

SPS machine report

H. Bartosik for the SPS team

SPS summary of the last 7 days

○ **Friday 9.7. – Sunday 11.7.**

- Pumping was completed by Friday morning, allowing to set up TT20 before the weekend so that commissioning of secondary beam lines could start

○ **Monday 12.7. – Tuesday 13.7.**

- Good progress on debugging beam instrumentation – mini scans (to measure beam position in front of targets) back working
- ZS extraction septum alignment optimization for loss minimization
- Crystal alignment for further loss reduction – looks very good so far
- Parallel commissioning work on HiRadMat and AWAKE

○ **Wednesday 14.7.**

- Official start of physics
- After optimization of losses on first splitter, increased intensity to $1e13$ per pulse
- Worked on optimization of spill
- Further investigation on beam instrumentation around T10
- Parallel commissioning work on AWAKE cycle during the day – reached $3e11$ p
- Maximum duty cycle during the night

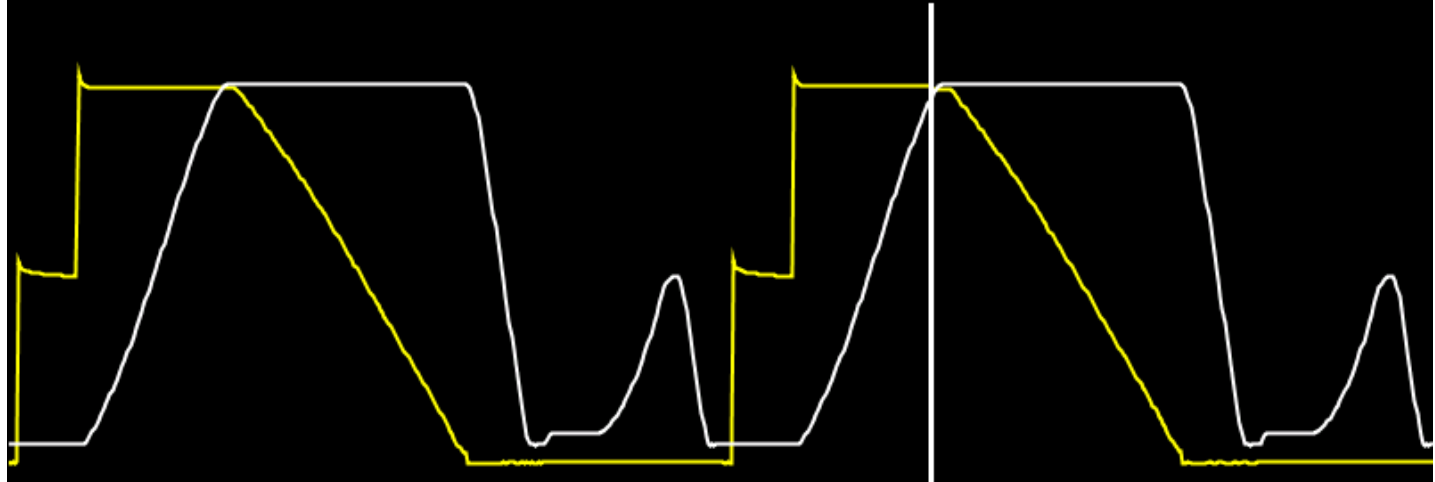
Maximum duty cycle during the night

SPS-PAGE1 Current user: SFTPRO1

9.83E+12 15-07-21 00:43:56

SC 18913 (24BP, 28.8s)

Last update: 3 seconds ago



Target	I/E11	MUL	%SYM	Experiment
T2	11.8	15	0 a	H2/H4
T4	5.4	18	0 a	H6/H8
T6	30.1	12	41 a	COMPASS
T10	0.0	0	0	NA62

Phone: 77500 or 70475

Comments (14-Jul-2021 23:26:00)

MD1 0.0 E10 0.9 E10

Physics start

15/07 no beam from 9h to 12h

Plans for the coming days

○ **Today**

- Access and other interventions from 9:00 – 12:00, in the shadow of PS DSO tests
- Further increase intensity
- Continue working on spill optimization
 - Optimize RF gymnastics before extraction – should improve reproducibility
 - 50 Hz compensation
- Continue investigation on T10 beam instrumentation
- Parallel commissioning work on AWAKE cycle (bunch rotation at extraction)

○ **Later this week**

- Physics as much as possible
- Parallel commissioning work on AWAKE cycle, possibly also on HiRadMat cycle

○ **Next week**

- Wednesday dedicated MD (8:00-18:00)
- Thursday “parallel MD” (8:00-18:00), with reduced duty cycle for NA physics