

# Gemini

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**Winter 2004**

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October 2004**

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## **The Okie-Tex Star Party – October 2004**

**by John Marchetti**

This following is a brief account of Greg Haubrich's and my trip to the Okie-Tex Star Party held near Kenton, Oklahoma, which is about 985 miles from Greg's home in Champlin. Located on the far western edge of the Oklahoma panhandle, the star party is actually held on the property of the Billy Joe Bible Camp about a mile from "downtown" Kenton. The people of this county, site of this star party, brag that they are the only county in the United States without a stoplight. Kenton has a population of about 35 and is located only a few miles from New Mexico; its big business is the Kenton Mercantile, an establishment that by itself is well worth the trip. It's owned by an interesting character who will sell you any of the thousands of items in his store, ranging from groceries, medicines, gifts, tools, and so many other quirky things that you have to see it to believe it, and they're arranged on tables and shelves in no particular order. The owner also operates a small grill that produces very tasty hamburgers. Last year Greg and I waited for this owner to run to his house and retrieve some Nyquil from his stash in the basement of his house; when he returned, we overheard him say to a customer, "Well I've officially set the world's record for waiting time on that hamburger you ordered over an hour ago."

And now I'll mention a few words about Camp Billy Joe and its facilities so you can visualize the setting. Camp Billy Joe is a beautifully serene piece of property with two large observing fields surrounded by gorgeous rocky hills. Most of the year, it is a Bible camp for various local church groups. A local rancher donated the land for use by the various religious denominations in the area. The name Billy Joe comes from the rancher's young son who was killed by a horse some years ago. Many people camp or stay in motor homes, but there are at least six bunkhouses with about a dozen sets of bunk beds. When you claim a bunk, you claim both the upper and lower beds. The lower is for sleeping and the upper becomes your closet. I'm sure that would change if too many people wanted bunks, but the two times we have been there, it seemed there were always empty beds. The cabins are well insulated and heated when necessary. At night there is a solitary red bulb in the center, so if you need a nap or change of clothes, your night vision isn't affected. The men's and women's restrooms consist of 5 showers, sinks and toilets, and at night this is also under red light. The vendor's area is a large building that also houses the kitchen where we pick up our meals. We eat in a large tent just outside of this building. Greg and I elected to buy only dinner this year because when nights are clear, we are usually the last to leave the observing field and we barely get to bed when the lunch bell starts ringing. Ordering lunch last year deprived us of a great deal of sleep, so we decided to eat from our cooler for lunch and only purchase dinner. If someone wants a change from the camp's food, there is a Starlight Cafe open from 10PM until 3AM that is run by a young woman named Andrea, who coincidentally is the daughter of the man who runs the

*Continued on Page 3*

## MAS UPDATE *Compiled by Mike Kibat*

Board members (old and new)

Members of the Society elected three new officers at the November meeting. Mike Kibat will serve as President, Steve Emert is the new secretary and Greg Haubrich was elected to the open board member at-large position. The term of office for all three positions is two years.

A special 'Thank You!' to the four other candidates who expressed a willingness to serve. And, more importantly, a heartfelt 'THANK YOU!!' to the outgoing officers -- Tim Hagen (president), Tom Greenwalt (secretary) and Michael Koppelman (board member at-large) -- for their dedication and hard work during the past two years! The new board members take office effective January, 2005. Members can contact all board members via email by using the 'MASBoard@MnAstro.org' email address. Mike's personal email address is 'kibatme@visi.com', and can also be reached via the MAS discussion forums (www.mnastro.org/forums) at the user ID 'kibatme'.



**New MAS President  
Mike Kibat**



**New MAS Secretary  
Steve Emert**



**New MAS  
Board Member  
Greg Haubrich**

## Patron Members

MAS offers a patron membership to those who want to help support our activities by paying \$55 rather than the regular annual membership fee of \$22. We would like to thank the following patron members as of December 2004

Tom Alm	Thomas Hawkinson	David Olmstead
Greg Baril	Michael Haydock	Margaret Olson
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Ron Bennett	Ben Huset	Kirby Richter
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W. Michael Garner	Beverly Miller	Valts Treibergs
William Glass	Scott and Beth Mosley	Bob Vangen
Thomas Greenwalt	Rebeca Most-Reinfeld	Paul Walker
Timothy Hagen	Douglas Oines	William White

## GEMINI INFO

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Photo by Greg Haubrich

Fully packed for the last roadtrip for this van

Kenton Mercantile. She makes a delicious hamburger and a fabulous Philly Cheese Steak sandwich, and also sells coffee, hot chocolate, and soft drinks. Our schedule usually included dinner around 5:30, then a trip to the Starlight Cafe around 2:00 a.m., and snacks from the cooler after we got up sometime in the early afternoon. I must say that the camp food, which is catered by the

both of our visits. Plenty of

good hot food is always available and they serve breakfast, lunch and dinner. For meal planning they want a headcount, so you pre-request the number of meals you want as part of your application. They usually have enough quantity so that you can buy a meal even if you didn't sign up for it, and taking second helpings is also not usually a problem.

Greg had spent the week prior to the star party in Europe. He arrived back home about 2:00 p.m. on Sunday, October 10th. After visiting with his family for a few hours, we left Champlin around 6:00 p.m. We had packed his trusty, but aging minivan the week before he left for Europe. This was to be the last road trip for the van because Greg planned to trade it in after our return, provided the van made it to Oklahoma (how's that for a little uncertainty on a long road trip?). Greg drove to Des Moines when his week of travel finally caught up to him and I took over the wheel around 10:00p.m. Greg took a long and well deserved power nap. With an interesting "book on CD" to listen to and some coffee, I was good to go while Greg slept. We were so packed into the van that the passenger could only recline the seat back a few notches. Somehow we had neatly and tightly packed two 16 inch telescopes, all of our accessories, computers, winter clothes, summer clothes, a couple of coolers, books, and more. I hit rain shortly after I began driving and it kept up throughout the night. In Witchita, Kansas, when we needed fuel, Greg took over again and I napped. We got to Camp Billy Joe around 12:30 p.m. on Monday, Oct 11th, about 18 ? hours after we left Champlin. Since it was drizzling, we staked our claim, previously held for us by Paul Nelson from the MNAA, another Minnesota Astronomical group. Paul is a fellow amateur who we had met the year before. Then we made our way to the bunkhouse for a serious power nap before dinner.

### Monday, Oct 11th

We woke for dinner and while we ate the movie "The Alamo" was playing on the large rear projection screen with a very good sound system. It was cloudy, but Greg and I set up our scopes just to be ready. Well, it remained cloudy so at 7:00 o'clock they started the "Lord of the Rings; The King Returns" with about 95% of star party attendees present. After the movie, Greg and I went to the scopes as occasional stars poked

through the cloud cover. A few constellations and even part of the Milky Way were visible and Greg quickly did his final setup and started to work on one of the two Okie-Tex observing lists. He started on "The Bright & the Beautiful" list while I was trying some objects from the Herschel 2 list. I was very tired and not functioning at an optimal level, but Greg was logging several of the objects on his list. We observed for about an hour under very clear skies. Then some clouds moved in and also formed above us so we decided to visit the Starlight Café for one of those delicious Philly Cheese Steak sandwiches. When we finished and stepped outside to see how much of the sky had cleared, we were disappointed because there wasn't a single star to be seen. We waited for a while and then finally gave up and covered the scopes to get a fair night's sleep at about 3:30 a.m.

### Tuesday, Oct 12th

We woke up about noon to very blue skies and only a few patchy clouds. Even without Greg's usual optimism, hope for the night was high. After some shopping at the vendors and some snacks, we took a nap. We started observing shortly after dark with skies changing continually. There were areas of extreme clarity and others that were totally clouded out. Conditions continued to vacillate as clouds just seemed to form above us in spots and then disappear. Moreover, other aspects were very strange in that usually humidity is not a problem here, but with so much recent rain, the humidity just seemed to form in dark patches right above us. These clouds did not move in, but rather just formed and later disappeared. At about 2:30 a.m., the skies got really grungy so we decided to give it up well after most of the other observers had all ready done so. We had just gotten our scopes covered and our accessories packed away when the sky totally clouded over and a very strong wind suddenly picked up. We were happy that we packed it in because this wind was strong and cold. So it was back to the bunkhouse for a night's sleep.

### Wednesday, Oct 13th

We woke up to bitter cold and a driving rain, which was really depressing. We called our friend Doug Brown at work to check the Clear Sky Clock for us. Doug often travels to these star parties with us, but he was unable to join us this time. He became our link to the outside world since cell phones and cable televisions are unavailable in this remote part of the United States. Doug told us that it was supposed to clear up around 8:00 p.m. The temperature was bitterly cold and the rain continued all day. Around 6:00 p.m. it began to clear and then the clouds started forming and dissipating above us again. Around midnight it looked as if the skies would continue to clear so we decided to take our food break early and go to the Starlight Café. We were back at the scopes around 12:45 a.m. The skies were very clear and transparent, but the humidity was high and the temperature was dropping dramatically. If you go to this star party, you will need summer clothes, fall clothes and your Minnesota winter clothes. Being from Minnesota, we had appropriate clothes for the evening, but equally important, we had brought our dew equipment that gets heavy use back home and was put to use that evening. Greg worked on the second Okie-Tex list, "Fornax and



One of the East Observing Field



One of the bunk houses

Friends.” He and others were struggling with the Sculptor Dwarf Galaxy. Greg also worked on the Astronomical League’s Arp Galaxy list and he finished his Deep Sky Binocular list. I was working on the Herschel 400 and Herschel II lists and star hopped a number of objects on the Messier list. The temperature dropped to about 28 degrees.

Some months ago Doug had given us ballpoint pens developed for the astronauts that write in any position and under very damp conditions. We had tested them in Minnesota by putting a piece of paper under the faucet, shaking the excess water off and then writing on it - the pen wrote perfectly. Of course these pens are handy in dew-prone Minnesota, but we were sure happy we had it them on this evening in Oklahoma. However, we did find a limit to this magical pen – the combined low temperature and moisture began to form frost, and the pen wouldn’t write over the frost.

Aside from the moisture problems, on clear nights the skies here were amazing. To give the reader a feel for Okie-Tex skies, for the first time in our lives we could see M33 with our naked eye, and through the telescope M33 was just magnificent with incredible spiral structure visible. The Flame Nebula in Orion was just fabulous with or without the H-beta filter, even better than last year since it was higher due to the star party being almost a month later. The Horsehead Nebula was more difficult, but it was definitely there. M42 in Orion was just a mass of swirling clouds of gas and the Trapezium showed 5 and sometimes 6 stars.

We observed until astronomical twilight, around 6:45 a.m. and began putting our gear away. By then Venus was so brilliant that it was causing light pollution in the Gemini and Leo areas. When we were finished, we took a shower and got into our bunks about 7:45 a.m. Greg mentioned that to get 8 hours of sleep we would have to sleep until 4 in the afternoon. It was a tremendous evening as we held up the Minnesota reputation of being some of the last to leave the field. Many people who had retired early were just getting up and taking their morning showers.

#### Thursday, Oct 14

This was an “all nighter” with magnificent skies. We worked on our lists and just enjoyed the night sky as it was meant to be seen. The imagers like Steve Liekand from the MAS were

very busy. We went to bed again around 7:45 a.m.

#### Friday, Oct 15

We woke to incredibly blue skies and thought that a terrific night was coming for us again. We did the usual eating, visiting and shopping. Steve Leikind of the MAS gave an interesting and well organized talk at 2:00 p.m. entitled, “Telescopes for CCD Imaging.” After dinner the skies had some clouds to the north but we thought nothing to worry about. We had seen similar clouds before and they looked liked the stuff that usually blows off after dark. We set up before dark and went to the big tent for part of the evening talk and the drawing for one-third of the door prizes being given away that night. During the talk, someone interrupted and said that rain was only a few minutes away. The tent emptied as if someone had dropped a sack of snakes in our midst. We saw the sky almost completely covered with clouds and a wind had picked up, so we put our computers away, covered the scopes, and disappointedly returned to the tent for the end of the talk.

I want to mention the door prizes at the Okie-Tex Star Party. While this isn’t the largest star party around, you would never know it by the large number and high quality of door prizes. In fact this year they decided to give one-third of them away on Friday so it wouldn’t take so long on Saturday evening. The door prizes are worth thousands of dollars and include such things as software, eyepieces, many binoculars, discounts on astro B & B’s, and several telescopes, among other items. They also have a large number of door prizes for children under 14, including binoculars and at least one telescope.

After the drawings and with the sky 99% cloudy, it was to be another movie night. They played “Master and Commander” and “The Patriot.” Instead of watching films, we joined Paul Nelson in his large enclosed, heated, gazebo-type tent and engaged in a night of interesting conversation and some of Paul’s hot chocolate, along with delicious apple pie that Greg’s wife Sue had made for us. Paul is a man we met last year from the Montivideo area and a member of one of Minnesota’s other clubs, the MNAA. Last year we were treated to views through his remarkable 25-inch Dob. I remember seeing M33 and almost falling off the ladder it was so remarkable. This year he brought his 18 inch Dob and his other imaging setup. But that night, as I said, was a night for enjoying each other’s company, telling stories, discussing politics, and sharing our com-

mon bond of love for the stars. It is truly remarkable how you see some of these people only once or twice a year and have so much to talk about. We turned in around 2:00 a.m. and Greg set his alarm for 3:30 a.m. to check the skies. Still solid clouds. I got up an hour later to do what “more mature men” tend to do once or twice a night and still no stars were visible.

### Saturday, Oct 16

We woke around 10:00 a.m. to mostly blue skies and pretty strong southerly winds. It looked hopeful. After several short naps we attended the afternoon talk by NASA’s Nagin Cox’s about the Kepler Mission to be launched in several years. This is a mission that will look at the Cygnus area of the sky for four years straight without “blinking” in the search for earth-like planets around sun-like stars. It will do this by the eclipsing method if a star is in our line of site. Of course the planet will be as small as a sunspot, so it will be looking for a spot on a spotted surface. It was a very interesting and well-delivered presentation. Dinner consisted of barbecued brisket smoked in pecan wood cooked by a local rancher. Needless to say it was delicious. Nagin was also the keynote speaker that evening, and she spoke about the two Mars rovers, Spirit and Opportunity. She worked on that project for years and after the landing, she moved to the Kepler Mission. Her talk was longer than any I’ve heard at a star party, about 75 minutes. This was my 8th regional star party and this was by far the best talk I have ever heard. Even though you would expect that people would be anxious to get on with door prizes and observing, all of us gave her a standing ovation, something I have never seen at a star party. I tell you this in case you ever have an opportunity to see her in person or on the NASA channel. Following the applause the other two-thirds of the door prizes were handed out. I was in a row of seven people and only one other man and I didn’t win anything. Greg also lost out, but our friend Paul Nelson, who won a hat last year, won a Telrad this year. Greg and I joked that we couldn’t win anything because we didn’t have any room in the van to haul it back home. (Maybe a poster could have fit on top of all our stuff though.)

The skies had been beautiful before the talk, but now it had

become solid clouds again. We visited, ate and remained awake until 3:00 a.m. waiting for the skies to clear, but they never did.

### Sunday, Oct 17th

We woke up around 8:30 a.m., began packing our equipment, and took a shower. While we were packing, a fellow observer saw all of our gear lying on the ground; he just laughed and said we were never going to get it all into the van. Well of course we did. We left at 11:11 a.m. for the trip home and made better time on the way back because we didn’t stop as often. However, we did stop in Kansas City at Ferallo’s Jack Stack, a great barbecue place that Doug, Greg, and I have stopped at several times, including our trips to TSP. Greg and I each bought a gallon of their famous beans to enjoy in Minnesota. The trip took us about 17 hours and we got home before the Twin Cities morning rush hour began. In all we traveled almost 2000 miles and got about 21 miles to the gallon in Greg’s old van’s final astro trip.

Looking back on the trip and Okie-Tex star party, we have to admit that the skies this year were not the best, but it was still a great time. In my opinion this is the best star party to attend. About 350 people come together in a beautiful setting. There’s a lot of sight seeing to do, friendly unpretentious people to connect and re-connect with, good food, great door prizes, interesting talks, many terrific telescope setups, lots of things for families to do, good accommodations, and usually incredible skies. If you can only attend one star party, I highly recommend that you try the Okie-Tex Star Party in 2005. We’re planning to go back. One of the things that make this one so great is the longer evenings at this time of year. When it gets dark, Bootes is still fully above the Western horizon and when the sun comes up, Leo is fully above the Eastern Horizon. We are looking forward to next year. ■



Photo by Greg Haubrich

One of our observing site just rt of the RV



Photo by Greg Haubrich

One of the main building & eating and presentation tent

## BAD Update

### Deane Clark

For the uninitiated, the “BAD” is the Big-Ass Dob, the colorful name by which the MAS’s 24 inch Starmaster Dobsonian telescope is known. Acquired about a year ago, this telescope is housed at our Cherry Grove observing site. Many members were first introduced to it at our Astronomy Day event at Onan Observatory last spring. It was the big-BAD hit of the party.

At this writing (beginning of October), there are just under 20 MAS members trained-in to use the BAD. Due to storage constraints at Cherry Grove, the BAD is stored unassembled, which complicates the training somewhat, but the Starmaster is actually fairly easy to assemble, especially with two people.

In order to make the Starmaster much easier to use, we are in the midst of constructing a shed at Cherry Grove in which it can be stored fully assembled. This will reduce both the training requirements as well as the time devoted to setup rather than observing. The most recent major accomplishment, on September 11<sup>th</sup>, was pouring a concrete foundation for the shed, and a walkway in front of it where the Starmaster can be rolled out and set up on a nice level surface. We are currently waiting for a storage shed kit to arrive, and then we’ll be off on another construction adventure as we try to get it built before the snow flies.

Accomplishing this required money, of course. Through the generous donations of many MAS mem-

bers and folks who have bought t-shirts, Hubble cards, and other assorted trinkets, we have raised a total of \$10,904 for the “BAD Fund”. \$5000 of this was allocated by the MAS Board from the Special Projects fund, made up mostly of the extra yearly dues paid by our Patron members, so thanks are due to them as well. So far, \$7000 of this was spent acquiring the Starmaster (a good price for a 24” telescope) and another \$1000 on accessories and building supplies. After paying for the shed, we will still have about \$1200 left to spend on accessories like a couple nice 2” eyepieces.

If you are interested in becoming a trained BAD user, the only prerequisite is being an MAS member who’s willing to drive down to Cherry Grove (about 1.5 hours south of downtown Minneapolis). Just drop an e-mail to me at [drclarkjr@mn.rr.com](mailto:drclarkjr@mn.rr.com), call 612-922-9638, or stop me at any star party or meeting.

Finally, I would like to personally thank my colleagues on the BAD Administration and Maintenance Committee (Greg Haubrich, Dick Jacobson, Bill Kocken, Steve Emert, Tom Lindquist, Vic Heiner, and Michael Burr) for their dedication to seeing this project through, as well as those who have helped us along the way, like John Young, Glenn Lee, Helen Curtis, David Smith, Bob Minor, my brother Dan, and everyone who contributed by battling around opinions on the BigDob mailing list over the last couple years. Sorry if I left anyone out, but I see a hook coming... 🍪

## MAS MINI-MESSIER MARATHON RE-CAP

### Steve Emert

The second annual fall MAS Mini-Messier Marathon was held on Saturday, September 18th this year. Saturday night turned out to be a very good night for the 4M. Temperatures stayed in the mid to low 60’s and the 20% cloud cover predicted by the Clear Sky Clock for part of the evening never materialized – we had clear skies all evening. Even though temperatures were moderate, the hot cider and cookies tasted good during the occasional trip to the warming house. Breezes that evening were fairly strong, however, and we found out just how well a couple of truss Dobs could double as weathervanes (most especially the BAD)! Fortunately the wind died down somewhat after midnight.

About a dozen or more people turned out for the 4M. Most stayed until around midnight, with a few “diehards” lasting until around 4:00 am. We all had a good time, but this event didn’t turn out to be a true marathon in the sense of the spring Messier Marathon which requires the observers to get a strong start, work throughout the night, and well into the morning twilight to log all 109 Messier objects (110 if you are among those that count NGC 5866 as M102).

For this fall 4M, the most objects we could realistically view was 86, starting with the globular clusters M5 and M53 just after twilight and potentially ending with M44 and M67 in the morning twilight – although none of us ended up staying that late.

As it turned out, this event really ended up just being a very good late night star party. Apparently with the chance to “only” get a maximum of 86 objects, most participants decided to just get a good night of Messier viewing in without the pressure of the marathon. The most objects logged by a participant this evening was 25. The last of the participants wrapped up around 4:00 am after getting a view of Orion, Saturn, and finally just glimpsing a peek of Jupiter as it rose.

In the early evening many of us had the chance to share good views of M80, Ptolemy’s Cluster, the Butterfly Cluster, and the globular clusters in Sagittarius. Throughout the evening, Tom Swenson proved a good caretaker of the BAD, sharing views of M13, M92, M57, the

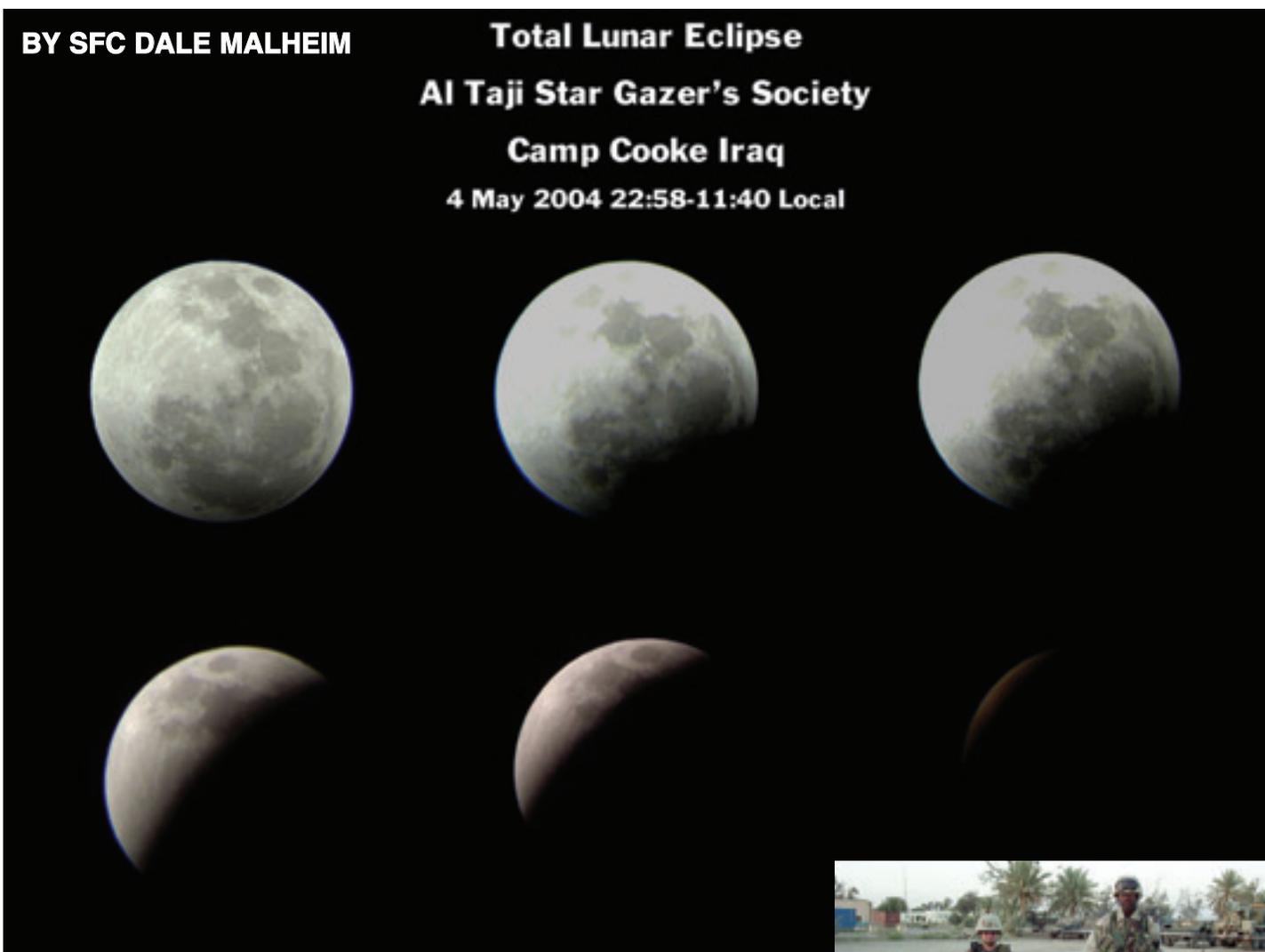
Dumbbell Nebula and much more. Many of us had an excellent chance to view the Veil Nebula in Cygnus through the BAD, using Tom's O-III filter. In past Messier Marathons and the previous 4M, we've typically had prizes for the most objects observed star-hopping, most objects observed with DSC or GoTo scope, and a random drawing. Although we had at least 12 or more people participate in this 4M, only a few of them actually signed in and let us know the number of objects they logged! (C'mon, if you don't sign in, how can we award you a "Fabulous Prize"?)

Here is the list of signed-in participants:

- Beth and Scott Mosley
- Jason Gates - 25 objects viewed, star-hopping!
- Tom Swenson - 21 objects viewed, star-hopping!
- David Gay - 18 objects viewed, star-hopping!
- Doug Brown

· Steve Emert  
Since only three people tallied their logs and there are three prizes, it seems only right to award the prizes to those who tallied their logs! Therefore, congratulations go to Jason (1st prize), Tom (2nd prize), and David (3rd prize) for logging the most objects viewed. Many thanks to Dan Fish of Radio City for donating the prizes for this event. The prize vouchers were presented to the winners present at the October 7th MAS General meeting. The others should have been delivered by mail by the time you read this article.

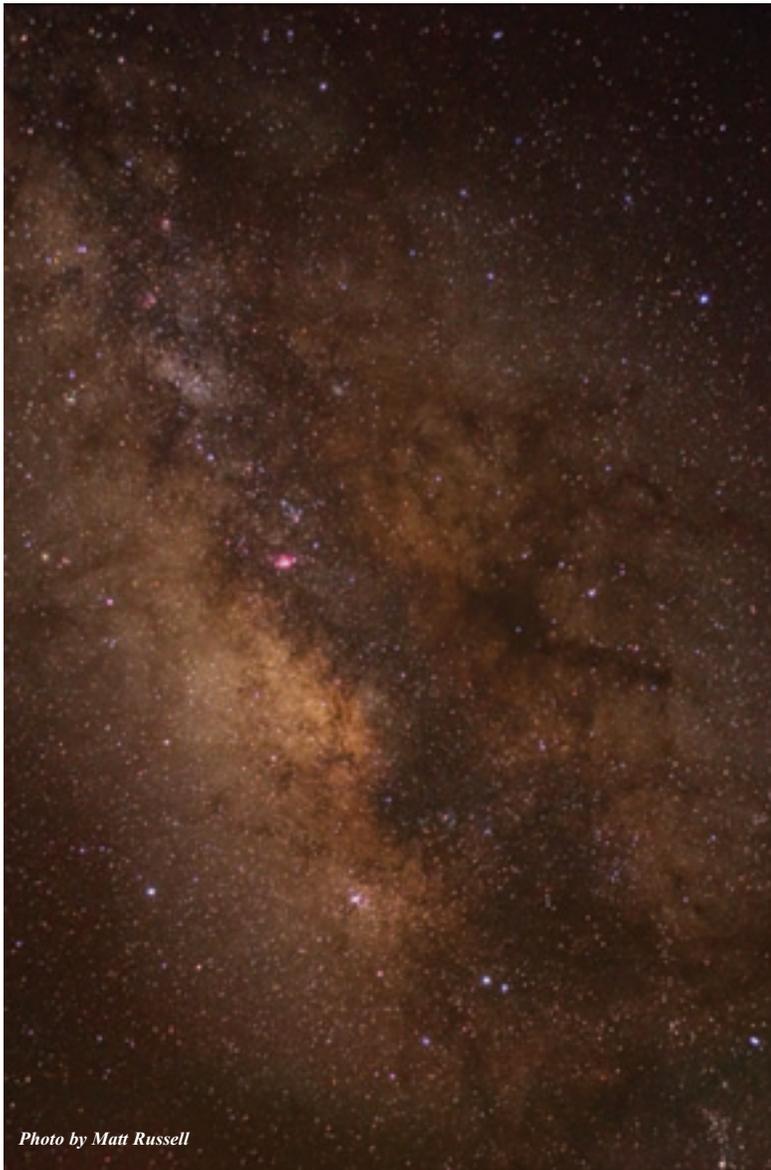
Again, congratulations to the winners! And thanks to everyone who participated in the 4M, making it a very fun observing event. Start planning early for the "real thing" next spring, and hope the weather will be as good as it was this fall! 🍂



These photos were taken at Camp Cooke in Al Taji Iraq. By members of the Al Taji Star Gazer's Society. The telescope is a Hardin Optical Star-Hoc 80-6 donated to us by Hardin Optical. Photos were taken using a Panasonic Disk camera clamped onto a 25mm eyepiece. We had 14 soldiers watching the eclipse at our party until totality was reached when attendance dropped due to guard duty shift change.

# MAS Photo Page

Space Pictures Pluto  
5/20/2004



*Photo by Matt Russell*

Hercules Cluster ( M13 ) Hercules  
date taken: 03-23-2001  
Starhouse Observatory, Cologne, MN  
Takahashi FS-102 f/8 Kodak PJ400

According to IRAF this image has somewhere around 11,284 stars. The way it finds stars is to look for gaussian shapes in the data that are  $n$  sigma above the background. You can play with  $n$ . This was set for  $n=12$ , so statistically speaking, a "star" had to be 12 times the background level before it was identified as a star. The probability of it being a mistake is pretty small.

When you view the image on a log scale you really get a sense for the unbelievable density of the stars.



*Photo by Matt Russell*

This one is of the core region of our own Milky Way galaxy. It was taken with a Canon 10D Digital SLR @ 35mm. It's a little noisy, but it's probably because I'm not used to processing digital SLR images.  
Object: Core of the Milky Way Galaxy  
Date Taken: 6/20/2004  
Location: RMSS 2004 Taryall, CO  
(Rocky Mountain Star Stare)  
Equipment: Canon 10D @ 35mm  
Exposure Specs: 9 minutes total, 3x3 minutes, ISO 800  
Processed with: MaximDL 3.x, Adobe Photoshop CS



*Photo by Michael Koppelman*



Photo by Matt Russell

I think this is one of the most interesting objects in the sky. IC 1396 is a very large nebulous region in Cepheus. This particular area, vdB-142, you can see all sorts of interesting types of nebulas, dark, emission, as well as reflection nebulas can be seen in this image.

IC Number: IC 1396 vdB-142  
 Constellation: Cepheus  
 Distance from Earth: ~1,500 Light Years  
 Size: 49 arc minutes

IC 1396  
 Date Taken:  
 7/13/2004

Location: Black Forest, CO

Equipment: 16" RCOS Ritchey-Chretien, Astro-Physics .67x Reducer, SBIG 10E, NABG, SBIG CFW-8a, SBIG AO-7, Bisque Paramount ME

Exposure Specs: 150 minutes total  
 Lum: 17x5 min  
 Red: 4x5 min  
 Grn: 4x5 min  
 Blu: 5x5 min

Processed with: AIP for Windows, MaximDL v3.0, Adobe Photoshop CS

There are over 300,000 stars in this cluster, which is located roughly 33,000 light years from us. You can always click on the image to see a larger version.

M3 Globular Star Cluster  
 NGC Number: NGC 5272  
 Constellation: Canes Venatici  
 Distance from Earth: ~33,000 Light Years  
 Visual Magnitude: 6.2  
 Size: 18 arc minutes  
 Date Taken:  
 7/10/2004  
 Location: Black Forest, CO  
 Equipment: 16" RCOS Ritchey-

Chretien, Astro-Physics .67x Reducer, Bisque Paramount ME, SBIG 10XME, NABG, SBIG CFW-8

Exposure Specs: 75 minutes total  
 Lum: 6x5 min  
 Red: 3x5 min  
 Grn: 3x5 min  
 Blu: 3x5 min

Processed with:  
 MaximDL v3.0  
 AIP for Windows  
 Adobe Photoshop CS



Photo by Matt Russell

## 2004 Onan Observatory Public Star Parties

*Star parties are held on Friday if weather permits, otherwise on Saturday. Call (952) 467-2426 after 6:00 p.m. on a star party date to hear whether it will be held.*

Date	Event	Starts	Ends
04/23/2004	Astronomy Day Star Party	06:30 PM	10:00 PM
04/24/2004	Astronomy Day / Star Party	Noon	10:00 PM
05/28/2004	Observatory Public Viewing	07:00 PM	10:00 PM
05/29/2004	Observatory Public Viewing	07:00 PM	10:00 PM
06/25/2004	Observatory Public Viewing	07:00 PM	10:00 PM
06/26/2004	Observatory Public Viewing	07:00 PM	10:00 PM
07/23/2004	Observatory Public Viewing	07:00 PM	10:00 PM
07/24/2004	Observatory Public Viewing	07:00 PM	10:00 PM
08/11/2004	Public Meteor Viewing Party	10:00 PM	Dawn
08/20/2004	Observatory Public Viewing	07:00 PM	10:00 PM
08/21/2004	Observatory Public Viewing	07:00 PM	10:00 PM
09/17/2004	Observatory Public Viewing	07:00 PM	10:00 PM
09/18/2004	Observatory Public Viewing	07:00 PM	10:00 PM
10/15/2004	Observatory Public Viewing	07:00 PM	10:00 PM
10/16/2004	Observatory Public Viewing	07:00 PM	10:00 PM
10/27/2004	Public Lunar Eclipse Party	07:00 PM	01:00 AM
11/16/2004	Public Meteor Viewing Party	10:00 PM	Dawn

## Directions to the Star parties

### Metcalf

Metcalf is the grassy parking lot of Metcalf Nature Center, about 20 miles east of St. Paul along highway 94. About 6 miles E of the 694/494 crossing is county road 15 (Manning Ave.). Turn right, then left onto the frontage road and continue east, crossing over county road 71. Turn right (south) onto Indian Trail; follow it 1.1 miles to an chicken-wire gate on the right, (marked by three blue reflectors), opening onto a dirt driveway, which is the entrance to Metcalf.

### Baylor Regional Park

Baylor Regional Park is roughly 25 miles W of the SW corner of 494. Head west on highway 5, through Waconia, to Norwood Young America. Turn right onto county road 33 and follow it about 2 miles to the park which is located on the right (east) side of the road. When entering the park stay to the right, follow the park road roughly  $\frac{1}{2}$  of a mile. Card-Carrying MAS members may observe at Baylor at any time; call the park caretakers Steve and Margo by 7 p.m. in advance at 952-467-6488.

When visiting Baylor Regional Park, MAS members are requested to NOT PARK OR DRIVE on the grass. Annual Parking Permits (not required for observing) can be purchased for \$20 in the following ways:

- Mail a check to Carver County Parks, 11360 Hwy 212 W, PO Box 330, Cologne, MN 55322
- Call the Park office at 952-466-5250, can be paid with Master or Visa Cards.
- Through the honor box or gate attendant at either Baylor or Lake Minnewashta Regional Park.

For additional information about the Carver County Park system visit the park web site at [www.co.carver.mn.us/parks](http://www.co.carver.mn.us/parks) or contact the park office at 952-466-5250.

### Cherry Grove

Cherry Grove is about 20 miles south of Cannon Falls. Head south on Hwy 52. Around 6 miles south of Cannon Falls, take a right onto Goodhue County 1 and follow it around 16 miles, where it ends in a T with Dodge County A. The observatory and warming house are at your right, nestled in the corner of the T.

## Beginners SIG meeting schedule

SIG meetings are held the third Tuesday of month, usually starting at 7:00 p.m. Locations vary from month to month and are posted on the Beginner's e-mail list. This year's meeting schedule.

Topic	Speaker	Date
Star Hopping / Reading Star Charts	Greg Haubrich	01/20/04
Logging / Drawing Your Observations	Dave Venne	02/17/04
Planning Your Observing Session	Jim Fox	03/16/04
Spring/Summer Constellations	Tom Youngblood	04/20/04
Accessories	Phil Lefever	05/18/04
Collimation	Phil Lefever	06/15/04
Astronomy League Observing Programs	Greg Haubrich	07/20/04
Imaging	Thor Olson	08/17/04
Fall/Winter Constellations	Tom Youngblood	09/21/04
Binocular Astronomy	Doug Brown	10/19/04
Optics	Phil Lefever	11/16/04

## 2004 Star Parties

*Star parties are held on Friday if weather permits, otherwise on Saturday. Call (952) 467-2426 after 6:00 p.m. on a star party date to hear whether it will be held.*

Date	Alt Date	Event	Start	End	Location
2/13/04	2-14-04	Star Party: Baylor	Dusk	Indefinite	Baylor Regional Park (Onan Observatory)
2/20/04	2/21/04	Star Party: Cherry Grove	Dusk	Indefinite	Cherry Grove Observatory
2/27/04	2/28/04	Star Party: Metcalf	Dusk	Indefinite	Metcalf Nature Center
3/12/04	3/13/04	Star Party: Baylor	Dusk	Indefinite	Baylor Regional Park (Onan Observatory)
3/20/04		StarParty: Cherry Grove+			
		MAS Messier Marathon(alt.)	Dusk	Dawn	Cherry Grove Observatory
3/26/04	3/27/04	Star Party: Metcalf	Dusk	Indefinite	Metcalf Nature Center
4/9/04	4/10/04	Star Party: Baylor	Dusk	Indefinite	Baylor Regional Park (Onan Observatory)
4/16/04	4/17/04	Star Party: Cherry Grove	Dusk	Indefinite	Cherry Grove Observatory
4/23/04	4/24/04	Astronomy Day Star Party	6:30 PM	10:00 PM	Baylor Regional Park (Onan Observatory)
5/7/04	5/8/04	Star Party: Metcalf	Dusk	Indefinite	Metcalf Nature Center
5/14/04	5/15/04	Star Party: Cherry Grove	Dusk	Indefinite	Cherry Grove Observatory
5/21/04	5/22/04	Star Party: Baylor	Dusk	Indefinite	Baylor Regional Park (Onan Observatory)
5/28/04	5/29/04	Observatory Public Viewing	7:00 PM	10:00 PM	Baylor Regional Park (Onan Observatory)
6/4/04	6/5/04	Star Party: Metcalf	Dusk	Indefinite	Metcalf Nature Center
6/8/04		Transit of Venus	4:30 AM	7:00 AM	Urban/Suburban Location T.B.D.
6/11/04	6/12/04	Star Party: Baylor	Dusk	Indefinite	Baylor Regional Park (Onan Observatory)
6/18/04	6/19/04	Star Party: Cherry Grove	Dusk	Indefinite	Cherry Grove Observatory
6/25/04	6/26/04	Observatory Public Viewing	7:00 PM	10:00 PM	Baylor Regional Park (Onan Observatory)
6/25/04	6/26/04	Star Party: Metcalf	Dusk	Indefinite	Metcalf Nature Center
7/9/04	7/10/04	Star Party: Baylor	Dusk	Indefinite	Baylor Regional Park (Onan Observatory)
7/16/04	7/17/04	Star Party: Cherry Grove	Dusk	Indefinite	Cherry Grove Observatory
7/23/04	7/24/04	Observatory Public Viewing	7:00 PM	10:00 PM	Baylor Regional Park (Onan Observatory)
7/23/04	7/24/04	Star Party: Metcalf	Dusk	Indefinite	Metcalf Nature Center
8/6/04	8/7/04	Star Party: Baylor	Dusk	Indefinite	Baylor Regional Park (Onan Observatory)
8/11/04		Public Meteor Viewing Party	10:00 PM	Dawn	Baylor Regional Park (Onan Observatory)
8/13/04	8/14/04	Star Party: Cherry Grove	Dusk	Indefinite	Cherry Grove Observatory
8/20/04	8/21/04	Observatory Public Viewing	7:00 PM	10:00 PM	Baylor Regional Park (Onan Observatory)
8/20/04	8/21/04	Star Party: Metcalf	Dusk	Indefinite	Metcalf Nature Center
8/27/04	8/28/04	Observatory Open House	Dusk	10:30 PM	Baylor Regional Park (Onan Observatory)
9/10/04	9/11/04	Star Party: Baylor	Dusk	Indefinite	Baylor Regional Park (Onan Observatory)
9/17/04	9/18/04	Observatory Public Viewing	7:00 PM	10:00 PM	Baylor Regional Park (Onan Observatory)
9/17/04	9/18/04	Star Party: Cherry Grove + Mini Messier Marathon	Dusk	Dawn	Cherry Grove Observatory
9/24/04	9/25/04	Star Party: Metcalf	Dusk	Indefinite	Metcalf Nature Center
10/8/04	10/9/04	Star Party: Baylor	Dusk	Indefinite	Baylor Regional Park (Onan Observatory)
10/15/04	10/16/04	Observatory Public Viewing	7:00 PM	10:00 PM	Baylor Regional Park (Onan Observatory)
10/15/04	10/16/04	Star Party: Cherry Grove	Dusk	Indefinite	Cherry Grove Observatory
10/22/04	10/23/04	Star Party: Metcalf	Dusk	Indefinite	Metcalf Nature Center
10/27/04		Public Lunar Eclipse Party	7:00 PM	1:00 AM	Baylor Regional Park (Onan Observatory)
11/5/04	11/6/04	Star Party: Baylor	Dusk	Indefinite	Baylor Regional Park (Onan Observatory)
11/12/04	11/13/04	Star Party: Cherry Grove	Dusk	Indefinite	Cherry Grove Observatory
11/16/04		Public Meteor Viewing Party	10:00 PM	Dawn	Baylor Regional Park (Onan Observatory)
11/19/04	11/20/04	Star Party: Metcalf	Dusk	Indefinite	Metcalf Nature Center
12/3/04	12/4/04	Star Party: Baylor	Dusk	Indefinite	Baylor Regional Park (Onan Observatory)
12/10/04	12/11/04	Star Party: Cherry Grove	Dusk	Indefinite	Cherry Grove Observatory
12/17/04	12/18/04	Star Party: Metcalf	Dusk	Indefinite	Metcalf Nature Center



**MN ASTRONOMICAL SOCIETY**

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Your MAS membership expires at the beginning of the month shown on your Gemini mailing label. Send your payments to the MAS treasurer (Patti Neavin) PO Box 16656 St Paul MN 55116-0656. Make checks payable to MAS. The current annual membership dues and subscription fees are:

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To subscribe to the MAS e-mail list visit:  
**<http://lists.mnastro.org/mnastro/listinfo/>**  
and follow the subscription instructions.

There is a general list (MAS) as well as special interest group (SIG) lists. Archives of the lists are also available by visiting the listinfo page for a specific list.

The MAS list has about 40% of the membership on it.