



# Capitol Skies

*The Newsletter of the Madison Astronomical Society*

## Moon Over Monona Terrace! Friday, October 3rd

*by Tim Ellestad*

A really great MAS event is again at hand. Moon Over Monona Terrace is our largest community outreach effort, bringing the public an evening of lunar observing and a fun time for young and old alike. This is a very important undertaking for MAS. It is essential that as many MAS members as possible participate on Friday, October 3rd or on the evening of Saturday, October 4th as an alternative weather date. It is our largest public effort to perform one of our fundamental required roles—to make astronomy available to everyone and to encourage active participation. Activities such as this are essential to maintaining our all-important tax-free organizational status. Moon Over Monona Terrace presents a cordial invitation to people of all ages to join us on the Evjue Rooftop Gardens of the Monona Terrace Community and Convention Center to ‘peek into’ the world of astronomy and to have a good time viewing the fascinating and detailed landscape of our Moon.

Turnout for past Moon Over Monona Terrace events has been wonderful. Monona Terrace Community and Convention Center is very pleased to host this event and they look forward to Moon Over Monona Terrace each year. Monona Terrace promotes the event themselves, in their own brochures and in the newspapers. In addition, MAS posts announcements in the public libraries, schools, and on public bulletin boards. So, it is critical that many MAS members participate to make sure that the event will live up to everyone’s expectations. All types of viewing apparatus—binoculars, refractors, Newtonians, Schmidts, Dobsonians, eyepiece or video—any device that might be used to view the

moon will be useful to show people that real participation in astronomy can be at any level and in varying ways. This year the Moon will be a three or four day crescent so it will set before the event is over. We’ll then have to look to other objects such as Jupiter so bring equipment that you can use for alternative viewing. Members not bringing equipment will be needed as well to answer questions, take care of hand-out material and generally assist. This will be a happy, enjoyable outing in one of Madison’s most spectacular settings, talking with a curious and enthusiastic public about our passion for astronomy.

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 drive-up entrance to the loading dock is at the traffic lights on John Nolan Drive just to the northeast of the Monona Terrace parking ramp tunnel. When turning off John Nolan Drive at the traffic light intersection 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 by way of



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. A brief lecture about the Moon will be available to the public at 7:30 PM in the Monona Terrace auditorium. The talk will be given by MAS member John Rummel. The announced concluding time for Moon Over Monona Terrace 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 and vehicles will have to be parked elsewhere until departure. 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 mutual go/no-go decision will be made at 4:00 PM by MAS and Monona Terrace Community and

Convention Center. The weather decision can be checked by calling the Monona Terrace events number 261-4042, Don Martin at 231-0197, 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 4th, 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 really enjoyable event!

## From the President's Desktop

*By Don Martin*

**G**reetings to my fellow MAS members. I hope all are in good spirits and looking forward to the October 3rd Moon Over Monona bash at Monona Terrace where we will showcase some fine instruments for the public's pleasure in observing the moon and a few other astronomical sights. If you don't wish to bring a telescope, think about attending anyway, the more participants we can muster the better MAS will be able to answer questions about astronomy, what we at MAS do, and the enjoyment we all find in pursuing this avocation, whether as eyepiece amateurs or not.

Another date to note is October 6th when Chris Zeltner, Jim Lattis, Wynn Wacker and myself will be guest commentators on WORT's Access Hour. We are scheduled for a one hour talk about amateur astronomy issues and if you are near a radio tune into 89.9 on the FM dial; you are free to critique our performance, but please, be kind in your assessments as we are just amateur radio broadcasters and not

pros, but I can assure you the four of us will be giving this one hour our best shot at "stardom."

And as long as we are on a date and time track, don't forget the next monthly MAS meeting is Friday October 10th at 7:30 PM. For those who have not been to a meeting in a while, I encourage you to attend, and reconnect with what's happening in the group.

One last date to keep in mind is the November MAS general meeting will be held at the MMSD's Planetarium, located at Memorial High School on Madison's west side off Gammon Road.

At YRS, the handicapped-accessible C11 telescope roll-off structure is nearing completion and Tim Ellestad and I are working our fingers to the bone to have the scope operational soon. Tim is an excellent craftsman and I am continually amazed at the way he can conceive and then fabricates the various parts that are going into the shelter and pier to make this a great asset for MAS members to use when at YRS. While I am fairly conversant in

the ins and outs of construction (I was a general housing contractor before moving to Madison from Colorado 20 years ago, gee, time does fly by, doesn't it) I am not nearly as knowledgeable in design and fabrication as Tim, but I do know the difference between less than adequate and excellent workmanship, and I can assure one and all that Tim does possess the talent and has the necessary quality of "pride in workmanship" factor that so often spells the difference between which are acceptable and which are excellent final products. I doubt if the shelter will be winning many blue ribbons at architectural competitions, but then that isn't what the MAS membership is looking for; they want the study and functional shelter that Tim is providing, so next time you have the opportunity to speak with him, please, give him a pleasant and heartfelt thanks, he has worked long and hard and deserves kudos.

We will be announcing when the actual completion date will be at a future time since there still are a

couple of steps to be finished, but I am thinking that we should hold a "Gala Grand Opening" for those who would like to take a look at the final product and then stick around for some viewing while out and about at YRS; heck, I might even bake some of my "world famous" chocolate chip cookies to pass around.

Remember, Neil will be "hawking" the 2009 Observer's Handbook at the October general meeting, so if you look forward to this excellent publication each year, then be sure to come to the meeting, or if you are unable to do so, contact Neil to make sure you are on the list and know the deadline for sending him your payment.

After the September General Meeting, the MAS Board held a lengthy meeting at which a number of topics were discussed, and as different topics become clarified or acted upon, I will be letting you, the members, know what we are doing and what we see as the various issues we need to deal with and also those

that the membership as a whole needs to be involved with, such as opinions and views on the various topics that are now, or will be in the future, impacting us as an amateur astronomy organization, and also as a nonprofit entity under Wisconsin Statutes.

At this point, given the upcoming Presidential election, some of you might be wondering if I too am planning on running for office, given the previous paragraph's lack of details; well, I can assure each and every one of you that I am not running for el presidente or any other office at this time, but having been a member of MAS for only 3 years (and a few odd months), that I am still trying to get on board and so I am vague at the present time, not out of any hidden agenda, but out of a personal need to try and become as conversant as I can on the issue, otherwise, to try and be more specific would be a waste of ink and your time in reading something half-baked, sort of like if I brought

halfway cooked chocolate chip cookies to YRS.

So as I become more knowledgeable and the board can review some of the issues, I will be providing information to you, either through the Capitol Skies Newsletter, or via e-mail to the global list I now have in my e-mail program, and for those of you who have not provided an e-mail to Mary Ellestad, please consider doing so if possible, since this is the easiest way to provide timely information between the printed issues of our newsletter.

Well, that's it for now, but please, don't hesitate to contact me with any ideas, concerns, opinions, or thoughts about MAS that you have, or you feel needs to be addressed.

My home phone is: 608/231-0197 and e-mail is: [martido@tds.net](mailto:martido@tds.net).

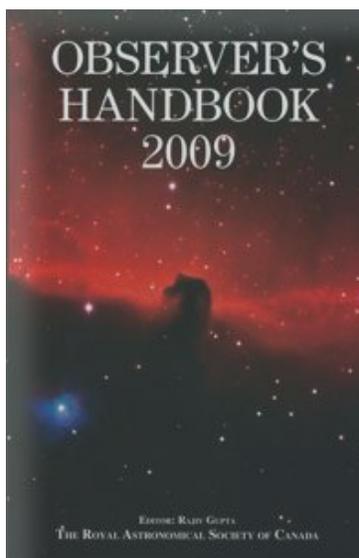
Hope to see you at Moon Over Monona and/or at one of the upcoming monthly meetings at UW Space Place (MMSD Planetarium in November).

## Order your 2009 Observer's Handbook

*by Neil Robinson*

Greetings Fellow MAS'ers. It's time again for ordering the "Observer's Handbooks" from the RASC.

The Observer's Handbook is a 320+ page guide published annually since 1907 by The Royal Astronomical Society of Canada. Through its long tradition and the expertise of more than 50 contributors, the Observer's Handbook has come to be regarded as the standard North American reference for data on the sky. The material in the Handbook is of interest to professional and amateur astronomers, scientists, teachers at all levels, students, science writers, campers, Scout and Guide leaders, as well as interested general



readers. The Observer's Handbook is an integral part of many astronomy courses at the secondary and university levels, and it should be on the reference shelf of every library.

The price is dependent upon how many orders we get for a bulk order. I think we can get at least 5 orders across the club so the all-up price with shipping drops from \$32.45 ea. to \$20.95 ea. I will take payment-accompanied orders by mail or in person until the October 10th MAS meeting and then place the order so as to have the books on hand to distribute in time for the Nov 14th meeting at the Memorial HS Planetarium.

## Calendar of Events

Oct 3, 2008	Moon over Monona Terrace, see article page 1.
Oct 10, 2008	MAS Regular Monthly Meeting at Space Place, 2300 S. Park Street. 7:00 arrive, 7:30 presentation, business meeting to follow. This month's presenter is Jane Breun, " <b>Observing Jupiter's Moons.</b> " Jane says "This summer I determined to do more observing than I usually do and Jupiter presented a target that I could observe in twilight. So I decided to see what I could figure out about Jupiter's moons without any aid from observers' guides. Could I determine their orbital periods? Could I predict when they would be eclipsed by Jupiter (or each other)? With a simple telescope, just how much could I figure out about these moons?"
Oct 14, 2008	Space Place guest speaker: 7:00 pm. "Peak Oil and Energy Supplies for Planet Earth" by William Newhouse. Space Place, 2300 S. Park Street.
Oct 15, 2008	MMSD Planetarium Public Programs, 6:30 and 7:45 pm (programs are one hour): "Skywatching," Explore the current night sky in the planetarium, learning how to identify constellations, planets, and interesting telescope and binocular targets so that you will be able to find them in the real sky. Tickets: \$2. No reservations. Tickets go on sale starting at 6:00 PM. Some shows do sell out. Memorial High School, 201 S. Gammon Rd., corner of Gammon and Mineral Point.
Nov 11, 2008	Space Place guest speaker: 7:00 pm. Speaker TBA. Space Place, 2300 S. Park Street.
Nov 14, 2008	<b><i>MAS Special Monthly Meeting.</i></b> This meeting will be at the Memorial High School Planetarium! 7:00 arrive and see the facility, 7:30 presentation, business meeting to follow. Memorial High School, 201 S. Gammon Rd., corner of Gammon and Mineral Point.
Nov 19, 2008	MMSD Planetarium Public Programs, 6:30 and 7:45 pm (programs are one hour): "Solar System Update," a visual tour of our current spacecraft explanation of the solar system. Updates on the Mars Rovers and Phoenix Lander, Mercury Messenger, Cassini at Saturn, and much more. Tickets: \$2. No reservations. Tickets go on sale starting at 6:00 PM. Some shows do sell out. Memorial High School, 201 S. Gammon Rd., corner of Gammon and Mineral Point.

## Notes From Your Treasurer

by *Mary Ellestad*

My apologies—I missed the last newsletter and now I am a bit behind in welcoming new members. So here is a warm welcome from MAS to **Keith D'Souza, John Chrisholm, Gale Urbainzick, Arun Janakiraman, Mark Miller, Al Keup, Gopal Raja, Derek Morrick, Dave & Dave Sampson and Chris Lewis.** We are very happy to have you as members and look forward to seeing you at upcoming meetings and events. If you are an observing member and have not received your YRS orientation, call Tim Ellestad at 233-3305 to arrange a time for that.

We are looking for a volunteer to help with getting the MAS newsletters mailed. About every two to three months, John begs for articles, does the layout & editing, drops it off for printing and I pick them up, print labels & get the stamps. They are usually already folded. We need someone to pick this all up at our house (near West High), attach the labels & stamps and drop them in the mail. Please give me a call at 233-3305 or email [ellestads@att.net](mailto:ellestads@att.net) if you are interested in helping with this.

A really big Thank You to everyone who has sent in their MAS dues &

subscriptions payments. The response this year has been great—there are only about 20 members that I have not heard from. As always, I really appreciate this because I need to prepare the MAS budget and send in the Astronomy and Sky & Tel subscriptions in early October. Reminder—you can ignore any renewal notices from them—they know that all our renewals are sent in together. If you haven't sent me your payment (especially if you have subscriptions), please help me out and drop your renewal in the mail soon.

# An Unexpected Apparition, and What I Think It May Have Been

*By Eric W. Thiede*

**O**n June 15, 2008 at 7:35 UT (2:35 AM CDT for the temporally challenged) I was in my backyard observatory doing something that I have done many thousands of times before, observing HD 177550, a new variable star that has been the subject of most of my research efforts since 1999. These observations involve making a large number of estimates of the variable and a comparison star while viewing them both through a series of long-pass red filters. It was a beautiful quiet night, with the moon so low that it was lost in the trees to the southwest, and Jupiter playing hide-and-seek in the upper branches of the tree across the alley.

As I looked up from the eyepiece while preparing to change to the next filter in the series something to the upper left attracted my attention. In the middle of the small triangle formed by Alpha and Beta Capricorni and Epsilon Aquarii were two brilliant starlike objects, one about a degree north of the other. By brilliant I mean that the northern object was slightly fainter than Jupiter (which was visible at the time) and the southern was slightly brighter than Sirius (or my memory thereof). They were intensely white, more like Sirius in hue than like Jupiter, and they displayed no detectable motion relative to the stars. I cannot know how long they may have been there before I noticed them, but I proceeded to watch

them for perhaps five seconds, when the fainter southern one started to fade, becoming redder and disappearing from naked-eye visibility in a couple of seconds. The brighter northern one went through the same process about a second later.

At this point I was left to speculate on what I had just seen. I have watched the sky for almost 50 years and have never before seen anything remotely resembling those things. Three facts seemed most important: 1. They didn't appear to be moving, 2. There were two of them, and 3. They were very bright and of fairly constant brightness for at least a few seconds. One of my first thoughts was that they were something like an Iridium flash, that is, sunlight reflected very brightly off of a flat surface of a satellite. I have seen these, but they were brighter and much more brief. Any satellites that could produce reflections as bright as the ones I saw would have to be in a low orbit, which means they should have shown obvious motion in the time I had them under observation. Any satellite high enough to appear stationary for that length of time would have to be in a high orbit (e.g. geosynchronous), far too high to produce a reflection bright enough. (Attention, conspiracy theorists: maybe the U.S. government, or the Russians, or the Chinese, or somebody else we don't even know about but who is apparently worth being afraid of has secret geosynchronous satellites the size

of Bill Gates' house flying around up there....but somehow I doubt it.) Then there is the fact that there were two objects. How likely is it that two satellites would have flat surfaces oriented to reflect sunlight at me, at the same time? In short, too long in duration, too bright, too stationary, and too many at once to be probable satellite reflections.

My best guess as to what they might have been brings back memories of the kind of entertaining and imaginative talk that can occur at meteor shower observing sessions when the meteors to be seen are few and the hours to be passed are many. What would a meteor look like if it happened to enter the atmosphere on a trajectory that was directed straight at the bemused observer? I have never read or heard a report of this, but I don't see why it couldn't happen. Many objects in space have also been found traveling with co-orbitals, objects which were originally part of the same body but were slightly separated by collisions or gravitational perturbations. That could explain the simultaneous appearance of two objects.

So that is my conclusion, at this point, and if it is correct I am glad to have been witness to something that has only been the subject of speculation, as far as I know. If anyone reading this has ever made any similar observations, or has any other plausible theories, I would be very interested in hearing about them.

# Photographing the Milky Way

by John Rummel

For the past five years, Mark Weller and I have been on a mission to obtain beautiful wide-angle photographs of the milky way. To assist in this pursuit, we've made use of a spectacular location owned by a friend of Mark's, who lives in the Chequamegon forest of northern Wisconsin. Our location, about 8 miles west of Mellen, has what I estimate to be the darkest skies in the state. The nearest population center is Ashland, about 25 miles to the north, with about 8,500 people. The skies over the Chequamegon forest are beautifully dark and pristine.

From our observing location atop a glacially deposited rock, we can see absolutely no artificial lights, and long exposure photographs reveal faint sky glow to the north only when atmospheric conditions contain enough moisture to cause a dim orange sodium glow. On a good summer night, the milky way is startlingly bright, with the Cygnus rift appearing as a great dark lane and the extension into Ophiuchus painfully obvious. On a clear summer night, the milky way is bright and distinct all the way from Sagittarius to Cassiopeia.

Mark's friend's house includes a comfortable guest house so our yearly stays are comfortable and enjoyable. In addition to the



*One of Mark's July 2008 Milky Way shots. Four minute exposure with Canon 20D, Canon 10-22mm lens, ISO 800.*

attractions of the dark sky qualities, there is an abundance of wildlife and natural beauty. We have hiked to wonderful waterfalls, and spent hours photographing bear, deer, a variety of birds and other local creatures.

At the September MAS meeting, Mark and I did a presentation on our Milky Way photography, showing lots of pictures and telling some great bear stories. Included here is one of Mark's shots from this past July—his "money shot" for the Milky Way. You can see more such shots at one of my web galleries at [http://www.pbase.com/strangehost/mellen\\_2008](http://www.pbase.com/strangehost/mellen_2008).

## Stay in Touch with MAS

There is a new mas\_observers Google Group mailing list for MAS members (and others) to notify each other of upcoming events, observing opportunities, or anything else.

The group's home page is

[http://groups.google.com/group/mas\\_observers](http://groups.google.com/group/mas_observers)

If you have not yet joined the list, visit the group's homepage and click the [Join this group](#) link. Or send an email to Dan Strome at [djstrome@gmail.com](mailto:djstrome@gmail.com) and request an invitation.

## YRS Showing Its Age

by Tim Ellestad, Observatory Director

The Madison Astronomical Society didn't always have the fine observatory that we enjoy today. It came into our possession rather recently in our long and distinguished history. However, time is moving on and facilities that still seem quite new to us are, in fact, aging and in need of attention. Our observatory clubhouse got a new roof two years ago as a result of this "march of time" and other work is now needed.

Some of the most predictable maintenance at YRS is painting and it has come due on several of our observatory structures. In years past we thought of painting as something that the members could provide for YRS as a cost-savings to the Society. But experience has proven that MAS members simply do not have the time available in their busy lives to perform the labor necessary to satisfactorily prep and paint our structures. Effective and long-lasting paint jobs are the result of thorough preparation which is hard and time-consuming work. Without the prep work paint is ineffective and a waste of money.

Several of the YRS structures now need paint. We will be soliciting bids for this work soon, anticipating that the work will be started with the arrival of suitable weather next year. We realize that quality work won't be inexpensive but we also understand that this is part of the on-going cost of having and preserving a nice facility like YRS. While MAS would entertain any proposal from a member who would like to donate a

paint job at YRS, we realize that to acceptably prepare and paint any of the structures that require this work would be very time demanding (it took six long, hard days for Neil Robinson and myself to repair, prep and paint the clubhouse soffits and fascia ten years ago).

The liability incurred on such volunteered labor has become a serious concern for MAS too. The Society has a good insurance policy that covers our property and provides liability protection within the limits seen fit by the insurance company. While our insurance would extend liability coverage for paint work, issues of accidents resulting from, for instance, the imprudent use of a ladder would likely not be covered. Such coverage exemptions place Madison Astronomical Society Inc. and possibly the volunteer officers and directors in jeopardy and insurance policies that might extend this coverage are not available to organizations such as ours.

Further, members would find that their personal health insurance will likely not cover any injury sustained while performing work at YRS as a donation to MAS. The HMOs argue

that MAS should cover those injuries. MAS, however, does NOT have medical insurance. We would never be able to afford medical coverage. This was a lesson learned directly and personally by me. As a result, the Society now presumes that most essential maintenance work should be hired out—performed by contracting professionals to high standards and covered by their tradesman's bonding and insurance policies.

YRS is our major asset. It is a wonderful facility. Its maintenance and preservation is our most significant obligation. We likely could not have an observatory like YRS if we had to start from scratch today. While financial and legal reasons mandate that we take good care of our property the biggest reason of all to preserve our beautiful observatory is the gesture of thanks that this preservation becomes to the

kind and generous people who have contributed much of what makes up YRS.

