$$p^+ + n \rightarrow 2p^+ + p^- + \pi^0 \qquad \frac{x^3 . t^0}{x^0 . t^2} . \frac{x^3 . t^1}{x^0 . t^3} = \frac{(x^3 . t^0)^2}{(x^0 . t^2)^2} . \frac{x^0 . t^2}{x^3 . t^0} . \frac{x^1 . t^2}{x^1 . t^2} \qquad \frac{7 \;\; 9}{10 \;\; 7} \; ?$$

$$p^+ + e^- \rightarrow n + \pi^0 + \nu_e \qquad \frac{x^3 . t^0}{x^0 . t^2} . \frac{x^2 . t^2}{x^2 . t^1} = \frac{x^3 . t^1}{x^0 . t^3} . \frac{x^1 . t^2}{x^1 . t^2} . \frac{x^0 . t^1}{x^0 . t^0} \qquad \frac{6 \;\; 7}{6 \;\; 7}$$

$p^+ + e^- \rightarrow n + \pi^+ + \nu_e$?????

$$p^+ + p^+ \rightarrow p^+ + n + e^+ \qquad \frac{x^3 . t^0}{x^0 . t^2} . \frac{x^3 . t^0}{x^2 . t^2} = \frac{x^3 . t^0}{x^0 . t^2} . \frac{x^3 . t^1}{x^0 . t^3} . \frac{x^2 . t^1}{x^2 . t^2} \qquad \frac{10 \;\; 6}{8 \;\; 7} \; ?$$

$$n + n \rightarrow p^+ + p^- + \pi^+ + \pi^- \qquad \frac{x^3 . t^1}{x^0 . t^3} . \frac{x^3 . t^1}{x^0 . t^3} = \frac{x^3 . t^0}{x^0 . t^2} . \frac{x^1 . t^1}{x^1 . t^1} . \frac{x^1 . t^1}{x^1 . t^1} \qquad \frac{5 \;\; 8}{8 \;\; 6} \; ?$$

$p^+ + n \rightarrow 2p^+ + \pi^-$

$n + e^- \rightarrow n + \mu^- + \underline{\nu}_\mu + \nu_e$

$\mu^- \rightarrow e^- + \underline{\nu}_e + \nu_\mu$

$\mu^- + p^+ \rightarrow n + \nu_\mu + \pi^0$

$\mu^+ \rightarrow e^+ + \nu_e + \underline{\nu}_\mu$

$\mu^+ + e^- \rightarrow \nu_e + \underline{\nu}_\mu$

$\mu^- \rightarrow 2e^- + e^+$

$\mu^- \rightarrow e^- + \underline{\nu}_e$

$\mu^- + p^+ \rightarrow n + e^- + \pi^0$

μ^+ *to* $e^+ + \gamma$

$X(e^-) \Longrightarrow n + e^+ \rightarrow p^+ + \underline{\nu}$

$X(p^+) \Longrightarrow n + p^- \rightarrow e^- + \underline{\nu}$

$X(n,e^-) \Longrightarrow e^+ + \nu \rightarrow p^+ + \underline{n}$

$X(n,p^+) \Longrightarrow p^- + \nu \rightarrow \underline{n} + e^-$

$\mu^- \rightarrow e^- + \underline{\nu}_e + \nu_\mu$

$d \rightarrow u + e^- + \underline{\nu}$

$d + \underline{u} \rightarrow e^- + \underline{\nu}$

$s \rightarrow u + W^-$

$u + W^- \rightarrow d$

$\pi^+ \rightarrow p^+ + e^- + e^+$

$p^+ + e^- \rightarrow n + \nu$

$p^+ + p^- \rightarrow n + \pi^+ + \pi^-$

${}^{239}_{94}Pu + 3\,{}^{1}_{0}n \rightarrow {}^{137}_{55}Cs + {}^{99}_{39}Y + 3\,{}^{1}_{0}n$

$\pi^- + p^+ \rightarrow \Lambda^0 + K^0$

$K^0 + p^+ \rightarrow \Lambda^0 + \pi^+$

$\Lambda^0 \rightarrow \pi^+ + \pi^-$

${}^{65}_{30}Zn \rightarrow {}^{65}_{29}Cu + \beta^+ + \nu$

$n + \nu_e \rightarrow p^+ + e^-$

$C \Longrightarrow \underline{n} + \underline{\nu}_e \rightarrow p^- + e^+$

$p^+ + \underline{\nu}_e \rightarrow n + e^+$

π^-: d$\underline{u}$; antideeltje: u$\underline{d}$: π^+

π^+: u$\underline{d}$; antideeltje: d$\underline{u}$: π^-

π^0: u$\underline{u}$/ d$\underline{d}$; antideeltje: u$\underline{u}$/ d$\underline{d}$ $\rightarrow \pi^0$

n : udd; antideeltje $\underline{n}$: $\underline{udd}$

$\underline{d} \rightarrow \underline{u} + e^+ + \nu$

Δ^0(udd) $\rightarrow$ p^+(uud) + π^-($\underline{u}$d)

Δ^0(udd) $\rightarrow$ n(udd) + π^0($\underline{u}$u/d$\underline{d}$)

Δ^{++}(uuu) en Δ^-(ddd).

Δ^-(ddd) $\rightarrow$ n(udd) + π^-($\underline{u}$d)

${}^{14}{}_7$ N + n $\rightarrow$ ${}^{14}{}_6$ C + p^+

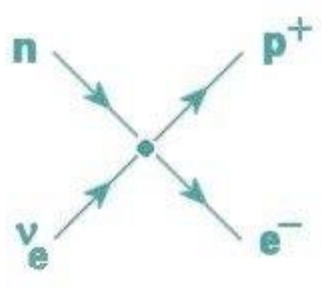
${}^{14}{}_6$ C $\rightarrow$ ^{14} N + β^-

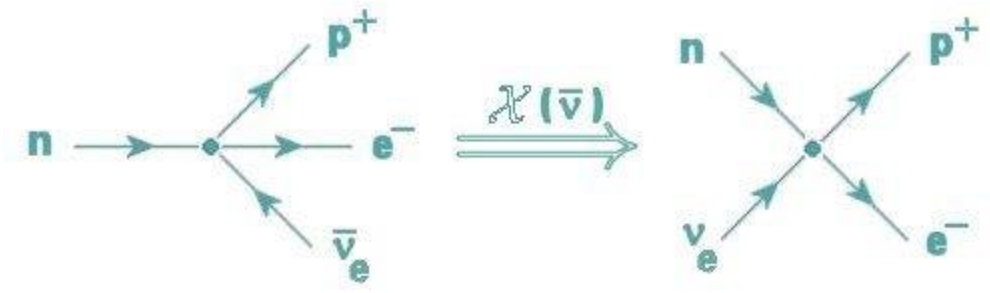
$\underline{K}^0 + p^+ \rightarrow \Lambda^0 + \pi^+$

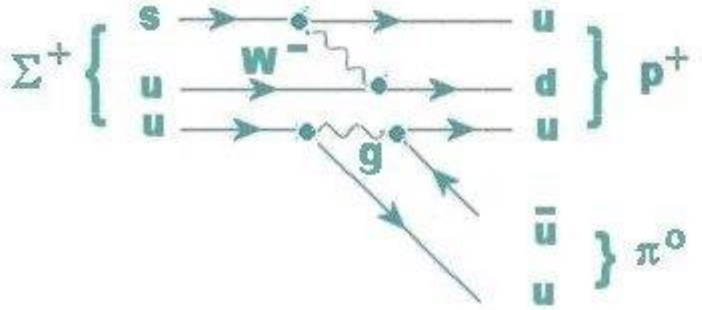
${}^{14}{}_7$ N + n $\rightarrow$ ${}^{14}{}_6$ C + p^+

b)

${}^{14}{}_6$ C $\rightarrow$ ^{14} N + β^-



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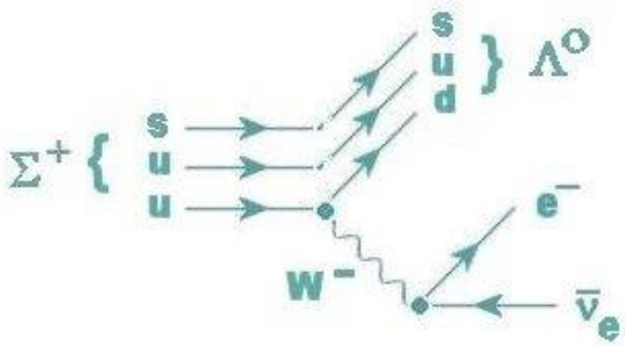
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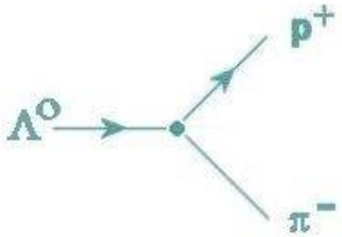
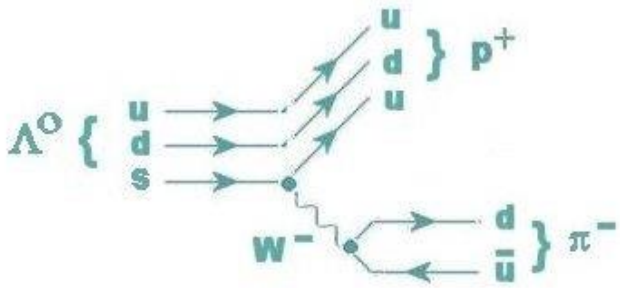

Λ0
p+
π−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