

# CMS in 2008

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- In 2008, CMS will focus on Detector/Physics Calibration
  - ▷ LHC will hopefully deliver colliding beam luminosity
    - tracking and muon detectors alignment
    - low lumi enables low trigger thresholds (dimuon  $p_{\perp} > 3 \text{ GeV}$ )
  - ▷ calibration/understanding of  $\cancel{E}_T$
- Physics topics at startup: detector calibration/understanding
  - ▷  $B$ -physics
    - 'calibration'
    - x-section and decays with (di)leptons
  - ▷ electroweak physics
    - mass uncertainty  $\Delta m_t < 30 \text{ MeV}$  (PTDR, with  $10 \text{ fb}^{-1}$ )
  - ▷ top physics
    - 'calibration'
    - mass uncertainty  $\Delta m_t \approx 1 \text{ GeV}$  (PTDR, with  $10 \text{ fb}^{-1}$ )
  - ▷ Searches
    - contingent upon detector understanding

# Wishes and Questions

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- Integrated and flexible tools for flavor/collider combination
  - ▷ cross-checks are essential (more than one tool)
  - ▷ preferably exhaustive than multiple single-topics tools
  - provide code to the implementation
  - provide choice to the user
- Errors and uncertainties
  - ▷ before reaching 'precision level'  
already seen (global) fit probabilities
- Questions
  - ▷  $B \rightarrow \tau\nu$ ,  $b \rightarrow s\gamma$ ,  $B_{s(d)}^0 \rightarrow \ell^+\ell^-$ ,  $(g-2)_\mu$
  - what else?  
already heard remarks on precision  $b \rightarrow s\ell\ell$
  - ▷ 'Forbidden' decays:  $B_s^0 \rightarrow \mu^\pm\tau^\mp$ ?
  - especially focusing on final states with leptons