

year follows an embolismic year, that is, if the preceding year was an embolismic year, then, in such a year, not Monday but Tuesday is set to be New Moon Day.

6. If the conjunction of an ordinary year that, as we have just stated (Sec. 4), requires postponement of the New Moon Day until Thursday occurs only one part *less* than the time mentioned—so that it occurs on 3d 9h 203p or earlier—then New Moon Day is declared to be on Tuesday. Similarly, if the conjunction of a year following an embolismic year occurs only one part earlier than stated above (Sec. 5)—so that it occurs on 2d 15h 588p or sooner—then New Moon Day is declared to be on Monday.

In sum, the procedure in setting the New Moon Day of Tishri according to this method of calculation is as follows:

First you ascertain by computation the day on which the *molaḍ* would occur, also the hour of the day or the night and the parts of the hour.

As a rule, *the day of the molaḍ is the day of declaration* (that is, the day of conjunction is normally declared to be New Moon Day), except in the following four cases (of Tishri):

- (i) if the conjunction falls on a Sunday, Wednesday, or Friday
- (ii) if it occurs at noontime or later
- (iii) if it occurs at 204 parts of the 10th hour, or later, on the night of Tuesday, and the year is an ordinary year
- (iv) if it occurs at 589 parts of the 4th hour of the day on Monday, and the year is an ordinary year following an embolismic year.

If the conjunction falls at any of these four periods, New Moon Day (of Tishri) is declared to be not on the day of the *molaḍ* but on the following day or on the day after the following day, as we have explained.

7. Why does this method of calendaric calculation eliminate 1, 4, 6 from being declared as New Moon Days (of Tishri)? Because this method reckons with the conjunction of the moon and the sun based not upon their true position but only upon their mean motion, as we have pointed out above (vi, 1). Therefore

(as regards the molad of Tishri) days of (normal) declaration are made to alternate with days of postponement, in order to hit upon the day of true conjunction. Thus: if the conjunction falls on a Tuesday, Tuesday is "declared" (as New Moon Day), and if on a Wednesday, "postponement" is made; if on a Thursday, Thursday is declared, and if on a Friday, postponement is made; if on a Saturday, Saturday is declared, and if on a Sunday, postponement is made; if on a Monday, Monday is declared.

8. At the root of all those four postponements (Sec. 6) lies the reason just stated, namely, that our computations are based upon the mean motion. And the following is proof of this statement: When the conjunction occurs during the night of Tuesday—yet New Moon Day is postponed until Thursday—it frequently happens that the new crescent will not be visible either on the night of Thursday or even on the night of Friday. Hence we must realize that the sun and the moon did not enter true conjunction except on Thursday (or on Friday).

CHAPTER VIII

1. As we have already pointed out (vi, 3), the lunar month comprises $29\frac{1}{2}$ days and 793 parts. However, we cannot think that the month should begin in the middle of the day, so that one part of the day would belong to the past month while the other part would belong to the next month; for it is said: *A month of days* (Num. 11:20), and by tradition the Sages have interpreted this verse to imply that the month is to be counted by days, not by hours.

2. Accordingly, the lunar months have been adjusted to represent an alternate succession of one defective and one full month. The defective month consists of 29 days only, although the lunar month is several hours longer; and the full month consists of 30 days, although the lunar month is some hours shorter. The reason