

# CMS plans and requests

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# CMS plans

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- Next major release: 3\_1
  - Development ends on March 28<sup>th</sup>
  - Should be “the release” for a mass MC production meant to be compared with the real collision data later this year
  
- Based on Geant4 9.2
  - + patches?
    - What will be available by the end of the month?
      - CMS has provided a patch to avoid string creation in G4IonTable, could you please confirm it will be available?
  - It depends on the result of our validations

# CMS needs

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- It is likely that the round of mass production after the 3\_1 one should exploit data-driven improvements
  - Unless major trivial bugs are discovered
  - From analysis of collisions data, beyond TB
  - Unlikely to take place before spring/summer 2010 at earliest
- Therefore we need to rely on G4.9.2pXX until then (we need a homogeneous data set)
  - Bug fixing not seriously impacting physics results
  - Performance improvements
- Of course we are willing to further improve G4 for the longer term future

## CMS requirements (not already in G4 plan)

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- Per G4Region physics lists: is it a possible development for the future?
  - Use case: a mixture of homogeneous (e.g. ECAL) and sampling (e.g. HCAL) calorimeters
  - The optimal choice for e.m. physics vs performance balance is different (QGSP\_BERT\_EM vs QGSP\_BERT)
  - At present only one choice can be done for everything
  
- Which developments are foreseen for tracking in magnetic field?
  - Use case: homogeneity of B-field and accuracy needed for tracking differ widely in different regions
  - local field managers and step integrators defined per regions?