

SPS-PAGE1

Current user: LHCION2

25-11-11 04:01:33

SC 63127 (47BP, 56.4s)

FT: 1000 ms

Last update: 7 seconds ago



SPS Highlights 2011

Target	I/E11	MUL	%SYM	Experiment
T2	0.0	0	0	H2/H4
T4	0.0	0	0	H6/H8
T6	0.0	0	0	COMPASS
T10	0.0	0	0	

Y. Le Borgne

CNGS T40.1	0.0 E11
CNGS T40.2	0.0 E11

Comments (24-11-11 18:43)

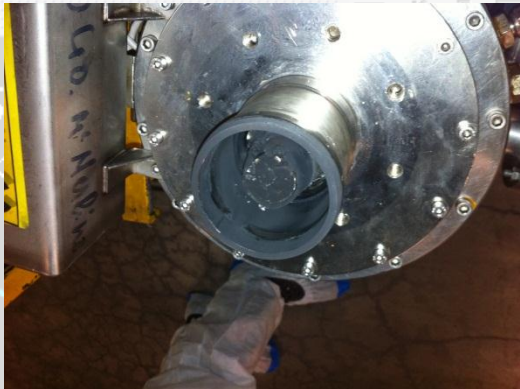
Phone: 77500 or 70475

RF with minimum power

LHC filling and COAST Beam available for the night...

User	Injected	Flat Top
LHCION2	0.7 E8	1.4 E8

SPS: The Dark Side



- Bad year for kickers : (60h downtime)
 - Termination resistor (MKP),
 - Problems with trigger units,
 - Leak on feed through on Dump Kicker, ...

• CNGS :

Target	Horn power	converter	MUL	%SYM	Experiment
T2	0.0		0	0	H2/H4
T4	0.0		0	0	H6/H8
T6	0.0		0	0	COMPASS
T10			0	0	

• Trouble in the North :

- TAX motors blocked (late start of FT physics)
- TT20 : two vacuum leaks near splitters
- New North Area access system with some child diseases (33hrs downtime, more than for RF power)

User	Logins	Flt To	Comments
LHCION2	0.7 E8	1.4 E8	(24-11-11 18:43) Phone: 77500 or 70475 AST Beam available for the night...

SPS: the Bright Side

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Pushing the Limits:

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New performance records

- 50 ns beam: $2.16 \cdot 10^{13}$ protons per shot in 144 bunches of $1.5 \cdot 10^{11}$ protons with emittance of $1.9 \mu\text{m}$.
- 25 ns beam: $3.17 \cdot 10^{13}$ protons per shot in 288 bunches of $1.1 \cdot 10^{11}$ protons with emittance of $2.9 \mu\text{m}$.

Target	L/E1.1	MU1	%SYM	Experiment
T2	0.0	0	0	H2/H4
T4	0.0	0	0	H6/H8
T6	0.0	0	0	COMPASS
T10	0.0	0	0	
CNGS	0.1	0.0	0	Comments (24-11-11 18:45)
CNGS T40.2	0.0	0.0	0	Phone: 77500 or 70475
				with minimum power
				LHC filling and COAST Beam available for the night...
User	Injected	Flat Top		
LHCION2	0.7 E8	1.4 E8		

- CNGS: $3.85 \cdot 10^{19}$: integrated number of protons on CNGS target. $3 \cdot 10^{11}$ protons/bunch (4 bunches) sent for neutrino time of flight measurement.

- LHC ions: 24 bunches spaced by 200nsec using 12 injections from PS. $1.4 \cdot 10^8$ ions/bunch with emittance of $0.7 \mu\text{m}$

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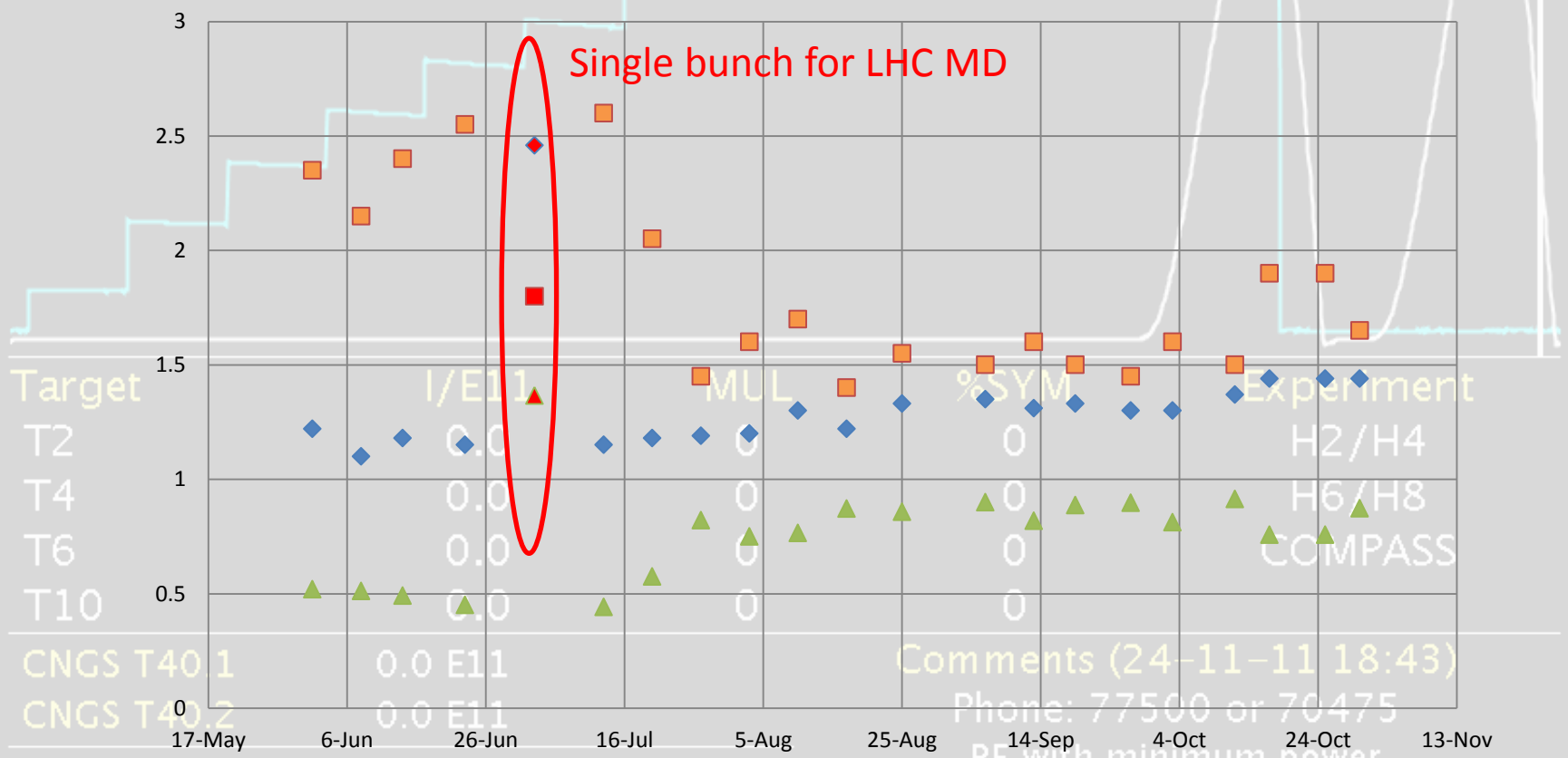
25-11-11 04:01:33

SC 63127 (47BP, 56.5...)

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SPS: The Bright Side

50 nsec beam : intensity, emittance and brightness evolution in 2011



User
LHCION2

Injected
0.7 EB

Flat Top
1.7 EB

LHC filling and COAST Beam available for the night...

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New Stuff

Last update: 7 seconds ago

- New experiment **HiRadMat** finished and commissioned.

- **Q20 optics** defined for protons and ions.

Target	I/E11	MUL	%SYM	Experiment
T2	0.0	0	0	H2/H4
T4	0.0	0	0	H6/H7
T6	0.0	0	0	COMPASS
T10	0.0	0	0	

- **Single bunch to CNGS** for neutrino time of flight.

- **100 ns proton beam** for p-Ion collisions in LHC.

User	Injected	Flat Top
LHCION2	0.7 E8	1.4 E8

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 for the night...

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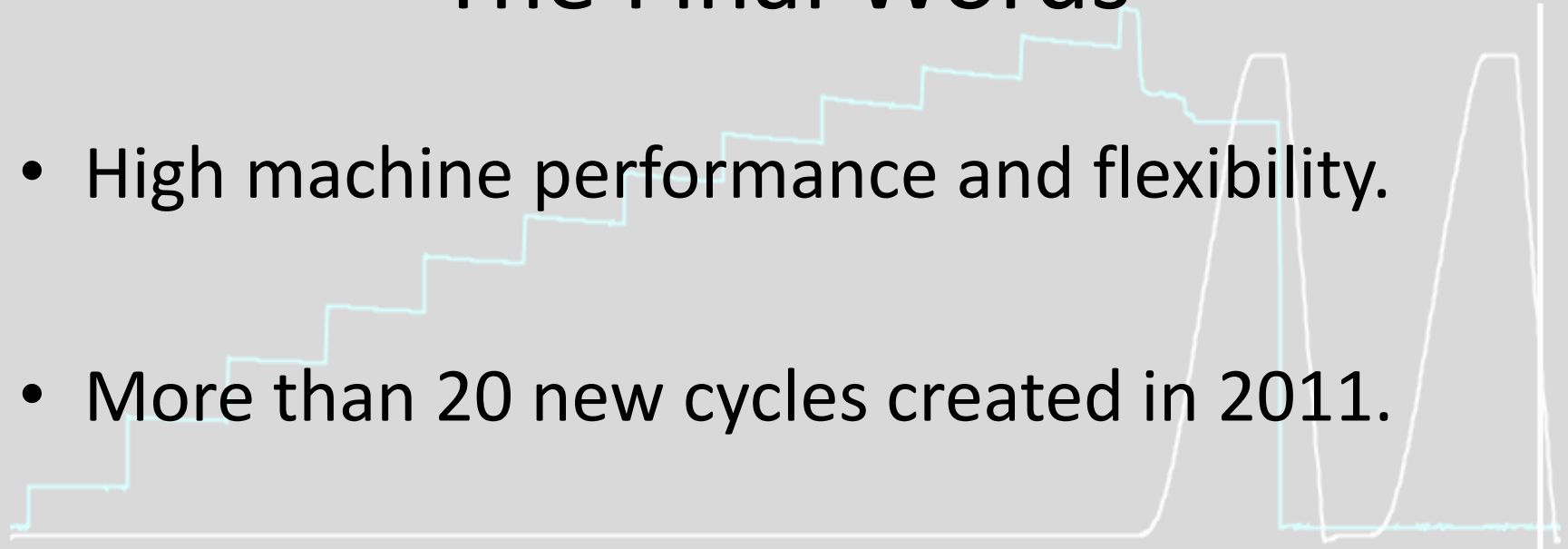
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SC 63127 (47BP, 56.4s)

The Final Words

last update: 7 seconds ago

- High machine performance and flexibility.
- More than 20 new cycles created in 2011.



Target	I/E11	MUL	%SYM	Experiment
T2	0.0	0	0	H2/H4
T4	0.0	0	0	H6/H8
T6	0.0	0	0	COMPASS
T10	0.0	0	0	

- Average of 146 shifts in the year for the SPS.



Shifters feel tired at the end of the year.

User	Injected	Flat Top	Comments (24-11-11 18:43)
LHCION2	0.7 E8	1.4 E8	RF with minimum power LHC filling and COAST Beam available for the night...

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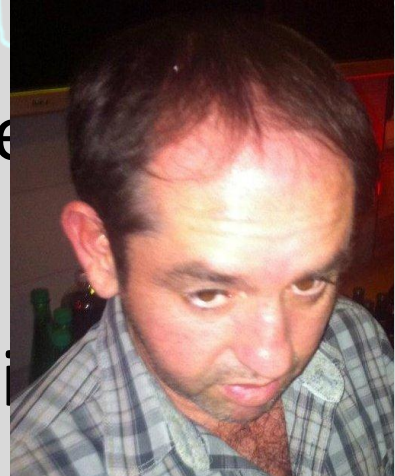
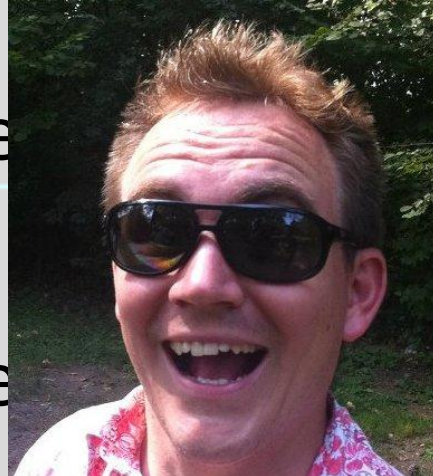
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SC 63127 (47BP, 56.4s)

The End Words

Last update: 7 seconds ago



Target

- T2 Av
- T4
- T6
- T10
- CNGS
- User
- LHCION2



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H8

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(8:43)

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available

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T10	0.0	0	0	

CNGS T40.1 0.0 E11
 CNGS T40.2 0.0 E11

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Thanks to **Karel Cornelis** and the **SPS OP Team**.