

## QUOTATIONS ABOUT THE JEWISH CALENDAR

### FROM JEWISH SOURCES

The following list is a collection of quotations about the present Jewish calendar. All these quotations are from Jewish writers. Quotations from the first six works are from Jews who are also qualified in astronomy. The quotations after that are all from the Talmud, illustrating beyond doubt that the Jews understand the word "tekufah" to refer to the four seasons that each start with either an equinox or a solstice. Together with the quotations from Encyclopedia Britannica, which were in all likelihood also written by Jewish astronomers, these quotations represent the views about the Jewish calendar from those who are the most qualified people on earth on this subject of the Jewish calendar.

These people did not have an axe to grind. They did not attempt to find any astronomical justifications for the flaws in THEIR calendar. They were not attacking their own calendar. They simply stated the obvious facts about the Jewish calendar, facts that are obvious to any objective observer. It is only people who have a vested interest in ascribing to the Jewish calendar some "godly" or "sacred" status that will argue with, and reject, these clear and obviously correct views of highly qualified Jewish astronomers.

COMMENT: With all the quotations presented here the emphasis by means of capital letters is mine throughout, unless explicitly stated as otherwise.

Here are the quotations:

1) The JEWISH ENCYCLOPEDIA, copyright 1903, 1912, volume 3, page 500, article "Calendar, History of" states:

"The assumed duration of the solar year is 6 minutes, 39,43 seconds in excess of the true astronomical value, which will cause the dates of the commencement of future Jewish years, which are so calculated, to advance from the equinox A DAY IN ERROR IN 216 YEARS."

A few pages further in the article "Calendar" this same encyclopedia states:

"The cycle of nineteen lunar years (the cycle of Meton) determines the sequence of common years and leap years in the Jewish calendar, because nineteen lunar years with seven extra months of seven leap years APPROXIMATELY equal nineteen solar years." (page 505)

2) In 1886 A.D. ISIDORE LOEB, a Jewish author, published in Paris that the Jewish cycle in 19 years exceeds 19 Gregorian years by 2 hours, 8 minutes and 15,3 seconds. This makes a difference in 1900 years (i.e. in 100 cycles) of 8 days, 21 hours, 45 minutes and 5 seconds (as published in "Tables du Calendrier Juif, page 6, Paris 1886).

[COMMENT: The correct figure per 19 year cycle is actually 1 hour, 58 minutes and 15,3 seconds, exactly 10 minutes less (based on a 400 year Gregorian cycle and not on a 4000 year Gregorian cycle) than what Loeb stated.]

The point is that FOR OVER 100 YEARS IT HAS BEEN KNOWN that the Jewish calendar has exactly the same problem that the Julian calendar has, just to a somewhat lesser degree. It is an irrefutable fact that the Jewish calendar is astronomically inaccurate!

3) Here is a rather lengthy quotation from THE UNIVERSAL JEWISH ENCYCLOPEDIA, VOLUME 2, ARTICLE "CALENDAR", starting on page 630. It was published in the USA, and the copyright date is 1939. This was written by JEWS!

"Some time toward the end of the period of the Kings there was A REFORMATION OF THE ISRAELITE CALENDAR. The names of the months were dropped, and ordinal numerals were substituted (first, second, third month, etc.) ... This method of reckoning appears in Kings, Jeremiah and the later books of the Bible. Kings, whenever it gives the old name of the month, carefully adds the equivalent month in its own calendar; thus Ziv is indicated as the second month (6:1)."

"NOTHING FURTHER IS KNOWN OF THE CALENDAR UNTIL TOWARDS THE END OF THE PERIOD OF THE SECOND TEMPLE. By that time the months had again received names, the same names that have survived to the present day. These names are BABYLONIAN and were probably adopted shortly after the Babylonian Exile. They are Tishri ... etc. ... "

"LITTLE IS KNOWN OF THE PROCEDURE OF DETERMINING THE CALENDAR up to the 2nd cent. C.E. [i.e. A.D.], WHEN A DESCRIPTION IS GIVEN OF THE TRADITIONAL PRACTICE. It ran as follows: On the thirtieth day of the month a council would meet to receive the testimony of witnesses that they had seen the new moon. If two trustworthy witnesses had made deposition to that effect on that day, the council proclaimed a new month to begin on that day, that is, the day on which the testimony was given became the first day of the new month instead of the thirtieth day of the old month. If no witnesses appeared, however, the new moon was considered as beginning on the day following the thirtieth. Once the council had proclaimed the new month, announcement was made far and wide by means of fire signals to inform the communities outside of Jerusalem. ... "

"This method of determining the new moon had its defects. During certain periods of the year continuous rainfall might prevent the new moon from being seen at all until several days after the month should have begun. Witnesses might be overzealous and imagine they had seen the new moon too soon; or malicious witnesses might purposely give false testimony. The leaders of the community, therefore, had to study astronomy, in order to ascertain by means of calculation when the new moon should appear, and thus check up on the testimony of witnesses. AN EARLY RULE WAS that a year could not have less than four or more than eight months of thirty days each. Rabban Gamaliel II (2nd cent. C.E.) would test the witnesses by showing them pictures of the various phases of the moon and asking them which appearance they had seen. Disputes arose between those who depended on witnesses and those who relied on calculation; a noted instance of such a dispute between Gamaliel and Joshua is recorded in the Mishnah (R.H. 2:8 9). EVENTUALLY THE CALENDAR WAS DETERMINED ENTIRELY ON THE BASIS OF ASTRONOMICAL CALCULATIONS, and the hearing of the evidence of witnesses was merely retained to encourage individuals to perform their religious duties."

"ASTRONOMIC LEARNING was also applied in determining leap years. In 432 B.C.E. [i.e. B.C.] the Athenian astronomer Meton had reformed the Athenian calendar on the basis of a cycle of nineteen years, consisting of 235 lunar months, adding one month seven times in the cycle to take care of the excess (235 is 7 more than 19 times 12). THIS CALENDAR WAS WIDELY ADOPTED, AND WAS EVENTUALLY FOLLOWED BY THE JEWISH TEACHERS, who made seven out of every group of nineteen years leap years (embolismic years) of thirteen months."

"UP TO THE MIDDLE OF THE 4TH CENT. C.E. [i.e. A.D.] the Palestinian patriarchate retained the prerogative of determining the calendar, and guarded the secrets of its calculation against the attempts

of the rapidly advancing communities in Babylonia to have a voice in its determination. It was not until after Christianity had become dominant in the Roman Empire, and the Christian rulers forbade the Jewish religious leadership to proclaim leap years or to communicate with the Jews outside of the empire, that it was determined to abandon the method of official proclamation of months and years AND TO FIX THE CALENDAR IN PERMANENT FORM. The patriarch Hillel II, in 359, decided to publish the rules for the calculation of the calendar, so that all Jews everywhere might be able to determine it for themselves and to observe the festivals on the same day. FROM THAT TIME ON THE JEWISH CALENDAR HAS BEEN STABILIZED." (pages 631-632)

4) "STUDIES IN HEBREW ASTRONOMY AND MATHEMATICS" by SOLOMON GANDZ. The INTRODUCTION to this book is written by SHLOMO STERNBERG. It was published in 1970 in New York by KTAV Publishing House Inc. Here are some quotations from the lengthy Introduction by Shlomo Sternberg.

"The second Hillel and his court ENACTED THE FIXED CALENDAR which is still enforced today. The only problem of a legal nature which we have in regard to this calendar, is a theoretical one, namely, on what basis was the enactment of this calendar valid? It is a generally accepted legal principle that the central court, being representative of the people, had the right to determine the years, months, and therefore the festivals. The question is whether the court is empowered to determine the months and years far into the future or not. ACCORDING TO THE OPINION OF MAIMONIDES, the legal basis of the court's power is not so much judicial or legislative as it is that the court acts as the instrument representing the community as a whole. AS SUCH, IT IS NOT EMPOWERED TO ENACT CALENDRIAL DECISIONS INTO THE FUTURE. Our current calendar is based legally on the fact that all Jewish residents of Israel, in fact, follow this calendar in practice." (pages XXV-XXVI)

"THE ESSENTIAL INGREDIENTS ARE the nineteen year cycle, the mean motion of the moon, and the various regulations arranged TO POSTPONE THE NEW YEAR SHOULD IT OCCUR ON AN INCONVENIENT DAY." (page XXVI)

"As to rule 1 the Babylonian Talmud (R.H. 20a and Succah 54b) mentions that THE CALENDAR IS TO BE ADJUSTED SO AS TO AVOID Yom Kippur falling on Friday or Sunday BECAUSE OF THE INCONVENIENCE THIS MIGHT CAUSE. This means that Rosh Hashana must not fall on Wednesday or Friday. The Jerusalem Talmud (Succah Ch. IV, H.I.) also mentions that THE CALENDAR MUST BE ADJUSTED so that the seventh day of Succoth does not fall on the Sabbath. Thus Rosh Hashana may not fall on Sunday. (The implication from the Babylonian Talmud Rosh Hashana 20a is that the Babylonian Talmud did not have any such rule.) R. Nissim, in his commentary to Alfasi, Succah noticed this discrepancy and observed that 'WHOEVER FORMULATED OUR FIXED CALENDAR chose to follow the Jerusalem rather than the Babylonian Talmud in this matter.' IN ANY EVENT, the source we have in the Talmud for rule 1 INDICATES A UTILITARIAN REASON FOR THE RULE." (pages XXVII-XXVIII)

"Maimonides, in Chapter VII, H. 7 gives a different explanation ... APPARENTLY, Maimonides meant that there are astronomical reasons for postponing the New Moon Day in the Fall." (page XXVIII)

"Historical evidence seems to indicate that THE TIME IS SET IN BABYLONIA and NOT AT JERUSALEM. In any event, IT COMES AS NO SURPRISE THAT THE MEAN TIME OF CONJUNCTION GIVEN BY MAIMONIDES IN THE ASTRONOMICAL SECTION OF HIS 'LAWS OF SANCTIFICATION OF THE NEW MOON' DIFFERS BY OVER AN HOUR FROM THE MOLAD AS COMPUTED FROM THE CALENDRIAL RULES." (page XXIX)

5) "THE COMPREHENSIVE HEBREW CALENDAR, ITS STRUCTURE, HISTORY, AND ONE HUNDRED YEARS OF CORRESPONDING DATES" by Arthur Spier. This was published in 1952 in

New York by Behrman House Inc. Publishers.

"Furthermore, the lunar months must always correspond to the seasons of the year which are governed by the sun. THE MONTH OF NISAN with the Passover Festival, for instance, MUST OCCUR IN THE SPRING and THE MONTH OF TISHRI with the harvest festival Succoth IN FALL." (page 1)

"In the early times of our history the solution was found by the following practical procedure: THE BEGINNINGS OF THE MONTHS WERE DETERMINED BY DIRECT OBSERVATION OF THE MOON. The new months were sanctified and their beginnings announced by the Sanhedrin, the Supreme Court in Jerusalem, AFTER WITNESSES HAD TESTIFIED that they had seen the new crescent and after their testimony had been thoroughly examined, confirmed by calculation and duly accepted." (page 1)

"A special committee of the Sanhedrin, with its president as chairman, had the mandate to regulate and balance the solar with the lunar years. This so called Calendar Council (Sod Haibbur) calculated the beginnings of the seasons (Tekufoth) on the basis of astronomical figures which had been handed down as a tradition of old. Whenever, after two or three years, the annual excess of 11 days had accumulated to approximately 30 days, a thirteenth month Adar II was inserted before Nisan in order to assure that Nisan and Passover would occur in Spring and not retrogress toward winter. However, the astronomical calculation was not the only basis for intercalation of a thirteenth month. The delay of the actual arrival of spring was another decisive factor. The Talmudic sources report that THE COUNCIL INTERCALATED A YEAR WHEN THE BARLEY IN THE FIELDS had not yet ripened, when the fruit on the trees had not grown properly, when the winter rains had not stopped, when the roads for Passover pilgrims had not dried up, and when the young pigeons had not become fledged. The Council on intercalation considered the astronomical facts TOGETHER WITH THE RELIGIOUS REQUIREMENTS OF PASSOVER AND THE NATURAL CONDITIONS OF THE COUNTRY.

THIS METHOD OF OBSERVATION AND INTERCALATION was in use throughout the period of the second temple (516 B.C.E.- 70 C.E.), AND ABOUT THREE CENTURIES AFTER ITS DESTRUCTION, as long as there was an independent Sanhedrin. In the fourth century, however, ... the patriarch Hillel II took an extraordinary step ... he made public the system of calendar calculation which up to then had been a closely guarded secret." (pages 1-2)

"In accordance with this system, Hillel II formally sanctified all months in advance, and intercalated all future leap years UNTIL SUCH A TIME AS A NEW, RECOGNIZED SANHEDRIN WOULD BE ESTABLISHED IN ISRAEL." (page 2)

"The rebirth of the state of Israel rekindles in us the hope that the new Sanhedrin, recognized by the whole people of Israel, will be established again in our time. IT WILL BE THE TASK OF THE SANHEDRIN TO MAKE A DECISION AS TO WHEN AND HOW THE SANCTIFIED CALENDAR OF HILLEL II IS TO BE MODIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTRONOMY AND THE TORAH." (page 227)

"NOTE: In more than 60% of all years Rosh Hashanah does not occur on the day of the Molad but is postponed according to one of the Dehioth. Therefore the Dehioth are actually not the exceptions to the rule BUT THE RULE.

"It is obviously NOT the intention of the calendar calculation to establish Rosh Hashanah and the beginnings of the months ON THE DAY OF THE CONJUNCTION. IT WOULD RATHER APPEAR that the beginnings of the years and the months are generally adjusted to the days on which the Sanhedrin would have sanctified them ON THE BASIS OF OBSERVATION OF THE NEW CRESCENT." (page 219)

## "G. THE SEASONS: TEKUFOTH

18. With the introduction of the permanent calendar [i.e. by Hillel II], the solar and lunar years have been adjusted by a calculation which guarantees the coincidence of the lunar months with the seasons AS REQUIRED BY THE LAW. Therefore the independent computation of the beginnings of THE FOUR SEASONS, THE TEKUFOTH, has lost its importance. Nevertheless, in all our annual calendars we find the dates of the four Tekufoth listed as:

Tekufath Tishri (FALL EQUINOX)

Tekufath Tebeth (WINTER SOLSTICE)

Tekufath Nisan (SPRING EQUINOX)

Tekufath Tammuz (SUMMER SOLSTICE)" (page 223)

6) THE ENCYCLOPEDIA JUDAICA, published in Jerusalem in 1971.

A) The Article "ASTRONOMY" in Volume 3 , in Column 798 has the following subheading:

"THE FOUR SEASONS (Tekufot)."

[COMMENT: This makes quite clear that the Jews view the word "tekufah" as one of the words that means "SEASONS"!]

B) The Article "CALENDAR" in Volume 5, in Column 46, has the following subheading:

"Tekufot ("Seasons"). As stated, the four seasons in the Jewish year are called tekufot. More accurately, it is the beginning of each of the four seasons — according to the common view, the mean beginning — that is named tekufah (literally "circuit", from quph related to naqaph, "to go round"), the tekufah of Nisan denoting the mean sun at the vernal equinoctial point, that of Tammuz denoting it at the summer solstitial point, that of Tishri, at the autumnal equinoctial point, and that of Tevet, at the winter solstitial point."

"Rosh Ha Shanah does, OF COURSE, occasionally occur BEFORE THE DAY OF THE PHASIS BEGINS or, in some extremely rare cases, ON THE DAY IMMEDIATELY AFTER (never later), with a rather wider range of the occurrence of the New Moon BEFORE AND AFTER THE DAY OF THE PHASIS IN OTHER MONTHS; such oscillation is inherent in a system, like the present Jewish calendar, based on mean values." (also page 46)

7) THE FOLLOWING QUOTATIONS ARE ALL FROM THE TALMUD! The numbers in the body of the text refer to footnotes.

### **TALMUD - MAS. BERACHOTH 59B**

"and I make a sackcloth their covering.<sup>1</sup>

Our Rabbis taught:\* HE WHO SEES THE SUN AT ITS TURNING POINT,<sup>2</sup> the moon in its power,<sup>3</sup> the planets in their orbits,<sup>4</sup> and the signs of the zodiac in their orderly progress,<sup>5</sup> should say: Blessed be He who has wrought the work of creation."

FOOTNOTE 2:

"(2) In its apparent motion in the ecliptic, THE SUN HAS FOUR 'TURNING POINTS' WHICH MARK THE BEGINNINGS OF THE FOUR RESPECTIVE SEASONS. THESE POINTS ARE GENERICALLY REFERRED TO AS THE TEKUFOTH (SING. TEKUFAH). They are: the two equinoctial points when the sun crosses the equator at the beginning of spring and autumn respectively, and 'turns' from one side of the equator to the other; and the two solstices, when the sun is at its maximum distance, or declination, from the equator, at one or other side of it, at the beginning (\*) Note 6 and the notes on the following page are based on material supplied by the late Dr. W. M. Feldman, M.D., B.S., F.R.C.P., F.R.A.S., F.R.S. (Edin.), shortly before his death on July 1st, 1939. of summer and winter respectively, and instead of progressively increasing its declination it 'turns' to decrease it progressively. (IT MAY BE MENTIONED THAT THE TERM 'TEKUFAH' IS ALSO USED NOT ONLY FOR THE BEGINNING OF A SEASON BUT FOR THE WHOLE OF THE SEASON ITSELF.)"

#### **TALMUD - MAS. ROSH HASHANA 8A**

"If you like I can say that R. Hisda explains the Mishnah here in the same way as R. Zera, since R. Zera said [that it<sup>14</sup> means], FOR RECKONING CYCLES,<sup>15</sup> in this following the view of R. Eleazar, who said that the world was created in Tishri.<sup>16</sup> "

#### **FOOTNOTE 15:**

"(15) I.e., the cycle of Tishri is the first of the four cycles of the year, v. infra p. 43, n. 9. THE YEAR IS DIVIDED INTO FOUR CYCLES CALLED TEKUFOTH, the Tekufah of Nisan (Vernal Equinox); Tammuz (Summer Solstice); Tishri (Autumn Equinox); Tebeth (Winter Solstice). THE TERM TEKUFAH IS ALSO APPLIED TO THE SEASON ITSELF."

#### **TALMUD - MAS. ROSH HASHANA 11A**

"R. Joshua said: Whence do we know that the patriarchs were born in Nisan? Because it says, and it came to pass in the four hundred and eightieth year after the children of Israel were come out of the land of Egypt, in the fourth year in the month of Ziv<sup>11</sup> — that is, the month in which the brilliant ones [zewthane] of the world were born."

#### **FOOTNOTE 11:**

"(11) I Kings VI, 1. The text says that this was the second month, but SOMETIMES THE NISAN TEKUFAH (VERNAL EQUINOX) IS LATE IN OCCURRING, in which case the month of Iyar may according to solar calculation still be Nisan (Rashi)."

#### **TALMUD - MAS. TA'ANITH 10A**

"GEMARA. R. Eleazar said: The halachah is according to R. Gamaliel. It has been taught: Hananiah says: In the Diaspora<sup>18</sup> [we do not begin to pray] until the sixtieth day after THE [TISHRI] CYCLE.<sup>19</sup>"

#### **FOOTNOTE 19:**

"(19) THE YEAR WAS DIVIDED INTO FOUR CYCLES (v. Glos. s.v. Tekufah), Tishri, Tebeth, Nisan and Tammuz. HERE THE TISHRI TEKUFAH IS MEANT-THE AUTUMNAL EQUINOX."

#### **TALMUD - MAS. TA'ANITH 14B**

"The inhabitants of Nineveh<sup>3</sup> sent to enquire of Rabbi: How should we who need rain even in

THE TAMMUZ CYCLE act?4 Are we to consider ourselves individuals and [insert the special prayer for rain] in 'Who hearkenest unto prayer'. or shall we consider ourselves a community and [insert it] in the 'blessing of the years'?5"

FOOTNOTE 4:

"(4) HEB. TEKUFAH, v. Glos."

### **TALMUD - MAS. SANHEDRIN 11B**

"Our Rabbis taught: A year may be intercalated on three grounds: on account of the premature state of the corn-crops;<sup>7</sup> or that of the fruit-trees;<sup>8</sup> or on account of THE LATENESS OF THE TEKUFAH<sup>9</sup>"

FOOTNOTE 9:

"(9) Lit. 'cycle', 'season'. The Jewish Calendar, while being lunar, takes cognisance of the solar system to which it is adjusted at the end of every cycle of nineteen years. For ritual purposes THE FOUR TEKUFOTH SEASONS, ARE CALCULATED ACCORDING TO THE SOLAR SYSTEM, each being equal to one fourth of 365 days, viz. 91 days, 7 1/2 hours. TEKUFAH OF NISAN (VERNAL EQUINOX) BEGINS MARCH 21; Tekufah of Tammuz (Summer Solstice), June 21; TEKUFAH OF TISHRI (AUTUMNAL EQUINOX), SEPTEMBER 23; Tekufah of Tebeth (Winter Solstice), December 22. Should the Tekufah of Tammuz extend till after the Succoth Festival, or the Tekufah of Tebeth till the sixteenth of Nisan, the year would be intercalated, so that the festivals might fall in their due seasons, viz., Passover in Spring, Succoth in Autumn."

### **TALMUD - MAS. SANHEDRIN 12B**

"Rab Judah said in Samuel's name: A year is not to be intercalated<sup>32</sup> unless THE [SUMMER] TEKUFAH<sup>33</sup> is short of completion by the greater part of the month.<sup>34</sup> And how much is that? — Sixteen days: so holds R. Judah."

FOOTNOTE 33:

"(33) The solar year which consists of three hundred and sixty-five and a quarter days is divided into four equal parts, each period consisting of ninety-one days and seven and a half hours. THESE ARE CALLED RESPECTIVELY THE NISAN (VERNAL), TAMMUZ (SUMMER), TISHRI (AUTUMNAL), TEBETH (WINTER) TEKUFOTH. The lunar year which forms the basis of our calendar comprises altogether three hundred and fifty-four days. Though according to Biblical tradition our months are to be lunar (cf. Ex. XII, 2), yet our Festivals are to be observed at certain agricultural seasons; Passover and Pentecost in the Spring; TABERNACLES, OR FEAST OF INGATHERING, IN THE AUTUMN. In order to harmonise the lunar and solar years, a second Adar is intercalated once in two or three years. Our text lays down certain principles by which the Intercalators are to be guided."

### **TALMUD - MAS. SANHEDRIN 13A**

"R. Jose said: Twenty-one days.<sup>1</sup> Now, both deduce it from the same verse, And the Feast of Ingathering at the Tekufah [season] of the year.<sup>2</sup> ONE MASTER<sup>3</sup> HOLDS THAT THE WHOLE FEAST [OF INGATHERING]<sup>4</sup> IS REQUIRED TO BE INCLUDED [IN THE NEW TISHRI TEKUFAH];<sup>5</sup> the other,<sup>6</sup> that only a part of the Festival [of ingathering] must [be included].<sup>7</sup>

Now, which view do they adopt?<sup>8</sup> If they hold that the Tekufah day<sup>9</sup> is the completion [of the

previous season]: then, even if it were not so,<sup>10</sup> it will meet with the requirement neither of him who holds that the whole Festival [must be included,] nor of him who holds that only part of it [is necessary]! —<sup>11</sup> One must say therefore that they both hold that THE TEKUFAH DAY BEGINS [THE NEW TEKUFAH]."

#### FOOTNOTE 2:

"(2) Ex. XXXIV, 22. I.e., IT MUST FALL WITHIN THE TISHRI TEKUFAH."

#### FOOTNOTES 8-12:

"(8) Viz., with reference to the day on which the sun enters into the new Tekufah.

(9) I.e., the day on which the new Tekufah begins.

(10) I.e., even if it were not much short of completion, as sixteen days according to R. Judah, and twenty-one days according to R. Jose, but fifteen or twenty days, respectively.

(11) For even if the Tekufah day begins on the sixteenth or twenty-first day, the new season will commence only on the following day.

#### TALMUD - MAS. SANHEDRIN 13A

"An objection is raised: THE TEKUFAH DAY concludes [the previous season]: this is R. Judah's view. R. JOSE MAINTAINS THAT IT COMMENCES [THE NEW].<sup>12</sup> Further has it been taught: A year is not intercalated unless the [summer] Tekufah is short of completion by the greater part of the month [Tishri]. And how much is that? Sixteen days. R. Judah said: Two thirds<sup>13</sup> of the month. And how much is that? Twenty days.<sup>14</sup> R. Jose ruled: It is to be calculated thus: [If there are] sixteen [days short of completing the Tekufah] which precedes Passover,<sup>15</sup> the year is to be intercalated.<sup>16</sup> [If, however, there are] sixteen [short of completing the Tekufah] which precedes the Feast [of Tabernacles],<sup>17</sup> the year is not to be intercalated.<sup>18</sup> R. Simeon maintained: Even where there are sixteen [days short of completing the Tekufah] which precedes the Feast [of Tabernacles], the year is intercalated.<sup>19</sup> Others say [that the year is intercalated even if the Tekufah is short of completion] by the lesser part of the month. And how much is that? Fourteen days?<sup>20</sup> — The difficulty remained unsolved."

#### TALMUD - MAS. SANHEDRIN 13B

" — They differ as to WHETHER THE TEKUFAH DAY COMPLETES [THE PREVIOUS] OR BEGINS [THE NEW SEASON].<sup>1</sup> But their views were not defined.<sup>2</sup>

[Again it was stated:] 'Others say: [That the year is intercalated even where there is a shortage] by the lesser part of the month. And how much is that? Fourteen days.' Now, which view do they adopt? Do they hold that the Tekufah day completes [the previous season], AND THAT WE REQUIRE THE WHOLE FEAST [OF INGATHERING TO BE INCLUDED IN THE NEW TEKUFAH?] But surely in our case, it is so.<sup>3</sup> [Why then intercalate?] — The 'Others', says R. Samuel son of R. Isaac, speak of the Nisan Tekufah, for it is written, Observe the month of Abib [spring];<sup>4</sup> i.e., take heed that the beginning<sup>5</sup> of the vernal Tekufah shall occur on a day in Nisan [when the moon is still in the process of renewal].<sup>6</sup>"

#### FOOTNOTES 1-3:

"(1) Though they both state the number sixteen, the one who holds that the day completes the previous Tekufah must count the new season as beginning on the seventeenth.



(2) I.e., it is not clear who is of the one and who of the other opinion.

(3) For THE TISHRI TEKUFAH THEN COMMENCES ON THE FIFTEENTH, WHEREAS THE FEAST OF INGATHERING, AS DEFINED IN P. 58, N. 1, COMMENCES ON THE SIXTEENTH."

### **TALMUD - MAS. SANHEDRIN 13B**

"Rabina said: In reality, the 'Others' refer to the Tishri Tekufah, but THEY HOLD THAT THE WHOLE FEAST [OF INGATHERING]<sup>10</sup> MUST FALL [IN THE NEW TEKUFAH] INCLUDING ALSO THE FIRST [DAY OF THE FEAST].<sup>11</sup> '[Including] the first day'?<sup>12</sup> But is it not written, The Feast of Ingathering [shall be] at the Tekufah of the year; [meaning the day on which ingathering is permitted]? — [They interpret it as] 'The Feast which occurs in the season of ingathering.'"

FOOTNOTE 11:

"(11) And being of the view that the Tekufah day completes, the season, if there is a shortage of fourteen days, in which case the new autumnal Tekufah will begin on the fifteenth day, the first day of the Feast will not be included in it, so that intercalation is justified."

### **TALMUD - MAS. NIDAH 38B**

"Mar Zutra further stated: Even according to him who holds that a woman who bears at nine months does not give birth before the full number of months has been completed,<sup>7</sup> a woman who bears at seven months may give birth before the full number of months has been completed, for it is stated in Scripture. And it came to pass, after the cycles of days<sup>8</sup> that Hannah conceived, and bore a son;<sup>9</sup> the minimum of 'cycles'<sup>10</sup> is two,<sup>11</sup> and the minimum of 'days'<sup>10</sup> is two.<sup>12</sup>"

FOOTNOTE 11:

"(11) EACH CYCLE (TEKUFAH) consisting of three months (the year being divided into four cycles) and two cycles consisting, therefore, of six months."

### **8) QUOTATIONS FROM ENCYCLOPEDIA BRITANNICA**

A) The 1911 ENCYCLOPEDIA BRITANNICA, 11th edition, volume 4, page 1001, column 1, article "Calendar" states in the section of the article devoted to the Jewish calendar:

"Such difference may also in part be accounted for by THE FACT that the assumed duration of the solar year is 6 minutes 39,43 seconds in excess of the true astronomical value, WHICH WILL CAUSE THE DATES OF COMMENCEMENT OF FUTURE JEWISH YEARS, SO CALCULATED, TO ADVANCE FORWARD FROM THE EQUINOX A DAY IN ERROR IN 216 YEARS."

B) The ENCYCLOPEDIA BRITANNICA, 1964 edition, Volume 4, Article "CALENDAR", section "Jewish Calendar, Origin, pages 624-625 states the following:

"The Jewish calendar is the result of LONG DEVELOPMENT; ITS PRESENT FORM IS NOT OF GREAT ANTIQUITY."

"Intercalation, already evident from Ezekiel ... (chapter and verse references), WAS AT FIRST EMPIRICAL, an intercalary month being added FOR VARIOUS REASONS AT IRREGULAR INTERVALS. The length of each month was determined FROM THE OBSERVATION OF WITNESSES, who reported having seen the new crescent moon and who were carefully questioned by the authorities

..."

"GRADUALLY OBSERVATION GAVE PLACE TO CALCULATION, with the right to adjust the calendar reserved to the patriarchate."

"However, a great calendric controversy arose in A.D. 921. Ben Meir, claiming the old Palestinian prerogative as a descendant of the patriarchs (whose office had been abolished by the Romans in the 5th century A.D.), maintained that new year was not to be deferred unless the molad occurred 642/1080 of an hour after noon. The controversy ended, mainly through the championship of Saadia (892-942), with COMPLETE BABYLONIAN VICTORY. Since then the Jewish calendar has remained unchanged. The sole difference between Babylon on the one hand and Palestine (with Italy and France) on the other, AS TO WHETHER THE YEAR SHOULD BEGIN WITH TISHRI OR NISAN, was settled about 1250 IN FAVOUR OF BABYLON; i.e. commencement with Tishri."

"This easily disproved THE THEORY of their (i.e. of the Karaites) great Rabbanite opponent Saadia that CALCULATION PRECEDED OBSERVATION, A THEORY WHICH WAS ALSO REJECTED BY NOTABLE RABBANITES ; e.g. MAIMONIDES (1135-1204)." (all the above quotations are from pages 624-625)

### **IN CONCLUSION: SOME COMMENTS REGARDING THESE QUOTATIONS:**

I have not presented many comments with the above quotations. But these quotations make quite clear the following:

- 1) The Jews understand that the Hebrew word "tekufah" (used in Exodus 34:22) refers to the seasons which start either on an equinox or on a solstice. The Hebrew word "tekufah" does NOT refer to any period of time that precedes the equinox.
- 2) Jewish astronomers understand that the Jewish calendar has an inherent flaw for which at some point some adjustments will have to be made. They understand that their calendar has the tendency to wander through the seasons.
- 3) Jewish astronomers understand that their present calendar does NOT go back to biblical times.
- 4) Jewish scholars understand that in New Testament times the start of each month was determined based on the report of eyewitnesses who had seen the first new crescent. It was at that time NOT based on calculation.
- 5) Jewish astronomers understand that the molad of Tishri sometimes precedes the astronomical new moon, while at other times it follows the astronomical new moon. This is obviously a flaw!
- 6) Jewish astronomers understand that there really are no astronomical justifications for the postponement rules. They understand that the only purpose of these postponements is to avoid specific Holy Days from falling on "inconvenient days" of the week.
- 7) While this is not directly stated in any of the above quotations, it comes across quite clearly, and Jewish religious leaders openly acknowledge that ...

**THE CALENDAR IS NOT IN ANY WAY A PART OF "THE ORACLES" THAT HAVE BEEN PRESERVED BY THE JEWS!**

It is only members of the Church of God who have attempted to ascribe to the Jewish calendar the

status of "a divine oracle". The Jews themselves have NEVER viewed the knowledge about their calendar in that light.

Frank W. Nelte