

Observer Staff  
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# THE NHAS OBSERVER AND MARTIAN CHRONICLES



Volume 2003 No. 9

"All the news that fits in print"

September 2003

## Mars and Skywatches Abound

### President's Message

It has been an exciting month for observing Mars. Weather has been cooperating and the media has helped to put out the information about the near approach of this interesting planet. Those of you who have had the opportunity to take photographs are encouraged to bring them to the September meeting to share with the general membership and explain what techniques you used.

I want to thank those who were able to attend the CMP and Pelham High School Skywatches on such short notice. Your participation was greatly appreciated. There were many excited families who got to see the stars.

Regards,

★ Joe Derek  
NHAS President 2003

### Public Observing Highlights

On Weds. Aug. 27, NHAS members were invited to set up their telescopes in conjunction with the Mars events at CMP. I don't know what they were expecting, but over 800 people showed up! Some club members didn't get home until after 1 a.m. Thursday morning.

On the following night, we were at Pelham High School (thank you Joe Derek for filling in and setting up this event for the club.) They told us to expect about 50 people.

When we got there, the town had set up an impromptu drive-in theater in the soccer field behind the school, using large white panels, a DVD player, and a high-powered digital projector. The organizers told us about 500 people were there, but I could have sworn there were more – many more.

After "Monsters, Inc" ended around 9:30 p.m., the crowd swarmed over the 12 or so NHAS members who had shown up with their telescopes. A great time was had by all, even though it was another late night.

Special mention goes to club member **Herb Bubert**, who not only attended both events that week, but who went back to Chester and set up his scope again after the skywatches. Can't get enough observing, Herb?

★ Ed Ting

### Up North Skywatch

One of the Parks Service folk I met at the Pinkham Notch Interpretive training asked, somewhat at the last moment, if I would bring a scope to Weeks State Park on Aug. 14. W.S.P. is a small hill with a cool stone tower, overlooking the area north of Twin Mountain, NH.

After a slide show about local logging history, about 30-40 people of various ages sat on the lawn while the park service folks spoke about meteor showers. Mars popped up along with the Moon over the distant line of the Presidential Mountains to our east. Most had never seen either through a scope of larger size.

Although I live north of the Ossipee Mountains, this site was 73 miles north of me, on a level with Berlin, NH. They have really dark skies!

Much fun was had by all.

★ Marc Stowbridge

### Mars Madness at CMP

The special Wednesday night Mars observing session at CMP went as planned and with an extraordinary turnout. Officially starting at 9:30 p.m., there were already long lines at the

early arriving telescopes when I got there at 8:45 p.m. As other telescopes arrived and were setup, the lines migrated around to equalize in length. In 30 minutes, I lost count at about 150 people who had already visited my telescope in the first 30 minutes.

This continued well into the night, when, at about 11:30 p.m., the lines seemed to clear away. It was estimated that over 800 visitors came and looked at Mars! A HUGE thank you to the following people who made this possible. The public loved it!

– **John Blackwell**, 8-in. SCT/GM8

– **Larry & Linda Lopez** 4-in. Traveler/AP400

– **Mark Stowbridge** 8-in. SCT LX90

– **Jim McCarthy**, 9.25-in. Celestron Mak, Orion Imager, TV.

– **Mike Townsend** 4-in. C102 & 9.25 CelestronMak

– **Joe Derek**, 12.5-in. Super Newtonian

– **Dave McDonald**, CMP, Dob 12-in. Odyssey & CMP Star Quest 6-in. Dob

As for seeing conditions, Mars was visible for over 90% of the time, with only a sparse cloud or two obscuring the view for a few minutes. Other than that, the sky was clear with moderate seeing conditions. Most people could easily see the polar ice cap, and at times, other details were plainly visible.

★ John Blackwell

**Noteworthy News**

Photos of Mars Up Close ..... Page 2

## Photos of Mars Up Close

A few NHAS members took photos of Mars as it made its superb close approach to Earth at the end of August.

From **Joe Dechene**

Here are some Mars photos I took with my 14.5 inch scope and a Philips ToUCam Pro Webcam.



## In the News

Joe Derek was quoted in an article about Mars in the Nashua Telegraph for Aug. 27, 2003.

"Everybody's really interested . . . this is an opportunity to see it like you've never seen it before," said Joe Derek Jr. of Hudson, president of the New Hampshire Astronomical Society.

The article included the usual bubbling but technically ignorant enthusiasm as well as a snooty remark about the "weird scale used by astronomers to measure brightness (where smaller numbers mean brighter stuff)," the quantity we know as visual magnitude.

From **Steve Stefanik**:

You can see the latest image I made of Mars on 8/29/03 using a 10-inch SCT, 20 mm eyepiece projection, 185 frames captured with a Panasonic WV 3240 video camera, combined using AstroStak, processed with Adobe PhotoShop LE. Central meridian was approximately at 50 degrees longitude 04:15 UT.

<http://www.mv.com/ipusers/astron/images/Mars082903.gif>



## Thank You

I wish to thank all the club members who came to the astronomy sale of Ed's prizes and surprises found in the cellar. The turnout was great and much appreciated. People are still calling about what is left and to check out the new items that are being put out as we find them. Thank you again for such an awesome and continuing response.

Yes, I will keep my promise to so many of you, the tool and equipment sale will be held on Sat. Sept. 13 and Sunday Sept. 14, 9 to 6 each day. It will include the garage, machine shop, all tools and equipment, electronic test equipment, as well as all left over astronomy items from the last sale.

Thank you all so much,

★ Cindy Dougherty

## Thanks for the Memories

First of all, I was out of town during Ed's remaining days and the subsequent events. I was saddened to hear of his passing. I am not good at these types of things, but I do wish to express my sincere condolences to his family. I have many fond memories of Ed and I am honored to share them with everyone else.

I've been in NHAS for a little over two years now and have fond memories of Ed. I remember my first Astronomy day at CMP and Ed had his solar

equipment setup viewing the Sun.

Conditions were excellent and I saw my first solar flares through his filter. He was describing the details and teaching me about what I was looking at. Before I knew it, I was answering questions and helping Ed with the crowd. After a bit more, he asked me to cover a while so he could take a break. He was a great teacher and I was being mentored without even knowing it.

There were also several meetings where I enjoyed sitting with Ed and learning from his experiences. I was also fascinated with his background and growing up near the General Electric R&D center where he worked, it was wonderful listening to his stories of various projects he worked on. It was fun comparing notes to several DoD projects I have worked on. Moreover, my Dad also worked for GE for 39 years so those conversations added special meaning.

The most memorable time was the time Ed invited me to his home to see his observatory and all of his equipment. The walk through his house and seeing all the history was like going to a museum. In fact, his house could be one easily. I saw and touched his scope that won at Stellafane and all of his other contraptions throughout the years. My father was a very resourceful person as well and he always had some project going. His cellar would contain all kinds of tools or rare material. His talent was endless just as Ed's was. Visiting Ed's house reminded me of these times with my own Dad and helping him with some of those projects. In many ways, Ed reminded me of my own father which is why I enjoyed so much to be around him and why it will be so easy to remember him.

Farewell, my friend, and thank you for the memories.

★ Rich DeMidio

## Web Uploads

Slow progress is being made behind the scenes on the web site.

Not sure which NHAS email list to use? Go here to learn more about them.

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

★ Barbara O'Connell

## Solar Projector

Recycle an old finder scope into a solar projector



I changed the finder scope on my LX90 to a correct image from Orion, leaving me with a toy too good to toss or forget. I replaced the eyepiece with an old 3000 series 6 mm eyepiece, without chrome barrel. The EP is held in place with some electrical tape for a shim and quick set epoxy. I drilled and tapped the base bottom and back (1/4 x 20), allowing it to mount on a tripod and to hold a threaded rod leading to an aluminum frame. The frame holds a 4-inch circle of paper on which one can mark sunspots with a felt tip marker.

It is viewable from either side, making it crowd friendly. The sun shield puts the paper in shadow for better viewing. The contraption can be mounted back on the scope and will track the sun, making it even easier to use.

★ Marc Stowbridge

## The Bottom Line

Cash Balance: \$3,495

Payable: \$1,100

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Net Balance: \$2,395

Current Membership: 174 (a new record!)

Recent New Members:

**Anne Wheeler** Amherst

**David York** Weare

**Mike Paulin** Dublin

**Tom Jacobs** West Lebanon

**Brett Forlano** Manchester

Welcome to NHAS, one and all!

### Donations:

Thanks to **Chase McNbiss** for getting another 21 pound counterweight for the new Titan mount at the observatory.

### Dues

This is a reminder that annual dues are now being collected for the 2004 membership year which starts Oct. 1. Dues- \$15.00 (check payable to NHAS) *Sky & Tel Magazine*---- \$32.95 (check payable to Sky Publishing Corp.)

*Astronomy Magazine*--- \$29.00 (check payable to Kalmbach Publishing Corp.)

★ Jim Warena

## ASTRO-201 Course

At club meetings over the past few months, we have been discussing ideas for a follow-up introductory course offering. We have dubbed this series ASTRO-201. The intent is to have a more concentrated topic offering for this year's classes. Each class syllabus will depend on instructor inputs and will be published prior to each class.

The Membership Committee offers the following topics:

- Telescope Collimation
- Polar Alignment
- Double Stars
- Variable Stars
- Elements of Observing
- Workings of GoTo Telescopes

These classes will be similar in format to our popular Astro-101 series. There are no prerequisites. Classes are free and open to all members. The presentation will be introductory in nature and include a question and answer period. There will be a 30 to 50 minute lecture by a qualified instructor. Classes will be held in the warming room at our club's dark observing site (unless otherwise noted). Weather permitting, there will be observing afterwards. Classroom instruction will generally be held even if it is cloudy.

Several people have suggested photography topics. There are many possibilities for astrophotography lessons, so many in fact that a separate series could be run. However, we have an active Astrophotography Committee and it is best that this group work these imaging related topics.

At this writing there is still one more class from the Astro-101 series that will occur. The "Using YFOS" session will be scheduled when the new telescope equipment has been completely installed at YFOS.

★ Bob Sletten

## Looking Back at Last Month

**Opening.** Joe Derek opened by announcing that Astronomy Calendars were in, and he had 40 to sell. Price would be \$10.00 for NHAS members, \$12.00 for non-members.

Joe also said the Astronomical Society of Lebanon (Maine) invited NHAS to attend their star party.

**Book of the Month.** Joel Harris discussed *Parallax* by Alan Hirschfeld. Joel explained that Mr. Hirschfeld's presentation at the Stellafane Evening Talk got him interested. He bought the book for about \$16.00 (a good price).

**Scope of the Month.** none

**Public Observing.** Ed Ting said the July 30th Goffstown public skywatch was a success. Attendance was good, and they had about 13 scopes that night. Ed was also the guest speaker in Houston, Texas, at the University of Houston. All his expenses were paid by the local astronomy club. Ed said that the smaller Celestron Nexstar scopes were phasing out, and as a result would be picked up by Costco. The scope usually sold for about \$400; at the end of this month Costco would be selling them for \$199.

**Joe Derek** reviewed the Geneva Point skywatch, which drew 50-60 people.

**Committees.** Web: no news.

ATMs: **Larry Lopez** got the Foucault tester from **Ed Dougherty's** home. Larry also procured a 10-inch mirror.

Membership: **Bob Sletten** will be working on a list of topics for the next Astro 201 course. Also, when the Titan mount is setup and working, training classes will be made available. Photo: **Larry Lopez** said **Herb Bubert's** new photos of Mars had been posted on the Yahoo photo list.

(See Looking Back, p. 4)

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### Looking Back (cont'd.)

**YFOS.** Larry Lopez talked about grass cutting at YFOS; he planned on cutting the lawn the next day (Aug. 16) before the rain.

**Titan Mount.** The mount was delivered to Chase McNiss in four boxes. Chase showed us a picture of it on his dining room table.

On Aug. 16th, the plan was to bring the Titan up to YFOS and get it on the pier. Setup would come later. Possibly if Sat. night was clear, Chase would go back to YFOS and try to setup the mount and polar align Larry's C-14.

Chase mentioned that there was a 106-page manual on the Gemini GOTO system that came with the Titan. The manual was on the Losmandy web site as a PDF document also.

The Gemini system has an onboard database of over 40,000 objects and facilities to allow you to program your own list of objects. This feature could be useful for teaching or for groups.

The Titan mount and scope would be ready for use by the next Coffee House, for Mars viewing. Larry said he would bring the C-14 up to YFOS next day (Aug. 16th).

**Truss Mount.** Chase McNiss reported that the truss mount was being held up; and as a result of the delay, Jim the vendor agreed to waive the shipping costs, which will save NHAS about \$200.00. Chase says that Jim would try to deliver it by the end of August.

**Bushing Update.** Joel Harris showed us the bushing he made for the mount – anodized a bright red. It looked great. Good job Joel!

**Treasury.** Jim Warendra was not present, but Joe Derek said that Barbara O'Connell sold about \$100.00 worth of t-shirts recently at Stellafane.



Photos by Bob Sletten

**Evening Program.** The show was presented by Joe Derek and Chase McNiss. Both video and still photos of Stellafane were included. We had some A.V. technical problems but generally it came off as a good representation of Stellafane. We even saw a little of our editor on the tape.

★ Todd Miller



### NASA Space Place

#### Careful Planning and Quick Improvisation Succeed

By Tony Phillips

On December 18, 2001, ground controllers at JPL commanded NASA's Deep Space 1 (DS1) spacecraft to go to sleep. "It was a bittersweet moment," recalls Marc Rayman, the DS1 project manager. Everyone was exhausted, including Deep Space 1, which for three years had taken Rayman and his team on the ride of their lives.

DS1 blasted off atop a Delta rocket in 1998. Usually built from tried-and-true technology, Deep Space 1's mission was to test 12 advanced and untried technologies. Among them, an experimental ion engine, a solar array that focused sunlight for extra power, and an autopilot with artificial intelligence. But everything worked.

Indeed, DS1 worked so well that in 1999 NASA approved an extended mission: a visit to a comet. "We were thrilled," says Rayman.

And that's when disaster struck. DS1's orientation system failed. The spacecraft couldn't navigate!

Ironically, the device that broke, the 'Star Tracker, was old technology. The DS1 team substituted one of the 12 experimental devices – a miniature camera called MICAS. With Comet

Borrelly receding fast, they reprogrammed the spacecraft and taught it to use MICAS for navigation, finishing barely in time to catch the comet.

In September 2001, DS1 swooped past the furiously evaporating nucleus of Comet Borrelly. "We thought the spacecraft might be pulverized," Rayman recalls, but once again DS1 defied the odds and captured the best-ever view of a comet's heart.

By that time, DS1 had been operating three times longer than planned, and it had nearly exhausted its supply of thruster-gas used to keep solar arrays pointed toward the Sun. Controllers had no choice but to deactivate the spacecraft, which remains in orbit between Earth and Mars. Even asleep, DS1 continues to amaze.

Rayman has moved on to a new project, Dawn, an ion-propelled spacecraft that will visit two enormous asteroids, Ceres and Vesta, in 2010 and 2014. "Dawn is based on technologies that DS1 pioneered," he says.

Find out more about DS1 at <http://nmp.jpl.nasa.gov/ds1>.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with NASA.

### Min-Park Skywatch

My neighborhood has an organization, originally formed some years ago to protect an open area and keep it as a mini-park. We used to have cookouts and the like, but it's been largely defunct for a few years.

I managed to nag the organizer into sending out flyers to get people to come to an astronomy evening.

We met at 9 p.m. at the mini-park, and I showed them the constellations and stars that were visible through the haze, passing on what I hoped was a subtle anti-light-pollution message as well.

Then I put one of my telescopes on the Moon and the other on Mars and they all got a look or two. Conditions were good for both: the polar cap and Syrtis Major were visible, for example.

There were about twenty-five people there, and I think most of them enjoyed the views. It was all over by 10 p.m.

★ John Bishop

**DEADLINE Oct. 2003 Issue: 5 PM Sept. 27**

E-mail your articles to the Editor. Phone if you have a late submission.

**CHANGE OF ADDRESS**

Notify the Treasurer. Include your full name and new street address. If changing an e-mail address, specify whether you want to add, modify, or delete an e-mail address.

**This months' contributors:**

Joe Derek, Ed Ting, Larry Lopez, Bob Sletten, Jim Warena, Todd Miller, Marc Stowbridge, John Blackwell, Joe Dechene, Steve Stefanik, Cindy Dougherty, Rich DeMidio, John Bishop

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

**Write to us:**

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Attn: Treasurer

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

**Use our web site:**

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

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Treasurer: Jim Warena

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



**Mars, Sept. 12, St. Anselm**

**NHAS Upcoming Events**

Event	Date	Time	Location
September meeting	Sept. 12	7:30 p.m.	St. Anselm's College, Goffstown, NH
Coffee House	Sept. 26	7:00 p.m.	YFOS
Dover Skywatch	Oct. 1	7:30 p.m.	Woodman Park School, Dover, NH
CMP Skywatch	Oct. 3	7:30 p.m.	Planetarium, Concord, NH
October meeting	Oct. 17	7:30 p.m.	Planetarium, Concord, NH