π^0

$I^G(J^{PC}) = 1^-(0^{-+})$

Mass $m = 134.9764 \pm 0.0006$ MeV [a]
$m_{\pi^\pm} - m_{\pi^0} = 4.5936 \pm 0.0005$ MeV
Mean life $\tau = (8.4 \pm 0.6) \times 10^{-17}$ s (S = 3.0)
$c\tau = 25.1$ nm

π^0 DECAY MODES		Fraction (Γ_i/Γ)	Scale factor/ Confidence level	p (MeV/c)
2γ		(98.798 ± 0.032) %	S=1.1	67
$e^+e^-\gamma$		(1.198 ± 0.032) %	S=1.1	67
γ positronium		(1.82 ± 0.29) × 10^{-9}		67
$e^+e^+e^-e^-$		(3.14 ± 0.30) × 10^{-5}		67
e^+e^-		(7.5 ± 2.0) × 10^{-8}		67
4γ		< 2 × 10^{-8}	CL=90%	67
$\nu\overline{\nu}$	[f]	< 8.3 × 10^{-7}	CL=90%	67
$\nu_e\overline{\nu}_e$		< 1.7 × 10^{-6}	CL=90%	67
$\nu_\mu\overline{\nu}_\mu$		< 3.1 × 10^{-6}	CL=90%	67
$\nu_\tau\overline{\nu}_\tau$		< 2.1 × 10^{-6}	CL=90%	67
Charge conjugation (C) or Lepton Family number (LF) violating modes				
3γ	C	< 3.1 × 10^{-8}	CL=90%	67
$\mu^+e^- + e^-\mu^+$	LF	< 1.72 × 10^{-8}	CL=90%	26

η

$I^G(J^{PC}) = 0^+(0^{-+})$

Mass $m = 547.45 \pm 0.19$ MeV (S = 1.6)
Full width $\Gamma = 1.20 \pm 0.11$ keV [g] (S = 1.8)

C-nonconserving decay parameters [h]

$\pi^+\pi^-\pi^0$	Left-right asymmetry	$= (0.09 \pm 0.17) \times 10^{-2}$
$\pi^+\pi^-\pi^0$	Sextant asymmetry	$= (0.18 \pm 0.16) \times 10^{-2}$
$\pi^+\pi^-\pi^0$	Quadrant asymmetry	$= (-0.17 \pm 0.17) \times 10^{-2}$
$\pi^+\pi^-\gamma$	Left-right asymmetry	$= (0.9 \pm 0.4) \times 10^{-2}$
$\pi^+\pi^-\gamma$	β (D-wave)	$= 0.05 \pm 0.06$ (S = 1.5)

η DECAY MODES		Fraction (Γ_i/Γ)	Scale factor/ Confidence level	p (MeV/c)
neutral modes		(70.8 ± 0.8) %	S=1.2	–
2γ	[g]	(38.8 ± 0.5) %	S=1.2	274
$3\pi^0$		(31.9 ± 0.4) %	S=1.2	180
$\pi^0 2\gamma$		(7.1 ± 1.4) × 10^{-4}		258