



LHC Injectors Upgrade

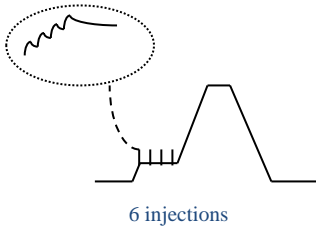
Pb-Pb Scenario for post-LS2

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Proposed Pb-Pb 50/75 ns scheme for after LS2



LEIR
($1.6 \cdot 10^9$ Pb ions / 3.6 s)

PS batch expansion

PS bunch splitting
followed by batch expansion
(100ns bunch spacing)

PS batch compression
(50ns bunch spacing)

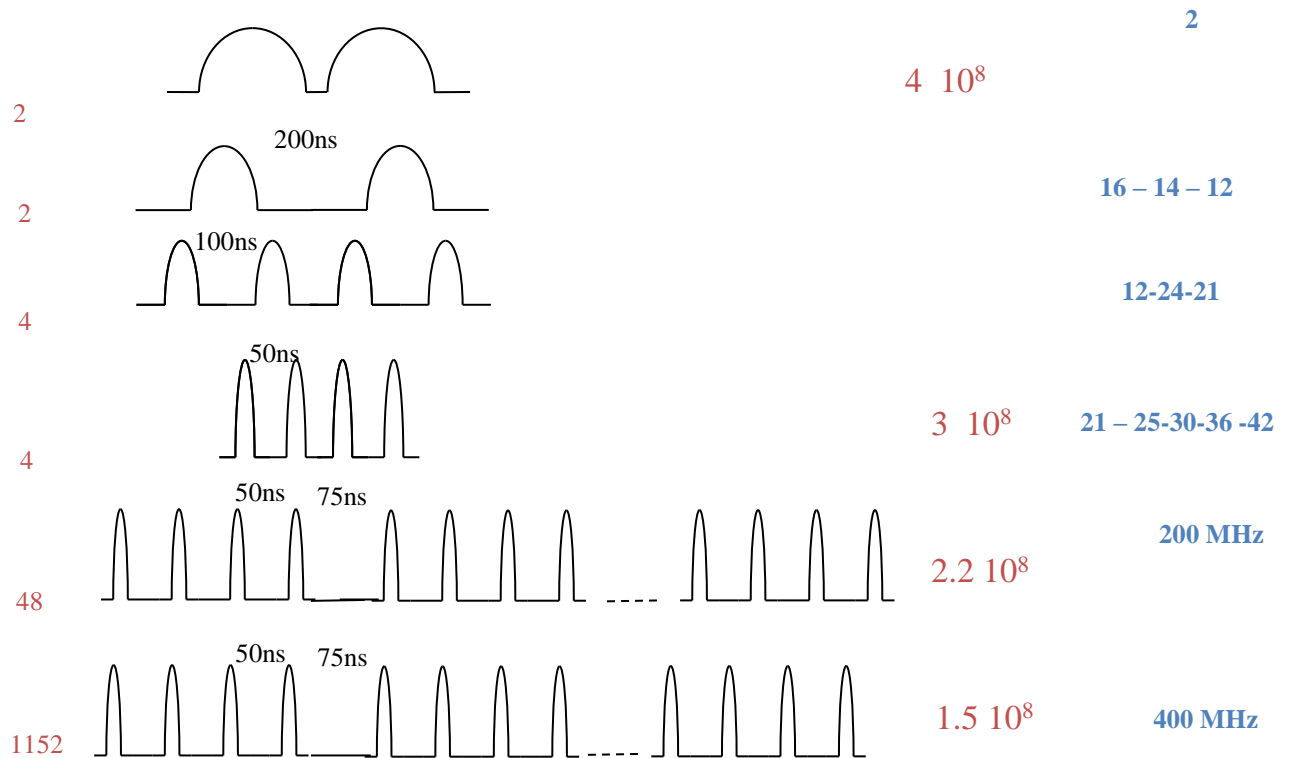
SPS at injection
after 12 transfers from PS,
with 75ns batch spacing

LHC at injection,
after 24 transfers from SPS

Nb of bunches

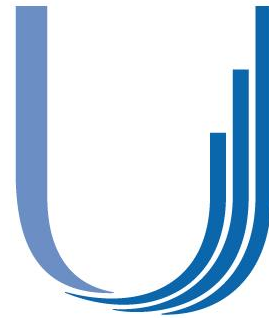
Pb ions /
(future) LHC bunch

Harmonic
number /
Frequency



$$\beta^* = 0.5 \text{ m} \rightarrow L = 9 \cdot 10^{27} \text{ cm}^2 \text{ s}^{-1}$$





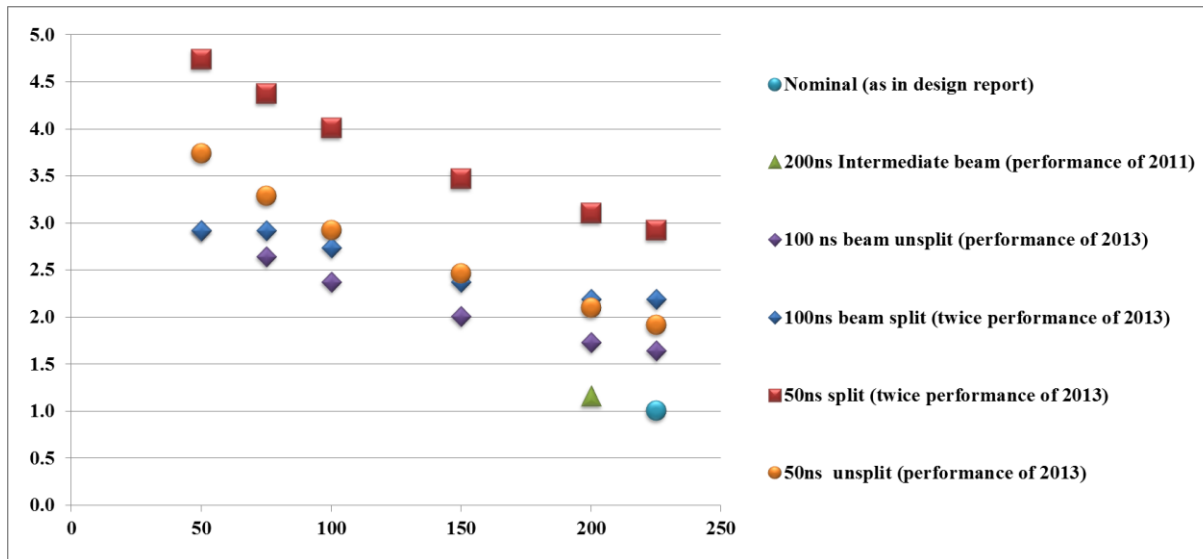
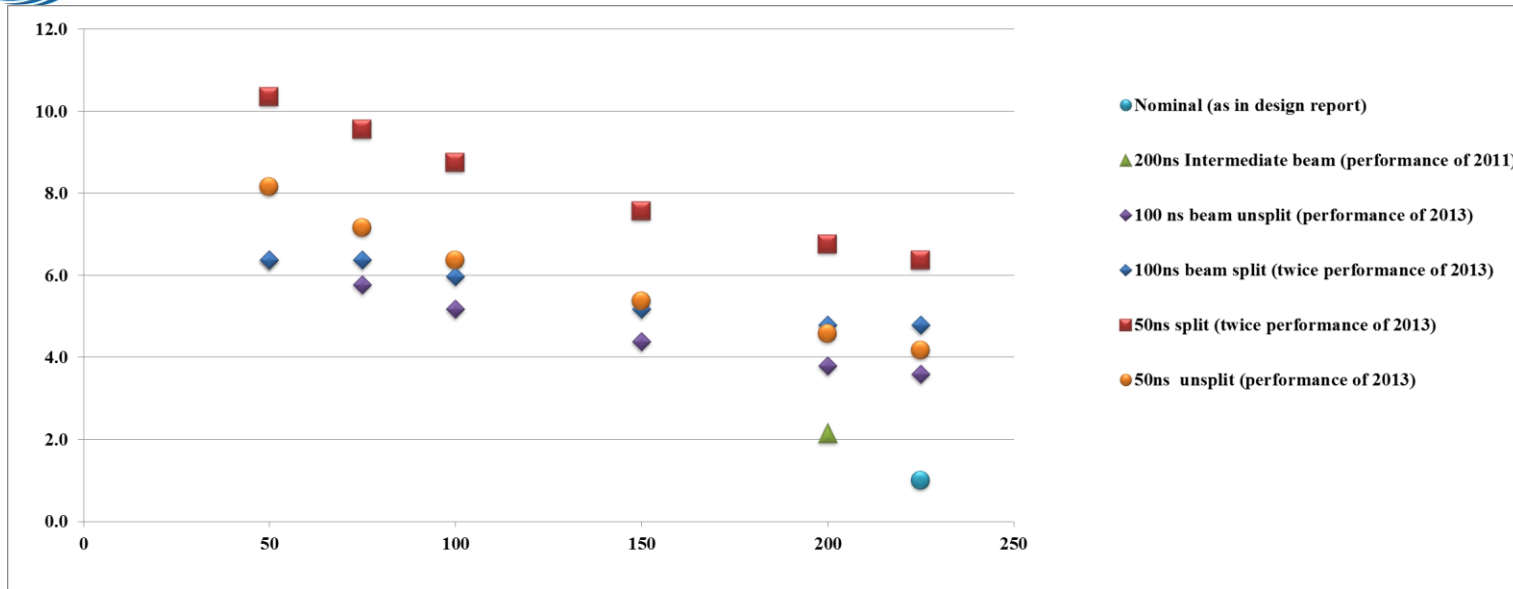
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THANK YOU FOR YOUR ATTENTION!



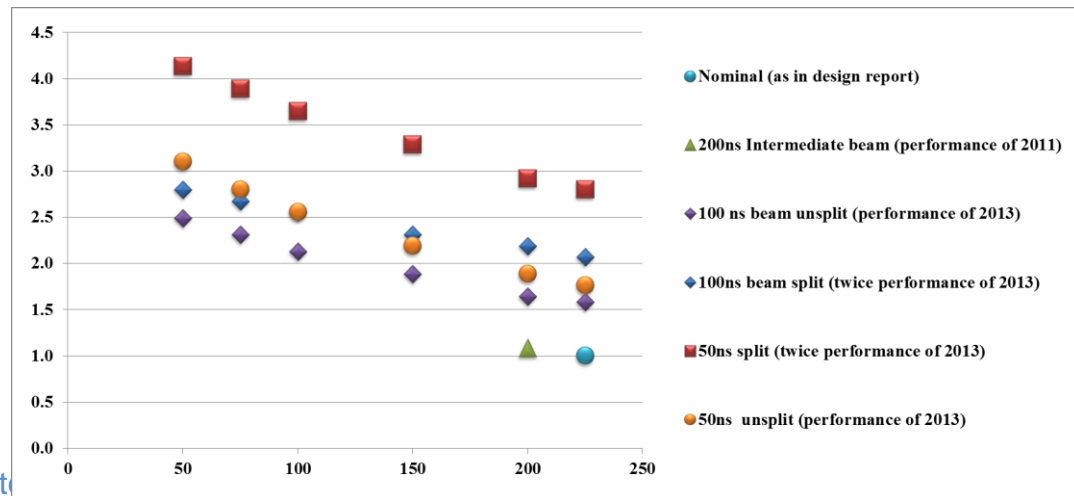
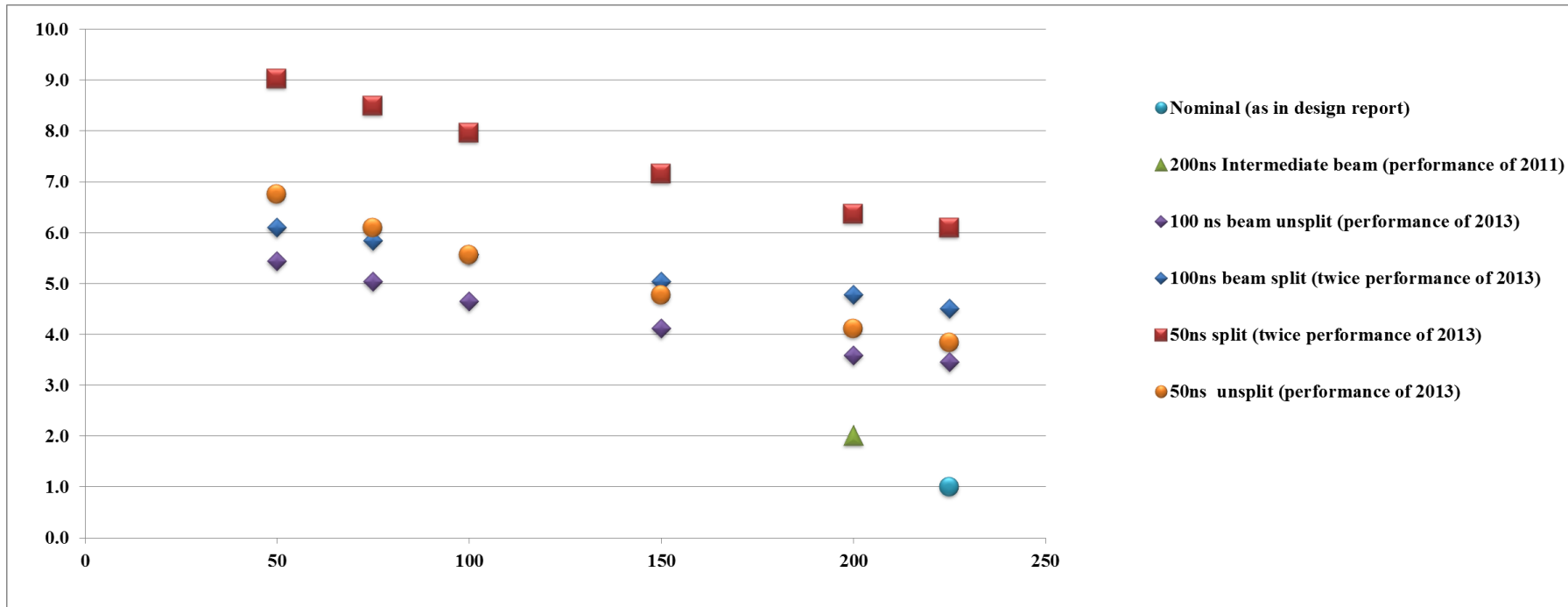


12 injections in SPS: peak lumi and intensity scaling



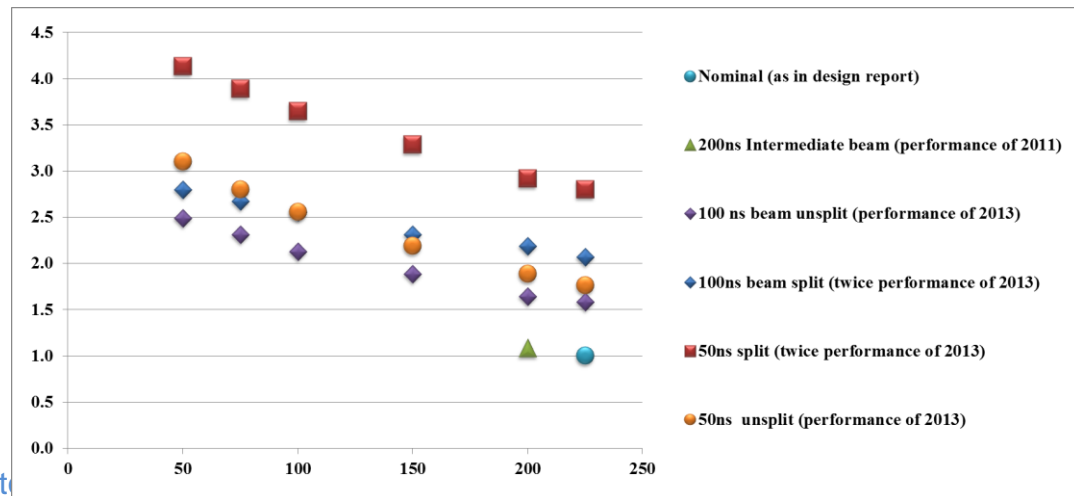
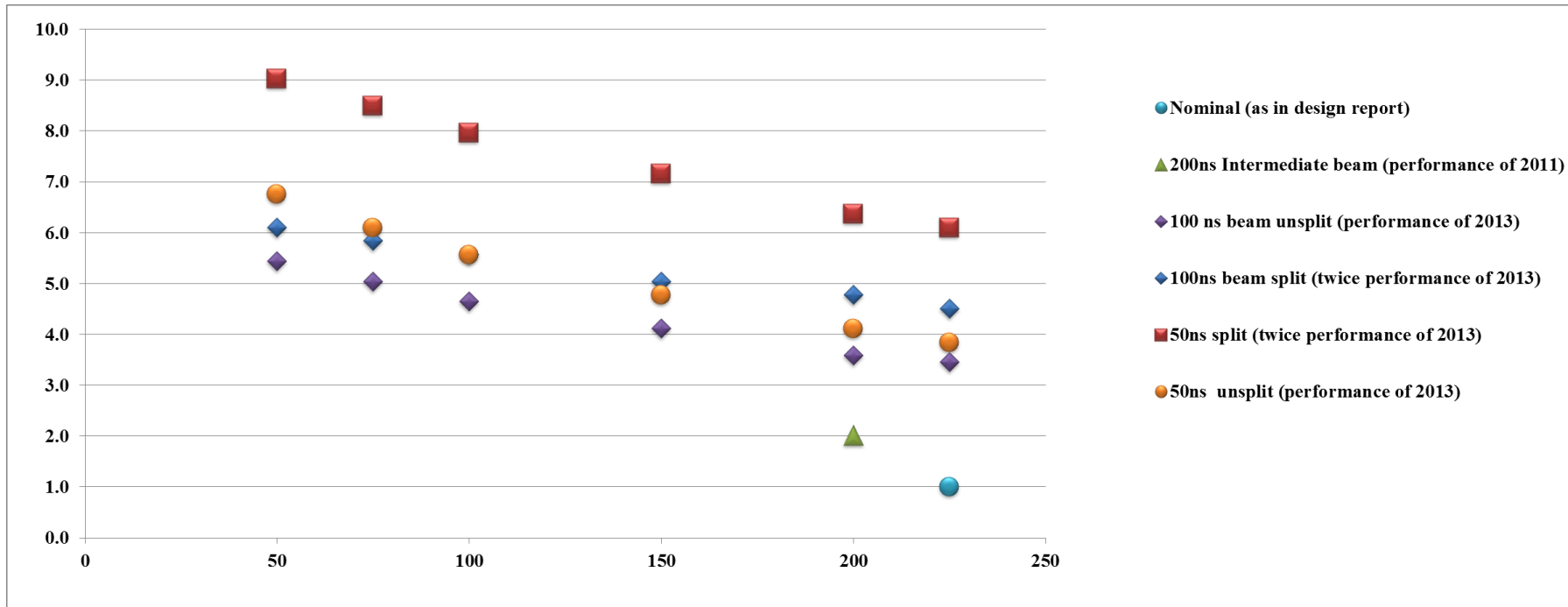


8 injections in SPS: peak lumi and intensity scaling





8 injections in SPS: peak lumi and intensity scaling





Optimum number of injections into the SPS (50/75ns)

