$^{2}_{1}H + \ ^{2}_{1}H \rightarrow \ ^{3}_{2}He + n + \text{energie}$

$^{1}_{1}H + \ ^{3}_{1}H \rightarrow \ ^{4}_{2}He + \text{energie}$

$n + \ ^{14}_{7}N \rightarrow \ ^{14}_{6}C + p$

$n + \ ^{235}_{92}U \rightarrow$ 2 menší jádra + 2 až 3 neutrony + energie

---

$^2H_1$ + $^2H_1$ => $^3He_2$ + n + energie

p.n . p.n => $p^2.n^1.e^{-2}$. n . „gama“

1 = e^{-2} . γ^2

1 = e^{-2} + 2γ (platí)

$$1 = \frac{x^4 . t^4}{x^4 . t^2} . \frac{x^4 . t^4}{x^4 . t^6} \quad \frac{8\ 8}{8\ 8}$$

- -

$^1H_1$ + $^3H_1$ = $^4He_2$ + energie

p . pn^2 = $p^2n^2e{-}^2$. γ^2

1 = e^{-2} + 2γ (platí)

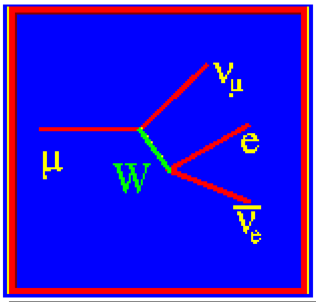
znamená to ovšem, že sloučením jader vznikne atom….a do interakce odkudsi vstupují i elektrony ; je to tak ? proč ?

- -

n + $^{14}{}_7N$ => $^{14}{}_6C$ + p

n + $p^7.n^7.e^{-7}$ => $p^6.n^8.e^{-6}$ + p

e^- $\neq$ 1 /to není dobrá rovnováha/



Sample	N_D	f_{B0}, %	f_{B+}, %	$f_{c\bar{c}}$, %
eD^+	258 ± 22	66.0	20^{+4}_{-7}	14 ± 4
μD^+	202 ± 22	64.0	19^{+4}_{-7}	17 ± 5
eD^{+*}	185 ± 24	71.0	15 ± 7	14 ± 4
μD^{+*}	173 ± 21	68.0	15 ± 7	17 ± 5

$D^+ \rightarrow K^-\pi^+\pi^+$

$D^{+(*)} \rightarrow K^-\pi^+\pi^+$

$$\frac{x^2 . t^3}{x^2 . t^3} = \frac{x^2 . t^1}{x^2 . t^1} . \frac{x^1 . t^1}{x^1 . t^1} . \frac{x^1 . t^1}{x^1 . t^1} \quad \frac{(6\ 6)}{(6\ 6)}$$

$$D^0 = K^- + \pi^+ \quad ; \quad D^{*+} = D^0 + \pi^+ \quad ; \quad D^0 = K^- + K^+$$

$$\frac{x^2.\,t^2}{x^2.\,t^2} = \frac{x^2.\,t^1}{x^2.\,t^1} \,.\, \frac{x^1.\,t^1}{x^1.\,t^1} \quad \begin{matrix}5\ 4\\ \\5\ 4\end{matrix} \qquad \frac{x^2.\,t^3}{x^2.\,t^3} = \frac{x^2.\,t^2}{x^2.\,t^2} \,.\, \frac{x^1.\,t^1}{x^1.\,t^1} \quad \begin{matrix}5\ 6\\ \\5\ 6\end{matrix} \qquad \frac{x^2.\,t^2}{x^2.\,t^2} = \frac{x^2.\,t^2}{x^2.\,t^2} \,.\, \frac{x^2.\,t^2}{x^2.\,t^2} \quad \begin{matrix}6\ 6\\ \\6\ 6\end{matrix}$$

zde je vidět, že rozlišovací činitel bude nutno dodat ; ten neznám.

$\Xi = \Omega + K$ pro tuto interakci mi literatura nezadala náboje, takže vyzkouším všechny v úvahu připadající možnosti (je jich pouze 6.mám-li ctít "hladiny"v interakci):

a) $\Xi^0 = \Omega^- + K^+$

$$\frac{x^5\,.\,t^1}{x^2\,.\,t^3} = \frac{x^6\,.\,t^2}{x^3\,.\,t^4} \,.\, \frac{x^2\,.\,t^1}{x^2\,.\,t^1} \qquad \begin{matrix}10\ \ 6\\ \\10\ \ 6\end{matrix}$$

b) $\Xi^- = \Omega^- + K^0$

$$\frac{x^5\,.\,t^2}{x^2\,.\,t^4} = \frac{x^6\,.\,t^2}{x^3\,.\,t^4} \,.\, \frac{x^2\,.\,t^2}{x^2\,.\,t^2} \qquad \begin{matrix}10\ \ 8\\ \\10\ \ 8\end{matrix}$$

c) $\Xi_c^+ = \Omega_c^0 + K^+$

$$\frac{x^5\,.\,t^2}{x^2\,.\,t^4} = \frac{x^6\,.\,t^3}{x^3\,.\,t^5} \,.\, \frac{x^2\,.\,t^1}{x^2\,.\,t^1} \qquad \begin{matrix}10\ \ 8\\ \\10\ \ 8\end{matrix}$$

d) $\Xi_c^0 = \Omega_c^0 + K^0$

$$\frac{x^5\,.\,t^3}{x^2\,.\,t^5} = \frac{x^6\,.\,t^3}{x^3\,.\,t^5} \,.\, \frac{x^2\,.\,t^2}{x^2\,.\,t^2} \qquad \begin{matrix}10\ \ 10\\ \\10\ \ 10\end{matrix} \qquad \text{(rovnováha)}$$

e) $\Xi_{cc}^{++} = \Omega_{cc}^+ + K^+$

$$\frac{x^5\,.\,t^3}{x^2\,.\,t^5} = \frac{x^6\,.\,t^4}{x^3\,.\,t^6} \,.\, \frac{x^2\,.\,t^1}{x^2\,.\,t^1} \qquad \begin{matrix}10\ \ 10\\ \\10\ \ 10\end{matrix} \qquad \text{(rovnováha)}$$

f) $\Xi_{cc}^+ = \Omega_{cc}^+ + K^0$

$$\frac{x^5\,.\,t^4}{x^2\,.\,t^6} = \frac{x^6\,.\,t^4}{x^3\,.\,t^6} \,.\, \frac{x^2\,.\,t^2}{x^2\,.\,t^2} \qquad \begin{matrix}10\ \ 12\\ \\10\ \ 12\end{matrix}$$

je vidět, že pro rovnováhu připadají interakce : $\Xi_c^0 = \Omega_c^0 + K^0$; $\Xi_{cc}^{++} = \Omega_{cc}^+ + K^+$, ostatní jsou nepravé rovnováhy.

Interakci $\Omega^* = \Xi + K^-$ lze realizovat (má-li se zachovat zák.zachování nábojové rovnováhy)

ve třech možnostech : $\Omega^- = \Xi^0 + K^-$

$$\frac{x^6 . t^2}{x^3 . t^4} = \frac{x^5 . t^1}{x^2 . t^3} . \frac{x^2 . t^1}{x^2 . t^1} \qquad \begin{matrix} 10 \ 6 \\ 10 \ 6 \end{matrix}$$

$\Omega_c^0 = \Xi_c^+ + K^-$

$$\frac{x^6 . t^3}{x^3 . t^5} = \frac{x^5 . t^2}{x^2 . t^4} . \frac{x^2 . t^1}{x^2 . t^1} \qquad \begin{matrix} 10 \ 8 \\ 10 \ 8 \end{matrix}$$

$\Omega_{cc}^+ = \Xi_{cc}^{++} + K^-$

$$\frac{x^6 . t^4}{x^3 . t^6} = \frac{x^5 . t^3}{x^2 . t^5} . \frac{x^2 . t^1}{x^2 . t^1} \qquad \begin{matrix} 10 \ 10 \\ 10 \ 10 \end{matrix} \qquad \text{(rovnováha)}$$

…a tak bych podle mých "názorů" navrhoval interakci $\Omega_{cc}^+ = \Xi_{cc}^{++} + K^-$

$\bar{b} \to l^+X,\ \bar{B}_d^0 \to D^{+(*)}X$

???????? $\Xi \sum \Omega$;

$$\frac{x^2 . t^3}{x^2 . t^3} = \frac{x^2 . t^2}{x^2 . t^2} . \frac{x^1 . t^1}{x^1 . t^1} \quad \begin{matrix} (5\ 6) \\ (5\ 6) \end{matrix} \qquad \frac{x^2 . t^2}{x^2 . t^2} = \frac{x^2 . t^1}{x^2 . t^1} . \frac{x^1 . t^1}{x^1 . t^1} \quad \begin{matrix} (5\ 4) \\ (5\ 4) \end{matrix}$$

$D^{*+} \to D^0\pi^+, D^0 \to K^-\pi^+$

a tak se mi tyto interakce moc nelíbí,není zde "pravá" rovnováha

---

$\bar{B}_d^0 \to D^{*+}X,\ D^{*+} \to D^0\pi^+, D^0 \to K^-\pi^+$

$$D^{+*} \to D^0\pi_s^+, D^0 \to K^-\pi^+.$$
$$B \to \bar{D}X \to l^-X.$$

..

$$\bar{b} \to l^+X, \bar{B}^0 \to D^{+(*)}X$$
$$\bar{b} \to l^+X, \bar{B}^0 \to B^0 \to D^{-(*)}X,$$
$$B^- \to D^{+(*)}X.$$
$$c \to D^{+(*)}X, \bar{c} \to l^-X.$$

	$\bar{b} \to l^+X$	$\bar{b} \to B^0 \to \bar{B}^0 \to l^-X$	$\bar{b} \to c \to l^-X$	$\bar{c} \to l^-X$
$\bar{B}^0 \to D^{+(*)}X$	rs	ws	ws	0
$\bar{B}^0 \to B^0 \to D^{-(*)}X$	ws	rs	rs	0
$\bar{B}^- \to D^{+(*)}X$	rs	ws	ws	0
$c \to D^{+(*)}X$	0	0	0	ws
combinatorics	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

$$b \to \bar{B}_d^0 \to D^+X,\ D^+ \to K^-\pi^+\pi^+$$

$$b \to \bar{B}_d^0 \to D^{*+}X,\ D^{*+} \to D^0\pi^+, D^0 \to K^-\pi^+$$

$B_d^0 \to K^{*0}\gamma$??

možná by mělo být v interakci, že odlétají fotony i antifotony čili $B_d^0 = K^{*0} + \gamma + \gamma^-$ a to pak už je dobře

B_d^0	=	K^{*0}	+	γ	+	γ^-	
$x^3 . t^2$		$x^2 . t^2$		$x^2 . t^2$		$x^2 . t^3$	(9 9)
-----	=	------	.	------	.	------	
$x^3 . t^2$		$x^2 . t^2$		$x^2 . t^3$		$x^2 . t^2$	(9 9)

A)

K^{*0}	=	K^+	+	π^-	
$x^2 . t^2$		$x^2 . t^1$		$x^1 . t^1$	5 4
------	=	------	.	------	?
$x^2 . t^2$		$x^2 . t^1$		$x^1 . t^1$	5 4

B)

D^0	=	K^-	+	π^+	
$x^2 . t^2$		$x^2 . t^1$		$x^1 . t^1$	5 4
------	=	------	.	------	?
$x^2 . t^2$		$x^2 . t^1$		$x^1 . t^1$	5 4

což je zajímavé, že interakce typu A) a B) jsou identické (asi je rozdíl v jiných parametrech) ……..

$$B_d^0 \to K^{*0}\gamma, K^{*0} \to K^+\pi^-$$

$$\mathcal{BR}(B_d^0 \to K^{*0}\gamma, K^{*0} \to K^+\pi^-) < 2.2 \times 10^{-4} \quad (@90\% \ \ C.L)$$

	$B_d^0 \to K^{*0}\gamma$	$B_s^0 \to \phi\gamma$
$\int Ldt(\phi\gamma)/\int Ldt(eD^0X)$	17.05/23.28	
$N(eD^0X)$ (events)	61 ± 11	
$\mathcal{BR}(B \to e^-D^0X)$	0.0699 ± 0.0142	
$\mathcal{BR}(D^0 \to K^-\pi^+)$	0.0383 ± 0.0012	
$\mathcal{BR}(K^{*0} \to K^+\pi^-)$	2/3	−−
$\mathcal{BR}(\phi \to K^+K^-)$	−−	0.491 ± 0.006
$f_s/(f_u, f_d)$	$0.34 \pm 0.10 \pm 0.03$	
$\epsilon(eD^0)/\epsilon(K^{*0}\gamma)$	0.500 ± 0.095	−−
$\epsilon(eD^0)/\epsilon(\phi\gamma)$	−−	0.342 ± 0.070

$B \to e^-D^0X$

$$\mathcal{BR}(B_s^0 \to \phi\gamma) < 3.9 \times 10^{-4} \quad (@90\% \ \ C.L)$$

$b \to s\gamma$

	$x^3 . t^{5/3}$		$x^2 . t^{2/3}$		$x^2 . t^2$		$x^2 . t^3$	(8 8)
b --> s . γ □. γ^-	--------	=	--------	.	-------	.	-------	
	$x^2 . t^{7/3}$		$x^1 . t^{4/3}$		$x^2 . t^3$		$x^2 . t^2$	(8 8)

opět by zde mělo platit, že z reakce odlétají fotony i antifotony

$K^{*0} \to K^+\pi^-$

$B_s^0 \to \phi\gamma$

$\phi \to K^+K^-$

$B_s^0 \to \phi\gamma, \phi \to K^+K^-$

$\mathcal{BR}(B_s^0 \to \phi\gamma, \phi \to K^+K^-) < 3.9 \times 10^{-4}$ (@90% $C.L$)

$\phi = K^+ + K^-$

$$\frac{x^3.\,t^2}{x^3.\,t^2} = \frac{x^2.\,t^1}{x^2.\,t^1} \cdot \frac{x^2.\,t^1}{x^2.\,t^1} \qquad \begin{matrix} 7\ 4 \\ 7\ 4 \end{matrix} \qquad ?$$

$B_s^0 = \phi + \gamma$ >>>> to je už dost špatně

$$\frac{x^3.\,t^4}{x^3.\,t^4} = \frac{x^3.\,t^2}{x^3.\,t^2} \cdot \frac{x^2.\,t^2}{x^2.\,t^3} \qquad \begin{matrix} 8\ 8 \\ 8\ 9 \end{matrix} \qquad ?$$

lépe je interakci doplnit na foton plus antifoton :

$B_s^0 = \phi + \gamma + \gamma^-$

$$\frac{x^3.\,t^4}{x^3.\,t^4} = \frac{x^3.\,t^2}{x^3.\,t^2} \cdot \frac{x^2.\,t^2}{x^2.\,t^3} \cdot \frac{x^2.\,t^3}{x^2.\,t^2} \qquad \begin{matrix} 10\ 11 \\ 10\ 11 \end{matrix}$$

……i když i to není pravá rovnováha

$\bar{B}_s^0 \to J/\psi\phi$

$$\frac{x^3.\,t^4}{x^3.\,t^4} = \frac{x^3.\,t^4}{x^3.\,t^4} \cdot \frac{x^3.\,t^2}{x^3.\,t^2} \qquad \begin{matrix} 9\ 10 \\ 9\ 10 \end{matrix} \qquad ?$$

$\Lambda_c^+ \to K^- p \pi^+$

$$\frac{x^4.\,t^3}{x^1.\,t^5} = \frac{x^2.\,t^1}{x^2.\,t^1} \cdot \frac{x^3.\,t^0}{x^0.\,t^2} \cdot \frac{x^1.\,t^1}{x^1.\,t^1} \qquad \begin{matrix} 7\ 7 \\ 7\ 7 \end{matrix}$$

$\Lambda_c^+ = K^+ + p + \pi^-$

$$\frac{x^4.\,t^3}{x^1.\,t^5} = \frac{x^2.\,t^1}{x^2.\,t^1} \cdot \frac{x^3.\,t^0}{x^0.\,t^2} \cdot \frac{x^1.\,t^1}{x^1.\,t^1} \qquad \begin{matrix} 7\ 7 \\ 7\ 7 \end{matrix}$$

$\Lambda_c^+ = K^+ + n + \pi^0$

$$\frac{x^4.\,t^3}{x^1.\,t^5} = \frac{x^2.\,t^1}{x^2.\,t^1} \cdot \frac{x^3.\,t^1}{x^0.\,t^3} \cdot \frac{x^1.\,t^2}{x^1.\,t^2} \qquad \begin{matrix} 7\ 9 \\ 7\ 9 \end{matrix} \qquad ?$$

zde je něco záhadného….že zde "se ona " rovnováha přeskočí : ??

$B_c^- \to J/\psi \ell^- X$ $\qquad$ $\bar{B}_s^0 \to \ell^- D_s^+ X$

$\ell = e, \mu$ $\qquad$ $J/\psi \to \mu^+\mu^-$ $\qquad$ $B \to J/\psi K$ $\qquad$ $B \to J/\psi X$

$B \to \psi(2S) K$

$^{3}H = {}^{3}He + e^{-} + \nu_{e}^{-}$ (? ? ? ? co to je)

$p.\,n^{2}.e^{-} = p^{2}.n \;.\; e^{-} \;.\; \nu_{e}^{-}$

$n = p \;.\; e^{-} \;.\; \nu_{e}^{-}$

$$\frac{x^{3}.t^{1}}{x^{0}.t^{3}} = \frac{x^{3}.t^{0}}{x^{0}.t^{2}} \;.\; \frac{x^{2}.t^{2}}{x^{2}.t^{1}} \;.\; \frac{x^{0}.t^{0}}{x^{0}.t^{1}}$$

$\pi = \mu^{+} + \nu_{\mu}$

$$\frac{x^{1}.t^{1}}{x^{1}.t^{1}} = \frac{x^{1}.t^{1}}{x^{1}.t^{2}} \;.\; \frac{x^{1}.t^{1}}{x^{1}.t^{0}} \qquad \frac{(3\;\;3)}{(3\;\;3)}$$

↳ $\mu^{+} = e^{+} + \nu_{e} + \nu_{\mu}^{-}$

$$\frac{x^{1}.t^{1}}{x^{1}.t^{2}} = \frac{x^{2}.t^{1}}{x^{2}.t^{2}} \;.\; \frac{x^{0}.t^{1}}{x^{0}.t^{0}} \;.\; \frac{x^{1}.t^{0}}{x^{1}.t^{1}} \qquad \frac{(4\;\;4)}{(4\;\;4)}$$

$\tau = /n/ \;.\; (\;\pi + \nu_{\tau}\;)$

$$\frac{x^{2}.t^{1}}{x^{2}.t^{0}} = n\,\frac{x^{1}.t^{1}}{x^{1}.t^{1}} \;.\; \frac{x^{0}.t^{2}}{x^{0}.t^{1}} \qquad \frac{(3\;\;3)}{(3\;\;3)}$$

$H^{0} = b\,b^{-}$; $e^{+} + e^{-} = H^{+} + H^{-}$; $H^{+} = \tau^{+} + \nu_{\tau}$; $H^{+} = t^{*}\,b^{-} = W^{+}\,b\,b^{-}$

$D^{0} = K^{+} + K^{-} = K^{-} + \pi^{+} = K^{+} + \pi^{-}$

$D^{+} = \mu^{+} + \nu_{\mu}$

$D_{s}^{+} = \phi + \ell + \nu_{\ell}$

.–.–.–.–.–.–.–.–.–.–.–.–.–.–.–.–.–.–.–.

$H^{0} = b + b^{-}$ >>>>>>>

$$\frac{x^{0}.t^{1}}{x^{0}.t^{1}} = \frac{x^{3}.t^{5/3}}{x^{2}.t^{7/3}} \;.\; \frac{x^{2}.t^{7/3}}{x^{3}.t^{5/3}} \qquad \frac{5\;\;5}{5\;\;5}$$

$e^{+} + e^{-} = H^{+} + H^{-}$ >>>>

$$\frac{x^{2}.t^{1}}{x^{2}.t^{2}} \;.\; \frac{x^{2}.t^{2}}{x^{2}.t^{1}} = \frac{x^{2}.t^{1}}{x^{2}.t^{1}} \;.\; \frac{x^{0}.t^{2}}{x^{0}.t^{2}} \qquad \frac{6\;\;6}{6\;\;6}$$

$H^{+} = \tau^{+} + \nu_{\tau}$???????

$H^{+} = \mu^{+} + \nu_{e}$ >>>>>>

$$\frac{x^{2}.t^{1}}{x^{2}.t^{1}} = \frac{x^{1}.t^{1}}{x^{1}.t^{2}} \;.\; \frac{x^{0}.t^{1}}{x^{0}.t^{0}} \qquad \frac{3\;\;3}{3\;\;3}$$

$H^{+} = \tau^{+} + \nu_{\tau}$???????

$H^{+} = e^{+} + \nu_{\tau}$ >>>>>>

$$\frac{x^{2}.t^{1}}{x^{2}.t^{1}} = \frac{x^{2}.t^{1}}{x^{2}.t^{2}} \;.\; \frac{x^{0}.t^{2}}{x^{0}.t^{1}} \qquad \frac{4\;\;4}{4\;\;4}$$

$H^{+} = t^{*}\,b^{-} = W^{+}\,b\,b^{-}$

$$\frac{x^{2}.t^{1}}{x^{2}.t^{1}} = \frac{x^{3}.t^{8/3}}{x^{2}.t^{10/3}} \;.\; \frac{x^{2}.t^{7/3}}{x^{3}.t^{5/3}} \qquad \frac{(7\;6)}{(7\;6)} \qquad \frac{x^{2}.t^{1}}{x^{2}.t^{1}} = \frac{x^{2}.t^{2}}{x^{2}.t^{2}} \;.\; \frac{X^{5}.T^{4}}{X^{5}.T^{4}}$$

$D^0 = K^+ + K^- = K^- + \pi^+ = K^+ + \pi^-$

$$\frac{x^2 . t^2}{x^2 . t^2} = \frac{x^2 . t^1}{x^2 . t^1} . \frac{x^2 . t^1}{x^2 . t^1} \quad \begin{matrix}(6\ 4)\\ =\\ (6\ 4)\end{matrix} \quad \frac{x^2 . t^1}{x^2 . t^1} . \frac{x^1 . t^1}{x^1 . t^1} = \begin{matrix}(5\ 4)\\ \\ (5\ 4)\end{matrix} \quad \text{dtto} \qquad ????$$

$D^+ = \mu^+ + \nu_\mu$???

$D^+ = \tau^+ + \nu_e$

$$\frac{x^2 . t^3}{x^2 . t^3} = \frac{x^2 . t^0}{x^2 . t^1} . \frac{x^0 . t^1}{x^0 . t^0} \quad \begin{matrix}(4\ 4)\\ \\ (4\ 4)\end{matrix} \ ; \quad \frac{x^2 . t^3}{x^2 . t^3} = \frac{x^1 . t^1}{x^1 . t^2} . \frac{x^1 . t^1}{x^1 . t^0} \quad \begin{matrix}(4\ 5)\\ ????\\ (4\ 5)\end{matrix}$$

$\mu^+ = e^+ + \nu_e + \nu_\mu^-$ >>>>

$$\frac{x^1 . t^1}{x^1 . t^2} = \frac{x^2 . t^1}{x^2 . t^2} . \frac{x^0 . t^1}{x^0 . t^0} . \frac{x^1 . t^0}{x^1 . t^1} \qquad \begin{matrix}4\ 4\\ \\ 4\ 4\end{matrix}$$

$K^+ = \mu^+ + \nu_\mu$

$\pi^+ = \mu^+ + \nu_\mu$

$D^+ = \mu^+ + \nu_\mu$ toto vše uvádí literatura…ač je to podivné, plyne to z toho, že fyikové postavili mezony "takatak" z kvarků…já kvarkovou tezi přijal beze změny.

$$\mu^+ + \nu_\mu = \frac{x^1 . t^1}{x^1 . t^2} . \frac{x^1 . t^1}{x^1 . t^0} \quad \begin{matrix}(2\ 2)\\ \\ (2\ 2)\end{matrix}$$

$$K^+ = \frac{x^2 . t^1}{x^2 . t^1}$$

mezony K^+; π^+ ; D^+ podle určení kvarků , nejsou částicemi totožnými, a tak nemohou se rovnat $\mu^+ + \nu_\mu$

$$\pi^+ = \frac{x^1 . t^1}{x^1 . t^1}$$

$$D^+ = \frac{x^2 . t^3}{x^2 . t^3}$$

32.Nakřáplá jádra od Milana Rojka, Jiřího Dolejšího, Jana Kuchaře.(11/98)

Uvádí se zde,že *: rozpad není jedinou cestou,jak se jádra navzájem přeměňují.Může také docházet ke slučování jader a různým reakcím,například :*

$_1H^2$ + $_1H^2$ => $^3{}_2He$ + n + energie

p.n . p.n => $p^2.n^1.e^{-2}$. n . „gama“

1 = e^{-2} . γ^2

- -

n + $^{14}{}_7N$ => $^{14}{}_6C$ + p

n . $p^7.n^7.e^{-7}$ => $p^6.n^8.e^{-6}$. p

e^- ≠ 1 /to není rovnováha/

- -

Buď zde není správně dodržena zápisová konvence, nebo já chybně čtu zápis, anebo (se domnívám) , že takto je reakce nesprávně.

$\mu^- = e^- + \nu_e + \nu_\mu^-$

$$\frac{x^1 . t^2}{x^1 . t^1} = \frac{x^2 . t^2}{x^2 . t^1} . \frac{x^0 . t^1}{x^0 . t^0} . \frac{x^1 . t^0}{x^1 . t^1} \qquad \begin{matrix} 4\ 4 \\ 4\ 4 \end{matrix}$$

$\tau^- = e^- + \nu_\tau + \nu_e^-$

$$\frac{x^2 . t^1}{x^2 . t^0} = \frac{x^2 . t^2}{x^2 . t^1} . \frac{x^0 . t^2}{x^0 . t^1} . \frac{x^0 . t^0}{x^0 . t^1} \qquad \begin{matrix} 4\ 4 \\ 4\ 4 \end{matrix}$$

$K^0 = \mu^- + e^+$

$$\frac{x^2 . t^2}{x^2 . t^2} = \frac{x^1 . t^2}{x^1 . t^1} . \frac{x^2 . t^1}{x^2 . t^2} \qquad \begin{matrix} 5\ 5 \\ 5\ 5 \end{matrix}$$

$B = (C \quad C^- \quad S)$

$$\frac{x^3 . t^{5/3}}{x^2 . t^{7/3}} = \frac{x^2 . t^{5/3}}{x^1 . t^{7/3}} . \frac{x^1 . t^{7/3}}{x^2 . t^{5/3}} . \frac{x^2 . t^{2/3}}{x^1 . t^{4/3}} \qquad \begin{matrix} 7\ 7 \\ 7\ 7 \end{matrix}$$

$\rho^{-+} = W^{-+} + \pi^0$

$$\frac{x^1 . t^1}{x^1 . t^1} = \frac{x^2 . t^1}{x^2 . t^1} . \frac{x^1 . t^2}{x^1 . t^2} \qquad \begin{matrix} 4\ 4 \\ 4\ 4 \end{matrix}$$

$\tau^- = K^- + \pi^- + \pi^+ + \pi^0 + \nu_\tau$

$$\frac{x^2 . t^1}{x^2 . t^0} = \frac{x^2 . t^1}{x^2 . t^1} . \frac{x^1 . t^1}{x^1 . t^1} . \frac{x^1 . t^1}{x^1 . t^1} . \frac{x^1 . t^2}{x^1 . t^2} . \frac{x^0 . t^2}{x^0 . t^1}$$

$D^+ = \mu^+ + \nu_\mu$

$$\frac{x^2 . t^3}{x^2 . t^3} = \frac{x^1 . t^1}{x^1 . t^2} . \frac{x^1 . t^1}{x^1 . t^0} \qquad \begin{matrix} 4\ 5 \\ 4\ 5 \end{matrix}$$

$D^0 = K^- + K^+$

$$\frac{x^2 . t^2}{x^2 . t^2} = \frac{x^2 . t^1}{x^2 . t^1} . \frac{x^2 . t^1}{x^2 . t^1} \qquad \begin{matrix} 6\ 4 \\ 6\ 4 \end{matrix}$$

$D^0 = K^- + \pi^+$

$$\frac{x^2 . t^2}{x^2 . t^2} = \frac{x^2 . t^1}{x^2 . t^1} . \frac{x^1 . t^1}{x^1 . t^1} \qquad \begin{matrix} 5\ 4 \\ 5\ 4 \end{matrix}$$

$D^+ = {}^*K^{-0} + \ell^+ + \nu_\ell$

$$\frac{x^2 . t^3}{x^2 . t^3} = \frac{x^2 . t^2}{x^2 . t^2} . \frac{x^2 . t^1}{x^2 . t^2} . \frac{x^1 . t^1}{x^1 . t^0} \qquad \begin{matrix} 7\ 7 \\ 7\ 7 \end{matrix}$$

$e^+ + \nu_\mu$

$D^+ = {}^*K^{-0} + \tau^+ + \nu_e$

$$\frac{x^2 . t^3}{x^2 . t^3} = \frac{x^2 . t^2}{x^2 . t^2} . \frac{x^2 . t^0}{x^2 . t^1} . \frac{x^0 . t^1}{x^0 . t^0} \qquad \begin{matrix} 6\ 6 \\ 6\ 6 \end{matrix}$$

$D_s^+ = \phi^0 + \ell^+ + \nu_\ell$

$$\frac{x^3 . t^3}{x^3 . t^3} = \frac{x^3 . t^2}{x^3 . t^2} . \frac{x^1 . t^1}{x^1 . t^2} . \frac{x^0 . t^1}{x^0 . t^0} \qquad \begin{matrix} 4\ 4 \\ 4\ 4 \end{matrix}$$

$D_s^+ = \phi^0 + \mu^+ + \nu_e$

$D_s^+ = \phi^0 + e^+ + \nu_\tau$

$$\frac{x^3 . t^3}{x^3 . t^3} = \frac{x^3 . t^2}{x^3 . t^2} . \frac{x^2 . t^1}{x^2 . t^2} . \frac{x^0 . t^2}{x^0 . t^1} \qquad \begin{matrix} 8\ 8 \\ 8\ 8 \end{matrix}$$

$K^+ = \pi^+ + \nu_e + \nu_e^-$

$$\frac{x^2 . t^1}{x^2 . t^1} = \frac{x^1 . t^1}{x^1 . t^1} . \frac{x^0 . t^1}{x^0 . t^0} . \frac{x^0 . t^0}{x^0 . t^1} \qquad \begin{matrix} 3\ 3 \\ 3\ 3 \end{matrix}$$

sestaveno 1.4.2002

(13.11.2004) ke dnešku mi nikdo neodpověděl a neřekl názor ani na jednu z 96 lekcí o mých substitucích