

THE NHAS OBSERVER

Newsletter of the New Hampshire Astronomical Society



Volume 2001 No. 2

"All the news that fits in print"

February 2001

SkyBound

President's Message

Mike Andsager of CMP will be presenting the Planetarium's SkyBound program this month. Here is how the planetarium describes it:

"Since this show tells you all about the current night sky plus the latest exciting information about space, it's never the same twice! Hold on to your seat as you become part of the spectacular night sky.

"Our DIGISTAR® projection system reduces 14 days of the moon's phasing to mere minutes, and allows us to travel thousands of light years from Earth."

During the show, I may be calling on some of our veteran observers to discuss their favorite winter sky (binocular or telescope) objects and to point out how to find them. After the program, weather permitting, anyone interested can join us outside for a short observing session.

Speaking of observing: If you have not done so lately, now would be a good time to drag your scope outside. In the early evening both Jupiter and Saturn are in prime viewing position near the zenith. Over the next few months, they will be marching westward towards an early spring disappearance from the evening sky.

For you early risers, Comet McNaught-Hartley will be traveling through the constellation of Hercules in February. The comet is receding from the sun and will be about 9th magnitude during the month. You will need either binoculars or a telescope for viewing.

Finally, thanks to **Larry Lopez, Bob Sletten, Chase McNiss, and Jim Young** for preparing YFOS for our annual FYB (Freeze Your Binoculars?) event.

★ John Pappas

Public Observing Highlights

The weather has not cooperated with our observing efforts lately. Although temperatures have moderated from their record lows in November and December, the clouds have stubbornly persisted.

On January 17, I spoke to Pack 104 Boy Scout Troop in Londonderry, NH. I got them all excited to look at the planets, but when we went outside after the slide show, it was snowing! Several kids still got their kicks by talking to the snow-covered NHAS members who had shown up. Thanks to club member **Alan Kaplan** for setting this up.

On Jan. 18th, I spoke at the Conservation Center in Concord, NH. It was a dark, gloomy, cloudy night, and I was not expecting much. I mean, who goes to a Conservation Center on a night like this? It turns out that many people do, like hikers returning from walks in the dark woods (huh?!). The staff turned out a warm reception for me as I talked for an hour about astronomy.

They kept asking questions for almost 30 minutes afterwards. This unexpectedly turned out to be one of the most rewarding talks I've given all year. Thanks to **Kristin Loomis** for her enthusiastic support.

A skywatch at East Derry Memorial Elementary was canceled due to a snowstorm.

Our annual skywatch at Smyth Library in Candia on Feb 1 brought out about 100 adults and children to look at Saturn, Jupiter, M42, M31, and other objects.

Thanks to **Kathy Binns** for hot chocolate and cookies. A \$100 donation was made to NHAS on behalf of the library.

★ Ed Ting

Cruising the NH Skies

Did anybody catch the emergence of Europa from behind Jupiter on Jan. 29? My wife had some ladies over for a cosmetic party so I thought I would play on the computer or watched TV in my bedroom. But, with a perfect excuse, how could I not get the scope out?

It wasn't the best seeing, but there moments when it settled down enough to catch decent details. It was around 9 pm when the Giant Red Spot (GRS) rolled around the edge of the planet, then I could see this dark mark following the GRS. I talked to **Dan Smith** the next morning and he said me that it was Europa's shadow. I suspected this, but I had trouble imagining that I would see the shadow on the opposite side of the planet from the moon. *Cool*, to say the least.

I would judge the seeing to be 5 to 6 on a scale of 1 to 10. Transparency seemed better in the south than around the Little Dipper. I could just see the 5th magnitude star in the bowl of the dipper, so I rated the transparency at 5.

Saturn was good too, but only being able to use 120X as a maximum magnification left the ringed wonder looking a little small in my 4-in. refractor. Overall, it was a good night.

★ Chase McNiss

Feature Story

Good Turnout at FYBPage 2



Astronomy Mailed

Astronomy Day at the Mall of N.H. is scheduled for Sat. Feb. 17 from 11 am to 3 pm in the middle courtyard of the Mall. As in the last two years, we expect hundreds if not close to 1000 people to view our scopes, pictures, and displays.

Mike Pelletier will be the point of contact and is looking to see who would like to participate this year. Contact Mike at 879-3557, or send e-mail to mikpel@hotmail.com.

★ Mike Pelletier

Photography in Focus

The past meeting was a quiet one. The snow kept many people from attending.

Chase McNiss showed photos taken with his Astrovid 1000. He overlaid several captured frames from his video camera and used Picture Window software to produce some great photos. (See the Photo of the Month on p. 3.)

Todd Miller inspired us with his excellent journal and great drawings of objects sketched through his telescope. We had an interesting discussion of films, focusing, and cameras, with many interesting insights from **Larry Lopez**.

Our next meeting is on February 16 at 7:30 pm at the Whipple Free Public Library in New Boston. For directions, e-mail me at joemal50@aol.com.

This month we will start to examine various film types to determine which films respond best for astrophotography. This will be a hands-on project, so bring in a roll of your favorite film.

★ Joe Malinowski

Good Turnout AT FYB

Larry Lopez, **Chase McNiss**, **Bob Sletten**, and **Todd Miller** preened the grounds on Saturday. **Bob** installed additional propane tanks. **Jim Young** cleared 4 inches of snow Monday. and **Larry** came by at 11 am Friday, cleared the paths and edges, sanded the driveway, and then laid out electrical cables for people to use.

I arrived about 7 pm with my new AP1200 mount and 10-year-old AP 7-in. f/9 refractor. The observatory was open

and at least 3 people used the 16-in scope. **Linda** had her 80mm Brandon and was having fun with it.

Joe Derek was there with his scope as was **Chase McNiss** and **Joel Harris**.

Bert Bingel really liked the observatory. **Joel** is working out the mechanical details of cranking the roof off.

Steve Stefanik and **Bill Babineau** helped me with polar alignment. All went well after actually reading the manual and fortifying myself with stew. There was a reasonable amount of eats: kish, chili, and stew.

Sky conditions were reasonable but not great. At the peak the parking light was almost full.

We were on the road by 11 pm.

★ Larry Lopez

Another View

FYB Coffee House at YFOS started out on a good note. It was wonderfully steady just after sunset – especially the Moon and Venus. The light haze and clouds filtered Venus so the 1/4 phase was better than I have seen it in years. Even the moon way down on the horizon was uncommonly steady. I wish I had had the video gear along.

Saturn and Jupiter were looking good at dusk. The haze helped filter Jupiter, but there was no sign of the GRS or transiting moons. The haze soon made Saturn a little too dim for my scope.

There were a few breaks until 9:00 or 9:30 with Orion looking like a jewel through the hole in the clouds. Once it clouded up, most of us spent more time in the warming hut getting fat on all the great munchies.

Next time you see Larry, ask him how he likes the AP 1200 mount he just got. Yes! I said a 1200! What a beautiful piece of work. Larry has a different idea about what comprises a portable scope and mount. Larry had a 7-in AP refractor on the mount.

Also, the site looked great. **Joel** spent some time with the 16-in. scope in the observatory. Collimating it made a big difference. I brought a new step stool and attempted to plug in some red lighting, but apparently the outlets had not been wired yet. **Bob Sletten** showed up later

and put some rubylith in the one light in the observatory so we could see without hurting our night vision too much.

YFOS is turning out to be a great resource for the club. I had fun even though the observing was not great.

Thanks to **Larry** and **Bob** for getting the site ready for winter and a special thanks to **Jim Young** for keeping it clear of snow. The parking and the observing areas were first rate and easily accessed.

★ Chase McNiss

Resources for Star Gazers

I have at least three shelves of Astronomy books, but there are four publications that I use a great deal of the time.

1. *The Audubon Society Field Guide to the Night Sky*, if I could have only one book it would be this one, because it is the most comprehensive, easy to index, easy to understand, and small book I have ever seen on general Astronomy.
2. *Burnham's Celestial Handbook* (3 Volumes) is comprehensive, but now somewhat dated. Still, this is an excellent work by a very dedicated man.
3. *Starware*, a book on making informed purchases of astronomical equipment. This book was what greatly helped me form a purchase decision on the scopes I have owned.
4. *Sky Atlas 2000*, not really a book but a star chart. Although I don't use it much as I use my planetarium programs, I use it from time to time as a quick reference or as a teaching tool when a computer is not handy. The down side to published star charts is that they can be damaged by dew or wind (unless laminated, which adds other problems), and it seems that whenever you are star hopping, the object you are after is on a different page than the best stars to hop from. Printing your own charts from a planetarium program takes care of both issues. If the chart is damaged, you can always print another, and you can center the chart on the page as best fits your needs.

All of the above should be in the club library and available to members. See the NHAS web page (www.nhastro.com) for details on borrowing them.

★ Mike Stebbins



Donations

NHAS wishes to thank the following organization for its donation. Your financial support is greatly appreciated.
Smyth Library – \$100

The Bottom Line

The club account balance as of Feb. 4 was \$7276.69. Our current enrollment was 118 members.

★ Jim Warendra

Photo of the Month

The following photo was taken using an 8-in. f/10 C-8 with a 2x teleconverter,



Saturn, courtesy of Chase McNiss

The camera head was an Astrovid 100, no filtration, recorded to a Sony Hi8 Digital video camera and then captured as a BMP file to my computer.

I combined 16 images of 1/30th second using Picture Window and then processed the final images using PhotoShop. I think I over did it a little on the image processing. More experimenting will help.

★ Chase McNiss

Looking Back at Last Month

Opening Remarks. John Pappas, our new President, welcomed us to the first meeting of 2001.

Book of the Month. Larry Lopez brought *Optics* by Ronchi..

Scope of the Month. None this month.

Committees. ATMs: Larry said they have gone into hibernation for the winter.

He asked for interest in mirror making and surprisingly several hands went up.

Web Comm: **Barbara O'Connell** confessed that building her new house has held up enhancements to the web site. She asked for volunteers to help update various web pages.

Photo Comm: **Joe Malinowski** announced that their next meeting would be on Jan. 19 in New Boston.

YFOS Observatory. Larry noted that **Jim Young** has been doing a wonderful job keeping the site plowed of snow. The current gas heater developed a defect and will need to be replaced. No work will be scheduled until warmer weather. A

discussion then ensued about the lack of eyepieces for club scopes at YFOS. **John Pappas** said he would contact the Board about the matter since the Board is responsible for club property.

Public Observing. Ed Ting apologized about the non-

Skywatch at Massabesic due to poor directions from that group. His reviewed the upcoming skywatches in Concord, Derry, Londonderry, and the Freeze Your Buns event on Jan. 26. Astronomy Day will be held on May 12 and needs a volunteer event leader.

Treasury. Jim Warendra reported not much activity. Current balance is \$7350. He produced new membership cards but found a typo after the fact and will redo them. We still eagerly accepted the cards.

Evening Program. Our own **R.P. Hale** gave an intriguing presentation on ancient Mayan and Aztec calendars.

The earliest timekeeping, based on solar motions, was

done by the Olmecs around 1800 BC.

The Mayan period lasted from 1000 BC to 800 AD. They used a numbering scheme based on 20 (fingers and toes) and included a numerical zero. Time periods were based on intervals of 20, for example, 1 U'i'nal = 20 K'in (20 days). They used dots and horizontal lines to symbolize numbers.

Significant numbers in meso-America included 13 (number of lunations per year), 20 (number of fingers and toes), and 260 (lowest common denominator of 13 and 20). Their year consisted of 18 groups of 20 days each.

Special holy days were Aug. 13 and Apr. 20. Izapa was the first city to develop a formal calendar. Every city was built in alignment to the sunset point on Aug. 13.

The Toltec period (500-1200 AD) was followed by the Aztec period (1300-1520 AD). Aztecs were the last dominant culture prior to what R.P. called the Spanish Invasion in 1520. They reintroduced the Olmec/Mayan elements of timekeeping but lost the concept of zero. They also altered the numbering system to use dots and various other symbols.

R.P. went into detail about the Aztec Sun Stone (shown in last month's issue). 26 feet in diameter and 3 feet thick, it was consecrated on Aug. 13, 1479. You read the symbols from the center out-ward. In a series of slides, he explored the wealth of meaning in this stone.

A short question and answer session concluded this fascinating presentation.

★ Michael Frascinella

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NHAS Upcoming Events

SkyBound Show, Feb. 9, Planetarium

Event	Date	Time	Location
Feb. Club Meeting	Feb. 9	7:30 pm	Planetarium, Concord, NH
Astronomy Day at the Mall	Feb. 17	11 am-3 pm	Mall of NH, Manchester, NH
YFOS Coffee House	Feb. 23	dusk	YFOS, Hillsborough, NH
CMP Skywatch	Mar. 2	7:30 pm	Planetarium, Concord, NH
Mar. Club Meeting	Mar. 9	7:30 pm	St. Anselm's College, Goffstown, NH

