787TH ORDINARY GENERAL MEETING

HELD IN COMMITTEE ROOM B, THE CENTRAL HALL, WESTMINSTER, S.W.1, ON MONDAY, MARCH 11TH, 1935, AT 4.30 P.M.

MISS CHRISTABEL PANKHURST, LL.B., IN THE CHAIR.

The Minutes of the previous Meeting were read, confirmed and signed, and the HON. SECRETARY announced the election of the Rev. H. M. Webb-Peploe, O.B.E., as an Associate.

The CHAIRMAN then called on Sir Andrew Taylor, J.P., F.S.A., who had kindly offered to read Dr. W. Bell Dawson's paper on " Solar and Lunar Cycles Implied in the Prophetic Numbers of the Book of Daniel."

PROPHETICAL NUMBERS IN DANIEL, IN RELATION TO CELESTIAL CYCLES.

By WILLIAM BELL DAWSON, M.A., D.Sc., F.R.S.C., Gold Medallist, Institution of Civil Engineers, London, Laureate of the Academy of Sciences, Paris.

IN considering this matter, we may need to realise that what God has revealed to us in His word is related to His works in ways which may not be obvious without some study. This is especially true regarding references in Scripture to the heavenly bodies, the sun and moon. For these not only give us day and night, the seasons of the year, and the tides of the ocean, but they were appointed from the first to measure off time in definite periods of the day, month, and year, as well as in longer cycles in terms of these. Such time-values are necessarily related to man, who dwells in time and space ; and this is included in the comprehensive statement, that God " made

from one forefather every nation of men to dwell on all the face of the earth ; having defined for them their appointed periods and the bounds of their habitation." (Literal Greek in Acts xvii, 26.) The extent and duration of kingdoms and dynasties is thus providentially limited ; and this is revealed to the Prophets, so far as they concern the people of God, by the periods predicted in their prophecies ; which deal especially with the limitation of evil in its various aspects in different ages.

The counting of time.—From the earliest days, man has felt his need of what we now call a calendar system, by which to follow the seasons of the year and to correlate the day, month, and year with each other. To this endeavour he devoted the high intelligence with which he was originally endowed ; for the problem was not an easy one, since the year does not contain a complete number of natural lunar months nor an exact number of days ; but both involve fractional values. He soon found that these three time-measures could only be correlated by determining longer cycles, or groups of years into which an exact number of months would fit, or a series of months in which there was a whole number of days without a fraction. It was thus only by making use of these longer cycles, that a workable calendar system could be devised. Our present purpose is to show that such cycles, deduced from the prophetic numbers in the Book of Daniel, have a far higher accuracy than any which man has otherwise been able to obtain by his own wisdom.

This subject has in reality a wide interest. For calendar systems which enable the months and the seasons to be known in advance, were devised to enable food supply to be obtained from crops, and to provide beforehand for suitable clothing. There is also an interest for all who are at all acquainted with astronomy, in exact cycles for the position of the sun and moon. But the main appeal is to the Bible student who desires to follow the march of the purposes of God in successive ages, and the accomplishment of His promises when " the time is fulfilled." For we find throughout Scripture that a limit is set in the providence of God, to the continuance of evil times ; such as the Servitude in Egypt, the Wandering in the Wilderness, the Captivity in Babylon. The prophetic announcements by which these were limited were made in terms of days or years that are in reality the times of revolution appointed by the Creator for

the heavenly bodies. May we not perceive divine foresight in similar prophecies, predicting periods for the fulfilment of God's wider purposes towards His people, if they likewise embody still longer cycles, astronomically related to the movements of these heavenly bodies ?

To understand our subject comprehensively, we may refer as briefly as possible to the aspects above indicated ; though we cannot here go beyond the various cycles themselves to any interpretation of them in prophecy or in history.

Primitive endeavour.—One of the earliest needs of man, as he spread over the earth, was to fix a point in the year in relation to the seasons ; to know when to sow and plant, when to expect the rainy season, when a river such as the Nile would be in flood. Moonlight also was of value in prolonging the light of day for the agriculturist or the traveller. The first step, then, was to have a fixed point in the year to start from ; and to measure in days the length of the year and the lunar month. This achievement was no theoretical research but a very practical matter ; which may well account for the early attention given to astronomy.

In all countries, the point at which the sun rises and sets shifts along the horizon with the seasons. From this change in the point of sunrise, the length of the year can be found anywhere where there is a wide view of the horizon to the eastward, as there usually is in Babylonia and Egypt. From any position selected, some natural mark is noted on the horizon at which the sun rises ; and the days are counted until (at the same season in the following year) it rises again at the same point as before. It would soon be found best to select special points on the horizon, marked by a line of sight ; either near the Equinox when the shift at sunrise is most rapid, thus giving the result readily with greatest accuracy, or at the Solstice when the point of sunrise reaches its northern limit and the day is longest.

These methods were carried out with great elaboration in Egypt, where the temples are set truly to the Equinox or to the Solstice, and thus form masonry telescopes for the purpose. In outlying lands, stone circles such as Stonehenge were erected, showing the same need everywhere. These structures may also have been associated with sun worship, when at the longest day the sun reaches its triumph over the darkness of the night.

It would thus appear simple to count the days in the year, and to fix the same day in the circle of the year. But in the first three years there would be a slight shifting of the sunrise from the line of sight, and only on the fourth year would it occur again precisely at the point indicated. The four years would count up to 1,461 days; showing that each year should properly be $365\frac{1}{4}$ days. It is to be noted that this could be ascertained by only four years of observation. There is also good evidence that the ancients knew the length of the year much more closely than this.

The length of the lunar month was a matter of much greater difficulty. The actual new moon cannot be seen, and it is quite difficult to estimate just when it is full. But at the quarters, the time when there is exactly a half-moon can be noted almost to the nearest hour; and the length of the month can thus best be found between the similar quarters. But the trouble is that the motion of the moon is not uniform. It moves faster when it is nearest the earth at Perigee and slower when farthest away at Apogee. Also, the phase of the moon at which Perigee occurs is continually changing, during the course of the year as well as in a longer period. Because of these complications, the length of one lunar month may differ from another by more than seven hours.

Notwithstanding these inequalities, long and patient observation enabled the average length of the lunar month to be determined with remarkable accuracy. We may well pay tribute to the very ancient inhabitants of Babylonia for their careful astronomical observations and records, and their knowledge of eclipses; on which much might be said. They were followed closely by the Persians and Arabians, but much of the credit given to the Greeks is now known to be borrowed from earlier peoples; and the Romans showed little of the exalted astronomical ideals and careful exactitude of their predecessors.

For our present purpose, we can limit our astronomy to the three periods: (1) The solar year, technically known as the "Tropical year," being the period in which the sun circles the heavens from one vernal equinox to the next, as this corresponds with the seasons; (2) the lunar month, from new moon to new moon, which astronomically is the "Synodic month"; and (3) the day, properly termed the "mean solar day," by which the length of the other periods is measured.

Types of Calendars.—To be systematic, we must now take up the various types of calendar, and the degree of accuracy which they exhibit, for comparison with the results derivable from the Book of Daniel. For all calendar systems are based upon cycles related to the primary time measures, which place them on the same footing as the astronomical cycles implied in the numbers in Daniel.

It is extremely interesting to look into the various methods by which different nations have dealt with the reckoning of time. They all had before them the same natural measures; the day, the month of the moon, and the year of the seasons; and yet they have adopted every possible type of calendar. The highest ideal is found earliest; namely, to keep the year fixed in its place in the seasons and yet to retain the natural month, which makes the moon always new on the first day and full on the middle day. We are so unaccustomed to this idea that we may not appreciate the advantages it has for the farmer, the traveller, the fisherman, the mariner, and all who live close to nature. For the gathering of sea food, on which many peoples largely depend, the lowest tides and the widest beaches are at new and full moon. We may therefore admire the persevering endeavour of old to bring the revolutions of the sun and moon to a precise system, so that the lunar month might be incorporated in the yearly calendar.

The ancient Hebrews achieved this object by a method which at least could never go wrong. Their system can be reduced to this simple rule: "The first day of the First month shall be at the New moon which is nearest the Equinox in spring; that is, within 15 days before or after it." The full moon of the Passover will thus always be at the middle of the First month.* In carrying out this rule, a thirteenth month had to be added to the year when necessary. The necessity arose because the twelve lunar months fell short of a full year by 11 days; and there came to be a gap between the end of one year and the

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* Hales, in his *Analysis of Chronology*, states that almost universally, amongst the old nations, the year began at the vernal equinox. The Egyptians were an exception, because the Nile attains its highest near to the autumnal equinox. At the Exodus from Egypt, the Lord enjoined that the year should begin in its rightful place with the spring month. (Exodus xii, 2.)

beginning of the next, which had always to begin near the equinox. It is clear that this extra month would usually come every third year; but on this there was no fixed regulation, for the adjustment was automatic. So, by simply keeping to the rule, the months remained closely at the same season of the year, for all time.

We may contrast this with the highly astronomical method of the Chinese to reach the same end, with a calendar also retaining the lunar month. Their rule is that if two New moons occur while the sun is passing through any one Sign of the Zodiac, an extra month is to be added to the calendar. This system not only requires advanced astronomical knowledge and accurate calculation, but it has a serious practical disadvantage. For the motion of the sun among the stars is slower in summer than in winter; and the sun then takes longer to traverse one of the divisions of the zodiac. It follows that the extra month usually falls in summer in the middle of the year, instead of always at the end, as with the Hebrew method.

There were other nations who made choice between the sun and the moon, and based their calendar exclusively on the one or the other. There are thus two other possible types of calendar, the lunar and the solar. The lunar calendar comes into prominence in the seventh century, and has been used by the Saracens, Turks, and other Mohammedans until quite recent times. In it the year consists of twelve lunar months; and it thus comes short of the full solar year. Hence the beginning of the year falls gradually back through the seasons, which is inconvenient. Yet the accuracy of the calendar itself is extraordinary, especially considering that any error in the length of the lunar month is multiplied by twelve in making up the length of the lunar year. The "lunar year" is also of outstanding importance in connection with the cycles we have to consider.

The endeavour to retain the lunar month in the calendar was continued by the Greeks, but was finally given up by the Romans. This has led to a purely solar calendar, to which we are accustomed. Astronomically it is very elementary; for it merely fixes the position of the first day of the year, which the most primitive peoples can do, as we have seen; and the year is divided into twelve sections called months, neither regular nor systematic, and without relation to the moon which earlier nations made such effort to maintain. Yet the need for the moon

asserts itself, when one feature of the Hebrew method is grafted in, awkwardly enough, to bring Easter into a system otherwise solar. We need not wonder at suggestions for the reform of so crude and inconsistent a type of calendar.

Comparison of cycles.—With these types of calendar before us, we can proceed to examine the amount of error in the cycle-values on which they are based, for comparison with the cycles derived from the prophetical numbers in Scripture. By the method of comparison adopted, we can show their relative accuracy in a simple way and on a uniform basis. The accuracy of the Daniel cycles is so high in relation to the most accurate modern determinations of the year and lunar month that we need to take into account the least variation in the length of these, during the course of the centuries, known as "secular acceleration." The need to consider this emphasises the extreme accuracy of the cycles themselves; as such a refinement has never been contemplated nor provided for in any calendar system.

The cycles to which we refer are based on the two leading prophetic numbers 2300 and 1260. The latter of these is styled in the Book of Daniel, "time, times, and a half," an expression explained in Revelation as meaning 1260 "days," corresponding with the prophetic "time" of 360.* It has been shown by a series of investigators during the last two centuries that if these numbers are taken as years, they constitute cycles of astronomical importance; and from them again, cycles of the highest known accuracy can be derived. Professor T. R. Birks of Cambridge, in his *First Elements of Sacred Prophecy* (1843), has discussed this matter fully, and cites earlier authors as far back as 1700, who perceived its significance. The present writer, in carrying this work forward, has discovered that a cycle can be deduced from these numbers which correlates the solar year with the complete lunar year, by a simple arithmetical relation. These prophetical numbers thus embody a cycle of the highest type which is possible in this whole domain, and surpasses all others in accuracy.

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* *See* Daniel viii, 14 and xii, 7, 11 and 12. The "time, times, and a half" is followed by 1290 and 1335, indicating that it is shorter than these; and thus according with 1260 as explained in Revelation xii, 6 and 14.

Before proceeding to the cycles that underlie the various calendar systems, we must give the best modern data for the length of the solar year and the lunar month.

Data for the sun and moon, at the Epoch A.D. 1900.—The value for the length of the year now adopted by astronomers is the determination by Simon Newcomb, who revised all the data for the solar system. It is (in days) 365·24219879 in 1900; for the length is decreasing by a little over half a second per century. This is the year of the seasons, or the "Tropical year" from equinox to equinox. In the decimal of a day, one second is represented by the fifth decimal place; the above decimal thus showing that the length of the year is now known to less than the hundredth of a second.

The lunar month which concerns us, is the visible month of the moon's phases, named the "Synodic month." The value accepted for this by astronomers is the revision by Dr. E. W. Brown of Yale University, namely (in days), 29·53058818 at the Epoch 1900. The "lunar year" of twelve lunations is therefore 354·3670582 days, which, being derived from the month, cannot be carried to further decimals. There is a slight decrease in the length of the month, estimated in centuries, due to the "secular acceleration" of the moon.

As the Daniel cycles reach the limits in the accuracy of our data, it is essential to ask whether the day itself is truly constant in length, or, physically speaking, whether there is any progressive change in the rate of rotation of the earth. For the day is the unit of measurement, and if any continuous alteration in its length was appreciable, there would be an apparent change in all the time elements throughout the solar system, as stated in days; and of this there seems to be no evidence. We may assume, therefore, that the length of the day is constant; or at the least that it has been so during the last twenty-five centuries since the time of Daniel. For we are not discussing theoretical changes in geological time extending over millions of years. Because of the importance of this matter, however, we append a technical note upon it; from which it will be seen that the various forces, known to influence the earth's rotation, act in opposite directions; and any residuum must be very minute. (*See* Note A.)

We may now consider the various cycles and their accuracy, on a uniform system of comparison; taking them up in a

rational order, beginning with the relation of the day to the year and month.

I. *The solar year and the day.*—The Julian year of 365¼ days is represented by the cycle 4 years = 1,461 days; for according to it there is a leap year uniformly every fourth year. This gave rise to an accumulated error in course of time; and the Gregorian year, devised in the sixteenth century, improves upon it by suppressing three leap years in four centuries. It is therefore represented by the cycle, 100 years = 36,524¼ days, or in the four centuries, 400 years = 146,097 days. The accuracy of these systems at the epoch A.D. 1900 (to which we are reducing them all) is as follows:—

		Error per century.	Error of one day in:—
Solar year	365·2421988		
Julian year	365·2500000	0·78012 day.	128 years.
Gregorian year ...	365·2425000	0·03012 day.	3,320 years.

As this calendar system requires 400 years for its complete adjustment, the accuracy here indicated will not be reached until the fourth century after A.D. 1582 when it first came into use in Europe; and its adjustment has not therefore been completed as yet.

II. *The lunar year and the day.*—We here meet with the first of the cycles based on the prophetic numbers. The "1,260 days," stated in Daniel as "3½ times" and explained in Revelation, is evidently half of the complete period of "seven times;" as seven represents perfection in Scripture. Accordingly, the double of 1,260, or 2,520 is the measure of this whole period.

If then the "days" mentioned in these prophecies are taken to be symbolical of years, we discover that the period of 2,520 lunar years contains an exact number of days, and is thus indeed an astronomical cycle of a high order. It can also be further reduced to a period of 504 lunar years. On the symbolism of a day for a year, on which such cycles depend, the following remark is made by Moses Stuart, **Professor of** Sacred Literature from 1810 to 1848 at Andover Seminary, afterwards affiliated with Harvard University: "It is a singular fact that the great

mass of interpreters in the English and American world have, for many years, been wont to understand the days designated in Daniel and the Apocalypse as the representatives or symbols of years. I have found it difficult to trace the origin of this general, I might say, almost universal custom." This usage must have been helped forward a century earlier by Sir Isaac Newton. For in explaining the symbolical actors in the drama of prophecy, he takes "the days of their acting, for years." (*See* his *Prophecies of Daniel and the Apocalypse*, 1733; reprinted 1922, page 152.)

In this instance we have, with the value adopted :—

Lunar years 2520 × 354·3670582 = 893004·9867 days ;
or 504 × do. = 178600·9973 days.

This comes within 4 minutes of a complete number of days in the five centuries ; and if we reverse the process, by assuming the cycle, 504 lunar years = 178,601 days, to be exact, we find the following values for the lunar year and month, which we term the " cycle-values " :—

$$\frac{178,601 \text{ days}}{504} = 354 \cdot 3670635 \text{ for the lunar year ;}$$

and 29·53058862 for the lunar month.

The month thus resulting, differs only four-hundredths of a second from the most recent modern value already stated. Further, as the lunar month has been slightly longer in the past, the cycle is even nearer perfection in previous centuries than it is now.

Mohammedan calendar.—This calendar is purely lunar and thus comes properly under this heading. Its use became widespread through the Saracen conquests of the seventh century ; but it may have been more ancient. It is in such remarkable agreement with the lunar cycle above explained that it would almost seem that its originators must have known that cycle. This is by no means impossible when the calendar is Eastern in origin ; because, from the Persian point of view, Daniel was one of their own statesmen, and they must have been acquainted with his writings. These might well have given them the clue, when Eastern peoples were always keen to discover astronomical cycles. We make this suggestion to account for the high accuracy

of this calendar, and because its basis can be deduced from this cycle by the process following, if the cycle were known.

The cycle is 2,520 lunar years = 893,005 days. The number 2,520 is highly divisible, which is characteristic of prophetic numbers ; but the number of days has no factor but five. But by deducting one day, or admitting an error of a day in the 2,520 lunar years, the number becomes divisible by 12 and 7, and the period can be reduced to a cycle of thirty years, thus :—

$$30 \text{ lunar years} = \frac{893,004}{12 \times 7} = 10,631 \text{ days ;}$$

and consequently one lunar year = $354 \frac{11}{30}$ days. Each year of 354 days can therefore be divided into months of 29 and 30 days alternating evenly ; and during the cycle of 30 lunar years, 11 intercalary days are required. It is remarkable that this is precisely the adjustment we find in the Mohammedan calendar. The error in this calendar, at the Epoch 1900, is as follows :—

	Error per century.	Error of one day in :—
Lunar year, Epoch 1900 = 354·3670582		
From cal'r cycle, $354 \frac{11}{30}$ = 354·3666666	0·04035 day.	2,478 years.

This accuracy within one day in 2,478 years is one day in 2,554 lunar years ; and it was the near coincidence of this period with the number 2520 which first drew the attention of the writer to the cycle above described. Compared with the Gregorian calendar, this accuracy is quite outstanding, in view of the greater difficulty of determining the lunar year correctly ; and further, when the adjustment of intercalary days is completed within 30 lunar years, instead of requiring four centuries.

III. *The solar year and the lunar month.*—A common measure for these periods was early sought as a basis for a natural calendar, in which the year and lunar month could both be preserved. There are two well-known cycles which serve this purpose. In the Metonic cycle, 19 solar years = 235 lunar months or lunations ; the series of months giving a total of 6,940 days for its period. The Calippic cycle made a correction on this by deducting one day in four Metonic cycles, or 76 years. It thus

has 76 years = 940 lunations; with a total of 27,759 days in that period. This cycle also corresponds more closely with the anomalistic month of the moon's distance; so that the more rapid motion of the moon is again in the same position in relation to its phases. This brings the hour of the new moon at the beginning and end of the cycle into better accord with observation. The following are the actual lengths in days which these cycles have :—

Metonic.—
Solar years $19 \times 365 \cdot 2421988 = 6,939 \cdot 6018$ days.
Lunations $235 \times 29 \cdot 5305882 = 6,939 \cdot 6882$ days.

Calippic.—
Solar years $76 \times 365 \cdot 2421988 = 27,758 \cdot 4071$ days.
Lunations $940 \times 29 \cdot 5305882 = 27,758 \cdot 7529$ days.

The advantage of the correction made by the Calippic cycle becomes evident when both cycles are reduced to any period of the same length. The two best comparisons to be obtained from these cycles are the relation of the solar year to the lunar month as given by either of them and the relation of the lunar month to the day as given by the Calippic cycle. (The Metonic cycle with 19 years equal to 235 lunations gives $29 \cdot 5302203$ for the synodic month; and the other, with 940 lunations equal to 27,759 days, gives the value $29 \cdot 5308511$.) The accuracy of these "cycle values" is here shown :—

	Error per century.	Error of one day in :—
Lunar month (1900) ... $29 \cdot 5305882$		
Metonic cycle.		
Cycle value (as above) ... $29 \cdot 5302203$	$0 \cdot 4550$ day.	220 years.
Calippic cycle.		
Cycle value (as above) ... $29 \cdot 5308511$	$0 \cdot 3251$ day.	308 years.

We have seen the outstanding superiority of the relation between the lunar year and the day, as brought out by one of the prophetic numbers; and in the correlation of the lunar month with the year, which earnest minds strove to achieve through the above cycles, we now reach a transcendently more accurate solution deducible from the numbers revealed in

Scripture. We may thus realize that as the heavens are higher than the earth, so are the thoughts of the Creator higher than our thoughts, in all that man has been able to devise for his reckoning of time in his calendar systems.

A systematic investigation of the whole subject of cycles is given by Professor Birks in his work already referred to. He points out that the prophetic "month" of 30 years, as well as the "time" of 360 years composed of twelve such months, has a scientific character. He goes on to explain the discovery of a Swiss astronomer, M. De Cheseaux, in the eighteenth century, who found that the numbers 1,260 and 2,300, taken as solar years, proved to be strikingly correct soli-lunar cycles; and as their small outstanding errors were almost the same, he inferred that the difference of these periods, or 1,040 years, should be a perfect cycle. This is given in *Mémoires posthumes de M. De Cheseaux*, published by his sons in 1754. Yet, as Dr. H. Grattan Guinness remarks in his explanation of the matter : "It is a fact full of the deepest interest to the Christian mind, and which has never received, either at the hands of the Church or the world, the attention that it merits." (*See* discussion by Guinness in *The Approaching End of the Age*, 13th Edition, 1897, pages 399 to 406.)

These points, as well as the high accuracy, will be clearly seen from the following figures, when the cycle is stated in days :—
Solar years $1040 \times 365 \cdot 24219879 = 379,851 \cdot 8867$ days.
Lunations $12863 \times 29 \cdot 53058818 = 379,851 \cdot 9558$,,

The error in the complete number of lunar months contained in the 1,040 years is thus only $0 \cdot 0691$ of a day, or less than 2 hours in over 1,000 years. The value of the lunar month given by the cycle (found by dividing the days in 1,040 years by 12,863 months), and also the error of the cycle, is here shown. The error is less than half a day in the whole human period.

	Error per century.	Error of one day in :—
Lunar month—		
Epoch 1900 = $29 \cdot 53058818$		
Cycle value = $29 \cdot 53058281$	$0 \cdot 00664$ day.	15,056 years.

Upon this, De Cheseaux himself remarks : "This period of 1,040 years, indicated indirectly by the Holy Spirit, is a cycle

at once solar, lunar, and diurnal of the most perfect accuracy.
. . . A cycle of this kind had long been sought in vain; no
astronomer or chronologist had been able to light upon one;
and yet for two thousand three hundred years there it had
been, written in characters legible enough, in the Book of
Daniel: legible, that is, to him who was willing to take the
trouble of comparing the great prophetic periods with the
movements of the heavenly bodies—comparing the book of
nature with the book of revelation." He gives to this cycle
the name of the *Daniel Cycle*; and after further discussion he
thus concludes: "Is it possible, considering all these points,
to fail to recognise in the Author of the Book of Daniel, the
Creator of the heavens and all their hosts, of the earth and
the things that are therein?" This remark evidently applies
with equal force to the other two Daniel cycles here under
consideration.

IV. *The solar year and the lunar year.*—We here reach the
highest possible type of cycle, which rises above the months,
and makes a complete number of lunar years exactly equal to
a definite number of ordinary years. It is thus a period in
which a series of lunar years (of 12 lunations) will begin and end
exactly with the solar year. Such a cycle could only be obtained
from the prophetic numbers.

It occurred to the writer that instead of the method adopted
by De Cheseaux, this higher result could be obtained by taking
the numbers 2,300 and 1,260 in the prophecies to represent
lunar years; and it was then discovered that in the corresponding
number of solar years there were fractional remainders which,
if added, together would be almost exactly unity. By taking
the half-sum, therefore (instead of the difference as De Cheseaux
did) an equivalent in *whole numbers* would be found between
lunar years and solar years.

To take these numbers as lunar years accords with the
Jewish reference in the passages in which they occur in Daniel;
furnishing a further example of the clue afforded by the prophecy
itself. Also, the half-sum is simply the mean value in each
case, thus :—

$$2300 \text{ lunar years} = 2{,}231 \cdot 517159 \text{ solar years.}$$
$$1260 \quad ,, \quad ,, \quad = 1{,}222 \cdot 483313 \quad ,, \quad ,,$$

Half the sum $= 1780$ lunar years $= 1{,}727 \cdot 000236$ solar years.

This cycle (1,780 lunar years = 1,727 solar years) is the highest
type possible, as it brings the lunar year of 12 Synodic months
or lunations into accord with the Tropical year of the seasons;
and it is clear that it could only have been discovered through
the hint given in the inspired Scriptures. It also affords a
simple ratio between these two years which is very convenient
for calculation purposes. Its accuracy stands quite above any
other of the cycles discussed, as here shown :—

	Error per century.	Error of one day in :—
Lunar year. Epoch 1900 $= 354 \cdot 3670582$ Lunar year as given by the cycle itself $= 354 \cdot 3670097$	$0 \cdot 00501$ day.	$19{,}960$ years.

This cycle falls short of perfect exactitude by only 2 hours
in its whole period, as shown by the above decimal of a year
($\cdot 000236$).* It should also be noted that the lunar year, although
of little account to us, is of primary importance to Eastern
peoples, especially in the Hebrew and Mohammedan modes of
reckoning; and such accuracy as this, with only one day of
discrepancy in more than ten times the length of the Christian
era, far transcends anything attained by human endeavour
to meet calendar requirements.

Considered from the prophetic standpoint also, the fulfilment
of a predicted period to a day represents perfect accomplishment.
Such accuracy is not unclaimed in Scripture, as it is stated
that the promise made to Abraham was fulfilled to a day at
the Exodus from Egypt. (Exod. xii, 41.) The end of the
predicted Wandering in the Wilderness was marked by the
ceasing of the manna, at an exactly completed year from the
original Passover. (Joshua v, 10–12.) Expositors have also
expected fulfilment to a day, for the period of the Seventy Weeks
to Messiah, revealed to Daniel; especially when reckoned in
lunar years, when the full moon gives the same day of the first
month at the beginning and end of the period. We cite these
as examples, without entering upon exposition, to show the

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* Contrast this with the 6 hours of shortage in the individual solar
year; corrected roughly every fourth year by an extra day in our calendar.

limit of accuracy in such cycles or periods that represents perfection in this sense. A note on the number 1,727 in relation to the perfect number 1,728 is also appended. (Note C.)

Since these calculations were first made by the writer, for a technical Paper published 30 years ago, a distinct improvement in the three Daniel cycles has come about, because of higher accuracy in the lunar data through revision meantime. The cycles have thus come so near to true exactitude that in following the matter any further we enter upon refined calculations arising from slight change that can be detected in the solar and lunar periods themselves, in the course of the centuries, known as secular acceleration. On the effect of this, we append a technical note. (Note B.)

A summary of the results is given in the following table, in which the three Daniel cycles are marked with asterisks.

Classes of Cycles compared. (At Epoch A.D. 1900.)	Error per century. (As a fraction of a day.)	Period in which the error amounts to one day.
I. *Solar year and the Day.*		
Julian year. Cycle, four years	0·78012 day.	128 years.
Gregorian year. Cycle, four centuries ...	0·03012 ,,	3,320 ,,
II. *Lunar year and the Day.*		
Calippic cycle (Lunations and days) ...	0·3251 day.	308 years.
Mohammedan calendar. Cycle, 30 lunar years	0·04035 ,,	2,478 ,,
*Cycle, 504 lunar years equal to 178,601 days	0·00052 ,,	Almost exact.
III. *Solar year and Lunar month.*		
Metonic cycle. (Lunations and years)	0·4550 day.	220 years.
*Cycle of De Cheseaux. Period, 1,040 years	0·00664 ,,	15,056 ,,
IV. *Solar year and Lunar year.*		
*Cycle, 1,780 lunar years equal to 1,727 solar years	0·00501 day.	19,960 years.
Ditto. At Epoch 600 B.C.	—	More than 26,000 years.

* The three cycles marked with asterisks are deduced from the Prophetic numbers in the Book of Daniel.

Concluding remarks.—We thus find that the only three cycles which exceed the high accuracy of one day in 10,000 years are those deduced from the prophetic numbers. They more than cover the entire human period with less than one day of error.

This results from a comparison with our best modern data, at the present epoch; but when secular acceleration is taken into account the cycles are found to challenge the limits of accuracy in the data themselves.

These cycles are not hidden in the prophetic numbers in any recondite or abstruse way; but their periods are simply a multiple, or a difference, or an arithmetical mean between them.

Can it then be deemed unreasonable to believe that these periods were revealed by the Creator, who originally appointed the sun and the moon for times and seasons? That He should use such periods to mete out human destinies is but to correlate man with the works of creation which surround him; and to show once more that as the heavens are higher than the earth so are His thoughts higher than our thoughts.

We may conclude with a quotation from Professor Birks, giving a wide outlook into future time. After discussing the periods predicted by the Prophets in their relation to the movements of the sun and moon, he says: "Surely, in the view which is thus unfolded, we are raised out of the contracted range of human reckonings (as in calendar systems) to a lofty elevation of thought, and catch some glimpses of that mysterious wisdom by which the Almighty blends all the works of nature and of providence into subservience to His deep counsels. A divine ladder of time is set before us; and as we rise successively from step to step, days are replaced by years, and years by millennia; and these perhaps hereafter, in their turn, by some higher unit, from which the soul of man may measure out cycles still more vast, and obtain a wider view of the immeasurable grandeur of eternity . . . . . Human science has strained its utmost efforts in calculating the actual motions of the Moon and the Earth; but the determining causes which fixed at first the proportion of their monthly and yearly revolutions, have altogether eluded its research. Yet these elements of the natural universe are linked in, by these sacred times and celestial cycles, with the deepest wonders of Providence, and the whole range of Divine Prophecy." (*First Elements*, chap. xiii, pp. 370–372).

NOTE A. *The length of the day.*—The causes operating continuously to alter the length of the day, are these : (1) The friction of the tides acting as a brake to decrease the earth's rotation. A mathematical investigation of this effect in the various oceans and seas has been made by Dr. Harold Jeffreys of Cambridge, who concludes that owing to this tidal friction " the day has probably lengthened a second in the last 120,000 years. (2) The wearing down of mountain ranges and denudation generally tends to increase the earth's speed ; for any material descending from a higher to a lower level accelerates its rotation. But if the theory of isostasy is correct, mountain ranges would rise somewhat as they wear down, due to decreased pressure on their base ; and this would partly compensate for the effect of denudation. (3) Any shrinkage of the earth in cooling. Dr. Jeffreys discusses this question exhaustively, from data for the expansion of rocks by heat, their elasticity, compressibility, crushing strength, etc., as found experimentally. He shows that continuous cooling would not give continuous adjustment but would result in long quiet intervals separated by short and great upheavals. Objections to this view are answered ; especially as it is known that there have been long intervals of quiescence in the history of the earth. He finds from the data that the accumulation of stress, on reaching its limit, would cause separated epochs of mountain building ; computed to be about 50 million years apart. These upheavals would thus correspond to the dividing points between the four great ages in Geological time, described in any text-book. (*See The Earth*, by Jeffreys, 1929 ; especially pages 267, 277, 285, 287, 293–294.)

As to variation in rotation temporarily or for a period, which astronomers suspect, the main cause seems to be the accumulation of ice at the Poles, in some seasons or for a series of years. This decreases the weight of equatorial waters and tends to accelerate rotation. Yet even in the extreme conditions of the Glacial age, this effect would only be residual ; because in the displacement of waters any increased rotation necessarily raises the ocean level in the equatorial zone.

In any moderate number of centuries these effects seem scarcely measurable, and thus difficult to differentiate from variations in other periods, as astronomers find. This needs to be pointed out, since unfounded or extravagant statements on

the subject are sometimes made. What in reality is so very remarkable is the wondrous stability of the earth.

NOTE B. *On secular acceleration.*—Cycles of such high accuracy as these are affected by the slightest variation in the motions of the sun and moon. The length of the Tropical year is decreasing by half a second per century (or exactly $0 \cdot 530$ second) ; and the rate of this change is nearly constant. The period of the Synodic month is also decreasing. Hence, in going back in time, both the solar and the lunar year are slightly longer than at present.

The decrease in the length of the month, or the moon's secular acceleration, is always given as the angular value by which it will be in advance of its calculated position after the lapse of a century. The matter is complex, however ; for in addition to astronomical causes, a considerable part is due to the reflex effect of tidal friction upon the moon, which diminishes its total energy. The general average value during past centuries, however, can be checked by comparison with ancient eclipses, recorded with careful detail in Babylonia between 700 and 500 B.C., as well as with Chinese and Egyptian observations. The angular value of $12'' \cdot 4$ per century is now generally accepted. This may be taken to mean that the moon is falling forward by an amount measured by 1–150th of its diameter in a century, in addition to its average rate of speed. (*See* Herschel, *Outlines of Astronomy*, paragraph 741 ; Sir Robert Ball, *Elements of Astronomy* ; and investigation of ancient eclipses, by Dr. J. K. Fotheringham, *Monthly Notices*, R. Astro. Soc. 80, 1920 ; 578–581.)

The present accuracy of the cycle, 1780 lunar years = 1727 solar years, is one day in 19,960 years, or only two hours in the length of the cycle (exactly $2 \cdot 04$ hours). Its accuracy in Daniel's time, in 600 B.C., can be found on the assumption that the acceleration of the moon, as well as the sun, has been constant during the 25 centuries since then. In the calculations which need not be detailed, the lunar angle representing acceleration was transformed into a time value, the lengths of the solar and lunar years in 600 B.C. were determined, and the cycle-value of the lunar year was found from the solar year at both epochs. As both these " years " are slightly longer in former centuries, the change in the accuracy of the cycle is not very marked, though distinctly better in relation to the earlier epoch.

The calculated error of 2 hours during the period of this cycle is thus even less in the past; which shows its superiority over the others. Also, in the 1,780 lunar years of this cycle, there are 21,360 lunar months; and these 2 hours represent an error in each month of only one-third of a second according to our present data.

There is a probability that all the periods and cycles indicated in Scripture would together attain absolute accuracy at an epoch in early human history, by the convergence of their variations. They might then prove to form definite fractions of the longest known astronomical period, or else together to build it up; namely, the rotation of the Pole in approximately 25,800 years, which causes the Precession of the Equinoxes. This period is itself subject to variation in the course of the centuries, as well as the solar and lunar periods, requiring much refinement in the calculations; but an investigation to determine the required epoch would be most interesting.

NOTE C. *On the number* 1,727, in relation to other periods and numbers in Scripture. The Jubilee is the year following the completion of a period of seven weeks of years, or the 50th year, following the 49th. Similarly, the year following the close of this cycle of 1,727 years is the 1,728th, which is the cube of 12. This number is made very prominent in Revelation in the description of the New Jerusalem, the cubical city; its length, breadth and height being equal, and each side 12,000 furlongs, making a cube of 1,728 thousand million. Thus the addition of a year to the cycle, or its jubilee year, brings it into correspondence with the mystical number of cubical perfection in the New Jerusalem.

REFERENCES; to authors who have written on the astronomical cycles implied in the numbers and periods which are mentioned in the Prophetical books of Scripture.

Rev. William Hales, D.D., an outstanding chronologist.

"A Synopsis of the Signs of the Times, past, present and future; attempted to be traced from the Chronological Prophecies in the original Scriptures." 8vo. 1817.

"A new Analysis of Chronology, History and Prophecy; . . . explained upon Scriptural and Scientific principles." Four vols. 8vo, 1830. (First published in three vols. 4to, 1812). This work includes a thorough and comprehensive discussion of

Hindu, Chaldean and Egyptian chronology and cycles, with full explanations; as well as the Prophetic periods.

Rev. Geo. S. Faber. "The Sacred Calendar of Prophecy." Three vols. 1828. In one of his works, he points out that in Prophetic symbolisation, there is a systematic employment of miniature; including in predicted periods, a specific rate of numerical reduction.

Also, *William Cuninghame*; a voluminous writer on Scripture chronology and cycles; about 1838.

Rev. Professor T. R. Birks, Fellow of Trinity College, Cambridge. "First elements of Sacred Prophecy," 1843; containing a discussion of all known cycles, with a chapter on: The Cyclical character of the Prophetic times.

Dr. H. Grattan Guinness. "The Approaching end of the Age." Thirteen editions, 1878–1897. Section III, Chap. III, and Appendix A: Soli-lunar cycles, and their relation to the Chronology of History, pages 509–580. A discussion of cycles of various lengths, from the Jubilee of 50 years to the Great Year of the precession of the Equinoxes, in approximately 25,800 years.

Dr. W. Bell Dawson. "Solar and Lunar Cycles implied in the Prophetic Numbers in the Book of Daniel;" Trans. Royal Society of Canada, 1905. Vol. XI, Section III; pages 33 to 52.

The earlier of the above writers laid the foundations of this subject, following upon the Rev. Robert Fleming's remarkable work on the Prophetic periods in 1701 (reprinted in 1848, 1870 and 1929), and the discovery of De Cheseaux in 1754. Guinness acknowledges his indebtedness to his predecessors, especially to Professor Birks.

Montreal, Canada;

DISCUSSION.

Lieut.-Colonel ARTHUR KENNEY-HERBERT said: This paper to which we have listened is a valuable addition to our Library. I wonder how many of our members realise the importance of a good collection of our annual Proceedings. The student can find in these Proceedings the most up-to-date opinions of men who have specialized in some line which bears more or less directly on the study of the Bible. He will find in our Proceedings information

not to be found in plain and homely language in any encyclopædia or text-book.

Personally, I welcome this paper because it starts on a sound foundation. I presume that it is intended to help those who would seek to turn the time references of the Bible into the terms of our calendar. It rightly ignores any reference to the stars. Gen. i, 14, clearly lays down that the sun and moon are to provide us with the necessary units with which to measure. The sun is for days and years, the moon marks God's appointed dates (*see* Ps. civ, 19). In this connection I might add that I can find no reference in the Bible to a year of 12 lunations.

The student who follows this paper will find that the Jewish year is clearly defined, beginning with the spring moon nearest to the equinox. With good lunar tables, he should be able to turn any month date of the Old Testament into a date of the Julian calendar, providing the year is known. Alternatively, the week-day incidence of any month date may be a check on the accuracy of the year.

The paper shows that God fulfils His types and his prophecies to the day. This we believe, I suppose, but do not act on, as a rule. The date of the Crucifixion turns on the 14th day of the new moon. God, who fulfils to the minute, would not allow his fulfilment to be 24 hours in error, owing to man's eyesight or a cloudy sunset.

This raises a point: Astronomical new moon is a misnomer, it might be called *no moon*; God has appointed the first day of new moon to be determined by its visibility. The very words imply it. I know of no passage in the Old Testament where the sense of "Chodesh" would be impaired by translating invariably by "new moon."

The accuracy of the Mohammedan reckoning is interesting, but in my experience, the 1st of Bairam was not a question of calendar, it was a question of visibility.

It is a valuable fact that the length of the mean day has not changed appreciably presumably during the last 120,000 years.

CYCLES.

God's plan has evidently been designed in cycles, and the writer quotes one or two periods measured in **metonic** cycles. To these

I could add others, if my own personal effort at a true Bible chronology be exact. For example: From the Covenant with Abraham to the Ascension of Our Lord was 1,938 mean years, that is 102 metonic cycles. The error by then had amounted to 10 days, so from the Covenant with Abraham to Pentecost was exactly 102 cycles of 19 soli-lunar years. From Pentecost to the June of 1914 was also 99 metonic cycles.

The student who wants to study chronology for himself will do well to master Grattan Guinness's astronomic data contained in the *Approaching End of the Age*. He will find that the second volume of *Lunar Tables in "Creation Centred in Christ"* will meet all his need.

NUMBERS.

Now these tables were built up by discovering a mean year and a mean lunation from the 2,300, and 2,300 − 1,260 = 1,040 numbers contained in Daniel.

These is no need to turn days into years; all that we have to do is apply any given number to years, days or months as the case may be. If the significance of any number defines any particular period, I expect that God uses the number as the time limit of the period. It may be used with any time unit.

For instance, 52 is 13 × 4; 13 is the number of rebellion, 4 is the world number: the combination is world rebellion. As a matter of indisputable fact, the Great War lasted 52 months of 30 days exactly.

Mrs. MAUNDER said: I cannot agree with the Lecturer's argument in the paragraph on *Primitive Endeavour*. Neither in Ancient Egypt nor Babylonia was there an early attempt made to fix the year by noting the points on the horizon when the sun rose and set, giving either equal days and nights, or the longest days or nights, so as to form an agricultural calendar. Indeed, in such low latitudes as these two countries, such an observation is by no means an easy one, since the equator rises very steeply from the horizon, and there is very little difference between the longest and shortest days. If my memory serves me aright, in Mesopotamia observations of equal day and night were not made much before 700 or 800 B.C.

In Egypt the year was given by the Nile always, and, as it chances, from meteorological reasons, the initial rise at Cairo is very near the summer solstice, and the maximum inundation near the autumnal equinox ; and that always gave a tropical year. But about 2800–2900 B.C. it so happened that Sirius, the brightest star in the heavens, rose, for the latitude of Cairo, heliacally at the summer solstice—that is for Cairo when the Nile began to rise, and the Sothic Cycle connected with Sirius of 1,461 years (as mentioned by the lecturer) took its origin ; but, as a consequence, this cycle went twice through all the seasons before the beginning of our era, and so ceased to inform the farmer when to sow or reap. But the farmer never needed any agricultural help from this cycle ; he got all he wanted from the Nile itself.

But the lecturer is definitely wrong in his paragraph *Types of Calendars*, where he gives for the Ancient Hebrew the " simple rule : ' The first day of the first month shall be at the New Moon, which is nearest the Equinox in spring ; that is, within 15 days before or after it.' The full moon of the Passover will thus always be at the middle of the first month "—and this quite apart from what I have already said, that the observation of equal days and nights was unknown both to the Egypt from which the Children of Israel had just come out and to the First Dynasty of Babylon, from which their ancestor Abraham the Hebrew had crossed over the Euphrates into Palestine.

For the command given to Moses (in Leviticus, chapter xxiii, 5–15) was : " In the fourteenth day of the first month at even is the Lord's Passover . . . ye shall bring a sheaf of the firstfruits of your harvest unto the priest : and he shall wave the sheaf before the Lord . . . on the morrow after the Sabbath [16th Abib] the priest shall wave it . . . and ye shall count unto you from the morrow after the Sabbath, from the day that ye brought the sheaf of the wave offering : seven Sabbaths shall be complete." And again (Deut. xvi, 1–10) : " Observe the month of sprouting . . . seven weeks shalt thou number unto thee : begin to number the seven weeks *from such time as thous beginnest to put the sickle to the corn*." And note that all the subsequent feasts of the year took their times from this putting of " the sickle to the corn."

Now the barley (which we are told in Ex. ix, 31 was sprouting

(Abib) when Pharaoh let the people go) harvest only *begins* to ripen at the end of March in the low, hot, Jordan valley, and is not ripe for the highlands till the beginning of May. Therefore, the Passover (on the 14th Abib) could *never* have been held until at least a week after the equinox, and might need to be postponed for another month if the standing corn were not yet ripe for the sickle. It all depended on what the weather had been.

The nearest new moon to a definite date—say, in vernal equinox— may be fitted into a cycle ; but the weather on which the ripeness of the harvest depends cannot so be. And this raises the question as to what God Himself puts an emphasis upon—A calendar with a precise and almost perfect repetition, or the ripening of the grain. The prophet Micah answers, for he says : " The Lord's voice crieth . . . ' my soul desireth the first ripe fruit.' "

There is no doubt that the numbers 2,300 and 1,260 speak of a purpose in God's mind—a purpose that we do not know. Is it simply of the perfect cyclical repetition of lunar and solar years fitting into each other throughout the centuries ? If it were just that, then surely He would have spoken directly of the still more perfect cycles got by taking their difference or their arithmetical mean !

Sir AMBROSE FLEMING, D.Sc., F.R.S., wrote : I have been much interested in this valuable paper by Dr. Bell Dawson on Prophetical Numbers in the Book of Daniel, as it is a subject which attracted some little attention from me in past years.

Some 30 years ago, I noticed the soli-lunar character of the period of 1,985 solar years, as it contains a nearly exact integer number of synodic months or lunations.

This period of time is the difference between 2,300 years and 315 years, both of which are soli-lunar, but the errors are in the same direction.

Now, 1,985 solar years are equal to 725,005·7670 days and 24,551 lunations are 725005·7606 days. The difference is 0·0064 days or about 9·2 minutes of time. Hence, after this period of 1,985 years, the sun and moon come round with respect to the earth into almost exactly the same positions. The period of 315 years is seen at once to be a quarter of 1,260, which is also a Daniel cycle number.

I have not, however, been able to trace any very important historical period of time covered by 1,985 solar years, except the following period.

The Roman general Pompey took Jerusalem in 62 B.C. and began the Romanisation of the city. In A.D. 663, Pope Vitalian decreed the exclusive use of Latin in the services of the Church, reckoning 1,985 years from 62 B.C. and 1,260 from A.D. 663, they both run out in A.D. 1923, which is the termination of other prophetic periods also.

Mr. W. E. LESLIE wrote: The author contends that certain prophetical numbers correspond so closely with certain celestial cycles that the correspondence must be intentional. Further, he contends that it is closer than was possible for a human astronomer in those times, and therefore must be due to revelation. But in that case should we not expect an exact coincidence rather than an approximation?

In 1912 (*Expositor Series* viii, vol. III), J. Lepsius suggested that the number 2,520 was intended to be the sum of the days in 480 Julian years of 365·25 days and 480 Apocalyptic years of 360 days. Further that the sum of the days in 500 Julian and 500 Apocalyptic years was equal to the sum of the two numbers at the end of Daniel xii—1,290 and 1,335. The author does not mention this. What does he think of it?

If these correspondences can be established, we have to ask two questions. Were the movements of the earth and moon designed to fit human history? Or is human history shaped to fit these movements? In either case, we find our feet near the slope that descends to the superstitious depths of Astrology.

AUTHOR'S REPLY.

The writer desires to express his thanks to those who have been good enough to take part in the discussion, and who have thrown further light upon cycles. He may be allowed, however, to reply briefly to some points, to obviate any misunderstanding.

Lieut.-Col. Kenney-Herbert remarks that he finds no reference in the Bible to a year of 12 lunations. But it is surely evident that

each Hebrew year *was* a year of 12 lunations; with an extra lunar month added when needful to keep the year in harmony with the seasons. Yet some prophecies refer to nations that omitted this correction and kept to a lunar reckoning.

As to the month beginning with the actual visibility of the new moon, it may at least be noted that the Divinely arranged system is on so sound a basis that it works out with the true hour of New Moon as now calculated; as may be seen in the present-day Jewish calendar.

Mrs. Maunder, in discussing the year, refers to the difficulty of observing equal day and night, which is very true. But the shift of the point of sunrise (or sunset) on the horizon can be used to fix a definite day in the year; and thus to keep the seasons in their place. This method is as applicable in the tropics as elsewhere; and it was in actual use in ancient Egypt, where the temples were set on a line of sight to a point on the horizon. By a system of masonry diaphragms, it was only on a definite day that the beam of sunrise would shine through to the interior shrine. (*See* Lockyer, *The Dawn of Astronomy*, pp. 109–110.) A fixed point in the solar year (either at or near the Equinox, or at the Solstice) was thus determined, quite independently of the rise of the Nile.

Regarding the beginning of the year, the First month was related primarily to the moon; and from what is said in Scripture, the time of harvest appears to be accessory. The harvest date would no doubt help in deciding whether an intercalary month was required to keep the seasons in their place; as Mrs. Maunder seems to suggest.

We hardly need to be ignorant of the purpose of the numbers 2,300 and 1,260; for the Prophecies themselves show them to be limitations of times of trial and difficulty. We have not touched upon their fulfilment in history; for the present paper is limited to their relation to astonomical cycles.

Mr. W. E. Leslie remarks that if these cycles are due to revelation, we should expect them to be better than an approximation. But can they be termed approximate? For in dealing with such an extreme degree of accuracy as these cycles present, we have to reckon with variations of less than a second in the year and month, in the course of the centuries. If we had sufficiently extended knowledge of this "secular variation" to enable us to make the

investigation, the cycles might prove to have absolute accuracy (in the mathematical sense) at some era. Yet in Scripture, the fulfilment of predicted periods to the nearest day is reckoned as accuracy. (Exodus, xii, 41.) These cycles far exceed this; for their "error" is only one day in a period of 10 to 15 times the length of the cycle itself.

The question of the relation of human history to the movements of the earth and moon should rather point us to One Lord over all, than tend toward superstition. For much idolatry is connected with the sun, moon and planets; and judgment may be meted out to the nations by the movements of these very bodies, to show that the Lord is "above all gods." For the career of nations, and tolerance of their evil ways, is limited by God the Creator. (*Cf.* Genesis xv., 16, and Acts xvii., 26.)