Variable	Description
Event variables	
$\ln m_3$	Invariant mass of three hardest jets in the event
Aplanarity	Aplanarity of the event [**?**]
Fox–Wolfram #1	First Fox–Wolfram moment [**?**] of the event
$q(\ell)$	Electric charge of the lepton
$\mathrm{t\bar{t}}$ jet assignment variables	
$\ln m(\mathrm{t_{had}})$	Invariant mass of the reconstructed hadronically decaying top quark
CSV($\mathrm{W_{had}}$ jet 1)	Output of the b tagging discriminant for the first jet assigned to the hadronically decaying W boson
CSV($\mathrm{W_{had}}$ jet 2)	Output of the b tagging discriminant for the second jet assigned to the hadronically decaying W boson
ΔR($\mathrm{W_{had}}$ jets)	ΔR between the two light jets assigned to the hadronically decaying W boson
tHq jet assignment variables	
$\ln p_{\mathrm{T}}(\mathrm{H})$	Transverse momentum of the reconstructed Higgs boson candidate
$\lvert\eta$(light-flavor jet)$\rvert$	Absolute pseudorapidity of light-flavor forward jet
$\ln m(\mathrm{H})$	Invariant mass of the reconstructed Higgs boson candidate
CSV(H jet 1)	Output of the b tagging discriminant for the first jet assigned to the Higgs boson candidate
CSV(H jet 2)	Output of the b tagging discriminant for the second jet assigned to the Higgs boson candidate
$\cos\theta(\mathrm{b_t}, \ell)$	Cosine of the angle between the b-tagged jet from the top quark decay and the lepton
$\cos\theta^*$	Cosine of the angle between the light-flavor forward jet and the lepton in the top quark rest frame
$\lvert\eta(\mathrm{t}) - \eta(\mathrm{H})\rvert$	Absolute pseudorapidity difference of reconstructed Higgs boson and top quark
$\ln p_{\mathrm{T}}$(light jet)	Transverse momentum of the light-flavor forward jet
tHW jet assignment variable	
JA-BDT response	Best output of the tHW JA-BDT