

Determine how edge positions depend on sparticle masses

$l_{\text{near}q}^{\pm}$ edge	$(m_{l_{\text{near}q}}^{\max})^2 = (\tilde{q} - \tilde{\xi})(\tilde{\xi} - \tilde{l})/\tilde{\xi}$
$l_{\text{far}q}^{\pm}$ edge	$(m_{l_{\text{far}q}}^{\max})^2 = (\tilde{q} - \tilde{\xi})(\tilde{l} - \tilde{\chi})/\tilde{l}$
$l^{\pm}q$ high-edge	$(m_{lq(\text{high})}^{\max})^2 = \max \left[(m_{l_{\text{near}q}}^{\max})^2, (m_{l_{\text{far}q}}^{\max})^2 \right]$
$l^{\pm}q$ low-edge	$(m_{lq(\text{low})}^{\max})^2 = \min \left[(m_{l_{\text{near}q}}^{\max})^2, (\tilde{q} - \tilde{\xi})(\tilde{l} - \tilde{\chi})/(2\tilde{l} - \tilde{\chi}) \right]$
M_{T2} edge	$\Delta M = m_{\tilde{l}} - m_{\tilde{\chi}_1^0}$

Table 4: The absolute kinematic endpoints of invariant mass quantities formed from decay chains of the types mentioned in the text for known particle masses. The following shorthand notation has been used: $\tilde{\chi} = m_{\tilde{\chi}_1^0}^2$, $\tilde{l} = m_{\tilde{l}_R}^2$, $\tilde{\xi} = m_{\tilde{\chi}_2^0}^2$, $\tilde{q} = m_{\tilde{q}}^2$ and X is m_h^2 or m_Z^2 depending on which particle participates in the “branched” decay.

$l_{\text{near}q}^{\pm}$ edge	$(m_{l_{\text{near}q}}^{\max})^2 = (\tilde{q} - \tilde{\xi})(\tilde{\xi} - \tilde{l})/\tilde{\xi}$
$l_{\text{far}q}^{\pm}$ edge	$(m_{l_{\text{far}q}}^{\max})^2 = (\tilde{q} - \tilde{\xi})(\tilde{l} - \tilde{\chi})/\tilde{l}$
$l^{\pm}q$ high-edge	$(m_{lq(\text{high})}^{\max})^2 = \max \left[(m_{l_{\text{near}q}}^{\max})^2, (m_{l_{\text{far}q}}^{\max})^2 \right]$
$l^{\pm}q$ low-edge	$(m_{lq(\text{low})}^{\max})^2 = \min \left[(m_{l_{\text{near}q}}^{\max})^2, (\tilde{q} - \tilde{\xi})(\tilde{l} - \tilde{\chi})/(2\tilde{l} - \tilde{\chi}) \right]$
M_{T2} edge	$\Delta M = m_{\tilde{l}} - m_{\tilde{\chi}_1^0}$

Table 4: The absolute kinematic endpoints of invariant mass quantities formed from decay chains of the types mentioned in the text for known particle masses. The following shorthand notation has been used: $\tilde{\chi} = m_{\tilde{\chi}_1^0}^2$, $\tilde{l} = m_{\tilde{l}_R}^2$, $\tilde{\xi} = m_{\tilde{\chi}_2^0}^2$, $\tilde{q} = m_{\tilde{q}}^2$ and X is m_h^2 or m_Z^2 depending on which particle participates in the “branched” decay.