Differential cross-section variables

Higgs variables

$y(H)$, $p_T(H)$

Legend:
H+0jet Born variables,
H+0/1j resolution variables

(note: once a H+0/1j var is not << m_H it turns into a H+1jet Born variable

Diphoton variables

$p_T(\gamma_{1,2})$, $y(\gamma_{1,2})$, $\cos\theta^*(\gamma\gamma)$, $p_{Tt}(\gamma\gamma)$, $\varphi^*(\gamma\gamma)$, $(p_T(\gamma_1)+p_T(\gamma_2))/2$

Leading Jet variables

$p_T(j)$, $y(j)$, $|y(j) - y(H)|$

$\tau_C(j) = \max_j \{ m_T(j)/(2\cosh y(j)) \}$ where j runs over all jets

$p^+(j) = \tau_B(j) = \max_j \{ E(j) - |p_z(j)| \}$ where j runs over all jets

Higgs-jet variables

H+1/2jet resolution variables: **p_T(Hj)**, **Δφ(H,j)**, **p_T(j2)**, **m(j)**

(note: each of these requires defining cuts that specify the underlying H+j Born system)

H+2jet Born variables: **m(jj)**, **Δφ(j,j)**, **Δη(j,j)**,

H+2/3jet resolution variables: **p_T(Hjj)**, **Δφ(H, jj)**, **p_T(j3)**

(note: each of these requires defining cuts that specify the underlying H+jj system)

Source material