

# Phase 2 Tracker Upgrade

- the future tracker will provide a trigger to be used in the Level-1 trigger of CMS
  - each detector module will consist of a sandwich of two sensors
  - signals from both sensors will be correlated on the module and allow for a  $p_T$  measurement
- mechanical prototype for one possible module design will be built this year
  - detailed list of work packages exists
  - the DESY CMS group is participating in 4 out of 9 work packages
    - *Thermal Tests, Deformation Tests, Choice of Materials, Finite Element Analysis*
- construction and commissioning of laboratory equipment is well under way
  - will be used to
    - study specific aspects of the mechanical prototype design (e.g. thermal interfaces),
    - characterize the mechanical prototype,
    - give feedback to the finite element analyses
- dedicated workshop on materials is planned for the end of this year
  - funded by the PIER Ideenfonds in collaboration with the DESY ATLAS group and UHH
  - discussion between science and industry on possible material solutions for future detection systems
  - strong interest in the workshop from the community

