

pT Scan for finding limits using VLCR10_inclusive jets

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n_lep=0, n_jets>=2, pT cut only on leading jet, COM Energy = 6TeV

Limits on T1

pT cut on leading jet (GeV)	95% CL limits (TeV ⁻¹)
100	[-0.0028, 0.00203]
200	[-0.0048, 0.00281]
300	[-0.57, 0.00386]
400	[-0.045, -0.0133]

Total efficiency

Cuts ->	pT>100	pT>200	pT>300	pT>400
SM_EFT	30.38	18.83	11.76	7.49
INT_T1_12	55.2	55.02	54.66	54.15
QUAD_T1_12	55.11	54.94	54.58	54.1
ggwpwm	16	5.87	2.37	0.96
wpwmz_ztonunu	32.86	31.26	30.02	28.69
wzmunu	26.61	14.82	8.14	4.53
zzmumu	9.03	4.81	2.49	1.31

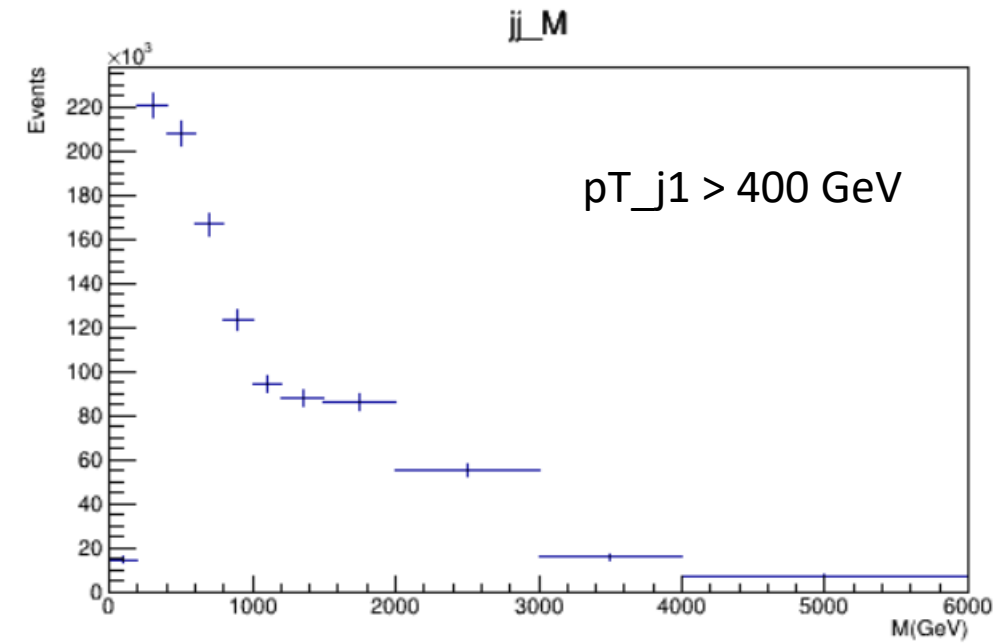
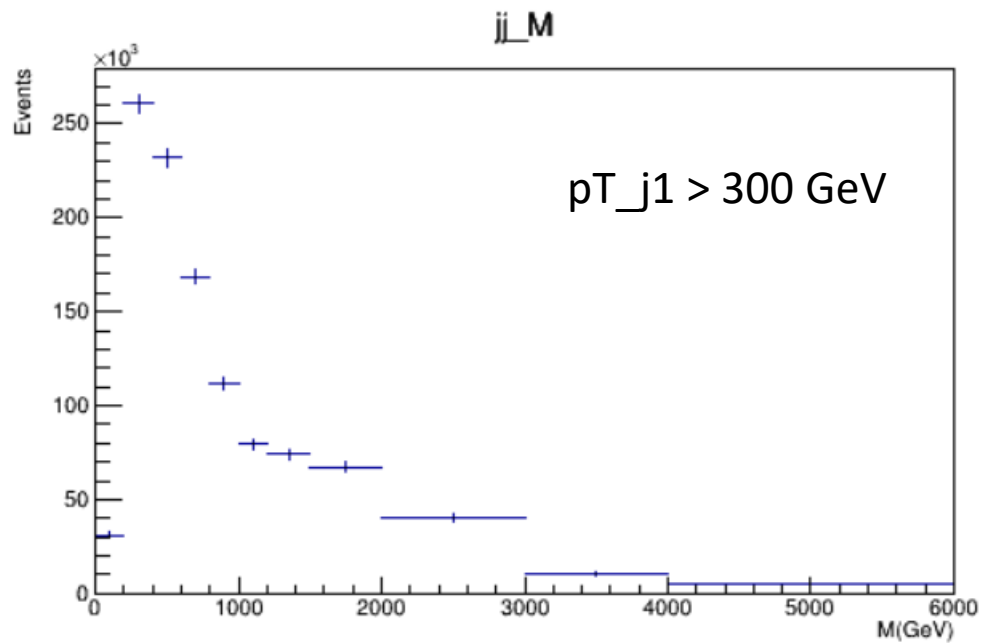
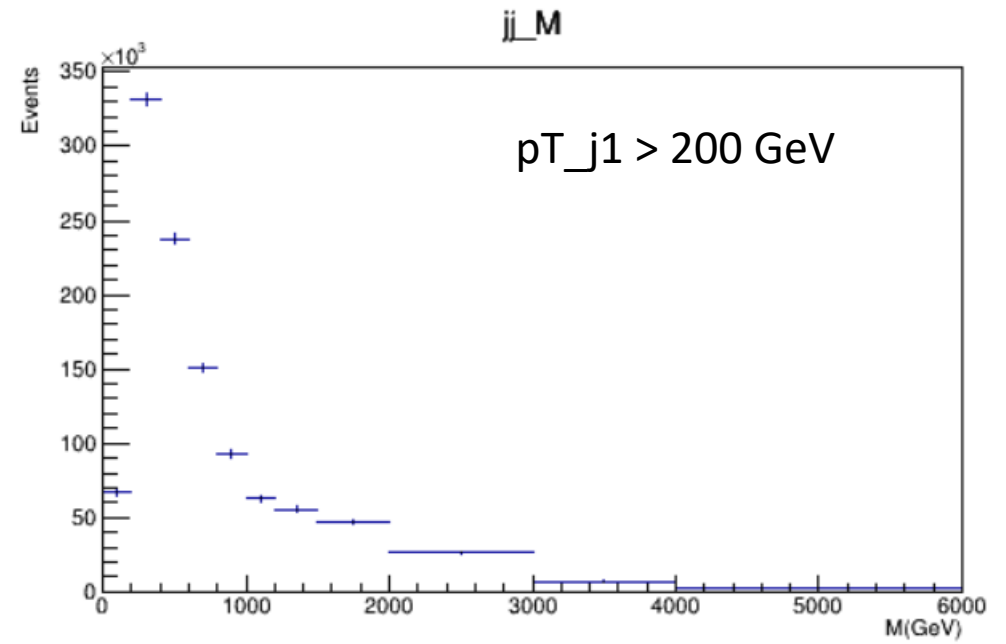
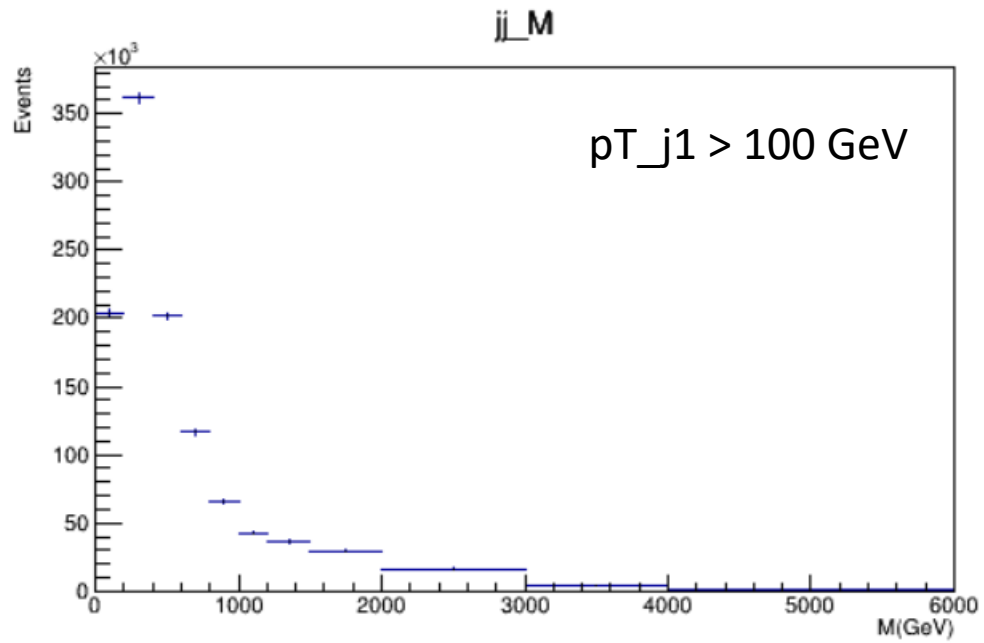
Efficiency

Process/Efficiency->	N_lep=0	N_jet>=2
SM_EFT	65.86	64.79
INT_T1_12	60.22	91.79
QUAD_T1_12	60.19	91.69
ggwpwm	63.15	66.72
wpwmz_ztonunu	72.77	49.11
wzmunu	62.03	64.19
zzmumu	25.88	50.85

Efficiency of pT cut on first leading jet

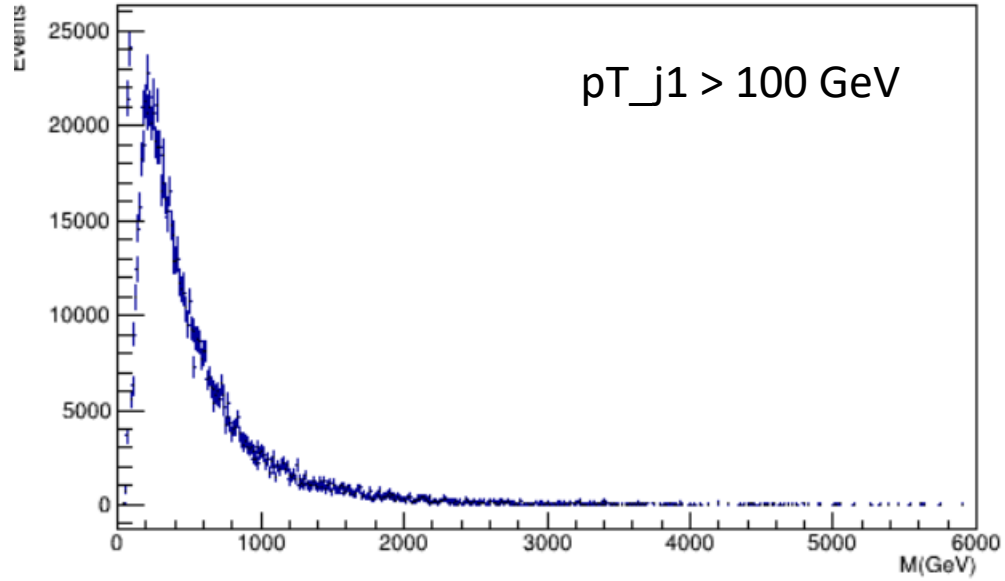
Cuts ->	pT>100	pT>200	pT>300	pT>400
SM_EFT	71.2	44.13	27.55	17.54
INT_T1_12	99.86	99.54	98.89	97.97
QUAD_T1_12	99.87	99.55	98.91	98.03
ggwpwm	37.98	13.93	5.61	2.29
wpwmz_ztonunu	91.94	87.48	84	80.29
wzmunu	66.85	37.22	20.46	11.39
zzmumu	68.65	36.52	18.9	9.93

SM plots

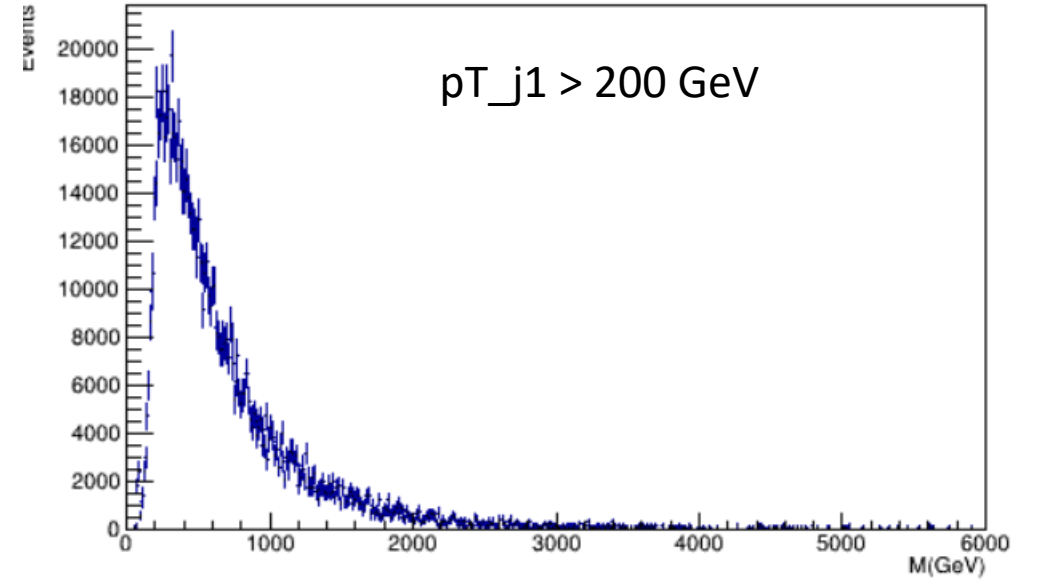


SM plots

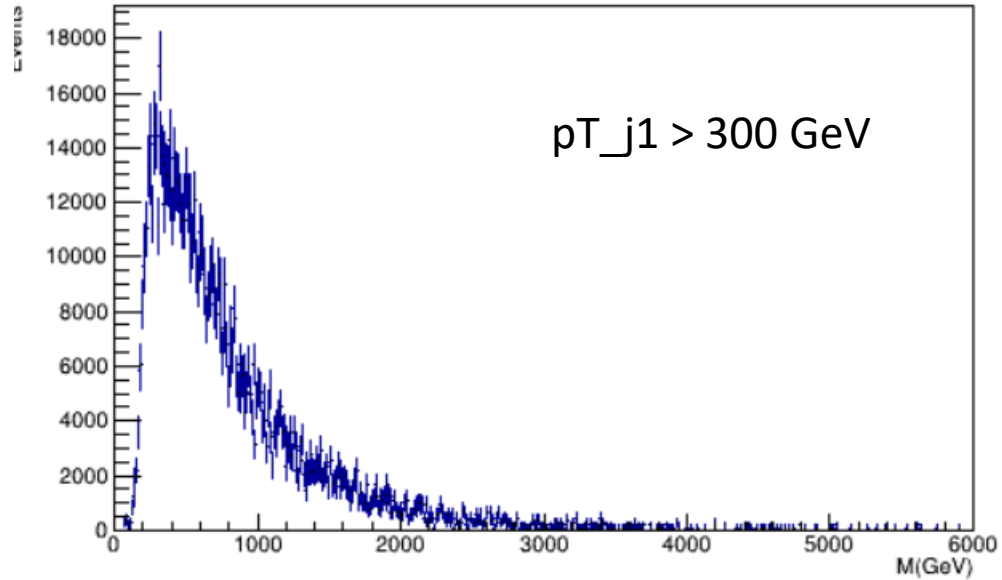
jj_M



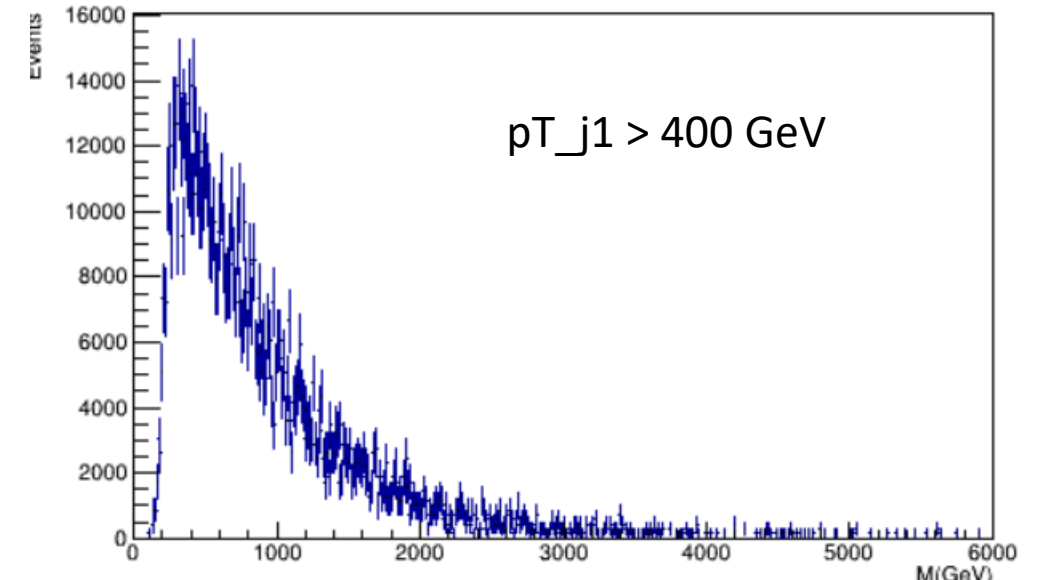
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jj_M



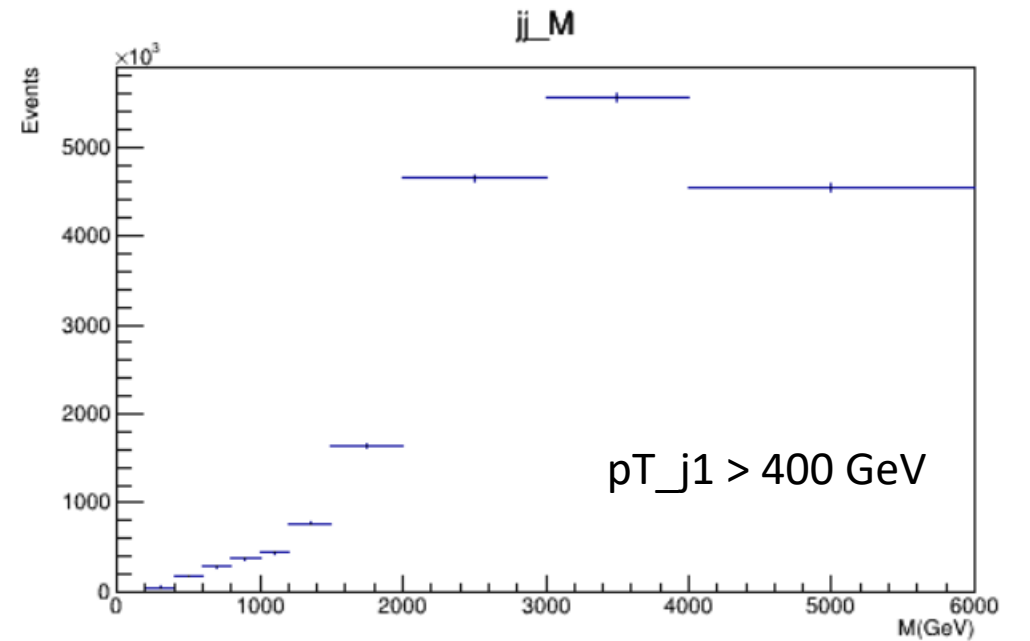
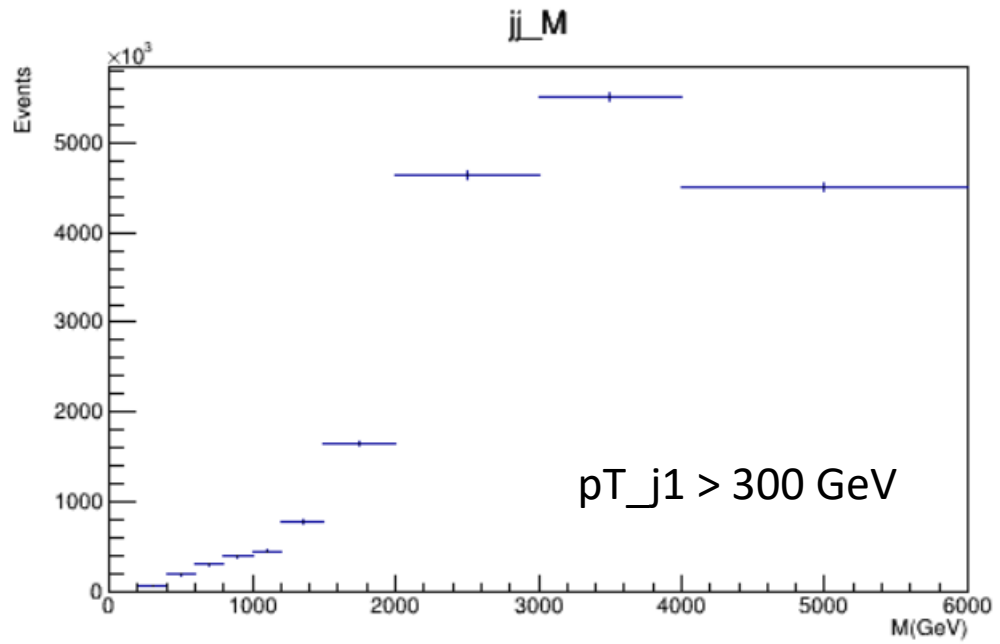
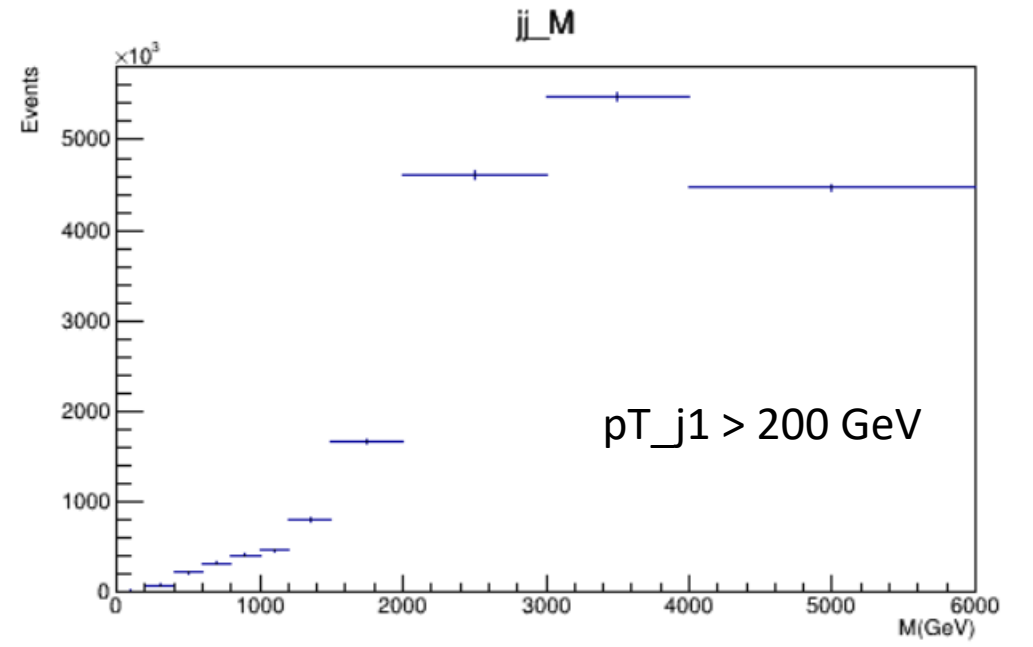
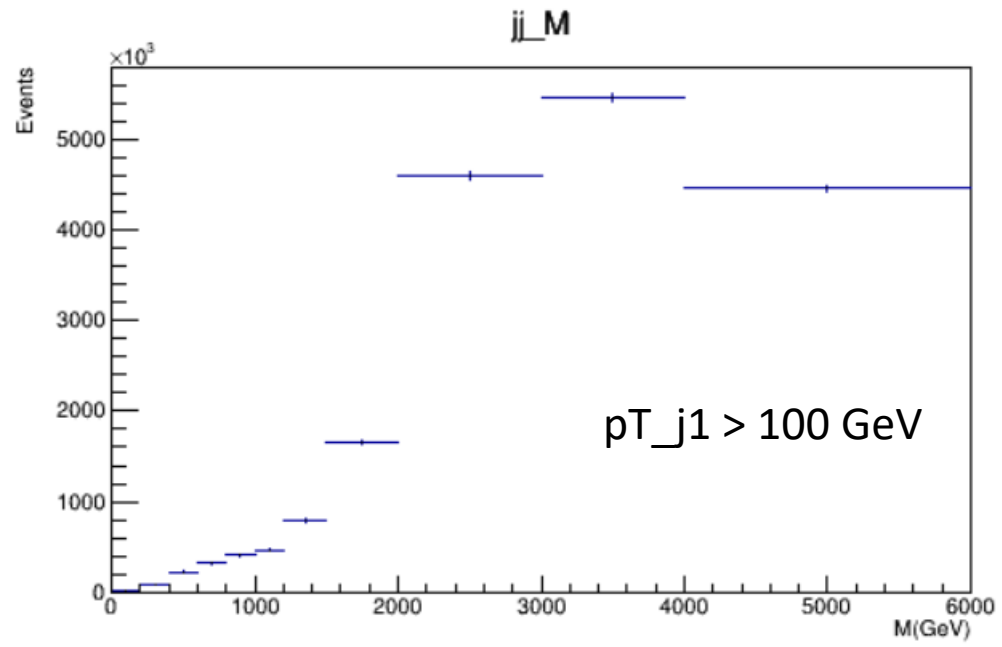
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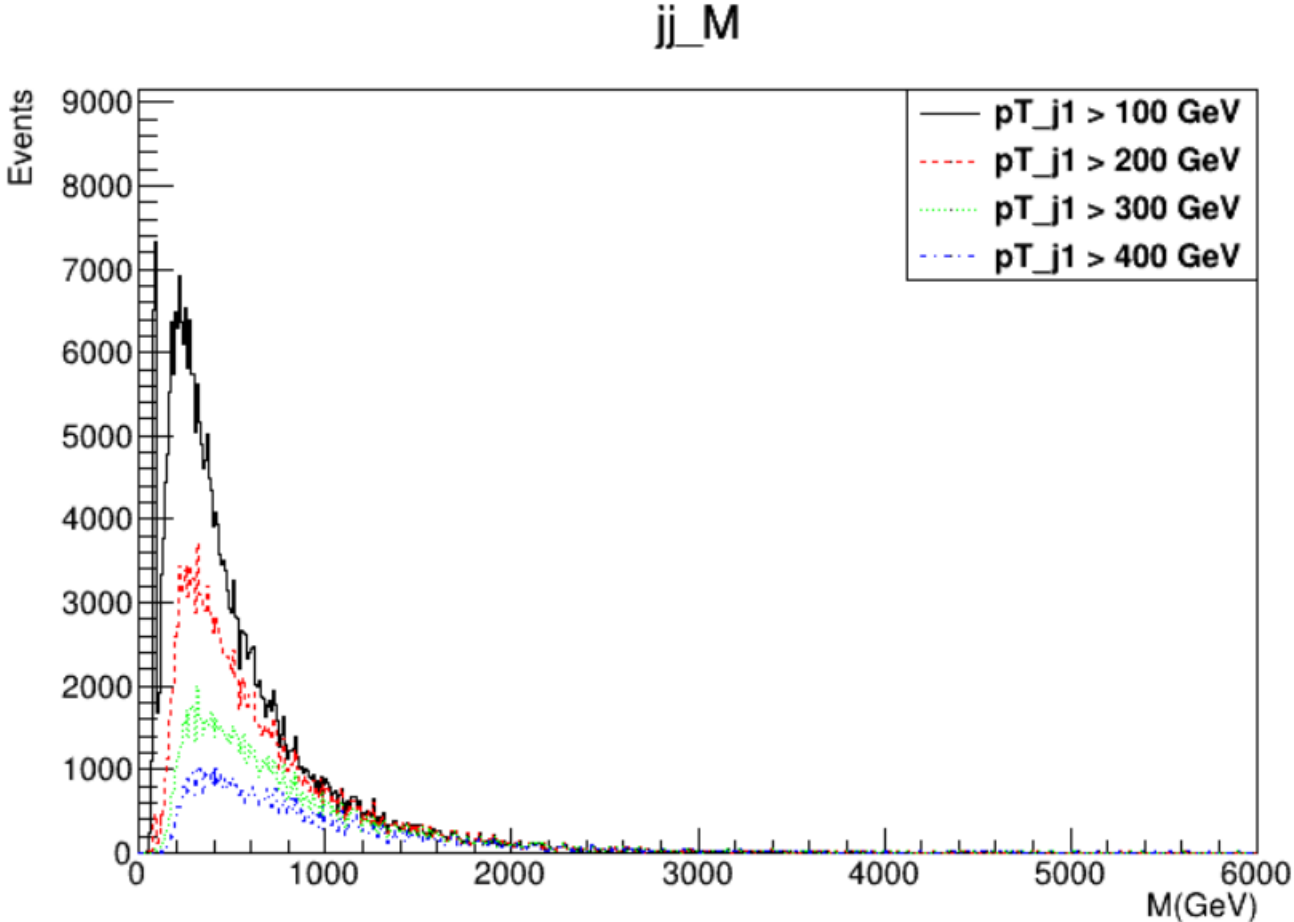
Yields

Cuts ->	n_lep=0, n_jets>=2, first leading jet pT>100	n_lep=0, n_jets>=2, first leading jet pT>200	n_lep=0, n_jets>=2, first leading jet pT>300	n_lep=0, n_jets>=2, first leading jet pT>400
SM_EFT	1081164.417	1081142.576	1081108.046	1081055.55
INT_T1_12	282244.2007	282244.0875	282243.8505	282243.5094
QUAD_T1_12	18492706.39	18492699.99	18492686.94	18492668.64
ggwpwm	11181200	11181199.87	11181200.23	11181200.04
wpwmz_ztonunu	14383.64465	14383.0148	14382.47632	14381.85155
wzmunu	1132800.002	1132800.003	1132799.993	1132800.001
zzmumu	3318.832602	3318.509485	3317.865373	3316.660813

QUAD plots



Correction to previous code: N_events used in scaling was incorrect.



pT cut on leading jet (GeV)	95% CL limits (TeV ⁻¹)
100	[-0.002299, 0.00177]
200	[-0.002299, 0.00177]
300	[-0.002293, 0.00177]
400	[-0.002263, 0.00175]
500	[-0.002183, 0.00171]

Asymmetric pT cuts	Limits (TeV ⁻¹)
100, 30	[-0.002299, 0.00177]
200, 100	[-0.002299, 0.00177]
300, 150	[-0.002294, 0.00177]
400, 200	[-0.002267, 0.00176]
500, 250	[-0.002183, 0.00171]

Symmetric pT cuts on two leading jets (GeV)	Limits (TeV ⁻¹)
100	[-0.002299, 0.00177]
200	[-0.002297, 0.00177]
300	[-0.00227, 0.00176]
400	[-0.0022, 0.00172]
500	[-0.00204, 0.0016]

Yields

Cuts ->	n_lep=0, n_jets>=2, first leading jet pT>100	n_lep=0, n_jets>=2, first leading jet pT>200	n_lep=0, n_jets>=2, first leading jet pT>300	n_lep=0, n_jets>=2, first leading jet pT>400	n_lep=0, n_jets>=2, first leading jet pT>500
SM_EFT	328468.5603	203579.1483	127116.6842	80917.00813	52351.70403
INT_T1_12	155787.5096	155293.5196	154280.1342	152837.6834	150331.0366
QUAD_T1_12	10191700.4	10159519.59	10093493.43	10003609.1	9841965.237
ggwpwm	1789390.948	656466.5075	264485.2262	107668.679	48426.87289
wpwmz_ztonunu	4726.077221	4496.676964	4317.461154	4126.642182	3901.503135
wzmunu	301467.5328	167846.9758	92259.76309	51356.62075	29611.39197
zzmumu	299.8432511	159.5141134	82.51531253	43.35539043	25.88976014

Yields for assymmetric cuts

Cuts ->	n_lep=0, n_jets>=2, pT>100, 30	n_lep=0, n_jets>=2, pT>200, 100	n_lep=0, n_jets>=2, pT>300, 150	n_lep=0, n_jets>=2, pT>400, 200	n_lep=0, n_jets>=2, pT>500, 250
SM_EFT	298162.5249	104638.5357	55065.5161	30543.9001	17666.80813
INT_T1_12	154641.4528	148072.7971	143869.6478	139711.6633	135065.3344
QUAD_T1_12	10119016.15	9695672.003	9419915.735	9148598.197	8848428.886
ggwpwm	1642908.673	409645.6762	158258.5382	71618.8978	35929.6152
wpwmz_ztonunu	4548.66092	3694.056768	44219.98077	3002.573697	2698.299847
wzmunu	275868.5186	91149.61882	44219.98077	22882.56001	12225.17759
zzmumu	272.8847092	90.84650397	46.6945057	27.40331527	17.98342571

Yields for symmetric cuts

Cuts ->	n_lep=0, n_jets>=2, first leading jet pT>100	n_lep=0, n_jets>=2, first leading jet pT>200	n_lep=0, n_jets>=2, first leading jet pT>300	n_lep=0, n_jets>=2, first leading jet pT>400	n_lep=0, n_jets>=2, first leading jet pT>500
SM_EFT	127949.2081	48437.75991	21094.21212	10163.28021	5503.308136
INT_T1_12	148208.2915	140550.0347	133145.8305	125129.0784	115737.6228
QUAD_T1_12	9704734.417	9704734.417	8723959.417	8191866.323	7579876.062
ggwpwm	725081.2554	213054.2048	78468.35635	33886.79445	16823.23145
wpwmz_ztonunu	3733.976877	3091.411415	2617.106411	2224.009238	1887.114047
wzmunu	117083.9428	41437.82405	17053.17119	7872.960008	4170.969609
zzmumu	119.0198736	47.12600168	24.4293121	14.77044013	10.11692168