Particle	Symbol	Makeup	Rest mass MeV/c^2	B	S	Lifetime	Decay Modes
Lambda	Λ^0	uds	1115.6	+1	-1	2.6x10^-10	$p\pi^-$, $n\pi^0$
Lambda	Λ_c^+	udc	2281	+1	0	2x10^-13	

$$\overset{uds}{\Lambda^0} \rightarrow \overset{uud}{p} + \overset{\bar{u}d}{\pi^-} \qquad \overset{uds}{\Lambda^0} \rightarrow \overset{udd}{n} + \overset{\frac{\bar{u}u+\bar{d}d}{\sqrt{2}}}{\pi^0}$$

$$S = -1 \neq 0 + 0 \qquad S = -1 \neq 0 + 0$$

Particle	Symbol	Makeup	Rest mass MeV/c^2	B	S	Lifetime	Decay Modes
Sigma	Σ^+	uus	1189.4	+1	-1	0.8x10^-10	$p\pi^0$, $n\pi^+$
Sigma	Σ^0	uds	1192.5	+1	-1	6x10^-20	$\Lambda^0\gamma$
Sigma	Σ^-	dds	1197.3	+1	-1	1.5x10^-10	$n\pi^-$

Particle	Symbol	Makeup	Rest mass MeV/c^2	B	S	Lifetime	Decay Modes
Omega	Ω^-	sss	1672	+1	-3	0.82x10^-10	$\Xi^0\pi^-$, $\Lambda^0 K^-$

$$\underset{\bar{u}s}{K^-} + \underset{uud}{p} \rightarrow \underset{sss}{\Omega^-} + \underset{u\bar{s}}{K^+} + \underset{d\bar{s}}{K^0}$$

	Lifetime
$\underset{sss}{\Omega^-} \rightarrow \underset{uss}{\Xi^0} + \underset{\bar{u}d}{\pi^-}$	$.8 \times 10^{-10}$ s
$\underset{uss}{\Xi^0} \rightarrow \underset{uds}{\Lambda^0} + 2\bar{\gamma}$	2.9×10^{-10} s
$\underset{uds}{\Lambda^0} \rightarrow \underset{uud}{p} + \underset{\bar{u}d}{\pi^-}$	2.6×10^{-10} s

$$\Sigma^+ \rightarrow p + \eta^0$$

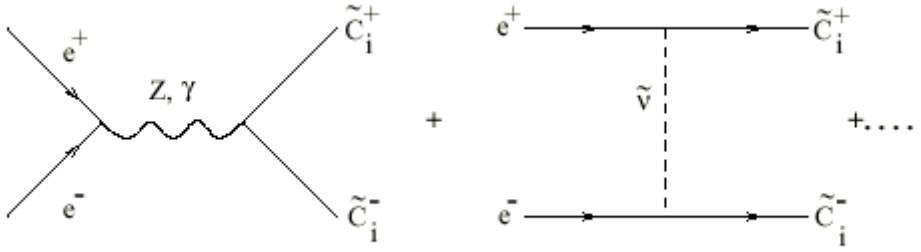
$$I = 1 \neq 1/2 + 0 \quad \text{Isospin}$$

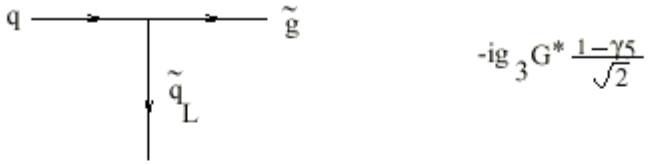
$$\Sigma^+ \rightarrow p + \eta^0$$

$$I = 1 \neq 1/2 + 0 \quad \text{Isospin}$$

$$\pi^+ \to \mu^+ \nu_\mu \qquad\qquad \pi^+ \to \mu^+ \nu_\mu \hookrightarrow e^+ \nu_e \overline{\nu}_\mu$$

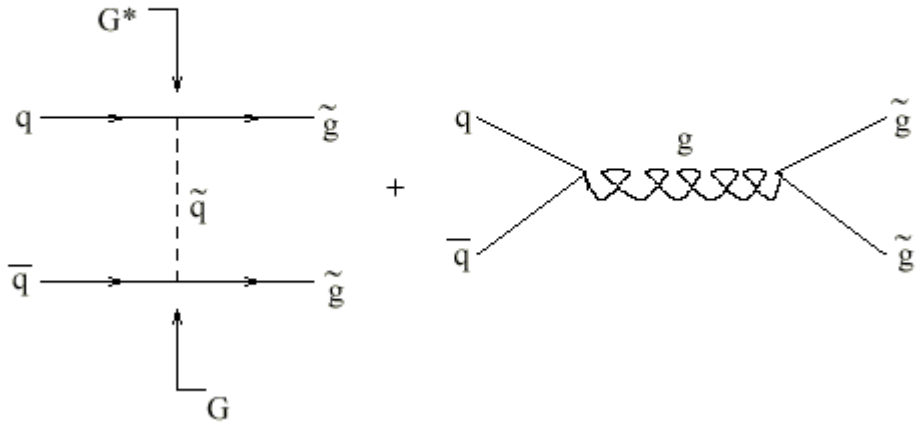
From kinematical studies of the particles produced in $^3\mathrm{H} \to {}^3\mathrm{He}\ e^- \overline{\nu}_e, \pi \to \mu\nu_\mu$, and $\tau \to n\pi\nu_\tau$, various upper bounds on neutrino mass have been obtained. In the case of the decay $^3\mathrm{H} \to {}^3\mathrm{He}\ e^- \overline{\nu}_e$, the upper bound on the neutrino mass is derived from study of the e^- energy spectrum. It should be

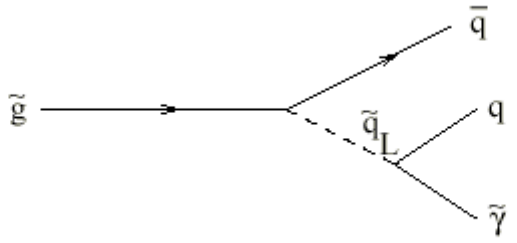


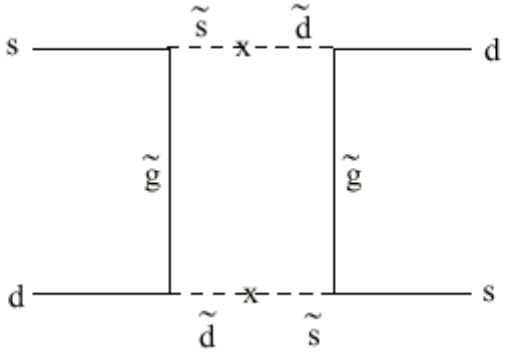


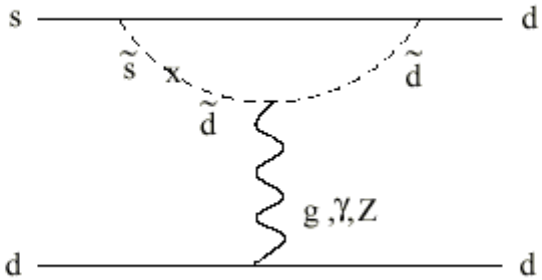
not including the color factors.

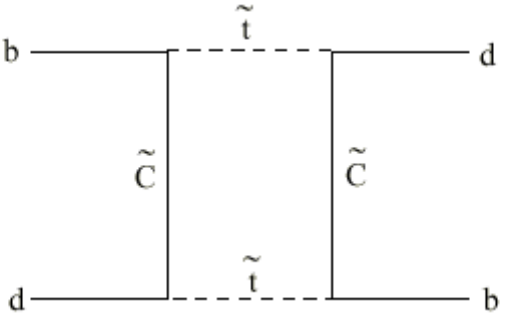
Now consider gluino production $q + \bar{q} \to \tilde{g} + \tilde{g}$. Factors of G and G^* enter so that there is no dependence on the phase from these two diagrams.



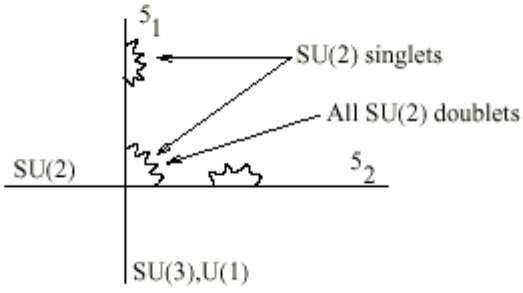


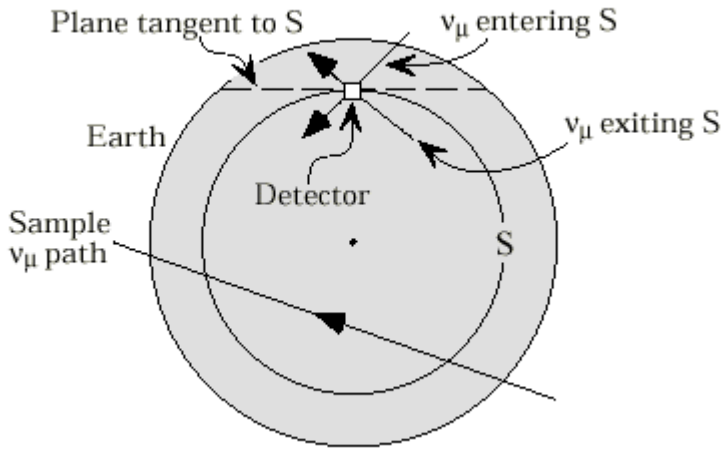






intersecting 5-branes, as illustrated below:




Plane tangent to S
ν_μ entering S
Earth
ν_μ exiting S
Detector
Sample
ν_μ path
S