



# Brain storming on 2018 MD proposals



- Validate HL-LHC configuration (and anticipate it for run 3 ?) :
  - Long-range + negative octupole polarity ( $\rightarrow$  octupole threshold measurement with reduced crossing angle, BTFs, AC dipole with long-range interactions)
  - RATS (operational validation of the procedure)
  - ...
- Improvement of the LHC stability model :
  - Puzzles leftover (B1H, train instability, interplay with lattice non-linearities, ...)
  - Stability with low  $Q'$ , for different ADT gains ( $\rightarrow$  destabilising effect of the damper)
  - Optimisation of the ADT phase (resistive / reactive) ?
  - ...
- Beam quality preservation :
  - Parameter optimisation at injection ( $Q$ ,  $Q'$ ,  $Q''$ ?, octupole current, ADT gain)  $\rightarrow$  commissioning time ?
  - Identification of noise sources (Collision of high brightness bunches before and after the squeeze with and w/o telescoped optics)
  - Stability with reduced bandwidth / increased ADT gain in collision
  - ...