

# Weekly report

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1) The note is close to complete, but a more complete note is required in order to unblind the analysis.

- not sure which part he means

2)Figure 2, could you make it clear what jets are used, from parton or truth-jets ?

- @Qi

3) For event selection, should you require only one lepton ? which could reduce a few % of background from Figure 6(b).

- I suppose Qi already moves to one lepton and Qi needs to update the number and plots?

4) Table 6 is based on 2015 data, can you update with full 2015+2016 sample?

- just need to normalize the SM Higgs bkg with full lumi. @Qi

5) Table 11, it would be good to include all  $\text{chisq}/\text{ndof}$  for other functions, so it's clear which one is better.

- done

6) Figure 9, 10, 11, the plot with 0th-order polynomial should be removed, which is clear that would not work.

- @Qi

7) Table 12 for photon purity, can you add some text how the calculation is done ?

- I will add some description.



8) Figure 17 (b), is this oth-order exponential function ? should you try the first order exponential as well ?

- That is a simple exponential function. Due to lack of freedom to cover the data in the few bins, the function is pulled flat. You can read  $a_1=0$  in the plot. (Xiaohu)
- It is an exponential, but the fit is really bad.

9) WH systematic in section 8, I would suggest to compare the predictions using different ME+PS MC, instead of LO+PS.

- - The current uncertainties cover the difference from PS jets and ME jets, because this is motivated by that PS might model jets badly. The uncertainty is very conservative. Could you clarify the suggestion of comparing ME+PS and LO+PS? Thanks! (Xiaohu)

10) in Appendix D, fake lepton, can you list the efficiency for real lepton from MC ?

- I will.