FMC25 & DSBAM
Test Results

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MSK Collaboration Workshop, DESY, 12.05.2014

Agenda

- FMC25 status

- DSBAM status

- Test results

- Future plans

FMC25 status

- No hard errors found so far

- 6 boards available:

  - 1 board used for "on table" tests of DSBAM FMC mezzanine

    - Missing: USB EEPROM, Clock buffers, RTM hot plug controller

  - 1 board prepared for MTCA crate operation

    - Missing: RTM Hot-plug controller

  - 4 boards are spare

    - In ZE for missing components assembly – MF

- 2 Boards are broken – first series, Ilfa error

FMC25 status

- On the tested boards, following features works:
  - Power supplies
  - Virtex-5, Spartan-6, ATxmega128 (MMC)
  - USB communication (for both, MMC and FPGA)
  - Board works in MTCA crate
    - PCIe works fine
  - FMC slots works (tested partially, individual pins used for BAM FMC)

DSBAM Status

- Boards has minor errors, but all can be bypassed by cable soldering

- 7 boards available:

  - 1 board is "cabled" and used for tests

  - 6 boards are untouched

- 1 boards seems to be broken, we suspect assembly error, it stayed in Świerk

DSBAM Status

- On tested board clock PD was correctly impedance matched by default

- Clock distribution chip AD9516 works:

    - SPI communication

    - Clock distribution

- ADC works

    - SPI communication

   - ADC readout – tested partially, test patterns observed in ChipScope

Test status

- Standalone "on table" tests:
  - All SPI devices works (clock chip AD9516, ADCs)
  - ADC were generating test patterns

- In crate testing:
  - PCI Express works
  - AD9516 clock chip works
  - There is problem with the SPI communication with all ADCs, this blocks "full ADC test"

Pulses received by PD after first Amp.
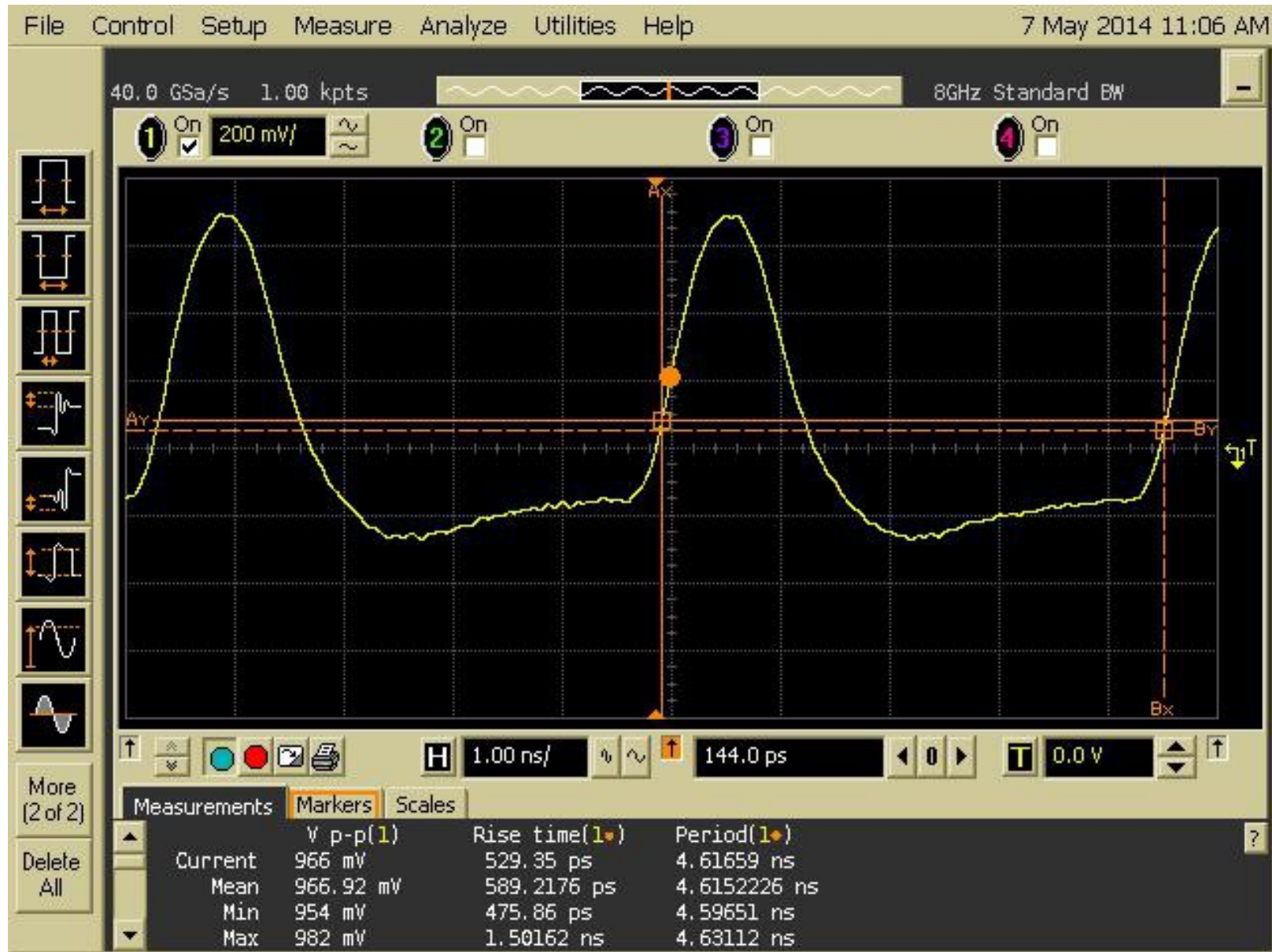
Pulses passed through AD9516 and placed on the LVPECL output
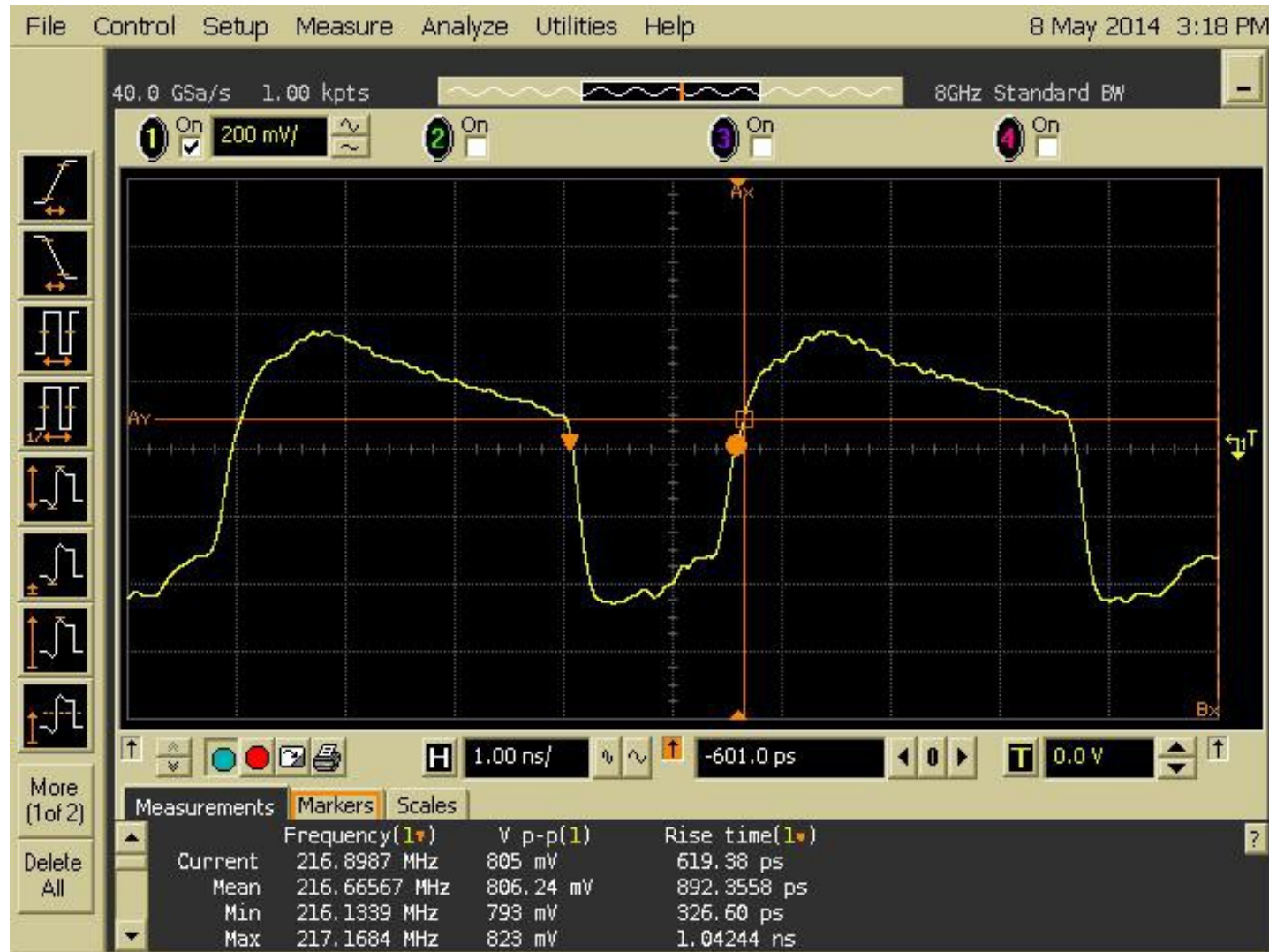
Future plans

- To Do:
  - Finish the DSBAM in-crate test
  - Tune the ADC readout (clock delay compensation)
  - Commission the phase shifting, scan the laser pulse
  - Port the BAM processing firmware from ACB 2.1
  - Commission arrival time estimation in FLASH
  - Commission SFP communication through DSBAM
  - Close the energy feedback loop :-)

The End

Thank You