Start of the Discussion on the Impact of Higher Order Corrections in the view of MVA techniques
Just some thoughts for the start

- All LHC experiments move more and more to MVA techniques for SM processes
  - Tri-boson final states
  - (rare) VBS and VBF processes

- Problem: MVA use black-box-combinations/relations of several observable to distinguish signal from background
  - we only have (N)LO differential predictions
  - Estimate impact of missing order on the training by varying scales
  - Question: How much can we trust those approaches when it comes to MVAs and their dependence on correlations between observables.
    - We might have a significant (unknown) theory uncertainty on our measurements