Statistical treatment of the AGC results with RooFit.

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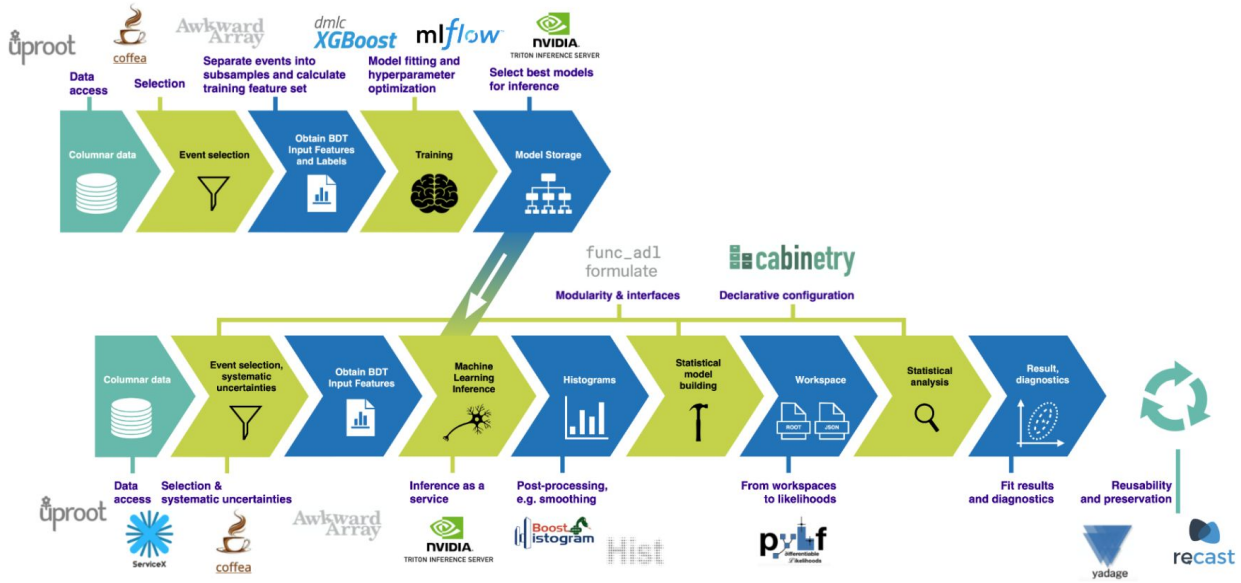
IRIS-HEP Analysis Grand Challenge



The Analysis Grand Challenge includes both integration of software components for analyzing the data as well as the deployment of the analysis software at analysis facilities.

Maximum likelihood method for AGC

Already implemented:

1. Configure your template fitting using cabinetry
2. Fit using pyhf

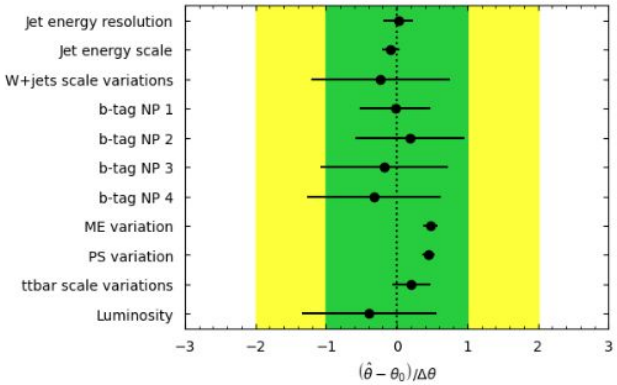
To be added:

1. Configure template using ROOT HistFactory
2. Fit using ROOT RooFit

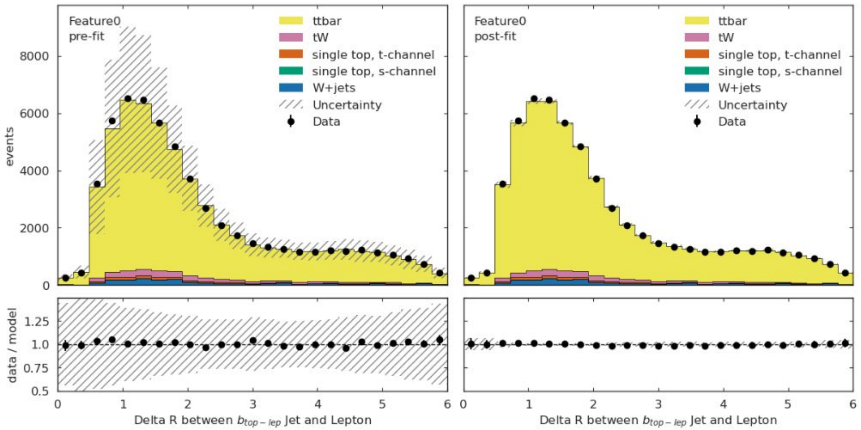
Extra things ?

Cabinetry have extra toolkit, which simplify results visualisation a lot

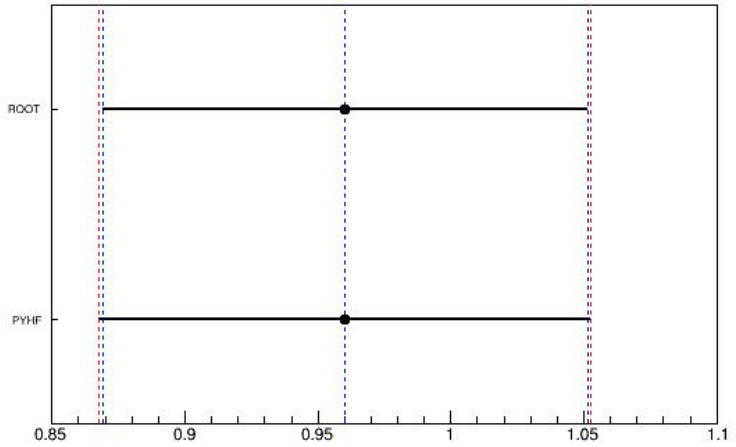
Fitting result in an easy-to-understand way



Pre/post fit histograms with one line of code



Some preliminary results

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pyhf:                0.96019 +/-  0.0926
root histfactory:    0.96026 +/-  0.0913
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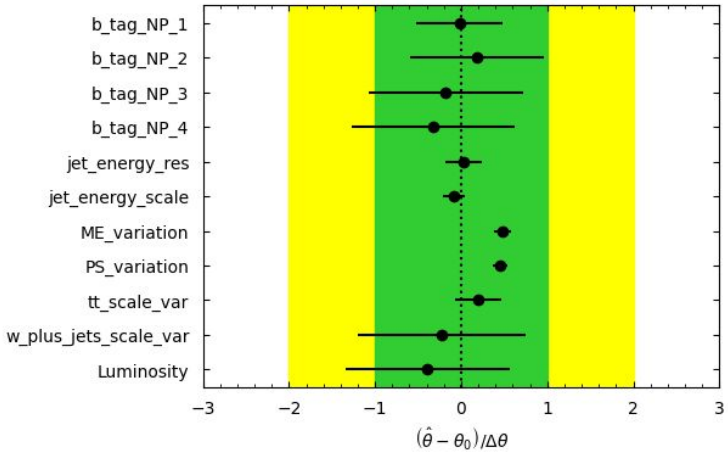
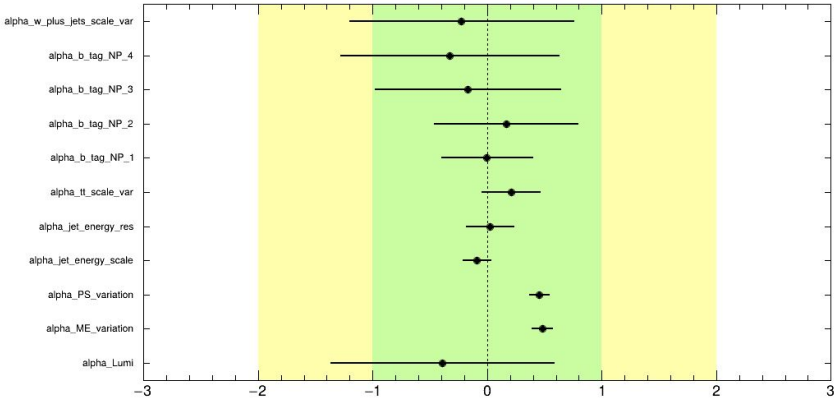
The first results of the fits, which match the results of the pyhf, have been obtained.





Main goal:

- Keep analysis simple and clear

- Provide more ways to perform analysis in fast and efficient way