

# A time to watch the night

This weekend seems to be a big astronomy shindig. The event is called [Galilean Nights](#). This is in honor of Galileo. Sidewalk astronomers around the world will be out letting people look through their scopes to see the Moon, Jupiter or some other bright evening object.

The site above has a link to find some sidewalk astronomy locations. The closest places to this neck of the woods will be Bowling Green Ohio, Sylvania Ohio and Fort Wayne Indiana. If my youngest agrees, I may be in Fort Wayne.

In case you wondered, a sidewalk astronomer is somebody who sets his/her telescope out on the sidewalk. They hope people will stop and share the evening sky with them.

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## What telescope should I buy?

After quite some time, I'm getting back to this question. Since the holiday season is approaching and fall is one of my favorite times to get the scopes out... Here are my opinions on telescopes to buy.

If I'm on your list and money is no object here are the scopes I want. ☐

[The Questar 3.5 inch anniversary model](#). This has a lot of sentimental value for me, and if money were no object I would own one.

[Any really large reflector](#). This one is from Orion Telescopes.

[A good sized goto Scope](#) and an observatory to go with it.

[Or maybe a dedicated Solar Scope???](#)

OK, I understand you are not buying one for me, but if you are a first time telescope buyer, you may see those prices and just stop your shopping. Or you will go to Walmart and buy the telescopes they have during the Christmas shopping time with all the pretty pictures on them.

In shopping for a telescope, size matters. You want the biggest scope you can afford and move around. Magnification power however does not matter. I don't care if the telescope at your local super store is 150 power or they say it will magnify 200 times. You'll never use it. Most of the time, even with the best telescope, you can't use it. So are you going to be able to with the \$30 – \$40 scope from the super store?

Even though my first suggestion would be binoculars, I won't go there, you want a telescope... I know this, because I was there once. I still don't have my binoculars...

Second suggestion a 4 to 8 inch reflector on a Dobson mount. The mount is very simple. It moves Up and Down – Left and Right. Very stable and inexpensive. An 8 inch reflector would probably be more of an intermediate scope, but it may be the only telescope you ever need. (want is another matter). The 4 and 6 inch scopes are excellent for beginners.

3rd suggestion a 60 or 70 mm refractor on a good mount. These tend to be more expensive. The mount design makes the cheaper models almost unusable. But they do look like the telescope everybody expects to see. This may be important to you.

4th suggestion... Stay away from computer controlled models for your first scope. You really don't want to have to learn how to use the computer end of the telescope when you are just starting out. That just adds to the frustration.

So here are some actual telescopes that fit my suggestions. I'm using the Orion Telescope company site, because they have nice pictures, many different scopes, and a lot of other good information on their site. I don't own an Orion Scope, and I'm

not suggesting they are the only place to get telescopes. In fact, I will add links for other sites main pages.

Refractors (lenses)

[80mm table top model](#) Nice looking little scope with what looks like a very nice mount. A good solid table will be needed to use this. A used end table from a garage sale would work nicely. A solid picnic table (that nobody is sitting on) would work well too.

[70mm refractor](#) The mount looks nice, but the tripod looks a bit on the flimsy side. This may make an shaky mount. Weight can be hung from the center support to help stabilize it.

Reflectors(mirrors)

[100mm tabletop scope](#) This mount is the same as the first refractor I mentioned. Nice size, looks easy to move around.

[4.5 inch tabletop scope](#) Slightly larger mirror than the one above. I've actually used this scope once. It is an excellent first scope.

[4.5 inch equatorial](#) Same scope as above, but a different mount. Adds to the cost, but you don't need the table.

Some Telescope web pages

[Orion](#)

[Meade Telescopes](#)

[Celestron Telescopes](#)

[Optics Planet](#)

[Anacortes](#)

[Discovery Telescopes](#)

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## Something I need to do

It has been quite a long time since I took any of my telescopes out to gaze at the night sky. I've had many

excuses, but they were just that, excuses. I think I'm really beginning to miss that hobby of mine.

The first thing I need to do is have a talk with my boss. Some of the best nights of the year are going to be happening in the near future. I need to be able to plan some time off on a quick basis if I know the sky will be clear.

I love early spring, because some of the wonderful winter constellations are visible just after sunset, and if you are up long enough, some of the summer constellations are there in the morning. On top of that, the spring time just starts to have some warmer nights. Not summery warm, but you don't end up fighting the frost bite you do in the winter.

Right now, it doesn't look like clear skies, but [my favorite place to check](#) this sort of thing, is forecasting favorable viewing tonight.

I hope it is clear when I get home tonight, I may take my little scope out to view the heavens above me.

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## First look at WorldWide Telescope

After spending a couple of days looking at WorldWide Telescope from Microsoft. This is a very fun program to run. The pictures from NASA telescopes are simply beautiful. There is a lot more there than I can uncover in just a few days, but here is what I found out.

It is a good tool for use in the classroom. By using this, you can actually place some of the wonderful NASA pictures in

the night night sky. I'm not sure it is good for planning night view sessions at the telescope, but if you have a computer driven scope, it will allow you to point at specific night sky targets. Trouble with this is that it likes to be online. While it does work offline, it seems to be slower. Getting data/photos on-line do take up space on your hard drive. I'm not sure how much space yet, but I will again keep looking into that.

For me, this is a good addition to other software I have, but I don't think it will replace anything. More to come.

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## **Something Good from Microsoft!**

I ran into a bit of news today that made me take a bit of notice. Microsoft has launched a new site [Worldwide Telescope](#). I'm downloading the software as I write this, so I will give a more in depth look later. The software is supposed to be a virtual telescope with access to images from all over the world and from space. Terrabytes of data are supposed to be available.

For me, a one stop shop of various space images is just what I am looking for. If this even gives half of what the press release states, I will be interested.

I'll keep you posted as I use the software.

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# Telescopes, an introduction

If you've been reading through the entire blog, you will notice I talk about my family and telescopes. I will try to make the titles very specific, so you will know what you are going to be reading...

Eventually, I will answer the question: "What telescope should I get?" For now I want to talk about various kinds of telescopes. There are really only two types of telescopes. If you're a die-hard astronomer, just wait. This is for beginners. ☐

There are telescopes that use lenses (called refractors) and those that use mirrors (called reflectors). The refractors are the telescopes most people think of. A pirates spyglass, 1/2 of a binocular are examples of refracting telescopes. Reflectors are generally the big boys. Most observatory telescopes are now reflectors of one type or another. The space telescope is a reflector.

Now for some there is a third group of telescopes that combine the mirrors and the lenses. I don't differentiate in that manner. I will admit there are different types of reflectors. Some have corrector lenses somewhere in the light path that correct different deficiencies in the mirrors. More on that in a latter post. Lets just say that all telescope types have there problems, and various ways are used to correct those problems.

Now more on the introduction. The first telescopes were refractors. But the strength of any telescope is how much light it can take in. Refracting telescopes with big front lenses get very big and awkward quickly. And there is also a limit as to how big you can make a piece of glass and only support it on the edge. So some bright people invented reflecting telescopes. Theoretically, there is no limit as to

how big you can cast a mirror because it is supported across the entire back. In practice, once a mirror gets too big, it is very hard to support in something that can move and take in the entire sky. And glass does have a problem with deforming under stress, and big mirrors under gravity are under stress.

The biggest refracting telescope is in the Chicago area at the Yerkes observatory. The main lens is 40 inches across. The largest reflecting telescope in operation is the 11 meter scopes in South Africa. The largest telescope in the United States are the twin 10 meter scopes on Mauna Kea in Hawaii. The largest in the mainland US is the 9.2 meter Hobby-Eberly Telescope in Texas. And finally in Ohio the largest telescope is the the 1 meter (39 inch) at the University of Toledo.

I have a family connection with the telescope in Toledo (and others around the world), my father was a quality control manager at Owens-Illinois and this was one of the mirrors he over saw the production of.

More later