

Observable		5j3b	6j4b	6j3b3l	7j4b3l
σ_{fid}	Inclusive cross section	✓	✓	✓	✓
Global observables					
N_{jets}	Jet multiplicity	✓	✓		
N_{b}	b jet multiplicity	✓			
H_{T}^j	Scalar sum of jet p_{T}	✓	✓		
H_{T}^{b}	Scalar sum of b jet p_{T}	✓	✓		
$H_{\text{T}}^{\text{light}}$	Scalar sum of light jet p_{T}			✓	✓
Observables related to b jets					
$p_{\text{T}}(\mathbf{b}_3)$	p_{T} of third hardest b jet	✓	✓		
$ \eta(\mathbf{b}_3) $	$ \eta $ of third hardest b jet	✓	✓		
$p_{\text{T}}(\mathbf{b}_4)$	p_{T} of fourth hardest b jet		✓		
$ \eta(\mathbf{b}_4) $	$ \eta $ of fourth hardest b jet		✓		
Observables considering all pairs of b jets (bb)					
$\Delta R_{\text{bb}}^{\text{avg}}$	Average ΔR of all bb pairs		✓		
$m_{\text{bb}}^{\text{max}}$	Highest invariant mass among all bb pairs		✓		
Observables related to the pair of b jets closest in ΔR (bb^{extra})					
$p_{\text{T}}(\mathbf{b}_1^{\text{extra}})$	p_{T} of leading extra b jet		✓		
$ \eta(\mathbf{b}_1^{\text{extra}}) $	$ \eta $ of leading extra b jet		✓		
$p_{\text{T}}(\mathbf{b}_2^{\text{extra}})$	p_{T} of subleading extra b jet		✓		
$ \eta(\mathbf{b}_2^{\text{extra}}) $	$ \eta $ of subleading extra b jet		✓		
$\Delta R(\text{bb}^{\text{extra}})$	ΔR of bb^{extra} pair		✓		
$ \eta (\text{bb}^{\text{extra}})$	$ \eta $ of bb^{extra} pair		✓		
$m(\text{bb}^{\text{extra}})$	invariant mass of bb^{extra} pair		✓		
$p_{\text{T}}(\text{bb}^{\text{extra}})$	p_{T} of bb^{extra} pair		✓		
Observables related to the pair of b jets not from $t\bar{t}$ decay ($\text{bb}^{\text{add.}}$)					
$p_{\text{T}}(\mathbf{b}_1^{\text{add.}})$	p_{T} of leading additional b jet		✓*		
$ \eta(\mathbf{b}_1^{\text{add.}}) $	$ \eta $ of leading additional b jet		✓*		
$p_{\text{T}}(\mathbf{b}_2^{\text{add.}})$	p_{T} of subleading additional b jet		✓*		
$ \eta(\mathbf{b}_2^{\text{add.}}) $	$ \eta $ of subleading additional b jet		✓*		
$\Delta R(\text{bb}^{\text{add.}})$	ΔR of $\text{bb}^{\text{add.}}$ pair		✓*		
$ \eta (\text{bb}^{\text{add.}})$	$ \eta $ of $\text{bb}^{\text{add.}}$ pair		✓*		
$m(\text{bb}^{\text{add.}})$	invariant mass of $\text{bb}^{\text{add.}}$ pair		✓*		
$p_{\text{T}}(\text{bb}^{\text{add.}})$	p_{T} of $\text{bb}^{\text{add.}}$ pair		✓*		
Observables related to extra light jets					
$p_{\text{T}}(\text{lj}_1^{\text{extra}})$	p_{T} of leading extra light jet			✓	✓
$ \Delta\phi(\text{lj}_1^{\text{extra}}, \mathbf{b}_{\text{soft}}) $	$\Delta\phi$ of leading extra light jet and softest b jet			✓	✓