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Mathematica Package for Accessing and Manipulating PDFs for New Physics Searches ERIC GODAT, Southern Methodist Univ — With the LHC Run 2 data fast approaching, the search for new particles is in full swing and with that comes the need to improve our ability to distinguish these potential new signals from existing uncertainties. Parton Distribution Functions (PDFs) are a tool used to improve these uncertainties by bridging the gap between theoretical predictions and experimental data. Here we provide a set of Mathematica packages that include an assortment of tools for utilizing PDFs in these searches for new physics. This software is capable of performing PDF calculations in a Mathematica environment and incorporates sets from several collaborations including the recent LHAPDF6 formatting. A few examples of the package applications will also be demonstrated.

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