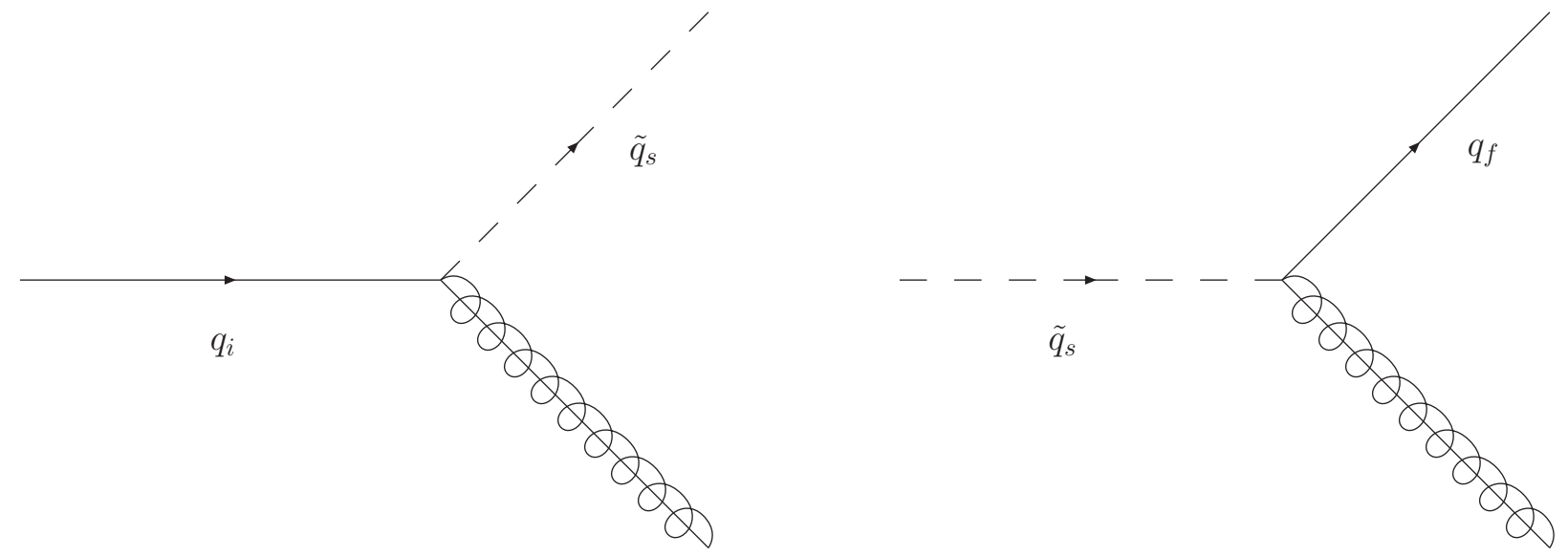
$\tilde{q}_s$
q_i
q_f
$\tilde{q}_s$