Minutes of CEPC HZZ Meeting

Online, 2020-06-05

Meeting indico link: https://indico.ihep.ac.cn/event/11459

Draft Update

- BDT related parts (Ryuta)
    - Add/modify descriptions, add BDT score distributions
    - Arrange format of table
- updates of descriptions based on the comments from Yaquan (Ryuta)
- Preparation of the reply (Ryuta)

Actions

1. Polish (update) the reply (Ryuta)
    1.1. More clear statement, especially on the first question from Manqi
    1.2. Since we are going to consider the HZZ overlap issue (+ ZH background), need to modify the reply mentioning this part, accordingly.
    1.3 Circulate it within us

2. Paper Draft tag versioning (Xin)

3. Draft update; only showing the best two histograms, for fig.2/fig.3 (Ryuta)

4. the analysis of the HZZ overlap/ZH bg. issues
    4.1. Make a list(action) steps for the first item(HZZ overlap) (Ryuta)

➔ Following is what I can assume:
   -- Define exclusive regions in the 2D map (recoil mass vs recoil mass)
   -- Removing (turn off) the "not mmHZZ/vvHZZ/qqHZZ" cuts
   -- prepare the 2D plots before(and after, for a confirmation) the region masking cuts are applied, for signal/background
   -- counting the number of events within each exclusive region as well as making plots before the fitting process
   -- fitting the signals
   -- by changing the definition of the exclusive regions, check how much the fitting results could fluctuate

5. Confirmation of the steps, have discussions if needed, and then proceed it (Yanxi, Min, Kaili)