



HCAS Happenings for July and August

Carol and I were out of town for the July general meeting and received no minutes. So, I've included some personal activities from members to bring us all up to speed on the general news of interest.

STELLAFANE

Many of you may not have realized that HCAS member Joe Manning took his astounding dobsonian up to the premiere event for hand crafted telescopes, StellaFane. Here are some



observations from Joe: StellaFane was wet. Andy and I went up on Thursday and spent the night in the Holiday Inn in Springfield. Thursday night was warm and clear and things looked good for the weekend except for a chance of rain. We got up early on Friday to get a good campsite. When we were leaving the hotel around 7:30 it started to rain. Rain all morning, rain all afternoon. The rain let up between 8 and 10 Friday evening for the guest speakers but then it rained all night. Needless to say there was no optical competition that day. Mechanical competition was held on Saturday, we took 4th place for craftsmanship. There was some very tough competition.

It cleared up enough Saturday to get everybody excited about the optical competition. Everything looked good until around dark. Then came the cloud cover. The competition was called off around 11. So you know all the clouds cleared out about 11:15.

We met some nice people and got some good advice for improving scope performance, fans, dew heaters and such. I met John Dobson on Friday. We stood in the rain and talked for a few minutes. That was the highlight of Friday. All in all it was a nice weekend. It could have been dryer though. I think we will return next year. More information is posted on their website, <http://www.stellafane.com/> go to the 2003 convention post-convention page.

We're delighted With Joe's entry and his consistent participation in the club's events! He's certainly become one of our more active new members and continues to make significant contributions to the success of the HCAS! Well done, Joe (and Andy!). Next year!!!!

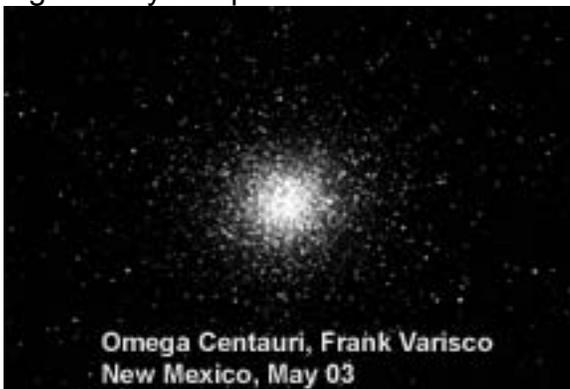


[New Mexico Skies](#)

Frank Varisco sends this message:
Hi Steve:

If you have room in the next AstroViews these are a couple of images that I took while I was an New Mexico Skies last May. I got a rare peak of Omega Centauri--some say the most spectacular globular in the sky. We were just far south enough to see it. I also took this image of the Whirlpool Galaxy. What makes this pick interesting is that a satellite drifted across as I was imaging.

The weather was kind of disappointing as they were experiencing similar weather to the very wet Spring we were having. Normally, that's not a problem so going there is definitely a treat. It's a haven for astronomers and imagers from all over the World. There were folks from Germany, England, a group of astrophotographers from Maine to West Virginia, and us! If there weather is bad Mike Rice (the proprietor) has a 'Starbucks-class' cappuccino bar. A nice shot of java to keep to up through the night always helps.



From Larry and Fran Armstrong

I came across this site about a year ago and have been using the programs to organize notes and helping with planning my targets for the evening. The Ultimate Messier Observation Log (TUMOL) is an outstanding program and the others are just as good. Best of all they are all free. This is a great way to organize and maintain your observation records, not to mention that once you start to play with them it's hard to stop.

<http://www.davidpaulgreen.com/software.html>

[Display at Edgewood Library](#)

With her usual energy, Grace Wyatt led the effort to display astronomy and club items at the Edgewood Public Library. Steve Krall, Larry and Fran Armstrong and other members worked to design the best layout. Grace and Steve carried out the plan and by all reports it has certainly generated interest. We've had many folks that came out to our public Mars Event tell us that they saw the display and that prompted their interest in the club.

Observatory Operations

Carol, Bill G. and I spend a large chunk of this past weekend working on final calibration of the Observatory scope. The end result was to determine that we appear to have a substantial software "glitch" in the hand controller that manages the GOTO functions.

The mount tracks fine, and the scope collimation is super.

I spoke with Astro-Physics today and they concur with the need to upgrade the software. I have obtained the necessary password and etc and have downloaded the upgrade. We will install this at the earliest opportunity and I'll enlist Carol and Bill to give it another go at calibration.

So...we're still chipping away at this and if the upgrade does the trick, we'll start training classes within two weeks. As Bill observes: "I think we accomplished something at the observatory last night. It is now at the functional level of the old observatory in that the scope will track and photography is possible as before and objects can be shown to the general public with minimal effort. It is beyond the functionality of the old observatory in that the scope and building are much better and the versatility of both far exceeds the old observatory. I don't think we need to say "we're working on it" any more!"

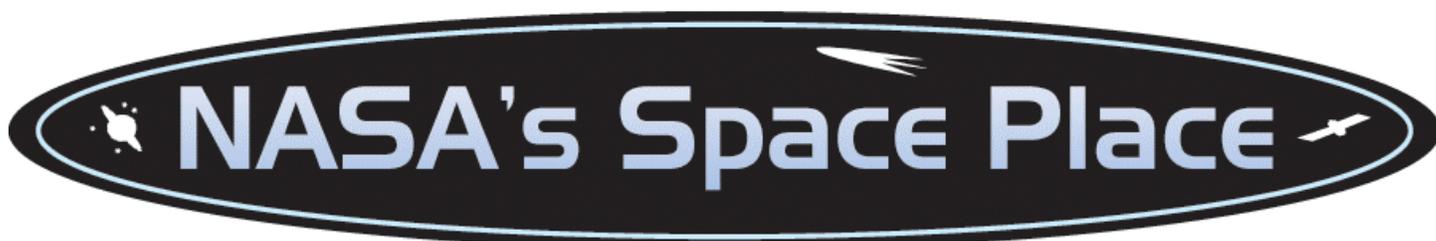
September EVENTS

6st. Public Open House. Harford Technical High School Parking lot, adjacent to the Observatory Grounds.

9th. General Meeting 7:30 p.m. **Speaker is Dr. Harold Williams of the Montgomery College Planetarium. He will give a talk on astrolabes.**

20th. *StarBQue and Star Party* >>Members_Only<< dusk at the observatory.

27th. *Star Party* >>Members_Only<< dusk at Broad Creek



Careful Planning and Quick Improvisation Succeed in Space Biz 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. Most spacecraft are built from tried-and-true technology-otherwise mission controllers won't let them off the ground. But Deep Space 1 was different. Its mission was to test 12 advanced technologies. Among them: an experimental ion engine, a solar array that focused sunlight for extra power, and an autopilot with artificial intelligence. "There was a good chance DS1 wouldn't work at all; there were so many untried systems," recalls Rayman. Nevertheless, all 12 technologies worked; the mission was a big success.

Indeed, DS1 worked so well that in 1999 NASA approved an extended mission, which Rayman and colleagues had dreamed up long before DS1 left Earth-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! What do you do when a spacecraft breaks and it is 200 million miles away? "Improvise," says Rayman. Ironically, the device that broke, the 'Star Tracker,' was old technology. The DS1 team decided to use one of the 12 experimental devices-a miniature camera called MICAS-as a substitute. 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. "It was a very close shave."



This was the final image of the nucleus of comet Borrelly, taken just 160 seconds before Deep Space 1's closest approach to it. This image shows the 8-km (5-mile) long nucleus from about 3417 kilometers (over 2,000 miles) away.

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. It captured the best-ever view of a comet's heart and emerged intact.

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.

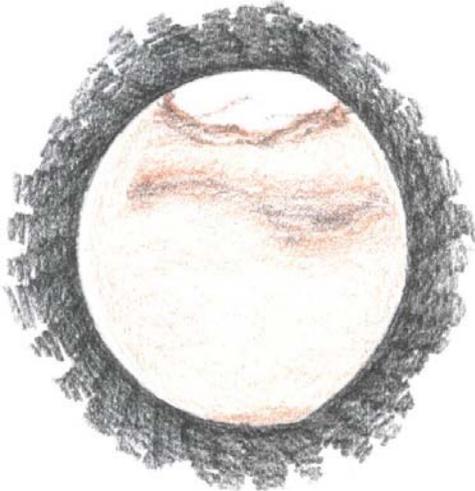
Rayman has moved on to a new project-Dawn, an ion-propelled spacecraft that will visit two enormous asteroids, Ceres and Vesta, in 2010 and 2014. "Dawn is based on technologies that DS1 pioneered," he says. Even asleep, DS1 continues to amaze.

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

Mars Week

Our Mars Week events were very well attended. The first Saturday and Sunday evenings were clear and we had large crowds. Even during the week, on those nights that were not clouded over, good numbers of people came out to check out the red planet. In between viewing, Mark Kregal and I gave star lectures although now that Mark has discovered the "green laser" it at times took on the look of Jedi Knights doing battle with light sabers!! Several members have been sketching Mars while observing. I've included some of those...outstanding work I'd say!

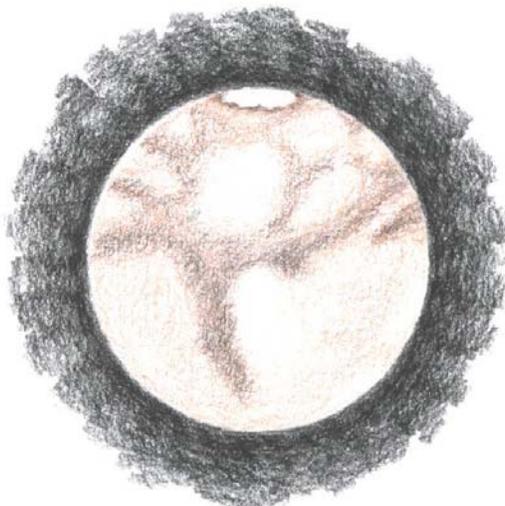
This series of three are an example of great observing work by Bill Geersten. Bill did all these using his 6" f-8 refractor working at 200X. South is up in all images.



5/03/2003; 02:30am; 06:30UT
Tuckahoe S.P., MD
Note: huge Polar cap & gibbous



8/22/2003; 23:30pm; 03:30UT
Timonium, MD
Soles Lacus: "The Eye of Mars"



9/05/2003; 22:30pm; 02:30UT
Timonium, MD

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