

Observer Staff  
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# The NHAS Observer

and

## Stellafane Scoop



Newsletter of the New Hampshire Astronomical Society

Volume 2004 No. 7

"All the news that fits in print"

July 2004

## Breezy Hill Ahead

### President's Message

Due to technical difficulties with my Internet Service Provider e-mail, I have become way behind in old mail and thus way behind in composing my monthly message.

Summer is here and the Summer Triangle of Vega, Altair, and Deneb ride the evening sky. We have had a lot of cloudiness lately and the chance of observing the sun has been higher than that of observing stars.



At this month's meeting, the feature is preparations for the NHAS pilgrimage to Stellafane on Aug. 13.

For newer members, this is an annual

convention of amateur telescope makers (ATMs) hosted by the Springfield Vt. Telescope Makers. The event features open field camping, all-night observing, swap tables, technical talks, and a contest for the best handmade telescopes and accessories.

Steeped in history from the days of Russell Porter, the site offers something for everyone. Visitors from around the world attend and chances are good that you might meet someone from another club that you used to belong to.

For those unable to attend Stellafane, there is a YFOS Coffee House scheduled for Aug. 13.

★ Joel Harris  
NHAS President 2004

### Public Observing Highlights

On Monday June 21, several NHAS members set up telescopes on the baseball field in New Boston for a skywatch put on by the library. About 40 people were signed up ... but only seven showed up (it was the first day of summer vacation.) Still, a good time was had, as the skies were dark and there wasn't a cloud in the sky.

Our annual visit to the Manchester VA Hospital took place on Tuesday June 29. About a dozen patients and their families took some time and viewed the moon and Jupiter.

★ Ed Ting

### Astro 201 Course

On Friday June 18, the last session of ASTRO 201 series was held at the club's dark sky site. The topic of the class was "A Discussion of Polar Alignment."

Chase McNiss led the class though a technical presentation combined with group questions and discussion. Virtually everyone's polar alignment questions were answered.

★ Bob Sletten

### Meteors Incoming

The summer season is now upon us, and July marks the start of the busy meteor season. Before you head out for a night of observing, print the set of four NAMN star charts, slip them into page protector sheets, and mark all the shower radiant positions on these maps. The NAMN maps can be found at

<http://www.namnmeteors.org/charts.html>. Set your printer to landscape mode.

In July we have three different Aquarid showers – the northern and southern

delta Aquarids, and the southern iota Aquarids. The southern delta Aquarids (SDA) reach a maximum of about 20 meteors per hour on July 27th. The southern iota Aquarids (SIA) reach a peak of 2 per hour on August 4th. The northern delta Aquarids (NDA) reach a peak of about 4 meteors per hour on August 8th.

Other smaller meteor showers occur in July. For more details, visit the North American Meteor Network (NAMN) web site: <http://www.namnmeteors.org>

★ Lew Gramer

### Now That Was a Transit

NHAS members blanketed the state to witness this rare event. Reports flooded the NHAS mailing list from Epsom, Lake Massabesic in Manchester, Hampton Beach, Rye, Nashua, Pack Monadnock Mountain, St Paul's Observatory in Concord, Hooksett, Bow, Osceola Campground near Waterville Valley, and Medford, Mass.



Photo courtesy Dan St. Hilaire

The next Transit of Venus is due in 2012. See you then.

**Noteworthy News**  
Scope for Iraq ..... Page 2

On the web at <http://www.nhastro.com/>

## Scope for Iraq

At the June meeting, we announced that NHAS had shipped a donated scope to a US Soldier in Iraq. The chain of events began when a former member of NHAS currently serving with the NH Army National Guard in the Iraq-Kuwait region asked if we could send him some old scope that the soldiers could use while off-duty.



The officers jumped at the idea. An NHAS member who wished to remain anonymous donated a Starmax127 scope (wow!) and several other members donated lots of accessories (see Donations, p. 3). The officers worked out the remaining details, shipped the package on June 21, and it arrived in Kuwait on June 29.

## AstroPhotons

The next meeting of the Photography Committee will take place on July 17 at 6:30 p.m. at YFOS. If the weather is clear, we will put the cameras to work.

## ATM True Grit

The slow summer days are upon us. Sign up for Stellafane – it is for amateur telescope making. That's all for now.

★ Larry Lopez

## YFOS Log Book

YFOS spring cleaning and mowing took place on June 12. **Steve Forbes** and son mowed the grass early and left me voice mail.

Not to be outdone, I arrived with the John Deere tractor and mulched the chippings and trimmed the grass with my electric trimmer. I also reestablished the path out to the stone wall.

I also left a string [trimmer] in the observatory expecting members to run it often so it doesn't rust. It was cheap – \$20 plus \$7 worth of string.

Not to be outdone, **Joe Derek** string trimmed with his gas trimmer. He did most of the work along the driveway.

Not to be outdone, **Chase McNiss** cleaned the warming room floor – on his hands and knees.

Not to be outdone, I started cutting trees down with wild abandon. Joe then tied them and used the John Deere to haul them into the woods where Chase hid them from the deer. We cleared the trees in the field – the ones to the west of the observatory and the ones south of the observing pad.

Curiously on Sunday **Linda** and I put up a retaining wall. On Monday morning, I discovered I overdid it.

★ Larry (Ouch) Lopez

## Looking Back at Last Month

**Opening.** **Joel Harris** opened the meeting under the tent.



**YFOS.** An event was scheduled for YFOS the next day to do grass trimming, cleaning the warming room, and mowing.

**Book of the Month.** **Don Ware** brought *The Handbook of Astronomical Image Processing with AIP4Win Software* by Richard Berry. **Larry Lopez** reported that he really liked it.



**Scope of the Month.** **Don Ware** discussed the scope for Iraq. See the article to the left.



**Public Observing.** **Ed Ting** reviewed the past skywatches and announced the ones to come.

**Venus Transit:** We viewed a lot of images of the transit and discussed the various problems we had encountered. We then relocated inside the planetarium and observed a lot more images on the dome.



All photos courtesy of Chase McNiss

**RP Hale** displayed sketches he made of the transit and of Venus just a little bit after transit showing a very, very narrow crescent.

Under the dome, we had several people running different laptops connected to the projector during the Venus transit review: **Bob Sletten**, **Nils Wygant**, **Chase McNiss**, **Matt Marulla**, and **Don Ware**. **Steve Stefanik** presented a video segment and photos.

**Other Presentations.** **Matt Marulla** also gave two short but intense presentations that were non-Venus related. He demonstrated the radioactivity of some lenses made with lanthanum (very dramatic presentation with a Geiger counter!). He also did a

(see Looking Back, page 3)

**Looking Back (cont'd.)**

nice spreadsheet comparison on effective aperture of various styles and models of telescopes. Again, this was very revealing and though provoking.

Newlyweds **Todd** and **Marci Miller** enjoyed the show along with **Linda Lopez**.



★ Michael Frascinella with assistance from Larry Lopez and Bob Sletten

**The Bottom Line**

Cash Balance: 3,458.32  
 Deposits: \$145  
 (memberships & t-shirts)  
 A/P: \$46.67 Peerless Insurance  
 Membership: 148  
 New member:

**Steven Lundahl** Canterbury, NH  
 (has Meade LXD55 10")

**Donations:**

Anonymous Star Max Telescope for loan to US Iraq/Kuwait soldiers  
 Anonymous Rigel Finder, Televue diagonal

**Chase McNiss** Eyepiece 15mm Plossl

**Nils Wygant** Eyepiece 10mm Plossl Sirius

**Mike Frascinella** Eyepiece 29mm

**Matt Marulla** Planisphere for Iraq latitude, 32mm Plossl Celestron, Norton's Sky Atlas

**Steve Forbes** Carrying Case

**Larry Lopez** Batteries, wrenches, tripod case, and other assorted (but very useful) tools

**Larry Lopez and Don Ware** Time (examined scope and prepared it for shipping)

Barbara O'Connell

**NASA Space Place**

**Space Weather**

By Patrick Barry and Tony Phillips

Radiation storms, 250 mile-per-second winds, charged particles raining down from magnetic tempests overhead ... it

sounds like the extreme weather of some alien world. But this bizarre weather happens right here at Earth.

"Space weather" occurs mostly within the gradual boundary between our atmosphere and interplanetary space, where the blast of particles and radiation streaming from the Sun plows into the protective bubble of Earth's magnetic field. But space weather can also descend to Earth's surface. Because the Earth's magnetic field envelops all of us, vibrations in this springy field caused by space weather reverberate in the room around you and within your body as much as at the edge of space.

One way to see these "geomagnetic storms" is to suspend a magnetized needle from a thin thread inside of a bottle. When solar storms buffet Earth's magnetic field, the needle will move and swing. At higher latitudes, more spectacular effects are the aurora borealis and the aurora australis. These colorful light shows happen when charged particles trapped in the outer bands of Earth's magnetic field get "shaken loose" and rain down on Earth's atmosphere.

And because a vibrating magnetic field will induce an electric current in a conductor, geomagnetic storms can have a less enjoyable effect: widespread power blackouts. These storms can also induce currents in the metallic bodies of orbiting satellites, knocking the satellite out temporarily, and sometimes permanently.

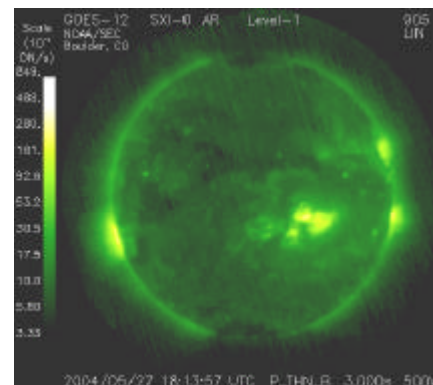
Partly because of these adverse effects, scientists keep close tabs on the space weather forecast by watching the Sun. The NASA/ESA SOHO satellite and NOAA's fleet of GOES satellites keep a constant watch on the Sun's activity. If a "coronal hole"--where high-speed solar wind streams out from the Sun's

surface--comes into view, it could mean that a strong gust of solar wind is on its way, along with the geomagnetic storms it will trigger. And an explosive ejection of hot plasma toward the Earth--called a "coronal

mass ejection"--could mean danger for astronauts in orbit. The advancing front of ejected matter, moving much faster than the solar wind, will accelerate particles in its path to near the speed of light, spawning a radiation storm that can threaten astronauts' health.

Look for coming articles for more about space weather and about NOAA's efforts to forecast these celestial storms. Meanwhile, read today's space weather forecast at <http://www.sec.noaa.gov/>. Kids can learn about the geostationary and orbits of the GOES satellites at [http://spaceplace.nasa.gov/en/kids/goes/goes\\_poes\\_orbits.shtml](http://spaceplace.nasa.gov/en/kids/goes/goes_poes_orbits.shtml).

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.



This image shows the outer solar atmosphere, or corona, as viewed by the GOES 12 Solar X-ray Imager (SXI). It shows the plasma at 4.0 MK (million degrees Kelvin). Bright areas are associated with sunspots seen in white light images and may produce explosive events known as flares. Dark regions are coronal holes where the fastest solar wind originates. Image courtesy of the Space Environment Center/NOAA.

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**DEADLINE for Aug. 2004 Issue: 5 PM July 31**

E-mail articles to the Editor.

**CHANGE OF ADDRESS** – Notify the Treasurer of changes to postal or e-mail address.

**How to Join N.H.A.S.**

**Write to us:**

NHAS  
P.O. Box 5823  
Manchester, NH 03108-5823  
Attn: Treasurer

**Send E-mail to:**

[info@nhastro.com](mailto:info@nhastro.com)

**Use our web site:**

<http://www.nhastro.com/>

**This month's contributors:**

Joel Harris, Ed Ting, Larry Lopez, Bob Sletten,  
Barbara O'Connell, Lew Gramer, Chase McNiss,  
Dan St. Hilaire



**2004 Officers**

**President: Joel Harris**  
**Vice President: Don Ware**  
**Treasurer: Barbara O'Connell**  
**Secretary: Michael Frascinella**

**New Hampshire Astronomical Society**  
**P.O. Box 5823**  
**Manchester, NH 03108-5823**



**Stellafane Preview, July 9, St. Anselm**

**NHAS Upcoming Events**

<b>Event</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>
July business meeting	July 9	7:30 p.m.	St. Anselm's College, Goffstown, NH
Coffee House	July 16	disk	YFOS
Photo Comm. Meeting	July 17	6:30 p.m.	YFOS
Goffstown Skywatch	July 28	8:00 p.m.	Goffstown Public Library
CMP Skywatch	Aug. 6	7:30 p.m.	Planetarium, Concord, NH
Stellafane Convention	Aug. 13-14		Springfield, Vt.
Coffee House	Aug. 13	dusk	YFOS
Aug. business meeting	Aug. 20	7:30 p.m.	Planetarium, Concord, NH