

When is Shabbos Over?

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Determining when Shabbos concludes has always been a weekly necessity for observant Jews. Thus, one might assume that everyone ends Shabbos at more or less the same time. In actuality, there is a great deal of variation. Some people commence weekday activities on Saturday night 40 minutes after sunset, while others wait longer—some as long as two hours after sunset. How could it be that there is such a range?

Compounding the question is the fact that the Gemara itself seems to rule that Shabbos is over quite early. Shabbos ends at halachic nightfall, which is heralded by the appearance of three medium-sized stars (*tzeis ha-kochavim*). The Gemara states that nightfall occurs when the amount of time has passed after sunset that one could walk three-quarters of a *mil* (*Shabbos* 34b). This is at most 18 minutes.¹

Granted, some interpret the Gemara's conclusion to mean that *tzeis ha-kochavim* actually occurs a bit later than three-quarters of a *mil* after sunset.² But people nowadays wait **much** longer than 18 minutes after sunset to end Shabbos. Why?

The answer is threefold: First of all, the time it takes darkness to fall is variable depending on the season and location. The amount of time the Gemara gives between sunset and nightfall is only an approximation.

Second, it is not entirely clear that what the Gemara calls "sunset" (*shki'as ha-chama* or *mishetishka' ha-chama*) is the same as what we call sunset today—i.e., when the top of the body of the sun dips below the horizon. Talmudic sunset may actually be a bit later, when the sun's bright rays disappear.³ For these two reasons, we must follow the actual appearance of stars to determine *tzeis ha-kochavim*, not a fixed amount of time after what we call sunset.

¹ This figure assumes that a *mil* is 24 minutes. According to the opinion that a *mil* is 18 minutes, three-quarters of a *mil* would be even less: 13.5 minutes.

² In this interpretation, it is only R. Yehuda who holds that nightfall is three-quarters of a *mil* after sunset; according to R. Yose, *tzeis ha-kochavim* occurs slightly later. However, many authorities maintain that nightfall is at an identical time according to both R. Yehuda and R. Yose. See Rabbi Chaim P. Benish, *Ha-Zemanim Ba-Halacha*, chapter 40, paragraphs 8-10.

³ See Rabbi Meir Posen, *Or Meir*, chapter 3; Rabbi Gidon Rothstein in BDD 14 (2004); Rabbi Yosef Qafih's commentary to Rambam *Hilchos Shabbos* chapter 5 note 14; Rabbi M.M. Karp's monograph in the back of *Hilchos Shabbos Be-Shabbos* volume 4.

A third reason that our practice seems more stringent than the Gemara is that we are no longer proficient at identifying which stars are considered “medium-sized.” *Shulchan Aruch*, following earlier authorities, rules that we must actually wait until three **small** stars are visible, at least where a Biblical law is concerned (*O.H.* 235:1). On Motzaei Shabbos, we must be even more stringent and wait until three small stars are visible close together in the sky. This is due to the requirement of *tosefes Shabbos* (adding extra time to Shabbos; see *O.H.* 293:1).

Most of us nowadays are not adept at identifying the required stars at all—either because we do not know how, or because light pollution from electric illumination obscures them. Therefore, we generally determine the time of *tzeis ha-kochavim* by consulting a calendar.

The time given in the calendar is based on an astronomical calculation: One ascertains how far the sun must descend below the horizon to produce a level of darkness sufficient to view the requisite stars. By extrapolating when a similar solar position occurs for the target date and location, one can compute the appropriate time for *tzeis ha-kochavim*.⁴

Most contemporary calendars and *zmanim* apps adopt the calculation of Rabbi Yechiel M. Tukacinsky (1871-1955), which is that “three small stars close together” appear when the sun has descended 8.5 degrees below the horizon.⁵ In New York, the sun attains a depression angle of 8.5 degrees approximately 40 minutes after sunset at the equinox, and as late as 51 minutes in the summer.

Unfortunately, many twentieth-century New York calendars gave an oversimplified time for the close of Shabbos. Since most people were cognizant of the time for Friday candle lighting (18 minutes before sunset), for convenience’s sake these calendars calculated Motzaei Shabbos as one hour thereafter (42 minutes after sunset). Now that the accurate calculation of 8.5 degrees is readily accessible, there is no more excuse for relying on fuzzy math. If one insists on using a fixed number of minutes after sunset rather than astronomical calculation, 50 minutes would be more appropriate.⁶

⁴ See a concise explanation of this at <https://www.myzmanim.com/read/sources.aspx>.

⁵ See *Ha-Zemanim Ba-Halacha* chapters 51-52 for other calculations. Although some of these are actually earlier than 8.5 degrees, it behooves us err on the side of stringency in this very serious matter. In fact, waiting a few minutes after 8.5 degrees would be appropriate when possible. I heard from Rabbi Emanuel Gettinger that in New York, it is proper to refrain from performing forbidden labor until one hour after sunset.

⁶ Cf. *Iggros Moshe O.H.* 4:62. *Hazon Ish* held a similar opinion.

So why do some people end Shabbos considerably later than when the sun has descended 8.5 degrees? Those who are more stringent claim to base their practice on the opinion of Rabbeinu Tam, who reinterprets the Gemara's discussion of halachic nightfall. While others consider them synonymous, Rabbeinu Tam distinguishes between the two Talmudic terms for sunset: *shki'as ha-chama* refers to the beginning of the sun-setting process (Psachim 94a, see *Tosafos* ad loc.); *mishetishka' ha-chama*, the second stage of sunset, occurs 3.25 *mil* later (Shabbos 34b and *Tosafos* ad loc.). *Shki'as ha-chama*, the first sunset, is generally identified with what we call sunset—the top of the sun disappearing below the horizon.⁷ The second sunset (*mishetishka' ha-chama*) is thus at least 58.5 minutes after what we call sunset.⁸

In Rabbeinu Tam's view, nightfall is three-quarters of a *mil* after the **second** sunset. Depending on how precisely one interprets Rabbeinu Tam's opinion, *tzeis ha-kochavim* is either 72,⁹ 90,¹⁰ or 120 minutes after what we call sunset.¹¹ If one further applies the principle of calculation based on solar depression angle,¹² the amount of time between sunset and nightfall can increase even more.¹³

The most common variant of "Rabbeinu Tam's nightfall" as practiced nowadays is 72 fixed minutes after sunset.¹⁴ Individuals of diverse backgrounds have adopted this stringency, and it is virtually standard in many Hasidic and *yeshivish* communities.¹⁵

Actually, referring to the late version of Motzaei Shabbos as "Rabbeinu Tam" is a misnomer, as it implies that Rabbeinu Tam is a lone opinion on the matter. In fact, most early commentators and *Shulchan Aruch* concur with Rabbeinu Tam (*O.H.* 261:2). The question now becomes reversed: Why is keeping Shabbos until "Rabbeinu Tam's time" not a universal Jewish practice?

⁷ See, e.g., *Mishnah Berurah* 261:20.

⁸ If a *mil* is 18 minutes, 3.25 *mil* equals 58.5 minutes. If a *mil* is longer, the time increases accordingly.

⁹ Since there are 3.25 *mil* from the first sunset to the second, and 0.75 *mil* from the second sunset to nightfall, the total amount of time from the "beginning of sunset" to nightfall is 4 *mil*. 4 *mil* of 18 minutes equals 72 minutes.

¹⁰ 4 *mil* according to the opinion that the *mil* is 22.5 minutes.

¹¹ 120 minutes assumes that there are actually 5 *mil* between beginning of sunset and nightfall. A corollary to this opinion is that the *mil* is 24 minutes.

¹² This would assume that nightfall is 72 minutes after sunset in Jerusalem at the equinox, when the sun is 16.1 degrees below the horizon. In many current and former Jewish communities, such as London and Vilna, the sun does not descend to this level at all in the summer (cf. *Bei'ur Ha-Gra* to *O.H.* 261:2). Furthermore, if nightfall according to Rabbeinu Tam is actually 90 or 120 minutes after sunset, this time is past absolute darkness (astronomical twilight) in Jerusalem at the equinox. All stars have already appeared by that time!

¹³ There is also the famous "Brisker" approach which calculates these times by way of *sha'os zmaniyos* (proportional hours). According to the Brisker practice, Rabbeinu Tam's *tzeis ha-kochavim* is earlier in the winter than at the equinox. This is the opposite of astronomical reality, which is that it takes longer to become dark in the winter than at the equinox.

¹⁴ While in New York waiting 72 minutes after sunset to end Shabbos always results in stringency, one must be aware that the same does not pertain to all locales. In northerly places such as England, 8.5 degrees occurs **later** than 72 minutes after sunset in the summer.

¹⁵ See *Yabia Omer O.H.* 2:21 regarding the Sefardic community.

Truth be told, it is far from clear that Rabbeinu Tam and *Shulchan Aruch* really require such a late ending to Shabbos. Figuring out when Shabbos ends according to the aforementioned approach necessarily involves consulting an accurate clock or a precise astronomical calculation, both of which were generally unavailable for the vast majority of Jewish history. Jews determined all halachic times by celestial observation or by reading a sundial. Except in extremely northern locales, the sky is dark and filled with stars well before the time people claim is *tzeis ha-kochavim* according to Rabbeinu Tam.¹⁶

Indeed, many contemporary works argue that Rabbeinu Tam never intended to establish a novel time for *tzeis ha-kochavim*.¹⁷ Rather, he only intended to reanalyze the process of halachic sunset. In other words, Rabbeinu Tam's insight is that the "beginning of sunset" occurs 72 minutes before three stars appear, not that *tzeis ha-kochavim* is 72 minutes after what we call sunset.¹⁸

The actual practice of the Jewish people from time immemorial supports the contention that Rabbeinu Tam never disagreed about the time of *tzeis ha-kochavim*. Rabbi Chaim P. Benish, in his book *Ha-Zemanim Ba-Halacha*, musters clear evidence that until quite recently, all communities ended Shabbos when they actually observed three stars, including those that claimed to follow the opinion of Rabbeinu Tam (see chapters 44-46).

The fact that it is so common nowadays to observe Shabbos until 72 minutes after sunset despite the incongruence with astronomical reality and historical practice can probably be attributed to the breakdown of the living religious tradition during the upheaval of the World Wars.¹⁹

In conclusion, the commonly accepted time for ending Shabbos, Yom Tov, and Yom Kippur is when the sun has descended 8.5 degrees below the horizon. In New York, this is at most 51 minutes after sunset. Many individuals and communities keep Shabbos even longer, which is certainly a commendable custom.²⁰ However, the prevalent practice is eminently halachically sound and reflects the historical practice of the Jewish people.

¹⁶ It is obviously extremely difficult to argue that all the stars that appear before 72 minutes after sunset are "large" stars, and the "medium-sized" stars that indicate *tzeis ha-kochavim* appear only thereafter.

¹⁷ The most expansive presentation of this view is *Yom Va-Layla shel Torah* by Rabbi Y.G. Weiss. The most concise is Rabbi M.M. Karp's monograph, printed in the back of *Hilchos Shabbos Be-Shabbos* volume 4. See also the literature cited in *Ha-Zemanim Ba-Halacha* chapter 42 paragraph 20.

¹⁸ This would explain why the only place *Shulchan Aruch* cites Rabbeinu Tam's view is regarding the earliest time to accept Shabbos (*O.H.* 261:2, following Ramban in *Torat Ha-Adam*). Everywhere that *Shulchan Aruch* mentions *tzeis ha-kochavim*, he simply states that it is when three stars appear (see *O.H.* 235:1 and 293:1, cf. *Y.D.* 262:5). This implies that Rabbeinu Tam's insight is irrelevant for determining the time of nightfall. This is also the implication of the fact that all early sources that cite Rabbeinu Tam's opinion give no indication that it had any impact on the time for ending Shabbos.

¹⁹ Cf. Haim Soloveitchik, "Rupture and Reconstruction: The Transformation of Contemporary Orthodoxy" in *Tradition Vol. 28, No. 4 (Summer 1994)*, available online [here](#).

²⁰ However, it is completely unacceptable even to consider the possibility that *tzeis ha-kochavim* is 72 minutes (or more) after sunset when this would result in a leniency (e.g. for praying *mincha*, *hefsek tahara*, etc.). See Rabbi Gavriel Zinner, *Nit'ei Gavriel Hilchos Shabbos*, vol. 1 p. 929ff.