

p-Pb pilot physics run 12th- 13th September 2012

LCU Meeting – 18th September 2012

R. Versteegen for the p-Pb team:

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Redaelli, M. Schaumann, M. Solfaroli, J. Wenninger
and others ...

Overview of the run

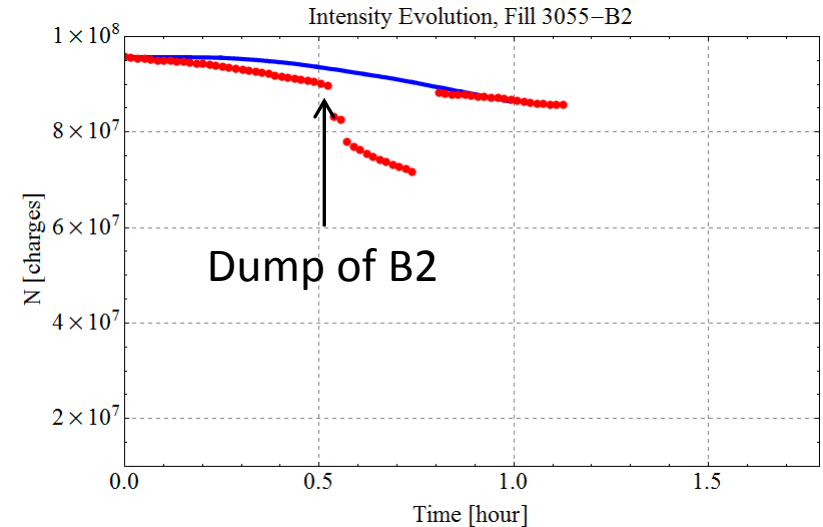
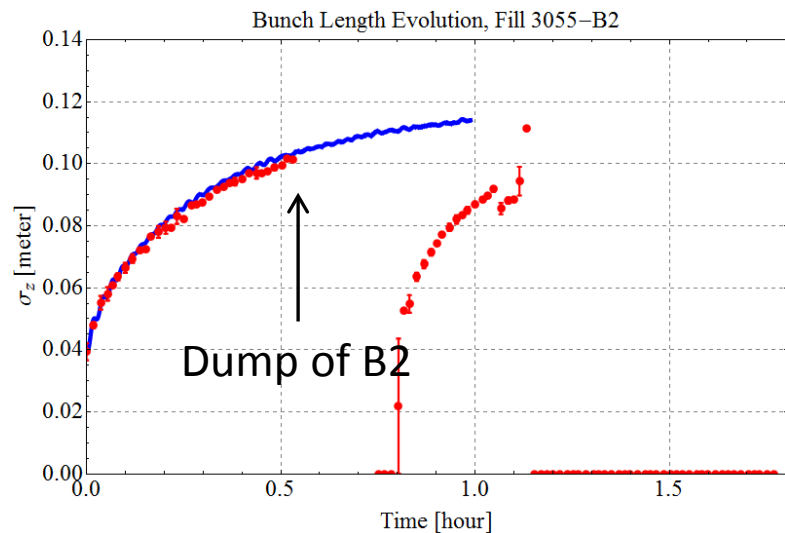
- 15:45 Injection of first Pb bunch, intensity about $7 \cdot 10^9$ charges.
- Dumped due to RF synchronization problem.
- 17:37 Injection of B1. Trouble injecting Pb.
- 18:54 Injection of B2.
- 19:19 dump of both beams during the ramp due to TCT position interlocks.
- QPS and RF problems
- 22:40 -> 22:52 Ramp.
- 23:30 Collapsing separations with injection optics – optimizations at each experiment with collision rates
- 00:43 Loss maps on 2 additional bunches in each beam
- 01:27 STABLE BEAMS
- 06:25 Stable beams, IP moved by -0.5 m in ALICE
- 07:55 Stable beams, IP moved by +0.5 m in ALICE
- 09:35 Beam dump by operators

-> Successful movement of the IP opens up new possibilities for putting the beams into collision, to be studied further.

-> Measurements were performed with WS, data were taken with BGI for B2, but are not analyzed yet.

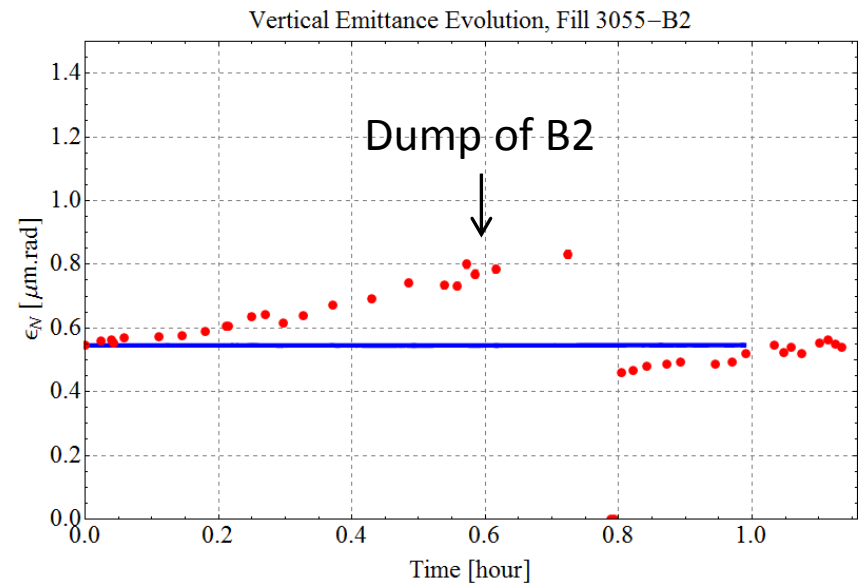
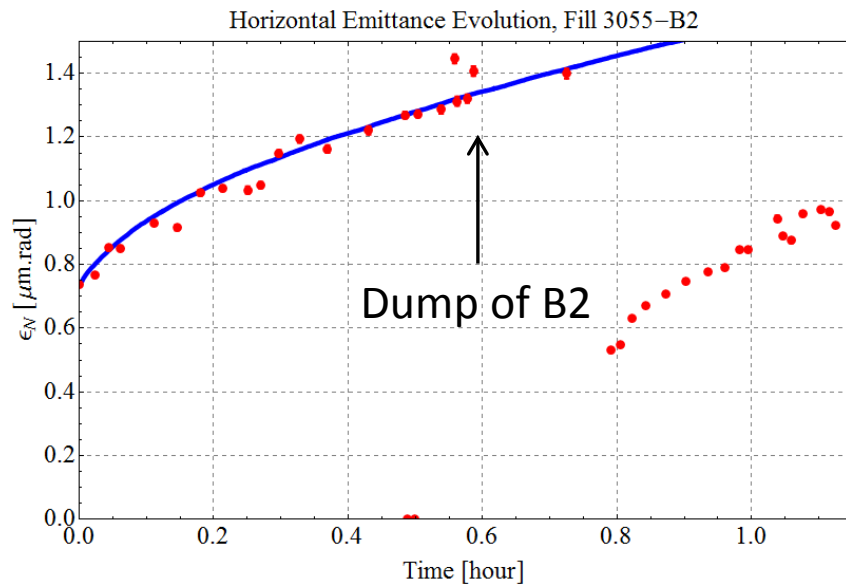
B2 - measurements between 18:00 and 19:00

- Measurements performed on Pb bunches in the presence of 15 p-bunches before the first ramp (WS data in red),
- compared with IBS simulation (blue curve) (M. Schaumann)
- Time = 0 h correspond to 18:00.



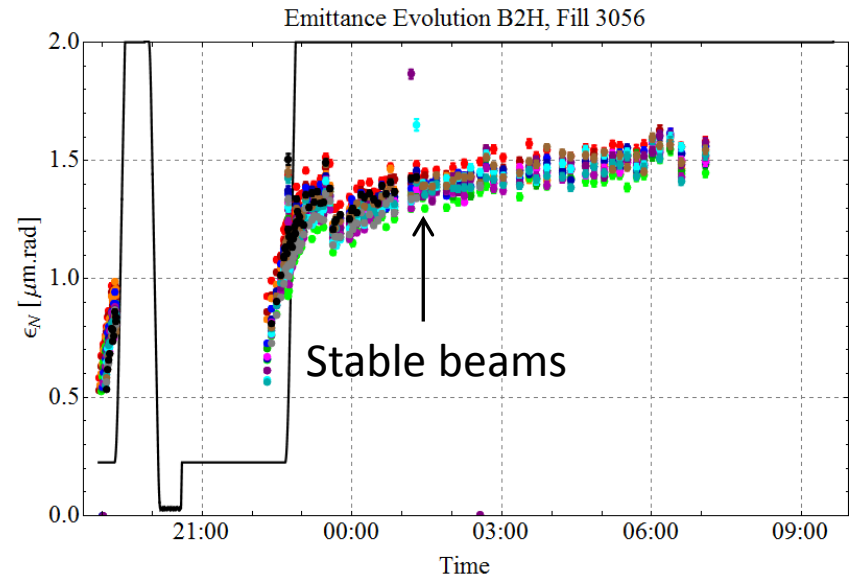
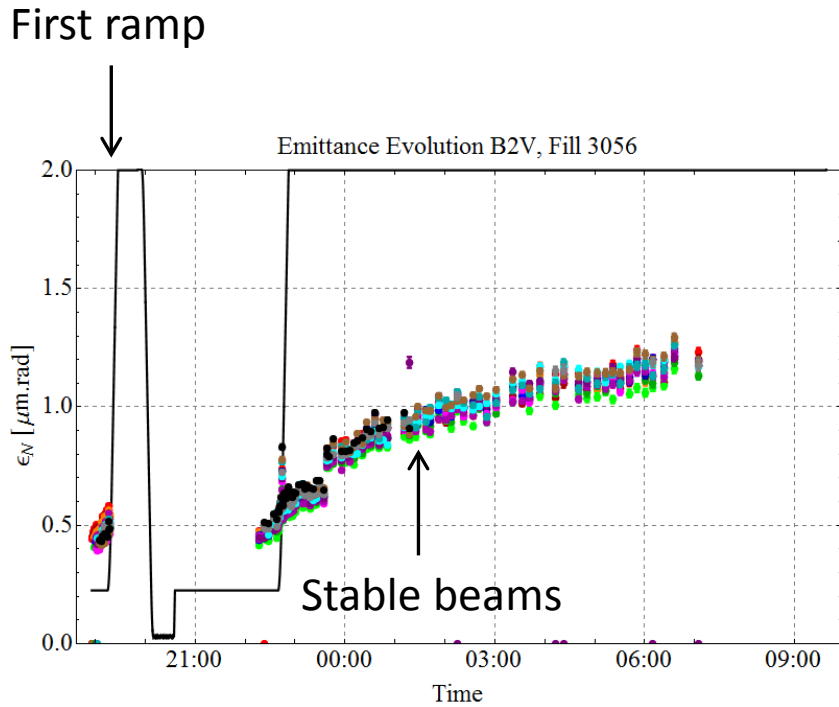
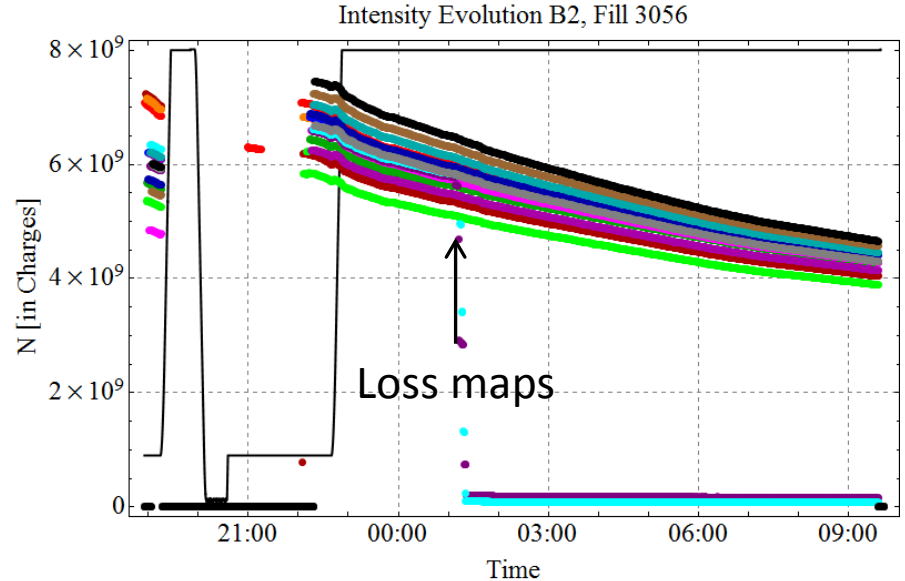
B2 - measurements between 18:00 and 19:00

- IBS simulation is in very good agreement with WS-data
- Except for vertical emittance, maybe due to coupling?



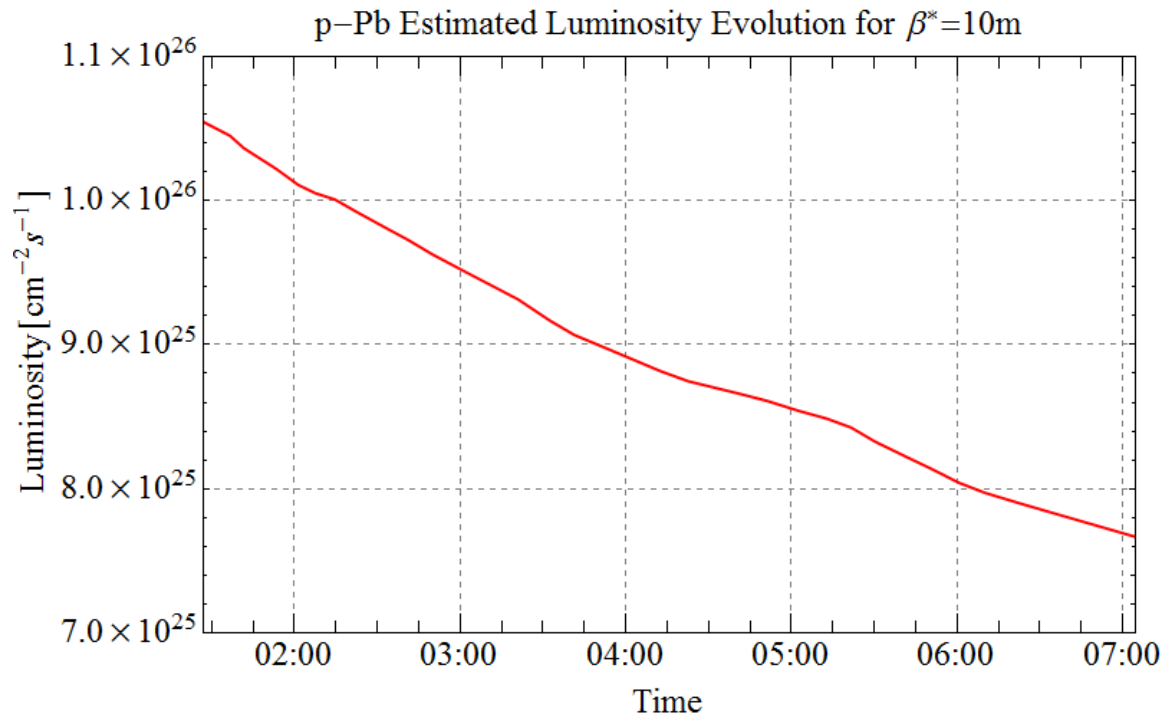
B2 parameters during the physics fill

- WS were done all along the fill.
- The black line is the energy variation (in arbitrary units)



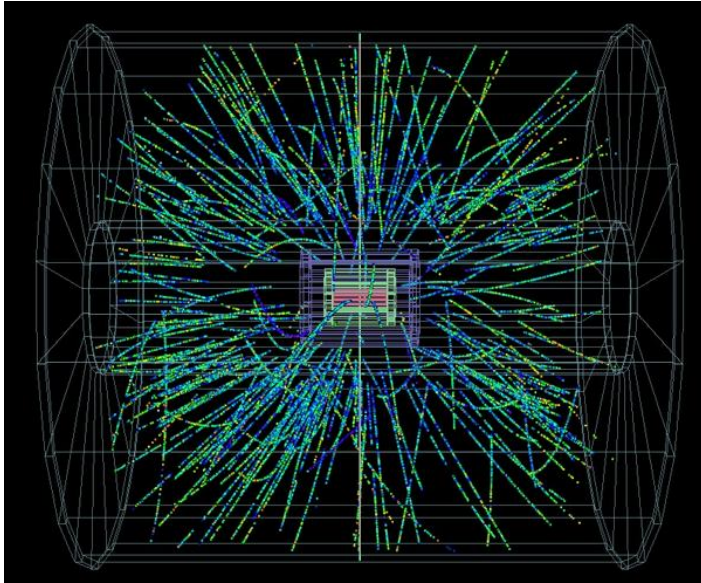
Luminosity in ALICE

- Estimated from data of bunch 1 (B2)
- Proton emittance was about $1.5 \mu\text{m}$, intensity about 1.1×10^{10} charges.

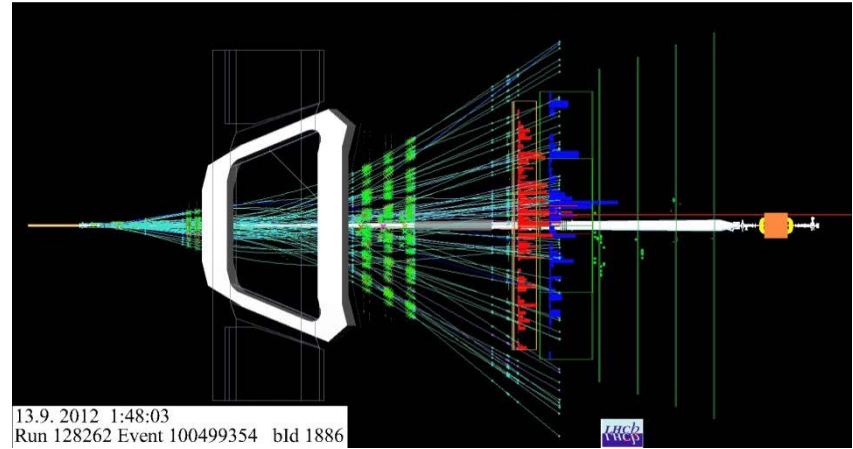


First events

In ALICE



in LHCb



In the CCC

