

(3) The “Planck mass” is defined as $\sqrt{\hbar c/G}$. As energy, what is this worth in gallons of gasoline?

The Planck mass, $(\hbar c/G)^{1/2}$ —the mass of a particle whose Compton wavelength is equal to its Schwarzschild radius—works out at 22 μg . That is equivalent to 2×10^{16} erg, or 2×10^9 J. Heat of combustion for gasoline is around 10^4 cal/g, or 4×10^7 J/kg. Thus one Planck mass is worth 50 kg of gasoline. That is 60 l, or 16 gal—about *one tankful*.