

W W + 2 jets Analysis



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M A D I S O N



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WW + 2 Jets Analysis

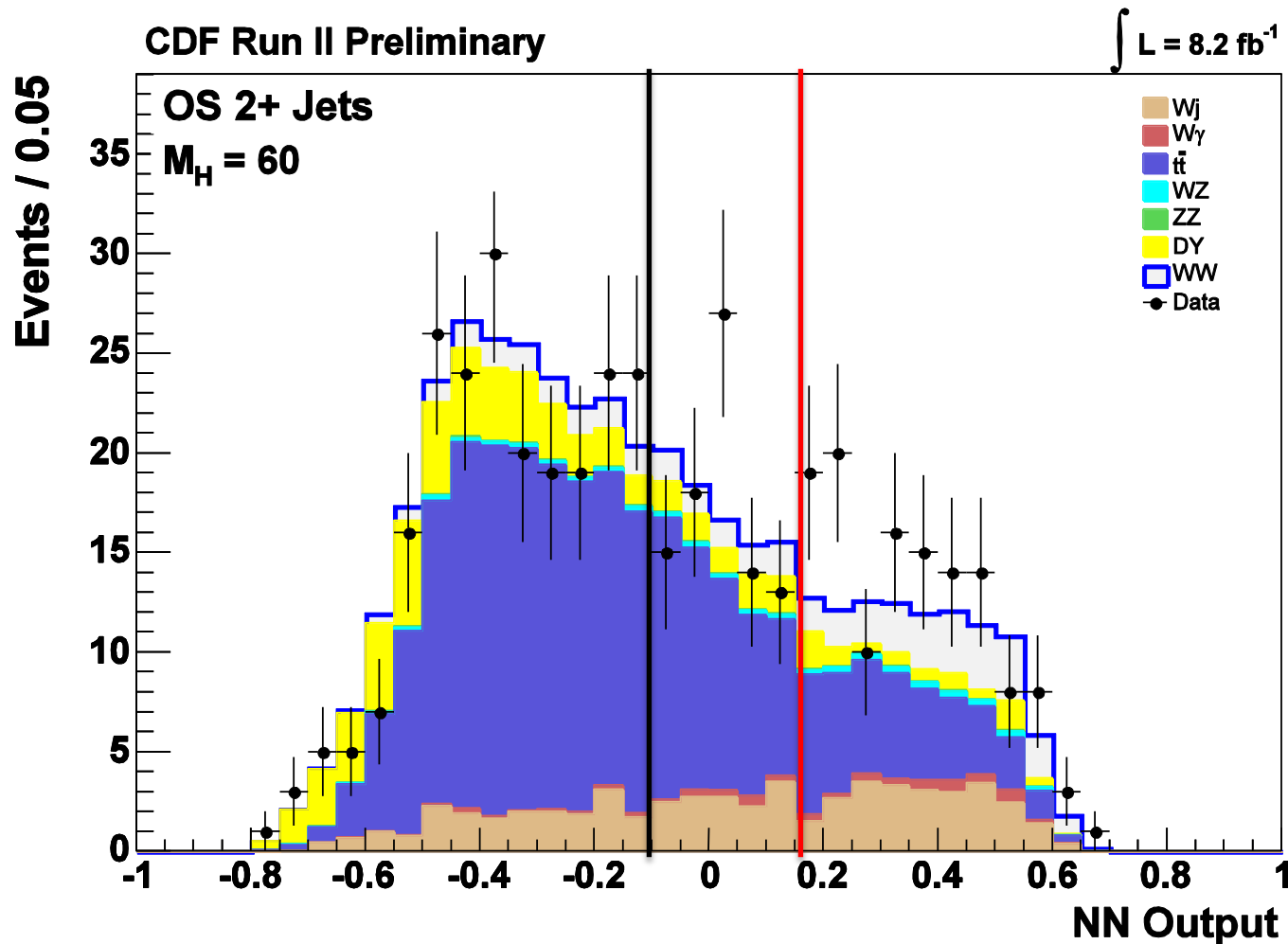
- Began processing 9.7 fb-1
- NN inputs made
- Calculated Si/No-Si Scale factors
 - 28 No-Si events with 1 Btag gives scale factors of 1.021 for signal, 0.968 for tt control region
 - Minimal change from 8.2 fb-1
- Waiting for Alpgen DY JES samples
 - + samples available as of this morning, - samples perhaps by this afternoon

Change in Yields

Process	8.2 fb-1	9.7 fb-1	% Increase
ttbar	242	284	17.4
DY	129	151	17.1
WW	44.7	52.7	17.9
WZ	13.0	14.2	9.23
ZZ	3.53	4.14	17.3
Wjets	61.1	77.3	26.5
Wy	5.80	7.67	32.2
ggH	4.18	4.93	17.9
WH	3.71	4.36	17.5
ZH	1.79	2.11	17.9
VBF	2.06	2.42	17.5
Data	487	585	20.1

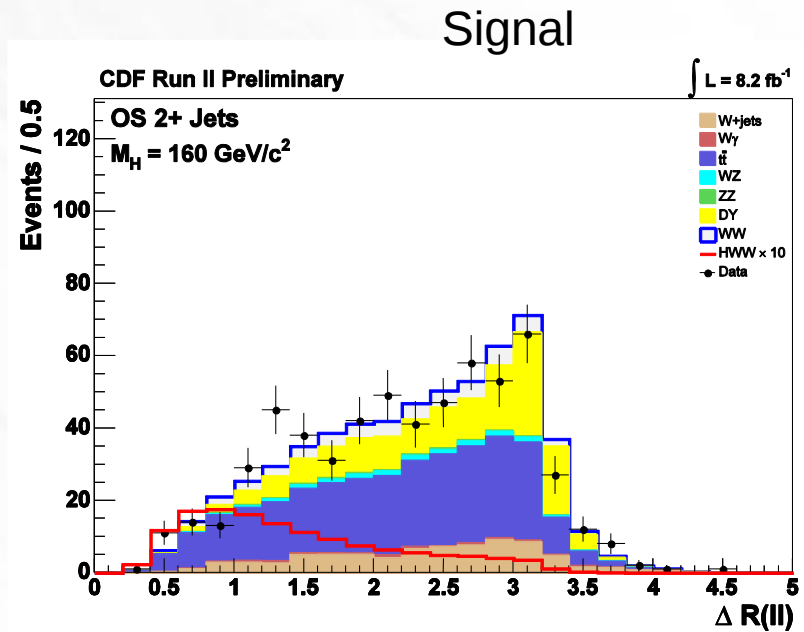
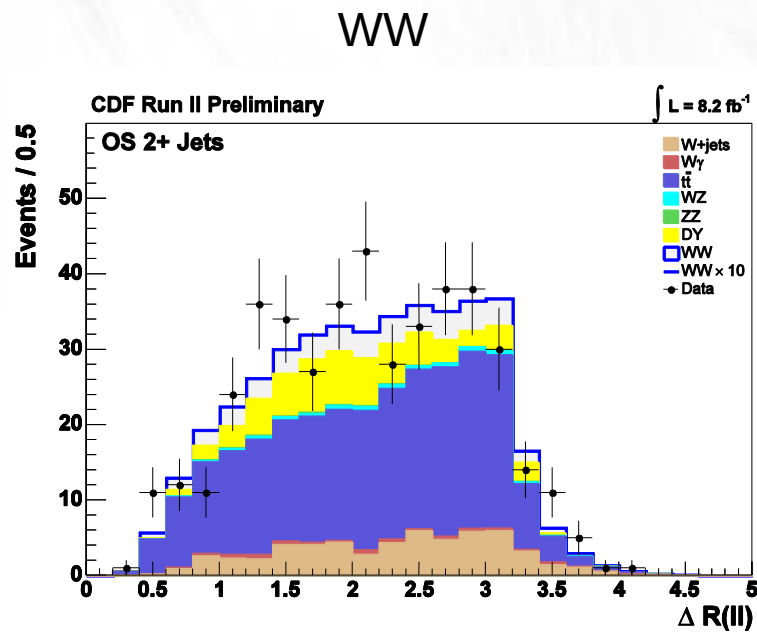
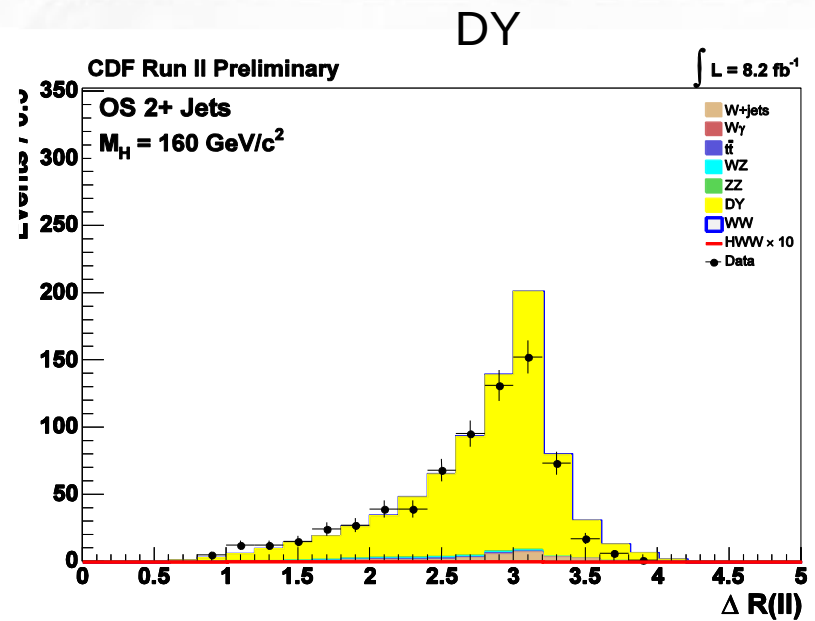
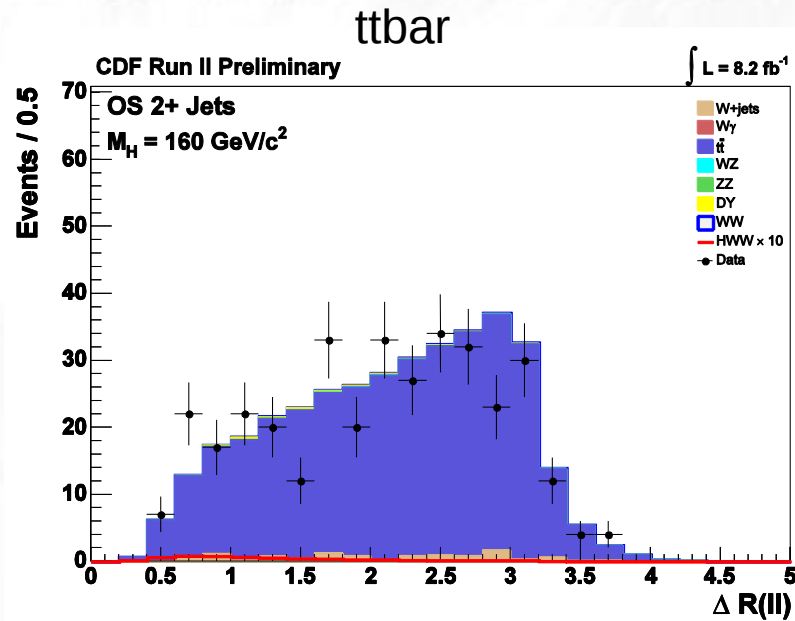
I have checked these yields as far back as the stripping of the ntps

WW Discrimination



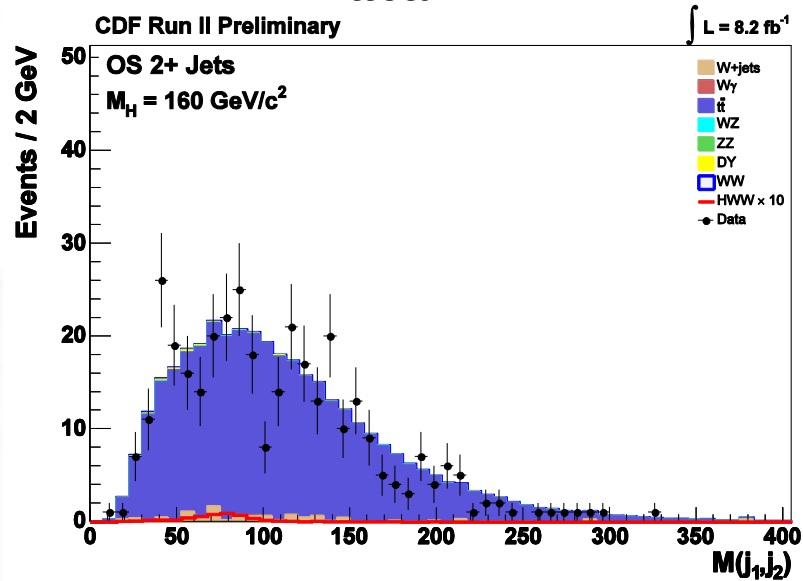
- Increase in W+jets hurts WW discrimination
- If yields are correct, I would move the cut from -0.1 (black) to 0.15 (red). This gives 23 events, 23% purity

$\Delta R(II)$

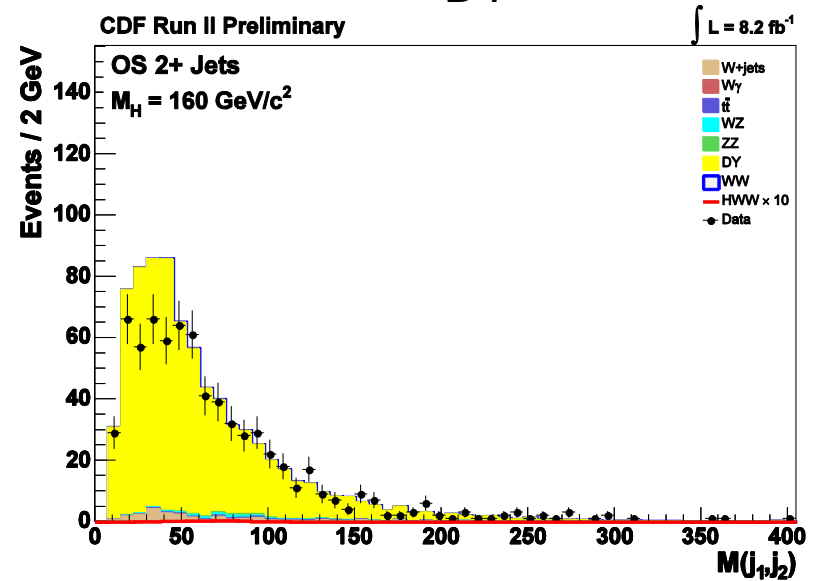


M(jj)

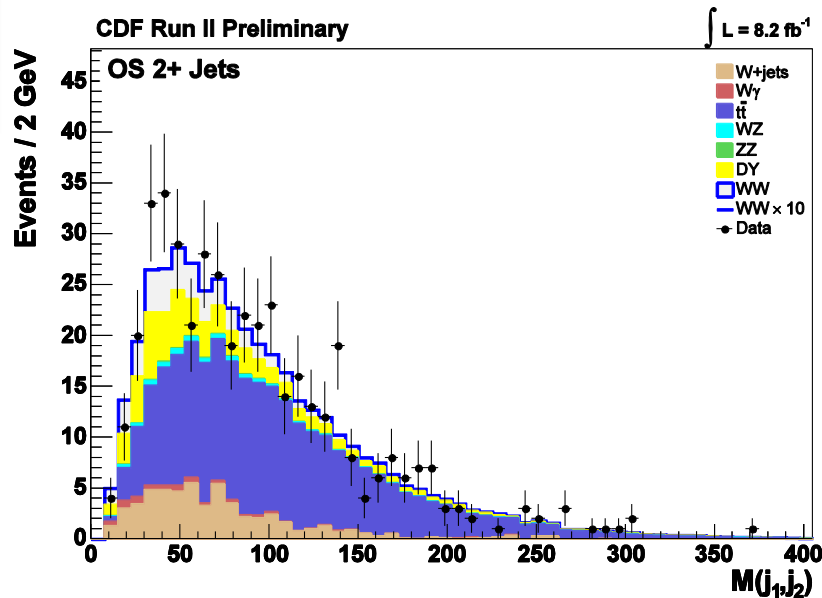
$t\bar{t}$



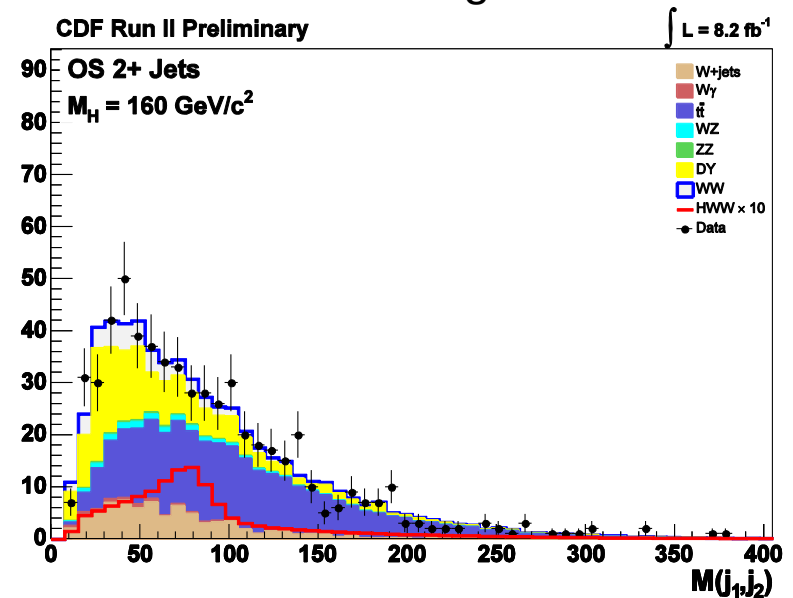
DY



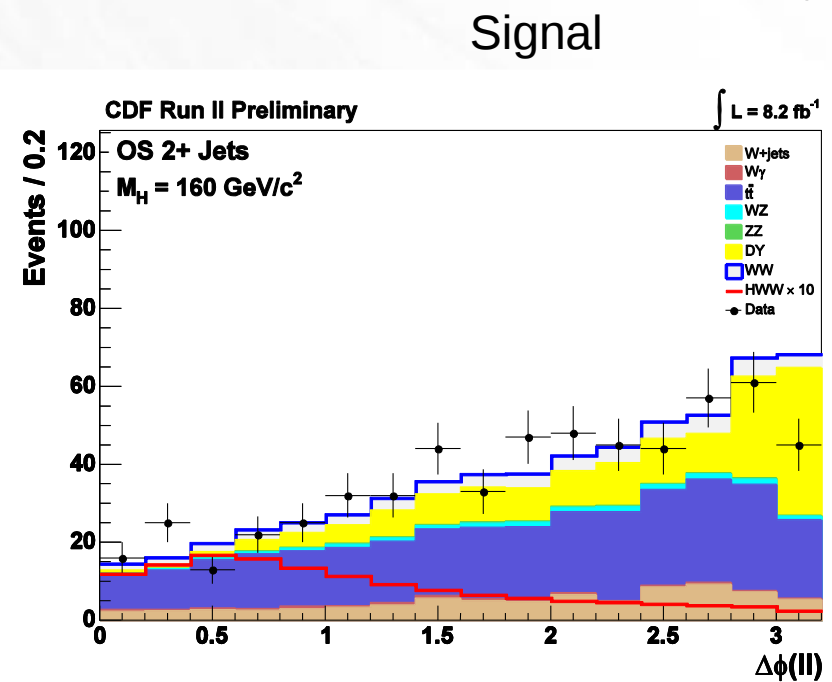
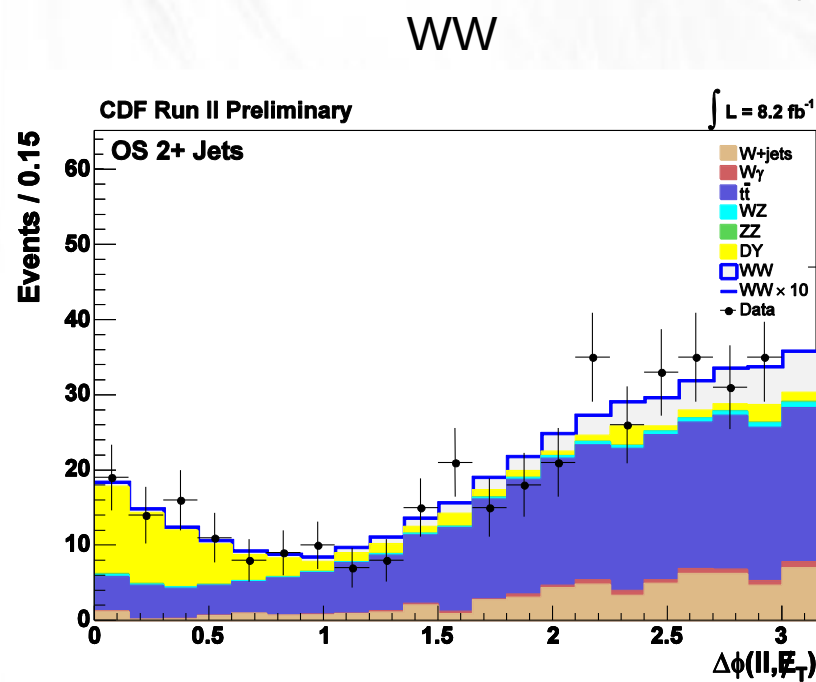
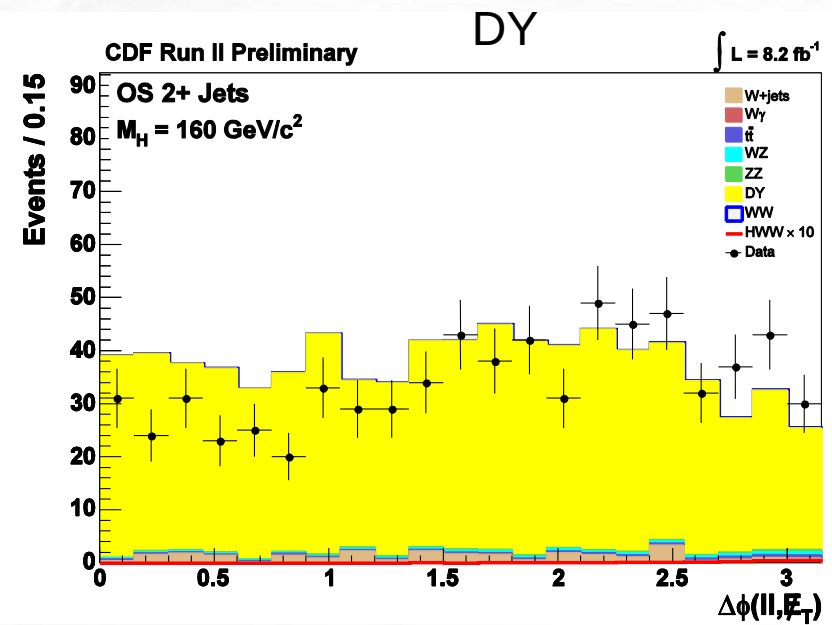
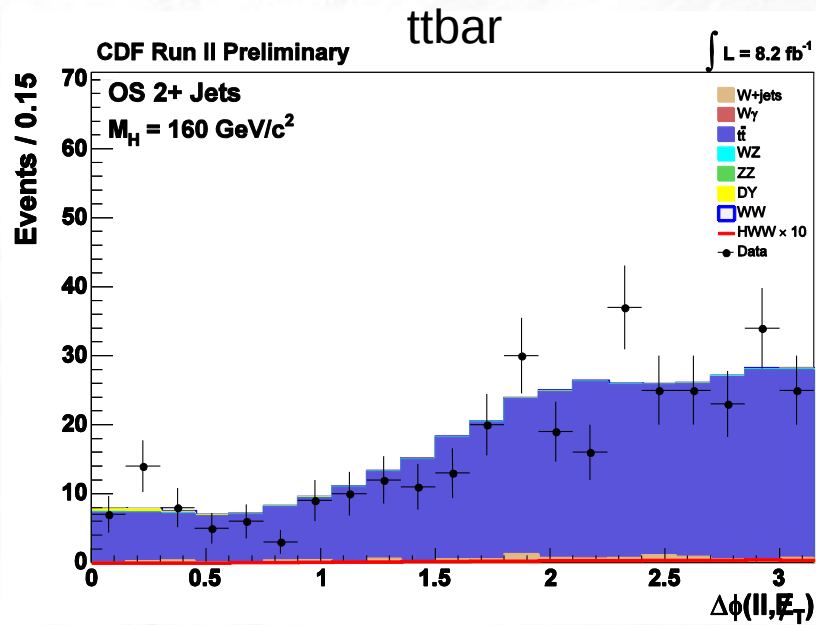
WW



Signal

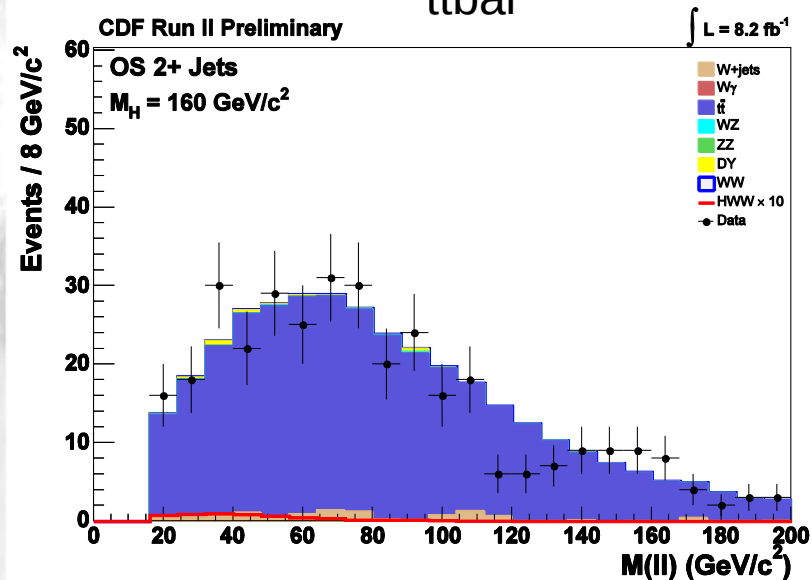


$\Delta\Phi(\ell\ell, E_T)$

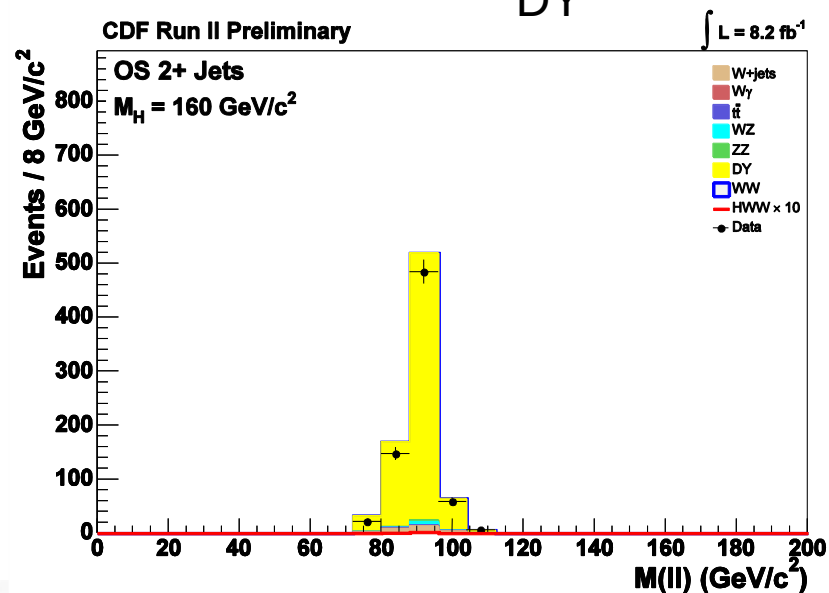


M(II)

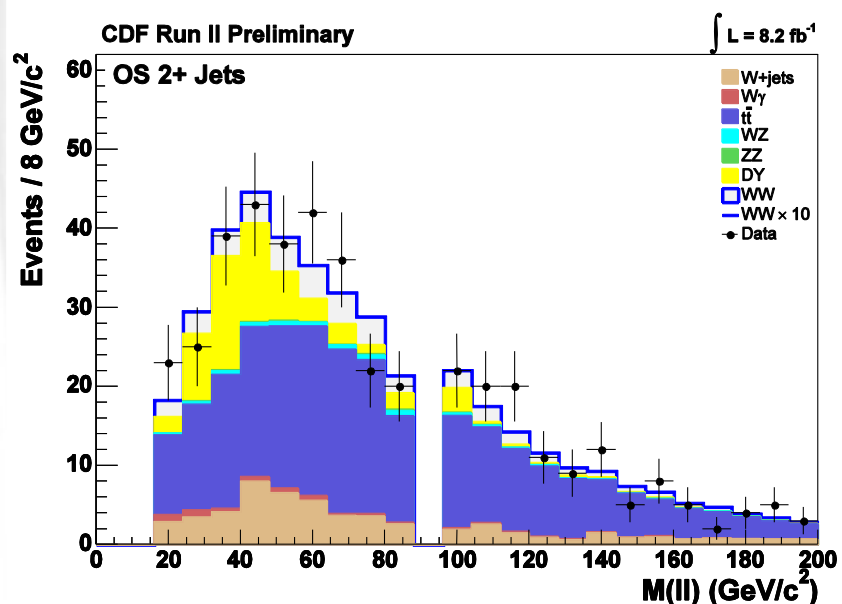
$t\bar{t}$



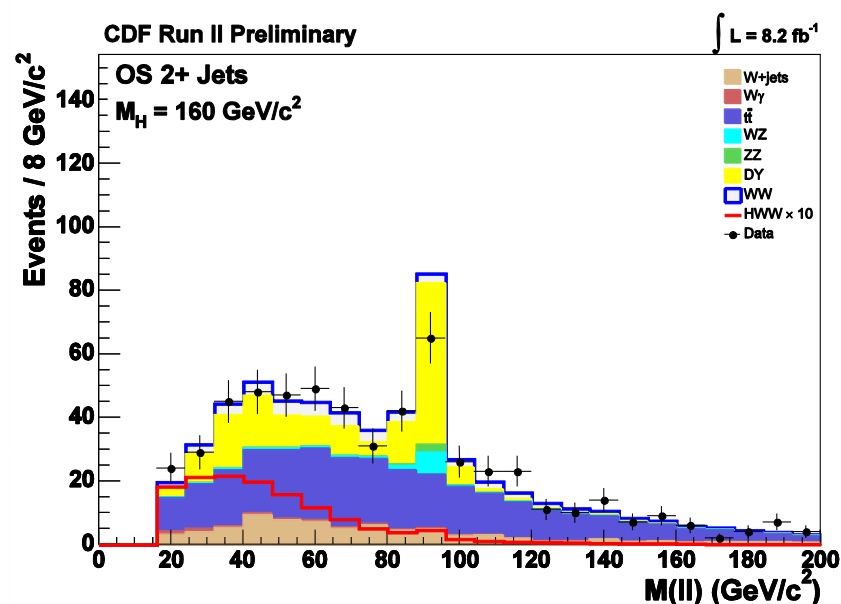
DY

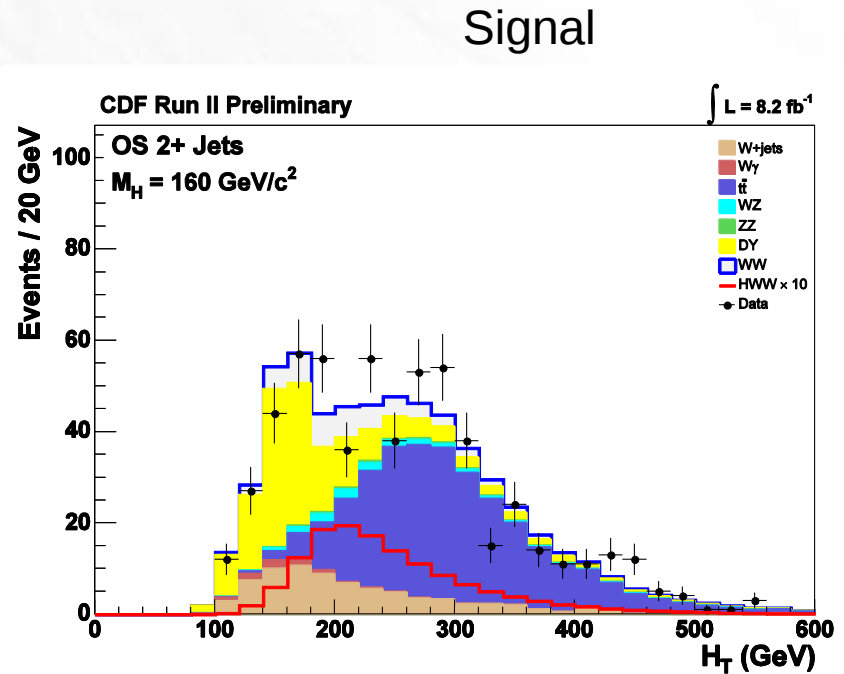
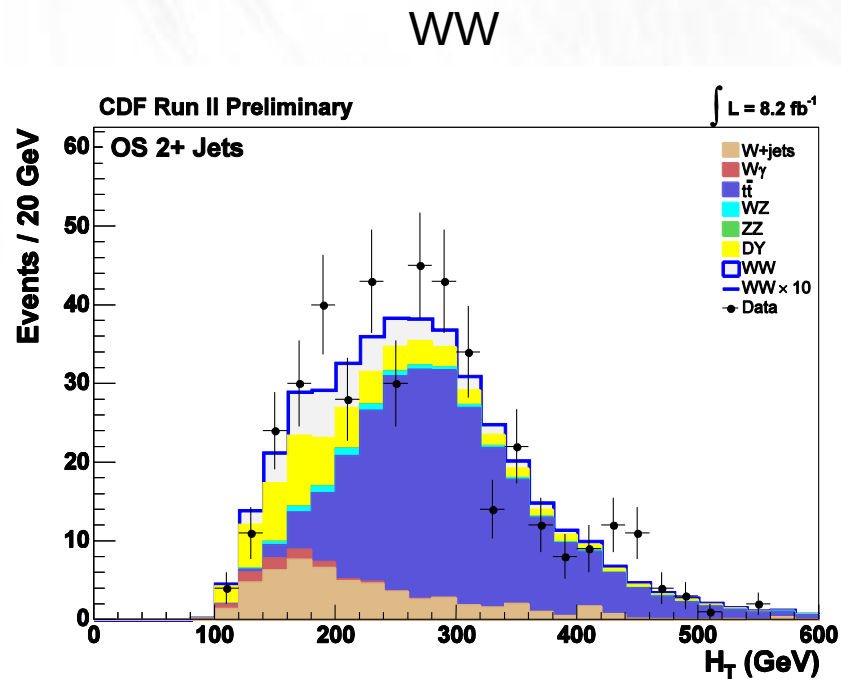
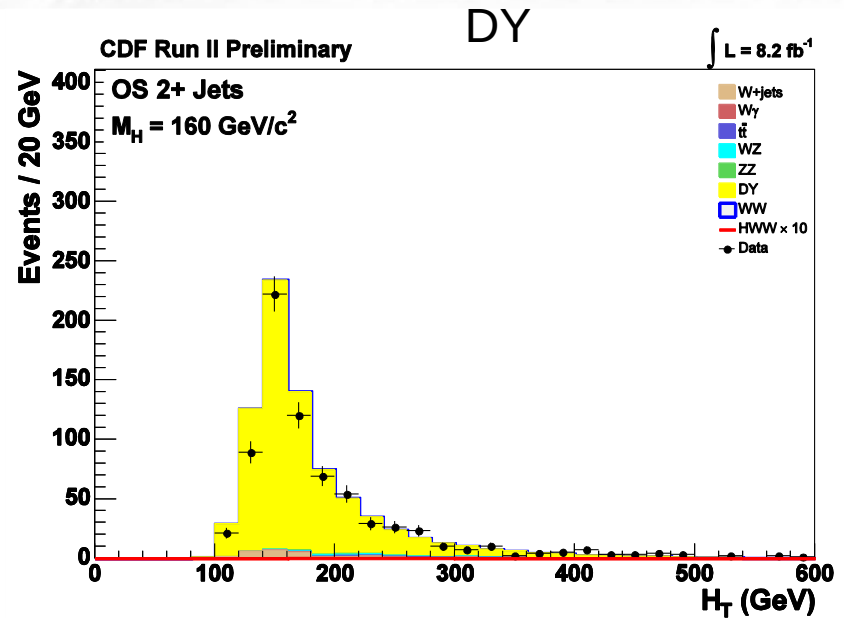
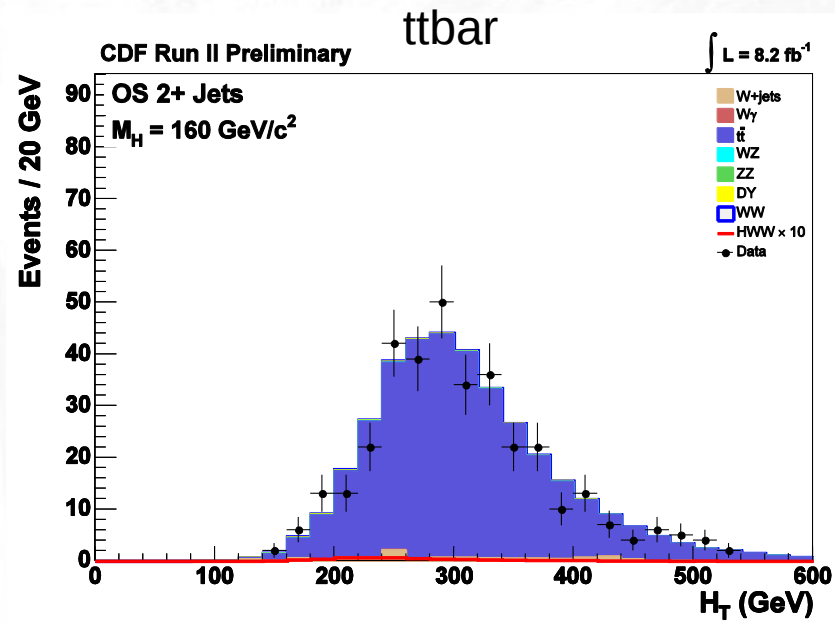


WW



Signal





To Do

- Look into differences in yields?
- Investigate DY JES uncertainty
- Get NN results
- Extend to full mass range

