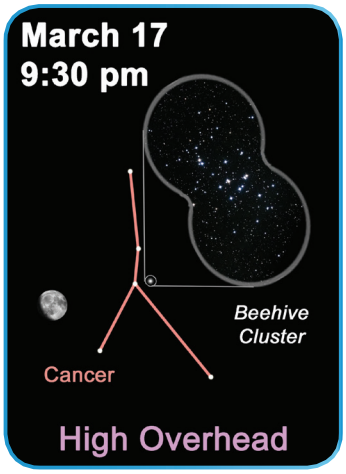
astronomical calendar

BUHL PLANETARIUM & OBSERVATORY

Spring
2019

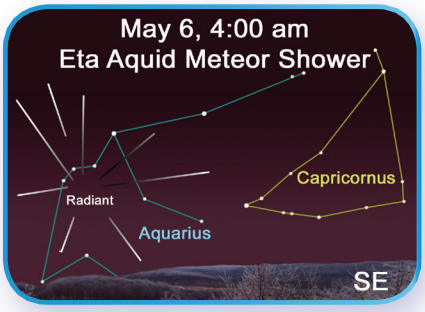


MARCH 2019

6	Wed	●	New Moon
14	Thurs	◐	First quarter Moon – 6:27 am
17	Sun		Close approach of waxing gibbous Moon with M44 Beehive Star Cluster (Look south after sunset)
20	Wed	○	Vernal Equinox – 4:58 pm; Full Moon (Worm Moon) and Supermoon – 9:42 pm
26	Tues		Close approach of Jupiter and waning gibbous Moon (Look south after 2:30 am)
28	Thurs	◑	Last quarter Moon – 12:09 am
29	Fri		Close approach of Saturn and waning crescent Moon (Look southeast before dawn

APRIL 2019

5	Fri	●	New Moon – 4:50 am
9	Tues		Close approach of Mars and waxing crescent Moon (Look southwest after sunset)
11	Thurs		Mercury at greatest elongation (Look east just before dawn)
12	Fri	◐	First quarter Moon – 3:05 pm
19	Fri	○	Full Moon (Pink Moon) – 7:12 am
22	Mon		Lyrid meteor shower (Mid-evening until dawn on April 23)
23	Tues		Close approach of Jupiter and waning gibbous Moon (Look southeast after 1:30 am)
25	Thurs		Close approach of Saturn and waning gibbous Moon (Look south before dawn)
26	Fri	◑	Last quarter Moon – 6:18 pm



MAY 2019

4	Sat	●	New Moon – 6:45 pm
6	Mon		Eta Aquarid meteor shower (Mid-evening until dawn on May 7)
11	Sat	◐	First Quarter Moon – 9:12 pm
18	Sat	○	Full Moon (Flower Moon) – 5:11 pm
20	Mon		Close approach of Jupiter and waning gibbous Moon (Look south after 11 pm)
22	Wed		Close approach of Saturn and waning gibbous Moon (Look south after 1 am)
26	Sun	◑	Last quarter Moon – 12:33 pm

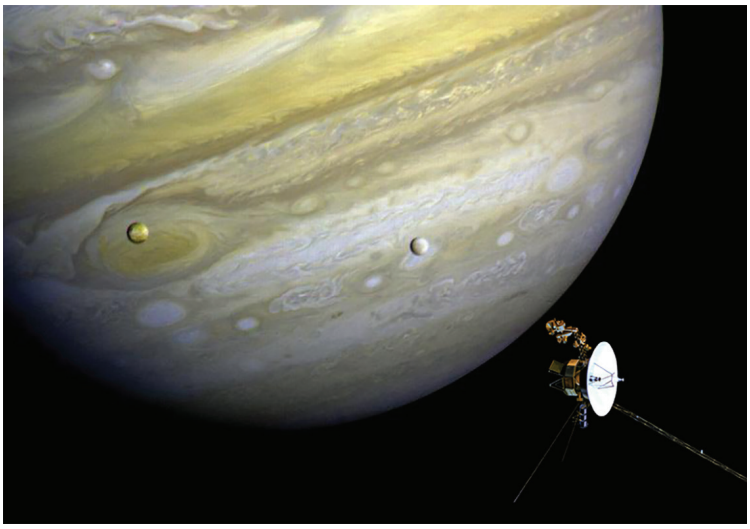
CARNEGIE SCIENCE CENTER

astronomical calendar

BUHL PLANETARIUM & OBSERVATORY

Winter Planet Visibilities

March	**Morning:**	Venus and Jupiter (East)
	Evening:	Mars (West)
April	**Morning:**	Jupiter and Saturn (East)
	Evening:	Mars (Low in the west)
May	**Morning:**	Jupiter (Rising in the east after midnight) and Saturn (East)
	Evening:	Mars (Low in the west)



Astronomy History

March 5 marks the 40th anniversary of the flyby of Jupiter by the storied Voyager 1 probe.

40 years since Voyager met Jupiter

The Voyager 1 probe provided up-close images of the gas giant and its numerous moons in stunning detail. Along with stunning images, the Voyagers–Voyager 2 flew by on July 9, 1979–discovered massive volcanism on Jupiter's nearest moon, Io. Io's extreme geology has since been shown to affect the entire Jovian system, and its influence can even be observed in the aurora around Jupiter's poles.

Celestial events to watch for this spring

A 'Blue' Moon in May

The full Moon on May 18 is the third of four full Moons this spring.

Typically, seasons contain only 3 full Moons. This unusual happenstance is one of two kinds of phenomena frequently referred to as a Blue Moon. The other kind of Blue Moon occurs when there are two full Moons within the same month. Since both kinds of Blue Moon are relatively rare, the phenomena have given rise to the popular expression, "once in a Blue Moon," to make note of unusual or rare events.

Contrary to its name, the Moon does not change colors during a Blue Moon. Adding to the color confusion, the April full Moon is known colloquially as the Pink Moon but does not signal a change in the Moon's color. Regardless of hue, the Moon remains one of the most intriguing objects in the sky as we progress through the year toward the 50th anniversary of the Apollo 11 lunar landing this summer.

Eta Aquarid meteor shower

The Eta Aquarids are a meteor shower known to produce nearly 60 visible meteors per hour at its peak.

The shower is caused by the Earth plowing its way through a debris field left from Halley's comet. This year, the peak of the shower occurs late on May 6 and reaches its maximum early in the morning hours of May 7. The crescent Moon will set early in the evening, leaving ideal conditions for observing meteors streaking through the sky. While meteors will appear to radiate outward from the zodiac constellation of Aquarius, observers should maintain a broad view as they may be visible in any given portion of sky.

Science Fact

Vernal equinox — March 20

The vernal or spring equinox occurs when the Sun is directly over the equator and the axis of the Earth is perpendicular to the celestial ecliptic, also known as the plane of the solar system. The Moon will reach complete fullness four hours after this moment, a coincidence that hasn't occurred in nearly 20 years.