



Capitol Skies

The newsletter of the Madison Astronomical Society

September/October 2005

Moon over Monona Terrace October 7

by Tim Ellestad

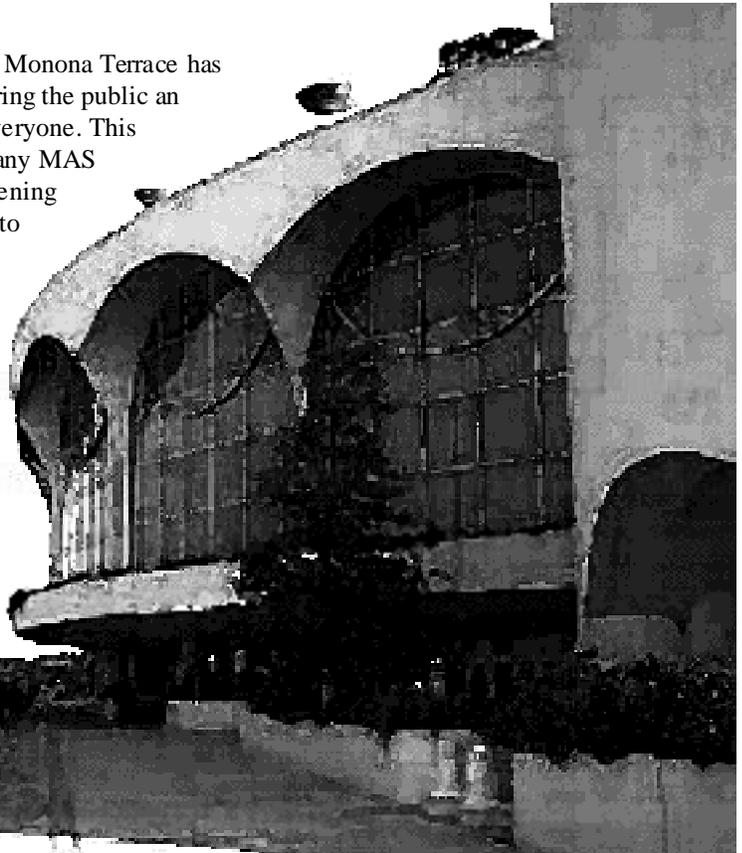
A really great MAS event is again at hand. Moon Over Monona Terrace has become our premier community outreach effort, offering the public an evening of lunar observing and a truly fun time for everyone. This is a very important undertaking for MAS. It is essential that as many MAS members as possible participate on October 7th and reserve the evening of October 8th as a weather alternative. It is our main opportunity to fulfill one of our fundamental declared purposes - to make astronomy available to the public and to encourage them to take an active involvement. Functions such as this are crucial to sustaining the critical tax-free status that MAS enjoys. Moon Over Monona Terrace is an open invitation to folks of all ages to join us on the Evjue Rooftop Gardens of the Monona Terrace Community and Convention Center to indulge their curiosity and to have an enjoyable time discovering the details of the Moon.

Public response to previous Monona Terrace events has been terrific. Like us, Monona Terrace Community and Convention Center appreciates the public turnout as well and looks forward to Moon Over Monona Terrace each year.

Monona Terrace promotes the event extensively themselves, both directly and through their press releases. In addition, MAS posts announcements in the public libraries, schools, and on public bulletin boards. So, it is absolutely essential that many MAS members participate to make sure that the event will live up to everyone's expectations. All variety of instruments - binoculars, refractors, Newtonians, Schmidts, Dobsonians - any optical device that might be used to view the moon will be needed to show people that real participation in astronomy can be at any level. Members not bringing equipment will be needed as well to answer questions, take care of hand-out material and generally assist. In the past, Moon Over Monona Terrace has been a happy, enjoyable outing in one of Madison's most spectacular settings. This year should be the same.

We can start setting up as early as 5:30 PM. Members bringing equipment may use the loading dock located on the northeast end of the Convention Center. The driveway to the loading dock starts at the traffic lights on John Nolan Drive just to the northeast of the Monona Terrace parking ramp tunnel. Turn off John Nolan Drive at these traffic lights and make an immediate hard right turn. The dock will be in plain sight. Members may use the large cargo carts in the dock area to transport their equipment to the rooftop via the service elevator which is also located right in the dock area.

The event has been promoted to begin at 7:00 PM and members of the public usually begin to arrive right on time. The announced concluding time is 9:30 PM. The



last stragglers should be packed and gone by 10:00 PM. The concession stand will be open.

If Monona Terrace has no other traffic for the loading dock that evening (fairly likely) members bringing equipment will probably be allowed to park in the loading dock area in an orderly fashion. If not, equipment will have to be delivered to the dock and vehicles will have to be parked elsewhere until departure. If this is the case, the MAS has authorized a \$2 dollar parking stipend be

Continued on page 5

Notes From Your Treasurer

by Mary Ellestad

I'm very happy that MAS has a number of new members who have joined since June. Welcome to Jeff Bonte, John Hubbard, Kate Kruger, Chad Metcalf, John Quigley, Dave Minerath, Ted Casper and Michael Wolkomir. Some of you have already been out to YRS and to our last meeting at the new and improved Space Place. If you are an observing member and need YRS orientation, please call Tim Ellestad at 233-3305 and he will set that up with you.

You just received your annual MAS dues and subscription renewal statement. At the last meeting there was a discussion and vote for a modest dues increase. The regular membership and observing privilege will each be \$5 more. There are two items that are mainly responsible for this - increased insurance rates and printing of our newsletter. We did a lot a research on insurance and found that we can't do much better for the same coverage. From our member survey and discussion at meetings, we also know that most members like getting a nicely formatted newsletter in the mail. There hasn't been a dues increase for at least 8 years and we hope that there won't be another one for quite a while after this.

I have already received some of your dues and subscription payments and I want you to know how much I appreciate this. This really helps me with my next fun jobs of preparing the MAS budget and getting all the subscriptions sent in by the end of October. By the way, Astronomy has already sent 3 renewal notices and I'm ignoring them because they know that all of our club renewals are sent in at the same time. Please do the same.

Thanks Again Everyone.

From the President's Desk

by Neil Robinson

Greetings Fellow MAS'ers. Here we are in the cross-quarter-day season with some good observing weather in prospect. Perseid showers and the Mars opposition are highlights of August's delights.

MAS has new digs at the NEW UW Space Place at the Villager Mall on far South Park St. Jim Lattis gave us an inaugural tour at the Aug meeting.

Also at the August meeting, we voted to increase the dues for the first time in about 7 years, by \$5 for regular memberships and another \$5 for observing member privileges. This will stop the drain which was beginning to affect the treasury and hopefully we can make it through the better part of another decade without raising dues again.

As for officers, the June picnic election meeting returned exactly the same slate of officers for next year except that Jeff Shokler has replaced Greg Selleck on a board of directors at-large seat. Thank you Greg for your service! And welcome aboard Jeff! (I ran for re-election, after all, when no-one would stand for Prez [much less oppose me]). Maybe next year.

We are well along on preparations for this year's Moon Over Monona Terrace event so mark your calenders for the first week of October, Friday the 7th for MOM. We'd love to have a large turnout this year again. This has become our premier public- interaction event. Thanks are due to John Rummel, (your newsletter editor) for creating an MAS brochure for public distribution at MOM, it looks great!

Calendar of Events

- | | |
|--------------|--|
| September 9 | MAS monthly meeting at Space Place (<u>2300 S. Park St., in the Villager Mall</u>). Business meeting 7:00 pm, main meeting 7:30; Mark Hanson and R. A. "Doc" Greiner will give a talk on their experiences doing astronomical imaging at New Mexico Skies. |
| September 10 | Space Place Family Workshop, 10:00 am |
| September 13 | Space Place Guest Lecture, 7:00 pm, Dr. Bob Benjamin, Physics Dept., UW-Whitewater, will talk about the UW-Madison-based infrared survey of the Milky Way called GLIMPSE. |
| September 17 | Space Place Family Workshop, 10:00 am, science workshop by UW chemistry department students. |
| September 24 | Space Place Family Workshop, 10:00 am. |
| September 27 | Space Place, Eyes on the Skies Lecture, 7:00 pm. |
| October 7(8) | Moon over Monona Terrace. MAS' premier annual outreach event will take place on Friday the 7th with Saturday the 8th being the rain/cloud date. See first page for details. |
| October 8 | Space Place Family Workshop, 10:00 am |
| October 11 | Space Place Guest Lecture, 7:00 pm, Dr. Bob Bless, Astronomy Dept., UW-Madison, will talk about the history of the Orbiting Astronomical Observatory-2. |
| October 14 | MAS monthly meeting at Space Place (2300 S. Park St., in the Villager Mall). Business meeting 7:00 pm, main meeting 7:30. |
| October 15 | Space Place Family Workshop, 10:00 am, science workshop by UW chemistry department students. |
| October 22 | Space Place Family Workshop, 10:00 am |
| October 25 | Space Place Annual Telescope Fair (MAS volunteers most welcome), 6:30 to 9:00 pm. |

Observing Mars in 2005

by John Rummel

After all the hoopla surrounding the opposition of Mars in August 2003, you may be forgiven for thinking the party is over for a few years. Though Mars will not be as close or as big as it was two years ago, in at least two ways the 2005 opposition will be even better. First, opposition 2005 occurs during the cooler months of October and November (the actual date of the opposition is Nov 7 but Mars' closest approach to earth is a week earlier, on Oct 30). This means less humidity and haze, and far fewer unpredictable thunderstorms (though to be fair, Wisconsin experiences, on average, more cloudy days in Oct-Nov than it does in Aug-Sept). Second, this opposition occurs in the constellation Aries, which means when it culminates each night (reaches its highest point above the horizon), Mars will be above 60 degrees altitude. This is far better than the 2003 opposition in August in Aquarius when it scarcely got above 30 degrees altitude for mid-northern viewers. This higher altitude alone will make Mars observing a much more rewarding and satisfying experience than it was two years ago.

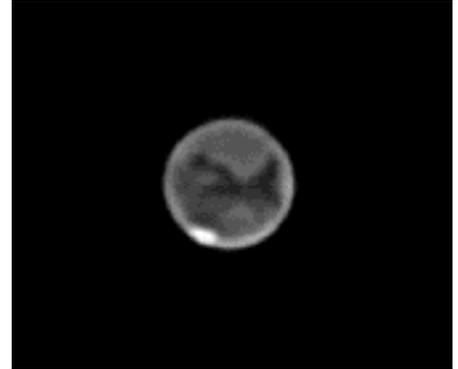
When to Look

Since Mars' closest approach is right at the end of October, the viewing is good anytime up to a month or two on either side of that date. Since I tend to do most of my serious observing on weekend nights, I prepared the table below to assist me in planning my Mars 2005 observing. The dates given are successive Fridays starting at the beginning of September and running right through the end of 2005. I have given only Mars' angular size and magnitude, as well as rising and culmination times. Culmination times are when Mars crosses the meridian - another way for saying that it's highest in the sky, and due south. All times are computed for Madison, but will hold true for all southern Wisconsin observing sites.

How to Look

While some internet email myths are circulating that Mars will appear "as big as the full moon," such talk is clearly nonsense. Mars will be bright and very conspicuous in the evening sky, but it will look like a bright orange star to the naked eye. For serious Mars observation,

you need to use a telescope and eyepiece combination that will give you at least 50x magnification, and ideally, much higher. Mars frustrates many novice observers who have been spoiled with the splendor and vast detail visible with Jupiter and Saturn. Mars requires more effort and patience in observing, but will richly reward the persistent observer. Because of its small size (only 20 arcseconds at its largest), higher magnifications will rule



Mars, shot by the author on 9/5/2003 when it was still about 25 arcseconds in size, just past closest approach. North is up.

the day, and filters can be very important in bringing out subtle details of the surface and atmosphere.

What to look for

Mars' southern summer just began with the Martian summer solstice occurring on August 16th. Thus, throughout the period of this opposition, Mars' southern hemisphere will be tilted toward the sun - and the Earth. Most observers will have no difficulty identifying the south polar cap. Watch to see the polar cap to diminish in size during the relatively warm days of summer.

Mars is much more prone to planet-wide dust storms during its southern summer, possibly because that season also corresponds to Mars's closest approach to the sun in its eccentric orbit. This opposition occurs after the peak in sandstorm probability, but the possibility always exists that a planet-wide storm will obscure surface features, rendering Mars a bland orange disk. If dust storms do not intervene, observers can expect to see a wealth of detail on the surface, as well as meteorological activity such as clouds forming in the higher and lower surface elevations.

Sky and Telescope website has a very easy-to-use java applet that will display a labelled Mars map to correspond to your observations, to assist you in identifying and searching for surface features.

Enjoy!

Date	Angular Size (arcseconds)	Mag	Rises	Highest Point
9/2	14.2	-1.1	10:13pm	5:12am (CDT)
9/9	15.0	-1.2	9:51	4:53
9/16	15.9	-1.4	9:28	4:32
9/23	16.8	-1.5	9:03	4:09
9/30	17.7	-1.7	8:36	3:43
10/7	18.6	-1.8	8:07	3:14
10/14	19.3	-2.0	7:35	2:42
10/21	19.9	-2.1	7:01	2:07
10/28	20.2	-2.2	6:25	1:30
11/4	20.1	-2.3	4:49	11:53pm (CST)
11/11	19.6	-2.2	4:12	11:15
11/18	18.9	-2.1	3:37	10:39
11/25	17.9	-1.8	3:04	10:04
12/2	16.8	-1.6	2:32	9:32
12/9	15.6	-1.4	2:02	9:03
12/16	14.4	-1.2	1:34	8:37
12/23	13.4	-0.9	1:08	8:13
12/30	12.4	-0.7	12:44	7:50

Editorial: The MAS Telescope Scholarship Loan Program

by John Rummel

The MAS Telescope Scholarship Award is now in its sixth year, and has grown from a single loaner telescope to two. At our May meeting, we christened our two newest recipients (see article below). As we look ahead, I'd like to reflect on the value of this program for a few minutes.

The MAS telescope loaner is arguably the most significant thing the club does in terms of outreach and education. I could even make the argument that it's the most important thing the club does - period. This program puts a quality telescope into the hands of interested and motivated young people for a full year. Included are print resources, a Society membership, and the offer of mentoring from an experienced member. This latter offer has never been seriously taken up, but maybe there's more we could do to encourage this type of interaction.

As we think about moving forward, some ideas occur to me about expanding the program. Tom Jacobs is already at work preparing several additional telescopes for possible scholarship awards. Former MMSD teacher Jim

Kotoski has talked to the group about forming a young astronomer's club that would work in association with the MAS. If successful (and the Society should work to ensure the success of this venture), we would have a ready pool of young people exposed to MAS members and activities in the years ahead.

AJ Carver, who was our first telescope recipient, and is now deeply involved in astronomy as an undergrad at the UW, had this to say in the last newsletter:

The year I had with the 8" dob, as the MAS Young Astronomer Award winner, was inspirational.... An excellent expansion of the MAS Young Astronomer Award, and the MAS Education and Outreach award, would be to pay for the tuition to the University of Arizona astronomy camp for the award recipients (assuming the recipients applied to camp and were admitted). MAS has proof of concept that their awards promote astronomy and science education. Therefore it should be possible to find grant money for such an expansion.

I think MAS should take seriously this idea. AJ gave the example of the University of Arizona camp because he himself attended this event twice as a

high school student (and is now works as a counselor there summers). There are other astronomy camps, and other such opportunities for kids. There is also the idea of a general college scholarship. What a tremendous privilege it would be for the MAS to endow to a graduating senior each year with a sum of money to help pay for an education in the sciences? I'm sure such a program could be set up with a minimum of work by notifying area high school guidance departments, and providing copies of an "application." This would be priceless exposure for the Society and a sound investment in the future.

As for the telescope loaner program, I'd like to see someone else from the Society step forward and take it over. Since I work at West High School, I'm unavoidably biasing the selection process each year. Though I make efforts to get the word out to all Madison high schools (and beyond), the last five recipients have all been West students. We need someone who can invest a little time in broadening the appeal beyond the corner of Regent and Ash in Madison.

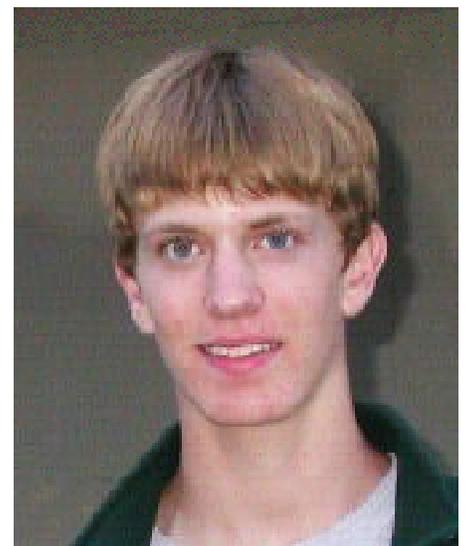
MAS 2005-2006 Telescope Scholarship Award Winners



Left: Juan Rubalcava. Right: Ian Jarvis. Ian and Juan will both be juniors at West High School this fall.

Juan told the story of getting a telescope for Christmas a few years ago and taking it out that night to observe the moon. It was his first and last time with a telescope though, since his brother had an "accident" with his scope. Juan is looking forward to observing the moon with the 4.5" equatorial reflector now in his possession.

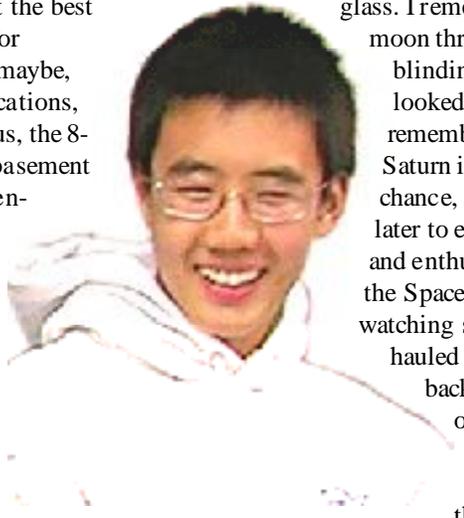
Ian has attended some MAS star parties in the past, including one at YRS last year where he got to look through many scopes. Ian is looking forward to observing Jupiter and Venus with his new 8" dob.



Outgoing Scope Recipients Respond

David Yu

Maybe senior year wasn't the best time for another distraction; maybe, amidst college applications, AP tests, and calculus, the 8-inch Dobson in my basement didn't help me concentrate on school-work. Certainly, it didn't write any essays or add any free time to my day. But for what it's worth, I definitely enjoyed my year with the MAS scholarship telescope. I remember seeing spots by a star and trying to wipe the dirt off the eyepiece, only to figure out that Jupiter's



moons weren't going to smudge off the glass. I remember squinting at the moon through sunglasses after blinding myself the first time I looked through the eyepiece. I remember stumbling across Saturn in the sky completely by chance, and then showing it later to eager young children and enthusiastic parents at one of the Space Place's evening watching sessions. Every time I hauled the telescope and its backbreakingly heavy stand out of the house, I lost myself in the depths of the sky. Thanks to all of those who made this scholarship possible, who brought astronomy into my house and who showed me the wonder of the stars.

Lena Song

I would like to start off by thanking the MAS for the telescope scholarship – especially for lending out two scopes this year. David and I shared our telescopes so we had twice the opportunity to familiarize ourselves with both the eight-inch dobsonian and the 4.5-inch equatorial. I must admit, although I had not used the telescopes as often as I had hoped, it had still been an educational year for me. Before this year, my only technical stargazing experiences have been limited to the few planetarium sessions I attended; I never knew I could see the moon so close or Saturn and its rings from my very own home! I also very appreciated Mr. Rummel taking me out to use the telescope our School District owns; it was quite an opportunity cramming into the little dome using computer software to locate stars. The use of the two MAS telescopes



have inspired me to participate in other astronomy-related activities such as our West High Rocket Club. This year, we designed, built, and launched a ten-foot rocket to above one-mile for NASA's Student Launch Initiative Project (we even broke the sound barrier!) - our team just returned from the Marshall Space Center two weeks ago. I am also fortunate enough to be building a part of the sounding rocket the UW-Madison Physics Department is working on in association with NASA; the rocket will collect x-ray photons and will be launched this September in New Mexico. Although I plan on majoring in Business at the UW-Madison next year, I will continue exploring my interest in astronomy. Thanks again for the patience and guidance that came with this unique academic endeavor.

Moon over Monona, cont.

given to each member bringing equipment. Paid parking is available in the Monona Terrace lot or on the streets or in the public ramp a block away. If weather is inclement a go/no-go decision will be made at 4:00 PM by MAS President, pilot, and weatherman extraordinaire Neil Robinson. The weather decision can be checked by calling the Monona Terrace events number 261-4042, Neil Robinson at 238-4429, or Tim Ellestad at 233-3305. Should the event be canceled due to clouds or high winds (The Monona Terrace rooftop can get really, really windy.) the following evening, Saturday October 8th, has been announced as the weather date. The same weather announcement procedure will be used. Everyone come to Moon Over Monona Terrace! It's a wonderful time.

For Sale

12.5" reflector Mag 1/Port-a-Ball custom made by Peter Smitka of Waukesha. Includes Nagler 32, 18, and 7.5mm oculars. Price negotiable but will entertain offers in the vicinity of \$2,000. Contact Tom Muench at tsmksm@charter.net or 233-5793.

Orion XT10 Dobsonian telescope. New condition, used twice. Stored inside; climate controlled. For sale are the following: Telescope - Orion SkyQuest XT10, original price \$499, Padded carrying case - original price \$90, Orion full-aperture solar filter - original price \$139, Orion Variable Polarizing filter - original price \$30, Orion SteadyPix Universal Digital & Film Camera Mount - original price \$35. Contact Patti Rozner at 715-341-5706



Capitol Skies
2810 Mason Street
Madison, WI 53705

First Class

MAS would like to thank:

IDC

for hosting our web presence

Officers

PRESIDENT

Neil Robinson
238-4429

neilandtanya@mailbag.com

VICE PRESIDENT

Wynn Wacker
274-1829

wkw@mailbag.com

TREASURER

Mary Ellestad
233-3305

ellestad@mailbag.com

SECRETARY

Dave Odell
608-795-4298

dodell@midplains.net

OBSERVATORY DIRECTOR

Tim Ellestad
233-3305

ellestad@mailbag.com

AT-LARGE BOARD MEMBERS

Jeff Shokler
301-0191

jshokler@wisc.edu

Mark Hanson
833-8988

markh@tds.net

Madison Astronomical Society members are active in sharing the pleasures of astronomy with the public, acting as a resource for students and teachers, and exchanging information at Society meetings which occur monthly. The Society continues to pursue its original goal to "promote the science of astronomy and to educate the public in the wonders of the universe."

For more information about the Society, please contact one of the officers listed at left or visit us on the web at:

www.madisonastro.org

MAS Membership Form

Name _____

Street _____

City/State/Zip _____

Phone/email _____

Please circle membership type:

Student (\$5.00)

Regular (\$30.00)

Observing (\$70.00)

Enclose check and make payable to the Madison Astronomical Society.

Mail to MAS Attention Mary Ellestad,
2810 Mason St., Madison, WI 53705