



## THE WEEKS OF SHOAVIM – HENRY EHREICH

Shovavim Tat is an abbreviation for the first eight Sedras in the book of Shemos. It is an old custom, still marked in a few Shuls throughout the world, for men to fast, utilise these weeks as a period of Teshuva and Tikkun and to recite selected Selichos at Shacharis and to lein Vayechal at Mincha on the Mondays and Thursdays (or for some traditions on Thursdays only) of these eight weeks (later on, these fasts were also instituted in the first six weeks of an ordinary year, but that custom is not as widespread). It had been well established to fast etc. on BeHaB (the Monday, Thursday and next Monday) at the start of Marcheshvan and Iyar to atone for any excesses and improper behaviour that may have been committed during the Pesach and Succos holidays and as a "protection" for the next half year. However in a leap year where the gap from one BeHaB to the next was more than six months, extra fasts were introduced. Exactly why there are eight fasts is not entirely clear. Some relate the fasts to concepts and episodes in the relevant eight Sedras whilst others suggest that they were to request protection, especially for children, during the unusually long winter period. In an ordinary year (as well) it is still considered as an auspicious time to revise on the Halochos of Ta'aras Hamishpocho.

Concerning traditional observances of this period, one of the most popular is the observance of fasting. During these winter months, when the days are short, a fast of such brevity is relatively easy for most and therefore can be observed by many. Yet, the mere abstinence from food and drink is not enough. The fast must be focused and performed as a means of mini-atonement for one's blemishes. This focus is brought about through the special prayers and meditations performed on these days. There are even a number of special Shovavim prayer books available that have a full array of prayers. The traditional Sephardic Shovavim prayer book is entitled Marpeh L'Nefesh (To Heal the Soul). Some also used this period to observe a Ta'anis Dibbur (to refrain from unnesscassary speech) and to recite of the entire book of Tehillim three times (for a total reading of 450 Psalms).

## SUNRISE & SUNSET IN WINTER – HENRY EHREICH

Have you ever wondered why it is in the heart of winter, even though the time for nightfall and Motzoi Shabbos is already getting later, the time for sunrise is still not getting earlier? In fact, nightfall starts to get later on or around 18<sup>th</sup> December, yet sunrise does not start to get earlier until 6<sup>th</sup> January. Further-more, in summer the times of sunrise start to get later on 24<sup>th</sup> June and sunset starts to get earlier around 27<sup>th</sup> June, a much shorter gap than in winter.

The reason for this strange situation is the result of two astronomical facts about our planet: first, that its orbit around the sun is not a perfect circle, and second, that that its axis of rotation isn't perfectly perpendicular in its orbit. Their combined effort is to change the apparent speed with which the sun completes its journey from sunrise to sunset over the course of a year.

During the winter months in northern latitudes, the earth's eccentric orbit brings it ever nearer to the sun, reaching its closest point ("perihelion") around 4 January, at which point it is travelling at its fastest through space. By this time, the tilt of the earth has led to the sun starting its move northward again, which also has an effect on its apparent speed across the sky. Thus, contrary to appearances, the sun does not march across the sky at the same pace throughout the year, but speeds up and slows down according to a messy combination of these two effects.

As a means of reckoning time, the sun is clearly far from perfect, and to overcome its deficiencies Victorian astronomers invented a fictitious version on which they can rely called the Mean Sun, whose speed across the sky really is constant. This artificial sun became the basis of Greenwich Mean Time (GMT) - the time quoted in tabulations of sunrise and sunset times.

Inevitably, this attempt to impose order on nature produces a discrepancy with what the real sun is doing - and this manifests itself as the mismatch between the days on which the latest sunrise and earliest sunset occur.

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