

Abstract Submitted
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Automated procedures for the assembly of the CMS Phase 1 upgrade pixel modules¹ ALEX WADE, Purdue University, CMS COLLABORATION — The Phase 1 upgrade of the pixel tracker for the CMS experiment requires the assembly of approximately 1000 modules consisting of pixel sensors bump bonded to readout chips. The precision assembly of modules in this volume is made possible using several robotic processes for dispensing epoxy, positioning of sensor components, automatic wire-bonding and robotic deposition of elastomer for wire bond encapsulation. We will describe these processes in detail, along with the measurements that quantify the quality of assembled modules, and describe the subsequent steps in which the sensor modules are used in the construction of the Phase 1 pixel tracker.

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