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Using CMS Open Data for education, outreach and software benchmarking

Tuesday 5 November 2019 14:15 (15 minutes)

The CMS collaboration at the CERN LHC has made more than one petabyte of open data available to the public, including large parts of the data which formed the basis for the discovery of the Higgs boson in 2012. Apart from their scientific value, these data can be used not only for education and outreach, but also for open benchmarks of analysis software. However, in their original format, the data cannot be accessed easily without experiment-specific knowledge and skills. Work is presented that allows to set up open analyses that are performed close to the published ones, but which meet minimum requirements for experiment-specific knowledge and software. The suitability of this approach for education and outreach is demonstrated with analyses that have been made fully accessible to the public via the CERN open data portal. In the second part of the talk, the value of these data as basis for benchmarks of analysis software under realistic conditions of a high-energy physics experiment is discussed.

Consider for promotion

Yes

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