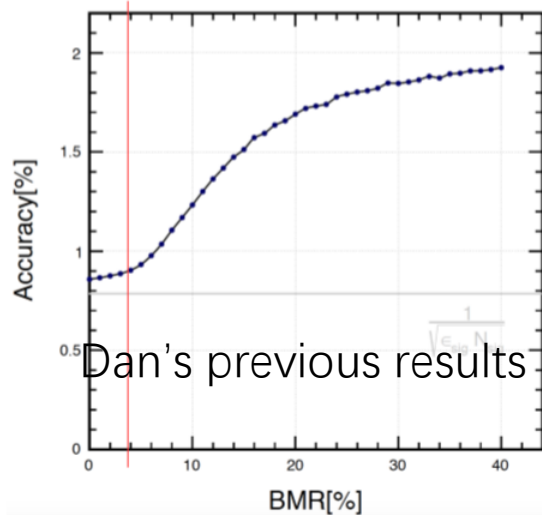


qqHtautau

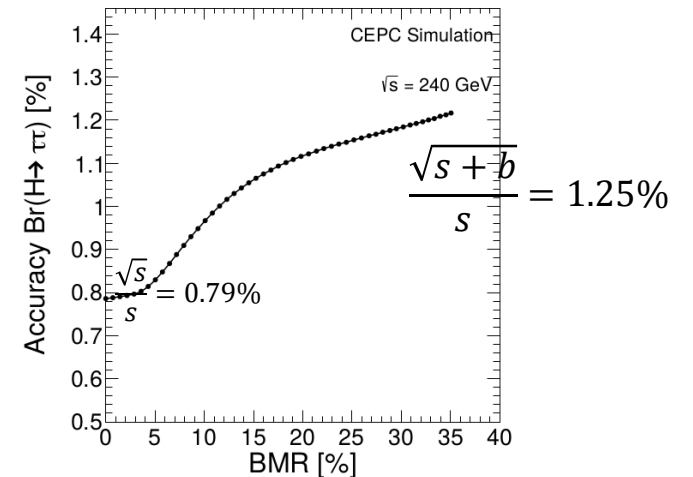
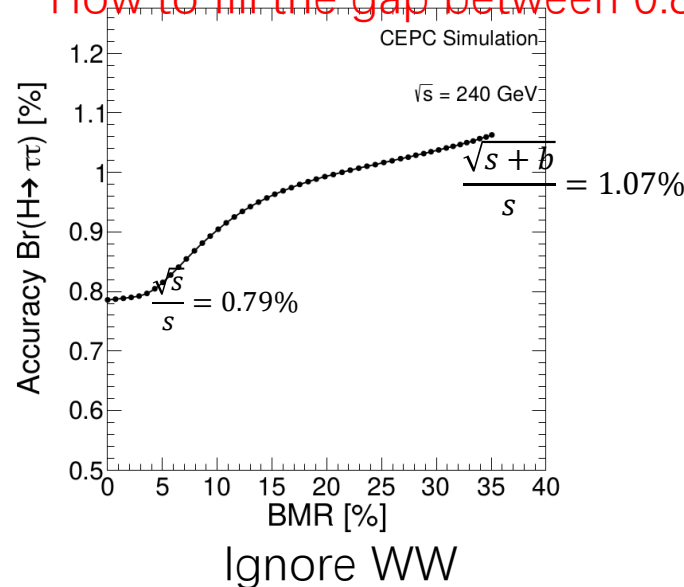
- Full simulation according to <https://arxiv.org/pdf/1903.12327.pdf>
  - $5.6\text{ab}^{-1}$
  - qqHtatau
    - gen: 48266
    - Cuts applied: 16211
  - Accuracy: 0.93%
  - Backgrounds (cuts applied):
    - ZZ: 13814 (consider this only in fast simulation?)
    - WW: 11071
    - Little the others

# Fast simulation

- Smear the two quark jets with two random numbers, say it  $\alpha_q$
- Using the number of events after cuts but shape without cuts.
- Then
  - BMR calculated at which for Z or Higgs and for quark or gluon?
  - how do we related the  $\alpha_q$  with  $\alpha_g$ ?
  - Accuracy calculated



How to fill the gap between 0.8 and 0.93?



Treat number of WW as part of number of ZZ  
Use only the shape of ZZ

