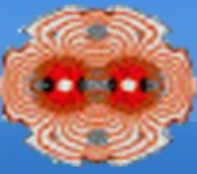


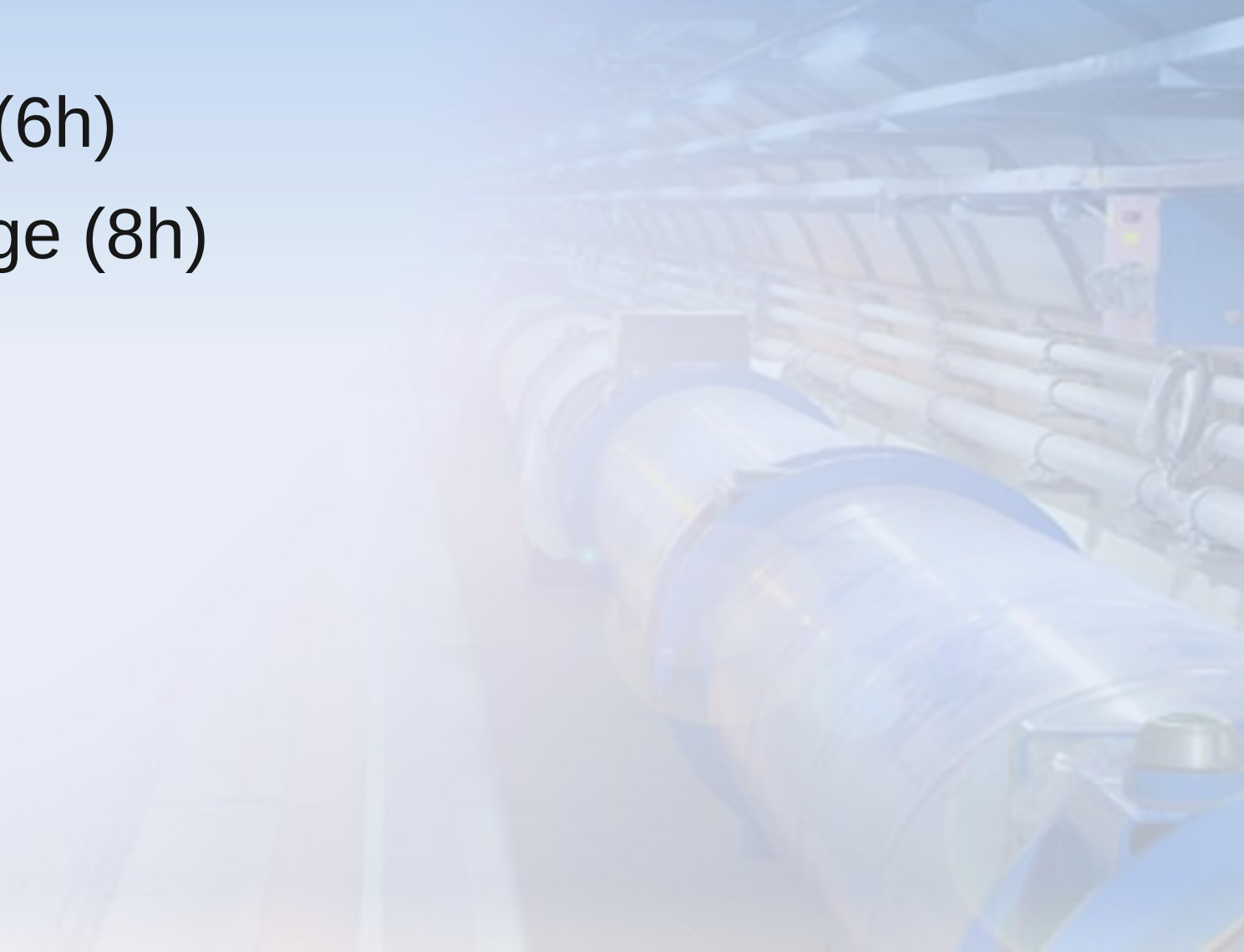


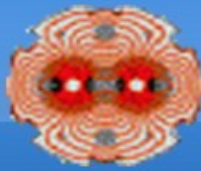
Beam-beam MD3



X. Buffat on behalf of the Beam-beam WG

- Head on (6h)
- Long range (8h)





■ Setup :

- 2 bunches per beam
- $I > 2 \cdot 10^{11}$ p/b
→ **RF and ADT setup**
- $\epsilon \sim 2 \mu\text{m}$
- Ramp and squeeze
- Lumi scans
→ **Lumi measurement**
- Tune scans

■ Study :

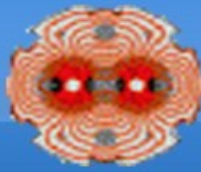
- Explore intensities and emittances that we can collide at 3.5 TeV
- Effect of collision schedule
- Working point optimisation
- Coherent motion

■ Observables :

- BCT, BLM, BSRT, WS, ADT pickups (Synchronized), BQS



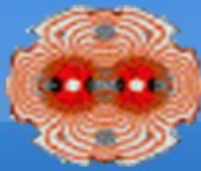
Request from experiments



- Sufficiently high brightness beams will be used to test high pile up in the experiments.
 - How bright ?
 - For how long ?



Long range



■ Setup :

- 2 · 36 bunches / beam
- Standard intensity and emittance
- Ramp and squeeze
- Lumi scans
→ **Lumi measurement**
- Reduce Xing
→ **Change collimator settings**
→ MP C
- Tune scans

■ Study :

- Limitation from long range when colliding in all IPs
- Bunch by bunch differences (orbit / tune / intensity)
- Working point optimisation

■ Observables :

- BCT, BLM, BSRT, WS, ADT pickups (Synchronized), BQS