July 2020

Volume 4

STARRY SCOOP

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WHAT'S UP

As we head into the dog days of summer in the Northern Hemisphere, we have quite the coincidence. While we are all enjoying the summer heat, the earth is at aphelion, its most distant point from the sun in its elliptical orbit. We must remember that our seasons are caused by the tilt of the earth's axis. During summer, we are tilted towards the sun, getting the full blast of the sun's rays. But, when it is winter, we are tilted away from the sun, getting only some of the sun's rays. Therefore, the heat of summer is caused by the earth's tilt, not its distance from the sun.

A few weeks ago, many Americans enjoyed the excitement of watching our astronauts lift off from Cape Canaveral. This was the first manned mission to the ISS launched from American soil in nine years. July 24th marks 70 years since the first launch from that site. Cape Canaveral was specially picked by NASA for two very important reasons: geography and physics. Rockets are launched from the coast so that if things go wrong, they will crash into the ocean, far away from civilization. Also, by launching close to the equator, NASA harnesses the Earth's rotational energy to boost the rocket's trajectory.

This month offers us front row seats to view our two favorite gas giants. We have Jupiter at opposition on the 14th and Saturn on the 20th. This is when these planets are at their brightest, and is also the best time for observing them. An opposition occurs when the earth is directly between the sun and a planet. Therefore, inferior planets (Mercury and Venus) can never have an opposition.

On the evening of the 28th and the morning of the 29th, the Delta Aquarids meteor shower will be at its peak. It is an average meteor shower that produces around 20 meteors an hour. The moon will be setting at about 1am, so if you find your way out to dark skies, look up! The meteors radiate from the constellation Aquarius. If you don't have an opportunity to watch during the peak, don't worry because the meteors will be visible until August 23rd.

JULY'S SKY

4: Earth at aphelion

5: Full Moon

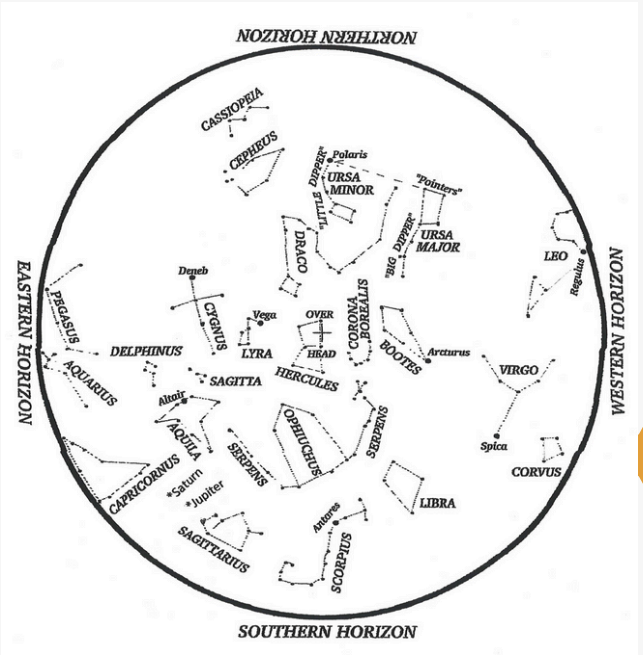
12: Last Quarter

14: Jupiter at Opposition

20: New Moon

20: Saturn at Opposition

28-29: Delta Aquarids Meteor Shower



Credit: Roger B. Culver

Hold star map above your head and align with compass points.

OBSERVATIONS

With the long days and astronomical twilight extending past 10:30, it's been difficult for me to do much observing. But, on those nights that I did get out, I used my new 12-inch, f/5 Dobsonian telescope. This telescope is huge! I need a step stool to look through it and it takes two people to pick it up.

On my first night with the new telescope, I visited some of my favorite globular clusters in the summer sky. Using low power, I started at the star Antares, the scorpion's bright red heart. Then I nudged a field of view to the west to come upon M4, a globular cluster in Scorpius. I looked at it with more power and was amazed at how many stars I could resolve. Next, I moved up to M80, a dense globular cluster located northwest of Antares and did the same.

I then headed upward in the sky to Ophiuchus. (This is the point where I have to use a step stool.) The globular clusters were popping out in the eyepiece as I moved the telescope from one to the next. They included M9, M107, M10, M12, and M14. I was amazed at how bright they were, like patches of glitter strewn about in the serpent holder's domain. After my visit to the Ophiuchus region, I decided to squeeze in one more object. I easily found M13 in Hercules, considered by some to be the finest globular cluster in the sky, and it finished off a great night of observing with my new Dobsonian telescope!

The purpose of the Starry Scoop is to communicate current astronomy and space events. If you want to share your observations or get digital copies of the Starry Scoop, contact starryscoop@gmail.com. Clear skies!

OBJECT OF THE MONTH

The object of the month is the Summer Triangle. The Summer Triangle is a prominent pattern of stars called an asterism. It is made up of three bright stars Altair, Deneb, and Vega. These stars are the brightest in their respective constellations: Aquila, Cygnus, and Lyra. This asterism is big, spanning over 45 degrees, and when you see it rising in the evening sky, you know that summer has arrived.

Within this triangle are many fun things to see. If you are lucky enough to find yourself under dark skies, you will notice that this asterism is located in the Milky Way, a fuzzy band of light containing billions of stars within our galaxy. Because of this positioning, it contains an abundance of objects visible with binoculars or a small telescope, including double stars, globular clusters, planetary nebulae, and even a coathanger!

After you become familiar with the Summer Triangle, it'll become your personal guidepost in the sky for months to come, even after summer ends and the cold weather creeps in.

The Summer Triangle
Photo Credit: NASA