



Let's Stay up all Night and Observe!



Linda on Friday Night

Lots of people try to do this and sometimes they succeed. Seeing as many targets as you can and being tired and full of starlight when you finally must stop is an exhilarating feeling. I won't fall into the age-old trap of second person narration and try to tell you what you will see; that is up to you. But I'm pretty sure you will have a wonderful time and although the next day may be quite wearisome, it will be worth it all.

There are a few cardinal points in the year that I especially enjoy choosing for observing. These include the equinoxes and solstices. In this article I'd like to describe the specific attraction each one holds and how I have, over the years, come to especially enjoy them. In years past, it was difficult for me to stay up all night any night unless it was on the weekend, so when I say that you should stay up all night on the June solstice, most of the items involved will be much the same if you observe a few days around the exact date. The only time this makes any difference is when talking about the days when we change our clocks or daylight-saving time. I'm going to discuss these also, although hopefully these will soon come to an end, and this will be a historical discussion.

Another thing to consider is that this article is biased toward those in temperate zones of the Earth. At the equator, where seasons don't mean a whole lot, this may not be much of a subject of interest. Also, if you live very far north or south, it will be a waste to worry about observing around the solstice because one will have bright twilight or the sun will be up all night at the summer solstice, and it will be unspeakably cold during winter.

WINTER SOLSTICE

"This is the night when you can trust that any direction you go, you will be walking toward the dawn."
— Jan Richardson

The winter solstice is of course the longest night of the year and the most difficult to get all the way through. I won't bore you with preparation advice but for safety's sake I will at least remind you to bring lots of layers of clothing and maybe an extra blanket and a little food in case you get stuck. Be sure and take lots of breaks too - you don't have to be outside the entire time, and this isn't a competition. Oftentimes I must run outside look at something and then run right back inside and warm up a little bit before I can face the cold again.

But oh, that sky! If it's very cold and clear and still the stars will almost look like you could reach up and pick one off the wall. In the northern hemisphere we have a view looking out from the Milky Way, so we don't have quite the telescopic

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gold mine that the Sagittarius direction gives us, but we have the brightest stars of the year in our winter sky and there are still plenty of wonderful open clusters, nebulae, and other deep sky sites to behold.



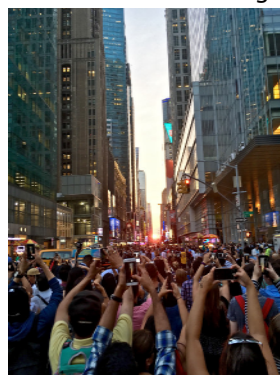
Druids Gather for the Autumnal Equinox

EQUINOXES

As I said above, the equinoxes are really tied for now to changing our clocks and that is usually

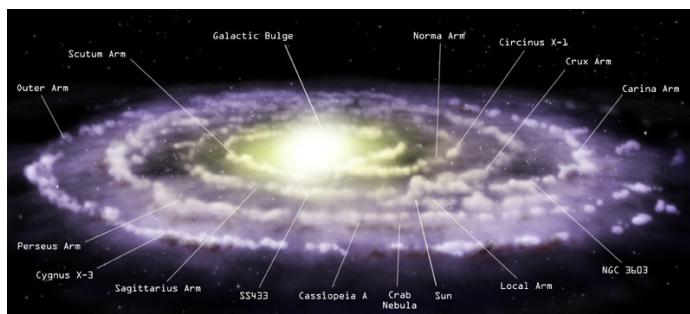
when I do my equinoctial observing nights. At a job I had long ago, the older employees got to work graveyard shift on the short Spring night and get paid for the hour that didn't exist, whereas young guys like me had to work the Autumn night. I still got paid for the extra hour, but it still seemed unfair somehow. Now, I always seem to miss out on the short night in March when we change them forward because the weather is always lousy. Luckily though, the date we change our clocks back in early November is often the end of what had been a magnificent late summer and early fall.

Whatever the weather may be, equinoctial observing nights are fun for many reasons. As said, the November one is often a cherry on top of a great Autumn. At both, you can watch the sun rise and set almost exactly east and west. In towns like mine where the streets are laid out on a grid, this means you can look down a long street like the one I live near and see the sun setting behind and between the tall buildings along the street. Depending on how your town is laid out, you may be in the same situation, or it may be at a different date during the year.



Manhattanhenge in mid-May

At both equinoxes, the word of the day is Galaxy. The Virgo supercluster is at its prime in March and not only Virgo, but Leo, Ursa Major, and Coma Berenices also have tons of galaxies and other sights to see. Fall galaxies are in Pegasus, Cetus, Pisces, and all through that area of the sky. We are treated to these views because we are looking either up or down respectively from the plane of the Milky Way and out into intergalactic space. With most of the dust and other matter out of the way, we see distant galaxies and galaxy groups as brightly as we can.



SUMMER SOLSTICE

"This is the solstice, the still point of the sun, its cusp and midnight, the year's threshold and unlocking, where the past lets go of and becomes the future; the place of caught breath."- Margaret Atwood

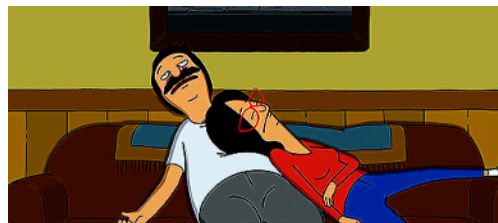
And finally, my favorite night is the June solstice. It is short, making it easy to get all the way through. It is warm, but I may not have grown weary of the relentless heat by now like I will be by Labor Day. There's lots of bugs, but that's what bug spray is for. I can usually lay down in my hammock when I get tired and, if I take a little nap under the stars, so be it. Of course, the splendor of the sky this time of year usually keeps me wide awake. We are looking at the center of the Milky Way and adjacent arms from our viewpoint. I won't begin to describe all the wonderful objects to be seen in this direction and you're going to need more than one night to see them all. Instead, pick a few favorites and select a few new challenges and make a night out of it. Be sure and take lots of liquids and light snacks to make it through the night. It's important to stay hydrated and don't forget that bug spray whatever you do!

This early in the summer, you can often still catch some of the galaxies that you might have missed in Spring, such as the groups in Virgo and Bootes and that area is still high enough early in the evening. Then the Messier parade begins throughout the areas surrounding the spine of the Milky Way. If you're at a dark site, you can see with your eyes only the Great Rift through the Milky Way and other dark nebulae, such as the Pipe Nebula. Then, sweeping through these areas with binoculars, there are smaller patches of both bright and dark clouds to be seen along with a few of the larger globular clusters and other sites you'll soon turn your telescope to.

Early morning, before dawn, brings autumnal sights like Cygnus and Cassiopeia again, with a warmth you may not get when these would "normally" be observed. One of the benefits of observing late in the night is seeing objects that might usually be seen when it is colder. This way, I see them in a more comfortable situation, and may spend more time on them at the eyepiece and sketch pad. Remember the statement above about running inside after every mid-winter glimpse? That can be avoided by catching those objects in a different season, before dawn.

If you do make it till dawn, it's a wonderfully satisfying feeling to see the first tendrils of light reaching into Sagittarius as you try to get that last thing you wanted to see before the sun came up. You may be tired and take a little break before putting the telescope away and going home. That last sip of coffee really helps right now too.

I hope to see you out there this summer equinox, and maybe some other nights too. It really is great to observe, especially if you can make it all the way through the night and enjoy yourself the whole time by pacing your observing and really looking at the objects as you behold them.



Linda on Saturday

References



1. Linda Belcher
2. Druids Gathering for Fall Equinox
3. By Fred Hsu on en.wikipedia - Own work, CC BY-SA 3.0
4. View of Milky Way
5. Linda Belcher

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