Table 1: JES percent Δ Acceptance in High Mass control region

samples	**enujj**	**munujj**
herwig.ww	14.92	17.05
herwig.wz	11.95	13.16
herwig.zz	12.95	16.95
mcatnlo.ttbar	9.80	10.29
mcatnlo.singletop	11.89	12.61
alpgen.wjets	18.27	16.37
alpgen.zjets	40.44	30.31
qcd.alpgen	0.00	0.00
rsg.m500.kmpl0_1	16.18	16.51
rsg.m750.kmpl0_1	5.05	4.79
rsg.m1000.kmpl0_1	5.38	3.89
rsg.m1250.kmpl0_1	6.10	4.89
rsg.m1500.kmpl0_1	5.88	4.73
wprime.wz.m500	16.89	14.35
wprime.wz.m600	4.44	6.06
wprime.wz.m700	2.66	3.13
wprime.wz.m800	1.30	0.93
wprime.wz.m900	1.25	1.03
wprime.wz.m1000	0.78	1.12
wprime.wz.m1100	0.62	0.51
wprime.wz.m1200	0.79	2.31
wprime.wz.m1300	2.48	1.37
wprime.wz.m1400	0.53	3.02
wprime.wz.m1500	1.94	1.20

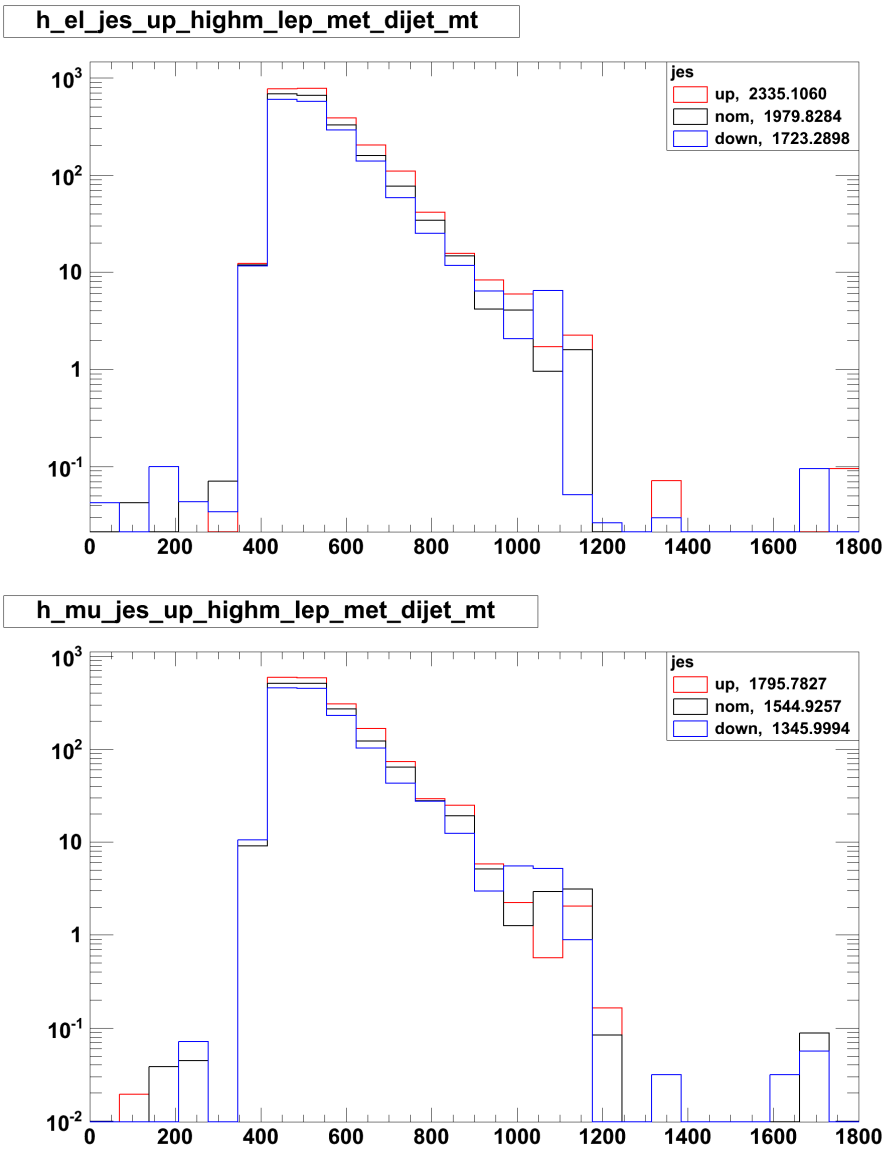

Figure 1: Transverse mass of the system for electron (top) and muon (bottom) channels

Table 1: JER percent Δ Acceptance in signal region

samples	**enujj**	**munujj**
herwig.ww	1.65	1.17
herwig.wz	2.41	1.79
herwig.zz	18.98	13.48
mcatnlo.ttbar	0.62	0.67
mcatnlo.singletop	0.81	0.95
alpgen.wjets	1.40	1.87
alpgen.zjets	15.39	7.83
qcd.alpgen	0.00	0.00
rsg.m500.kmpl0_1	1.08	0.91
rsg.m750.kmpl0_1	0.84	0.72
rsg.m1000.kmpl0_1	0.43	0.63
rsg.m1250.kmpl0_1	1.02	1.00
rsg.m1500.kmpl0_1	0.82	0.84
wprime.wz.m500	1.54	2.01
wprime.wz.m600	0.77	2.02
wprime.wz.m700	1.24	1.40
wprime.wz.m800	0.44	0.70
wprime.wz.m900	1.70	0.89
wprime.wz.m1000	1.26	1.33
wprime.wz.m1100	1.15	1.35
wprime.wz.m1200	1.00	3.21
wprime.wz.m1300	2.44	1.57
wprime.wz.m1400	1.31	1.90
wprime.wz.m1500	0.98	0.92

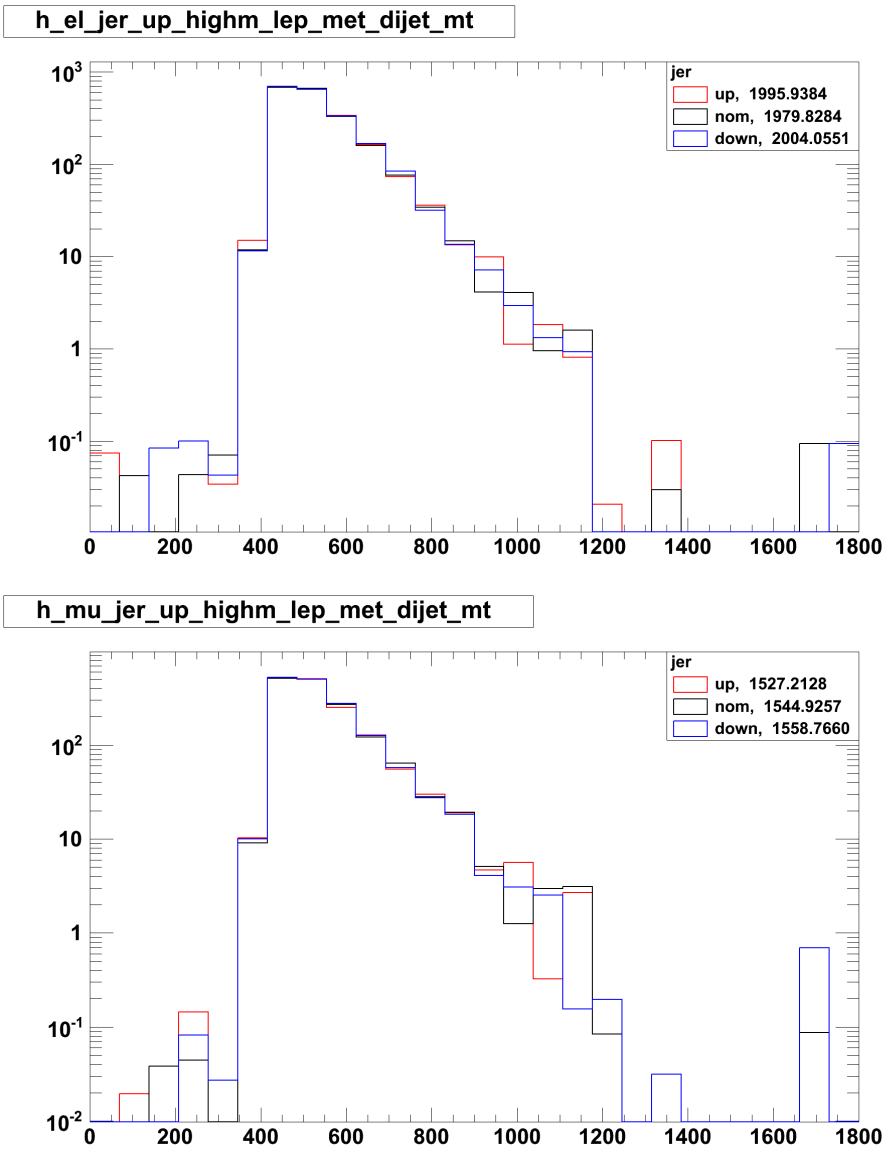

Figure 1: Transverse mass of the system for electron (top) and muon (bottom) channels

Table 1: LES percent Δ acceptance in signal region

samples	**enujj**	**munujj**
herwig.ww	0.42	0.08
herwig.wz	0.15	0.08
herwig.zz	1.65	1.54
mcatnlo.ttbar	0.08	0.00
mcatnlo.singletop	0.00	0.07
alpgen.wjets	0.34	0.04
alpgen.zjets	3.18	2.11
qcd.alpgen	0.00	0.00
rsg.m500.kmpl0_1	0.27	0.05
rsg.m750.kmpl0_1	0.19	0.01
rsg.m1000.kmpl0_1	0.52	0.01
rsg.m1250.kmpl0_1	0.28	0.02
rsg.m1500.kmpl0_1	0.29	0.00
wprime.wz.m500	0.15	0.04
wprime.wz.m600	0.19	0.01
wprime.wz.m700	0.02	0.05
wprime.wz.m800	0.16	0.06
wprime.wz.m900	0.17	0.01
wprime.wz.m1000	0.14	0.00
wprime.wz.m1100	0.15	0.03
wprime.wz.m1200	0.32	0.01
wprime.wz.m1300	0.25	0.10
wprime.wz.m1400	0.05	0.16
wprime.wz.m1500	0.32	0.00

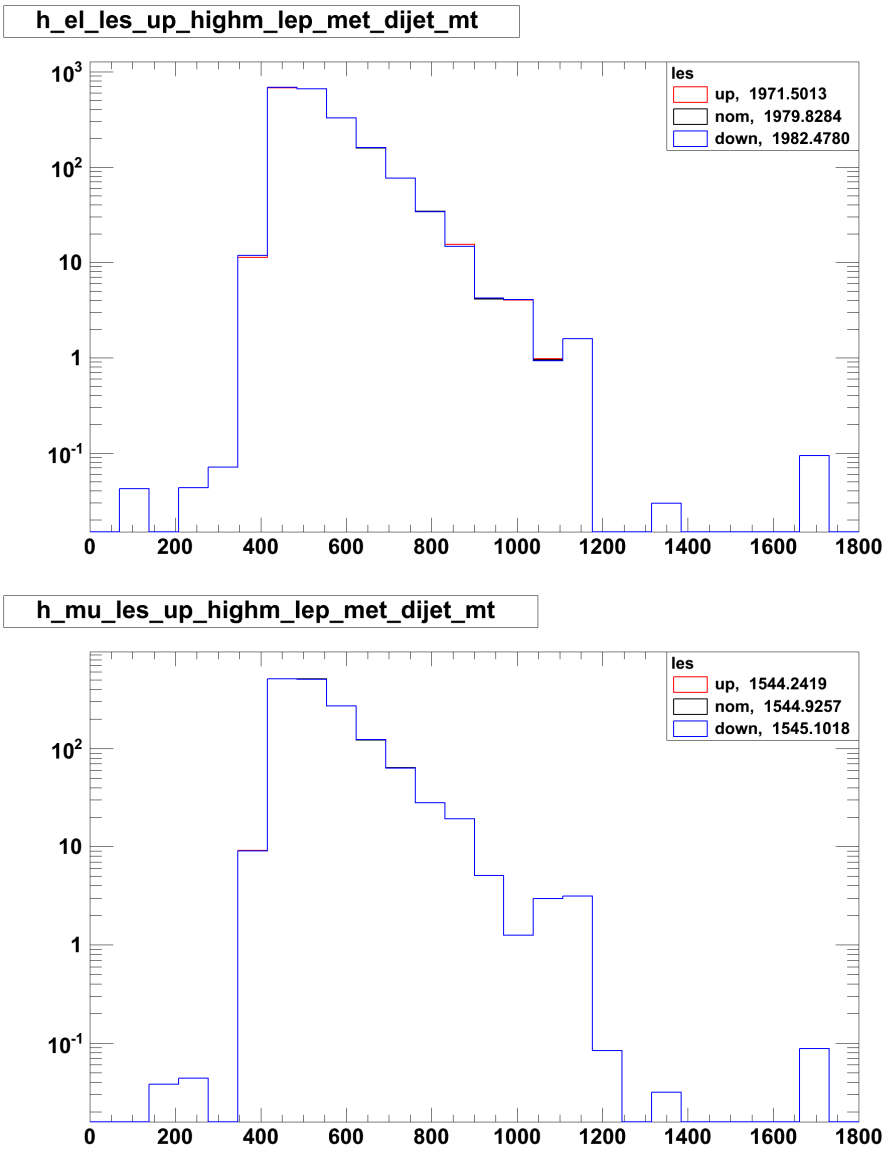

Figure 1: Transverse mass of the system for electron (top) and muon (bottom) channels

Table 1: ler Fractional Δ Acceptance in High Mass control region

samples	**enujj**	**munujj**
herwig.ww	0.33	0.56
herwig.wz	0.19	0.53
herwig.zz	2.01	6.49
mcatnlo.ttbar	0.03	0.86
mcatnlo.singletop	0.22	0.27
alpgen.wjets	0.18	0.66
alpgen.zjets	0.61	9.38
qcd.alpgen	0.00	0.00
rsg.m500.kmpl0_1	0.14	0.24
rsg.m750.kmpl0_1	0.08	0.60
rsg.m1000.kmpl0_1	0.46	0.95
rsg.m1250.kmpl0_1	0.20	0.72
rsg.m1500.kmpl0_1	0.03	0.87
wprime.wz.m500	0.31	0.43
wprime.wz.m600	0.26	0.57
wprime.wz.m700	0.31	0.49
wprime.wz.m800	0.12	0.57
wprime.wz.m900	0.24	0.99
wprime.wz.m1000	0.14	0.46
wprime.wz.m1100	0.17	0.70
wprime.wz.m1200	0.18	1.46
wprime.wz.m1300	0.25	1.25
wprime.wz.m1400	0.19	1.26
wprime.wz.m1500	0.00	1.54

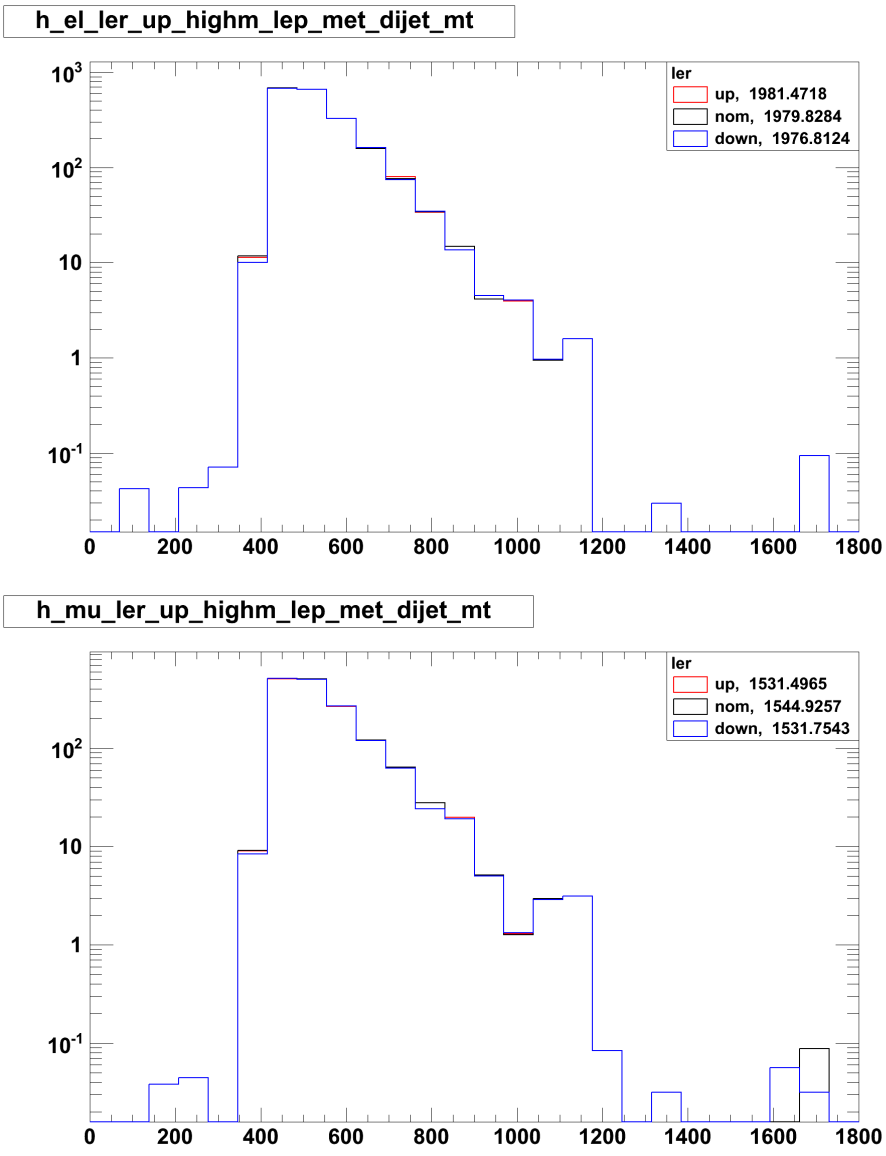

Figure 1: Transverse mass of the system for electron (top) and muon (bottom) channels

Table 1: Lepton ID scale factor, fractional Δ Acceptance in High Mass control region

samples	**enujj**	**munujj**
herwig.ww	0.92	0.04
herwig.wz	0.93	0.04
herwig.zz	0.85	0.04
mcatnlo.ttbar	0.88	0.04
mcatnlo.singletop	0.87	0.04
alpgen.wjets	0.95	0.04
alpgen.zjets	0.91	0.04
qcd.alpgen	0.00	0.00
rsg.m500.kmpl0_1	0.86	0.04
rsg.m750.kmpl0_1	0.88	0.04
rsg.m1000.kmpl0_1	0.90	0.04
rsg.m1250.kmpl0_1	0.95	0.04
rsg.m1500.kmpl0_1	1.00	0.04
wprime.wz.m500	0.91	0.04
wprime.wz.m600	0.89	0.04
wprime.wz.m700	0.89	0.04
wprime.wz.m800	0.88	0.04
wprime.wz.m900	0.87	0.04
wprime.wz.m1000	0.88	0.04
wprime.wz.m1100	0.89	0.04
wprime.wz.m1200	0.91	0.04
wprime.wz.m1300	0.92	0.04
wprime.wz.m1400	0.92	0.04
wprime.wz.m1500	0.95	0.04

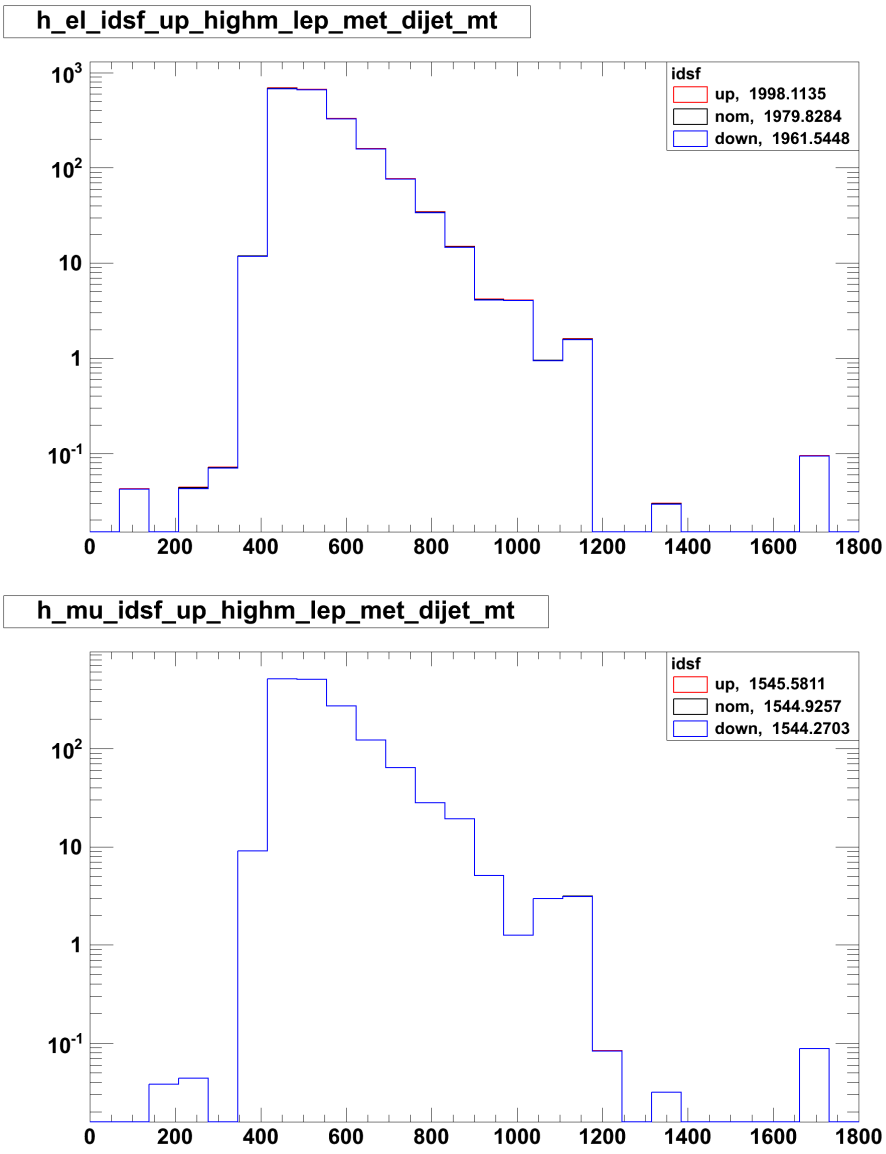

Figure 1: Transverse mass of the system for electron (top) and muon (bottom) channels

Table 1: Lepton isolation scale factor, fractional Δ Acceptance in High Mass control region

samples	**enujj**	**munujj**
herwig.ww	2.00	1.00
herwig.wz	2.00	1.00
herwig.zz	2.00	1.00
mcatnlo.ttbar	2.00	1.00
mcatnlo.singletop	2.00	1.00
alpgen.wjets	2.00	1.00
alpgen.zjets	2.00	1.00
qcd.alpgen	0.00	0.00
rsg.m500.kmpl0_1	2.00	1.00
rsg.m750.kmpl0_1	2.00	1.00
rsg.m1000.kmpl0_1	2.00	1.00
rsg.m1250.kmpl0_1	2.00	1.00
rsg.m1500.kmpl0_1	2.00	1.00
wprime.wz.m500	2.00	1.00
wprime.wz.m600	2.00	1.00
wprime.wz.m700	2.00	1.00
wprime.wz.m800	2.00	1.00
wprime.wz.m900	2.00	1.00
wprime.wz.m1000	2.00	1.00
wprime.wz.m1100	2.00	1.00
wprime.wz.m1200	2.00	1.00
wprime.wz.m1300	2.00	1.00
wprime.wz.m1400	2.00	1.00
wprime.wz.m1500	2.00	1.00

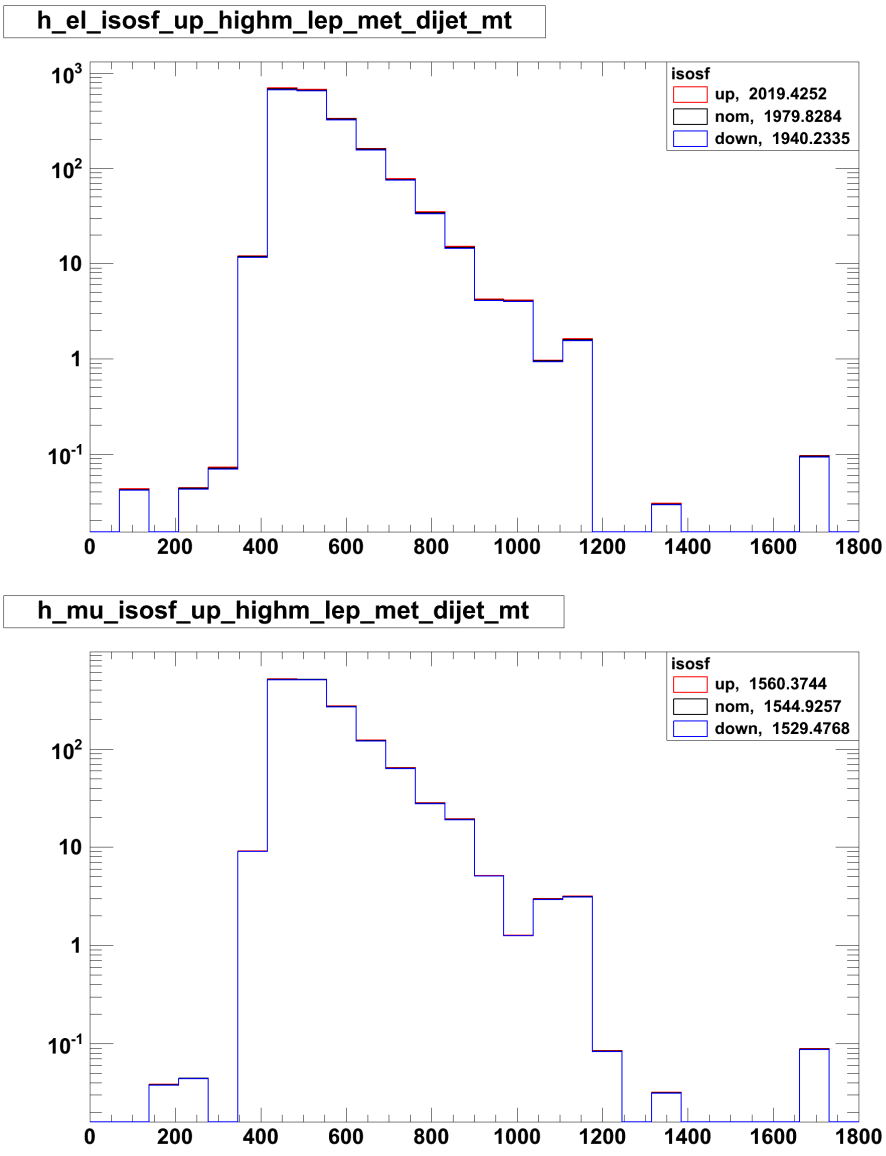

Figure 1: Transverse mass of the system for electron (top) and muon (bottom) channels

Table 1: Lepton reconstruction scale factor, fractional Δ Acceptance in High Mass control region

samples	**enujj**	**munujj**
herwig.ww	0.83	0.40
herwig.wz	0.83	0.40
herwig.zz	0.80	0.42
mcatnlo.ttbar	0.88	0.38
mcatnlo.singletop	0.88	0.39
alpgen.wjets	0.81	0.40
alpgen.zjets	0.84	0.46
qcd.alpgen	0.00	0.00
rsg.m500.kmpl0_1	0.90	0.37
rsg.m750.kmpl0_1	0.88	0.40
rsg.m1000.kmpl0_1	0.84	0.43
rsg.m1250.kmpl0_1	0.79	0.45
rsg.m1500.kmpl0_1	0.74	0.46
wprime.wz.m500	0.85	0.38
wprime.wz.m600	0.86	0.39
wprime.wz.m700	0.86	0.40
wprime.wz.m800	0.88	0.41
wprime.wz.m900	0.88	0.42
wprime.wz.m1000	0.87	0.42
wprime.wz.m1100	0.86	0.44
wprime.wz.m1200	0.85	0.44
wprime.wz.m1300	0.85	0.45
wprime.wz.m1400	0.81	0.47
wprime.wz.m1500	0.81	0.47

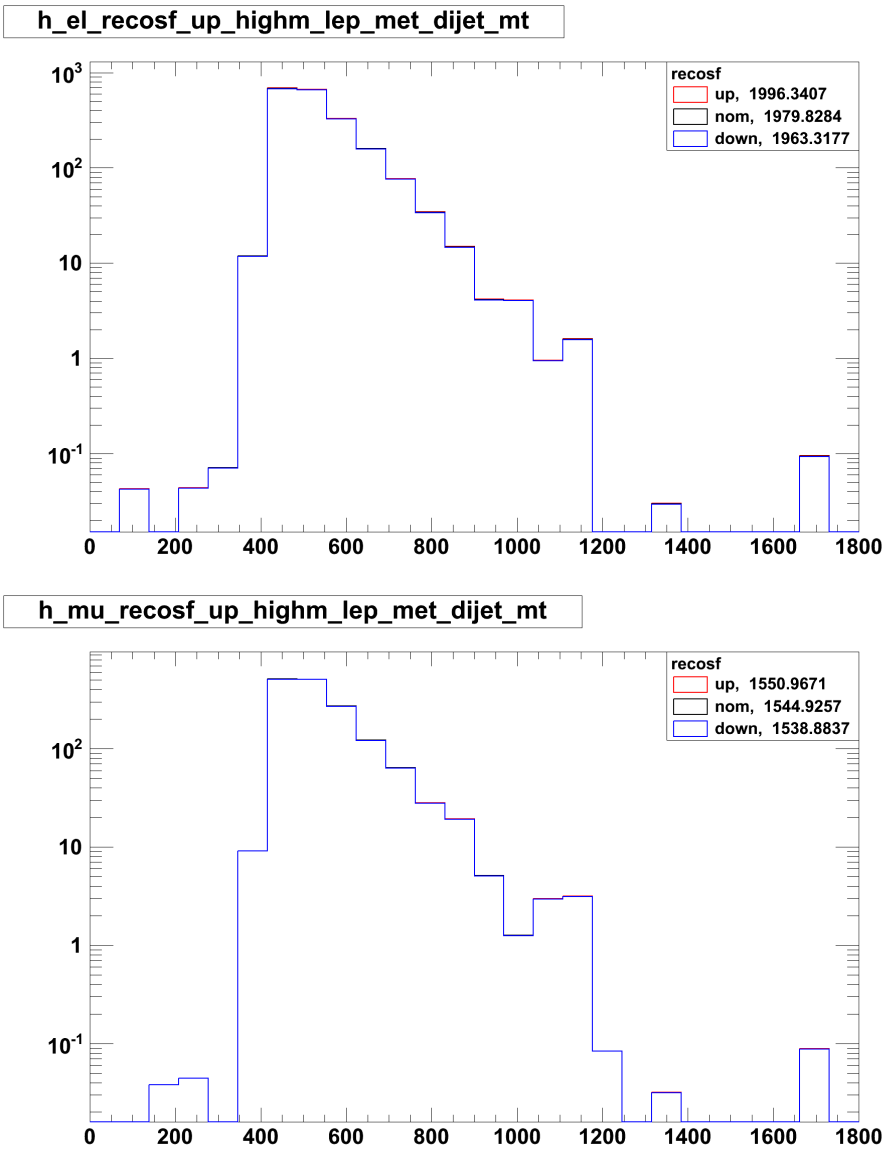

Figure 1: Transverse mass of the system for electron (top) and muon (bottom) channels

Table 1: Lepton trigger scale factor, fractional Δ Acceptance in High Mass control region

samples	**enujj**	**munujj**
herwig.ww	0.56	1.72
herwig.wz	0.55	1.70
herwig.zz	0.56	1.72
mcatnlo.ttbar	0.55	1.74
mcatnlo.singletop	0.56	1.73
alpgen.wjets	0.56	1.71
alpgen.zjets	0.55	1.71
qcd.alpgen	0.00	0.00
rsg.m500.kmpl0_1	0.55	1.74
rsg.m750.kmpl0_1	0.56	1.72
rsg.m1000.kmpl0_1	0.56	1.73
rsg.m1250.kmpl0_1	0.56	1.70
rsg.m1500.kmpl0_1	0.56	1.69
wprime.wz.m500	0.56	1.72
wprime.wz.m600	0.56	1.72
wprime.wz.m700	0.56	1.72
wprime.wz.m800	0.56	1.75
wprime.wz.m900	0.56	1.73
wprime.wz.m1000	0.56	1.75
wprime.wz.m1100	0.55	1.73
wprime.wz.m1200	0.56	1.73
wprime.wz.m1300	0.56	1.71
wprime.wz.m1400	0.55	1.75
wprime.wz.m1500	0.56	1.69

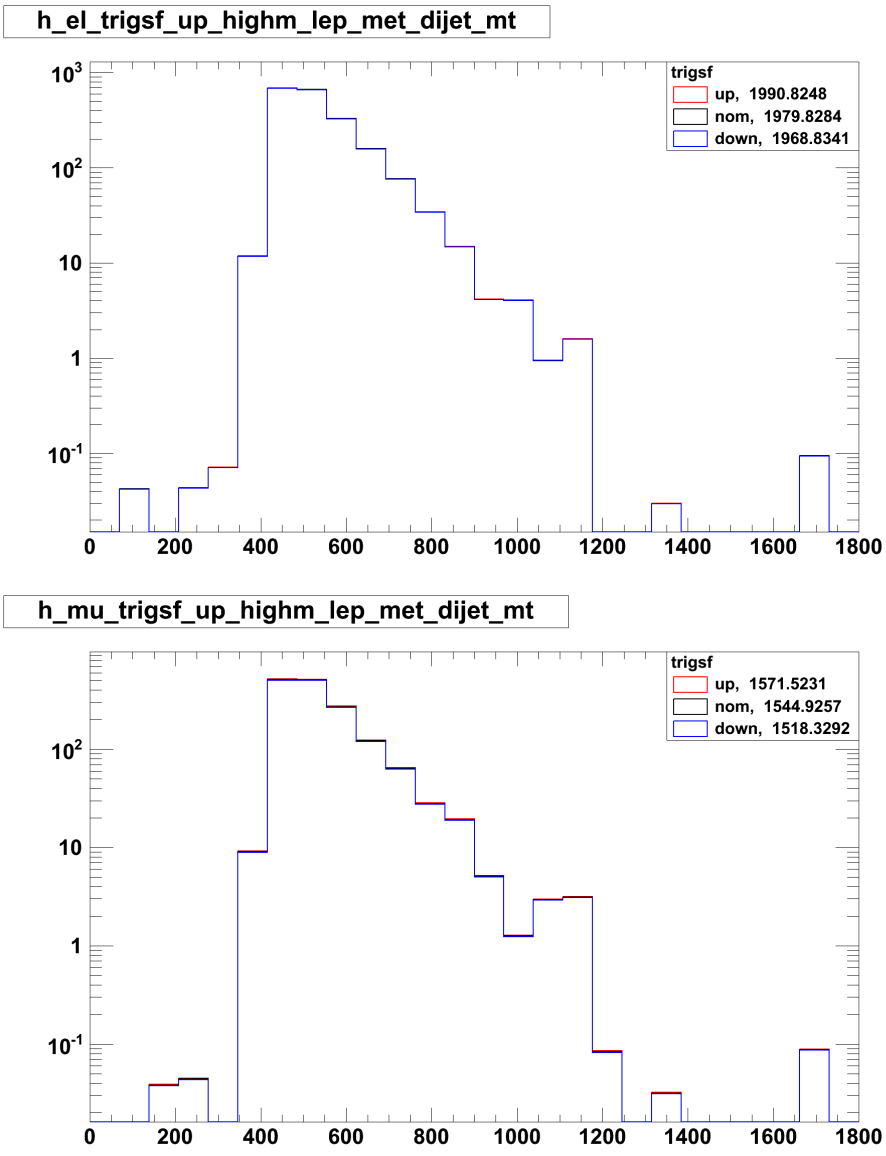

Figure 1: Transverse mass of the system for electron (top) and muon (bottom) channels

Table 1: All Clusters fractional Δ acceptance in signal region

samples	**enujj**	**munujj**
herwig.ww	0.35	0.18
herwig.wz	1.11	0.89
herwig.zz	2.18	3.20
mcatnlo.ttbar	1.28	0.47
mcatnlo.singletop	1.62	0.47
alpgen.wjets	0.92	0.60
alpgen.zjets	4.53	1.64
qcd.alpgen	30.77	1.39
rsg.m500.kmpl0_1	1.11	1.10
rsg.m750.kmpl0_1	0.18	0.16
rsg.m1000.kmpl0_1	0.32	0.24
rsg.m1250.kmpl0_1	0.16	0.09
rsg.m1500.kmpl0_1	0.20	0.03
wprime.wz.m500	1.41	0.58
wprime.wz.m600	0.53	0.04
wprime.wz.m700	0.12	0.09
wprime.wz.m800	0.36	0.12
wprime.wz.m900	0.07	0.14
wprime.wz.m1000	0.04	0.03
wprime.wz.m1100	0.13	0.12
wprime.wz.m1200	0.36	0.51
wprime.wz.m1300	0.16	0.20
wprime.wz.m1400	0.14	0.26
wprime.wz.m1500	0.15	0.00

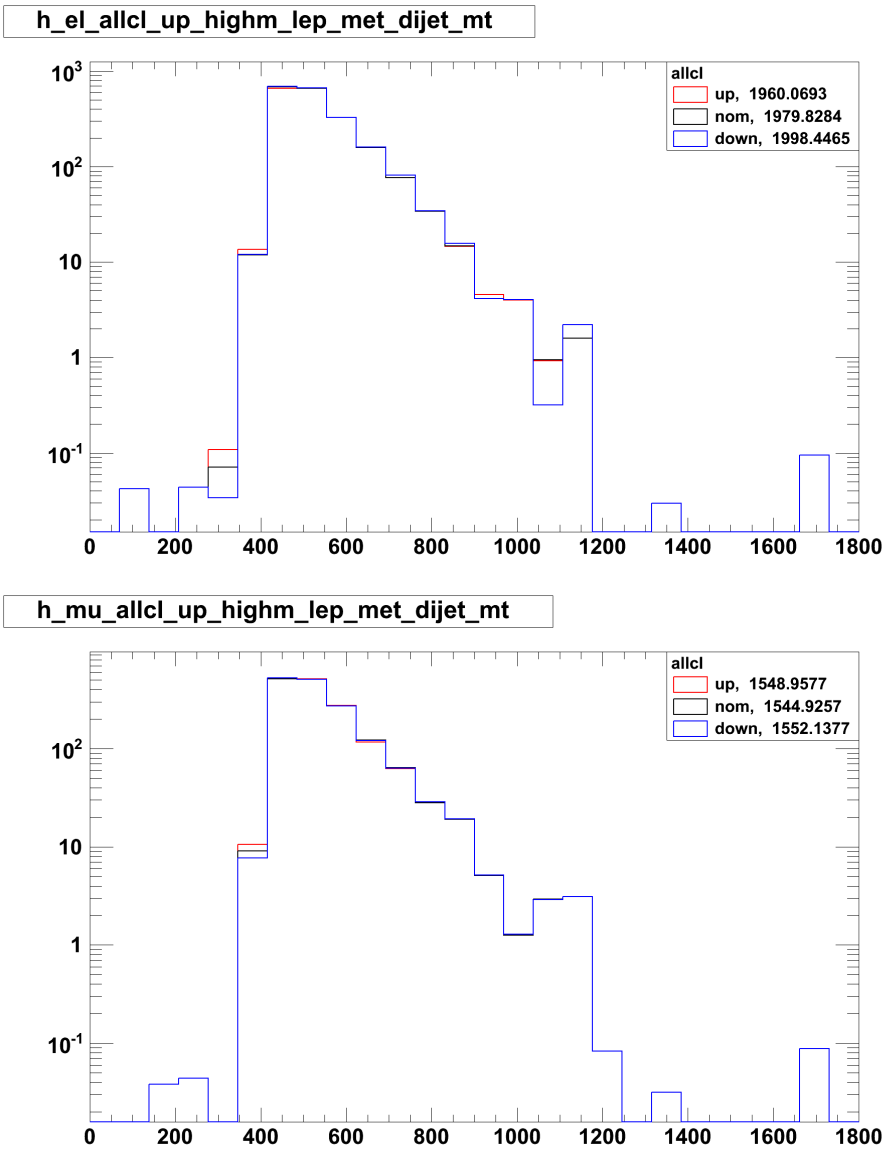

Figure 1: Transverse mass of the system for electron (top) and muon (bottom) channels