

Higgs Searches: A Status Report

Abdualazem Fadol

February 10, 2020



INSTITUTE FOR
COLLIDER
PARTICLE
PHYSICS

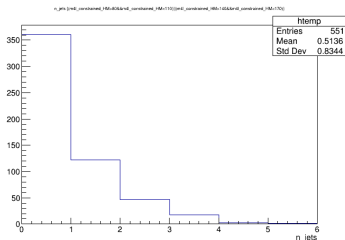
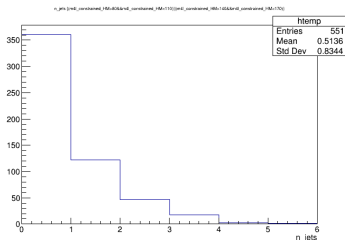


UNIVERSITY OF THE WITWATERSRAND

Update on $R \rightarrow SH \rightarrow 4\ell + E_T^{miss}$ analysis

Observed different numbers for the data in the side-band

2



- It turns that the problem is that HZZ uses private package;
- We've got the correct branch and reproduced all the samples again;
- After checking, the new samples look comparable with the ones HZZ uses;
- Reproduced the signal optimisation again and the optimal pints turns to be the same as the before;
- I also did the signal and background parametrisation;

- Because the total bkg in the 0SFOS is pretty small I merged the 0-SFOS and 1-SFOS;
- Finished the mass paring depending on the Z boson invariant mass; and
- Now I'm adding more statistics and started working on the optimisation.



Thank you!

