

## Cutting with AEACuS and Plotting with RHADAManTHUS

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AEACuS is a software package for the computation of collider event statistics and the application of event selection cuts. It interfaces with the LHCO format output of the popular detector simulation packages Delphes. A compact and powerful card file syntax unambiguously separates reusable user instructions from the code library. Support for most event discriminants employed by ATLAS and CMS is built in, and users may easily define custom variables as well as multivariate channel sorts.

RHADAManTHUS is a software package for the plotting and optimization of collider event statistics. Any function of variables computed by AEACuS may be used as a one- or two-dimensional histogram key or for secondary event selection. Histogram channels may be arbitrarily merged or transformed bin-by-bin, for example in visualization of signal-to-background significance versus cut threshold. Cross-section weighting and recombination of distinct or multiply sampled data sets is handled transparently. A simple card file control syntax facilitates automation and reuse.

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