

SKY CALENDAR OCTOBER 2018

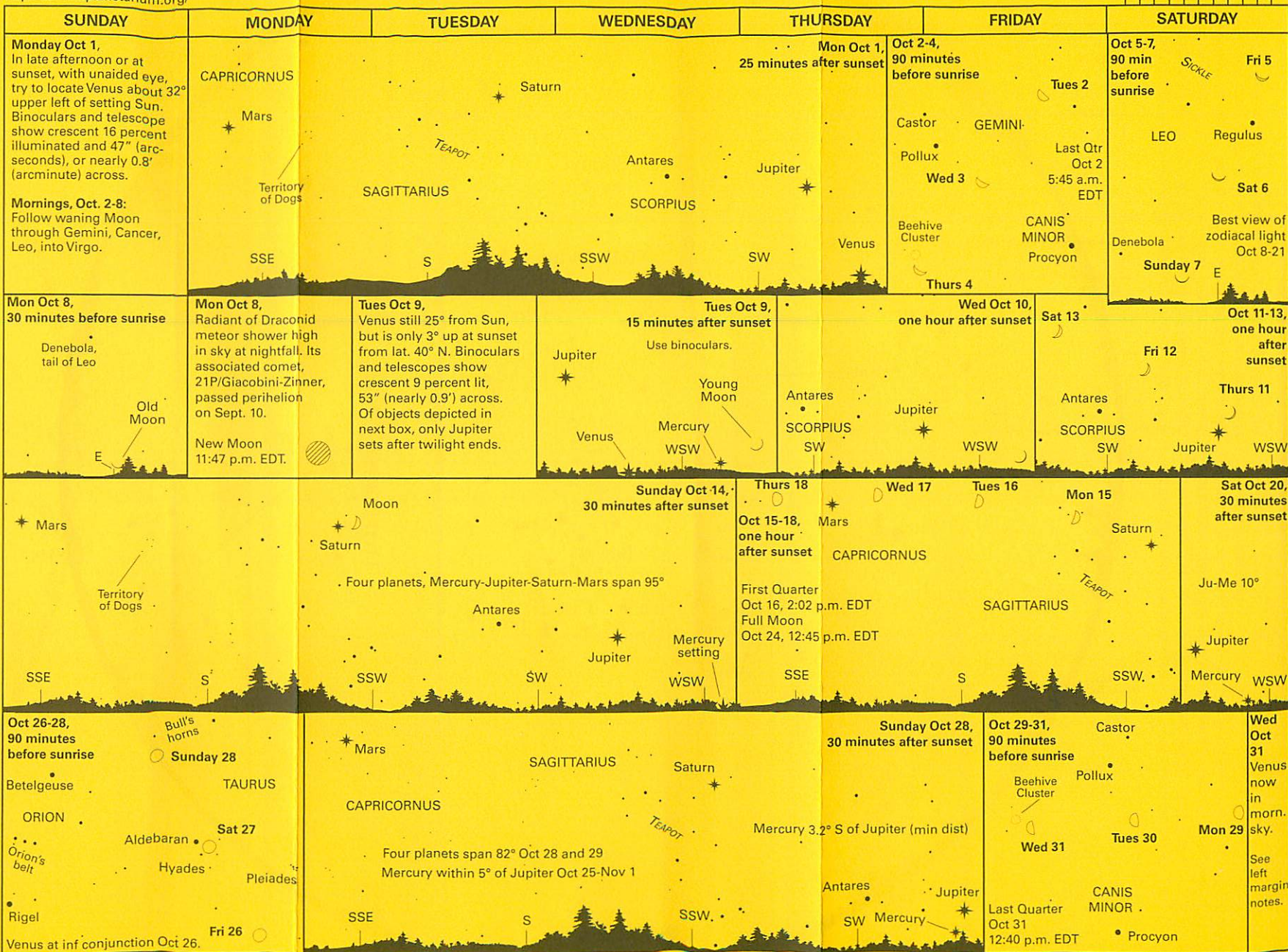
An aid to enjoying the changing sky

Use this scale to measure angular distances between objects on diagrams below.



In October 2018, we're winding down from a run of four joyous months of evening sidewalk astronomy. In earliest October, set up your 'scope very soon after sunset and still capture four worthy planetary targets. Be on time, and select your site carefully, for on Oct. 1, Venus is only 7° up at sunset and sets within ¾ hour (from lat. 40° N). Planet's large thin crescent, 47" (arcseconds) across, 16 percent illuminated, will surprise and delight most viewers even though Galileo reported Venus' phases over four centuries ago! Venus sets 3 minutes nearer to sunset daily, and on Oct. 16 will set with Sun. On Oct. 24 Venus appears 7.2° almost directly below midday Sun, and on Oct. 26 passes inferior conjunction within 6.3° SSW of the Sun. Both days, Venus appears as a very thin crescent 61 arcseconds across and less than one percent illuminated. In attempting the hyper-thin crescent so close to Sun, precautions must be taken to avoid accidentally exposing eyes to the Sun. Try standing under an overhanging roof or bridge to block the Sun from your telescope or binoculars. You'll have an easier time in March 2025, when Venus will pass over 8° north of the Sun; simply set up in shadow north of a building at midday, and look above the building! Rocketing nearly vertically into morning sky, Venus starts out rising 8 or 9 minutes farther ahead of sunrise each day. Can you spot it by Oct. 31, rising 28 min before sunup, 9° to Sun's upper right? Venus rises a full hour before sunup by Nov. 4, two hours by Nov. 13, and three hours by Nov. 25. Outreach: At the start of school days in late Nov./early Dec., have students spot Venus at its brightest, with unaided eye in daytime, and view its beautiful changing crescent with optical aid. Venus gleams at mag. -4.7 or brighter Nov. 13-Dec. 27. Visit <http://abramsplanetarium.org/msta/> for more detail on this month's events and a peek at what's in the sky in the coming school year.

Planetarium business office:
(517) 355-4676
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Robert C. Victor, John S. French
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October Evening Skies

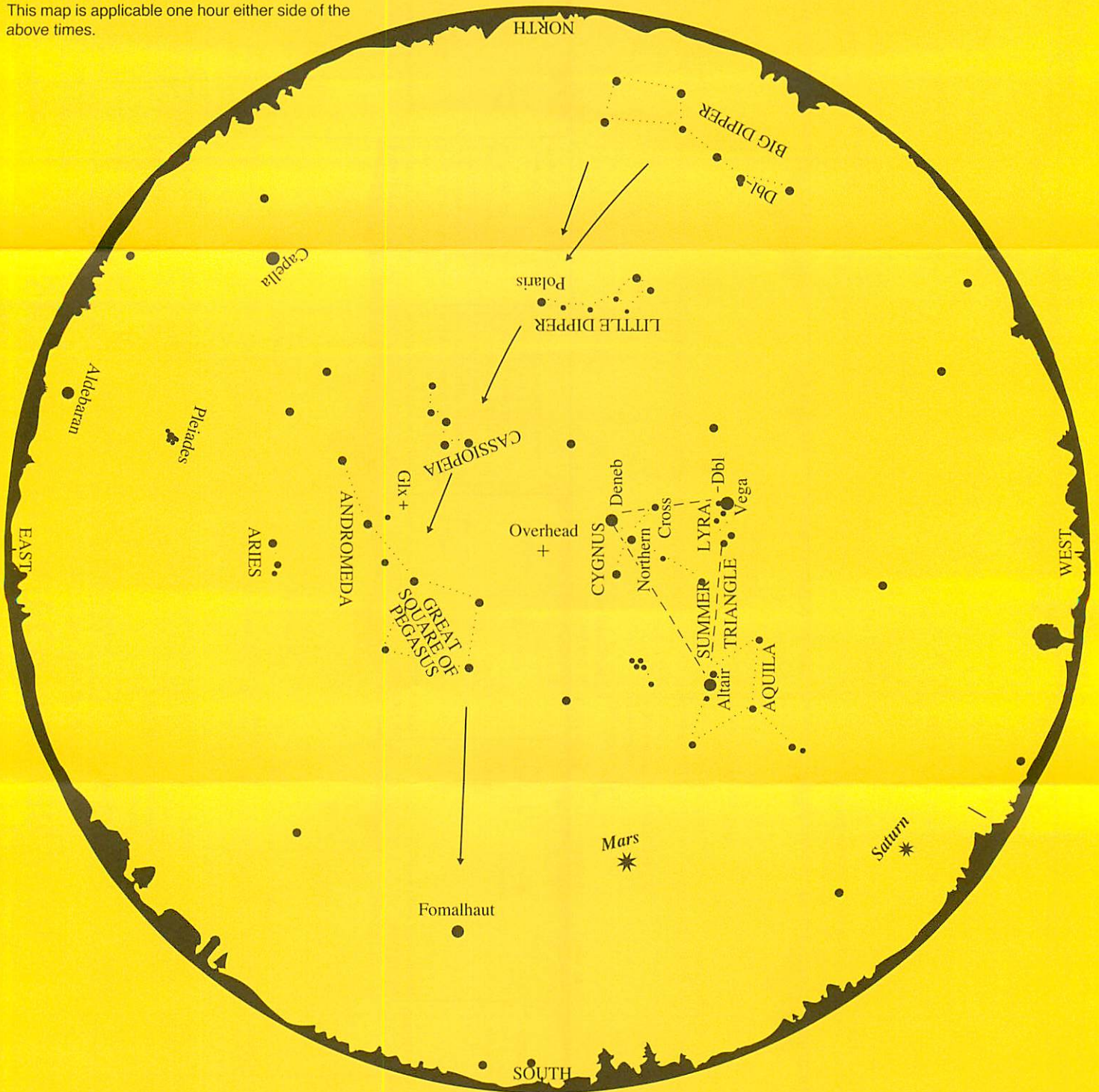
This chart is drawn for latitude 40° north, but should be useful to stargazers throughout the continental United States. It represents the sky at the following local daylight saving times:

Late September	11 p.m.
Early October	10 p.m.
Late October	9 p.m.

This map is applicable one hour either side of the above times.

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The planets Mars and Saturn are plotted at map time, mid-October 2018. Eight objects of first magnitude or brighter are visible. In order of brightness they are: Mars, Vega, Capella, Saturn, Altair, Aldebaran, Fomalhaut, and Deneb. In addition to stars, other objects that should be visible to the unaided eye are labeled on the map. The double star (DbI) at the bend of the handle of the Big Dipper is easily detected. Much more difficult is the

double star near Vega in Lyra. Low in the east-northeast, the Pleiades is a very attractive open or galactic star cluster. The position of an external star system, called the Andromeda Galaxy after the constellation in which it appears, is also indicated (Glx). Try to observe these objects with unaided eye and binoculars.

—D. David Batch