What’s in the sky tonight?

When does the Sun set, and when does twilight end? Which planets are visible? What time does the Moon rise?

Welcome to the Skygazer’s Almanac, a handy chart that answers these and many other questions for every night of the year. It is plotted for skywatchers near latitude 40° north — in the United States, Mediterranean countries, Japan, and much of China.

For any date, the chart tells the times when astronomical events occur during the night. Dates on the chart run vertically from top to bottom. The time of night runs horizontally, from sunset at left to sunrise at right. Find the date you want on the left side of the chart, and read across toward the right to find the times of events. Times are labeled along the chart’s top and bottom.

In exploring the chart you’ll find its sidereal-to-near patterns offer many insights into the rhythms of the heavens.

The Events of a Single Night

To learn how to use the chart, consider some of the events of one night. We’ll pick January 8, 2017.

First find “January” and “8” at the left edge. This is one of Skygazer’s 365 boxes, each of which string of fine dots crosses the chart horizontally. Each horizontal dotted line crosses the chart edge. This is one of the dates for which the chart’s top and bottom want on the left side of the chart, and the night. Dates on the chart run vertically. For any date, the chart tells the times

at any other time and date 

showing curves. Asterisks mark their dates of greatest elongation from the Sun are indicated just off the chart’s upper left and at the time when the shower’s radiant is highest in the night sky. This is often just as morning twilight begins.

A sweep of the eye shows that the line moving to the right, we see that (close pairings) of two objects on the meridian) at midnight. On evenings in January, add 754 to the date.

A planet, the date when

effect, add one hour to any time obtained from the chart.

skyandtelescope.com.

Skygazer’s Almanac

Skygazer's Almanac for Latitudes Near 40° North

What’s in the sky tonight?

The Events of a Single Night

To learn how to use the chart, consider some of the events of one night. We’ll pick January 8, 2017.

First find “January” and “8” at the left edge. This is one of Skygazer’s 365 boxes, each of which string of fine dots crosses the chart horizontally. Each horizontal dotted line represents the night from a Sunday even-

nighting Moon rises). Or follow the nearly right (waxing Moon sets) or left (wan-

dition is zero. Otherwise, to get standard 

time add 6 minutes to times obtained from the chart for each degree of longitude 

that you are west of your time-zone meridian. These subtract 4 minutes for each degree you are east of it.

For instance, Washington, DC (longi-

tude 77°), is 2º west of the Eastern Time meridian. Thus, when Washington, add 8 min-

utes to any time obtained from the chart. The result is Eastern Standard Time. Find your time-zone adjustment and memorize it. The table below shows the corrections from local to standard time, in minutes, for some major cities.

RISING AND SETTING. Times of rising and setting need correction if your lati-

dute differs from 40° north. This effect depends strongly on a star or planet’s right ascension and the Sun and planets can be found in each issue of Sky & Telescope.)

If your site is north of latitude 40°, then an object with a north declina-

ation stays above the horizon 

for the entire night and above for the rest of the night. At a site south of 40°, the effect is just the reverse. Keeping these rules in mind, you can gauge the approximate number of minutes by which to correct a rising or setting time from the table above.

Finally, the Moon’s rapid orbital motions alter lunar rising and setting times slightly if your longitude differs from 90° west. The Moon rises and sets about 50 minutes earlier on the chart shows for each time zone east Central Time, and two minutes later for each time zone west of Central Time. Euro-

pean observers can simply shift each 

date to the one for the next night, and at a site for the previous night.

Skygazer’s Almanac 2017 is a supplement to Sky & Telescope. © 2017 FW Media, Inc. All rights reserved.

For reprints (SGA17R, $4.95 each postcard) or to order a similar chart for latitude 50° north or south, contact Sky & Telescope, 90 Sherman St., Cambridge, MA 02140, USA; phone 800-253-2425, for 671-253-2425, fax 671-253-2425, e-mail to skyprintservice@skyandtelescope.com, or you can work with our content department at skyandtelescope.com.