

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

