

# ©ABRAMS PLANETARIUM SKY CALENDAR APRIL 2016

An aid to enjoying the changing sky

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

Planetarium business office:  
(517) 355-4676  
<http://twitter.com/AbramsSkyNotes>  
<http://abramsplanetarium.org/>

**Evening Planets:** Mercury climbs quickly into the western sky after its superior conjunction last month. This is the best evening apparition of Mercury for the year. Mercury is at its greatest elongation on April 18 when it is 20° east of the Sun. The elusive planet fades in brightness quickly in the last week of April as its phase shrinks. It will be at inferior conjunction on May 9, 2016. Jupiter is easily visible in the evening. The distance between Jupiter and the 1.4 magnitude star Regulus in Leo goes from 15° to 13° as Jupiter moves retrograde.

**Morning Planets:** Saturn and Mars continue to move closer to each other until April 20 when the minimum distance between them is reached. Mars begins moving retrograde April 17 and will continue it back through March until June 30. Mars will be at opposition May 22, 2016. Mid-April Mars is 63,236,776 miles away from Earth. Now is the time to start exploring the Mars through the telescope. The minimum distance between Mars and the star Antares occurs on April 26 when the two are 4.9° apart. Saturn is also moving retrograde but at a much slower speed than Mars. The pair moves apart from each other until they are 19° apart on June 24 and then start to converge and pass each other on August 25.

The New Moon on April 7 occurs the same day as the Moon's perigee. Expect large tides. The Full Moon April 22 occurs one day away from apogee, making this the smallest appearing Full Moon of the year. The largest appearing Full Moon this year will be in November. Try and notice a difference in size between this month's Full Moon and the so-called "supermoon" of November.

SUNDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>April 2-5, 40 minutes before sunrise</p> <p>Old Moon</p> <p>Sat 2</p> <p>Sunday 3</p> <p>Mon 4</p> <p>Tues 5 ESE</p> <p>Sunday Apr 10, one hour after sunrise</p> <p>Saturn 7.7°</p> <p>Mars 5.4°</p> <p>Antares</p> <p>SCORPIUS</p> <p>S</p>	<p>Tues Apr 5, one hour after sunset</p> <p>LEO</p> <p>Looking Southeast</p> <p>Denebola</p> <p>Wed Apr 13, one hour after sunset</p> <p>First Quarter Moon 11:59 p.m. EDT</p> <p>Fri Apr 22, The Lyrid meteor shower peaks overnight Thursday into Friday morning. This year, the light of the Full Moon interferes with the meteor shower.</p> <p>Taurus 10</p> <p>Sunday 10</p> <p>Aldebaran</p> <p>Daytime occultation of Aldebaran</p> <p>Mon Apr 11</p> <p>Betelgeuse</p> <p>ORION</p> <p>Orion's belt</p> <p>Rigel</p> <p>SSW</p>	<p>Wed Apr 6, 30 min after sunset</p> <p>Mercury</p> <p>ARIES</p> <p>W</p> <p>Wed Apr 13, one hour after sunset</p> <p>Castor</p> <p>GEMINI</p> <p>First Qtr Moon</p> <p>Procyon</p> <p>Fri Apr 22, The Lyrid meteor shower peaks overnight Thursday into Friday morning. This year, the light of the Full Moon interferes with the meteor shower.</p> <p>Weds Apr 27, one hour after sunset</p> <p>Betelgeuse</p> <p>ORION</p> <p>W</p>	<p>Thurs Apr 7, New Moon 7:24 a.m. EDT</p> <p>Closest New Moon of the year, 221,972 miles.</p> <p>Thurs Apr 7, one hour after sunset</p> <p>LEO</p> <p>Jupiter</p> <p>Denebola</p> <p>April 14-15, one hour after sunset</p> <p>Beehive Cluster</p> <p>Fri 15</p> <p>Thurs 14</p> <p>HYDRA</p> <p>Looking South</p> <p>April 20-22, one hour after sunset</p> <p>Aldebaran</p> <p>TAURUS</p> <p>Pleiades</p> <p>Mercury</p> <p>W</p>	<p>Fri Apr 1, 30 min after sunset</p> <p>Mercury emerges into the evening twilight. On what date can you first spot the elusive planet?</p> <p>W</p> <p>Fri Apr 8, 40 min after sunset</p> <p>Young Moon</p> <p>Hamal</p> <p>ARIES</p> <p>Mercury</p> <p>W</p> <p>Wed 20</p> <p>Spica</p> <p>Thurs 21</p> <p>SW</p>	<p>Saturn 8.8°</p> <p>Mars</p> <p>Antares</p> <p>SCORPIUS</p> <p>S</p> <p>Sat Apr 2, one hour before sunrise</p> <p>Moon</p> <p>Sat Apr 9, 40 min after sunset</p> <p>Hamal</p> <p>Mercury</p> <p>W</p> <p>Fri Apr 22, Most distant Full Moon of the year, 1:24 a.m. EDT 252,431 miles.</p> <p>April 21-23, one hour before sunrise</p> <p>Spica</p> <p>W</p> <p>W</p>
<p>April 16-17, one hour after sunset</p> <p>Denebola</p> <p>Jupiter</p> <p>Sat 16</p> <p>Sunday 17</p> <p>Mercury fades quickly in the last week of April. On what date can you last spot the elusive planet?</p> <p>Sunday Apr 24, one hour after sunset</p> <p>Aldebaran</p> <p>TAURUS</p> <p>Pleiades</p> <p>Mercury</p> <p>W</p>	<p>Mon Apr 18, one hour after sunset before sunrise</p> <p>Aldebaran</p> <p>TAURUS</p> <p>Pleiades</p> <p>Mercury at greatest elongation east (20°)</p> <p>W</p> <p>Mon Apr 25, one hour before sunrise</p> <p>Saturn</p> <p>Mars</p> <p>Antares</p> <p>SCORPIUS</p> <p>SSW</p>	<p>Wed Apr 27, one hour after sunset</p> <p>Aldebaran</p> <p>TAURUS</p> <p>Pleiades</p> <p>Mercury</p> <p>W</p> <p>Tues Apr 26, one hour after sunset</p> <p>Denebola</p> <p>Looking SSE</p> <p>Regulus</p> <p>LEO</p> <p>Jupiter</p> <p>13°</p>	<p>Thurs Apr 21, one hour after sunset</p> <p>Aldebaran</p> <p>TAURUS</p> <p>Pleiades</p> <p>Mercury</p> <p>W</p> <p>Thurs Apr 27, one hour after sunset</p> <p>Betelgeuse</p> <p>ORION</p> <p>W</p>	<p>Wed Apr 30, one hour before sunrise</p> <p>Capricornus</p> <p>Sagittarius</p> <p>W</p> <p>Fri Apr 29, Last Quarter Moon 11:29 p.m. EDT</p> <p>SSW</p>	<p>Thurs 28</p> <p>W</p> <p>Wed 27</p> <p>W</p>

John S. French  
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# April Evening Skies

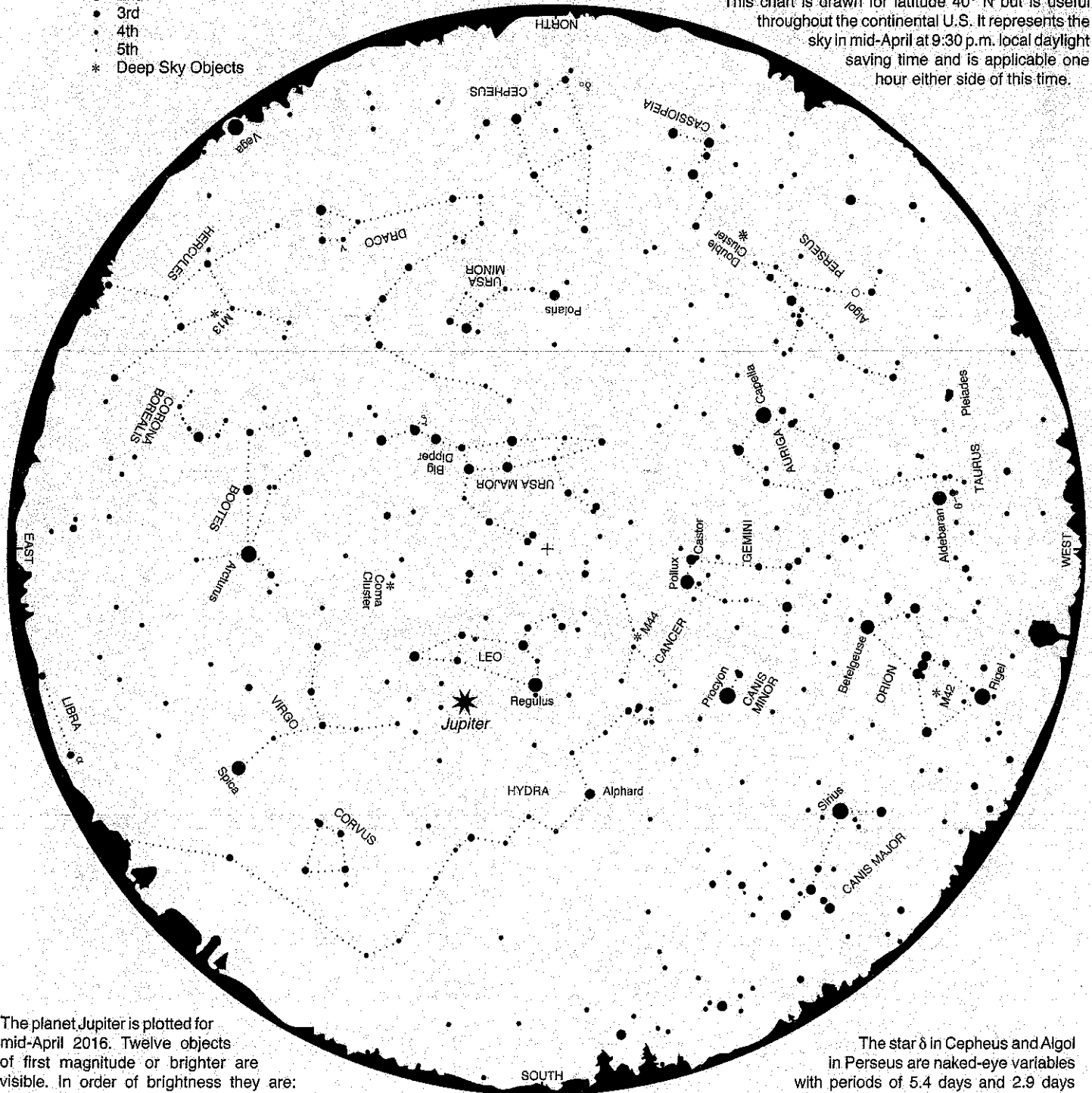
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This chart is drawn for latitude 40° N but is useful throughout the continental U.S. It represents the sky in mid-April at 9:30 p.m. local daylight saving time and is applicable one hour either side of this time.

## LEGEND Star Magnitudes

- Zero or brighter
- 1st
- 2nd
- 3rd
- 4th
- 5th
- \* Deep Sky Objects



The planet Jupiter is plotted for mid-April 2016. Twelve objects of first magnitude or brighter are visible. In order of brightness they are: Jupiter, Sirius, Arcturus, Vega, Capella, Rigel, Procyon, Betelgeuse, Aldebaran, Spica, Pollux, and Regulus.

Our usual monthly maps are designed for stargazers just beginning to find their way around the sky. This month's map is useful for serious stargazing from dark locations. It contains many more stars, inclusive to magnitude 4.5, and some fainter stars as needed to complete patterns or assist in locating special objects.

A selection of double stars (labeled with Greek letters) and "deep sky objects" is also plotted. All are visible with modest equipment; most are within the range of the unaided eye or binoculars.

The double stars, in order of decreasing angular separation, are  $\zeta$  in Ursa Major,  $\theta$  in Taurus,  $\alpha$  in Libra (just rising), and  $\nu$  in Draco.

The star  $\delta$  in Cepheus and Algol in Perseus are naked-eye variables with periods of 5.4 days and 2.9 days respectively.

Three open or galactic clusters are noted: the Coma Cluster between Leo and Bootes; the Beehive or Praesepe (M44) in Cancer; the Double Cluster between Perseus and Cassiopeia.

The Hercules Cluster (M13) is a fine example of a globular cluster, and M42, the Orion Nebula, is a gas cloud out of which stars are forming.