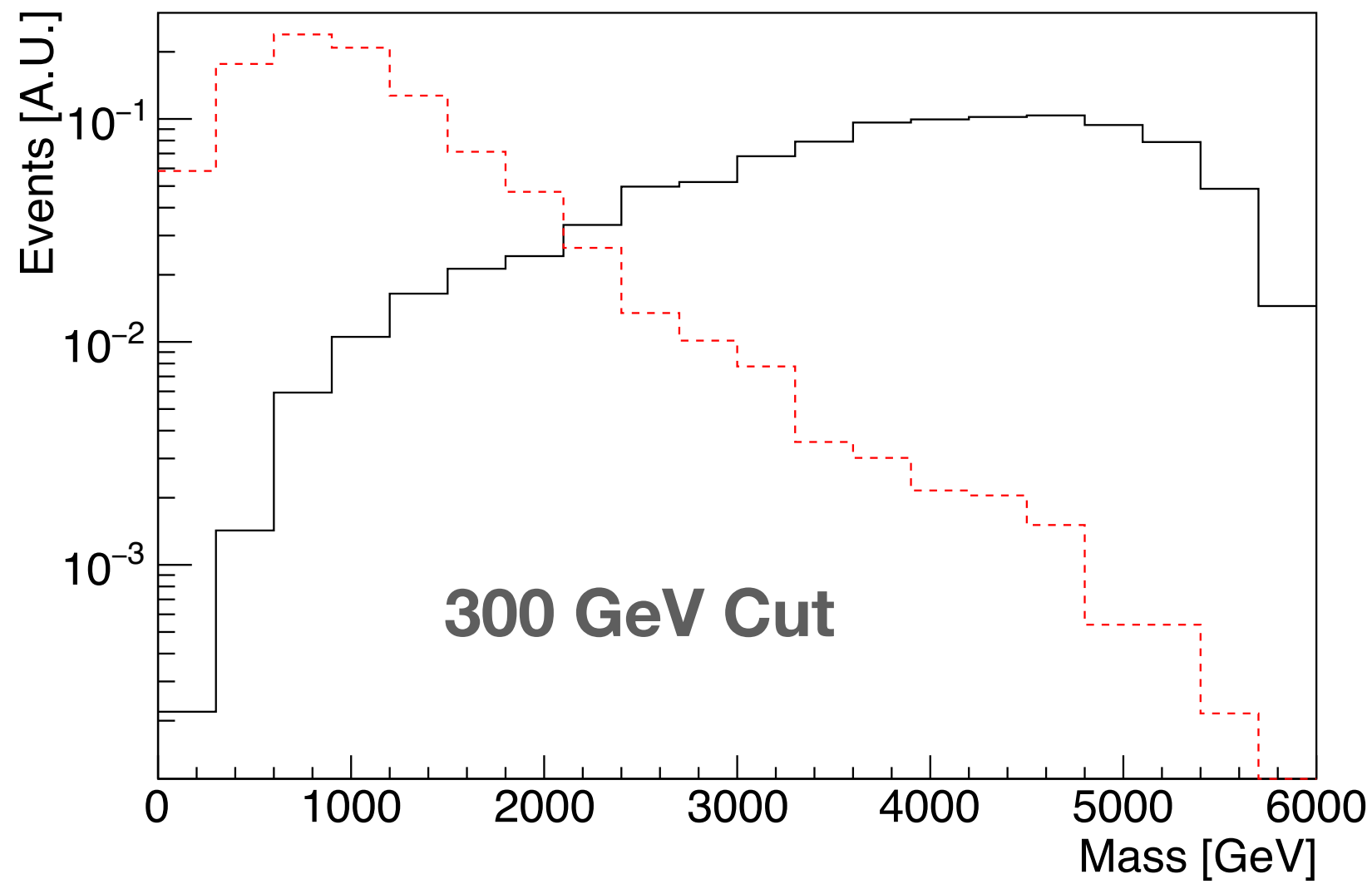


# **Mumu Channel Update**

Connor Waits 5-31-2022

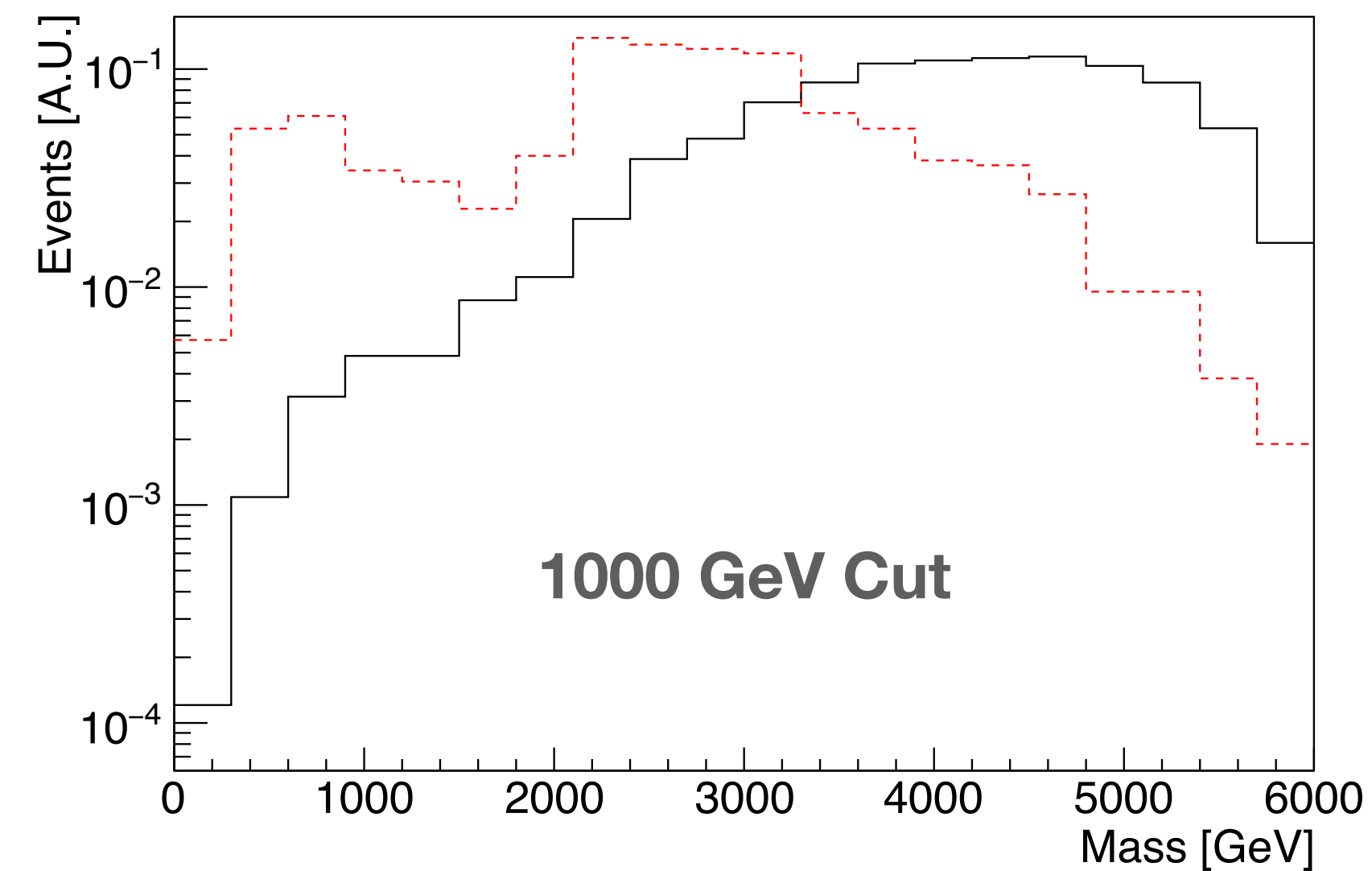
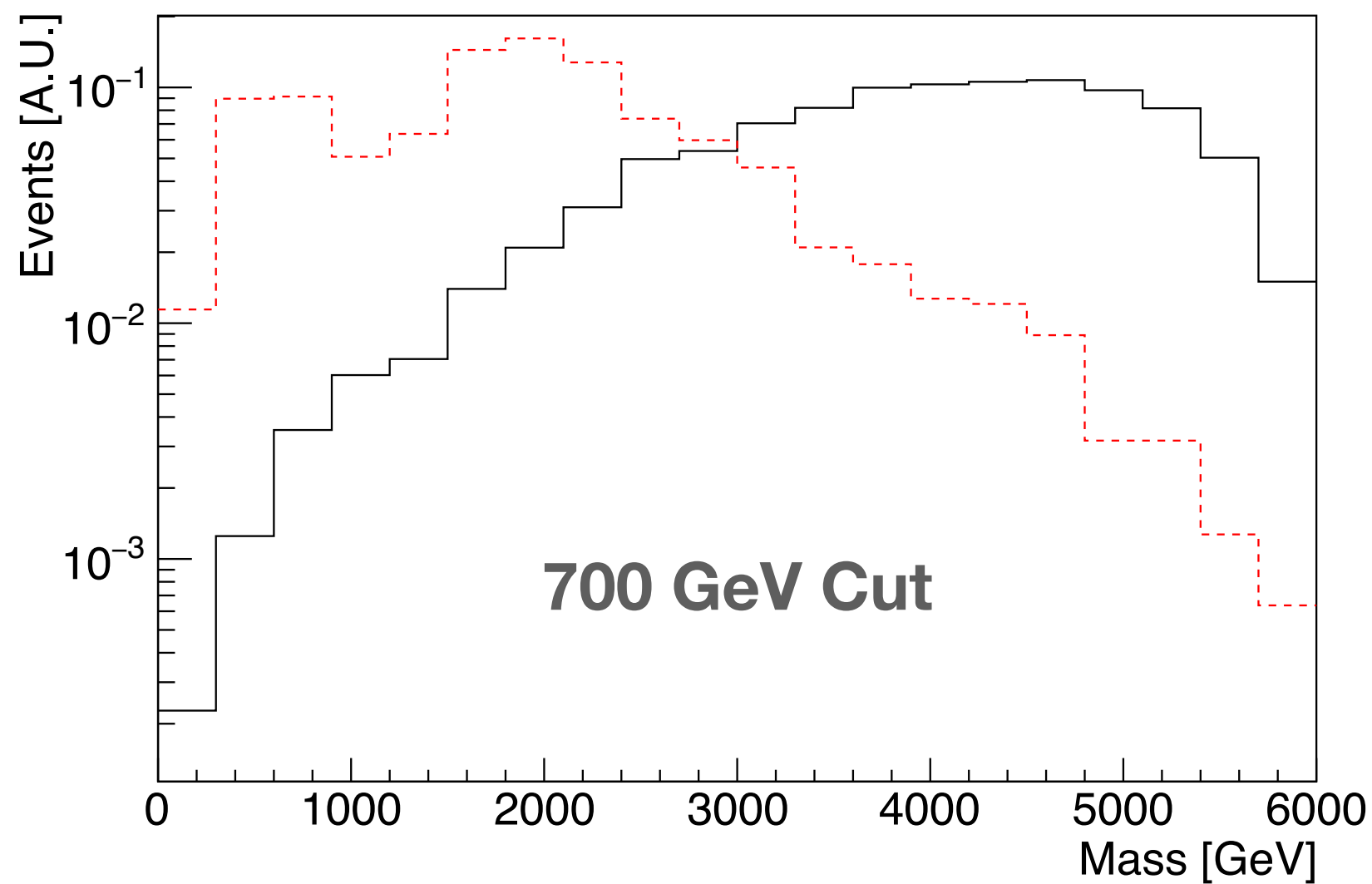
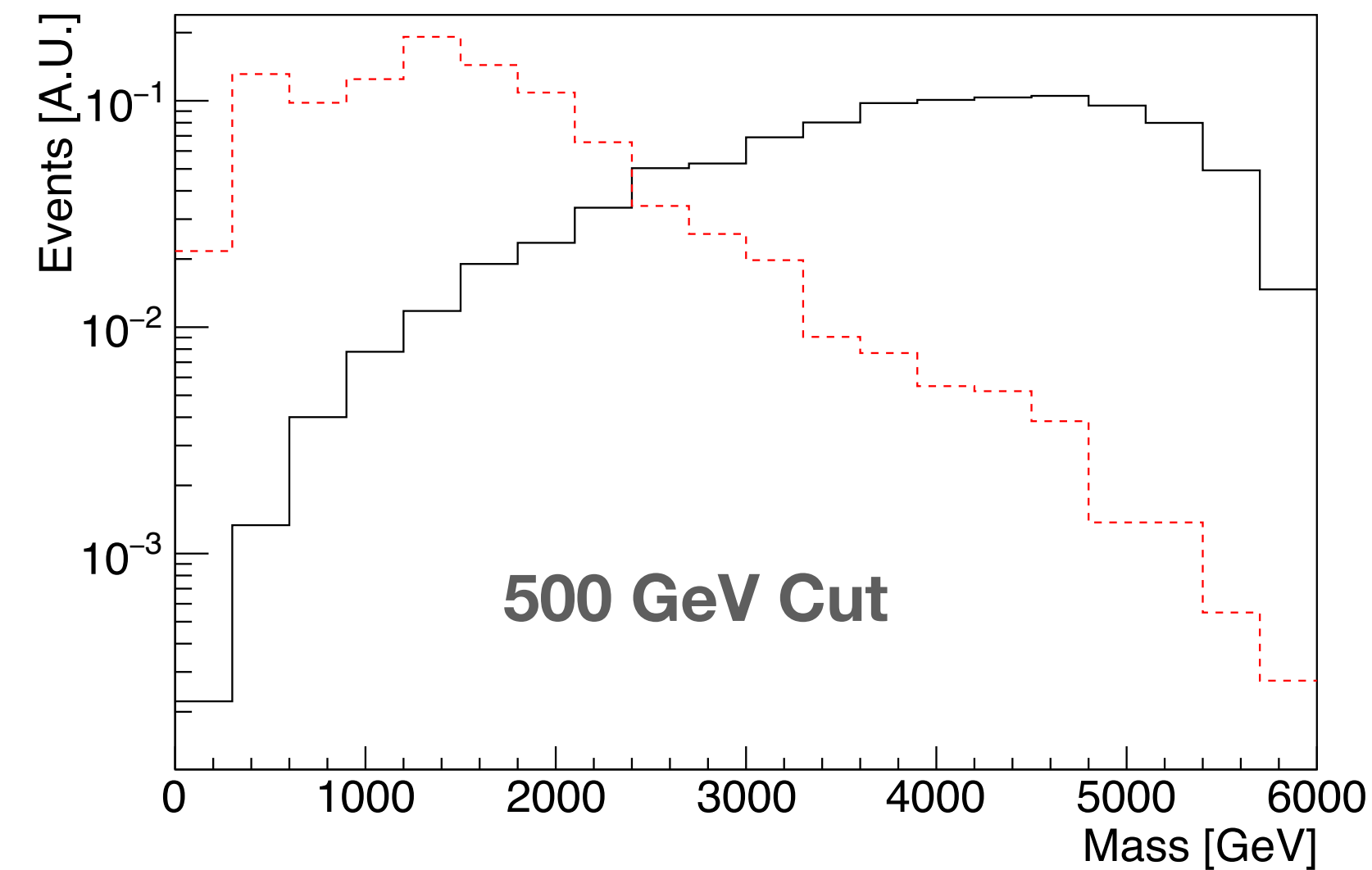


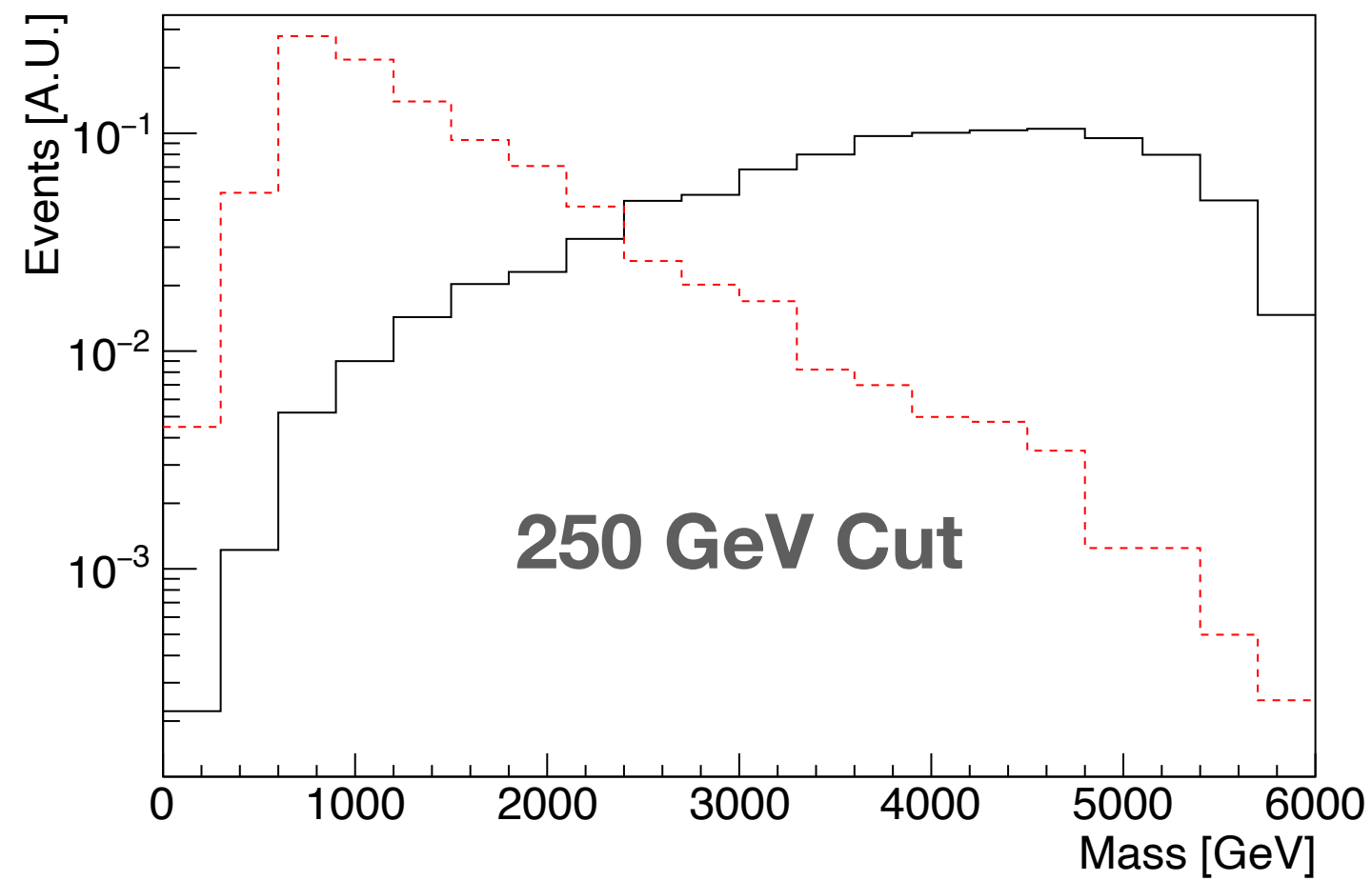
**Event Selection:**

- $\text{abs}(\text{truthW eta}) < 2.5$
- Truth W momentum  $>$  cut
- Number of truth W's = 2

**Black: INT+QUAD**  
**Red: SM**

**Truth WW pair invariant mass plotted**  
**Plots normalized to unit area**



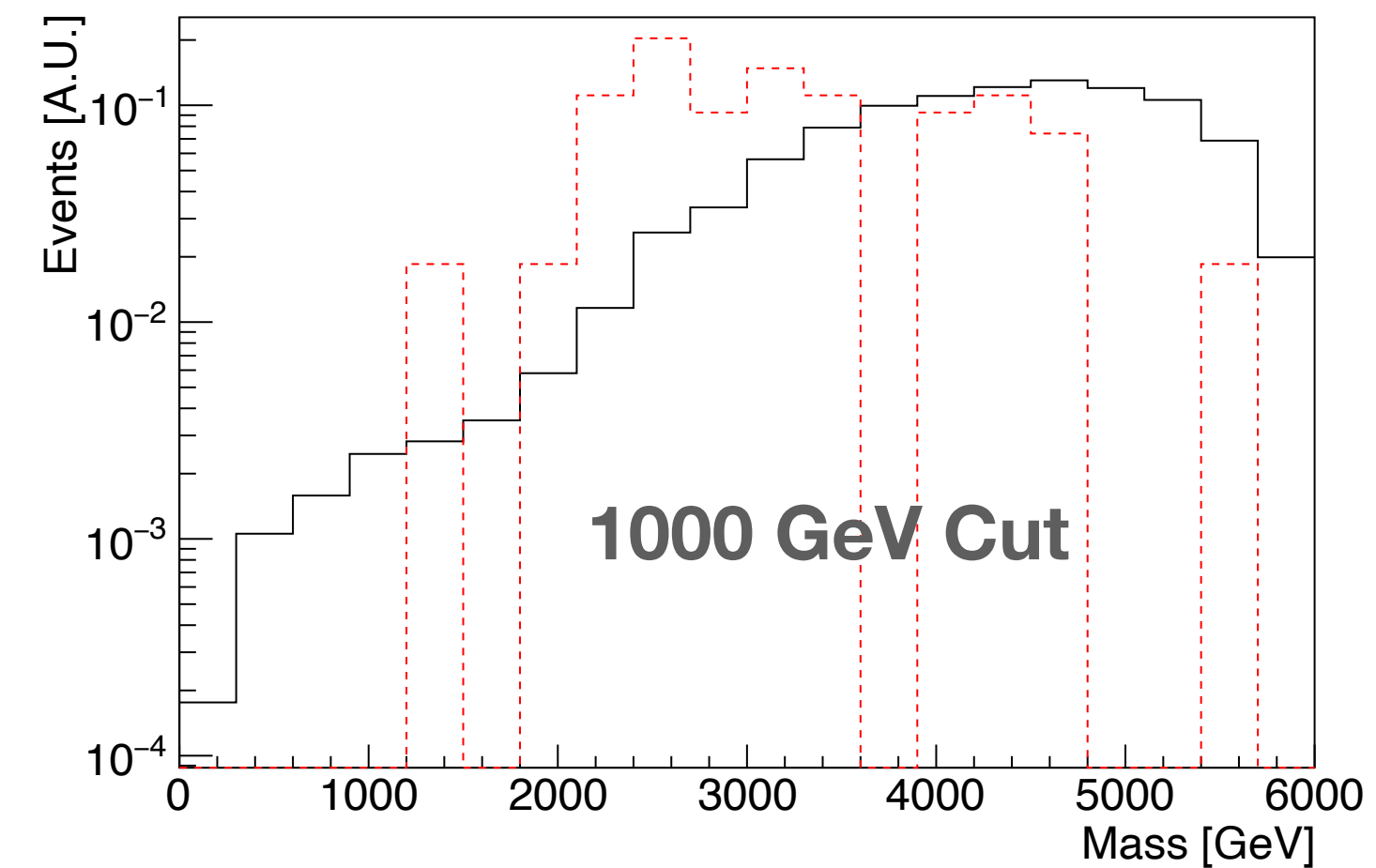
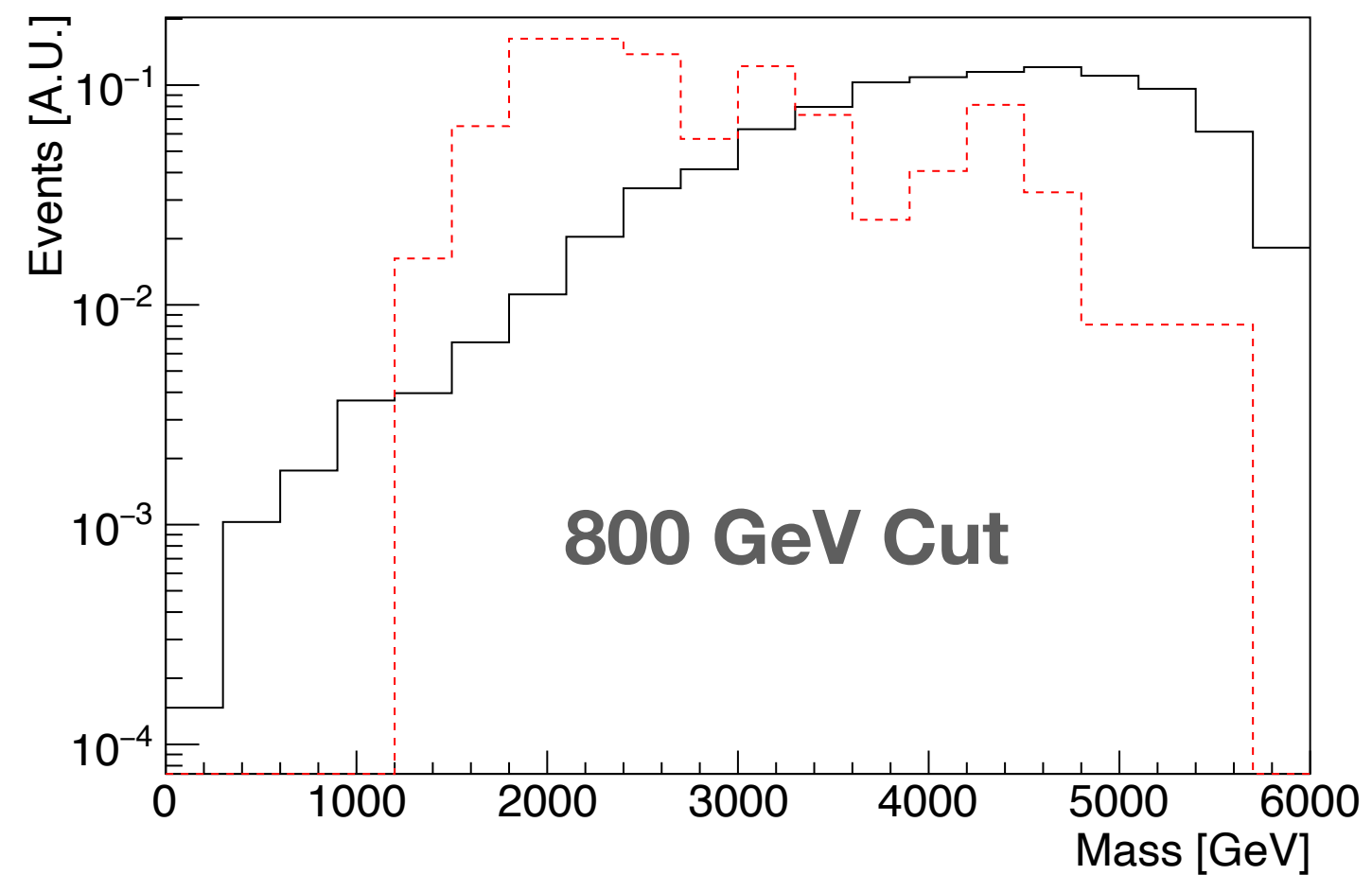
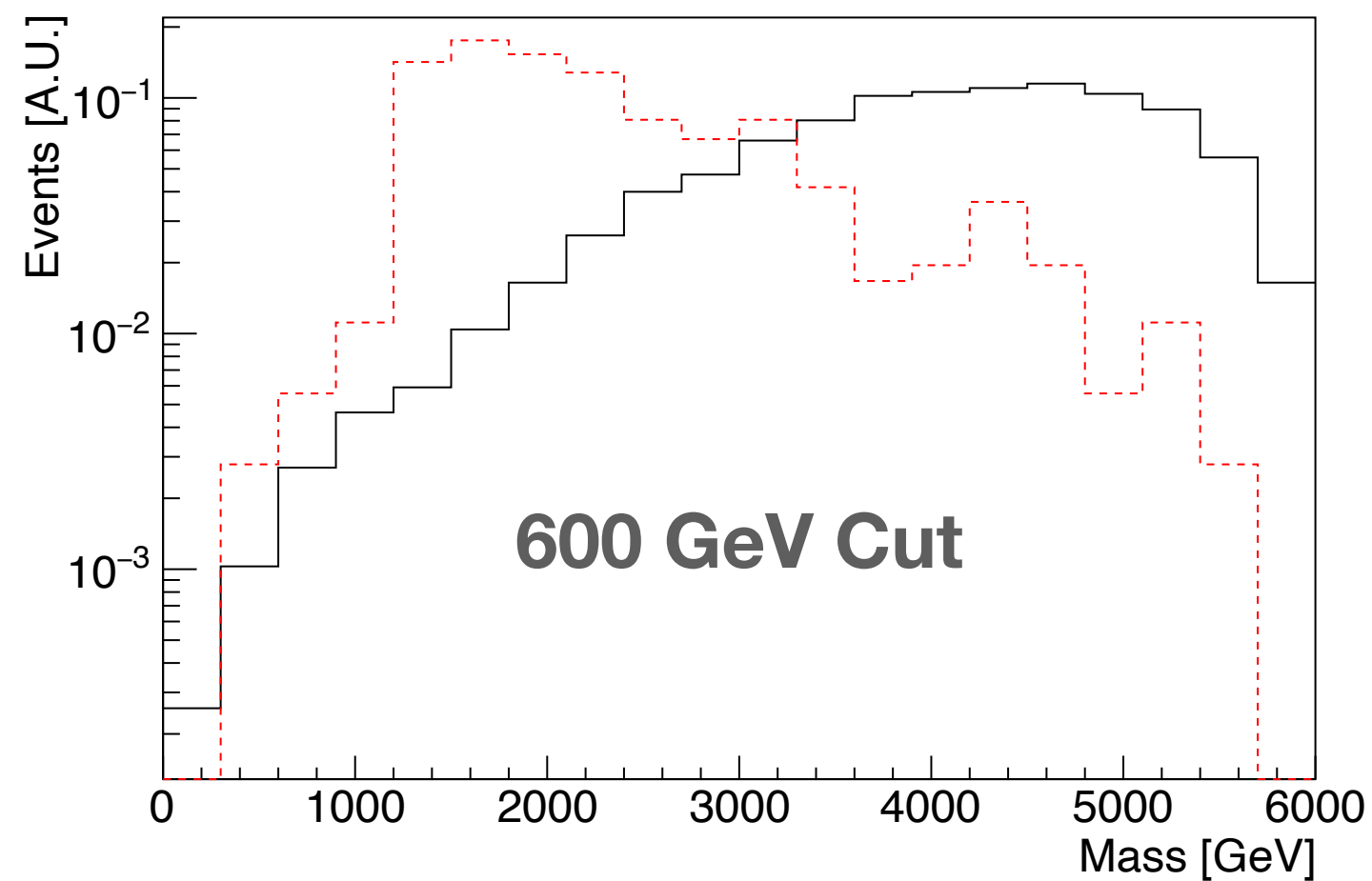
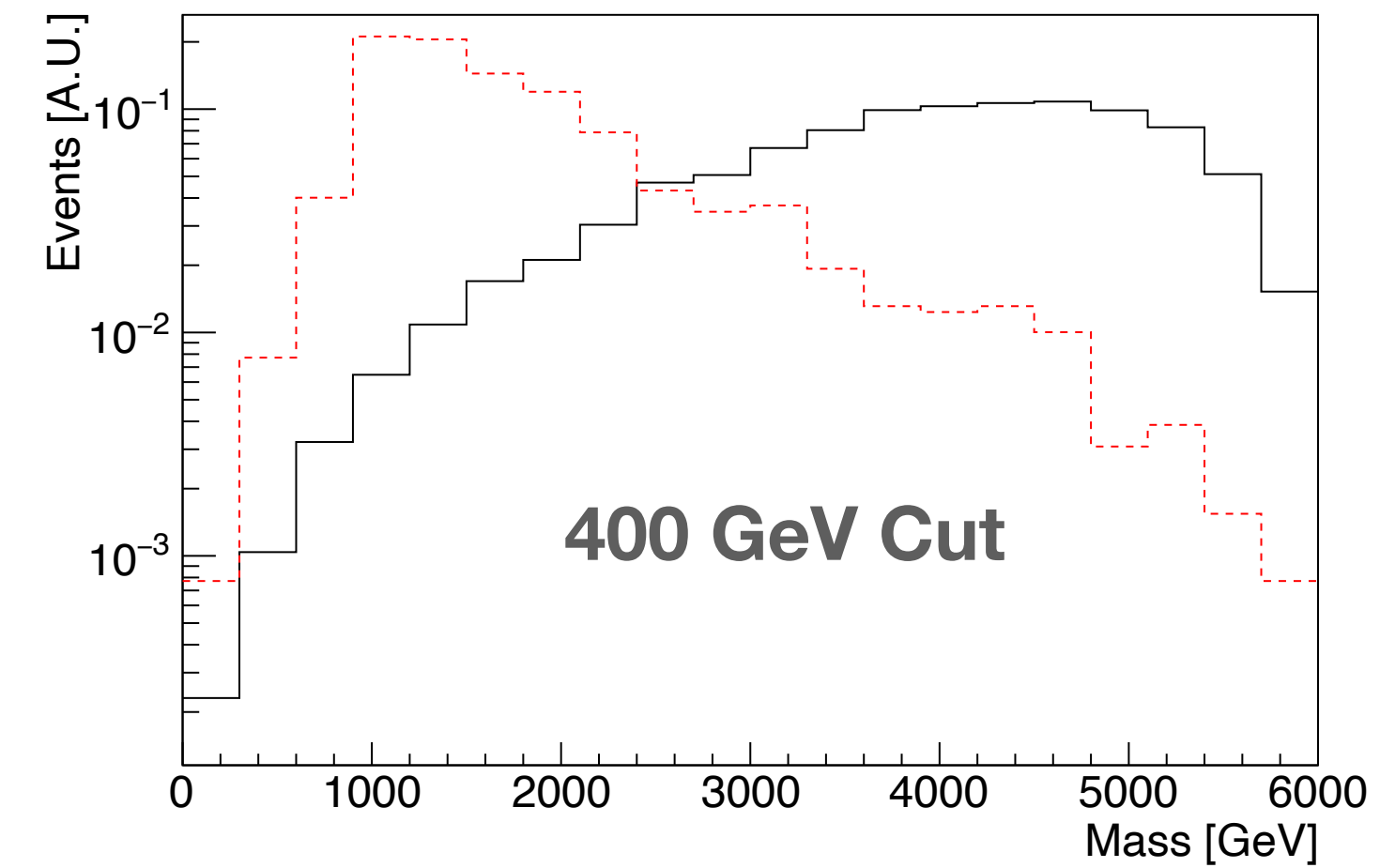


**Event Selection:**

- $\text{abs}(\text{truthW eta}) < 2.5$
- Truth W pT > cut
- Number of truth W's = 2

**Black: INT+QUAD**  
**Red: SM**

**Truth WW pair invariant mass plotted**  
**Plots normalized to unit area**



Truth W momentum cut (GeV)	300	500	700	1000
INT+QUAD Efficiency	91.10%	89.90%	88.30%	82.80%
SM Efficiency	9.27%	3.64%	1.57%	0.53%

Cut (P)	Lower Limit	Upper Limit
300	-0.007024	0.00423553
500	-0.0070711	0.00424148
700	-0.0072736	0.00426658
1000	-0.0082335	0.00436158

Truth W pT cut (GeV)	250	400	600	800	1000
INT+QUAD Efficiency	90.07%	86.6	77.81	68.1	56.79
SM Efficiency	4.01%	1.30%	0.34%	0.12%	0.05%

Cut (pT)	Lower Limit	Upper Limit
250	-0.0068451	0.00420472
400	-0.0064174	0.00400015
600	-0.0076443	0.0030054
800	-0.00885959	0.00276486
1000	-0.0074284	-0.0020095

New Limits	Lower	Upper
T0	-0.0206472	0.01008458
T1	-0.0324085	0.01524162
T2	-0.0624825	0.02012305
T6	-0.0155208	0.01258974
T7	-0.0209861	0.01581086

$WW\mu\mu$	Limits (TeV) <sup>-1</sup>
$f_{T0}/\Lambda^4$	[-0.04, 0.028]
$f_{T1}/\Lambda^4$	[-0.025, 0.0095]
$f_{T2}/\Lambda^4$	[-0.12, 0.068]
$f_{T6}/\Lambda^4$	[-0.034, 0.033]
$f_{T7}/\Lambda^4$	[-0.043, 0.038]