

Planet at dusk: Jupiter, near mag. -2.6, ascends slowly from SE to SSE in October. On the 12th, Jupiter ends retrograde 0.7° W of 4.3-mag. Iota Capricorni and nearly 7° W of 2.8-mag. Delta, tail of Sea-goat, and so moves little this month against the stars. Faint **Neptune** (mag. 8) reaches max. dist. of 6.7° from Jupiter in first half of Oct., and is still 6.0° from Jupiter at month's end. (Jupiter will pass just 0.5° S of Neptune in finale of their triple conjunction in December.) To find Neptune in October, note the nearly straight line of three 5th to 6th mag. stars 0.9° long, visible in binoculars 1.6° to 2.5° NW of Delta Cap and nearly aligning with it. The 5.2-mag. star 42 Cap is the N'most and brightest of the three stars. During October, faint Neptune is 2.2° NNW of Delta Cap and nearly due E of 42 Cap, within 1.0° on the 1st to within 0.7° on the 31st. **Mutual occultations of Jupiter's moons** (Using telescope, watch for several minutes before and after times given here): **Sat. Oct. 24** at 9:22 p.m. EDT, Io occults Europa, best in E and central U.S. to Rockies; **Thurs. Oct. 29** at 10:07 p.m. EDT, Ganymede occults Io, good for most of contiguous 48 U.S.; and **Fri Oct. 30** at 8:59 p.m. PDT, Ganymede occults Europa, best in W & south central U.S.

Planets at dawn: Mars rises in ENE ~ 6 hrs. after sunset and by dawn climbs very high in SE to S. Mars at mag. +0.7 outshines Pollux by half a magnitude as it passes 6° S of the star on Oct. 4. Crossing from Gemini into Cancer, Mars brightens to +0.4 and approaches the Beehive. See diagrams Oct. 4, 11-12, and text for Oct. 31. **Venus** rises 2.1 to 1.5 hrs. before sunup in Oct. At dawn the planet of mag. -3.9 is easy to see, low in E to ESE. **Mercury** on Oct. 1 is 9° LL of Venus, closes the gap to stay 6° LL during Oct. 5-12, then pulls away to 11° LL by Oct. 23. Mercury brightens a full magnitude from +0.3 to -0.7 during first week, then brightens slowly to -1.1 by Oct. 23, but then rises in midtwilight. **Saturn** of mag. +1.1 is the faintest and, for the first week, the lowest of the four morning planets. On Oct. 1 it rises an hour before sunup, 5° LL of Mercury and 13° LL of Venus. **Striking planet gathering:** Higher daily, Saturn appears 0.4° N of Mercury on Oct. 8 and 0.5° N of Venus on Oct. 13. The threesome, plotted on this calendar for Oct. 1-20 and 22, spans 5.8° (its minimum size) on Oct. 8, and no more than 7° during Oct. 7-13. Thereafter Saturn is highest of the three, rising 3.2 hrs. before sunup on Oct. 31. Now until 2025, we'll see the N face of the rings, which are tipped 1.5° to 3.1° from edge-on during October.

Have you spotted Mira (Omicron Ceti) yet? It's plotted on our December sky map and is expected to reach peak brilliance in November. Compare Omi Ceti to Alpha (mag. 2.5), Gamma (3.6), and Delta Ceti (4.1), and check your results against those posted on <http://aavso.org>.

Planetarium business office:
(517) 355-4676

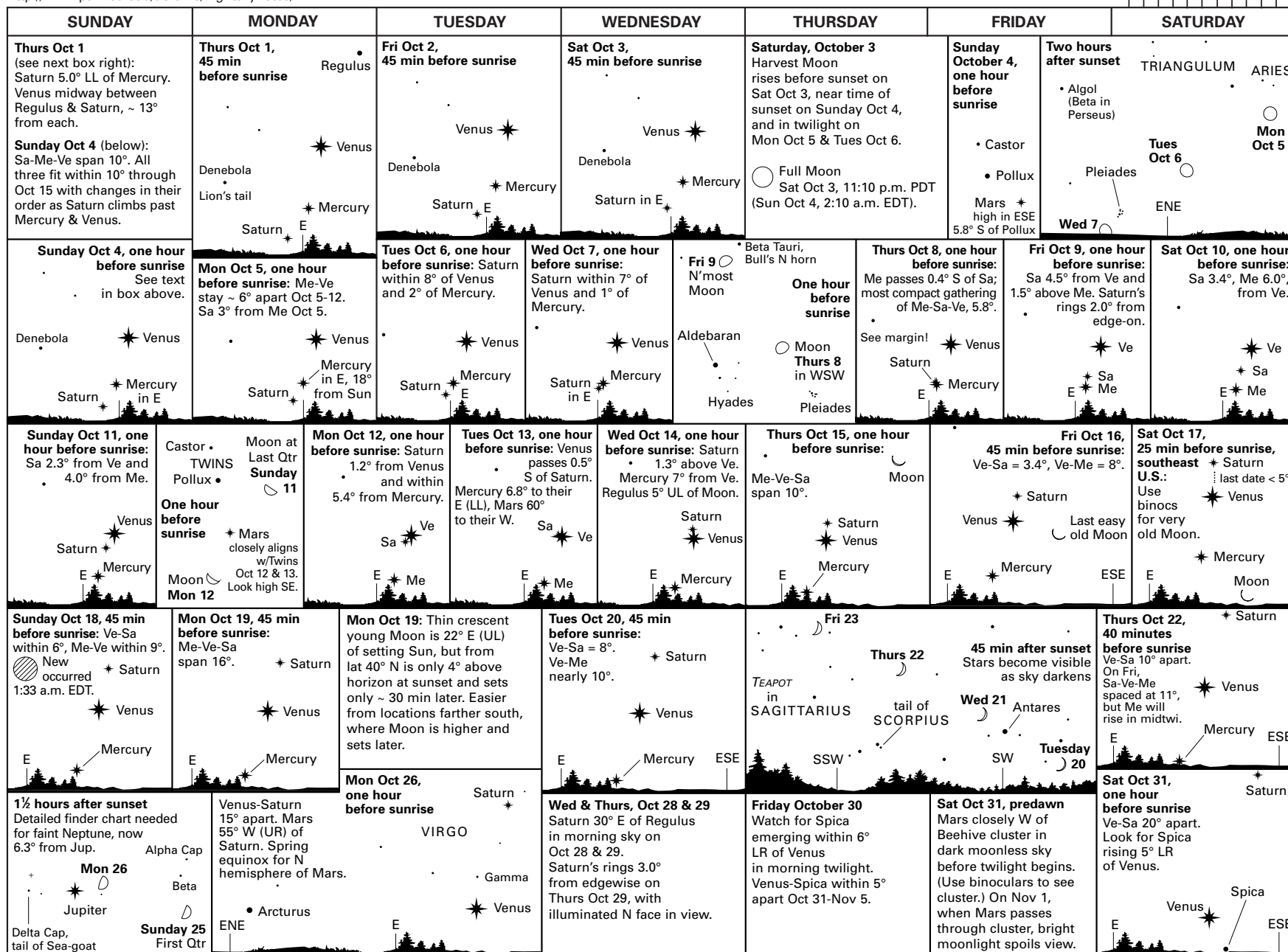
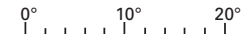
Night Sky Notes on World Wide Web:
<http://www.pa.msu.edu/abrams/nightskynotes/>

©ABRAMS PLANETARIUM

SKY CALENDAR OCTOBER 2009

An aid to enjoying the changing sky

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



Robert C. Victor, Patti Toivonen
ISSN 0733-6314

Subscription: \$11.00 per year, starting anytime, from *Sky Calendar*, Abrams Planetarium, Michigan State University, East Lansing, MI 48824