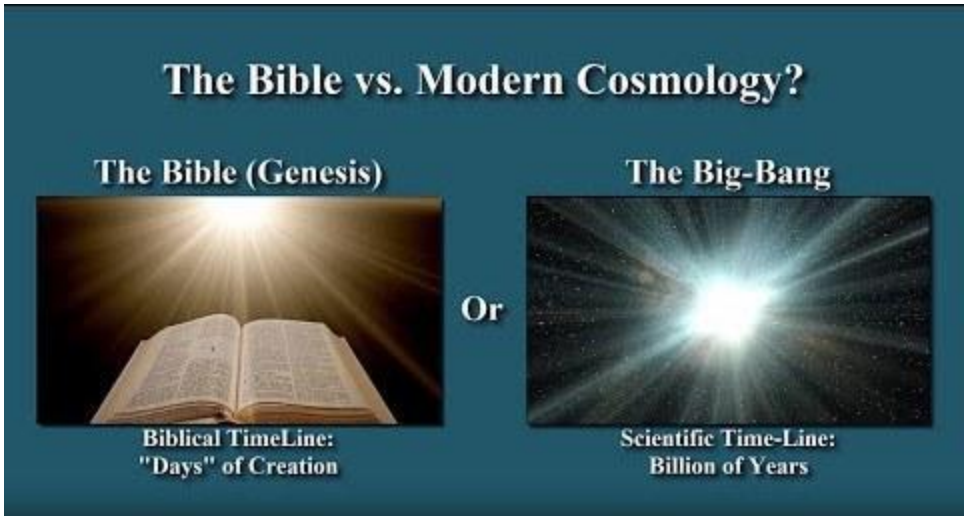


Age of the Universe – 6 days or 13.8 billion years?

Creationists tell us that according to Genesis 1 in the bible, the universe took 6 days for God to create. Cosmologists tell us the universe started with what is called the ***big bang*** event which is claimed to have occurred 13.8 billion years ago. Which is correct… 6 days or 13.8 billion years? The surprise answer, according to brilliant physicist Dr. Gerald Schroeder, is both. In his book ***The Science of God***, Dr. Schroeder goes on to explain that the answer is a matter of perspective... it depends upon who you are asking the question.

From the perspective of man living on the surface of the earth, there is evidence suggesting the universe began 13.8 billion years ago. This evidence is based upon observing the expansion of the universe. Generally speaking, it appears galaxies are moving away from us and from each other. To visualize this, imagine a partially inflated balloon with white dots marked on the surface representing galaxies. Now imagine increasing the amount of air in the balloon. You will notice the distance between white dots increasing… EXACTLY what astronomers notice when observing galaxies.

The age of the universe is derived by knowing the rate of expansion of the universe and working backwards to determine when the universe was infinitesimally small… effectively having a volume of zero. In the case of our universe, that appears to have occurred some 13.8 billion years ago.

So where does the 6 day perspective come from? In a moment of brilliant insight, Dr. Schroeder introduced another element to consider… ***relativity***. According to the theory of relativity, time slows down as you approach the speed of light. In fact, for anything actually traveling the speed of light, like a photon, time ceases to exist altogether.

Let's do a ***thought*** experiment. Imagine you have a twin and you both are wearing watches. Imagine you leave the earth in a space ship traveling near the speed of light and then come back to earth. If you were to look at your watch, you would notice that the time indicated is different than your twin's watch. Your watch would indicate only a small amount of time having passed compared to your twin's watch. This difference in the passing of time is known as **time dilation**.

Revisiting the big bang event, Dr. Schroeder calculated a time dilation factor for the near-speed-of-light expansion of the universe and came up with a value of 10 ^ 12. When you apply this time dilation factor to our earth-based perceived age of the universe of 13.8 billion years, you get the following:

$$\frac{13.8 \times 10^{9}}{10^{12}} \text{ years} \times \frac{365 \text{ days}}{\text{year}} = 5.03 \text{ days}$$

Forget Christianity for a second. Think of the ramifications of this result purely from a science perspective. I mentioned early that the answer to the "age of the universe" question depends upon who you ask. If you ask the universe, "how old do you think you are?", the universe responds "about 5 days".

Coming back to Christianity, while this isn't exactly 6 days as described in the bible, it is close enough for consideration… knowing that both the 13.8 billion year figure and the time dilation figure are based upon some imprecise assumptions with possible variability.

Consider the following ***thought*** experiment. Imagine the following conversation between God and Moses.

Moses: Wow God (… looking up at the starry heavens in awe), this is really cool. How long did it take you to do all of this?

God (creator of the universe): The amount of time that has passed since I first started this is (… looking down at his watch) what you would call about 6 days. I'm tired now… I think I'll take a day of rest. ☺