

Abstract Submitted
for the APR16 Meeting of
The American Physical Society

The Particle Physics Playground website: tutorials and activities using real experimental data¹ MATTHEW BELLIS, Siena College, CMS COLLABORATION — The CERN Open Data Portal provides access to data from the LHC experiments to anyone with the time and inclination to learn the analysis procedures. The CMS experiment has made a significant amount of data available in basically the same format the collaboration itself uses, along with software tools and a virtual environment in which to run those tools. These same data have also been mined for educational exercises that range from very simple .csv files that can be analyzed in a spreadsheet to more sophisticated formats that use ROOT, a dominant software package in experimental particle physics but not used as much in the general computing community. This talk will present the Particle Physics Playground website (<http://particle-physics-playground.github.io/>), a project that uses data from the CMS experiment, as well as the older CLEO experiment, in tutorials and exercises aimed at high school and undergraduate students and other science enthusiasts. The data are stored as text files and the users are provided with starter Python/Jupyter notebook programs and accessor functions which can be modified to perform fairly high-level analyses. The status of the project, success stories, and future plans for the website will be presented.

¹This work was supported in part by NSF grant PHY-1307562.

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Date submitted: 22 Dec 2015

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