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WEAK RADIATIVE DECAYS

A. T. FILIPPOV

Joint Institute for Nuclear Research

Quantity	Experimental value and Literature reference	Number of events	Remarks, procedure
$\frac{\Gamma(K_L \rightarrow 2\gamma)}{\Gamma(K_L \rightarrow \text{all})}$	$(7.4 \pm 1.6) \cdot 10^{-4}$ 1	33	Spark chambers
$\frac{\Gamma(K_L \rightarrow 2\gamma)}{\Gamma(K_L \rightarrow \text{all})}$	$(1.3 \pm 0.6) \cdot 10^{-4}$ 2	17	Spark chambers
$\frac{\Gamma(K_L \rightarrow \pi^+\pi^-\gamma)}{\Gamma(K_L \rightarrow \text{all})}$	$< 3 \cdot 10^{-3}$ 3		Confidence 85%; spark chambers
$\frac{\Gamma(K^+ \rightarrow \pi^+\pi^0\gamma)}{\Gamma(K^+ \rightarrow \text{all})}$	$(2.2 \pm 0.7) \cdot 10^{-4}$ 4	18	55 MeV < T _{π⁺} < 80 MeV; freon bubble chamber
$\frac{\Gamma(K^+ \rightarrow \pi^+\pi^+\pi^-\gamma)}{\Gamma(K^+ \rightarrow \text{all})}$	$(1.0 \pm 0.4) \cdot 10^{-4}$ 5		E _γ > 10 MeV; emulsion
$\frac{\Gamma(K^+ \rightarrow \pi^+2\gamma)}{\Gamma(K^+ \rightarrow \text{all})}$	$< 1.5 \cdot 10^{-4}$ 6		
$\frac{\Gamma(K^+ \rightarrow \pi^+e^+e^-)}{\Gamma(K^+ \rightarrow \text{all})}$	$< 4 \cdot 10^{-7}$ 7		
$\frac{\Gamma(K^+ \rightarrow \pi^+\mu^+\mu^-)}{\Gamma(K^+ \rightarrow \text{all})}$	$< 3 \cdot 10^{-6}$ 8		Confidence, 90%, freon bubble chamber
$\frac{\Gamma(K^+ \rightarrow \pi^0e^+\nu\gamma)}{\Gamma(K^+ \rightarrow \text{all})}$	$(1.2 \pm 0.8) \cdot 10^{-2}$ 9		
$\frac{\Gamma(\pi \rightarrow \mu\nu\gamma)}{\Gamma(\pi \rightarrow \text{all})}$	$(1.24 \pm 0.25) \cdot 10^{-4}$ 10	26	Emulsion
$\frac{\Gamma(\pi \rightarrow e\nu\gamma)}{\Gamma(\pi \rightarrow \text{all})}$	$(3.40 \pm 0.5) \cdot 10^{-8}$ 11	143	Determination of ratio of axial and vector form factors*
$\frac{\Gamma(\Sigma^+ \rightarrow p\gamma)}{\Gamma(\Sigma^+ \rightarrow p\pi^0)}$	$(0.37 \pm 0.08) \cdot 10^{-2}$ 12	24	Hydrogen bubble chamber
$\frac{\Gamma(\Sigma^+ \rightarrow p\gamma)}{\Gamma(\Sigma^+ \rightarrow p\pi^0)}$	$(0.17) \cdot 10^{-2}$ 13	4	Emulsion
$\frac{\Gamma(\Sigma^+ \rightarrow n\pi^+\gamma)}{\Gamma(\Sigma^+ \rightarrow n\pi^+)}$	$\cong 1.8 \cdot 10^{-3}$ 14		P _{π⁺} < 166 MeV/c; hydrogen bubble chamber
$\frac{\Gamma(\Sigma^- \rightarrow n\pi^-\gamma)}{\Gamma(\Sigma^- \rightarrow n\pi^-)}$	$\cong 1.1 \cdot 10^{-3}$ 15		P _{π⁻} < 166 MeV/c; hydrogen bubble chamber

*a/F = -2.0 ± 0.1; or a/F = 0.3 ± 0.1. For notation see the paper of A. T. Filipov at this seminar.

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