

**Creation Science Rebuttals
Faint Young Sun Paradox
Claim published in Creation, V26, I3
Review By Greg Neyman
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Young earth creation science ministry [Creation Ministries International](#) ran an article in the June 2004 issue of Creation Magazine, in which the apparent problem of the "faint young sun paradox" is considered (the article was the featured article on the Creation Ministries International website on 26 March 2006).¹

This article, by Jonathan Sarfati, supposedly shows that the paradox proves that the earth is young. However, if we examine the article, we find that it does no such thing. This paradox says that according to astronomy, the sun is getting hotter and hotter as it ages. At a point in earth's early history, 4 billion years ago, it would have been too cool for life to grow on earth. Sarfati says that according to long agers, the first life appeared about 3.8 billion years ago. Extrapolating the data for the sun back in time, the sun would be 25 percent brighter today than it was back then. However, most paleontologists believe that the earth was warmer in the past. Thus, the paradox.

Sarfati says that the way evolutionists and long agers fix this problem is through greenhouse gases. He says,

"The only way around this is to make arbitrary and unrealistic assumptions of a far greater greenhouse effect at that time than exists today, with about 1,000 times more CO₂ in the atmosphere than there is today."

If taken at face value, this statement appears to condemn the possibility of an old earth. However, instead of putting the numbers in the article itself, Sarfati puts the numbers to back up this claim in the footnote associated with this remark...hoping that most people will not read the footnote!

The footnote says...

However, analyses of acritarchs (eukaryotic algal microfossils) 'dated' to 1.4 billion years ago, when the sun would have been only 88% as bright as today, provide evidence for only 10–200 times today's level of CO₂. Still, the researchers continue to hope that this would have compensated for the fainter sun.

In the first quote, he says 1,000 times more CO₂ is required to fix this problem. This refers to life at the 3.8 billion year old point. However, the analysis he quotes is for only 1.4 billion years ago. At that time it is 10, but possibly as high as 200 times the present level. But Sarfati is off by 2.4 billion years. How high was the CO₂ level at 3.8 billion years? If it was 200 times higher at 1.4 billion years ago, a simple multiplication will yield results of 542 times higher at the 3.8 billion year point. However, simple multiplication is probably not the most accurate way to figure this, because there are so many other factors to consider...especially volcanoes.

In the early earth, volcanic activity was very high...much higher than it is today. What is one of the major byproducts of volcanic activity? You guessed it...CO₂. With such high levels of CO₂ being pumped into the early atmosphere, a level of CO₂ of 1,000 times the present level is easily possible.

Although Sarfati would have his followers believe this is evidence for a young earth, if you look at the numbers, it really presents no problems for old earth believers. It's just a 'numbers game' that Sarfati is playing to fool his readers.

For More Reading:

[Faint Young Sun Paradox](#) (Talk Origins)

[The Solar FAQ](#) (Talk Origins)

[Faint Young Sun Paradox](#) (Wikipedia)

¹ Creation Magazine, Volume 26, Issue 3. Published on the web at <http://www.answersingenesis.org/creation/v26/i3/sun.asp> and at <http://www.creationontheweb.com/content/view/554/>