

The CMS Phase 2 Outer Tracker Analyzer of Test Outputs - POTATO!

The Phase-2 upgrade of the Large Hadron Collider (LHC), also known as the High-Luminosity LHC (HL-LHC) is designed to achieve peak instantaneous luminosities which is about an order of magnitude higher than the nominal design value of $10^{34} \text{ cm}^{-2} \text{ s}^{-1}$ delivering a total of at least 3000 fb^{-1} data over 10 years of operation at $\sqrt{s} = 14 \text{ TeV}$. One crucial aspect of the CMS Phase-2 detector upgrade is the replacement of the existing tracking detector in order to deal with the extreme HL-LHC conditions, retaining and further expanding the physics performances achieved in the previous years. The outer part of the upgraded tracker (OT), will be equipped with over 13,000 macro Pixel-Strip (PS) and Strip-Strip (2S) modules! Module production is distributed across centers worldwide and necessitates coordinated efforts and standardized procedures. Along with production and assembly of the modules, Fermilab OT group is also working on a tool, Phase 2 Outer Tracker Analyzer of Test Outputs (POTATO) that will analyze, grade, upload and manage the large quantity of files to be stored in the centralized Database (DB). In this contribution a brief overview of the module testing and the power and dire need of POTATO to handle this large number of test outputs will be presented.

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