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VRVS, 29th August 2007

MERIT BEAM STATUS

Test beams

In collaboration with operations group and beam diagnostics

22nd Aug. 2007, 16:00 – 17:45

- ◎ Beam parameters
 - 14 GeV/c
 - $2 \cdot 10^{11}$ protons/bunch, 1-2 bunches/pulse
 - 0 pulses extracted to MERIT beam branch (magnet interlocked)

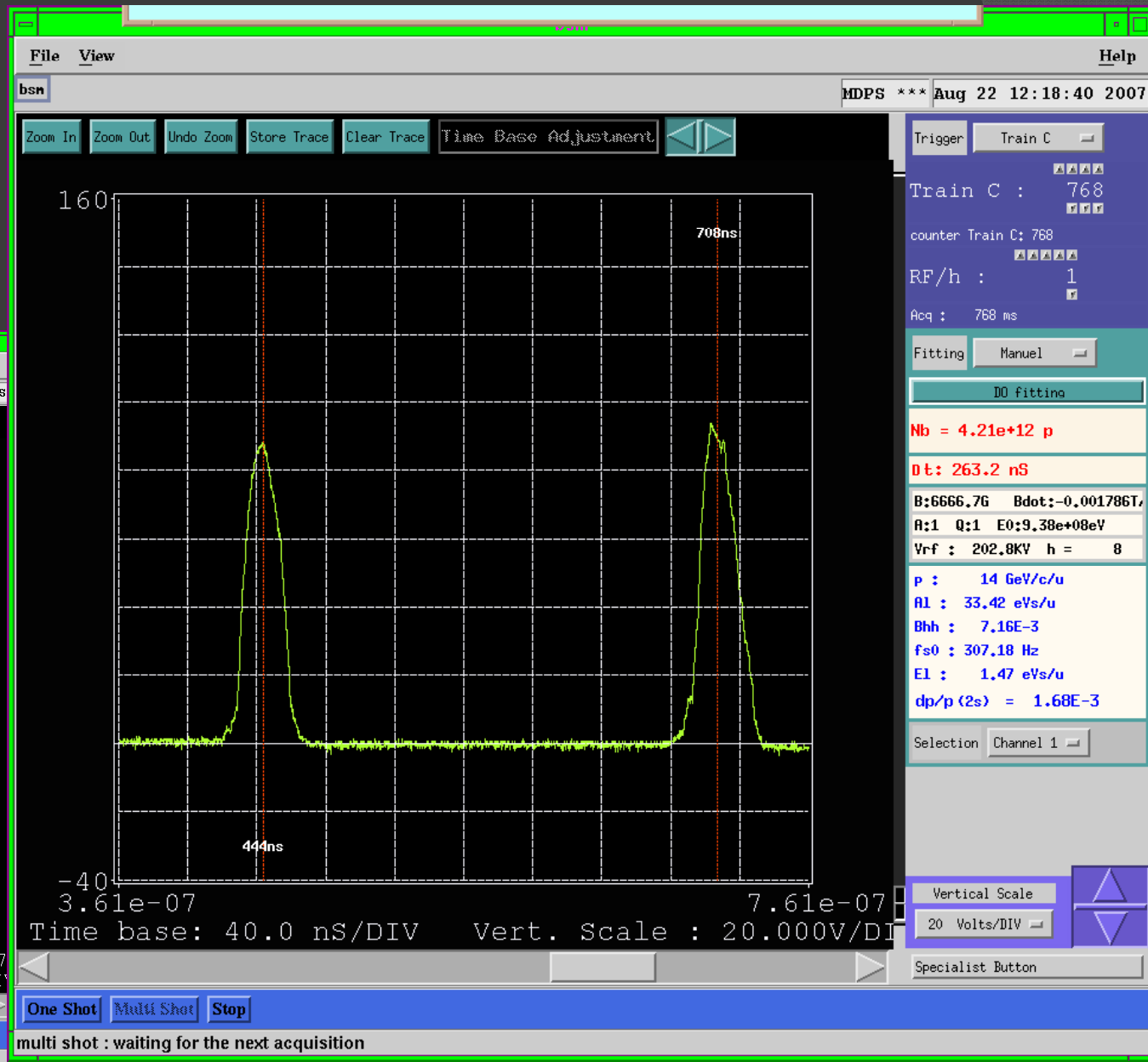
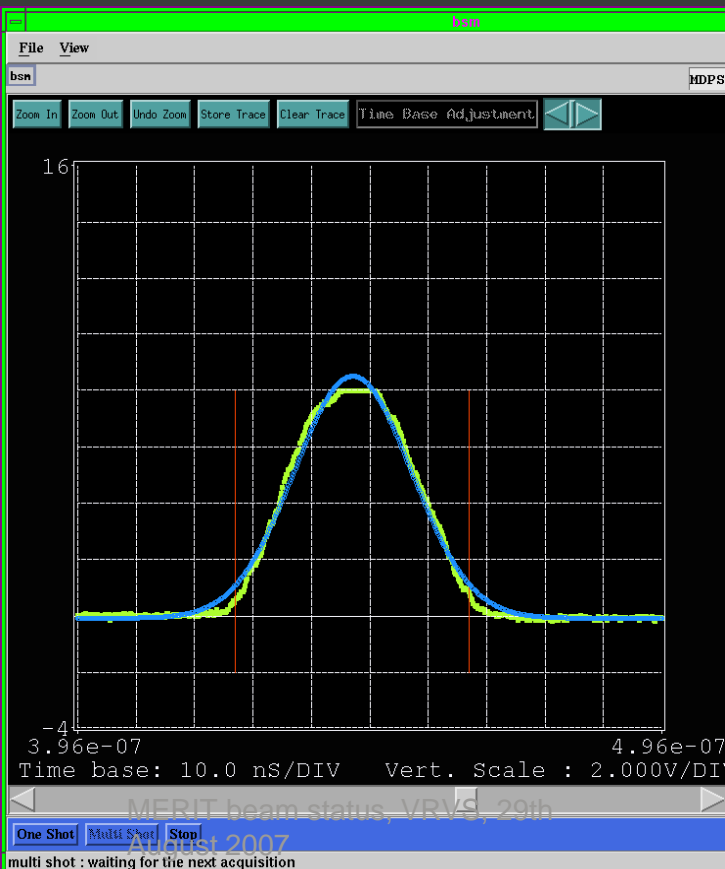
23rd August the magnet interlock was resolved (short access)

24th Aug. 2007, 16:00 – 17:45

- ◎ Beam parameters
 - 14 GeV/c
 - $2 \cdot 10^{11}$ protons/bunch, 1 bunch/pulse
 - 8 pulses extracted to MERIT beam branch

Longitudinal characteristics

Two bunches
out of
consecutive
buckets



Beam spot

MTV484

Position:

Z = -4 m

Focus:

Z = -5.5 m

Grid 1 cm

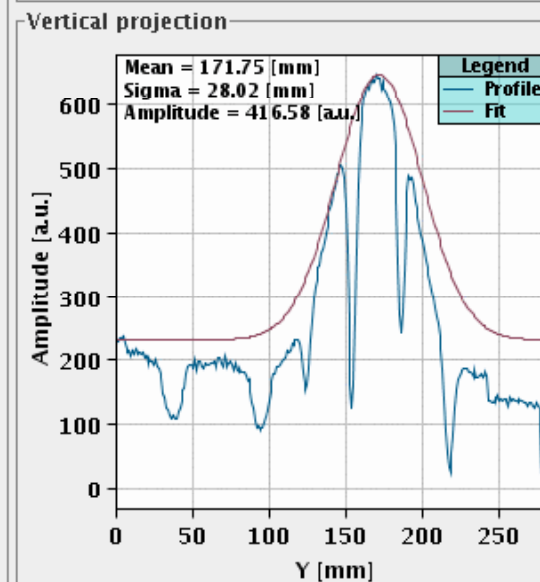
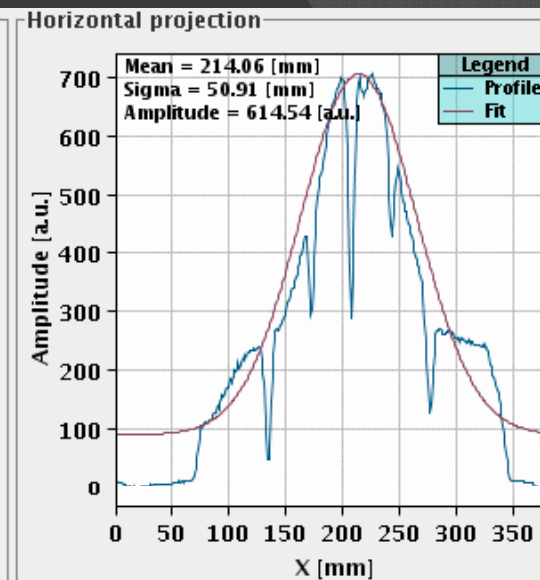
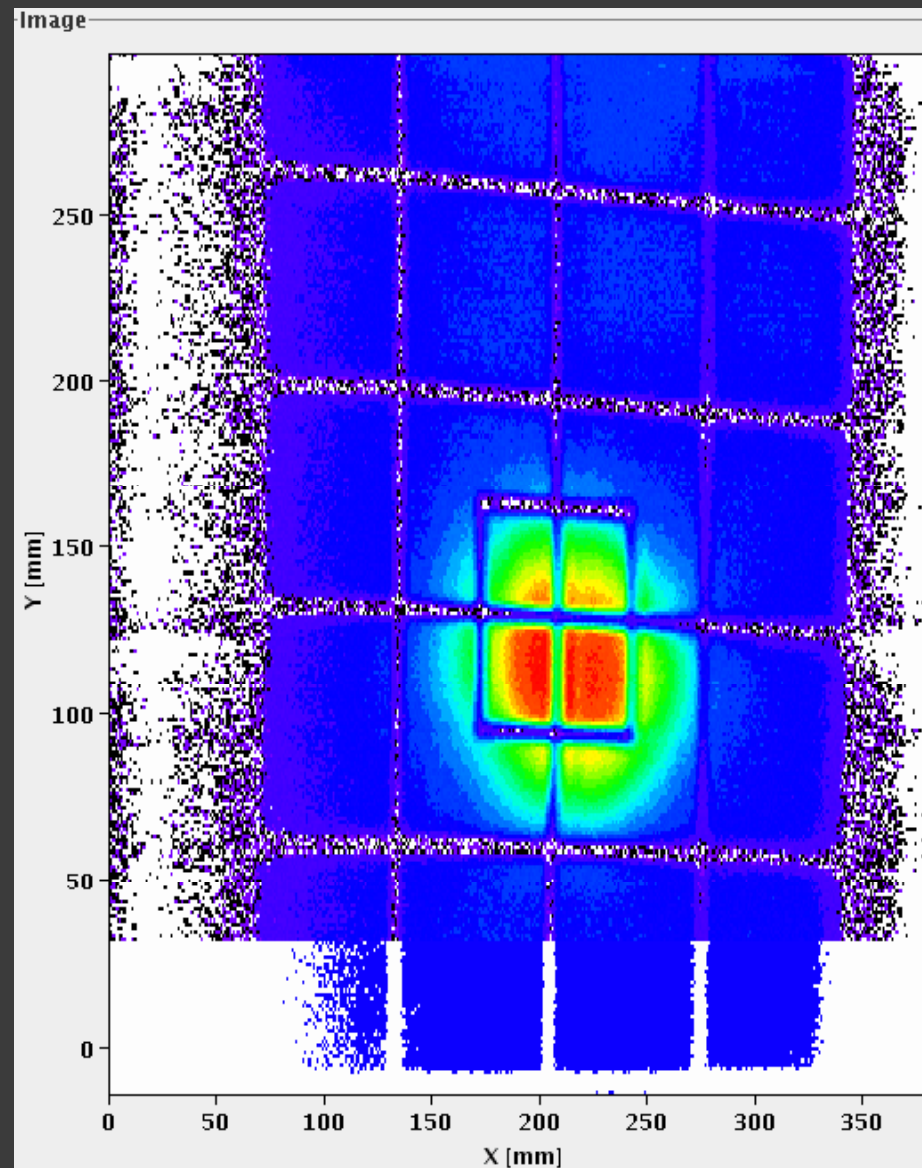
Calibration

“wrong”:

Not mm,
but pixel

~140 $\mu\text{m}/\text{px}$

$\sigma = 7/4 \text{ mm (h/v)}$

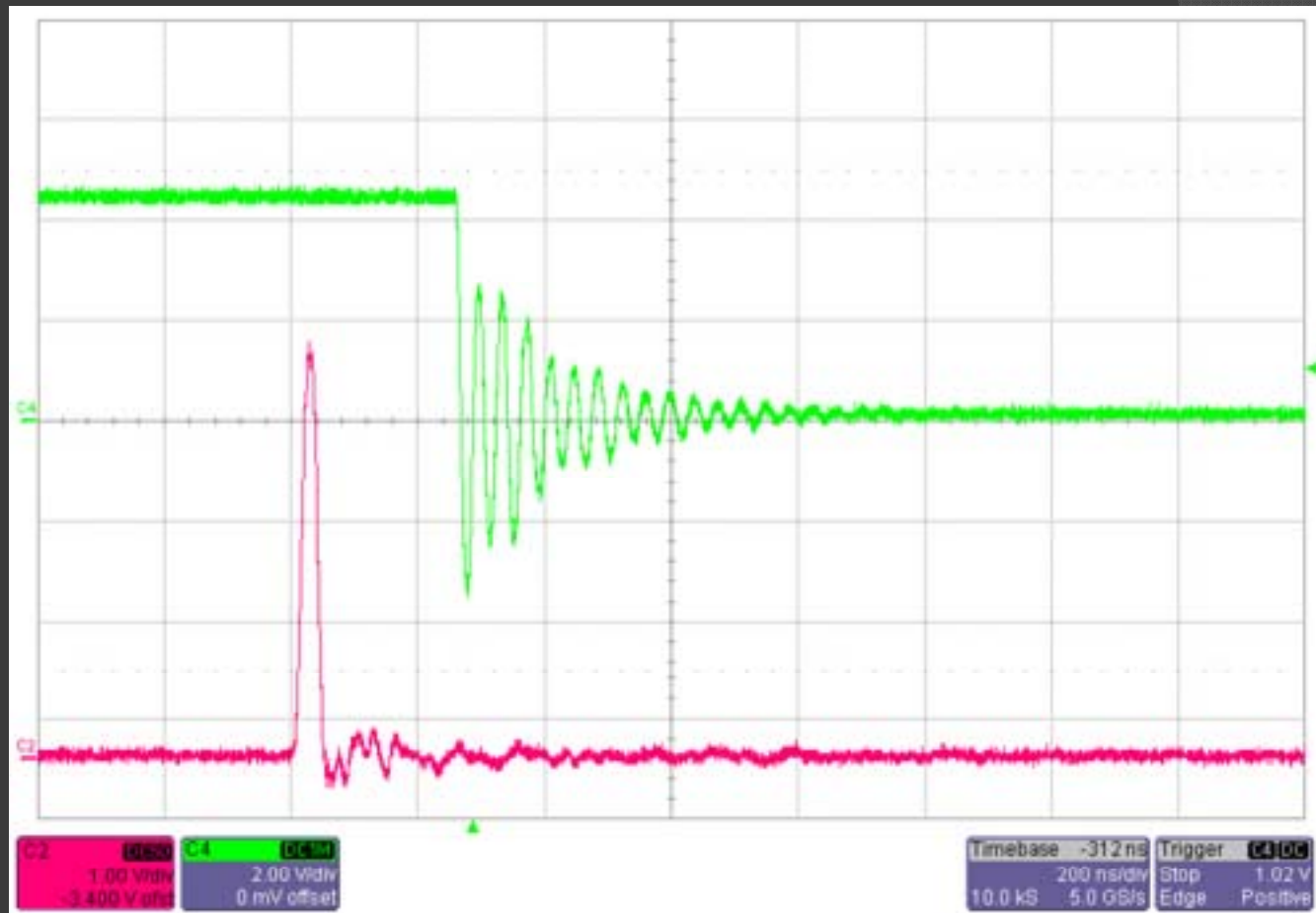


Raw transformer signal

- Recorded with oscilloscope

$$I = 1.56 \cdot 10^{11} \text{ ppp}$$

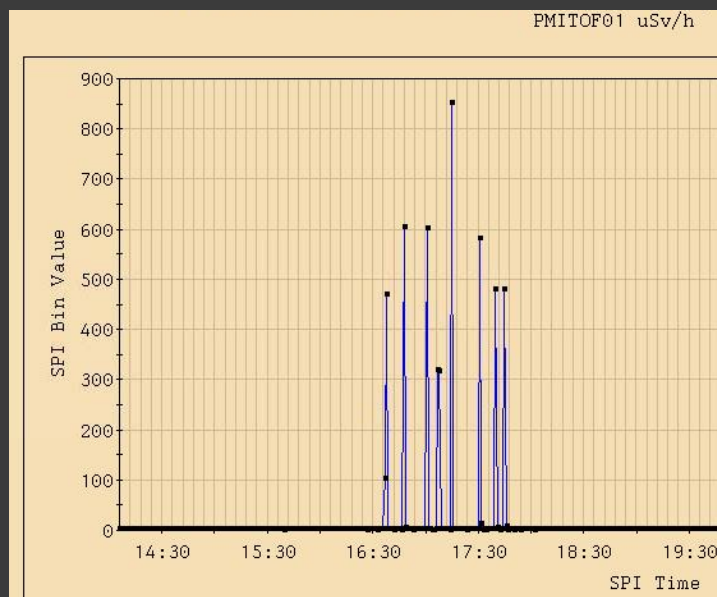
Final DAQ
soon to be
installed



Radiation/Activation

Radiation:

During beam operation the monitors read about 1 mSv/h (peak)



Activation after 3 days of cool-down:

1.5 μ Sv/h peak at hot spots on contact (upstream window)

Summary

- Beam line is fully operational.
- Some minor faults (swapped signal cables) have been fixed during the last access.
- In the coming weeks some more test beam days should follow to verify optics at both momenta.