

Impedance WG report

Proposed recommendations for BGI

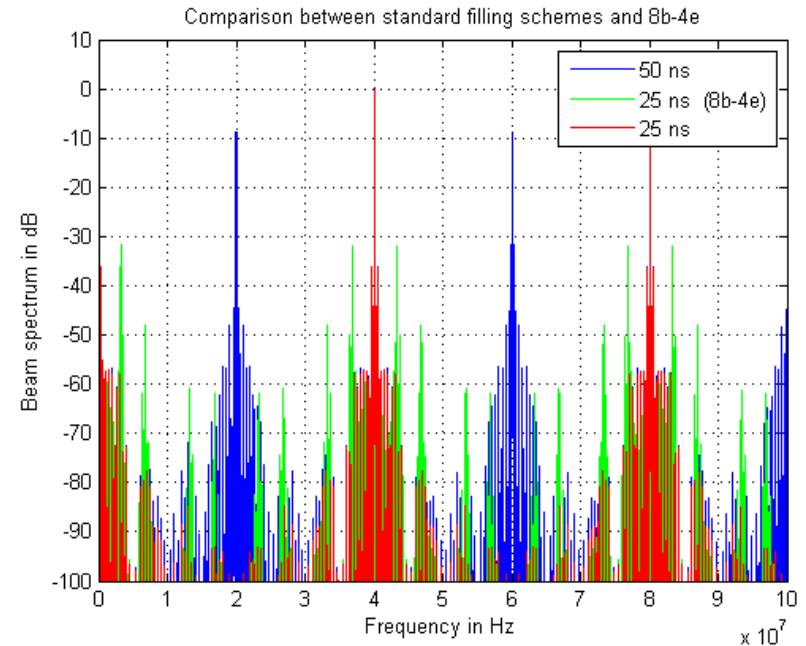
- Stability not believed to be an issue (even with bare metal plates) → need final simulations in transverse plane from Aaron
- Heating is large, with bare metal electrodes and coating → potential damage and outgassing
- Can we let a device which we know will heat to at least 250 C back in the LHC? → TE-VSC should check the outgassing at these high temperatures, statement by Giuseppe Bregliozi that it would not comply with the TE-VSC specifications

Proposed recommendation to BE-BI, presented to R. Jones and R. Veness (and agreed):

- Do not reinstall as is.
- Keep it away from the proton beam (e.g. installation only for ion run before LS2?).
- Work on a robust design to be installed after LS2. Several options, some of which could be combined:
 - Install only when there are ions in the machine
 - Screening of existing electrodes from proton beam with moveable or permanent shielding
 - Reduction of resonant modes by design change
 - Addition of active cooling
 - Damping of modes (coupler, all mode damper) for extraction of electromagnetic energy away to a well designed external system

Intensity ramp-up for 8b4e

- 8b4e generates a 12 bunch periodicity
- New harmonics of $1/(12 \cdot 25 \text{e-}9) = 3.3 \text{ MHz}$ that are much less excited otherwise.



- 8b4e already stored with many bunches (last time was 2016 for ecloud MD, ~850 bunches), i.e. before EYETS
- Standard ramp-up would be 600 – 1200 bunches. In view of this information, I have suggested 1100 bunches

Upcoming

- Important instability studies for the PSB (Tatiana)
- PS longitudinal stability now followed up by PS-LIU-BD
- Many ECRs for YETS and now also LS2
- Measurements by Olav and Antonio on the BGI
- Master thesis of Francesco, Giacomo and Antonio
- HE-LHC model