STRANGE MESONS
($S = \pm 1$, $C = B = 0$)

$K^+ = u\bar{s}$, $K^0 = d\bar{s}$, $\overline{K}^0 = \bar{d}s$, $K^- = \bar{u}s$, similarly for K^*'s

$K^\pm$

$I(J^P) = \frac{1}{2}(0^-)$

Mass $m = 493.677 \pm 0.016$ MeV (S = 2.8)
Mean life $\tau = (1.2371 \pm 0.0029) \times 10^{-8}$ s (S = 2.2)
$c\tau = 3.709$ m

Slope parameter g [r]

(See Full Listings for quadratic coefficients)

$K^+ \to \pi^+\pi^+\pi^- = -0.2154 \pm 0.0035$ (S = 1.4)
$K^- \to \pi^-\pi^-\pi^+ = -0.217 \pm 0.007$ (S = 2.5)
$K^\pm \to \pi^\pm\pi^0\pi^0 = 0.594 \pm 0.019$ (S = 1.3)

$K^\pm$ decay form factors [b,s]

K^+_{e3} $\lambda_+ = 0.0286 \pm 0.0022$
$K^+_{\mu 3}$ $\lambda_+ = 0.033 \pm 0.008$ (S = 1.6)
$K^+_{\mu 3}$ $\lambda_0 = 0.004 \pm 0.007$ (S = 1.6)
K^+_{e3} $|f_S/f_+| = 0.084 \pm 0.023$ (S = 1.2)
K^+_{e3} $|f_T/f_+| = 0.38 \pm 0.11$ (S = 1.1)
$K^+_{\mu 3}$ $|f_T/f_+| = 0.02 \pm 0.12$
$K^+ \to e^+\nu_e\gamma$ $|F_A + F_V| = 0.148 \pm 0.010$
$K^+ \to \mu^+\nu_\mu\gamma$ $|F_A + F_V| < 0.23$, CL = 90%
$K^+ \to e^+\nu_e\gamma$ $|F_A - F_V| < 0.49$
$K^+ \to \mu^+\nu_\mu\gamma$ $|F_A - F_V| = -2.2$ to 0.3

K^- modes are charge conjugates of the modes below.

K^+ DECAY MODES	Fraction (Γ_i/Γ)	Scale factor/ Confidence level	p (MeV/c)
$\mu^+\nu_\mu$	(63.51 ± 0.18) %	S=1.3	236
$e^+\nu_e$	$(1.55 \pm 0.07) \times 10^{-5}$		247
$\pi^+\pi^0$	(21.16 ± 0.14) %	S=1.1	205
$\pi^+\pi^+\pi^-$	(5.59 ± 0.05) %	S=1.9	125
$\pi^+\pi^0\pi^0$	(1.73 ± 0.04) %	S=1.2	133
$\pi^0\mu^+\nu_\mu$	(3.18 ± 0.08) %	S=1.5	215
Called $K^+_{\mu 3}$.			
$\pi^0 e^+\nu_e$	(4.82 ± 0.06) %	S=1.3	228
Called K^+_{e3}.			