

## HEP Data Author Instructions

This is a set of instructions for the authors of the pdf in order to have the correct format when submitting the HEPData.

The method uses a python library that takes a set of plots (histograms) from a root file and reads the associated histograms for each plot. For each histogram it uses the hep-data library in order to change the format of the histogram data and its uncertainties from a text to a yaml file (format needed from hep-data to be correctly uploaded).

A simpler explanation could be:

Create a root file with all the plots from your analysis that are included in the pdf.  
For example:

root file: **TOP-18-013\_AllHadronic.root**

This file contains N subdirectories:

Each subdirectory is associated with a figure from the paper.

You need to provide the figures that are associated with the results of the analysis  
(**Hadronic: figures 14-27, l+jets: figures 30-33**)

For example one could have:

**TOP-18-013\_AllHadronic.root**

→ /Figure1\_pdf/

....

....

....

→ /FigureN\_pdf/

Each **figure i** (i = 1, ...N) contains a set of **histograms** that complete the figure.

(In this case we will use only the data histograms)

An example of this is:

**TOP-18-013\_AllHadronic.root/**

→ /Figure1\_pdf/

→ /Histogram1\_Figure1\_pdf (this will be data that includes the statistical uncertainties)

→ Histogram with total systematic uncertainties

We want to create something like  $\text{Data} \pm \text{stat} \pm \text{systematic}$

....

....

→ /FigureN\_pdf/

→ /Histogram1\_FigureN\_pdf (this will be data that includes the statistical uncertainties)

→ /Histogram with total systematic uncertainties

### Important Notes:

For each figure the authors must provide a set of comments:

1. Description
2. Location (put the number of the figure)
3. Keywords

If possible send this in a csv file with the following format:

figureName;description;location;keywords;file\_location(you can leave this empty)

Also, for each data histogram, a similar description is needed:

1. Histogram Name
2. xAxis
3. yAxis
4. Histogram title
5. Is Independent (1 for all)
6. isBinned (0)
7. Units (for example GeV)

A csv file of the following format would be helpful

histName;xAxis;yAxis;histoTitle;isIndependent;isBinned;Units;

{Finally a small mapping of the files would be great (although this can be done via the python library)

For each figure please provide the associated histograms in a csv format of the type:

Figure1;histoData1; } **This is currently not needed**