

Summer Solstice Astronomy

By Comet Hunter

June 21st is the summer solstice. Yah, summer time! The word solstice means "sun stands still". Of course, it doesn't really, it just appears that way. Actually what we perceive as the sun's movement across the sky each day is our own planet earth rotating on it's axis.

On the day of the summer solstice, the sun is on it's highest path in the sky, allowing it to be visible in the sky longer than on any other day, making this the longest day, and shortest night, of the year.

After the summer solstice, the sun will be on a slightly lower path in the sky each day, until the fall equinox, when the days and nights will again be equal, 12 hours each.

This wonderful season of summer is the favorite time of year for most amateur astronomers to get out and observe, because the nights are warm now, making it so much more comfortable to be outdoors for hours at a time. The summer Milky Way stretches

from horizon to horizon under dark skies too, a most beautiful sight to behold.

Most of the major national as well as regional star gazes, usually termed "star parties" occur over the next few months. Some are for just one evening, some for a weekend, others last for an entire week. With the exception of the single evening star gazes, camping facilities are usually provided.

You are a child of the universe, no less than the trees and the stars; you have a right to be here. And whether or not it is clear to you, no doubt the universe is unfolding as it should.

Max Ehrman

Safe Star Gazing Tips for the Chemically Injured

So, in this issue, I thought I would give some tips for safe observing for those of us challenged with Chemical Injury. Yes, the illness can present a few challenges for us at star gazes, but overall, astronomy is one of the most "MCS safe" hobbies I have found, since many of the things that are harmful to us are also harmful to telescope optics. Particularly wood and cigarette smoke, perfumes, lotions, hair sprays and make up. Most people don't get "dolled up" for a night outside in the dark anyway, especially when it is in the woods :) The only things I have encountered in my many years of attendance at star gazes are insect repellents and occasionally fragrance. Usually the fragrances are on the public who attend, not the astronomers. There are sometimes a few who use insect repellent sprays.

To find the universal elements enough; to find the air and the water exhilarating; to be refreshed by a morning walk or an evening saunter. . .to be thrilled by the stars at night; to be elated over a bird's nest or a wildflower in spring - these are some of the rewards of the simple life.

- John Burroughs

At large public star gazes, introduce yourself to whomever is in charge, tell them you are sensitive to "bug spray", and most of the astronomers who use it will be happy to tell you, so you can simply avoid them. While most astronomers are very happy to have you take a look through their "scopes", they will understand if you don't because you are sensitive to the insect repellents they used. They want you to enjoy the experience, plus don't want you coughing all over their expensive equipment :) Likewise, just skip the few who might be wearing fragrance. At many star gazes given for the public, there will be a brief talk given by one of the astronomers, explaining what you will be viewing that night, perhaps pointing out the various constellations visible, as well as possibly a few rules of star party etiquette. Of course, if there is a crowd at the lecture, you will want to stay away from them, as you would anywhere else. Or wear your mask, if

it's dark enough no one will even notice.

Whether you prefer to go to a large gathering, a small star party, or to just go out and enjoy the night sky alone, choose large state or county parks if at all possible, since most are too poor to be able to afford to spray for insects. Wild life preserves are also good, as they don't spray insecticides either. They want the bugs, which are food for the birds. Take a comfortable lawn chair, something to eat and drink, a cell phone, and a jacket or blanket with you.

No matter how hot the day seems, it will get much cooler at night, especially in the woods. You will be surprised how chilly the air gets when you are outside for several hours. To avoid being bitten yourself by insects, wear long pants and a long sleeve shirt. You can put the long sleeve shirt over your summer attire, especially just at dusk, which is when the mosquitoes swarm. Once it is fully dark, the chances of being bitten are less. Wear shoes and socks too, leave the sandals at home.

If your own yard is safe and relatively dark, that's as good a place as any to enjoy the stars.

To find local star gazes that are open to the public, check your phone book for your local astronomical society or astronomy club. Do an Internet search on astronomy clubs in your state. They are always very pleased to have new visitors and likely have several evenings open to the public each season. Many national and local gatherings are listed in Sky And Telescope as well as Astronomy magazines. Many clubs also advertise special events centered around astronomical events, (such as a Lunar eclipse, meteor showers) as well as regular star gazes that are open to the public in newspapers.

Be glad of life because it gives you a chance to love and to work and to play and to look up at stars.

Henry van Dyke

**Whatever is dreamed on
this night, will come to
pass.**

~ William Shakespeare ~
A Mid-Summernight's Dream

You do not need a telescope to go out and enjoy the night sky. If you do have one, and don't know how to use it, your local astronomy club probably has members who volunteer to help newbies, and who would be happy to teach you. A pair of binoculars are nice, you can see many deep sky objects quite well with them, if you have them. However, your own two eyes are really all the equipment you need for observing. Having a dark place to observe

from is important, as city lights wash out most of the fainter stars. The farther you can get from street lights and the like, the more stars you will see. Some summer sky objects can be seen naked eye from very dark sky sites. Examples are M13, a star cluster comprised of 100,000 stars in the keystone of the constellation Hercules, the Beehive cluster in Cancer, M31, the Andromeda galaxy in Andromeda.

All month:

Saturn is still visible and very bright in the constellation Leo.

Venus in the constellation Cancer, the brightest object in the sky at dusk, in the west.

Jupiter is also very bright, in the constellation Scorpius.

June sky highlights:

Jupiter in Scorpius.

Venus is still visible and very bright in Cancer (in the west, just after dusk).

June 14 new moon.

June 30 full moon.

June 30 Venus and Saturn are $2/3$ of a degree apart (the full moon is $1/2$ degree) in the west, at dusk.

July Sky Highlights:

July 1 Saturn and Venus are only 0.8 degree apart.

July 14 new moon.

July 24-31 Delta Aquarid meteor shower.

July 29 full moon.

Venus and Saturn are gone for this season, but Jupiter is at it's best, still in Scorpius.

August Sky Highlights:

August 12 Perseid meteor shower.

Note: To find all the constellations in your sky, please take a look at the Cartes du Ciel sky charts. The link is included below. It is a small, quick download, it's

free, and very easy to use. It will tell you where any constellation is at any given time on any night of the year, in your local area. This is more accurate than my telling you where and when to look for each one, especially since the times are different in different locales.

Links:

[Cartes du Ciel Sky Charts](#)

[Astronomy magazine online, star gazes](#)

[Sky and Telescope Magazine, online](#)

*Comet Hunter is an avid astronomer who has courageously coped with chemical injury for many years. **[Email Comet Hunter](#)** your star gazing questions.*