

June 2010 Astronomy
From the Trackman Planetarium at Joliet Junior College

The first day of summer is June 21st. On that day the sun will cross the sky at the highest point for the year. From June 21st until December 21st; the first day of winter, the sun will cross lower each day. That is a result of the tilt of the earth's axis and our orbiting the sun. On June 21st we have the most hours of sunlight for the year - slightly more than fifteen hours. (And, if we hadn't changed the time last March, sunrise would be at 4:18 am!)

The sun is setting so late that star viewing doesn't start until after 9 pm. We have lost the last of the winter constellations to the eastward moving and late setting sun, and now the early summer constellations have taken their place. The Big Dipper is directly overhead after sunset. If you follow the stars that make the curve of the handle down and away from the "bowl", you come to the bright red star, Arcturus, the fourth brightest star in the sky after the sun. Arcturus is in the constellation of Bootes the Herder. If you continue the curve from the Big Dipper's handle, you come to Spica, the 16th brightest star in the sky. It is in the constellation of Virgo. Up to the left of Arcturus is Vega in the constellation of Lyra. Vega is the fifth brightest star and by the year 13000, it will replace Polaris as the North Star. The other two stars in the summer triangle - Altair and Deneb - are low in the eastern sky at mid-month.

Venus, Mars, and Saturn are in the evening sky during June. Venus is in the western sky after sunset and is very bright and easy to find. Venus will continue to move away from the sun and will reach the furthest point from the sun in August. Venus will then start orbiting around to cross in front of the sun. Our orbit is moving us further from Mars each day, but Mars is orbiting behind us and moving toward Saturn. Look for the red planet low in the western sky after sunset. Mars will be easy to find above the moon on the 17th. At mid-month, Mars will be 156 million miles from earth. Mars will continue to orbit eastward until it meets with Saturn at the end of July. Meanwhile, Saturn appears as a yellow "star", high in the western sky after sunset. We are moving away from Saturn in our orbit and at mid-month, Saturn will be 875 million miles from earth. It takes the light from Saturn an hour and twenty minutes to reach us. On August 5th, Venus will meet Saturn and Mars to form a tight triangle in the western sky just before sunset.

If you get up before dawn, you will see Jupiter in the eastern sky. And if you go out at the beginning of June, you will see both Jupiter and Mercury in the early dawn. By June 10th, Mercury will have orbited back into the early sunlight and it will pass behind the sun (superior conjunction) on June 28th. If you look at Jupiter with a strong pair of binoculars, you might see a tiny green object to Jupiter's right which is Uranus. (William Herschel discovered Uranus in 1781 and wanted to name it after the King of England. If he had his way, we would have Planet George. Well, actually Planet Georgium Sidus which means Georgian Planet. Either way, I prefer those names to Uranus.) Pluto, the "B" team planet, will be at its closet approach to the earth on the 25th. Pluto will be 2.87 billion miles from us. Pluto is in the constellation of Sagittarius and rises at 10:45 pm.

The sun starts the month in Taurus and on the 21st it moves into Gemini. The full moon is on June 26th. There will be an eclipse of the moon at the full moon, but we won't be able to see it from here. The full moon is opposite the sun so the full moon in June crosses at the lowest point for the year.

The Air Force has launched an unmanned space shuttle called the X-37B. The mission of the X-37B hasn't been announced. If you want to know when to look for this spacecraft as it crosses your sky, go to:

<http://www.spaceweather.com/flybys/?PHPSESSID=uv57d026gr8qslr2b4c18aqqm3>
<<http://www.spaceweather.com/flybys/?PHPSESSID=uv57d026gr8qslr2b4c18aqqm3>

The Community and Continuing Education Department at Joliet Junior College will sponsor "night camps" again this August. The two-day "night camp" for young people is on August 4th and 5th. The two-day "night camp" for adults is on August 11th and 12th. Call the Community and Continuing Education Department at 815-280-1555 for information and to register.

Our final public shows for the season are on June 1st (The Summer Skies) at 7:30 pm and on June 10th (What's in the sky?) at 6:30 pm. All of the public shows are offered at no charge as a service to the community from Joliet Junior College. Thank you to all of you who came and participated in our public shows this last season. And a special thanks to George Storm, a guest at almost every public show, and who added so much to each session.

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