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Concept of a Tilted Barrel for the CMS Tracker Phase 2 Upgrade

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A novel detector design with tilted silicon strip/pixel detector modules is being considered for the Inner Barrel section of the CMS Tracker Phase 2 Upgrade. By tilting the modules towards the interaction point the angular coverage of the modules is increased, leading to less modules needed. The layout and a support structure concept for such tilted geometry are presented.

Authors: ONNELA, Antti (CERN); CICHY, Kamil Norbert (Cracow University of Technology (PL))

Co-authors: HONMA, Alan (CERN); CONDE GARCIA, Antonio (CERN); ABBANEO, Duccio (CERN); BIANCHI, Giovanni (CERN); ROSE, Pierre (Ministere des affaires etrangeres et europeennes (FR)); MARTINA, Stefano (Universita e INFN (IT)); MERSI, Stefano (CERN)

Presenters: ONNELA, Antti (CERN); CICHY, Kamil Norbert (Cracow University of Technology (PL))