which to found an estimate of period. It seems certain, however, from my own observations, that it must be more than a year; and taking the indications of these, with what can be inferred from the above table, an estimate of 470± days seems a not impossible value; this is also accordant with what may be inferred from the star's extreme redness, in consideration of the relation between color and period, the existence of which seems to be demonstrated by CHANDLER, in Vol. IX, p. 2, of this Journal.

The comparison-stars used, with the light-scale and magnitudes deduced from my observations, are as follows:

		DM.	Y.	Light
		M	M	
e =	DM. 37°4410	7.2	7.0	23.3
a =	37°4404	8.0	7.5	18.0
k =	36°4679	7.7	7.8	14.8
b =	37°4405	8.2	8.2	10.8
d =	37°4418	8.5	8.6	7.4
f =	37°4401	8.8	8.7	6.0
c =	37°4400	9.3	9.3	0.0

It is very desirable that the variability of this star should be confirmed by other observers, and that its period may be determined by actual observation.

Dorchester, Mass., 1892 *Dec.* 10.

ANCIENT CHRONOLOGY AND ECLIPSES—A REPLY,

BY W. T. LYNN, B.A., F.R.A.S.

1. I do not feel it incumbent upon me to take up much space in replying to Mr. STOCKWELL's remarks in No. 280 upon my criticisms in No. 251 of his earlier paper. I am glad that he has "disposed of" my objections to his own satisfaction, though I scarcely think that he has refuted them, or shown my inferences to be erroneous.

2. It was unfortunate that Mr. STOCKWELL took the date of the death of DARIUS from the modern compilation of ROLLIN, instead of referring to the ancient authorities. But when I had pointed out the mistake, it was surely an odd way of writing to say that he has found the true date was in the Olympic year following the one he had supposed. It was only in reference to this that I stated that, according to his own statement (from ROLLIN) of date, the conclusion would be the opposite to that which he had drawn respecting the year of the battle of Arbela. Too much has probably already been said about CALPURNIA's night-mare. I certainly never maintained, nor did PLUTARCH say, that her slumbers were disturbed by the light of the moon. What he says (and it must be remembered he was not a contemporary) is that she was disturbed by the doors and windows flying open, and CAESAR saw her by the light of the moon, which he might well do if the large waning crescent were rising and shining into the room. I should think more of Mr. STOCKWELL's argument in regard to the Spanish War, had the account been written by CAESAR himself, or by some one equalling him in perspicuity, in which the actual writer much fails.

3. But I do not wish to go over ground again which I have already sufficiently traversed. It appears to me that the Roman history of the first century has been too carefully mapped out to admit of the alterations of date suggested by Mr. STOCKWELL. My principal concern now is with the "perfectly satisfactory and triumphant confirmation" which he derives for his views from the so-called eclipse of PHLEGON. Now, as Mr. JARVIS points out, there is uncertainty as to the Olympic year mentioned by PHLEGON, of whose writings fragments only are extant. Mr. STOCKWELL says "the earliest date given is by JOHN PHILOPONUS," and this is certainly true, but an incautious reader might think he meant the earliest authority. Not only do most of the authorities give the fourth, not the second (one gives the third) year of the 202d Olympiad, but PHILOPONUS himself gives in another place in the same chapter (*De Mundi Creatione*, lib. ii, c. 21) the fourth year. [This is quoted by LARDNER, who oddly enough says that the former passage makes it the 102d Olympiad, though he quotes the Greek correctly as the 202d in a note.] There can be little doubt, therefore, as Mr. JARVIS says, that the fourth year of the 202d Olympiad "is most probably the true reading." This would correspond to A.D. 32, or, according to Mr. STOCKWELL, A.D. 31, in neither of which years was there a total eclipse of the sun.

4. I shall not touch here upon the latter part of Mr. STOCKWELL's paper, as I am only concerned with eclipses. His calculation of the conjunction of *Jupiter* and *Venus* in B.C. 6 is interesting; but I must say I cannot see how such a phenomenon could constitute the "star of the Magi," which moved before them, and ultimately appeared to stand over a house. Nor can I reconcile CHRIST's birth in B.C. 6, and death in A.D. 33, with LUKE iii, 23. I believe the Crucifixion took place on April 7, in A.D. 30, and the Paschal full moon the day before, *i.e.* Thursday. But these questions cannot well be discussed in detail in the columns of the *Astronomical Journal*, and I must apologize for taking up too much space already.

Blackheath, S.E. England, 1892 *Dec.* 2.