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MathQCDSR: a Mathematica Package for QCD Sum Rules Calculations[1] LAI WANG, George Washington University, FRANK X. LEE, George Washington Univerity — We present a software package written in Mathematica for standard QCD sum rules calculations. Two examples are given to demonstrate how to use the package. One is for the mass spectrum of octet baryons from two-point correlation functions; the other for the magnetic moments of octet baryons in the external-field method. The software package FeynCalc is used to handle the gamma-matrix computations. The derived sum rules can be saved in various forms (native Mathematica, JAVA, Fortran, or Latex). Several notebooks are provided to carry out a Monte-Carlo-based numerical analysis of the sum rules, complete with in-line graphical display of sum rule matching, error distributions, scatter plots for correlations, etc.

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