## Sarfati's Inconsistent Views on Photon Transmissions between Stars and in the Sun's Interior

Kevin R. Henke, Ph.D.

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## YUC PROBLEMS WITH A LARGE AND OLD UNIVERSE

Because of their fundamentalist interpretations of the Bible, young-Universe creationists (YUCs) believe that the Universe is only 6,000 to 10,000 years old. However, since the 1840s, astronomers have known that interstellar distances easily exceed 10,000 light years (Brush, 1983, p. 305-306). If the Universe is only 6,000 to 10,000 years old as YUCs claim and if the speed of light has been constant over time, why do we see objects billions of light years away from Earth? In other words, how could light from a quasar 10 billion light years from Earth reach our planet in 10,000 years or less if the speed of light has always been constant?

Over the years, YUCs have proposed a number of wild ideas to explain away the great size and age of the Universe, including: Norman and Setterfield's (1987) decaying speed of light claims, the Moon and Spencer (1953) small Universe (Slusher, 1980, p. 33-37; Wysong, 1981, p. 156), and "tired light" (Slusher, 1978, p. 13-16). However, none of these YUC claims have survived scientific scrutiny (Strahler, 1987, p. 114-118; Freske, 1980, p. 36-37; Schadewald, 1981; Phillips, 1988). Even YUCs have criticized many of the claims of their fellow believers (as examples, Akridge, 1984; Aardsma, 1988a,b; and Humphreys, 1988). Today, many YUCs favor YUC D. Russell Humphreys' (1994) "white hole relativistic cosmology." However, old-Earth creationist and other physicists have extensively criticized Humphreys' ideas. Wisely, YUC Sarfati (2004, p. 190) is cautious about Humphreys' claims.

In the past, many YUCs (as examples: Morris, 1978, p. 61-62; Wysong, 1981, p. 156) have simply argued that God instantaneously created

starlight (photons) between the Earth and stars. Therefore, "Adam" did not have to wait for the stars to appear "as signs" (Genesis 1:14-15) in the heavens (Morris, 1978, p. 61-62). YUCs that support this claim not only cite Genesis 1:14-15 as "evidence", but also argue that if "Adam" was miraculously created in a mature and complete state, so could starlight (for example, Wysong, 1981, p. 156). Of course, Morris' and Wysong's "response" is nothing more than the feeble and unscientific "Gosse" or Omphalos argument. YUCs can always invoke a supernatural "Gosse excuse" and "eliminate" any problem by saying:

That's the way God did it and I don't care what your evidence says, I can invoke any number of miracles to cover it up.

Correctly, YUC Sarfati (2004, p.189-190) denounces this view as being both poor theology and anti-scientific nonsense:

Some older creationist works [as examples: Morris, 1978; Wysong, 1981] proposed that God may have created the light in transit, and [old-Universe creationist Hugh] Ross harps on this as if it is still mainstream [young-Universe] creationist thinking... [Ross reference omitted]. But AiG [Answers in Genesis] long ago pointed out the problems with this idea. [new paragraph] It would entail that we would be seeing light from heavenly bodies that don't really exist; and even light that seems to indicate precise sequences of events predictable by the laws of physics, but which never actually happened. This, in effect, suggests that God is a deceiver.

## YUC PROBLEMS WITH PHOTON TRANSMISSION IN THE SUN

Like other stars, nuclear fusion in the Sun's core produces photons, neutrinos and other radiation. In the past, some <u>YECs</u> have <u>erroneously</u> proclaimed that solar energy comes from a "shrinking Sun" (also see: Van Till *et al.*, 1988, Chapter 3). However, Sarfati (2004, p. 170, 341-342) and <u>AiG</u> properly reject this nonsense and embrace the reality of nuclear fusion in stars.

Physicists have determined that photons produced in the Sun's core take much more than 10,000 years to migrate through reradiation to the Sun's surface. The shortest time estimate in the literature for this migration is approximately 17,000 years, which was derived by Mitalas and Sills (1992). However, Stix (2003) argues that the estimate in

Mitalas and Sills (1992) is erroneous and that the actual value is closer to 30,000,000 years. Other estimates in the literature also greatly exceed 17,000 years (for example: Harrison, 2000, p. 94). So YUCs face yet another example of a natural phenomenon that refuses to comply with their "young" Sun. If the Sun is less than 10,000 years old, why do we detect photons and other radiation that could only form from the extremely high pressures and temperatures in its core?

Rather than dealing with science, Sarfati (2004, p. 171) simply invokes a Gosse argument to "solve" the YUC solar photon problem:

Also, some argue for long ages on the basis that the calculated time for a photon to travel from the [solar] core to the surface (actually by absorption and reradiation) exceeds the biblical time scale. But this is explained if the main purpose of fusion is STABILITY - producing enough energy to balance that lost from the surface, that is, the sun was created in a STEADY STATE CONDITION, with the outward pressure generated by fusion matching the inward gravitational pressure, maintaining a constant temperature profile. This means that it could immediately fulfill its function as the 'greater light,' [Genesis 1:16] and keep shining at a constant rate. It is no different from believing that God created Adam with oxygen in his bloodstream in his extremities, even though it now takes some time for oxygen to diffuse through the alveoli in the lungs, then be transported by the blood. [Sarfati's emphasis]

Obviously, Sarfati (2004, p. 171) fails to see that he's invoking the same type of groundless Gosse miracles to "explain" how photons travel WITHIN stars as Morris, Wysong and other YUCs have used to "explain" how photons travel BETWEEN stars. Clearly, Sarfati's approach to the migration of photons within the Sun is not only antiscientific, but it's also inconsistent and hypocritical.

## **REFERENCES**

Aardsma, G. E., 1988a, "Has the Speed of Light Decayed?", *Impact* #179, Institute for Creation Research, El Cajon, CA.

Aardsma, G. E., 1988b, "Has the Speed of Light Decayed Recently?", *Creation Research Society Quarterly*, vol. 25, #1, 1988, p. 36f.

Akridge, G. R., 1984, "The Universe is Bigger than 15.71 Light Years", *Creation Research Society Quarterly*, vol. 21, June, p. 18f.

Brush, S. G., 1983, "Finding the Age of the Earth: By Physics or By Faith?", p. 296f, in Zetterberg, J. P., (ed.), *Evolution versus Creationism: The Public Education Controversy*, Oryx Press.

Freske, S., 1980, "Evidence Supporting a Great Age for the Universe", *Creation/Evolution Journal*, <u>Issue II</u>, Fall 1980, p. 34f.

Harrison, E., 2000, Cosmology: *The Science of the Universe*, 2nd ed., Cambridge University Press, Cambridge, UK.

Humphreys, D. R., 1988, "Has the Speed of Light Decayed Recently? - Paper 2", *Creation Research Society Quarterly*, v. 25, June, p. 40-45.

Humphreys, D. R., 1994, *Starlight and Time*, Master Books, Green Forest, Arkansas, USA.

Mitalas, R. and K. R. Sills, 1992, "On the Photon Diffusion Time Scale for the Sun", *Astrophys. J.*, v. 401, n. 2, pt. 1, December, p. 759-760.

Moon, P. and D. E. Spencer, 1953, "Binary Stars and the Velocity of Light", *Journal of the Optical Society of America*, v. 43, n. 8, August, p. 653-641.

Morris, H. M., 1978, *The Remarkable Birth of Planet Earth*, Creation-Life Publishers, San Diego, CA.

Norman, T. and B. Setterfield, 1987, *The Atomic Constants, Light, and Time*, SRI International, Menlo Park, CA.

Phillips, P. G., 1988, "A History and Analysis of the 15.7 Light Year Universe", *Perspectives on Science and Christian Faith*, v. 40, n.1, March, p. 19-23.

Sarfati, J., 2004, Refuting Compromise: A Biblical and Scientific Refutation of "Progressive Creationism" (Billions of Years) as Popularized by Astronomer Hugh Ross, Master Books, Green Forest, Arkansas, USA.

Schadewald, R., 1981, "Moon and Spencer and the Small Universe", *Creation/Evolution Journal*, <u>Issue IV</u>, Spring, p. 20f.

Slusher, H. S., 1978, *The Origin of the Universe: An Examination of the Big-Bang and Steady-State Cosmogonies*, Institute for Creation Research Monograph #8, San Diego, CA.

Slusher, H. S., 1980, *Age of the Cosmos*, Institute for Creation Research Monograph #9, San Diego, CA.

Stix, M., 2003, "The Time Scale of Energy Transport in the Sun", *Solar Physics*, v. 212, n. 1, January, p. 3-6.

Strahler, A. N., 1987, Science and Earth History: The Evolution/Creation Controversy, Prometheus, Buffalo, NY.

Van Till, H.J., D.A. Young, and C. Menninga, 1988, *Science Held Hostage: What's Wrong with Creation Science AND Evolutionism*, InterVarsity Press, Downers Grove, IL.

Wysong, R. L., 1981, *The Creation-Evolution Controversy*, 5th printing, Inquiry Press, Midland, MI.