N BARYONS
$(S = 0,\ I = 1/2)$

$p,\ N^+ = uud; \quad n,\ N^0 = udd$

p

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

Mass $m = 938.27231 \pm 0.00028$ MeV [a]
$= 1.007276470 \pm 0.000000012$ u
$m_{\overline{p}}/m_p = 0.99999998 \pm 0.00000004$
$\left|q_p + q_{\overline{p}}\right|/e \ < \ 2 \times 10^{-5}$
$\left|q_p + q_e\right|/e \ < \ 1.0 \times 10^{-21}$ [b]
Magnetic moment $\mu = 2.79284739 \pm 0.00000006\ \mu_N$
Electric dipole moment $d = (-4 \pm 6) \times 10^{-23}\ e\,\mathrm{cm}$
Electric polarizability $\overline{\alpha} = (10.2 \pm 0.9) \times 10^{-4}\ \mathrm{fm}^3$
Magnetic polarizability $\overline{\beta} = (4.0 \pm 0.9) \times 10^{-4}\ \mathrm{fm}^3$
Mean life $\tau > \ 1.6 \times 10^{25}$ years (independent of mode)
$> \ 10^{31} - 5 \times 10^{32}$ years [c] (mode dependent)

For N decays, p and n distinguish proton and neutron partial lifetimes. See also the "Note on Proton Mean Life Limits" in the Full Listings in the *Review of Particle Properties* (Physical Review **D50** 1173 (1994)).

The "partial mean life" limits tabulated here are the limits on τ/B_i, where τ is the total mean life and B_i is the branching fraction for the mode in question.

***p* DECAY MODES**	Partial mean life (10^{30} years)	Confidence level	p (MeV/c)
	Antilepton + meson		
$N \to e^+\pi$	> 130 (n), > 550 (p)	90%	459
$N \to \mu^+\pi$	> 100 (n), > 270 (p)	90%	453
$N \to \nu\pi$	> 100 (n), > 25 (p)	90%	459
$p \to e^+\eta$	> 140	90%	309
$p \to \mu^+\eta$	> 69	90%	296
$n \to \nu\eta$	> 54	90%	310
$N \to e^+\rho$	> 58 (n), > 75 (p)	90%	153
$N \to \mu^+\rho$	> 23 (n), > 110 (p)	90%	119
$N \to \nu\rho$	> 19 (n), > 27 (p)	90%	153
$p \to e^+\omega$	> 45	90%	142