

Figure 1. McDonnell Douglas F-15 Eagle.

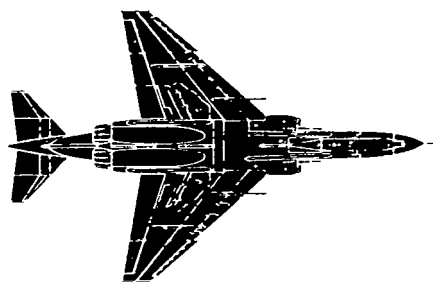


Figure 2. McDonnell Douglas F-4 Phantom II.

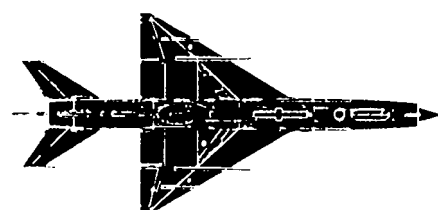


Figure 3. Mikoyan MiG-21 'Fishbed'.

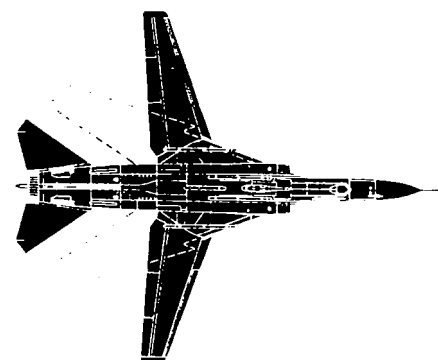


Figure 4. Mikoyan MiG-23S 'Flogger B'/'E' 'G'/'K'.

Dear Editor,

In the article 'Dinosaurs and Dragons' in *CEN Tech. J.*, 8(1), page 91, Figure 9 are silhouettes of two jet planes labelled 'F-15 Eagle' and 'MiG-21'. Figures 1, 2, 3 and 4 are silhouettes from William Green's *Observers Book of Aircraft*, 1978 edition, which show the

aircraft in your journal are the F-4 Phantom and Mikoyan MiG-23S (swing-wing). I hope this resolves any confusion.

Paul J. Smelter,  
Springfield, Illinois,  
UNITED STATES OF AMERICA.

*Our thanks to the above two sharp-eyed subscribers for picking up this error. Because we missed this, we obviously are not aircraft enthusiasts like these two, nor is the author in question who was responsible for this inadvertent mistake.*

— Editor

## NOAH'S ARK

Dear Editor,

Further to the article on Noah's Ark in *CEN Tech. J.*, 8(1),<sup>1</sup> it is interesting to note that both Brunei's 1844 'Great Britain' and the 1935 'USS Oregon' were built to exactly the same proportions as the Ark, that is, length ten times the height, six times the width. They are considered to have been the most stable ships ever constructed, having the optimum dimensions for riding storm-waves, being virtually uncapsizeable.

According to Torah tradition, Noah spent 120 years building the Ark, and God told him personally to plant trees in advance in order to grow to the correct size. The main beams were 300 cubit (at least 450 feet) *unitary* lengths which had grown to *precisely* the required size. Remarkably, the oldest living things today are the 4,500 year old pines of California and Canada, which even today can reach 400 feet in height. This would tie in with the opinion that the 'gopher' wood (Genesis 6:14) refers to pine. Some researchers hold that the speed of light was much faster in the past, and that floral and faunal growth was faster, larger and more efficient, due to lower fluid viscosities, faster diffusion, ion transfers, electron movements, etc.

Noah's Ark had a degree of holiness comparable to the sanctity of the Tabernacle in the Wilderness. Both their dimensions are not arbitrary, but relate to fundamental aspects of the metaphysical structure and dynamics of God's universe.<sup>2</sup>

## REFERENCES

1. Hong, S. W., *et al.*, 1994. Safety investigation of Noah's Ark in a seaway. *CEN Tech. J.*, 8(1):26-36.
2. Zimmerman, C., 1984. *Torah and Reason*.

Amnon Goldberg,  
London,  
UNITED KINGDOM.

*The pines in California referred to are of course the bristlecone pines, and our information is that they rarely grow more than a few feet in height.*

— Editor

## THE SPEED OF LIGHT — A CRITIQUE OF BOUNDS' METHODOLOGY

Dear Editor,

I read with interest Bounds' criticism<sup>1</sup> of Setterfield's work on the decrease in the speed of light and the latter's very adequate reply.<sup>2</sup> Bounds' second article<sup>3</sup> I considered to be extremely poor and in need of a rebuttal. My concern sprang not from the fact that he was critical of the proposition that the speed of light was faster in the past, but the one-sided and unobjective way in which he argued his case. For truly objective scientists, surely the aim is to discover the truth, wherever it may lead. It seems to me that Bounds' arguments failed to reach this criterion.

Since then, his papers have been referred to by others as being a reasonable critique, but the authors seem to be unaware of the weakness of Bounds' arguments that need to be demonstrated and his ignorance of certain facts that need to be publicised.

*CEN Tech. J.*, vol. 8, no. 2, 1994

May I therefore draw attention to the following points.

### (1) Goldstein's February 1986 Letter.

Bounds quotes this letter and then comments:

*'On this basis, the velocity of light in 1668 to 1678 was 307,600  $\pm$  5,400 km/sec. Therefore, it may no longer be claimed that Goldstein et al.'s analysis of Roemer's data confirms that  $c$  has been constant through time. However, although this new value is consistent with a past decrease in  $c$ , it does not give significantly greater support to Setterfield's hypothesis (which predicts a value of 301,400 km/sec for this time) than to the hypothesis that  $c$  has been constant.'*<sup>4</sup>

I regret that I am unable to follow Bounds' logic. Subtracting 5,400 from 307,600 leaves 302,200 km/sec. This is still much higher than the present day value, and higher than that predicted by Setterfield by a considerable margin. How can he possibly conclude that Goldstein's results give 'no greater support' to  $c$  having decreased than being constant? Surely it is patently obvious that these corrected results **do** support the hypothesis of the decrease of  $c$  and therefore of Setterfield's claim.

To make such a bold yet unjustified claim on these simple figures gives one little confidence that he will provide an unbiased interpretation of any results where the ordinary reader is relying on him for the presentation of facts from intricate mathematics or perhaps a little-known paper.

### (2) Froome and Essen's Paper

Bounds uses this paper extensively, but has he fully checked all the results they quote from the original sources as he says Setterfield should do? Were the authors also supportive of the idea that  $c$  has not decreased, and assessed (corrected; massaged?) results accordingly? Setterfield seems to have examined theirs and many more other results than Bounds' virtually uncritical acceptance of their values.

It is not impossible that seeking to

prove that  $c$  was constant, Froome and Essen sought for ways of reporting the results that would support their case, in the same way that Bounds accuses Setterfield of doing for his case. For any one experiment, it may be assessed or corrected by others to give a range of results, from which the most suitable final figures can be selected to support one's case. Setterfield, starting with the same basic set of references and experiments, has drawn quite different conclusions.

As an example of the inadequacy of Bounds' approach is his comment that out of 12 methods used to determine  $c$ , eight showed that  $c$  had been constant

*'where there was more than one measurement', . . . the only (!) groups of values that support Setterfield's hypothesis are those obtained by the toothed wheel methods, by Michelson, by geodimeter, by radio interferometer, and by tellurometer.'*

To count the types of methods used that are for and against a theory is fundamentally not a satisfactory way in which to determine whether a constant has changed or not. Those that support a change in  $c$  may be far more frequently used simply because they are more accurate. The others may be less used and less accurate, but because there are more types of the less accurate methods, they give a false impression that the weight is against a change of  $c$ . I give this as just a simply example of the erroneous method of argument used by Bounds in his article.

To my mind, the toothed wheel and rotating mirror are the most direct means of measuring  $c$ , and they have both given a series of results that support Setterfield. These methods were used in the mid-19th century, and clearly recorded a decrease, as Bounds admits. I note however, that many of the latest methods using radar etc. that appear in the second half of his Table 3 have only been used since 1947, by which time  $c$  was almost constant. Therefore, to simply quote the number of methods used that show  $c$  has not change is quite misleading.

### (3) Dorsey's Monograph

Bounds quotes this monograph extensively and with approval, but it is just as biased against there being any change in  $c$  as is Froome and Essen's. There is a strange admission in the opening paragraph quoted by Bounds, for Dorsey admits that

*'As is well known . . . the definitive values successively reported . . . have, in general, decreased monotonously from Cornu's 300.4 magameters per second in 1874 to Anderson's 299.776 in 1940 . . .'*

How is it that virtually all the measurements over a period of 66 years showed a decrease of  $c$  of 0.208% which was accepted by many experts of the day, yet Dorsey should then write a paper that denigrates every measurement that demonstrates this fact. It does not take much scrutiny of Dorsey's reasons that Bounds quotes to see that these measurements are dismissed with very little scientific evidence in support. He quotes Dorsey almost monotonously saying *'The best he would have been justified in claiming was . . .'* or a similar phrase, but gives nothing like sufficient information to enable the reader to judge for himself.

The overwhelming impression from reading them is that Dorsey was determined to 'prove' that  $c$  had been constant despite there being much evidence that it had decreased.

### The Confusion Around Goldstein's Errors

I have examined (above) Bounds' handling of Goldstein's analysis of Roemer's observed data. At that point, on his very first page, he notes that the speed **was** faster in the past, but attempts to minimise this. When we reach his final 'postscript' we find total confusion as to whether Goldstein's results, when corrected, gave a higher or lower speed for  $c$  in the past.

Before we try to examine Bounds' logic in his postscript, I would like to clarify the situation by relating the criticisms made by Lew Mammel about Goldstein's work in two network papers he circulated. I have quoted and discussed these in another journal,<sup>5</sup> but give

the following brief summary.

On December 2, 1983 he networked a paper<sup>6</sup> in which he pointed out the fundamental error in Goldstein's paper that changed the result from  $\pm 0.5\%$  to  $-8\%$  (slower than)  $\pm 9\%$ . Mammel rightly asks 'Why didn't a referee spot this?'

On December 7, 1983 he networked a further paper<sup>7</sup> pointing out that there was yet another error in Goldstein's paper that changed the result to  $+6\%$  (higher than present)  $\pm 8.6\%$ . This, as far as I know, is still the present position. It should be noted that Mammel is a critic of Setterfield's  $c$  decay theories and is therefore hardly likely to be looking for errors that would support his thesis.

When we then read Bounds' postscript to his article, in trying to set out the correspondence, he makes confusion worse confounded. Goldstein makes two more misleading statements. Firstly, he misleads Bounds and Setterfield when he says in his letter to Humphreys that what he '*had meant to say was the speed of light according to Roemer's data was 2.6% slower than it is now.*'

Secondly, in his letter to Bounds he says '*. . . the light travel time in 1668 to 1678 was  $-2.6 \pm 2.6\%$  compared to the modern value.*' Now it is obvious that if the light travel time was **less**, then the speed was **higher**. But he then continues with the misleading comment, '*An increase in the light travel time (if it is real) means that the velocity was lower.*' This is a statement that is quite the opposite of what his previous figures show. To then claim 'Thus, I have not found any support for Setterfield's theory' is quite baseless, for the evidence **does** give him support.

Bounds, not having received a response from Goldstein pointing out this error, seems to have initially drawn the correct conclusion as I have done above. However, from the letter that Humphreys quotes from Goldstein, Bounds reverses his opinion without any other justification than Goldstein's plain statement that it **was** 2.6% slower than now. He then concludes with yet another unwarranted suggestion that there is a **possibility** of no change in  $c$

in his quotation from Humphreys letter.

What all these critics seem to be unaware of is the fact that Mammel's second correction of Goldstein's work reverses the results to **support** Setterfield.

Reviewing all these bewildering changes, I would ask two questions:—

- (1) Both Goldstein and Bounds have made very sophisticated calculations on Roemer's data. Why then can neither of them state categorically whether the speed was faster or slower by the acknowledged percentage difference that was found? Surely Bounds should have been able to check Goldstein's work independently to set out his own conclusions for the reader, and not have to rely on Goldstein's say-so on whether his results were plus or minus the present speed.
- (2) Can neither Goldstein nor Bounds write in clear concise language what the conclusions are from their studies without misleading each other - and their less erudite readers doubly so? It is perhaps noteworthy that each time an erroneous statement is made, it is always in the direction that claims  $c$  was slower in the past. I would not of course accuse any of the participants in suggesting that this was the real intention, but some readers might tend to draw this conclusion with at least a modicum of justification.

### Comment

I have watched a number of exchanges of correspondence between Setterfield and his critics for many years, and as a result of being able to hear both sides of the arguments, I have supported Setterfield by publicising his ideas and evidence where I can. This has not been a blind acceptance of all that he says, but generally speaking I consider his line of argument to be far more convincing than that of his opponents. Although, like many, I am unable to check atomic formulae or quote astronomical data, I try to see if the line of arguments on either side are reasonable and not distorting the evidence.

Bounds' lengthy article is to me far

from convincing. Indeed, it has quite the opposite effect, for it suggests that with such a weak case to defend, an unjustifiable method of argument seems to have been resorted to.

Malcolm Bowden,  
Bromley, Kent,  
UNITED KINGDOM.

### REFERENCES

1. Bounds, V. E., 1984. Towards a critical examination of the historical basis of the idea that light has slowed down. **EN Tech. J.**, 1:105–107.
2. Setterfield, B., 1984. Towards a critical examination of the historical basis of the idea that light has slowed down — a reply. **EN Tech. J.**, 1:118–125.
3. Bounds, V. E., 1990. Further towards a critical examination of Setterfield's hypothesis. **EN Tech. J.**, 4:163–180.
4. Bounds, Ref. 3, p. 163.
5. Bowden, M., 1989. Speed of light — corrected Roemer's values. **Creation Research Society Quarterly**, 26:32–33.
6. Group - net.astro  
From - lew@ihuxr.UUCP (Lew Mammel. Jr.)  
Message-ID: <795@ihuxr.UUCP  
Date Rcd - Fri. 2-Dec-83 23:40:50
7. Group - net.astro  
From - lew@ihuxr.UUCP (Lew Mammel. Jr.)  
Message-ID: <800@ihuxr.UUCP  
Date Rcd - Wed. 7-Dec-83 23:33:37

---

### ANNOUNCING THE CREATION RESEARCH INDEX . . .

Dear Editor,

To help researchers easily find research articles a computer based **Creation Research Index** is now available. The Index lists the contents of the following creation sources:

- \* **Creation Ex Nihilo Technical Journal**, Vol. 1 through Vol. 7 (1993).
- \* **Creation Research Society Quarterly**, Vol. 1 through Vol. 30 (March 1994)
- \* **ICR's Impact**, #1 through #251 (July 1994)
- \* **Origins Magazine**, Vol. 1 through Vol. 20 (1) (1993)
- \* **Proceedings of the First International Conference on**

CEN Tech. J., vol. 8, no. 2, 1994