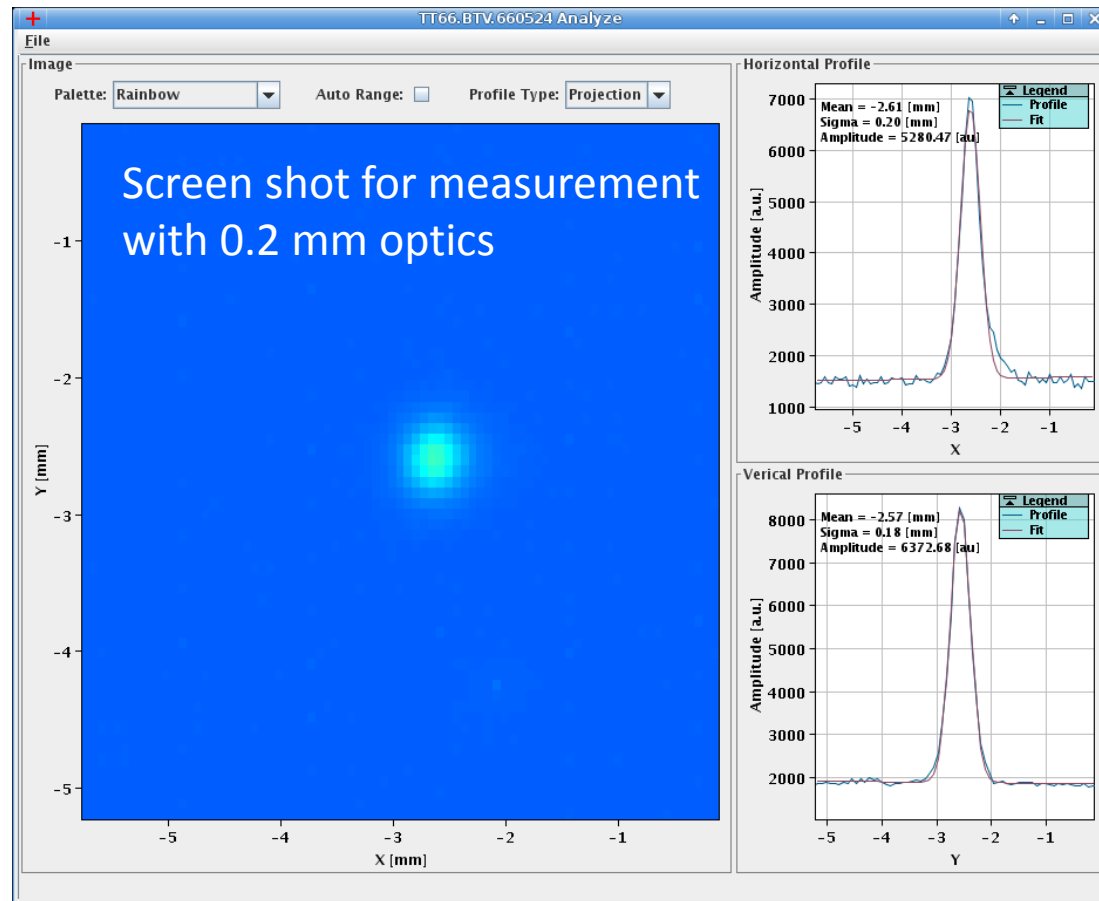


SPS LHC type beams

- BCMS up to 3 x 48 bunches: bunch intensity $1.15e+11$, 1.7-1.8 um emittance
- Doublet beam: damper setting up done
- Q22: heavily used for high-bandwidth feedback MD
- LHC50NS preparation ongoing.
 - 24 bunches per batch
- HiRadMat: screens at experiments with correction for forward OTR more consistent beam size measurements

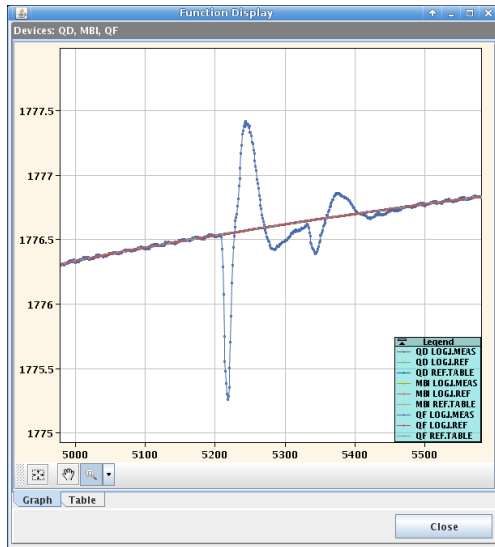
HiRadMat beam size measurement

- Systematic studies still to come



Fixed Target Beam

- QF glitches back?
 - EPC is already investigating



Normalized losses on ZS very stable



- Angle through splitters (i.e. splitter 2) to be optimized systematically
 - Reduces losses at splitters, increases transmission to T10, reduces radiation for NA62

Fixed Target BEam

SPS Online Quality Check - SPS.USER.SFTPRO2

20 Jul 2017 17:33:06 SPS - 18 SFTPRO2 | SFT_PRO_MTE_L4830_201... 18/30 03 SFTPRO2 | SFT_PRO_MTE_L483...

SFTPRO2 | 20.07.2017 17:32:07 | No telegram available with name SPS_TELEGRAM_INPUT

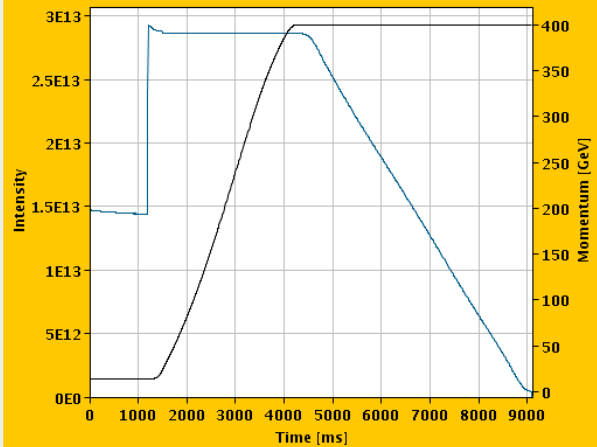
User: SFTPRO2 Super Cycle Number: 0 Machine Mode: Particles Type: Destination: Dynamic Destination: Lhc Mode: No Lhc Request: No

Main View | LSS2 Losses | Diamond BLM at extraction | Intensity Performance Trends | Spill Quality Trends | RF Oasis Signals Trends

SFTPRO2 | 20.07.2017 17:32:07 | No telegram available with name SPS_TELEGRAM_INPUT

Transmission: 96.62 %

Name	Time	Intensity
Injection 1	0	1.48E13
Injection 2	1200	1.49E13
Start Ramp	1260	2.92E13
Start FlatTop	4260	2.86E13
Extraction	4260	2.82E13
Std. Dump	9089	4.29E11

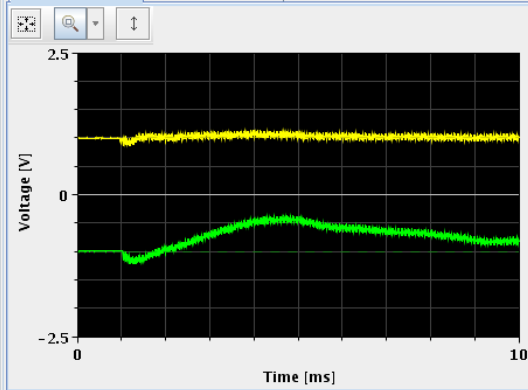


Intensity Performance Trends: Plot of Intensity (left axis, 0E0 to 3E13) and Momentum (right axis, 0 to 400 GeV) vs Time (0 to 9000 ms). Intensity (blue line) shows a step increase at 1200 ms and a peak at 4260 ms. Momentum (black line) ramps up from 0 at 1260 ms to a peak at 4260 ms.

SFTPRO2 | 20.07.2017 17:33:01

Inj. Phase Error: 0 deg
Ref. Phase Error: 34 deg

Injection Phase | Reference Phase



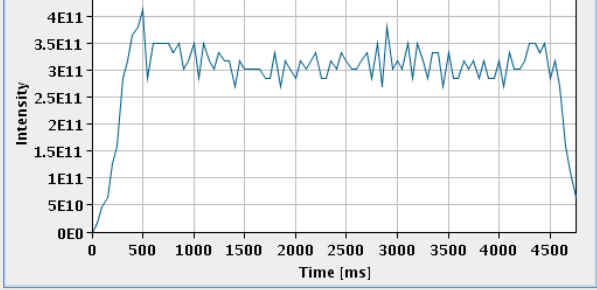
Injection Phase | Reference Phase: Plot of Voltage (V) vs Time (ms). Shows two signals: a yellow signal (Injection Phase) and a green signal (Reference Phase).

SFTPRO2 | 20.07.2017 17:32:43 | Spill Quality analysed

Effective spill length: 4507 ms

Frequency [Hz]	Amplitude [dB]
50	37.6
100	28.8
150	23.9
300	3.9


Extracted Intensity | FFT Amplitudes



Extracted Intensity: Plot of Intensity vs Time (0 to 4500 ms). Shows a noisy signal that peaks around 500 ms and remains high until 4500 ms.

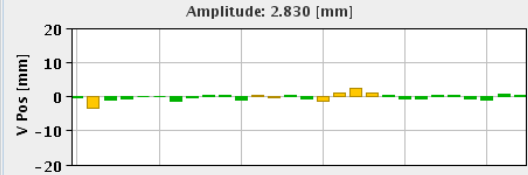
SFTPRO2 | 20.07.2017 17:32:43

Amplitude: 5.800 [mm]



H Pos [mm]: Plot of Horizontal Position vs Time (0 to 4500 ms). Shows a noisy signal fluctuating around 0 mm.

Amplitude: 2.830 [mm]



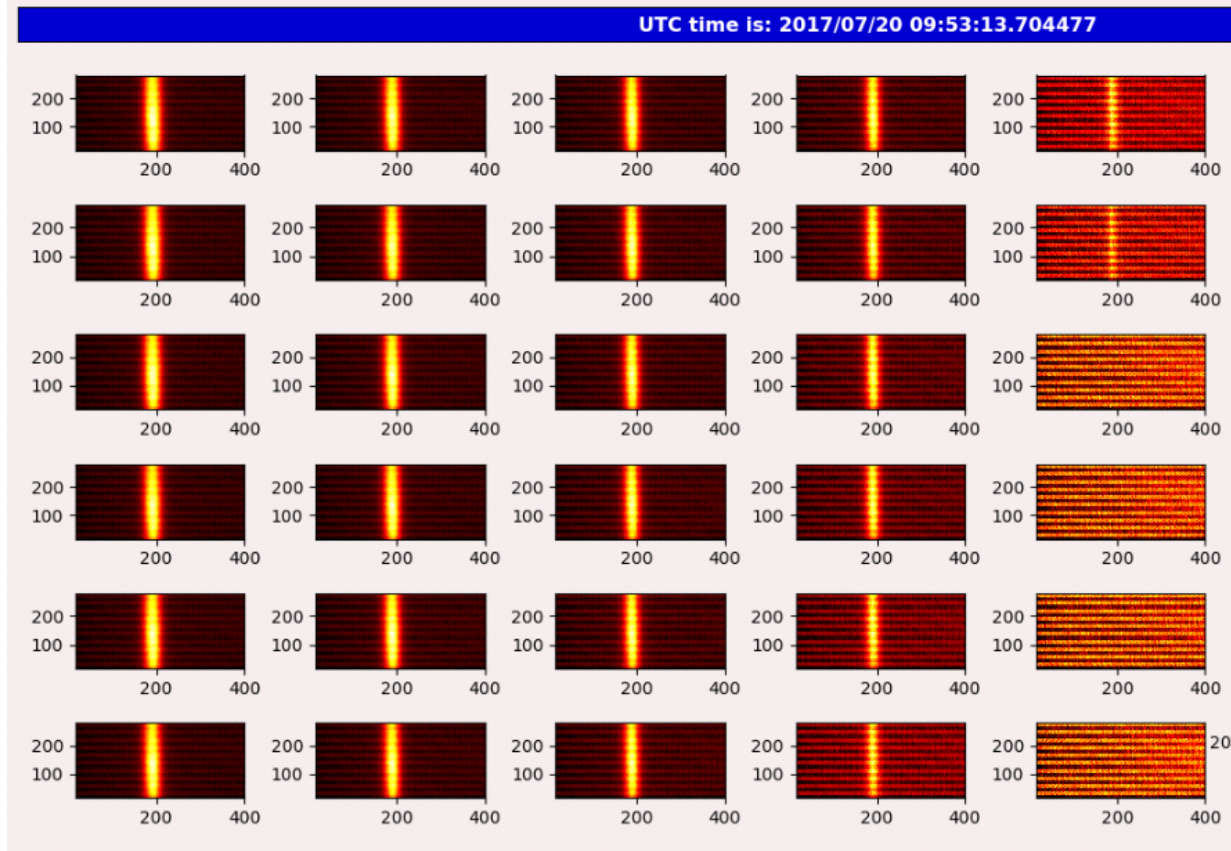
V Pos [mm]: Plot of Vertical Position vs Time (0 to 4500 ms). Shows a noisy signal fluctuating around 0 mm.

Start Monitoring | Stop

17:32:08 - Pls Condition: SPS.USER.SFTPRO2

Fixed Target Beams

- BGI during slow extraction
- We want it...



Xe Ions

- Transmission from PS now $\sim 100\%$
- Status: acceleration through transition on MD cycle with Q20

