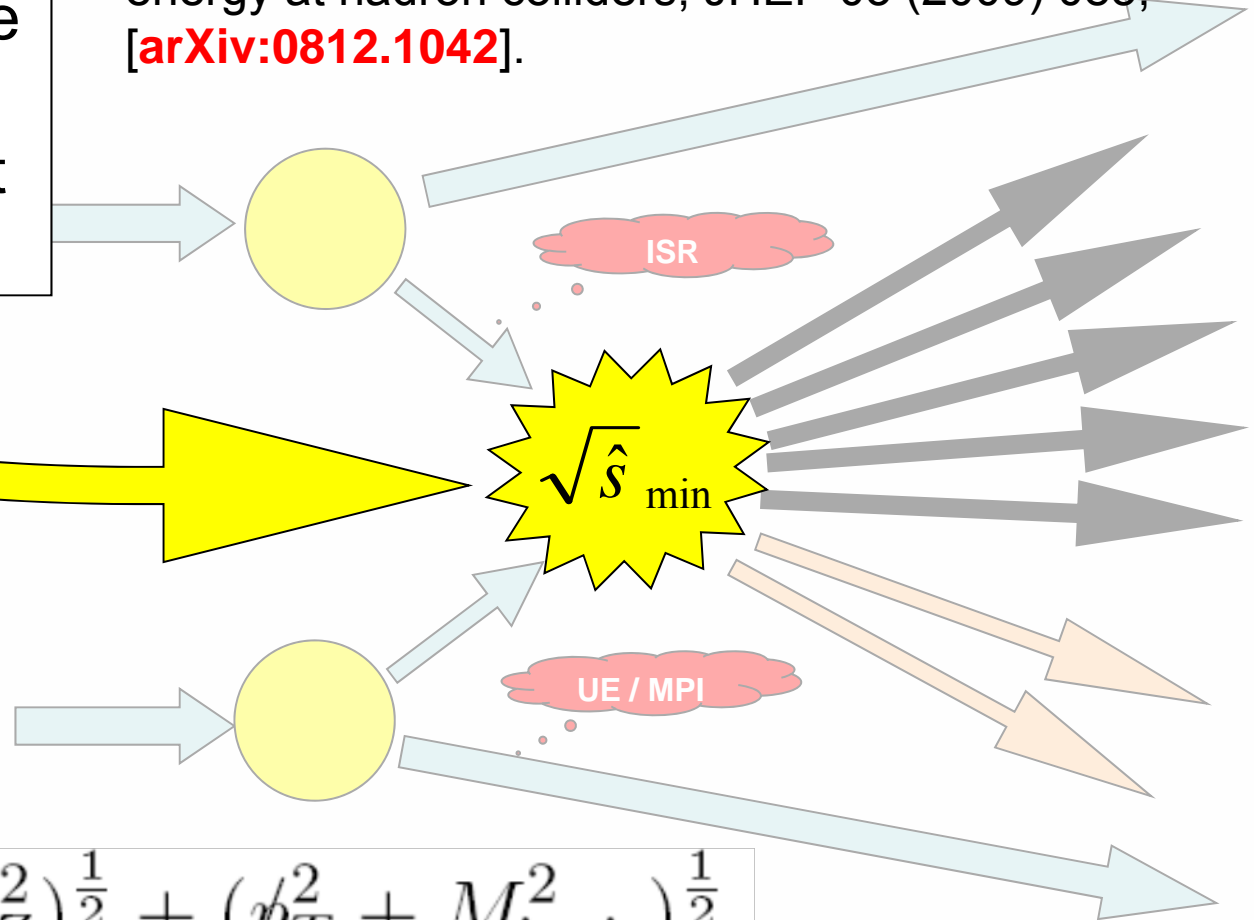


$\sqrt{\hat{s}}_{\min}$ is fully inclusive M_{1T} (i.e. $u_T=0$)

P. Konar, K. Kong, and K. T. Matchev, rootsmin : A global inclusive variable for determining the mass scale of new physics in events with missing energy at hadron colliders, JHEP 03 (2009) 085, [[arXiv:0812.1042](#)].

$\sqrt{\hat{s}}_{\min}$
seeks to bound the
invariant mass of
the interesting part
of the collision



$$\hat{s}_{\min}^{1/2} = (E^2 - P_Z^2)^{1/2} + (p_T^2 + M_{\text{invis}}^2)^{1/2}$$