Research Institute for Fundamental Physics
Kyoto University

素粒子論　藤本.　Nov. 8, 1955　(1)

$\tau^+ \to 2\pi^+ + \pi^-$　Dalitz 0^- (1^+) 2^+ 3^- ...　$4.0 \pm {}^{0.7}_{0.3}$ sec

$\tau' \to \pi^+ + 2\pi^0$　$1.6 \pm {}^{1.2}_{0.7} \cdot 10^{-8}$

$K_{\mu 2}$　$K_\mu^+ \to \mu^+ + \nu$

$K_{\pi 2}$　$\chi^+(0^+) \to \pi^+ + \pi^0$　$0^+, 1^-, 2^+ \ldots$　$0.95 \pm 0.14 \cdot 10^{-8}$ (K_L^+)

$K_{\mu 3}$　$\kappa^+ \to \mu^+ + ?^0 + ?$

$K_{\beta 3}$　$K_\beta \to e + ?^0 + ?^0$　0.65 ± 0.45

$0^0{}_\beta \to \pi^+ + \pi^-$ $(Q = 214 \pm 5\,\mathrm{MeV}) \to 1.7 \pm {}^{0.7}_{0.4} \cdot 10^{-10}$ (K_L^-)

	K_L	τ	τ'
Berkeley	295	29	7
Paris C.R.	48	3	1

$\nu\bar{\nu}_2$　χ　π　K_β

G stack : 16　7　5　3

m.p. Cl(S) : 5　5　14

Nuclear mean free path

K^+ $(30 \sim 120\,\mathrm{MeV})$　$3 \times l_{geo}$

K^-　$\sim l_{geo}$

elastic

inlastic　16

2

K^--star

$K^- + N \to \Sigma + \pi$

Λ^0

$\Lambda^0 \to p + \pi + 36.92 \pm 1$ MeV

$(\tau^0 \to \pi^+ + \pi^- + \pi^0)$ anomalous Λ^0.

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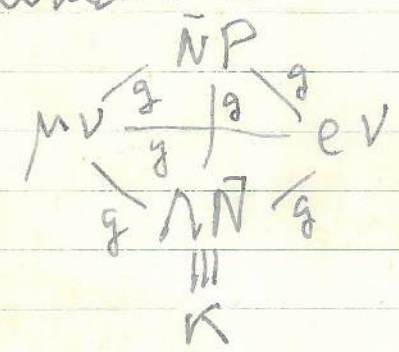
Dallaporta
Gellman π



$K^+ \to 3\pi$
$\to \mu + \nu$

$S \to 2\pi$
$\to \pi + \mu + \nu$
$\to \pi + e + \nu$

$\Lambda \to N + \mu + \nu$

$\Sigma^+ \to p + \pi^0$
$\to n + \pi^+$

$\Sigma^\pm$ $4.6 \pm^{2}_{1} \cdot 10^{-11}$ sec. (emulsion)

$(Y^\pm)$

Λ^0 $3.7 \pm^{0.6}_{0.7} \cdot 10^{-10}$ sec. ($\mp 1, 2$)

${}^*H^4 \to He^4 + \pi^-$
$\downarrow$
$H^3 + \Lambda^0$ B.E. $\begin{cases} 2.2 \pm 1.5\,\text{MeV} \\ 1.2 \pm 0.2\,\text{MeV} \end{cases}$ Oslo, Bristol

S
V^0 Λ^0, θ^0, anomalous
V^+ $\gtrsim 10^{-10}$ sec (K^+)
V^- $\sim 10^{-11}$ sec $Y^-(K^-)$

$\Xi^0 + \theta^0 + \theta^0$

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