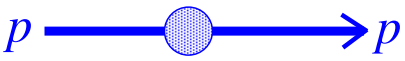
How to Divide the Phase Space

Recommendation

$Q^2_{min} = 1\ \mathrm{GeV}^2$

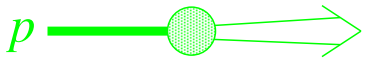
$M_{cut} = 5\ \mathrm{GeV}$

Elastic



$M_{had} = M_p$

Quasi-elastic

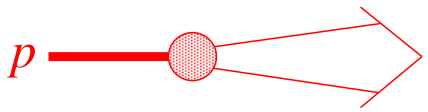


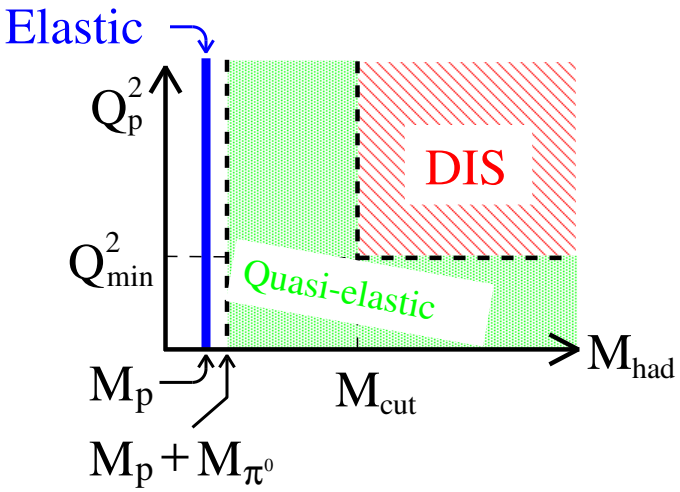
$M_p + M_{\pi^0} < M_{had} < M_{cut}$

OR

$\{M_{had} > M_{cut}\ \&\ Q^2_p < Q^2_{min}\}$

DIS



$M_{had} > M_{cut}\ \&\ Q^2_p > Q^2_{min}$

(Two samples are needed to be generated separately.)