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CERN Open Data Portal for Science and Education[1]

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Big Science is moving slowly but steadily toward a future in which open datasets are the norm, rather than the exception. Astronomers have regular releases of their data for the community to analyze, usually after some embargo period where those who took the data get first crack at it. However, particle physics experiments have traditionally been slow to adopt this approach, in large part because of the complexity of the datasets and the required knowledge needed to properly perform an analysis. This started to change in 2014 when CERN launched the Open Data Portal website. It hosts experimental data from the Large Hadron Collider (LHC) experiments and the OPERA neutrino experiment. Educational examples and simplified datasets are also provided but the bulk of the infrastructure goes towards allowing access to the same data and tools used by the analysts on the experiments themselves. In this talk, we review the current status of the Portal, highlighting publications and results from members of the theory community who used the CMS open data for their analysis. We also discuss how these data are being used for educational efforts and an exciting upcoming workshop designed to provide theorists with a hands-on tutorial interacting with the CMS open data.

[2]I am presenting this talk for the CMS Collaboration.