

Work Status



Maosen Zhou
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bkg summary?

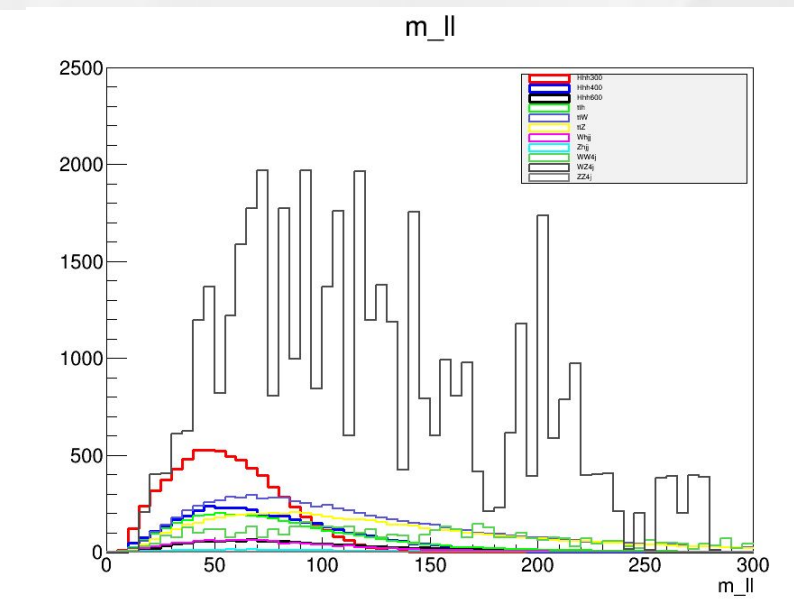
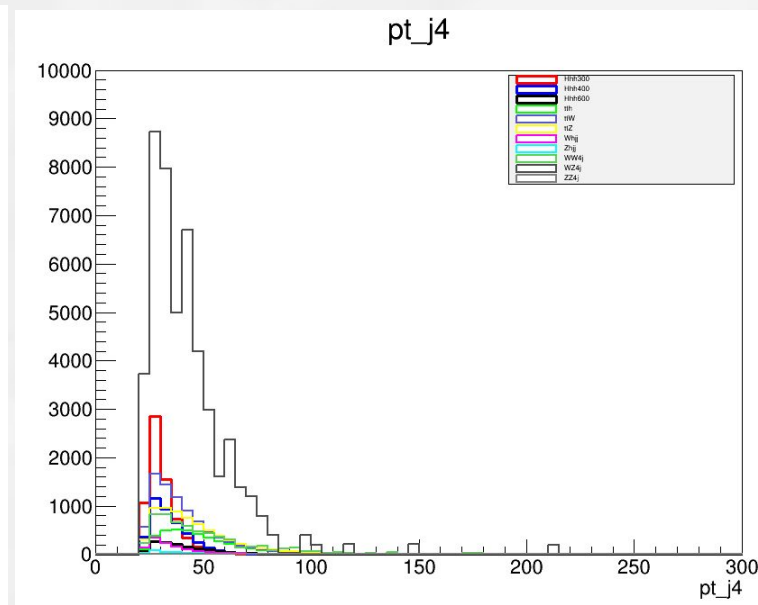
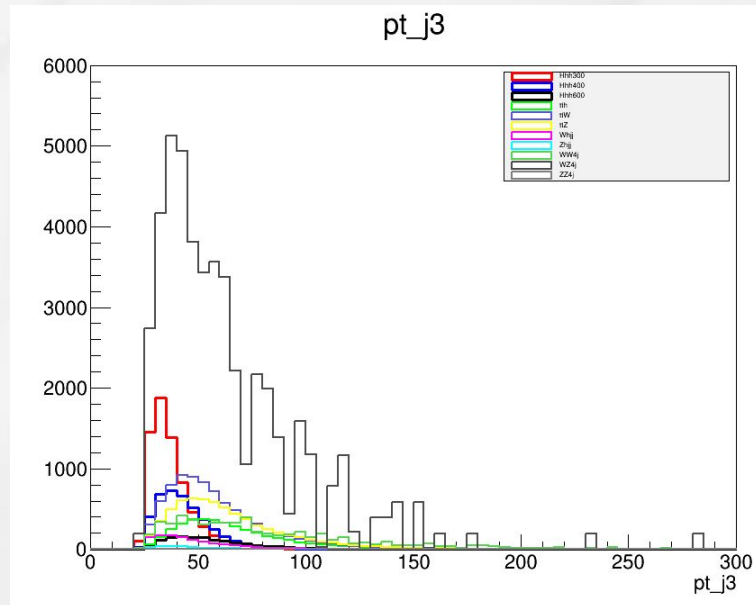
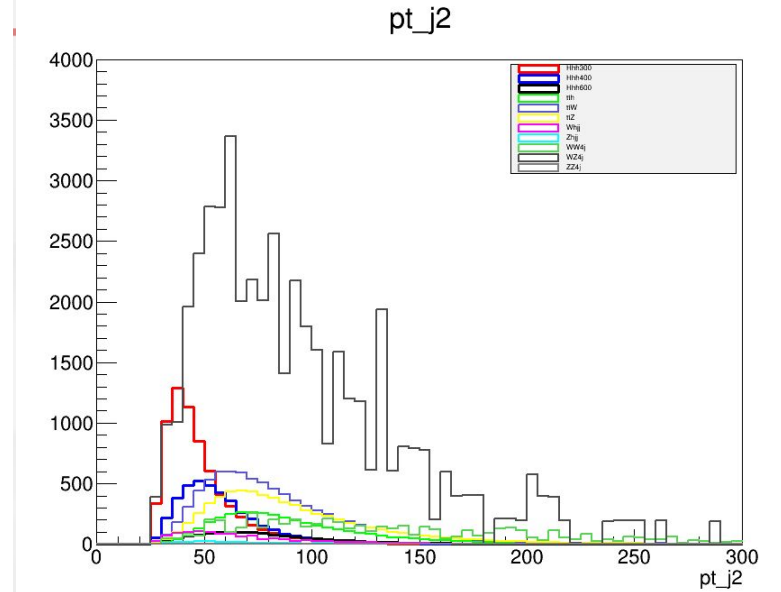
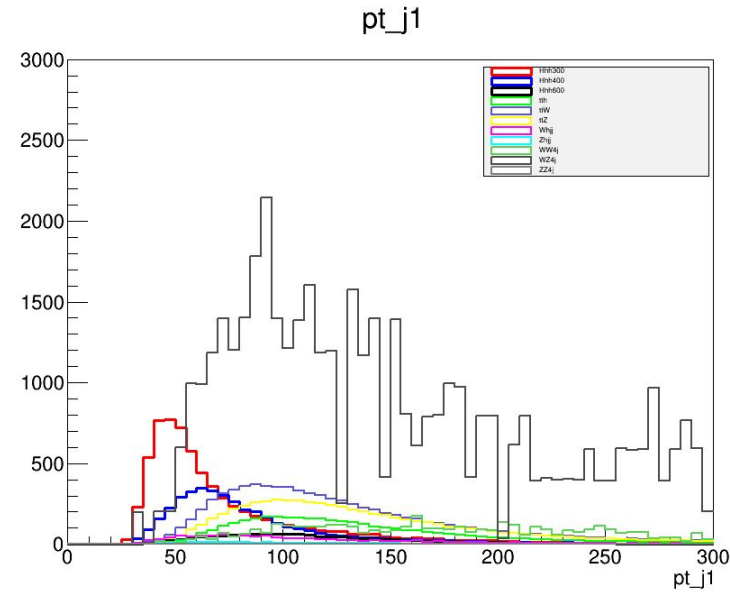
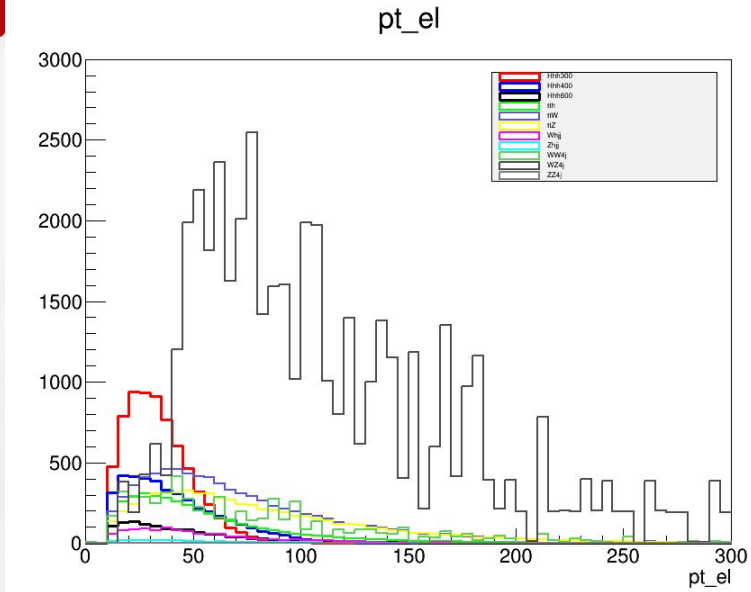
- single ME: ttW, tth, ttZ, Whjj, Zhjj, WW4j, WZ4j, ZZ4j
- fake: W+jets, W+gamma+jets, Charge misID, etc..
- Underlying Processes:
 - › DPS: WWjj + jj, WZjj + jj ?
 - › Triple ?
- next: estimate fake, produce MPI samples ?



Backup

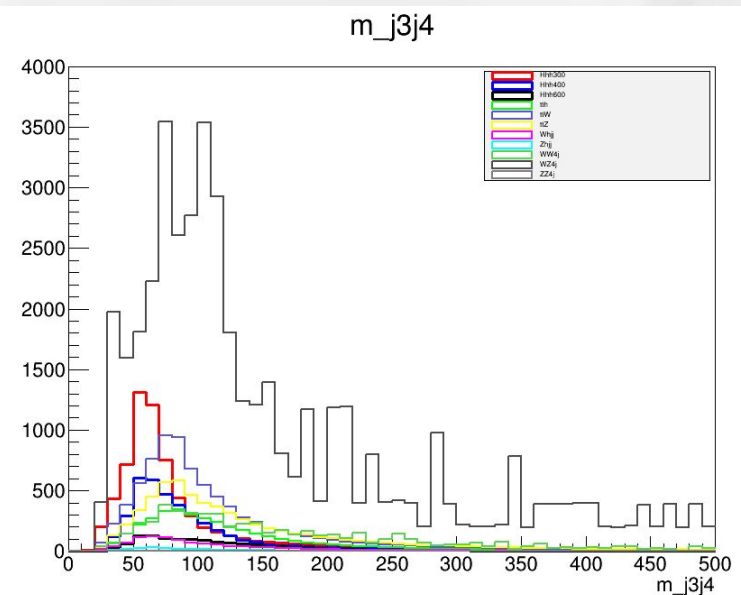
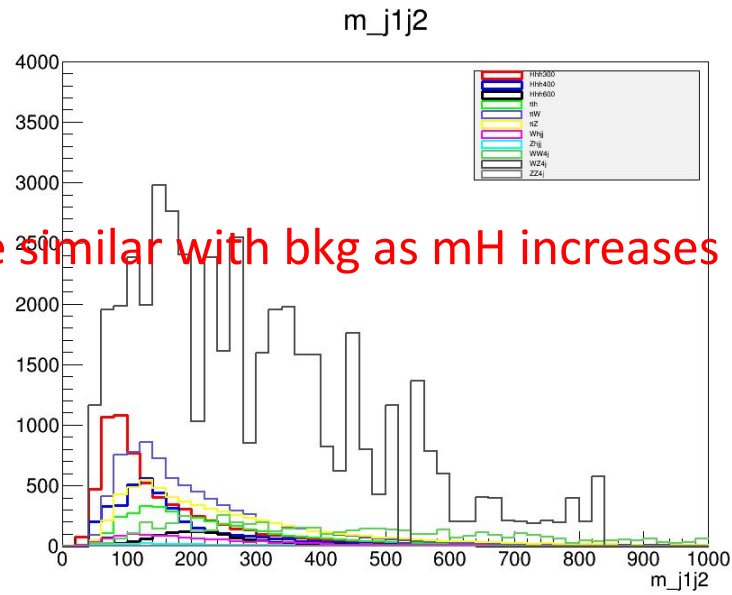
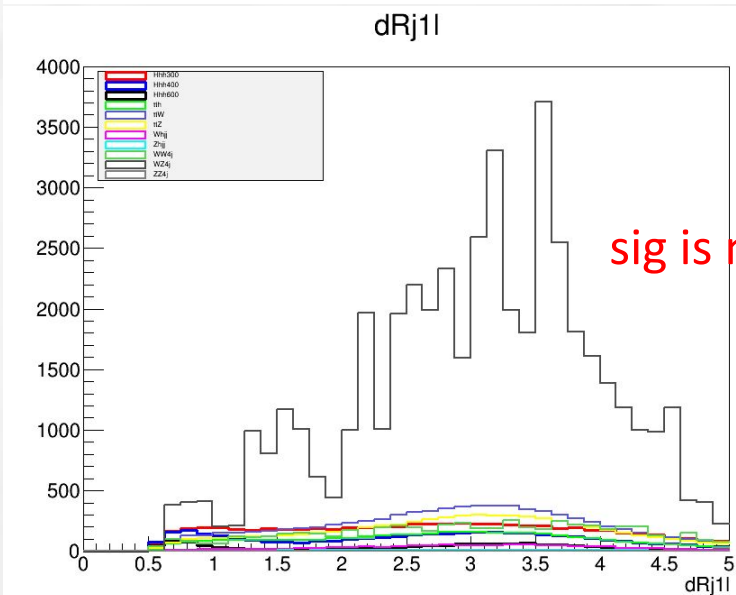
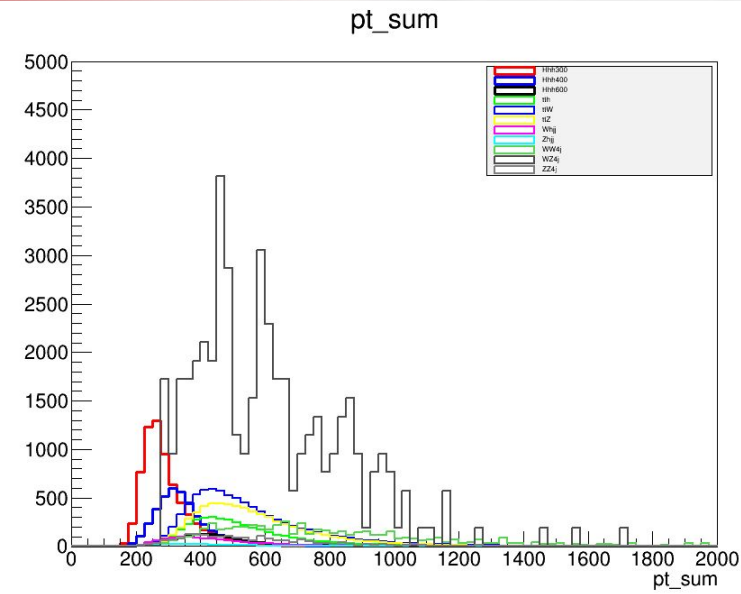
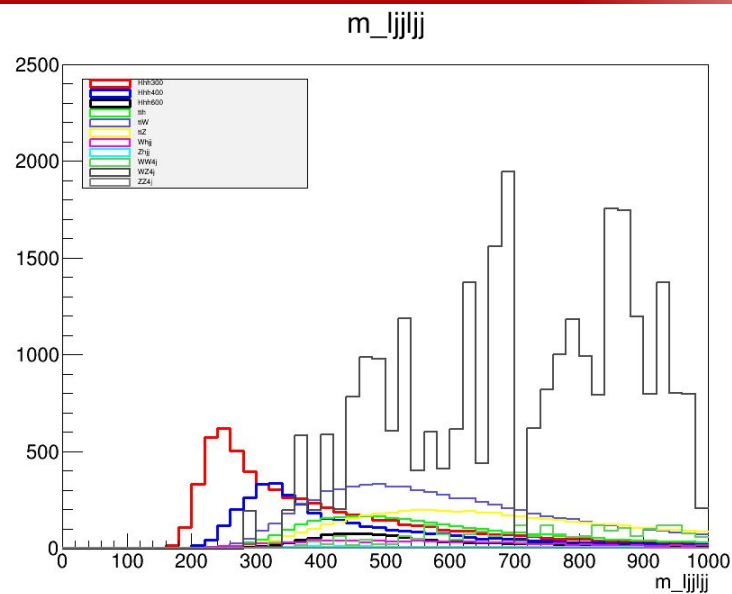
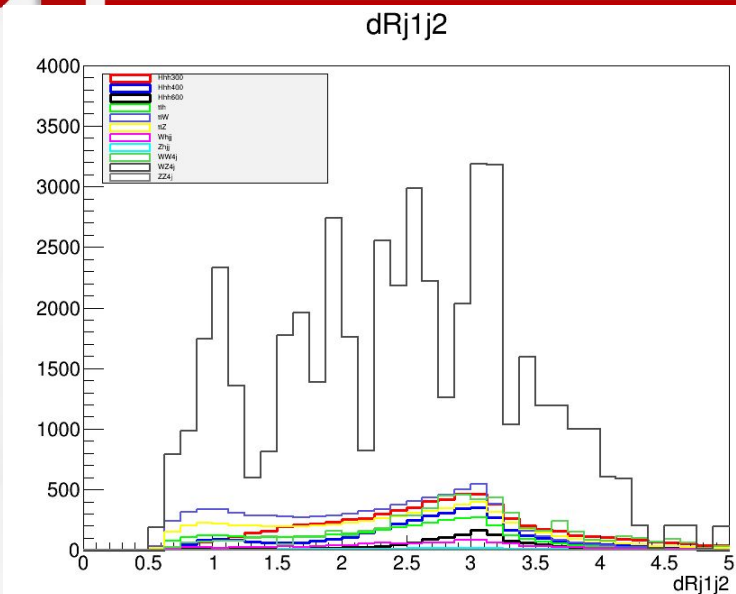


Theoretical simulations, Kinematics





Kinematics



sig is more similar with bkg as mH increases



Cut-flow: Hhh300

processes	xsec(fb)	basic cuts + event selection	b-veto	pt_sum < 300GeV
Hhh300	23	17	15	10
ttW	28.4	23.8	3.2	0.08
ttZ	21.7	18.5	2.6	0.045
WW4j	19.6	15.8	14.0	0.12
tth	12.6	10.4	1.5	0.05
Whjj	3.9	2.9	2.6	0.41
Zhjj	0.89	0.67	0.59	0.11
WZ4j	155	124	105	3.8
ZZ4j	6.3	5.2	4.6	0.24
S/sqrt(B)	23.0 (7.3)	20.8 (6.6)	22.4 (7.1)	78.6 (24.8)
Z ₀	22.8 (7.2)	20.5 (6.5)	22.0 (7.0)	63.0 (19.9)

Lumi=300 fb⁻¹ (30 fb⁻¹)

$$Z_0 = \sqrt{2[(S+B)\ln(\frac{S+B}{B}) - S]}$$



Hhh400

processes	xsec(fb)	basic cuts + event selection	b-veto	m_ljlljj < 350GeV
Hhh400	13.8	10.5	9.1	3.5
ttW	28.4	23.8	3.2	0.17
ttZ	21.7	18.5	2.6	0.06
WW4j	19.6	15.8	14.0	0.09
tth	12.6	10.4	1.5	0.11
Whjj	3.9	2.9	2.6	0.30
Zhjj	0.89	0.67	0.59	0.06
WZ4j	155	124	105	1.3
ZZ4j	6.3	5.2	4.6	0.04
S/sqrt(B)	15.2 (4.8)	12.8 (4.1)	13.6 (4.3)	41.5 (13.1)
Z ₀	15.0 (4.8)	12.7 (4.0)	11.0 (3.5)	34.4 (10.9)

Lumi=300 fb⁻¹ (30 fb⁻¹)



Hhh600

processes	xsec(fb)	basic cuts + event selection	b-veto	m_ljjljj < 350GeV
Hhh600	4.6	3.4	2.9	0.26
ttW	28.4	23.8	3.2	0.08
ttZ	21.7	18.5	2.6	0.045
WW4j	19.6	15.8	14.0	0.12
tth	12.6	10.4	1.5	0.05
Whjj	3.9	2.9	2.6	0.41
Zhjj	0.89	0.67	0.59	0.11
WZ4j	155	124	105	1.3
ZZ4j	6.3	5.2	4.6	0.04
S/sqrt(B)	5.1 (1.6)	4.2 (1.3)	4.3 (1.4)	3.0 (1.0)
Z ₀	5.1 (1.6)	4.1 (1.3)	4.2 (1.3)	3.0 (0.9)

Lumi=300 fb⁻¹ (30 fb⁻¹)



other

