

Minutes of CEPC HZZ Meeting

Online, 2020-04-22

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

Memo Update

- V1.0 : Completed (Yanxi)
Memo: <https://gitlab.com/cepc/memo/hig2zz-c4/-/tags/v1.0>
Code: <https://github.com/cepc/hig2zz/releases/tag/v1.0>
- V1.3: BDT done with six channels. (Min)

Draft Update

- Updated Feynman diagram (Ryuta) v1.0 done
https://gitlab.com/x-team/paper/p5_cepc_higgs_zz/-/tags/v1.0
- Summarize the ATLAS HZZ* study (Ryuta)
 - o Decided to drop EFT after discussion
 - o Will go with Higgs width measurement only

Actions

1. Memo v1.1
 - 1.1. Add standalone section with these new set of cuts for the final BRs with stat. uncert. (Yanxi)
 - 1.2. Add section to compare the results of v1.0 and v1.1, check if they agree within 1- sigma (Yanxi)
2. Memo v1.2
Previously, the purpose for v1.2 is to keep only the default cuts. After the discussion today, we decide to keep both. So, we'll move the v1.3 to v1.2
 - 2.1. Add BDT results for 6 channels (Min)
 - 2.2. Continue the fitting with BDT (Min)
3. Memo v1.3
 - 3.1. Add Higgs width fitting (Ryuta: to be discussed)
4. Memo v1.4
 - 4.1. Study the signal/background cross-feed issue (all)
 - 4.2. Comparison with white paper, investigate the difference (all)
5. Paper Draft v1.1
 - 5.1. Incorporate comment from v1.0 and memo v1.4 (Ryuta)
 - 5.2. Submission to second round CEPC internal review
6. Paper draft v1.2
 - 6.1. Update with the comment from CEPC internal (Ryuta)
 - 6.2. Final touch and release to journal for review (Ryuta)