotation cone. Principally, any device which may cause conflict must be deinstalled immediately after the experiment. One preamplifier was not.
- The rotation in counterclockwise direction was done without accidents.
- The rotation in clockwise direction caused the accident. The rotation was stopped immediately when the sound of the conflicting objects was heard. Unfortunately, removing the detector from the dangerous position was already not possible before deinstallation of the conflicting preamplifier and the ATC1.
- the vacuum was not lost immediately but after some 1-2 minutes. Nevertheless, the time was too short to shut down the HV.
- the impact point was too far from the capsule lid, lately was confirmed that the capsules are operational.



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END