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Speed of Light Slowing Down?

by Warren Krug (January-February, 2005)

People who have been following the creation/evolution debate in recent years are well aware of the shortcomings of the theory of evolution, from both scientific and biblical viewpoints. What we observe in nature not surprisingly fits much better with the account of creation given us in Genesis.

This is not to say though that all the questions have been answered for Bible-believing creationists. Perhaps the most perplexing problem has to do with starlight and the age of the Earth. Simply put, how is it possible for us to be viewing stars billions of light-years away in a universe that is only 6,000 or so years old?

Attempts to Explain This Contradiction

Several attempts have been made to solve this riddle.

The most commonly-used theory is that God created the light in transit, mature starlight so to speak, just as God created a mature Adam and Eve.

Few creation scientists use this argument anymore because of the nature of starlight. Starlight contains information about distant cosmic events such as supernovas which appear to have happened millions or billions of years ago. If this theory were true, then God would be including "phony" data in the starlight, and that, of course, is out of character for a Holy God. **1**

A second theory holds that the huge distances are in error, that there is something wrong with the way we measure the distances to stars. However, the simple fact is that if all the stars and galaxies were within 6,000 light-years of Earth, we would all fry to death! **2**

A third theory is that all the stars were made millions and billions of years before Creation Week. God placed these stars in such a way that their light first reached Earth on Day 4.

This idea clearly conflicts with Scripture which says "For in six days the Lord made the heavens and the earth." (Exodus 20:11) **3**

Barry Setterfield and Changes in the Speed of Light

For decades students have been taught that the speed of light is constant and has been since the beginning of time. However, in recent years, a number of scientists are beginning to question this "scientific fact," and suggesting that the speed of light ('c') is decaying ("CDK").

In 1979, an Australian undergraduate student named Barry Setterfield set about to chart all the measurements of the speed of light since the late 17th century. He gathered data on more than 163 measurements using 16 different methods over 300 years.

The early measurements typically tracked the eclipses of Jupiter's moons when the planet was near Earth and compared them with observations when Jupiter was farther away. The early astronomers kept detailed notes and sketches.

Setterfield expected to see the recorded speeds grouped around today's accepted value for light speed—about 299,792 kilometers/second. What he found instead amazed him. The light speeds from the early measurements were significantly faster than what one sees in the modern world.

For example, light speeds of roughly 303,320 km/second were recorded in 1738, 299,949 km/second in 1861, 299.921 km/second in 1877, and 299,792 km/second in 2004.

Even allowing for the fact that early telescopes were less precise, the speed of light apparently was much as 7% higher in the 1700s. A statistician, Dr. Trevor Norman, confirmed that Setterfield's measurements were statistically significant with a confidence of more than 99 percent.

Setterfield and Norman published their results in July of 1987 after extensive peer review. However, today even creationist scientists are not all in agreement that CDK is supported by the evidence. **4**

Russell Humphrey and Changes in Time

A creationist physicist, Dr. Russ Humphreys, said he tried unsuccessfully for a year to get CDK to work. Still, his research inspired him to come up with an alternate theory which involves changes in time rather than actual changes in the speed of light. No less a scientist than Albert Einstein long ago proposed that time is not a constant. Einstein's general theory of relativity (GR) indicates that gravity can distort time.

The effect of gravity on time has been measured experimentally many times. For instance, clocks at the top of tall buildings where gravity is slightly weaker run faster than clocks at street level.

When the concentration of matter is dense enough, the gravitational distortion can be so immense that even light cannot escape. According to GR, an invisible boundary surrounds such a concentration of matter (called an event horizon). At the event horizon light rays trying to escape the tremendous pull of gravity bend back on themselves, and time literally stands still.

Humphrey's cosmology assumes that the Earth is near the center of the universe (as observations seem to confirm) and that there is a net gravitational effect toward the center.

Further, he believes the universe has expanded perhaps up to 50 times its size at the moment of creation. Some observational evidence as well as Scripture's references to God "stretching out the heavens" (Isaiah 42:5, Jeremiah 10:12, Zechariah 12:1) tend to support this view.

With these assumptions in mind, scientific deduction based on GR says the universe has expanded out of its event horizon, a condition known as a "white hole."

CDK Not Dead

But the idea that the speed of light is slowing down has not died. In fact, a team of secular scientists including the famed physicist Paul Davies publicized a paper in *Nature* magazine in 2002 that claimed "light has been slowing down since the creation of the universe." **2**

A cover story in a 1999 *New Scientist* magazine proposed the "heresy" of c-decay. Some secular physicists have proposed the speed of light in the past was greater than even Setterfield has suggested. **2**

In Conclusion

The problem of how to reconcile billions of light-years of starlight in a world of thousands of years still awaits a definitive solution. Even Humphrey says his "white hole" cosmology is far from being the last word on the subject. All the theories have some unanswered questions.

Likely we will have to wait until heaven to learn the final solution to this riddle. Meanwhile we will accept the Word of God which describes a world which is only a few thousand years old but one which along with time itself will eventually end with the Second Coming of our Savior. *LSI*

References

1. Ham, Ken, Jonathan Sarfati, and Carl Wieland, "How Can We See Distant Stars in a Young Universe?" www.answersingenesis.org

2. Wieland, Carl, "Speed of Light Slowing Down After All?," www.answersingenesis.org (August, 2002)

3. Hartnett, John G., "A New Cosmology: Solution to the Starlight Travel Time Problem," www.answersingenesis.org (August, 2003).

4. Bennett, Chris, "Speed of Light Slowing Down?" www.worldnetdaily.com (7/31/04).

For more information: go to the Answers in Genesis website (http://www. answersingenesis.org) and insert "Speed of Light" in the search window. *LSI*