

New Hubble Space Telescope Cepheid variable star determination of the Hubble Constant, H_0 .

$$H_0 = 80 \frac{\text{km}}{\text{sec}} \frac{1}{\text{Mpc}}$$

km, kilometers, and Mpc, Mega parsecs, are both distances.

So H_0 has the units of an inverse time.

$$H_0 = 80 \frac{\text{km}}{\text{sec Mpc}} \frac{1 \text{Mpc}}{10^6 \text{pc}} \frac{1 \text{pc}}{3 \times 10^{18} \text{cm}} \frac{10^2 \text{cm}}{1 \text{m}} \frac{10^3 \text{m}}{1 \text{km}}$$

$$H_0 = \frac{80}{3 \times 10^{19} \text{sec}}$$

$$\frac{1}{H_0} = \frac{3 \times 10^{19} \text{sec}}{80} \frac{1 \text{yr}}{3.15 \times 10^7 \text{sec}} = 1.25 \times 10^{10} \text{yr}$$

$$\frac{1}{H_0} = 12.5 \text{ billion years}$$

Current big bang general relativistic cosmologies yield as the age of the universe

$$\frac{2}{3} \frac{1}{H_0} = 8.3 \text{ billion years .}$$

That is too young! Our own sun is 5 billion years old. How can you possibly form the galaxies and two generations of stars to form elements above H, He, Li, and Be in only 3.3 billion years. The big bang only makes H and He with a little Li and Be. But we are made principally of C, N, and O and the earth is made of Si and O in the crust and Fe and Ni in the core.

Stars in some globular star clusters seem to have ages of 15 ± 2 billion year. While this figure is somewhat model dependent it clearly conflicts with an age of the universe of 8.3 or even 12.5 billion years. Though with the $\frac{1}{H_0}$ figure of 12.5 billion year for the age of the universe the two numbers are almost not in direct conflict.