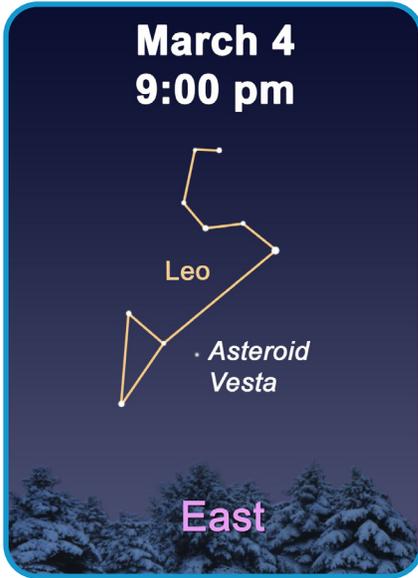


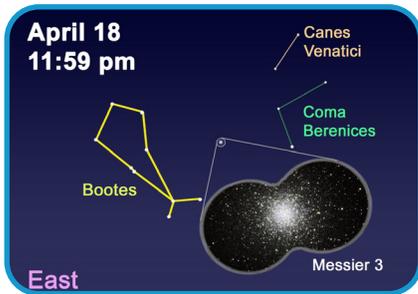
# 2021 Buhl Planetarium & Observatory ASTRONOMICAL CALENDAR

Spring



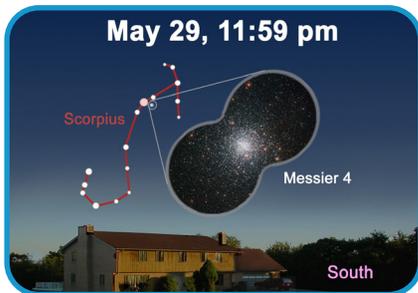
## March 2021

4	Thurs	Asteroid 4 Vesta at opposition (binocular viewing in Leo predawn)
5	☾ Fri	Moon at last quarter phase
6	Sat	Mercury at greatest elongation (look east before sunrise)
9	Tues	Conjunction Moon and Saturn (visible predawn looking southeast)
10	Wed	Conjunction of the Moon and Jupiter (visible predawn looking southeast)
19	Fri	Close approach of Moon and Mars (looking southwest)
20	☉ Sat	Vernal Equinox 5:22 EST
21	☽ Sun	Moon at first quarter phase
28	☾ Sun	Full Moon –(Worm Moon or Egg Moon) Venus at greatest brightness very low in evening sky



## April 2021

4	☾ Sun	Moon at last quarter phase
6	Tues	Conjunction Moon and Saturn (visible in the southeast dawn sky)
7	Wed	Conjunction Moon and Jupiter (visible in the dawn sky)
11	☉ Sun	New Moon
17	Sat	Conjunction of the Moon and Mars (after dusk above the western horizon)
18	Sun	Globular Cluster M3 well placed for binocular observing around midnight
20	☽ Tues	Moon at first quarter phase
22	Thurs	Lyrid meteor shower peak (best displays before dawn – radiant in Hercules)
23	Fri	rr-Puppis meteor shower peak (best displays soon after dusk)
26	☾ Mon	Full Moon at perigee – Supermoon (Pink Moon or Milk Moon)



## May 2021

3	☾ Mon	Conjunction of Moon and Saturn (look southeast before dawn); Moon at last quarter
4	Tues	Conjunction Moon and Jupiter (look southeast before dawn)
6	Thurs	n-Aquariid meteor shower peak (radiant point Aquarius, best before dawn.)
8	Sat	n-Lyrid meteor shower peak before dawn
11	☉ Tues	New Moon
12	Wed	Globular cluster M5 well placed for binocular viewing
15	Sat	Mercury reaches highest point in the evening sky (20 degrees above horizon at sunset)
16	Sun	Conjunction of Moon and Mars (36 degrees above western horizon at sunset)
19	☽ Wed	Moon at First Quarter phase
26	☾ Wed	Full Moon – Supermoon (Flower Moon); Total Lunar Eclipse - totality not visible from Pittsburgh
29	Sat	Globular cluster M4 well placed for binocular viewing in Scorpius

**Winter Planet Visibilities**

*March*

- Evening:** Mars (look southwest)  
Venus (look southwest at dusk)
- Morning:** Mercury (brief appearance at dawn)  
Jupiter (southeast pre-dawn)  
Saturn (southeast pre-dawn)

*April*

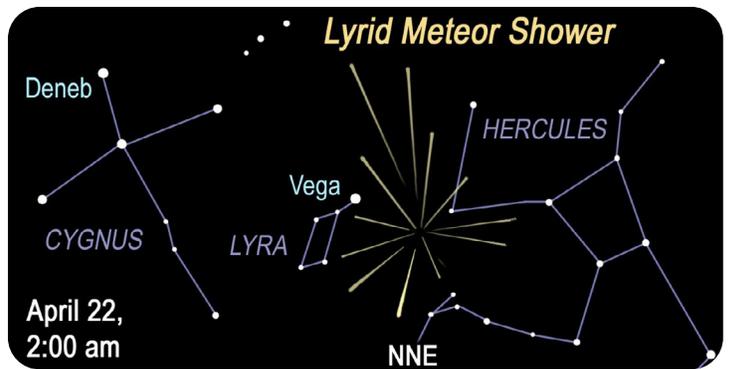
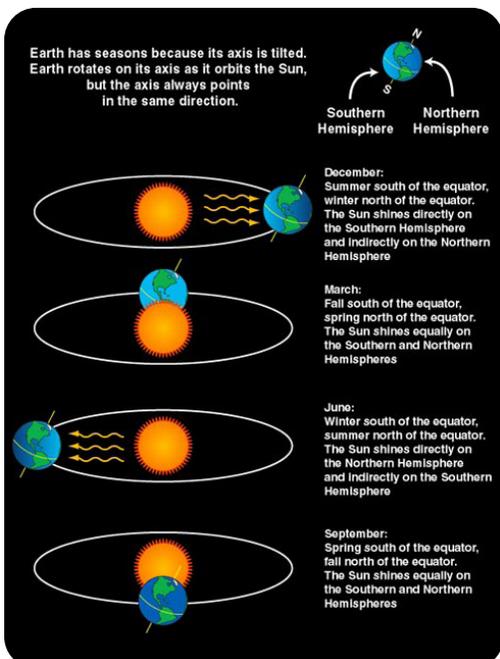
- Evening:** Mars (southwest)
- Morning:** Jupiter (southeast pre-dawn)  
Saturn (southeast pre-dawn)

*May*

- Evening:** Mars (look southwest)  
Mercury (brief view at dawn mid-month)
- Morning:** Jupiter (southeast pre-dawn)  
Saturn (southeast pre-dawn)

*Science Fact*

**The Vernal (Spring) Equinox**, the moment when the Earth is tilted neither towards or away from the sun and day and night will be of almost equal length, happens on Saturday, March 20 at 5:22 pm. But the date of the Equinox varies. Last year the Equinox was on March 19. It will be on the 19<sup>th</sup> of the month again about every four years through the century. But in the previous century, the Equinox dates varied frequently between the 20<sup>th</sup> and the 21<sup>st</sup> of the month and not at all on the 19<sup>th</sup>.



*Celestial events to watch for this Spring – April showers*

Thursday and Friday, April 22 and 23 bring back-to-back meteor shower peaks. Meteor showers occur on days the Earth passes through dense streams of dust debris left over from passing comets or asteroids. The Lyrids and the Puppids generate less meteors than other showers, and this year the Moon will be only a few days away from full, lighting up the night. But, if you happen to be in a very dark sky on those nights, take a look up.

*Astronomy history – Pluto*

In April 1929, Percival Lowell’s determined search for Planet X was posthumously resumed by 23-year-old Clyde Tombaugh at Lowell Observatory in Flagstaff, Arizona. A new, 13-inch telescope had been installed for the search, and photographic plates were examined nightly by Tombaugh. The discovery was announced March 13, 1930, and 11-year old Venetia Burney (Later Venetia Phair), submitted one of a thousand suggestions, the name Pluto. The idea of the Roman god of the underworld well suited the cold distant object, and the first two letters of Pluto were a fitting tribute to Percival Lowell.



*The images shown include Lowell’s Observatory telescope that discovered Pluto, a NASA produced photograph of Pluto, and a portrait of Venetia Burney.*