

Status from Huijun

Dilep channel

Signal

- $pp \rightarrow H \rightarrow hh \rightarrow wwyy \rightarrow l\nu l\nu yy$

BKG

- $pp \rightarrow Wh$ negligible
- $pp \rightarrow Zh \rightarrow l\nu l\nu yy$ efficiency = 0.003
- $pp \rightarrow tth \rightarrow l\nu l\nu yy$ efficiency = 0.001

Events Selection

- Flag_all
- At least 2 leptons
- MET >20 GEV
- Mass_ll > 10 GeV and the Z mass window is vetoed (80~100GeV)
- Mass_yy from 120~130GeV
- No B jets

Efficiency and

channel	efficiency	Expected events
260	0.048	0.12
300	0.052	0.13
350	0.0593	0.15
400	0.069	0.17
500	0.077	0.19
sm	0.069	0.17
ZH	0.003	0.072
ttH	0.001	0.008

BKG validation in lephad channel

- Validation is based on the ration N_{in}/N_{out}

- Samples are:

$pp > l\nu jj$

$pp > l\nu aa$

$pp > l\nu aajj$

- $l\nu aajj$ ratio: 0.236699
- $aajj$ ratio: 0.233747
- $l\nu aa$ ratio: 0.231274

