Monotop Update

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August 25, 2016
Event selection criteria (Hadronic channel)

- Hadronic $W+\text{jets}$ with a MET cut $> 250$ GeV at Generator level.

<table>
<thead>
<tr>
<th>CMS Selections</th>
</tr>
</thead>
<tbody>
<tr>
<td>[1] No b-jets $p_T$ $&gt; 30$ GeV</td>
</tr>
<tr>
<td>[2] No b-jets $</td>
</tr>
<tr>
<td>[3] $N(b - \text{jet})$ $= 1$</td>
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<tr>
<td>[4] $p_T(b - \text{jet})$ $&gt; 70$ GeV</td>
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<tr>
<td>[5] $</td>
</tr>
<tr>
<td>[6] Number (No b-jets) $= 2$</td>
</tr>
<tr>
<td>[7] $N(\ell) \ (\ell = \mu - \text{OR} - e - \text{OR} - \tau)$ $= 0$</td>
</tr>
<tr>
<td>[8] $E_T^{\text{miss}}$ $&gt; 350$ GeV</td>
</tr>
<tr>
<td>[9] $m(j, j, b)$ $&lt; 450$ GeV</td>
</tr>
</tbody>
</table>
Helicity after b selection. (Mass window 20 GeV)

Linear (left) and log scale (right).
Helicity after $\ell$ veto. (Mass window 20 GeV)

Linear (left) and log scale (right).
Helicity after MET. (Mass window 20 GeV)

Linear (left) and log scale (right).
Helicity after top-mass cut. (Mass window 20 GeV)

Linear (left) and log scale (right).
Helicity after $\text{MET} > 350$ GeV. (Mass window 20 GeV)

Linear (left) and log scale (right).

Events (100 fb$^{-1}$)

E(b)/E(t)[GeV]

DY→ll+jets
singletop
Signal-left 1-jet
Signal-right 1-jet
All BGs (stat uncertainties)
Helicity after top-mass $< 450$ GeV. (Mass window 20 GeV)

Linear (left) and log scale (right).
Helicity after MET $> 350$ GeV. (Mass window 40 GeV)

Linear (left) and log scale (right).
Helicity after top-mass < 450 GeV. (Mass window 40 GeV)

Linear (left) and log scale (right).
Helicity after MET $> 350$ GeV. (Mass window $60$ GeV)

Linear (left) and log scale (right).
Helicity after top-mass < 450 GeV. (Mass window 60 GeV)

Linear (left) and log scale (right).