

# Status of BB contributions to the Feasibility Study Report

- **II.1.1 Beam-beam effects, parameter choices, and luminosity**
  - Mostly done: Beamstrahlung, 3D flip-flop, X-Z
  - To do ? Asymmetry tolerance (intensity, emittance, beta\*)
- **II.1.2 Optics design and beam dynamics**
  - update parameter table / tune scan plots with beta\* = 110mm RF=88MV ?  $Q_x/Q_y = 218.20 / 222.22$  (222.23?)
- **II.1.4.5 Interplay between beam-beam and beam coupling impedance effects**
  - Mostly done: X-Z + (vertical) mode coupling instability of colliding beams, mitigation with chromaticity
- **II.1.8 Injection and extraction**
  - Done: SS BB simulation of top up injection
- **II.2 Operation concept – Bootstrap injection**
  - To do: X-Z with varying intensity
- **II.2 Operation concept – top-up injection**
  - To do? Impact of 3D flip-flop tolerance on intensity control
- **II.1.2 Optics design and beam dynamics**
  - To do? Impact of 3D flip-flop tolerance on optics tuning
- To do? IP tuning / feedback
- Collimation ?