



Capitol Skies

The Newsletter of the Madison Astronomical Society

PRESIDENT'S REPORT

by Don Martin

There are a number of important issues we need to consider regarding where MAS is at and where we would like the organization to go in the future, but for now I'd like to concentrate on the ones I see as the most important, which are:

- A. BUDGET CONCERNS (Revenue: Membership Issues and Increasing Revenue; Expenses: YRS and Non YRS Related)
- B. OUTREACH ACTIVITIES.
- C. PRESENTATIONS.
- D. DIRECTION MAS SHOULD TAKE.
- E. ENERGIZING MAS.

To this end I'd like MAS members to take some time to envision some constructive ideas we could explore and implement concerning these issues.

A. BUDGET CONCERNS.

Revenue.

Membership issues.

Membership is down which impacts our ability to maintain YRS. It also impacts our ability to provide funds for activities MAS would like to engage in beyond YRS; these include funds for honorariums for invited speakers from places like Chicago, Milwaukee, and Minneapolis; donations for activities like the Book Donation program started earlier this year, or things like funds given to Space Place for their "Galileo Scopes" effort; and other activities such as dues to join the Astronomical League, holding events around town, and Star Parties.

So what do we do?

First: We can encourage members to want to renew rather than drop out. We can do this partly by

working on ways to make MAS something all who join will take pride in and ownership of MAS so they have a positive experience that encourages renew over not renewing.

Second: Develop ways to recruit new members, especially on ways to bring more students and adults in the 25 to 40 age bracket.

But how do we attract new members?

There are many ways, certainly more than I can think of on my own, or that there is room for in this newsletter. To get us started thinking about this issue I've noted a few ideas on potential methods for you to consider, but I am looking to the members to add others they come up with.

1. *Distribute Flyers and Brochures.*

At various locations in Dane County.

2. *Organizing Star Parties in Dane County.*

UW campus at Washburn Observatory and Sterling Hall.

After our monthly general meetings.

At malls, restaurants, and other locations to be determined.

We should also plan for backup activities when the weather doesn't cooperate.

3. *Non Star Party Event and Activities.*

These could be held at the same location as noted for Star Parties.

Contact local service clubs and other entities to host an event.

Increasing Revenue.

There are two ways to fund MAS:

Membership Dues.

Currently this is our only long-term way we fund MAS in order to provide revenue for MAS related activities and obligations, and as such we need to both maintain and increase membership.

Fund Raising.

This is an area we have had some success in the past for provide funds for MAS operations, but given the economy, it is now an area we need to consciously address in terms of activities that can be successfully implemented. Below are two ways I can think of:

1. Engaging in activities that can generate revenue for MAS.
2. By looking for funds from various entities that could be potential donors.

I don't have a list for fund raising activities at the present, but we need to start addressing this issue. If you have others please let me or any board member know.

Expenses.

There are two areas to address in terms of expenses, YRS and Non YRS.

Maintaining YRS.

For reference, I've noted two areas for expenses at YRS.

1. Some past expenses we have incurred:
 - Freiburger Consulting for report on the actual condition of the KMO.
 - Reroofing of the Clubhouse.
 - Replacing the dome rotating motors in the AKO.
 - Lawn mowing in the spring and summer seasons.
 - Painting of the various structures.

Some projected expenses we will need to keep in mind:

Pumping of the privy (periodically, depending on usage at YRS).

Lawn mowing – an ongoing yearly expense.

Areas that will need to be addressed in the next few years.

Condition of the Hog House structure.

Condition of the rollers for the Doc G will need to be monitored for eventual replacement.

General maintenance items for all of YRS structures as they come up.

Some MAS can take care of.

Some will require a licensed and insured contractor.

This has to do with the MAS insurance liability policy; government regulations concerning non profits and building codes; exercising of fiduciary responsibility by the MAS Board of Directors, as well as the MAS members responsibility to exercise due prudence in any and all decisions we make in regards to maintenance at YRS.

This issues are being addressed at present by the board of directors as part of our effort to amend the MAS By-laws as well as clarify our obligations as a non profit in Wisconsin. I will have full information for you after the board completes the rewrite of the By-laws, which will be based on the recommendations and advise from the attorney retained by MAS to provide the actual facts regarding our obligations and responsibilities.

It is necessary for us to recognize that the costs to maintain YRS will be going up in the coming years as the facility ages. As a reference point I'd like to note that in the construction industry all buildings are built with a "Life Expectancy" factor built in to the cost estimates (well, it is a bit more complicated than this brief statement, but that doesn't concern us, just the concept of longevity).

Longevity really boils down to how long a structure can hold up so that it remains safe to access for its intended use, and is an area that MAS has only recently started to seriously consider. So we need to start addressing the costs to maintain YRS in terms of both the short term and the long term issues by projecting he expenses for both areas. I won't go into the details at this time, other than to state that we will be working on cost projections for each building at YRS as well as grounds maintenance. When we have more details, as well as cost estimates, the board will provide that information to the MAS membership.

Non YRS Related Expenses.

These have to do with our ability to:

1. Continue funding things like the Book Donation program, "Galileo Scope" activities, and others activities.
2. New activities such as honorariums; costs associated with fund raising; and expenses for generating new members.

Again, this is a new area and I am only starting to develop some ideas. I will provide more details in the future, but welcome your suggestions.

A note on our responsibilities and obligations when conducting MAS sponsored events. We have basically the same fiduciary responsibility and the exercising of due prudence regarding non YRS events we sponsor as we do at YRS.

B. OUTREACH ACTIVITIES.

Another area we need to consider are our efforts to reach out to Madison and the Dane County area. Below are some ideas, please feel free to contact me with comments and/or additional ideas.

- Outreach activities to the public at large similar to things like Moon Over Monona.
- Youth oriented outreach activities.
- MAS's charter as a non profit in terms of community involvement.

Goes to the issue that MAS is more than YRS.

- Public Star Parties.

Four Star Parties per year could be a basic goal.

Advertise our efforts to attract the public (and hopefully new members).

Look to prominent dates or interesting astronomical events for the public to view.

- MAS Star Parties on a regular basis that would help new members become comfortable with observational astronomy, and we can utilize the club house if clouded out. Would help to get members more involved in observing.

- Telescope Fairs & Workshops and Observing Workshops at:

Schools.

Scouting groups.

Malls.

Dark sites.

City sites.

Westgate type of set up, where scopes and exhibits can be displayed and members can offer advice.

- Advertising.

Rhythm.

Isthmus.

WORT

Others?

One area that might be helpful is for MAS to get involved in is with other astronomy focused organizations, so that we can tap into any help they might be able to provide. To that end I believe MAS should rejoin the Astronomical League as a starting point.

To be honest, I am not sure how to get more members involved, nor am I that naive to believe that all of the members will get involved, but I would like to go forward in a concerted effort to create more enthusiasm and

ownership of MAS among the members. If you have any ideas I will be happy to hear them and to act whenever it is practical to do so.

C. PRESENTATIONS.

Below are some thoughts and the direction I believe MAS needs to take regarding our monthly presentations. Presentations will consist of two distinct areas: Shop Talk and Guest Speakers.

I envision a breakdown as follows:

Shop Talk Sessions four times per year.

First half of the year in February and April. Second half of the year in September and November.

Guest Speakers six times per year.

First half of the year in January, March and May. Second half of the year in August, October, December.

June and July we will not schedule presentations due to summer holiday conflicts.

The above is a starting point and adjustments will be made in the future depending on how the MAS members feel about both types of presentations. So, if Shop Talk seems to be of more interest, we will increase them and reduce the number of Guest Speaker months, but if the members prefer the Guest Speakers, we will increase them and reduce Shop Talk session. I have no personal preference and plan to keep our options open, but I also need feedback from the members in proposing the best decisions for MAS, which brings up the survey I sent out by email a month ago, more on that below at the MAS Survey section below.

My decision to pursue making Shop Talk sessions an ongoing activity is partially based on replies received so far to the survey, plus the need, as expressed on numerous occasions by many members, for MAS to be more proactive in the area of member information, feedback, knowledge about observing and non observing astronomy related topics.

I will be providing more details about the format of the Shop Talk session in the future, but basically there are two components:

1. Round Table Discussions.
2. Member Presentations.

Guest Speakers.

These are for guest from outside the MAS membership to provide interesting presentation in astronomy and related

topics. They include things like technical aspects of observing; theoretical areas of interest; the history of astronomy in terms of people and events; and other areas of interest that the members would find interesting.

I'm not going to give a list of possible presentations as past ones give us a good idea of what we can expect, but if you have any ideas on guest speakers to contact, or have a specific topic you would like us to try and find a speaker for, please let me know.

• MAS Survey and the Direction MAS Needs to Take Survey.

Speaking of which! So far only nineteen members have responded, which is not enough to truly gauge member sentiment, and remember, if you don't take the time to respond I can't know your views, which means the decisions we make will be without your input.

For those who have not responded: I would appreciate your input, whether or not you are a regular attendee at the monthly meetings or not, and whether you utilize YRS or not. All input is welcome and appreciated, and the more received the better we can gauge where we are at now and the direction MAS needs to take to remain a viable organization going into the future.

I'll email the survey again for your convenience in responding, and I'd like to have each and every one of you respond to it. You can also give your thoughts and opinions on anything not addressed in the survey, that are related to MAS that you feel would be helpful.

D. DIRECTION MAS SHOULD TAKE.

This is something we need to address in a serious vein, and the more input from members the better. One issue we need to consider is based on a general sentiment expressed at the August 2008 general meeting. Towards the end of that meeting it was emphasized, and agreed upon, that for years previous to that date, there hadn't been enough effort to follow through or to take any meaningful new initiatives by both the board and the membership at large. I didn't join MAS until 2005 and so am not familiar enough with MAS's past to comment on the reality of this observation, but it did come from a number of long term members present that night. So I'd like to move forward and find ways to get more enthusiasm going among ourselves.

E. ENERGIZING MAS.

To try and address this issue, I have, in the year since I took over the president's duties, asked for more participation, and it is interesting that so few have responded to date, but then once a trend sets in it can be difficult to reverse. All we can do is to keep working on vitalizing MAS as we build enthusiasm within group.

But we cannot create enthusiasm, nor the desire among the members to follow through, all we can do is to try and foster an environment that is conducive to more participation and enjoyment in being a member of MAS.

A part of this is to tap into the talents and follow up ability of those members who are actively involved at the present time in various efforts on behalf of MAS, while realizing that MAS is only a part of each members life, nor is it in the best interest of MAS to tax any one further than they are willing to contribute. Currently we have a core group of 10 to 15 members who participate in the group's events and activities on a fairly regular basis, and this is true for most organization like MAS.

But I'd like to see is more MAS members getting involved and participating in whatever ways they find most comfortable for themselves.

I also think we need to address the changing face of amateur astronomy. A trend I see is a moving away from traditional "Observational Astronomy" to a more "Desk Top" oriented involvement, including using the Inter Net (accessing sites like NASA's Hubble pictures), computer programs like Voyager IV (a desk top planetarium program) and Photoshop for manipulating astronomical images.

There are a other aspects concerning desk top astronomy, and this is a discussion we need to have because I suspect that the student and 25 to 40 age group in Dane County are generally more interested in this area than in actually looking through the eyepiece. I'll give additional ideas and directions we might go in this area in a future article, but again, look to you for input on this topic.

That's it for now, but in future newsletter articles, emails, and announcements at the general meetings, I will relate what has come of the things I've discussed here, and add new ideas and comments from you, the members of MAS.

Notes from the Treasurer

By Mary Ellestad

I haven't welcomed new members for quite a while so I'm going to catch up and say Hi and Welcome to MAS to everyone who joined this year - Jan Winkel, Dale Marsden, John Gehring, Theresa Greco, Patric Meloy, Alfredo Jimenez, Steve Fitzsimmons and Jerry Erdmann. 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. The C11 is back in service at YRS - see Tim's article.

I don't even know where the last year went but I want to thank everyone who has renewed their MAS membership for another year. As always, your timely response is appreciated - there are only about 15 members that I have not heard from. All the Astronomy subscriptions are paid and sent in to them so you can just ignore all those renewal notices. I am still waiting to see if a few remaining Sky & Tel payments come in but will be cutting that off in about a week so there aren't any late issues like last year. As for dues, please

consider renewing if you haven't already. Our budget for next year is a little in the red and that makes it harder for me to match my record of presenting it in the 7 minutes you've grown to love! Better yet - get a friend to join this year and get an MAS coffee mug - what a deal! I will also be bringing the 2010 Astronomy calendars to the next two meetings. Thanks again - Mary

It has been a busy year at the observatory. Much needed repairs and maintenance have been accomplished. Our C11 scope is back in service again. YRS is hosting more observing activity.

Getting the Sight Lines Back Again

The eastern boundary of our observatory, the hedge along Kelley Road, was getting pretty wild and wooly. MAS President Don Martin promoted a brush trimming event that was well attended and the saws and loppers were heavily employed. MAS members Neil Robinson, Dan Strome, Don Martin, Chris Zeltner and her husband Walt, Theresa Greco, and myself worked hard. Walt Zeltner volunteered the use of his powerful brush-cutting mower to greatly help in pushing our mowed borders back to where they used to be. All of the cuttings were thrown on top of the "bunny pile" bringing it back to its original proud elevation. (The "bunny pile" is the perpetual

mound of trimmings made from the pruning sessions at YRS over the years. The rabbits have made a condo of it.) Sky views to the east are once again improved to about as low an angle as would provide acceptable seeing. It is critical, however to keep the eastern horizon blocked from view as there is quite a horizon glow from Evansville and Janesville. Thanks to all the brush cutters for the hard work.

C11 Back in Service

Our beautiful old orange Celestron C11 11 inch Schmidt-Cassegrain telescope is available for use. Many thanks to MAS President Don Martin for yeoman service in assisting to get this observatory up and running.

If you are not familiar with this scope it is a standard fork-mounted SC polar aligned instrument. on a basic, non-go-to base with standard clock-drive tracking only. You operate it in the good old-fashioned way by star-hopping and using setting circles. The C11 is equipped with a beautiful new Stellarvue

finder scope with a rotating viewing diagonal that is fully image-rectified. The finder eyepiece is focusable for individual eyesight differences and the crosshairs rotate and focus as well. Our C11 has also been recently equipped with a new aluminum dew hood that helps balance the scope in addition to keeping the corrector plate from dewing up. This hood must be attached and removed at each viewing session.

The eyepiece height of this scope has been set for use by the average seated observer. MAS had no telescopes that were accessible by a viewer in a wheelchair prior to creating this C11 installation. The deck that surrounds the pier has a wheelchair ramp constructed at the proper pitch dictated by the building code. The roll-off shelter for the scope was created to be extremely easy and effortless to use so that an un-accompanied observer who is wheelchair bound can use the observatory without assistance.

MAS has provided two eyepieces for this scope; a 26mm and 12.4mm Meade Super Plössl, in cases, living

News From YRS

By Tim Ellestad, Observatory Director

in the accessory tray on the mount wedge. This is a superb optical instrument - wonderful to look through. We require that any observing member who wishes to use it have a short orientation session about the opening and closing of the roll-off shelter. Please call me to make arrangements.

YRS is Looking Good in New Paint

Things were getting kind of shabby at the observatory. Paint jobs from a decade ago were starting to fail. A more recent paint job with inadequate preparation had totally failed in only a few years. Since most of our members simply don't have the time available to proficiently prep and paint our buildings professional painters were contracted to make YRS pretty again.

Glacier painting was hired to do the job. They prepped and painted the AKO and washed the dome. They prepped and painted the "Doc G" inside and out. They did trim improvements and minor repairs on the clubhouse and prepped and painted the trim and the soffits and fascia. They also did a substantial caulking job on the clubhouse, bringing it up to a new standard for weather resistance and the elimination of hidey-holes for hornets.

Glacier also did a wonderful job of pressure washing all of our decking. They followed up with a wood preservative treatment and a beautiful staining job. The observatory decking looks great. They also noticed the growing green growth on the north wall siding of the privy and pressure washed it to a like-new sparkling condition. We must thank our neighbor to the west, Jon Yanna, for the water access for the pressure washing. YRS is looking good.

AKO Dome Repair

This year Spring brought with it a

disturbing development in the AKO observatory. The dome wouldn't rotate. When the toggle switch was pushed one motor would run and make a failing effort to turn the dome and the other was not responding at all.

Don Martin and I timorously removed a motor cover. GAK! A mouse condo! OOFIE! What a filthy specter! The other motor cover housed more of the same. In a manner of only a few months the mice had done what they do best with the resulting mouse leavings being so prodigious and terrifyingly corrosive that they completely destroyed the motors. The steel motor shells were so wildly corrupted that they looked like they had been under the sea for a century.

Don set out immediately, heroically, pushing the foul rodent padding out of the building. It became readily apparent that this job required outfits. We procured respirators and rubber gloves. (These were white footed mice. White footed mice and deer mice - field mice - can carry Hantavirus. Hantavirus is something that humans can be infected by and really, really *don't want* to be infected by.) Wynn Wacker, our Vice-President and sage field biologist explained to me how Winters with long unbroken snow cover provide high survival rate for mice as they can't be so easily found under the snow by predators. When Spring comes, Yippee! There's plenty of 'em and they're pleased to see each other with mouse business on their minds.

After thoroughly cleaning out every last scrap of the mouse bedding Don armed himself with a mighty pump sprayer and methodically soaked the AKO interior with bleach solution. Three times! We aired the building completely back to a totally dry state. All this was a wretchedly awful job that required the intestinal fortitude of manly men.

Once the place had been disinfected we set about replacing the dead motors. Technical Innovations,

the manufacturer of the our Pro Dome, sold us upgrade replacement motors and motor covers to install. Don and I have done that. We are completing modifications to the new motor covers to finish the repair (the new covers have slightly increased dimensions and require some custom adapters.) This will all be complete in the next week or two.

Those of you experienced with the operation of the AKO dome will be very pleasantly surprised with how comparatively silent the new motors are. The original motors could really "scream into the night"! Attempting to quiet them, the manufacturer padded the motor covers with fiberglass insulation - a mouse dream-home! The new covers don't need or have this acoustical component, making them far less cozy to Ms. Mousy. Even without the motor covers installed you now mostly hear just the rollers.

KMO to be Demolished

The condition of the KMO has been declining for a number of years. We began to notice that the building was beginning to sag. Knowing that it was not a very substantial structure we hired a building engineer to inspect the building and give us an appraisal of its integrity. John Freiburger, well known in the area for this work, scrutinized the KMO and gave us a thorough report detailing the problems.

The north and south walls have swayed substantially. The north and south rim joists are both swayed. All the rim joists on the building are twelve foot two by eights. The east and west walls each have two equally spaced support posts between the corner foundation posts and have remained level but for some reason the north and south joists were installed with no support between the corners and have sagged. The stud walls, windows and door have no headers and the substantial weight load of the old dome being born in the center of each wall has hastened the structural failure. The KMO no

longer meets code requirements.

The building could be repaired but at significant expense. The KMO received significant repair work eleven years ago but interest and subsequent use was very low. This is the home of our sixteen inch f19 long focus Cassegrain telescope, an optically beautiful instrument with a very small, highly magnified field of view making it quite specific to only certain applications. With the demonstrated lack of interest in using this observatory, sustaining the KMO seems to be beyond the budget justifications of the on-going business of MAS and we will be getting quotes for the demolition work. The society cannot endure the liability jeopardy of an unsafe structure.

Winter is Coming

With Winter closing in on us I'm reminding everyone that observing opportunities persist in spite of the colder weather. While the season may bring snow it also can give us some wonderfully dark and transparent skies. No one should let a Winter go by without spending a little time viewing the magnificent Orion nebula. The Winter sky offers its own treasures that shouldn't be overlooked.

Please remember that during the cold months we barricade the driveway access to the main mowed area of YRS. Vehicle traffic goes pretty tough on the turf during this time of year. The barricade will be set up right between the arbor vitae where you enter the lawn from the driveway.

YRS is certainly available for use throughout the Winter though. While we provide no snow removal members may clear snow themselves from the concrete pads or from the telescope roll-offs. Observing members will find a snow shovel behind the door of the clubhouse. A very efficient heating system maintains the clubhouse at fifty degrees at all times. By simply setting some time on the heating

timer located on the floor next to the wall under the air conditioner the boost heating system will quickly bring the building up to sixty-eight degrees and keep it there as long as there is time left on the timer. If there is time remaining when you leave, please try to remember to zero the timer. Also never touch our thermostats - they are left at policy-established maintenance settings.

The coffee pot is available for coffee, hot chocolate, hot water for tea, etc. You must provide your own water. You must clean it out before leaving.

Let's bundle up this year and get out to see the Winter sky.

"Doc G" Operational Announcement

Our beautiful Meade twelve inch LX200 telescope in the "Doc G" observatory is in fine operating condition. The pointing and tracking accuracy is as good as it's ever been. This is partly to do with the fact that earlier this year we installed an additional counterweight on the rear of the scope around the view port. This weight is to offset the out-of-balance, front-heavy condition caused by the dew hood. LX200s are not without their problems and operating in an out-of-balance condition is one of them. The motor in the declination drive is simply not strong enough to slew the scope if it is nose or tail heavy. Persistent attempts to operate the scope in an out-of-balance condition will destroy the dec drive and these repairs are getting rare.

The "Doc G" telescope is currently in perfect balance in every attitude. Adding a camera to the scope, however, changes this dramatically. Our experience with camera usage has been that it almost always either uses the scope in an unbalanced state or it leaves the scope out of balance afterward. The next user probably doesn't realize this and begins to operate in an unbalanced state as well, and so on. MAS can't afford

this risk.

The Board of Directors has decided that no additional equipment may be used on our LX200 telescopes. No changes may be made to the scopes configurations and no balance changes may be made. If one of our LX200s is misbehaving or seems to be out of balance notify the Observatory Director and discontinue use of the instrument until notification is given that the scope is back in good working order.

In addition to the balance requirements of our LX200s, observing members are reminded of another usage mandate that we have for these scopes. Before any use of our LX200s is made the user must immediately polar align the scope via the single star method that has been long established at YRS. Power up the scope and let it boot. Pick a prominent star showing centrally in the sky near the celestial equator and center it in the eyepiece using only the slewing buttons to do so. (NO MANUAL POINTING!) When the star is centered call up that star in the LX200's "Star" database and when it shows on the controller LCD screen hold down the "Enter" key until the controller beeps and displays "Coordinates Matched". Then the scope knows where it is in the mount and in the sky. And never, never, I repeat, never . . . loosen the declination or right ascension locks! Never!

Meade LX200 telescopes are terrific devices and have provided wonderful use for MAS for many years now, but they are vulnerable in a number of ways and they are aging out in this era of electronic obsolescence. Repairs are becoming very hard to come by with some failures now being terminal. Our LX200s are still working nicely, providing MAS with excellent observing. We would like to preserve their service for as long as possible.

