



Anticipated Performance



Basic assumptions

- Beam parameters are given at injection in LHC: beam loss and blow-up inside the LHC are not accounted for.

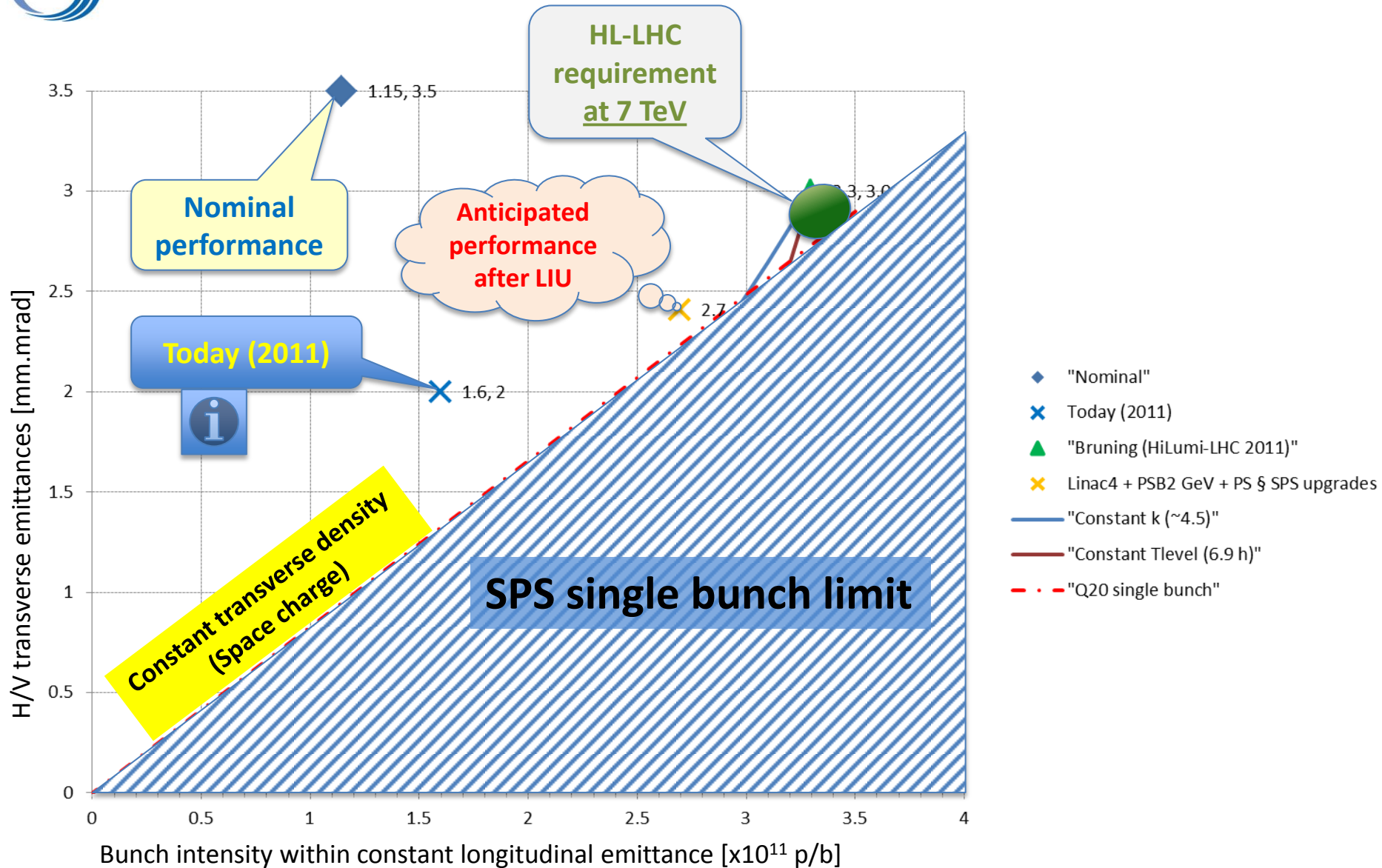
- All necessary improvements are implemented in the injectors (Linac4, PSB to PS transfer at 2 GeV, coupled bunch instabilities suppressed, e-cloud suppressed, hardware upgraded...)

- Estimated beam degradation in the accelerator chain (based on observations in 2010):
 - ✓ PS: 5 % beam loss, 5 % transverse blow-up
 - ✓ SPS: 10 % beam loss, 5 % transverse blow-up.

- RF gymnastics being kept, imperfections are unchanged:
 - ✓ +-10 % fluctuation of all bunch parameters within a given PS bunch train.
 - ✓ Traces of ghost/satellite bunches.



Beam parameters at LHC injection [50 ns]





Beam parameters at LHC injection [25 ns]

