MILWAUKEE ASTRONOMICAL SOCIETY

FOCAL POINT

July, 2015

Inside this issue:

Summer Schedule

Gene Hanson is presenting a similar talk about Pluto at the New Berlin Library

The next Public Night is scheduled for Friday, August 7th at 7:30 PM. The topic will be **The Pluto**. Gene Hanson Observatory Director will give a talk about status of Pluto in our Solar System. The presentation will include the latest discoveries of the NASA's New Horizon mission. We are going to explore this topic further during Augusts' second public night on August 21st, also at 7:30 PM.

From June through August, we have only Board Meetings on every second Monday of the month starting at 7 PM. As usual these Meetings are open for any member who is interested. The next Board Meeting will take place on August 10th. Regular Membership Meetings will restart in September. The program will be announced in August issue of this newsletter.

Saturdays are the designated Member's Nights, but the Observatory might also be open on other nights if announced on the Google group. Stay tuned.

MAS Picnic

The MAS Picnic is on next Saturday, **August 1st, 5:00pm** at the Observatory. Bring a dish to share. Beverages and charcoal grills will be provided. We will do solar observing weather permitting. Please join us, and have fun! Bring along your family or friends.

Star Party at Yerkes

The Yerkes star party will be held the day after the picnic, on **August 2nd**. Many members have already volunteered. Anybody who will be able to bring a telescope (or other observing device) and some enthusiasm for showing off the stars is welcome to join us. We start setting up at **7:00 PM** so that the kids have a chance to see our telescopes in the daylight.

After the Party we often gain a tour of the historic 40-inch telescope.

Observatory Report

Once again, a lot has happened at the observatory since my last report.

The Z Dome re-roofing was far more than the contractor bargained for. A lot of wood needed replacement since it was in pretty bad shape. But the big problem was the roof itself. The flashing eventually had to be removed. The great news is that the contractor did not ask for more money, which could have been easily justified. With the amount of roofing material added, there was an issue with the four high corners of the roof and when the flashing was replaced, it needed to be cut down so it doesn't hit those corners. But in the meantime the new seal is fantastic. See the photos below:

Scott got the lawn mower working and has been taking care of keeping the grass cut with the help from Frank Kenney.

The disassembly of the old Z Scope is not only finished, but it has been basically reassembled on the floor just east of the mount. My compliments to Scott for figuring out how to get this done safely. Consequently, no MAS Presidents were seriously injured during this process!

The plan to reassemble the scope downstairs in the hallway was rethought. Rather than attempting to drop the extremely heavy parts through the trap door and with the large amount of floor space available on the telescope floor, it was decided to set it up there.

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Treasurer's Report

$4,117.63	***Starting Balance as of 5/15/2015***
	Expenditures
$49.90	WE Energies
$1.87	PayPal Fees
$6,649.05	Z-Scope and Roofing Projects
-$6,700.82	TOTAL Expenditures
	Revenue
$4,600.00	Money Market Transfer
$4,000.00	Investco Transfer
$54.00	Membership Dues
$8,654.00	TOTAL Revenue
$6,070.81	***Ending Balance as of 6/8/2015***

Respectfully Submitted,
Dennis Roscoe, Treasurer

Membership Report

Since the May Membership Report Paul Swokowski and Family, and Steve Volp and Family joined the MAS.

We now have 87 members.

Respectfully Submitted,
Tamas Kriska, Committee Chair

Observatory Director's Report

continued from page 2.

In order to distribute the weight, Scott built a 2x6 box to set the base and the scope was assembled from there.

The 14" Celestron Edge telescope and mount arrived and on the night of June 27th it was raised onto the Astrophysics GTO900 mount, the dew cap added and our STF-8300 camera was attached.

And, finally, here's what the mount and telescope looks like sitting on the old fork.

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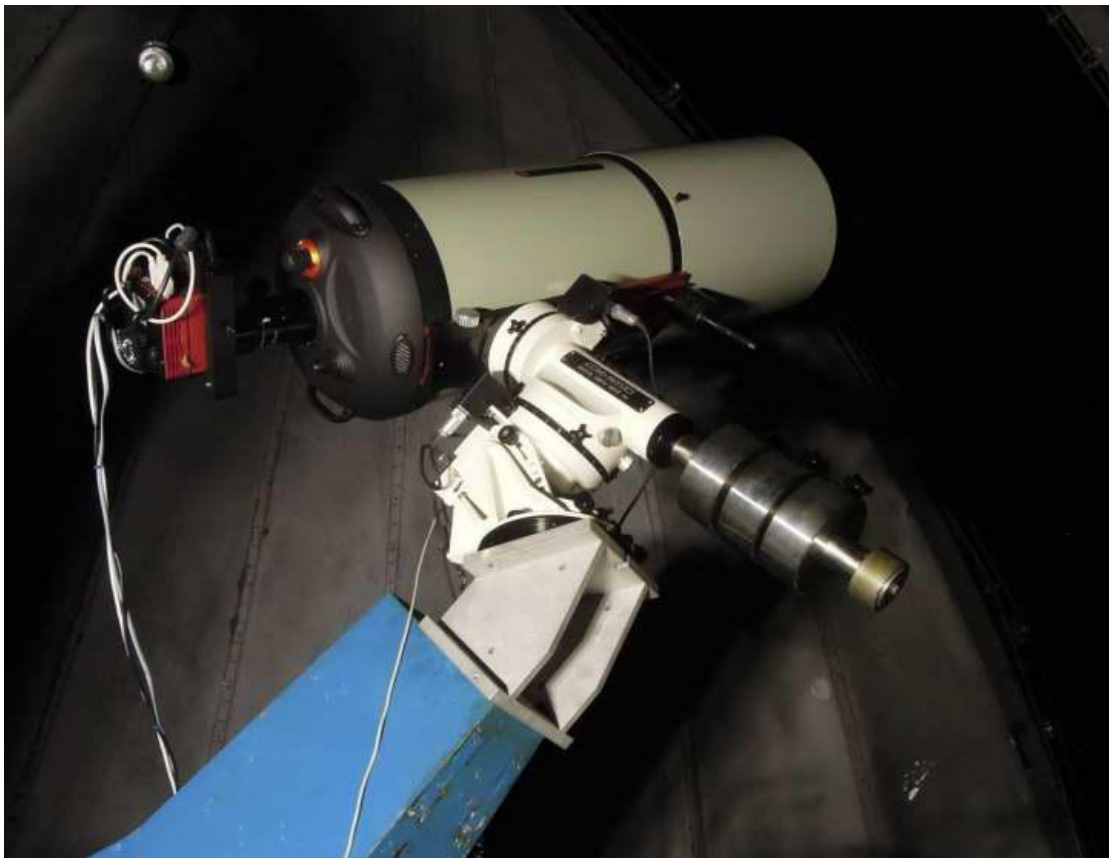


Respectfully Submitted,
Gene Hanson, Observatory Director

In the Astronomical News

Pluto's Atmosphere Is Thinner Than Expected, but Still Looks Hazy

Pluto's thin air may be falling to the ground. The total mass of the atmosphere on Pluto appears to have fallen by half in just two years, scientists working on NASA's New Horizons mission reported during a news conference.

Pluto reached its closest approach to the sun in 1989, and the expectation had been that as it moved farther away along its elliptical orbit, temperatures would drop and its atmosphere, mostly nitrogen, would begin to freeze and eventually disappear.

That was a driving motivation for the rush to send New Horizons to Pluto. Astronomers on Earth have been able to get glimpses of Pluto's atmosphere where Pluto passes in front of a star, watching whether the light of the distant star blinks out suddenly when blocked by Pluto or fades gradually because of the light bouncing off molecules in the atmosphere.

Confounding expectations, Pluto's atmosphere has actually thickened over the last 26 years, and many planetary scientists changed their minds. Maybe the atmosphere would persist throughout Pluto's 248-year orbit, they speculated. Now the story appears to be changing again. New Horizons obtained a snapshot of the structure of the atmosphere by looking at distortions in radio signals sent from Earth passing through Pluto's atmosphere.

What the new measurement seems to have detected is a potential for the first stages of that collapse just as New Horizons arrived. It would be an amazing coincidence.

Even if the atmosphere is collapsing, though, the view from the night side of Pluto is, at present, spectacularly hazy. A photograph showing a silhouette of Pluto surrounded by a ring of sunlight, showing sunlight scattered by small particles of haze up to 100 miles above the surface. This is our first peek at weather in Pluto's atmosphere.

The hazy atmosphere of Pluto, backlit by the sun, is seen in this breathtaking farewell photo taken by NASA's New Horizons spacecraft on July 15, 2015 just after its historic flyby of the dwarf planet. Credit: NASA/JHUAPL/SwRI

Computer models had suggested that the haze would float within 20 miles of the surface, where temperatures are about minus 390 degrees Fahrenheit. Instead, the haze particles formed higher, 30 to 50 miles up, where temperatures are balmier, around minus 270.

The haze probably plays a central role in producing Pluto's reddish hue. When warmed, methane ice on the surface turns to gas, entering the atmosphere. The methane molecules, bombarded by ultraviolet light from the sun, are transformed by chemical reactions in the haze particles, made of a class of dark reddish substances known as tholins. The tholin particles grow in size until they fall to the ground. That is how Pluto's surface got its reddish hue.

The scientists also released more close-up images showing places where sheets of ice appear to be flowing, much like glaciers on Earth.

At Pluto temperatures, water ice is much too stiff and brittle to flow. Indeed, in adjoining regions are soaring mountains of frozen water, one range as tall as the Rockies and another shorter, about as tall as the Appalachians. But frozen nitrogen, methane and carbon monoxide have also been detected on Pluto's surface. Below the ice could even be an ocean of liquid water.

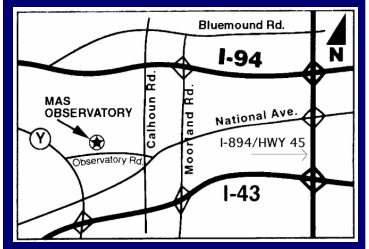
New Horizons zipped past Pluto, collecting a cornucopia of photographs and data. But because of the spacecraft's small antenna and the humongous three-billion-mile distance, the data will keep trickling back to Earth over the next 16 months.

After this initial burst of photographs, the pace of Pluto news will slow down. The spacecraft will be sending engineering information and less picturesque data for a couple of months, with only a few new photographs.

by Kenneth Chang, nytimes.com

Adopt a Telescope Program - Signup Sheet

	Adoptee	Scope	Location
1	Sue Timlin	18" F/4.5 Obsession	Wiesen Observatory
2	Neil Simmons	12.5" F/7.4 Buckstaff	B Dome
3	Russell Chabot	12.5" F/9 Halbach	A Dome (Armfield)
4	Dan Yanko	18" F/4.5 Obsession (Kyle Baron)	Albrecht Observatory
5	Tamas Kriska	14" F/11 Celestron	Z Dome
6	Henry Gerner	12" LX 200	Tangney Observatory
7	Vacant	8"/14" Celestrons	Ray Zit Observatory
8	Vacant	10" LX 200	Jim Toeller Observatory



MAS Observatory

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8/15	Jill Roberts	414-587-9422
8/22	Tim Hoff	262-662-2212
8/29	Lee Keith	414-425-2331
9/5	Henry Gerner	414-774-9194