

Preparing for a More Meaningful Solar Eclipse Experience

For Bais Yisroel Shabbos Observer, Parshas Shemini, Hachodesh, 5784

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This week we read Parshas Hachodesh, where Hashem commanded Moshe about the creation of the calendar, the first Mitzva given to Klal Yisrael as a nation. The first Rashi in Chumash asks why the Torah did not begin with this Mitzva. The Ramban asks, “What?! Bereishis is the foundation of Emunah?” The **Sifsei Chaim** explains (we expounded on this in last year’s BYSO) that Rashi didn’t mean to leave out Bereishis; rather to backtrack and discuss it later. But the Torah should *begin* with what is most important, and that is the new world order that began in the year 2448 when Hashem gave over the calendar to *us* and it’s *our* actions that affect things. This Mitzva is dependent on the moon, which symbolizes Klal Yisrael, because it changes, isn’t constant, and is able to have Chiddush (renewal, like the word Chodesh, because our calendar is based on the lunar month). The sun symbolizes the other nations, who, like the sun, don’t have the concept of change and their actions don’t affect the world. The secular year is solar, based on the sun, and called Shana, which is like the word Shayna, or sleep. It’s constant with no visible changes.

With that introduction and having connected it to this week’s Laining, we present the following discussion in honor of the upcoming full **solar eclipse** taking place this Monday, the last one in the continental U.S. for 20 years. In Minneapolis it will be from approximately 1-3 pm, with only about 75% coverage at its peak about 2:00 pm.

The Gemara (Shabbos 75a) says that someone who knows how to calculate Tekufos (seasons) and Mazalos (constellations) should do so. The Me’iri writes that this includes eclipses, so it would seem there is value to learning about such events, especially at a time when it is taking place.

It’s important to understand the difference between “astronomy,” which is the wisdom of the movement of the heavenly bodies, and “astrology,” the study and interpretation of the influence of those heavenly bodies and their movements. Both are rooted in Torah. The Sanhedrin were expert astronomers and used that knowledge in declaring the new moon each month and setting the calendar. Astrology is the idea that Hashem orchestrates many of the goings-on in the world through the influence of the various types of Mazalos. (There is the Mazal of each day, the Mazal of each hour based on the planets, and of course the Mazalos of the constellations of the Zodiac. The word Mazal is from the word Nozeil which means to flow. The Mazalos are the conduits through which Hashem’s influence flows to the world.) The horoscopes that you may read in the paper are based on this idea, although there isn’t any Torah basis to the secular horoscopes. The topic here is astronomy, not astrology. However, in these lines I will focus be”H on Halacha and Hashkafa.

We find that a Bracha is said for many types of unusual phenomena (Gemara Brachos 9th Perek), yet on an eclipse no Bracha is recited. One reason is based on the Gemara (Sukka 29a) which says that “Likui Hame’oros” (which is understood by most to refer to eclipses) is a bad Siman (sign). A lunar eclipse is a bad sign for Klal Yisrael who are symbolized by the moon. We, who have ups and downs (we do Mitzvos and Aveiros, and our actions affect the world), are like the waxing and waning moon. A solar eclipse is a bad sign for the other nations, who are like the sun whose shine is constant and steady; they too never have or effect any change.

The question is, how can an eclipse be a bad sign? Scientists can predict the exact moment of every eclipse from the beginning to the end of time. There aren’t any surprises and it’s never arbitrary. (Hotels and rental cars in cities that will experience a 100% eclipse, such as Dallas, Indianapolis, Cleveland and Buffalo, have been sold out for over a year! The cost of plane tickets to these locations for this Monday is astronomical.)

R’ Yonasan Eibschutz in **Ya’aros D’vash** (2:10) therefore disagrees and says that Likui HaChama is *not* an eclipse, rather it is sunspots. Although that also has a basic cycle of 11 years, it’s not as exact or predictable

as an eclipse. We can't see it because we can't look at the sun, but scientists can know when it is happening.

One answer from the **Shela** is that it's like the question of Yedi'ah and Bechira, meaning if Hashem knows everything that I will do in the future, how can it be considered that I have free choice? The answer is that although Hashem *knows* what will occur, it's not predestined, and I still am choosing. Here, too, Hashem knew when in the future history of the world people would misbehave and a bad sign would be warranted, and then set up the world to produce those signs at those moments in time.

Another answer from the Shela (and in Tzeida L'Derech on Rashi Parshas Bereishis) is that this means that an eclipse is a dangerous and an inauspicious time, just like the month of Av.

Emes L'Yaakov on Pirkei Avos and Meforshei Ein Yaakov answer that we have a rule in Psak that a Dayan can only rule based on what he sees in front of him now. For example, he must decide if a chicken is kosher or treif based on how it looks when it is shown to him, even if the owner tells him that it looked different to him yesterday. Here, too, an eclipse is only a bad sign if I see it. If Hashem orchestrated that I able to see it, that means Hashem is displaying a bad sign to *me*. If I didn't deserve the bad sign, it could have been cloudy, and I wouldn't have seen it. My *knowledge* alone that it is occurring because I know astronomy is not in of itself a bad sign.

One may wonder, if so, why would I go out to observe an eclipse? Shouldn't I wish to *not* see it? First, if it *is* visible in your location, I'm not sure that your deciding to ignore it would change the aspect of it being a bad Siman. Second, a solar eclipse isn't a bad Siman for us, as noted. Third, the story of the Chofetz Chaim (as witnessed and told by R' Shmuel Pliskin) is well known, how he said the purpose of a solar eclipse is to disprove those who worship and attribute divine powers to the sun. The sun disappears on occasion to prove to all that it's nothing more than a creation. The Chofetz Chaim then went outside together with his students to watch the eclipse.

This idea that things depend on the way we see or perceive them comes up elsewhere in the discussion of astronomy, in the geocentric (earth is central, and the sun and other planets revolve around it) or heliocentric (sun is central) controversy. Until some 400 years ago, Ptolemy's geocentric theory was accepted by all, and it seems that the Pesukim, Chazal and Rishonim also subscribe to it. Then Copernicus came along and introduced the heliocentric model, and it was pretty much accepted and it's what is taught today. Now, we need to understand that much of science is based on Kefira (heresy), the fact that scientists don't believe, and don't *want* to believe, in a creator. For example (and there are many), Darwin refused to acknowledge creation; therefore, he came up with the ridiculous theory of evolution. Here, too, Hashem created the world, and created man as the central figure in that world. Therefore, it makes sense that the earth on which man lives in central to the universe, and all else revolves around it. Copernicus, an atheist, refused to acknowledge the importance or centrality of man; therefore, he devised a theory in which earth is just another insignificant piece of the bigger puzzle. (When Albert Einstein introduced his theory of relativity, he concluded that this whole question is moot, because really, it's all relative: If you are on earth, it seems that sun revolves around it, and if you are on the sun, it seems that earth revolves around it. In short, both the Ptolemy and Copernicus systems can be reality, or, actually, it may be that neither is reality.) The Poskim discuss whether it is Kefira to learn/teach the Copernicus model. He upended the whole world, including (as we mentioned) what is apparent from the Pesukim and Chazal, so how can we accept it? **R' Yonasan Eibschutz** in Ya'aros D'vash holds that it's Kefira and prohibited to believe. But many others say otherwise.

However, there is a simpler approach here, from the **Maharal**, that Chazal talk the way a person perceives things. It's possible that Chazal certainly knew that really what is central is the sun, like Copernicus (and therefore it isn't Kefira to learn that way). That their discussions (and the words of the Pesukim) are from the viewpoint of the geocentric model is because they are talking to us who live on earth, and to *us* it *looks*

like the sun is going around the earth. This is similar to what we said earlier, that if I don't see the eclipse and don't perceive it, then it isn't a bad Siman.

Concerning the other answer that it's just an inauspicious time, the **Sifsei Chaim** touches on this in his discussion of Chanuka. The Greeks appreciated all Chochma, including the Torah for the wisdom within it, but they did not accept that it is a way of life. To them, it was a subject like math and science. In the Gemara (Pesachim 94b) the Chachmei Yisrael say that by day the sun comes out under the sky, and by night it goes back up into the sky, while the chachamim of the other nations say that at night it goes down into the ground. And the Gemara concludes that their chachamim are correct. How can it be that our Chachamim were wrong? The Maharal and Ramchal explain that Chazal were *not* discussing the physical aspect of the sun; they certainly understood what was going on with sunrise and sunset. Rather, they were discussing the Ruchniyus (spiritual) aspect of the sun, and talking in "riddles" as they are wont to do in Aggadeta Gemara throughout Shas. The sun as it shines on the world (during the day) gives Shefa (spiritual influence) of Bracha and Chochma to the world. At night, when the sun isn't visible, that Shefa is hidden; that's why Leila (night) is a time of Din (judgment). That's why Chazal say when a person is awake at night, he should do nothing but learn, because the lack of Shefa makes it a scary time that requires protection. That's what Chazal mean that the sun goes back up into the sky at night. It refers to the Shefa of Bracha going back up into the sky.

Perhaps with this we can explain the aforementioned answer that an eclipse is an inauspicious time just like Chodesh Av. Why? Because the sun that provides good influence when it shines, is now covered over during the day, and can't deliver that Shefa. The lack of Ruchniyus for those couple of hours of the eclipse makes it a scary time.

The **Chovos Halevavos** (Sha'ar Cheshbon HaNefesh 3:23) says a person should always contemplate the various aspects of creation to recognize the greatness of Hashem. Certainly, when we witness eclipses and things that are *out* of the ordinary, we see Hashem even more clearly in the Bri'ah. The Nifla'os HaBorei are so evident in a solar eclipse. The sun is about 400 times larger than the moon, but the moon is about 400 times closer to earth. So that, during an eclipse, to our view, the moon fits *exactly* over the sun!

Most of the time, when things aren't different, it's easy to forget Hashem, and we are supposed to learn from extraordinary times, that He's always there. This is the reason we say a monthly Bracha on the moon (Kiddush Levana) but not on the sun. Since we see constant change in the waxing and waning of the moon, the Hand of Hashem is apparent. With the sun it's not that way, but even so we say a Bracha once in 28 years to remind us that its daily cycle is also Yad Hashem. The lesson is that even where it's not clearly visible, we know that it's all Yad Hashem.

Contemplating the greatness of Hashem is very important, because it will bring us to Hakaras HaTov, which literally means recognizing good and leads to appreciating the good. The **Sefer HaChinuch** (Mitzva 430) in discussing the concept of Brachos explains that the point of saying a Bracha is to express our recognition and appreciation for Hashem's blessing, and Hashem, seeing that we have Hakaras HaTov, will then continue to bestow more Bracha. So, contemplating any unusual natural phenomenon, including an eclipse, should bring us to this Hakara of Hashem.

We say numerous Brachos about the various heavenly luminaries. The Bracha said when witnessing certain natural wonders is "Oseh Ma'aseh Bereishis – Who 'makes' the work of creation." We say "makes" in the present tense, not the past tense, just as we say daily "Yotzer Ohr Uvoray Choshech – Who 'forms' light and 'creates' darkness," in the present tense. That's because the rule is that Hashem is "Mechadesh B'chol Yom Tamid Ma'aseh Bereishis," He is recreating the Creation every moment. Every day (really every moment) Hashem is creating the shining sun once again, and it's during an eclipse that we see that, because when Hashem *doesn't* want the sun to shine, it doesn't. This is the daily Bracha of "Yotzer Hame'oros," He creates (present tense) the luminaries.

The **Shiras Dovid** says, let's understand this a step further. During the six days of creation, Hashem created the luminaries, the sun and the moon. Rashi says that Hashem had already created a tremendous light, the Ohr Haganuz, but then decided that the world couldn't handle it, so He hid that light and instead created the sun and moon. The Ramban differs and says that Hashem didn't fully hide that light, rather He hid most of it but left a remnant of it and that became the sun and the moon. So, the sun and the moon weren't new creations. **R' Yerucham Levovitz** says that is the understanding of how we end the Bracha of Hamapil which we say at night before we go to sleep. "Ha'may'ir La'olam Kulo Bichvodo – Hashem enlightens the entire world with His honor." That means that the world today is lit by the Honor of Hashem, and that's a reference to sun and moon which are remnants of the Ohr Haganuz which was the Shechina, the Kavod of Hashem. R' Yeruchem concludes that if someone would think about this, he would be so scared he would want to escape from the world! It would be hard for one to manage if he realized the level of Kedusha contained in every bit of light that we have.

R' Shlomo Wolbe asks that in the Bracha of "Yotzer Ohr Uvoray Choshech," both "Yotzer" and "Borei" are terms that refer to creation, but we know that in Hebrew all sets of synonyms have different connotations, so what is the difference? He answers that Yotzer means "Yeish M'yeish," something created from something else, while Borei means "Yeish M'ayin," something created from nothing. This fits well, because light was created from the original great light that was hidden, but darkness was a brand-new creation.

The **Avudraham** discusses the fact that Torah is May'ir to everyone is because the Ohr Haganuz was hidden in the Torah itself. Therefore, anyone who learns Torah can tap into that great spiritual light. Perhaps that's why the Bracha of Ahava Rabba about learning Torah follows the Bracha of Yotzeir Ohr. The Torah is that Ohr that is referred to in the first Bracha.

Concerning the Bris Bein Habesarim, the **Meshech Chochma** makes note of the fact that in the Torah, the sun is originally referred to as the Ma'or Hagadol, and the first time we find the word Shemesh used isn't until much later by Avraham Avinu. He explains that Avraham was the first one who recognized Hashem through contemplating the amazing Bri'ah, and he realized that the sun is no more than a servant of Hashem (and not a deity as most others thought), thus the term Shemesh which is like Shamash, a servant. Anytime we experience an unnatural phenomenon such as an eclipse it highlights the Avdus of the sun, its subservience to Hashem. When Moshe died, Hashem eulogized him with one word: "Avdi Moshe – My servant, Moshe." Chazal say that P'nei (the face of) Moshe k'P'nei Chamah; they compare Moshe to the sun. Moshe is the quintessential servant of Hashem. And it's the sun that represents this idea of complete Avdus; it rises every day, shines all day, and sets each night, never failing to do so (except during an eclipse!).

The Gemara (Bava Basra) says that Avraham had an Even Tova (precious stone) that had wondrous healing powers. After Avraham died, Hashem hung it on the sun. What does this mean? The precious stone refers to Avraham's Emunah, as he was the first one to recognize Hashem. And it's Emunah that enables one to be healed, because to merit a recovery one needs to recognize that it's Hashem Who heals. After Avraham died, Hashem hung it on the sun, meaning that it was the sun that would continue to teach this lesson of Emunah. The Nifla'os Haborei, the wonders of creation that are apparent in the heavenly bodies bring one to Emunah in Hashem. It is said of the holy **Arizal** that when he wanted to strengthen his Emunah he would contemplate the heavenly bodies.

Finally, **R' Yitzchak Hutner** says that in every language the word for mother has the "m" sound, and the "m" sound refers to Emunah. It's the mother who instills Emunah in a child. He said that the two words for sun, Shemesh and Chama, both have the "m" sound, because the sun instills Emunah in us if we only allow it to.