

| Reconstructed event | Decay products of the $t\bar{t}$ system | | | | |
|---|---|-------------------------|---------------------|-------------------------------|---------------------------|
| | $bq\bar{q} \bar{b}q\bar{q}$ | $bl\nu \bar{b}q\bar{q}$ | $bl\nu \bar{b}l\nu$ | $\ell_b q\bar{q} \bar{b}l\nu$ | $\ell_b l\nu \bar{b}l\nu$ |
| OS dilepton $t\bar{t}Z$ | X | | | | |
| SS dilepton $t\bar{t}W$ | | X | | | |
| $3\ell \bar{t}Z$ | | X | | | |
| $3\ell \bar{t}W$ | | | X | | |
| OS dilepton $t\bar{t}$ | | | X | | |
| SS dilepton $t\bar{t}$ | | | | X | |
| $3\ell \bar{t}$ | | | | | X |
| Input variables | | | | | |
| <i>Jet CSV (b tag) discriminator</i> | | | | | |
| b jet CSV | X | X | X | X | X |
| Higher jet CSV from $W \rightarrow q\bar{q}$ | X | X | | X | |
| Lower jet CSV from $W \rightarrow q\bar{q}$ | X | X | | X | |
| <i>Jet charge</i> | | | | | |
| Charge of b jet from t | X | | X | | |
| Charge of b jet from \bar{t} | X | | X | | |
| Charge of b jet from $t \rightarrow bl\nu$ | | X | | | |
| Charge of b jet from $t \rightarrow bq\bar{q}$ | | X | | | |
| Charge of b jet not decaying to a lepton | | | | X | X |
| Sum of charges of jets from $W \rightarrow q\bar{q}$ | X | X | | X | |
| <i>Invariant mass</i> | | | | | |
| Mass of lepton and b jet from t | | | X | | |
| Mass of lepton and b jet from \bar{t} | | | X | | |
| Mass of lepton and b jet from $t \rightarrow bl\nu$ | | X | | X | X |
| Mass of leptons from $t \rightarrow \ell_b l\nu$ | | | | | X |
| M_T of \vec{p}_T^{miss} and \vec{p}_T of lepton and b jet from t | | X | | X | |
| Mass of two jets from $W \rightarrow q\bar{q}$ | X | X | | X | |
| Mass of b jet and quark jets from $t \rightarrow bq\bar{q}$ | X | X | | | |
| Mass of lepton from b and jets from $t \rightarrow \ell_b q\bar{q}$ | | | | X | |
| Ratio of M_T to mass for jets from t or W | X | X | X | | |