Mars Pictures

During the past couple of days, I've again been amazed at the pictures current space missions have been sending back to earth. The first pictures from the latest lander are back. Just cool stuff. I saw one yesterday where one of the orbiters got a picture of the lander underneath the parachutes.

I am interested in all things in the space program, and these landings are on the top of my list of news stories.

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.

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.

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

So you want a telescope

After finding out I have a telescope, and of my interest in Astronomy, I am often asked “What kind of telescope should I get my (self, kid, spouse, father, fill in the blank). My first thought is to say they can buy mine so I can get a bigger, better, different telescope. But in reality, the best answer is usually to get a good astronomy book.

Unless you are exactly like me, you will need to get a foundation of what is in the sky before you drag out a telescope. Going out on clear nights with just a lawn chair and your eyes will give you an indication if you actually want a telescope. There are many uncomfortable aspects of sky watching and astronomy. If you add to this lugging and setting up a telescope, you may find you really don’t want to do this.

Spring in Ohio is a good time to start with your quest for a telescope. The clear nights are becoming a bit warmer from the winter deep chills, and the bugs aren’t out as much. If you can take the few mosquitoes and the slightly chilly nature of

the spring nights, you can then look forward to the summer nights. In most cases the summer nights in Ohio are quite comfortable for watching the night sky. If someone could do something about all the mosquitoes. Yes, you will be a target of these blood thirsty little creatures. Then there are the numerous encounters with other wildlife. Skunks will generally not spray, unless you scare them. Stepping on a skunk tends to scare it. Raccoons on the other hand don't fear much. Keep the snacks well sealed, and don't leave your car open. In NW Ohio that is all you generally have to worry about. But I did hear talk of a wandering Black Bear in the area!

Other parts of the country will have their own night time problems. Scorpions, cougars, wolves, bears, poisonous snakes, and the strange people who come out at night in our larger metropolitan areas, are all possible things you could run into trying to look at the night sky. Do you really wonder why I don't automatically tell a person which telescope to buy.

Astronomy and star watching is not for everyone. We are a strange breed. We tend to enjoy being out in the dark (the darker the better), communing with the wild, lugging heavy equipment out for maybe 2-4 hours of finding and studying a specific nebulae or feature on the Moon. Then we will pack up and lug that equipment back in. If you can't spend 1/2 hour after lugging your lawn chair out just to look at the sky, well this hobby isn't really for you. A telescope really won't help.

Ok, you got past the looking at the stars for 1/2 hour, and you enjoyed it. What next? Get a good astronomy book. Take the time to learn what is up there. Before you get a telescope you need to know what you're going to be looking at. Astronomy books and star charts are the road maps to the night sky. You should be able to find at least 1 or 2 constellations before you purchase that scope. Checkout Sky and Telescope or Astronomy Magazines at your local library or bookstore. They will have a sky map of the current month.

You say you've done all that and still want a telescope? Now we're talking. Get some good binoculars and come back in a month or two. No really, I wish someone had told me that at the beginning of my astronomy connection. I still don't have a good pair of binoculars, and my desire for them is growing. 7×50, 8×50 and 10×50 are all good binoculars to start with in astronomy. Oh yes, the first number is the magnification of the binoculars (7 times, 8 times or 10 times) the second number is the size of the front lens in millimeters. The bigger front lens collects more light, and the higher magnification allows you to see more. 2 big notes!! High magnification may seem like a good thing, but too much causes what I call the jitters. It is hard to hold binoculars steady, high magnification makes this much more apparent. And bigger front lenses may also seem like a good idea. Bigger lenses, means the binoculars will weigh more. Heavy binoculars also cause the jitters.

Ok, Ok you got this far? You should get a 7 inch Questar Maksutov. Make sure you get a well built tripod with this since this telescope needs good support. And when you get tired of astronomy let me know, I may have a home for your scope…. That's just a joke folks. When you find out what that telescope costs you may understand. For the real answer, stop back in the future. I work up a list of good beginner scopes.

Telescope review 2 Meade 70AZ

This was the telescope I just received for my birthday. It is a 70mm refractor with a Altazimuth mount. This telescope came with a planetary imager that I will review at a later date.

The mount with this scope, as with most inexpensive scopes is lacking. It is much to small to support the telescope. It also is a little short to use the telescope standing and looking near zenith.

This mount was also difficult to aim and keep in the same place. It had a lot of wobble and wiggle in both the horizontal and vertical axis. It also was prone to heavy vibration. The small finder scope was almost impossible to use. Most scopes in this class now come with the red dot sights. That would have been much easier to use. Since this scope is geared toward a beginner, I find that these problems are just too extensive for a beginner to get much real use out of the telescope.

Now on to the telescope. The optics really weren't that bad. There was some blue fringing on the moon and bright stars. I haven't looked at any planets yet, so I can't say on that, but I would assume that any of the brighter planets will have the blue fringe. This is what I expected with the scope. What I didn't expect was the amount of reflection in this scope. It was almost as if there was no baffling or the inside of the tube was painted with a gloss paint instead of flat. This was very noticeable when looking at the moon. The detail of the moon after centering it in the eyepiece was good. I'll push the power up the next time I get out.

The two eyepieces were inexpensive models, but the views were again what I expected. I did get some better views when I used my plossels. I haven't fully examined all there is to this scope, and have yet to compare it head to head with other scopes. The diagonal mirror was of similar quality as other parts of the assembly.

All this said, I'm going to play with the mount to see if I can get it to be a little more friendly. I want to see if the scope warrents getting a mount update or just making something up in the workshop. It could be quick grab and go

scope when I don’t want to lug out the reflector or set up the computerized scope. I will be mounting a small red dot finder to make things easier to find.

Telescope review 1 – The Questar

I really can’t say much about this telescope. Most of my memories of that night were trying to look again and again at the orange-red dot that was centered in the telescopes field of view. I was 5 or 6 years old. My sisters were bigger than me at that time. Why bring this up now, since it won’t be of any use for those looking to buy a telescope? The answer is simple. This is the scope that focused my attention on all things in the night sky.

For the record, I did find out (when I was much older) that this was a 3.5 inch Questar scope. It was a production test scope with a brand new mirror material (called “Cervit”). My father worked for O-I in the 60’s as part of the quality control of various telescope mirrors made with “Cervit”. The Questar company was looking into the possibility of using this material for their scopes. Questar telescopes have a history of being a “Quality Scope”, so I was probably looking through a good one. I will have to check the histories to see if Questar ever put the Cervit mirrors into production. I know that they now use a different zero-expansion material. Might be fun trying to find one.

On to the review, from the memories of a 49 year old trying to remember something at the age of 6.

I was frustrated (mad) that I didn’t get to look through the

scope as much as I wanted. I remember being told that if I didn't settle down, I wouldn't be able to look again. I think I sat as still as I ever did. I got to look a lot. My sisters then complained I was "hogging" it. I didn't care.

The color of whatever I was looking are still clear in my mind. After years of looking through other scopes the only thing that comes close is Mars or one of the red stars of similar color. I can't remember if it was a disk or a dot, so that is of no help I just remember a bright red-orange object in the middle of the blackest background I ever saw. I just was drawn to that telescope. Unfortunately, my father took the scope back. I had to survive, my growing fascination with space, with any books or magazines I could find. At that time, it was hard to find them for my reading level.

I forced myself to learn to read better, because I wanted to understand all I could. I thought if I really applied myself, my dad would bring back the telescope, or maybe get another. That was never meant to be. Dad noticed I was interested in space, but never put a connection with that one night with a telescope. It was the middle of the space race, so the apparent assumption was that I was interested in rockets. Those were cool to, so I didn't complain.

Jump forward a few years… Just after my mother died, I took my dad to the Ritter Planetarium and Brooks Observatory at the University of Toledo. This was the closest mirror made with 'Cervit'. Yes, my dad was on the quality control team for that mirror. It was too cloudy to actually look through the scope that evening, but we did get to look at it. Dad was in center stage, explaining how the mirror was made, and all the problems they had casting "good" glass. I also explained that evening about how much I remembered the scope that one summer evening so long ago.

I was never able to get back out the the observatory when they had open view with the 'Cervit' scope when Dad was alive, but

I did go again shortly after he died. Do you know the object we looked at was the planet Mars. It was red-orange in the middle of a deep black sky. Oh how the memories just came flooding back. A wonderful evening.

Later a review or two of scopes I actually use…

Stars out at night

Well, I got a small telescope for my birthday in February. I was able to take it out for a short time soon after that, but the weather was too cold to stay out long. The other night, I was able to take it out for a longer period. It wasn't too bad for the size and design, maybe someday I'll write a review for it.

What was really nice about that night was being able to share this night with one of my daughters. Normally I spend my nights alone with the stars, but it was nice to have a little company. It was still a bit chilly, so the night was shorter than it could have been. She's taking an astronomy course and was doing a 'lab' assignment. It felt good to help her out.

This got me thinking of her growing up. Back when she was in grade school, I gave a talk to her class about telescopes and astronomy. I brought in my telescope, and a few items of astronomical interest. Later that school year, we had a 'star party' for kids at the school. I'm not sure if it sparked any future interest in that class, but it was made my evening. Their questions were intelligent, and they seemed to enjoy themselves.

I was quite a bit younger when I saw my first telescope. I was about 5 or 6, when my dad brought home a small scope. I

don’t know what we looked at, but I was hooked on astronomy from that very day. Funny how I still remember that day. What in your life changed your outlook on life?