

Gemini



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A Perfect Day

By Merle Hiltner

Eagle Lake Observatory Chair

Onan Observatory • Sylvia A. Casby Observatory • HotSpot Classroom

We had an absolutely perfect day for an eclipse—cloud-free skies, above-average temps and calm winds. Any late-October afternoon would be worth bragging about with those conditions, but throw in a solar eclipse with a massive sunspot to boot, and it becomes a perfect day

The event started at 4:00 p.m., but MAS members were there as early as 3:00 to get their equipment set up. All scopes were trained on the Sun as the Moon slowly moved past it. The huge sunspot group, nearly in the center of the solar disk, was visible to the eye—through solar eyeglasses or solar filters, of course.

Steve Baranski had his telescope and camera set up, projecting the live solar image into the HotSpot classroom. This provided some of the best projected images we could hope to get. Mark Connolly brought his camera-equipped drone and took some aerial pictures and videos of the event as well.

The eclipse ended for us at sunset, a bit after the maximum eclipse. After sunset we extended the eclipse party to begin viewing Saturn, Mars and some of summer's best—M57, M27, M11, M31, the Double Cluster, and comets Jacques and Siding Spring as they are heading away from us.

What an amazing and memorable event! The weather was incredible, and with an estimated 240 in attendance the turnout was fantastic. A huge thank-you to our members, ELO keyholders and guests—not to mention Angela Davis and WCCO for doing a story about the eclipse from ELO. Clear skies!

Photographs by Merle Hiltner and Mark Connolly. 📷

Stories Wanted: *Gemini* is written entirely by our members, for our members! *Gemini* needs your stories... how you first became interested in astronomy, how your interest has evolved over the years, equipment you use, star parties and events you've attended here and elsewhere, how you've encouraged others — especially young people — to get involved in this fascinating hobby. Submit your stories to: brownreveugene66@gmail.com

E-mail Update: If your e-mail address has recently changed, chances are your address used for MAS email distribution lists is not current. Please inform Bob Brose of your new e-mail address at bob@qbjnet.com



GEMINI INFO

Editors

Brian Litecky and Eugene Brown

Webmaster

MAS Web Committee,
chair Merle Hiltner,
webteam@lists.mnastro.org

Forums Administrator

Russ Durkee

E-mail List Administrator

Bob Brose

Monthly Meeting Presenter Coordinator

Lauren Nelson

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Electronic submissions for

Gemini may be sent to:

blitecky@gmail.com
brownreveugene66@gmail.com

Hardcopy items should be sent to:

Minnesota Astronomical Society

Attn: Gemini

P.O. Box 14931

Minneapolis, MN 55414

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MAS Treasurer.

MAS Board Members

President: David Falkner

E-Mail: defalkner@aol.com

Phone: 763-785-0539

Vice President: Steve Baranski

E-Mail: steve_baranski@fastmail.fm

Phone: 763-792-9262

Treasurer: Chris Hansen

E-Mail: zurialjazz@gmail.com

Phone: 612-701-2785

Secretary: Roxanne Kuerschner

E-Mail: rkuerschner@waconia

K12.mn.us

Phone: 320-864-5798

Board Member: Greg Haubrich

E-Mail: greghaubrich@comcast.net

Phone: 763-421-4736

Board-Member: Wayne Boline

E-Mail: tramp46@aol.com

Phone: 763-533-3229

Student representative:

Josh Torgeson

E-Mail: 803031@gmail.com

Phone: 952-442-3924

More Solar Eclipse Photos





Fall Astronomy Day

By Merle Hiltner

Eagle Lake Observatory Chair

Onan Observatory • Sylvia A. Casby Observatory • HotSpot Classroom

Saturday, October 4, started out mostly clear, cool and windy. We opened the observatory at 2:00 for solar viewing and daytime observing of Jupiter and Venus. Our first speaker was MAS president Dave Falkner, who gave a talk on the Mars rovers Spirit and Opportunity. He discussed the journeys of these two remarkable spacecraft and the discoveries they have made during ten years on Mars.

I gave the second presentation on the history of the Eagle Lake Observatory and how the current observatories came to be. The idea for the Onan Observatory began in 1980 with the acquisition of the 16" Larson telescope. The site started construction in 2000 and was expanded in 2012-2013 with the addition of the Sylvia A Casby Observatory and Hotspot Classroom. My talk followed the course of nearly 35 years as the MAS Eagle Lake Observatory made ours one of the premier amateur astronomy clubs in the world.



After a break for dinner, Ron Schmit gave his “This is Big!” presentation. Ron described astronomy as the science of extremes—the hottest, the coldest, the nearest, the farthest, the slowest, the fastest, the smallest and the biggest. He gave us a tour from the Earth to the edge of the biggest thing ever—our universe.

At 7:30 we held the door-prize drawing. Prizes included MAS merchandise, books, DVDs and astronomical accessories. The first prize of a Celestron Cosmos tabletop telescope was won by Rob Nelson.

As night approached, the skies became clearer and the winds calmed down. At 8:30 Ron was back to give a laser-guided constellation tour in which he pointed out the constellations and demonstrated how to navigate the night sky. The evening continued with viewing through our array of telescopes. Highlights included Mercury, Saturn, Mars and the Moon, as well as comets Siding Spring and Jacques.

We estimated our attendance at 280 visitors, making this another very successful Fall A-Day. Thank-you to our speakers throughout the day as well as to the ELO keyholders and other MAS members who volunteered their time. Thanks also to our guests who came out to celebrate the day. Clear skies! 🌌



The 2014 Okie-Tex Star Party

By Greg Haubrich

There have been a couple of previous articles on the Okie-Tex Star Party in Gemini over the years. This article will provide a quick recap and then a summary of the particulars of this year's star party.

Nine MAS members—John Marchetti, Paul Nelson, Doug Oines, Dale Eason, Dave Tosteson, Tim Parson, Chris Wright, Steve Leikind and myself—attended this year. There were also an additional eight Minnesotans, primarily from southeast of Rochester, attending.



Of the over 450 people registered, about 350 were in attendance any given day. Some did not stay the whole week and others may have been scared away by the initial weather forecasts predicting that moisture would be drawn up by hurricane Ilene. In actuality, the weather/observing conditions turned out quite well, with four half-nights of observing and four nights of dusk-till-dawn clear, dark skies. Minnesota was well represented this year, and in fact Minnesotans gained an interesting reputation at Okie-Tex. More on this later.

The Okie-Tex Star Party is located near the semi-arid 4,439 ft.-elevation Black Mesa area of the extreme northwestern panhandle of Oklahoma at Camp Billy Joe, named after the deceased young son of a local rancher. This was ground zero for the dust bowl of the 1930s, commonly centered on Boise City, OK, which is 35 miles from Camp Billy Joe.

Located in Boise City, the Cimarron Heritage Center is a museum like no other; it is a must-see if you can find the time. It captures many aspects of the lives of locals during the dust bowl and was contacted for research for Ken Burns dust-bowl series. This area is officially known as No Man's Land.

The scrubby/sparse grass which grows in No Man's Land supports only one head of cattle per 30 acres. Interestingly enough, I asked a local about this, and he said that asking a rancher how many acres per head of cattle was equivalent to asking a mature woman her age. I pardoned myself but then went ahead and asked anyway.



Camp Billy Joe offers seven bunkhouses with eight decent twin-mattress bunk beds per bunkhouse. These beds are offered free of additional charge on a first come, first served basis, but they have never been filled to capacity that I'm aware of.

Usually the upper bunks are not even used; that's where you stash clothes and gear. Six MAS members chose to utilize the bunkhouses while three used tent trailers and one had a tent. Many RVs were also parked on or near the periphery of the two large observing fields. There is no electricity and no water/sewer hookups, so you're on your own to provide these. Ice is available at \$4 per 10-lb. bag but has been known to and did run out this year, late in the week.

Meal plans catered on-site are available—\$13 for dinner and \$10 for lunch. Breakfast is also available for \$8, but few were up early enough to partake.

It's about 1,000 miles from Minneapolis to Kenton, OK (nearest town, population 22). There are no stoplights in the whole of Cimarron County—the perfect recipe for some of the darkest skies in the U.S.

The Okie-Tex Star Party and the Texas Star Party are the two largest star parties geared around astronomical visual observing/imaging. Typically, Okie-Tex has somewhere between 300 and 400 attendees and TSP 400 to 650. This year Okie-Tex registration was said to be 450 with TSP being slightly less, making Okie-Tex the largest star party in the U.S., not including NEAF and other equipment/vendor expositions. There is a fair amount of competitive spirit between the two star



parties, with an Okie-Tex Star Party official facetiously saying “There’s a new sheriff in town!”

People from all over the U.S. attend the Okie-Tex Star Party, usually packing vans, pick-ups and trailers full of astronomical equipment. The most distant attendee was from Bangor, Maine, with many east coast, southwestern and central U.S. attendees.

The theme common to large star parties was followed here: Presentations by professional astronomers, college professors and advanced/knowledgeable amateurs; socialization and networking; astronomy swap fests; and above all, observing and astronomical imaging. To accompany the visual observing are observing lists where 20 astronomical objects may be observed from a list of 30. A stylish pin and certificate are awarded upon completion.



Two observing contests were added just this year. There were also the door prizes/grand prize giveaways. At Okie-Tex these can be substantial.

Talk/Presentation Highlights

- Guy Consolmagno, a Jesuit brother and professional astronomer from the Vatican Observatory, gave a very scientific talk on the chemical/geological composition of Vesta and different theories explaining its formation. This is not a clear-cut area and is only now being actively worked, based on recent Dawn spacecraft data. The specifics of this went well beyond my knowledge of chemistry and geology; however, it was still fascinating. He also presented on astronomy pro-am collaboration, specifically as it applied to the Arizona branch of the Vatican Observatory. Brother Guy has previously spoken at Okie-Tex on faith and science and on the Vatican Observatory. He’s a wonderful and interesting speaker on whatever subject he tackles.
- MAS’s very own Dave Tosteson was asked to present

at Okie-Tex. He spoke on two topics: “Rare Earth,” and “Pushing Visual Deep-Sky Observing to the Limit.”

The rare-earth talk was based on books and recent Kepler Space Telescope data, which used a variant of the Drake Equation to determine how many planets in our galaxy would be suitable for intelligent life. Much has been learned since Frank Drake’s initial posing of this equation. Many factors are involved, such as large moons, molten cores, stable stars, plate tectonics, and a Jupiter-like gas giant conveniently placed for clearing the inner stellar-system of mass-extinction-creating asteroids and comets. The talk ended up estimating that between two and ten planets suitable/stable enough to develop intelligent life as we know it exist in our galaxy.

- The “Pushing Visual Deep-Sky Observing to the Limit” talk centered on encouraging and illustrating how advanced amateurs can, with a little research and a lot of observing prowess, observe deep-sky objects that are extremely faint, extremely distant, or extremely interesting. Dave showed his own observations of gravitationally lensed quasars, Hubble deep-field galaxies, brown dwarfs, jets from active galactic nuclei, etc. Dave has been recognized as an advanced amateur astronomer who is pushing the limits on what is observable with amateur-class telescopes. Of course, having the largest telescope in the State of Minnesota—a 32" Dob—doesn’t hinder his efforts.
- Many other talks included historical reviews of Galileo by a University of Oklahoma professor who has a very complete collection of first edition books by Galileo, and astronomy image processing.



Telescope Observing Lists and Observing Contests

Okie-Tex traditionally has three levels of telescope observing lists: a novice list of Messier or brighter, easy-to-find objects; a Level 1 list for moderate-sized telescopes; and a more challenging Level 2 observing list for larger telescopes. After completion of the observations on any of these lists at Okie-Tex, you'll be awarded a certificate and a nice commemorative pin which is customized for each year.

New this year were two observing contests. One contest, sponsored by Dave Tosteson, was to observe as many challenge objects as possible from a list of 25, ranging in magnitude from mag. 13.7 to mag. 20.8. This list was extremely challenging and was designed to align with Dave's talk on visually observing faint deep-sky objects. These objects ranged from the companion star of the nearest known black hole to proto-stars and quasars.



The second contest was to observe in only one night as many NGC/IC objects brighter than magnitude 15 within one degree of apparent angular separation from any Messier object. Mike Roos gave a nice talk on this and provided a convenient list of these objects which were (possibly) visible at Okie-Tex this year. Orion Stratus and Orion Q70 eyepieces were the prizes for winning these observing contests.

Comaraderie/Networking/Making New Friends

This star party is low-key enough to allow ample time to stop by and talk with other amateur astronomers near their equipment or while eating under the big-top tent where communal meals are served and presentations given. On the star-party grounds, discussion groups naturally form and reform during the day and night. The diversity within amateur astronomy is amazing, from basic visual observing to imaging, spectroscopy, and pro-am collaboration (e.g., variable star observations). Don't be intimidated however, as many attendees are first-timers with humble/meager equipment and limited knowledge of their hobby. Almost everyone at this star party is



very friendly and willing to help and talk with others.

Typical Day for Okie-Tex Star Party Attendees

For obsessed observers: Dave, Tim, John and I would fall into this category. Paul and Ken are in danger of slipping into this mode as well. On a clear night, set up the telescope one- and-one-half hours prior to astro twilight and observe from dusk until dawn. This means observing from 8:30 p.m. until 7:15 a.m. the following morning. There will typically be one stop for a break at the Starlight Cafe, which is a fry-cook a-la-carte restaurant run by the caterers from 10:00 p.m. to 2:00 a.m. daily. The flip side involves having your sleep rudely interrupted by the noon dinner bell, a large bell that's loudly rung by the cooks when lunch or dinner is served. There is no breakfast, except for a hasty, afternoon breakfast served early enough not to interfere with dinner at 5:00 p.m.

No, we do not belong to the undead, nor have we contracted any other dark malady, other than being obsessed with observing under the pristine, ultra-dark skies of the Okie-Tex Star Party. If we're lucky we wake up early enough to catch one of the talks/presentations that typically run from 2:00 p.m. until 4:00 p.m. daily.

Repeat this cycle for every clear night/following day. Usually we don't wander around at night outside of our local group; we have our eyes glued to the eyepieces of our telescopes. Normally John and I are quite sociable. However, given the choice between observing under insanely dark skies or chatting under insanely dark skies, observing wins out almost every time. This year our friend Howard, from the Kansas City Astronomy Club, warned that he needed to come over and perform an intervention for John and me because under the clear dark skies we hardly socialized at all, we were so obsessed with observing. This intervention was purported to involve some earthly spirits. Luckily this never happened, and John and I were able to observe even more astronomical objects.

Due to the nine hours of darkness available during clear nights at the Okie-Tex Star Party, this can prove to be exhausting if the weather is nice. Weirdly enough, after four straight days of clear night skies one almost wants a cloudy night as a break and an excuse to socialize. I know, this may sound like heresy, but it's true.

For the less-obsessed observers: Most others fall into this category. Observe from 8:30 p.m. to 1:00 a.m. while mixing in breaks to the Starlight Cafe and wandering in the dark with small, red LED flashlights on the observing field in search of old or new friends and interesting equipment/astronomical objects in view. These folks were usually up for lunch and some even for breakfast. For the obsessed observers, this was unthinkable.

The astronomical objects observed by attendees included the Okie-Tex observing lists, the observing contest lists, Astronomical League observing program (including Binocular Messier, Herschel 400, Globular Cluster, Flat Galaxy, Carbon Star, Two-in-View, Dark Nebula, Bright Nebula, Comet Observing Programs) and just plain eye candy such as the Double Cluster, planets etc.

Some highlights included seeing five comets, globular star clusters in M31, dark nebula only visible from the darkest skies, splitting Sirius A and B, beautiful double stars on the Burnham double-star list, gravitationally lensed objects, and a very faint Abell planetary nebula.

There were also spectacular meteors and even a couple of fireballs that left smoke trails. The Milky Way does literally cast a shadow if you put a piece of paper on the ground. Mars was low in the western horizon in the evening, offering a pretty non-descript view. However, Jupiter rose higher in the early morning and was spectacular. The weather forecast on Jupiter doesn't look good for the giant Red Spot. It's shrunk to about half its previous grandeur and is barely a pale salmon color at best.

There were two swap fests, one on Tuesday and one on Saturday afternoon. The obsessed observers grumbled and crawled out of bed early to get to them. There was a range of equipment such as eyepieces, eyepiece filters, solar scopes, Dobs, refractors, equatorial platforms for Dobs, binoculars, and various imaging accessories.

I purchased one book for \$5. Other MAS members sold equipment and bought/sold various small items (except for Tim

Parson, who sold a behemoth equatorial platform for his 20" Dob).

The Minnesotans cashed in big time at Okie-Tex this year. Dale Eason won both grand prizes, a 20mm 100-degree apparent FOV Explore Scientific eyepiece and a PST H-Alpha solar scope. I won Starry Night Pro 7 planetarium software, John won a 50mm guide scope, and Paul won a gift certificate to Scope Stuff. Tim and Dave and the southern Minnesotans also won decent door prizes. Ken won a beautiful, hand-made astronomy-theme quilt. I won both observing contests and ended up with two new eyepieces, a 38mm Orion Q70 AFOV and an 8mm Orion Stratus 68-degree APOV.

The Minnesota folks south of Rochester ended up being pretty exuberant, with plenty of enthusiastic hoots and hollers whenever a member of their group won a door prize. The MC commented on the enthusiasm of the Minnesotans. The Minnesota presence was definitely felt at Okie-Tex this year.

Several of us joked with Dale as we touched his shirt, saying that we needed some of his luck for buying Lotto tickets on the way home. The odds of him winning both grand prize drawings was roughly computed to be more than 90,000 to one.

As we headed home we all agreed that the weeklong Okie-Tex Star Party had been a blast and that we would plan on returning next year. This year was my 12th straight year attending Okie-Tex. Memories of friends seen once a year and others seen more frequently, the hauntingly dark skies and the jewels they hold, draw us back each year.

Until next year...clear skies! 🌟

MAS Patron Members

Patron memberships are available to those who wish to contribute a little extra to support MAS activities. Patron memberships are established by constitution at 2-1/2 times the Regular membership rate—currently \$65 annually for a patron membership. The \$39 additional contribution is tax deductible. Patron memberships help fund equipment acquisitions, facility improvements, outreach activities and more. We would like to thank the following patron members as of October 31: 🌟

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Ted DeMatties	Michael P. Haydock	Louis M.	Loren Schoenzeit	

By Roxanne Kuerschner, secretary

September

Maintenance Update: Greg provided a form to give to the sites to use in order to plan maintenance items. This will be discussed later when Greg is here to go over it. **Sale of Particle-Wave Tripods:** An ad was placed in Astromart; lots of looks but no bites. Since Astromart doesn't allow organizations to post items, Dave posted them under his name. Ads were posted on 8/31. Asking price is \$3,000 for each of them. The tall tripod has received 518 looks. The short tripod has received 368 looks. We might consider lowering the price to \$2,499 but Dave wouldn't go below \$2,000. These are really high-end piers/tripods. The board agreed to go to \$2,499. **Hosting ALCON:** Carroll Igor, president of AL, is very interested in our hosting it in 2018. Dave F. is willing to take the lead on this. We are awaiting more information from Carroll on what is expected from the host club. This will be revisited when we get more information. **Election Chairman:** By constitution we need to appoint one tonight. Wayne will be the chair. **Member of the Year Award:** The board has voted. **Observatory Passport Program:** Tabled until October. Mark Job and Dave F. will talk about it. **Donation of Scope:** The scope that was donated was picked up by Steve. It might not be solid enough to use as a loaner scope; we may send it to Ric to use at the Boy Scout Camp. **Naming Exo-planets:** This will be brought to the general membership. Dave will register MAS with the contest. See <http://nameexoworlds.org/> **Mark Gottlieb and His Tripod Cart:** It is recommended that he posts on the marketplace forum. **Astronomy Day—Saturday, October 4:** Merle is looking for speakers.

October

Observing Site Maintenance: Greg will draft an e-mail to be reviewed by the MAS Board prior to delivery which requests that each site manager/coordinator: a. Develop and make available on each site a maintenance logbook containing equipment/structures/landscaping requiring maintenance, developed processes, scheduling, logging, etc. Greg will provide detailed guidance and examples here; b. Suggest a periodic check of maintenance and submit every fall the expected cost of maintenance for the coming year so it may be included in next year's MAS budget. **Particle-Wave Tripods:** We sold the shorter one (43") for \$2,000; we netted \$1,690

Lumicon Optical Filter Discounts

Lumicon offers a \$25 discount order code to all MAS members for orders of greater than \$99.99 for Lumicon filters or Parks Optical telescopes and accessories. Simply visit www.lumicon.com

after shipping costs were paid, with the proceeds going to the Special Projects Fund. The taller tripod (48") is still for sale; it is advertised in Astromart for \$2,500. **Hosting ALCON:** Brandon Hamil spoke with Carroll Igor about hosting ALCON in 2018. Carroll provided the MAS Board a list of AL bylaws and standing resolutions. Host societies are held liable for 15% of losses and will receive 15% of profits. The host society is responsible for advertising. Many other details—host insurance responsibility, reservations, booth, etc.—need to be delivered by the host organization. **Election for 2015 MAS Officers:** Ric Heins is the only nominee. There was discussion on how to solicit nominations. Wayne will post on the MAS general e-mailer. **MAS Member of the Year:** A member was selected. **Observatory Passport Program:** This will be postponed until spring 2015. Dave F. will work with Jerry on this. **J.J. Casby Observatory door-frame repair and other observing site maintenance:** Merle will replace the rotting wooden doorframe with a steel doorframe. It was suggested to develop training manuals for J.J. Casby Observatory and CGO. We will place the site training manuals on-line. **Review and update facilitators for the e-mail groups and discussion:** We will contact Ken Hugill and LLCC to assign a new administrator for the DSS/LLCC e-mail group. It was suggested that when new board members come on the list administrators will be reviewed and updated. **Monthly MAS Meetings:** The suggestion was made by members that MAS gain access to and use a portable public-address system—wireless mics preferable. Steve will research portable PA systems with wireless mics and bring the information next time. **Naming Exo-planets:** The IAU on-line sign-up form is long and unclear and will not successfully process, so it was decided not to do it as a club. **National Space Day—May 1, 2015:** An invitation came from Christopher Mick of Hudson, WI. He wants telescope viewing and presentation, so Dave will say Yes, MAS will support this outreach. Dave will give a presentation and ask for volunteers to handle the telescopes for viewing. **Solicitation for a new MAS outreach coordinator:** We will forward an outreach request to MAS general information. There was a discussion about potentially interested candidates; Nancy Rauschenberg and Ron Schmitt showed interest. Dave will put out a request for an outreach coordinator next month. **Memorial for Ric Heins:** The board decided that individual MAS members may contribute to this memorial as they see fit. 🐱

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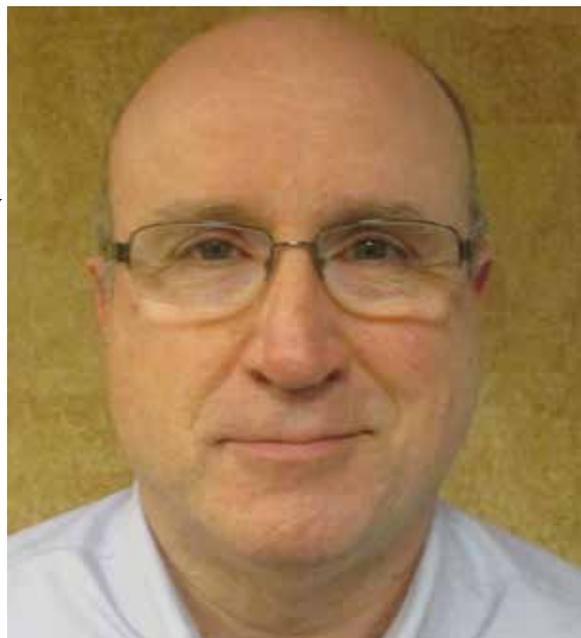
Candidate for President: Clayton Lindsey

I respectfully ask for your confirmation of my nomination for president of the MAS Executive Board. I first joined MAS in 2005 when my work brought me to the Twin Cities. This area is now home for my family. I have enjoyed participating in the many MAS events, finding new friends and being personally enriched from our astronomically passionate community. I have over the years attended multiple CWTS, NNSF, Messier Marathon, 4M and the Astronomy Day events. I have contributed in several areas, including outreach at the previously mentioned events, construction and maintenance work parties, Web site maintenance and one term as board member at large, 2010-2012.

These experiences have given me understanding and appreciation of MAS operations and the many contributions of its members. I have seen firsthand what makes MAS into such a positive and successful organization. In addition to leading the board with its core responsibility to ensure effective financial, legal and administrative processes, I will work to balance:

- Maintaining the traditions that are valued and rewarding to our membership;
- Securing and protecting the gains and achievements made in facilities and membership benefits;
- Seeking continued productivity improvements and economy in operations;
- Fairly evaluating and vetting new opportunities that enrich and strengthen MAS and its mission in the long term.

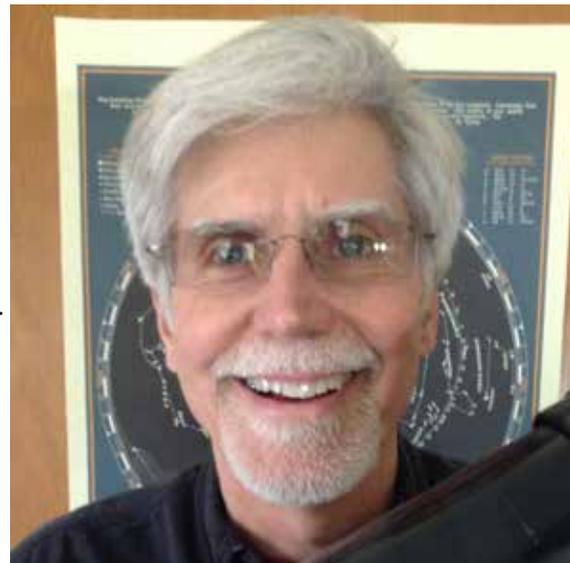
Meeting these challenges will be best done with collaboration and the continued contribution and commitment of our membership, both on and off the board. I have the ability to provide stewardship and would be honored to be given your support. Thank you for your consideration.



Candidate for Secretary: Jerry Jones

Like so many of us, I discovered astronomy (in 7th grade, back when the earth's crust was still cooling) when I first laid my own eyes on the rings of Saturn. It was through my first telescope—a 2" Sears refractor; I still have it somewhere. Since then my love affair with the night sky has waxed and waned, depending upon work and family. When my wife and I moved to Stillwater (from Duluth—darker skies, to be sure, but much cloudier and, oh, so much colder), my love affair was fanned into flame by joining MAS in March of 2010. I immediately recognized the organization to be of great quality and value. Without a doubt it is one of the best amateur astronomy clubs in our great nation.

Because I am, at heart, an observer first-and-foremost (I'm not sure what my wife's problem is; I own only eight telescopes), I took over the observing chair responsibilities about two years ago. I am currently working on my master observer certification (I'm only 25% through the Big H, though). I consider MAS to be an organization worthy of serving. Consequently, when positions on the MAS Board became available, I felt it was my time to serve. My current job as director of orchestras at Stillwater Area High School will be coming to an end this spring (retiring, not getting fired!). Consequently, I'll be looking for more things to do, and the MAS Board is a perfect fit. I am honored to be considered for a position on this fine organization's board.



Candidate for Board Member at Large: Suresh Sreenivasan

I grew up outside Chicago and have been an amateur astronomer for 30 years. I've always been fascinated by the motions of the stars and planets and of just being able to find things that are so far away. I became so enthralled with observing that while still in high school I got myself a C-8 and sketched all of the Messier objects. A couple years later I completed the Herschel list.

When I got to college my school didn't have an astronomy club, so I decided to start one. This became my first foray into public outreach. Although we had an urban campus we still held public viewing parties, and our monthly meetings attracted over 100 students. We fittingly called our newsletter *Skyglow*. Fresh off of building myself a 16" Dobsonian, I helped my university's physics department procure a 12.5" f/5 full-tube reflector, which we turned into a highly portable truss design for students to use.

My favorite thing to do is to observe under a dark sky. I've been to some of the largest star parties, and I still get out under a dark sky several times a year to observe. I also got into eclipse chasing and have witnessed four total solar eclipses on four continents. As I've gotten older I've spent more time doing public viewing. Each summer I volunteer to help my Chicago astronomy friends with a public viewing session at a state park in southern Wisconsin. When I encounter someone who is truly interested about amateur astronomy, I steer him or her away from modern technology and into learning the constellations and developing the ability to find deep sky objects via good old-fashioned star-hopping.

I joined MAS in 2004 and have been an ELO keyholder for several years. I come out to ELO a few times a year to assist with public viewing sessions. I've also begun to attend more MAS events, such as Northern Nights Star Fest and Camping with the Stars. I recently purchased a portable 12" reflector to help me to get out observing more often. As I've been re-kindling my love of astronomy, I've been seeking ways to help MAS more. I've been a member of several astronomy clubs over the years, but none has matched MAS in terms of equipment and facilities—but more importantly, the willingness of its members to teach the universe to others. There is nothing better than seeing a child's face light up when he or she is able to actually see a planet or a galaxy and wonder what else is possible. 🇺🇸



More Astronomy Day Photos by Merle Hiltner.





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