

Variable	Definition
Charged PF candidates and lost tracks	
$\ln p_T$	Logarithm of the particle p_T
$\ln E$	Logarithm of the particle energy
$\Delta\eta(\text{jet})$	Difference in pseudorapidity between the particle and the jet axis
$\Delta\phi(\text{jet})$	Difference in azimuthal angle between the particle and the jet axis
$ \eta $	Absolute value of the particle pseudorapidity
q	Electric charge of the particle
isMuon	True if the particle is identified as a muon
isElectron	True if the particle is identified as an electron
isChargedHadron	True if the particle is identified as a charged hadron
isLostTrack	True if the particle a charged PF candidate or a lost track
pvAssociationQuality	Quality of the association of the track to the primary vertices
lostInnerHits	Quality of the track related to missing hits on the pixel layers
χ^2/ndof	The χ^2 value of the trajectory fit normalized to the degrees of freedom
qualityMask	Quality of the track
d_z	Longitudinal impact parameter of the track
d_z/σ_{d_z}	Significance of the longitudinal impact parameter
d_{xy}	Transverse impact parameter of the track
$d_{xy}/\sigma_{d_{xy}}$	Significance of the transverse impact parameter
η_{rel}	Pseudorapidity of the track relative to the jet axis
$p_{T,\text{rel}}$ ratio	Relative track momentum perpendicular to the jet axis
$p_{\text{par,rel}}$ ratio	Relative track momentum parallel to the jet axis
d_{3D}	Signed three-dimensional (3D) impact parameter of the track
d_{3D}/σ_{3D}	Signed 3D impact parameter significance of the track
trackDistance	Distance between the track and jet axis at the point of closest approach
pixelBarrelLayersWithMeasurement	Number of valid hits in the pixel barrel layers
pixelEndcapLayersWithMeasurement	Number of valid hits in the pixel endcap layers
stripTIBLayersWithMeasurement	Number of valid hits in the strip TIB layers
stripTIDLayersWithMeasurement	Number of valid hits in the strip TID layers
stripTOBLayersWithMeasurement	Number of valid hits in the strip TOB layers
stripTECLayersWithMeasurement	Number of valid hits in the strip TEC layers
Neutral PF candidates	
$\ln p_T$	Logarithm of the particle's p_T
$\ln E$	Logarithm of the particle's energy
$\Delta\eta(\text{jet})$	Difference in pseudorapidity between the particle and the jet axis
$\Delta\phi(\text{jet})$	Difference in azimuthal angle between the particle and the jet axis
$ \eta $	Absolute value of the particle pseudorapidity
isPhoton	True if the particle is identified as a photon
isNeutralHadron	True if the particle is identified as a neutral hadron

Secondary vertices within the jet

$\ln p_T$	Logarithm of the SV p_T
m_{SV}	Invariant mass of the tracks associated with the SV
$\Delta\eta(\text{jet})$	Difference in pseudorapidity between the SV and the jet axis
$\Delta\phi(\text{jet})$	Difference in azimuthal angle between the SV and the jet axis
$ \eta $	Absolute value of the SV pseudorapidity
N_{tracks}	Number of tracks associated with the SV
χ^2/ndof	The χ^2 value of the SV fit normalized to the degrees of freedom
d_{2D}	Signed two-dimensional (2D) impact parameter of the SV
d_{2D}/σ_{2D}	Signed 2D impact parameter significance of the SV
d_{3D}	Signed 3D impact parameter of the SV
d_{3D}/σ_{3D}	Signed 3D impact parameter significance of the SV