

# Gemini

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## Trip to Nebraska Star Party

by Dave Falkner

*With contributions by Mark Job, Jake Hairrell and Jerry Jones*

In February 2013, I received an email from Mark Job saying that he and Jake Hairrell were planning to attend the Nebraska Star Party in August and wondered if I wanted to join them. I had heard about the NSP and knew it was held in a remote part of north-central Nebraska near Valentine. After consulting with the boss (my wife), I agreed to join them.

Mark had assured me that we would not be doing any primitive camping. He would rent an RV trailer and we would split the cost. He did some due investigating and found a dealer who would rent a 30-foot trailer at a fair price. Since we would be doing our own cooking, we figured the cost per person would be quite reasonable. I felt that a trailer advertised to sleep ten should be able to sleep four well enough. So we invited Jerry Jones to join us, despite his reputation for bringing cloudy weather. Jerry is the only person I know who could go to Phoenix and be clouded out six nights straight. Jerry was non-committal for several weeks but finally succumbed to our relentless badgering. So now we had four to split the cost.

The NSP was held August 4-9. As the time approached we had a couple of organizational meetings, one of them at Mark's office—the Starbucks in Maple Grove. Mark made reservations at the Wacky West RV Park in Valentine and made sure that his truck was ready, including adding an electric brake system for the trailer. Mark is a decent cook; he planned a steak dinner and one with a pork roast. We figured to have a couple of egg breakfasts and a pancake breakfast that Jake wanted to fix. The Tuesday night meal would be at NSP, as it was included in the registration fee. We would bring the meat and staples with us but would purchase the perishables in Valentine. It was large enough to have an IGA grocery store (and much more, as we would find out).

We had quite a bit of observing gear to bring. The more sensitive observing equipment would go in Mark's pickup, either in the back seat of the club cab or in the bed, which had a soft Tonneau cover. The rest would go in the trailer. Jake



*The four members of the group from MAS who attended the Nebraska Star Party.*

could not stay for the entire week, so he would drive separately and join us a day late. Having the extra vehicle turned out to be very helpful.

Finally the big day arrived. Pulling the large trailer would slow us down, so we figured the trip would take about ten hours. We planned on leaving around 8:00 a.m. on Saturday, August 3 (my wedding anniversary; my present for my wife was leaving for a week!). Around 10:00 p.m. on Friday night I got a phone call from Mark. He noticed that his driver's license had expired! Since he would be doing the lion's share of the driving, this was a problem. Moreover, we weren't sure that he could find somewhere open on Saturday to get it renewed. Mark's wife got on the Internet and found a licensing station open at Ridgedale. We adjusted our plans and would meet at Mark's house at 10:00 a.m. instead of 8:00. We could still make Valentine by Saturday evening.

While we packed the truck we decided that Mark would drive, I would ride shotgun, and Jerry would start out in one of the rear seats. We folded up the rear seat behind Mark and put Jerry's 12" Dob base and mirror box there. It was a good fit; this would keep it stable. With everything loaded we made another check of the trailer, made sure the lights all worked, and left around 10:30.

Since Mark lives in Buffalo, the first part of the trip took us southwest through south-central Minnesota. We drove south to pick up U.S. 212, then west to Olivia, then south again through Windom, where we picked up Interstate 90 west. As we drove through Minnesota farm country, some of the roads were smooth and some weren't. The ride in the front seat was fine, but Jerry was bouncing a bit in the back seat. He was trying to do some work on his iPad and found the bouncing made it too difficult. I told him that we could switch when we stopped for gas, which happened fairly frequently.

One of the things I found interesting was the gas mileage instant readout in the roof console between the front seats. When we were going downhill it read up to 99 miles per gallon. Of course with every downhill there is an uphill. The engine handled it well but the mileage plummeted to three miles per gallon. On level road we settled out to somewhere between five and seven miles per gallon. I know that sounds atrocious but remember that we were fully loaded and hauling a 30-foot trailer. Based on the size of the truck's gas tank, we figured about 160 miles per tankful.

We didn't know a great deal about one another's background. That would change after 20 hours on the road. Mark started talking about some of his work with the FDA and then transitioned to his youth, when his family moved from Minneapolis to a farm in central North Dakota. He identified the crops we passed and talked about planting and harvesting crops, including corn, soy beans, alfalfa, sugar beets and sunflowers. He showed us how to tell the difference between feed corn and sweet corn. We also talked about farm equipment and the operation of a farm. He told us about the inventory of equipment needed to plant the crop in the spring, care for it during the growing season, and harvest it in the fall.

Sometimes Mark's stories would dovetail with stories I had about my 20-year career in the Navy. I told about the duty stations I was at, the ships I was on, and some of the maneuvers we did, as well as some of the antics. There were a couple of dark stories about tragedies at sea and in port. There was a lot to talk about. Jerry took notes.

We stopped for lunch in Windom and checked the interior of the trailer. A drawer right inside the door had opened, but other than that all was secure. We closed the drawer. I offered to change seats with Jerry. It was clearly a rougher ride in back, and Jerry had mentioned that he was feeling it in his back. But he said he was fine. Besides, we would be on the Interstate soon, so the road should be better. Fair enough—and off we went.

We were heading west on I-90 now. It soon became clear that we were going in the direction of Sturgis, SD. I've never seen so many motorcycles, mostly Harleys with a few other brands mixed in. There were hogs, sidecars, trikes, you name it, and riders dressed in every way imaginable—as long as it included a leather jacket. A lot of cows gave their lives for this group.

The Interstate was better, but we soon found out that the road over bridges was just a bit higher, and there was a very noticeable bump as we encountered every bridge over roads, creeks, ditches, railroads, etc. Jerry wasn't getting much relief.

We reached Chamberlain, SD, and the Missouri River around suppertime. We had been seeing signs for Al's Oasis, and that sounded like a fine spot to have supper. Al's had an all-you-can eat buffet. It was a nice respite from the grueling road.

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We checked the trailer interior and again the drawer by the door had opened. It was the only thing out of place. We closed this rogue drawer and prepared to get back on the road. I took over the rear seat for the next leg of the trip. It wasn't terribly long—less than 160 miles—but it was the break Jerry needed. At Kennebec we gassed up and Jerry took over the back seat again. I think he liked having the space to himself.



*Jerry Jones*

As we approached Mission, SD, we encountered a freshly poured stretch of concrete highway. It should have been the best road yet, but somehow each section seemed to sag a little and was raised at the seam of the next section. The road was brutal for about ten miles; we vowed not to return that way. As dusk fell we passed an Indian Casino, an island of light pollution in an otherwise dark area of the country.

We rolled into Valentine around 10:00, just as we had hoped. We made our way to the Wacky West RV Park on the east end of town. No one seemed to be in the office. We decided to find a spot and figure things out in the morning. There were a number of RV trailers parked, but several spots were still available. Our trailer had a push-out living space to add additional room in the main area. The first spot had a tree blocking the push-out when the hook-ups were lined up. We found a second spot, set and leveled the trailer, and hooked it up.



*Dave Falkner*

The plan was to park the trailer and then go to the Merritt Reservoir, where the NSP was being held. It was about 11:00. The reservoir is located about 30 miles southwest of Valentine. We found the observing site. Even though the NSP didn't actually kick off until Sunday, there were a number of people already there and set up. As we pulled up we saw the light from our headlights wash across a number of telescopes; there was a flurry of yelling and handwaving to turn off our lights. The idiots from Minnesota had arrived! To add insult to injury, the interior lights of the truck

came on when we opened the door, and Mark didn't know of any way to turn them off. We bailed out as fast as we could to minimize the damage. Well, at least we were memorable.

It was quite windy, but clear and, oh my, the Milky Way was as brilliant as ever—"annoyingly bright," as Mark put it. A story from another member of our party will tell you more details. After about an hour the clouds rolled in from the south, and we decided to head back to Valentine.

It's difficult to describe how excited Jerry was to be here. After being clouded out in Phoenix he was ready to observe all night, every night. On the way back to Valentine, Jerry opened his window and stuck his head out.

"It's clear," he shouted over the wind noise.

"We should go back!"

"Jerry, get your head back in the truck," I said.

"No, really, I see stars!"

"Jerry," Mark said, "That's because we drove out from under the clouds. They're still coming."

"I think we should go back," Jerry said.

"No, Jerry," I said. "Get your head back in the truck."

Finally he reluctantly pulled his head back in and closed the window. When we got back to Valentine, the skies were clear. Jerry was thinking of unpacking his small telescope and setting it up. We talked him out of it, and within a half-hour the clouds had reached Valentine. We settled in for the night.

We soon found out that only having four adults in a trailer that sleeps ten was a smart idea. I was in the lower bunk in a double bed, but I couldn't stretch out without sleeping diagonally. Jerry was in the top bunk with the same issue. Even Mark, who had the queen-size bed, had to sleep diagonally. Clearly they had some small people when they measured the beds.

The next day brought sunny, warm weather, but not the blistering-hot weather others had warned us about. I'm a coffee person, and I usually opt for the drip-grind variety. Mark likes French-press Starbucks coffee; he invited me to try it, since his press made more coffee than he normally drinks. I agreed, and he made the coffee. It was good. We made eggs and toast for breakfast, but the toast was a bit of a challenge. We didn't have a toaster, so we decided to use the broiler. Both the stove and oven in the trailer were propane. The oven didn't really have a broiler; it had a metal plate on the bottom of the oven that was heated by the propane flame. We put some bread on foil and laid it on top of the plate to make the toast. The first couple of pieces were a little questionable, but we got better the more we used it.

Being it was Sunday, many of the RVs had pulled out to make their way home, so we moved the trailer to a better spot. We unpacked and settled in. The IGA was only about a block away, with an ALCO department store next to it—kind of a Mills Fleet Farm K-Mart. We bought some groceries and went into the department store. We picked up a few things, including a longer water hose and some tape for blacking out the white lights of the truck that had made us infamous. The sales clerks were very friendly and helpful, which we soon found out was quite genuine.

We spent some time taping over all the interior lights in Mark's truck so we wouldn't be as memorable that evening. Jerry discovered that he had forgotten the charger for his computer. On the off chance that the ALCO might have a suitable charger, Jerry and Mark went to investigate. There was no charger for sale, but the manager's computer used the same charger Jerry needed. She

allowed him to charge his computer there using her charger. She, like all the people we encountered in Valentine, was very nice.

The owner of the RV Park stopped by to introduce herself and to find out if we needed anything. She suggested that we move our RV to a different location where we would be more comfortable and our vehicles would not block traffic through the park. We scouted out a spot that would be better located to the electrical, water and sewer hookups. We chose a spot that had two trees for a nice shade on the door side of the RV, which made sitting outside comfortable in the afternoon. We no longer needed the long water hose.



*Jake Hairrell*

The fourth member of our group, Jake Hairrell, arrived around 3:00 that afternoon. For supper we had some great burgers with fresh ground beef from the IGA and a vegetable plate. After rearranging some telescope items between the truck and Jake's car, we set out for Merritt Reservoir to check in.

As usual the group attending the star party was quite diverse. Most of the folks came from the Omaha and Lincoln Astronomy Clubs, the hosts for this event. Along with some observing literature and object lists, we also received a commemorative T-shirt. I introduced myself to one gentleman who proceeded to tell me all he knew about eyepieces. I tried to excuse myself but the man continued rambling on about eyepieces for almost 15 minutes before I was able to break away. I thought to myself, "There's 15 minutes of my life I can never get back!"



*Mark Job*

After checking in, we went to find our spot for the week of viewing. The area to set up telescopes was quite expansive, and despite the number of people who were already there the amount of open space was still significant. The night before we had been made aware of a cell phone tower whose white flashing light failed to change to red after dark. This was quite annoying. One of the participants had brought a portable observatory dome; we

positioned our telescopes so that his dome blocked the annoying white flashing light from the cell tower. It was a stroke of genius.

Except for the light from the cell phone tower, the area was quite dark. One issue I found was that my white table reflected the red light I had attached to it so much that it was actually too bright. I would need to do something about that. Jerry also had a minor problem with his Dob in that one of the knobs that secured his cradle box interfered with the altitude encoder bracket. We would have to look into that tomorrow as well. We observed until around 1:00 a.m., when the clouds returned and we packed it in. We left the mounts, tables and chairs at the observing sites and covered them with tarps.



*ALCO Manager*

Some of us were still pretty awake when we got back to our trailer, so we started watching a movie, "The Great Escape." I can see why it is considered one of the greatest movies of all time. Despite the suspense and action, we faded around 3:00 a.m. and decided to finish it later.

The next day brought sunny skies. Jake made some fabulous blueberry pancakes, along with bacon, juice and coffee. It was a breakfast fit for a king.

After thinking about my problem with the red light reflecting off my white table, I decided that the cure would be to cover it with a black cloth. Mark and I set off to the department store to see if they had what I needed. Since we moved our trailer, we no longer needed a longer water hose, so Mark had to make a return. The problem was that the receipt was lost. During the return process at the customer service desk, Mark made a smart-alecky remark to the checkout girl. She gave it right back, and some friendly back-and-forth bantering ensued. She kidded with Mark, giving him a friendly warning with a smile and recorded his personal information for the manager's approval of the refund. This was a fun town.

They had the spray adhesive and scissors for my table project but not the black cloth. They mentioned that a sewing store on Main Street would probably have it. So Mark and I drove the four blocks to Main Street and sure enough, about a block and a half down was the sewing store. Mark dropped me off and I walked along a sidewalk with hearts stenciled on the cement every ten feet or so (Valentine—hearts—get it?). I stepped around the bucket catching water from the air-conditioner mounted over the front door and walked into a mom-and-pop sewing store crammed with bolts of cloth and every kind of sewing need, as well as crocheting, cross-stitch and needlepoint necessities. The saleslady helped me find some black felt, and I bought a yard of it. After paying for it, I walked outside and saw a Wells Fargo bank across the way. I used the walk-up/drive-up ATM to get some more cash. I re-joined Mark and we returned to the trailer for my arts-and-

crafts project.

Using the picnic table outside our trailer, I cut the piece of felt to size with some additional cuts to accommodate the corners and then fastened the felt to my table with the spray adhesive. It worked like a charm.

Meanwhile, a short distance away, Jerry was under a tree with his Dob, pondering what to do about his interference problem. I had finished my project, so I joined him. We decided that if we added some spacers to the bolt that secured the bottom of the encoder bracket, we should be able to move it out far enough to have the knob clear it. We took the bolt with us to the hardware store about a block down the street and found some suitable washers. We purchased six. We returned to the Dob, added the washers and voila! It worked.

On Monday afternoon, Mark cut a beef tenderloin roast into steaks and grilled them. The smell of the steaks on the grill was a sensory delight. We purchased a Caesar salad kit and corn on the cob (we were in the corn-husker state, after all) to go with them. The corn on the cob was roasted on the grill with the steaks. The steaks were cooked to perfection and just melted in the mouth. They were some of the best steaks I'd ever had. I'm not sure how big they were, but I'm sure they were well over 16 ounces. Jerry said he wanted a small steak until he saw the size of Jake's steak and decided that his should be just a little bigger. We tried really hard to convert Jerry to be a total carnivore, but we did not have enough time. Still, we were beginning to feel that Jerry was a closet carnivore.

After cleaning up the supper dishes, we headed back out to Merritt Reservoir for what would be our best night under the stars. We stayed out all night looking at objects and doing a little imaging, checking out the transparency by how annoying the Milky Way looked. I tried my hand at imaging deep sky objects, using my 10" SNT and my Canon Rebel T1i DSLR. I didn't have a guide scope, so my exposure times had to be fairly short. I got decent pictures of the Double Cluster and the Andromeda Galaxy.

We had viewed Venus and Saturn in the early evening, and during the night we observed Uranus and Neptune. Toward the end of the night, Jupiter rose and we were able to observe it low in the eastern sky. As morning twilight began to encroach, we packed up our things for the ride back to Valentine. The stars were slowly disappearing. We knew that Jupiter, Mars and Mercury would all be in the eastern sky. The road had a couple of turns that directed us in an easterly direction. I was checking out the sky to see if I could make out Mars and Mercury along with

Jupiter when I noticed that the truck was wandering all over the road. I looked at Mark, and he's leaning over the steering wheel looking out the windshield, also trying to make out the planets. Fortunately the road was pretty empty that time of the morning. Together we were pretty sure that we saw Mars and Mercury. That would mean that in one night we were able to see all seven other planets, which we thought was pretty cool.

It was about 5:30 a.m. on Tuesday when we finally crashed in bed. It was late morning before I arose. Even though the RV Park had showers, I always opted to use the small and quite cramped shower in the trailer. My short stature was an advantage. For breakfast we had leftover Jake pancakes, eggs and fruit (peaches, blueberries and strawberries). Jerry felt less guilty about that breakfast.

Tuesday afternoon was bright and sunny, so we broke out the solar scope Jerry had brought. We talked about telescopes and observed the Sun, and before we knew it the time came to return to the event. Tonight only they served supper—burgers, potato salad, veggies and lemonade—and had a drawing for prizes. I proceeded to spill my lemonade at the picnic table, almost drenching one of the founding members of the NSP, I would later find out. It was just another memorable act from the Minnesota group.

Jake left for home early on Wednesday and missed out on breakfast consisting of scrambled eggs and left over steak. Jerry (our closet carnivore) remarked that he was consuming more red meat this week than he'd had the entire year previously. He seemed content and we didn't stop him. We topped off breakfast with some incredible cookies that Mark's wife, Shari, had made for the trip. We enjoyed them all week.

On Wednesday morning, Mark put a pork tenderloin roast in the crockpot and let it cook all day. By late afternoon it was so tender that it was easy to pull apart. We enjoyed pulled pork sandwiches and coleslaw (from the IGA) for supper, and once again Jerry remarked about the amount of meat we were consuming. Mark reminded Jerry that pork is "the other white meat." He was a good sport and continued to partake in the culinary delight.

On Wednesday night we went back to the observing site, but it was cloudy so we packed up all our gear and returned to Valentine. We had finished watching "The Great Escape" on Tuesday, so we watched the two-hour pilot of "Stargate SG1," another great show.



*Andromeda Galaxy M31 & M32*



*Double Cluster*



*NSP Prize Drawing*

On Thursday morning we secured all our stuff for the trip back, stowing items that were more durable in the trailer storage compartments while the more fragile items went in the pick-up. When we hooked the trailer up to the pick-up, we noticed that a plastic piece at the end of a cable was just dangling. Mark recognized it as the plastic pull-key for the trailer breakaway switch that activates the emergency brake on the trailer in the event the trailer separates from the hitch. We needed to re-insert the key in the breakaway switch to release the brakes. Mark tried installing it but it wouldn't lock in. With increasing force he tried to jam it in. When Mark was unsuccessful I tried my luck at it, but it just wouldn't lock in. Mark called the RV dealer to see if there was some trick to it, but we were doing the right thing. After we messed around with it for a half hour, the key finally clicked in. Meanwhile, Jerry had retracted all the leveling jacks and stowed the final items. We taped the rogue drawer, hoping it would stay shut for the return trip. After a quick stop at McDonald's, we headed out on the road.

Not wishing to return over the incredibly rough road outside Mission, SD, we took a different route up to I-90. The trip home was much like the trip out—lots of Harleys, stories about farming and the Navy, and Jerry taking notes. At our first gas stop we checked the trailer, and sure enough the rogue drawer had opened again. We shut it. At each stop we checked it and it was always open. Finally, at our last gas stop we came up with a brilliant idea. We left it open.



*NSP Picnic*

We pulled into Mark's driveway about an hour before sunset. Jerry and I unloaded our gear, packed our respective cars and headed home. The trip was everything I had hoped it would be. There was great company, great camaraderie, exceptional eating and just a generally fun time. It was one of the best trips I have ever taken. We all agreed that we'd do it again sometime in the future. I'm not sure about 2015, but perhaps the solar eclipse of 2017? Road trip! 🍷

## MAS Patron Members

MAS offers a patron membership to those members who wish to contribute a little extra to help support MAS activities. Patron memberships are established by constitution at 2-1/2 times the regular membership rate—currently \$70 annually for a patron membership. The \$42 additional contribution is tax-deductible. It is used to fund equipment acquisitions, facility improvements, further outreach activities and more. We would like to thank the following patron members as of December 23, 2013 🍷

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## Stargazing at the Nebraska Star Party

by Jerry Jones

*With contributions by Mark Job, Jake Hairrell and Dave Falkner*

Sooner or later in the life of any serious amateur astronomer, he or she decides to chase dark skies. This usually takes the form of deciding—well ahead of time and completely unaware of the potential weather—to travel to a particular location known for its dark, clear skies. I did this twice last summer: first to Portal, AZ, the home of Jack Newton's Arizona Sky Village, and second to the Nebraska Star Party in Valentine, NE.

While the Arizona Sky Village is a wonderful place to visit, there was a reason why it was fairly easy to obtain housing during the summer—the monsoons. My beloved wife and I had rented a beautiful three-bedroom home for six nights in July, only to be clouded out *every single night*. While the days were really quite pleasant, with lots of things to do, the night sky produced more lightning than it did light from distant locations. It didn't matter that I had brought with us four telescopes and three different pair of binoculars. For all the astronomy I got in, we could have rented a SmartCar instead of the SUV. It was my first experience with serious dark sky disappointment.

Earlier last year, Mark Job, Jake Hairrell and Dave Falkner had invited me to attend the Nebraska Star Party held in Valentine in August. If I had had the Arizona Sky Village experience ahead of time, I might have said No, fearing another bust, but being a photon-starved astronomer of the late-winter season, I agreed in a heartbeat. The ins and outs of this trip you have already read about from another article in this edition of *Gemini* written by Dave Falkner. Now you get to learn what I was taking notes about.

Having been shut out so completely in July, I was understandably nervous about having that happen to me again. However, that did not stop me from taking my four telescopes and three binoculars with me. I figured that if I'm skunked again, I'm skunked. But if not, then I'll be ready. The truth, as expected, was a combination of both.

We arrived on Saturday night and, once we'd set up the camper, we headed out to the observing field even though the skies looked sketchy. After being remonstrated for leaving our headlights on too long (even though the star party didn't start until Sunday, there were about a dozen others like us who were trying to get a jump on the week), we settled in for about 90 minutes of dark but soupy skies. The transparency was pretty good but the seeing was terrible. On top of that it was very cold and windy. None of us had brought the appropriate clothing, but the skies were teasing enough to keep us out until just before our legs froze solid. Binoculars were best that night, and we were treated to some wonderful views of gazing up and down the Milky Way—which was annoyingly bright. The Eagle Nebula (M17), the Swan Nebula (M16), the Wild Duck Cluster (M11), the Lagoon Nebula (M8), the Hercules Globular Cluster (M13) and the Andromeda Galaxy (M31) were just a few of the objects easily seen with binoculars that night.

Sunday: Lousy. It was cloudy when we arrived and cloudy when we left at midnight.

Monday: We had some clear moments with lots of wind and clouds, viewing through sucker holes. However, we had two or three hours of some very nice observing. The transparency was good and the seeing did get better until it clouded up completely. Mark and Dave spent part of the time fine-tuning the C11 collimation. Together they were able to get it well aligned, and views through the eyepiece were markedly better. Mark spent more time than he should have trying to piggyback a 4" refractor on the C11 but could not get the combination to balance. He finally gave up, frustrated that he had wasted some valuable observing time. Jake spent most of the time simply appreciating the exquisitely dark skies with a pair of binoculars, as it was his first opportunity to experience this. However, he did manage to work in a few sketches of Herschel 400 globular clusters in the Ophiuchus region of the sky using his 12" Lightbridge.



*Mark, Dave, Jerry and Jake use red lights to set up their telescopes as the Sun sets and stars begin to appear.*

Tuesday was the best night of all. It had started quite cloudy, and a number of observers left early. Intrepid explorers that we were, we hung in there, hoping for the best. And, as we hoped, once the high cirrus clouds left around 1:00 a.m., we had super-crisp skies for about two hours. That night we stayed as long as we could and saw Jupiter, Mars and Mercury in the eastern horizon as we were heading back. Those of us who spied Venus and Saturn in the early evening and who had tracked down Uranus and Neptune during the festivities were able to say that we saw all the planets of our solar system in one night (sorry, Pluto). It was a glorious evening. Wednesday was a total bust, and it was clear from the weather reports that Thursday was going to be the same, so we headed home one day early. All in all, I was able to learn a lot about my recently acquired 12.5" Obsession as well as make a good dent in my continuing quest for the Herschel 400. Jake also made good progress on his Herschel 400 list, completing about 20 sketches of various objects. Most notably, he was able to finally find and sketch the fantastic North American Nebula (NGC 7000) with a little help from his companions and Dave's OIII filter.

Dave also tried his hand at deep-sky imaging, but without a guide scope. He chose a couple of targets in the northeastern sky—the Double Cluster and M31—to try and reduce the amount

of drift over a longer exposure. He was able to take three-minute images with minimal stellar drift. Despite the short exposure time, the images were decent for a first try.

Dave also brought along an Orion 32mm Q70 eyepiece. This 70-degree AFOV eyepiece in combination with his 10" f/4 Schmidt-Newtonian gave stunning panoramic views of the Andromeda Galaxy and open star clusters. He added an OIII filter to the eyepiece, and we were able to see a large portion of the Veil Nebula in surprising detail.

So, what did I learn from my quest for dark skies? First, you simply can't count on the weather acknowledging all of your preparation, time and money spent. Second, if you let your dark sky disappointment get to you, then you will wind up being frustrated and angry. As Dr. Clay Sherrod is fond of saying, "If you're not having fun with astronomy, then you're doing something wrong." Third, even though the dark, crisp night sky is the true life of the party, the real fun comes from those with whom you share the experience. In this case, the Nebraska Star Party was a hit.

The real question is whether or not I'll continue to chase dark skies, even though I now know what true dark sky disappointment feels like. Well, the answer to that is a no-brainer. 🐱

## Observing the Skies on Thanksgiving Night

By James Emery

Once in a while the stars align. Let's be clear that I'm speaking in metaphor here, though some of my more irrational friends still cling to a Ptolemaic model of the workings of the cosmos and read their daily horoscope. In the interest of good science, I might more properly state that, on occasion, due to the mechanics of physics, the various revolutions and rotations of the objects contained in my observable universe occur in a fashion that is coincidentally advantageous to me. Not much poetry there, I'm afraid, so I'll go back to my original if somewhat inaccurate thought: Sometimes the stars align.

The skies on Thanksgiving night were not overcast. If you are an amateur astronomer in Minnesota, you assuredly do not take the availability of a clear night lightly. The skies in the Fall of 2013 were perpetually overcast, leaving us encased in a vast cumulous dome, wishing for just a glimpse of something farther out, anything, even a naked-eye glimpse of Ursa Major or the Moon. This seemed especially true on weekends when a star party was scheduled at Eagle Lake Observatory. The minute I thought about driving out, the clouds rolled in.

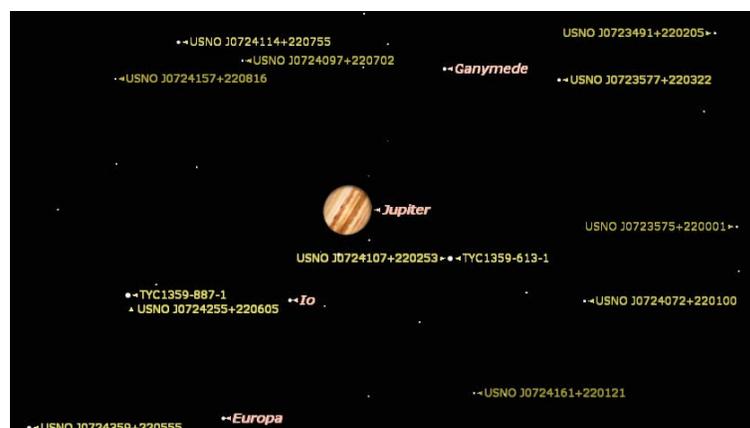
This night there were no clouds, and the haze of summer and early Fall had cleared off. It was cold, but not the sub-zero variety of cold that is surely coming—the kind that shocks you and disrupts your concentration while you're trying to take your time looking at the target you finally lined up. It was just cold enough for me to dig out a pair of gloves, step out from the forced air heat, and let the brisk air wake me up a bit as I carried the scope I borrowed from MAS out to the back deck—a deck that, as those aligning stars would have it, faces east.

Besides being clear, the night was moonless, not that it mattered so much to me. I don't go deep sky very often, most of my observing being done in an urban, light-polluted environment. Still, a darker sky without moonlight does help a bit, and it's pleasing to see the stars shine a little brighter.

The holiday celebration was complete. Gratitude had been properly expressed, turkey consumed, relatives sated and on the way home, football games over, dishes done, leftovers in the fridge awaiting a midnight visit. It was not midnight yet, or even close, which was best of all. Jupiter came into view early in the night, about halfway between the eastern horizon and zenith by 9:00.

And I got to stand out there and look at it. I love looking at the planets, even without observing instruments. Mostly I like to know that they're there, that it's all out there. That's why I read about this stuff and try to take on mathematical equations that are way over my head. Still, there's nothing like seeing it. There's an old Rolling Stones song I'm reminded of: "I don't want to walk and talk about Jesus, I just want to see his face." That night I just wanted to see Jupiter's face.

And I did, that clear Thanksgiving night. There it was, in all its glory, massive both literally and visibly in the eyepiece, horizontal bands and three moons observable. I stood on my own small piece of spherical real estate, close to our star, a glass of something in my hand raised to my gas giant neighbor, our respective orbits bringing us into each other's line of sight. Just seeing each other's face.



## November

**MAS Observing Awards:** The reason behind the awards is to get members to the sites and use the equipment. The expected outcome is that those who complete the observing list will continue to use the facilities. The list does not have to be very challenging; the goal is just to get people out there. The J.J. Casby Observatory could be for double stars and planets, for example. There would not be a time frame on it; the list could be inclusive of things that are available throughout the year. The goal is to get out to the facility. This would be similar to the passport idea that the park systems have. Mark, Greg and Jerry will work on this. The number of items to find should be able to be done in one sitting. **Recognition for Onan Donors:** There is no new progress so far. Clayton will have a plaque ordered by the December meeting. **Preemptive Media Contact—ISON:** An email was sent to 12 different reporters. There is no response as of yet. **Membership Database Updates:** Steve is being kept in the loop about the upcoming switch to the *Gemini* printing cost. There are some forms that will need to be updated to reflect the change. When the membership list comes out it will only include the members' email, phone and city; no home address will be published. It might be easier to email a pdf of the list to all members. The target date is February first. The initial renewal notification will be via email; the final notification will be by regular mail. **MAS Election Update:** There are two vice-president candidates, and two board-member-at-large candidates. All the information has been sent to Father Brown for Gemini and also posted on the forums. **Observatory Update:** There is still work being done at Eagle Lake Observatory. **Annual MAS Member of the Year Award:** The award winners will be announced at the December meeting. **New Meeting Projector:** Using the facilities projector worked well; it seemed to be easier to set up and use and it was brighter. Mark will see if there can be a discount given to us since we use the audio and the projector every month. **Location for December Meeting:** The Roseville library will be the location for the next meeting. **Spanish-Speaking Astronomers:** There has been no response to the request. **President's Next Idea—MAS Documentary:** It would be nice to be able to reach out to the public and tell them about MAS. Dave met with Richard Hudson and pitched the idea about a documentary, and Richard thought it had merit. The cost would be \$50,000 to \$100,000. The goal is to talk about the history of MAS, meet some of the members and see what they do, show the different sites, and end up with a star party at Eagle Lake Observatory. Once that is together, we would take it to TPT and they would help put it together and get sponsors. Once there are sponsors, it gets edited and put together. This is a long way out and just in the planning stage. **Open Forum:** Clayton needs someone to take the supplies to the December meeting. Greg will take care of it.

## December

**New Member Welcome:** Welcome to new vice-president Steve Baranski and to new board-member-at-large Wayne Boline. **Gemini and Membership Database Updates:** We will announce at the January meeting to go green on February first. Steve will

modify the database to fit the change. Steve will send an email to see if anyone wants to opt out sooner than renewal time; however, there will not be a reimbursement if opt out happens before renewal. **Change in Dues:** Regular membership drops from \$28 to \$26; regular membership with a paper Gemini is \$35; patron membership is \$65; patron membership with a paper Gemini is \$74; student membership is \$13; student membership with a paper Gemini is \$22. Lifetime members will receive a paper copy of Gemini free of charge if they want to. The website needs to be fixed to show the changes. We will send out an automated email three months prior to expiration, another email a month after renewal, and a letter two months after membership lapses. **MAS Observing Site Awards:** Jerry presented ideas for the awards. He suggested that two levels be included. One level is to get people out to the observatory and the other is a bit more challenging. The issue is using the gear at the site, not observing, so there are some challenges. Jerry wants assistance in creating the lists. We could have a handful of difficult things to do because the point is to get people out to the observatories and use the scopes. Jerry will create the lists. Mark and Clayton will work on the package details. The amount to spend will be decided at the budget meeting. The goal is to have this ready by April first, with the final design ready by the February board meeting. **Name Tags:** We could possibly add a site sticker to the meeting name tags to encourage conversation. **Recognition for Onan Donors:** The plaque has been ordered and the plates have been assigned. **MAS Documentary:** All the people whom Dave has asked to be involved have agreed. It is anticipated that this is a three-year project; the goal is to increase awareness of the Minnesota Astronomical Society. This is still at the proposal stage. **Meeting Room:** We have the meeting room for the year with the projector for \$25 less per month than what we were paying. The cost is now \$125 a month. **Cherry Grove Observatory Telescope:** The 14" scope needs some repair. Steve is working on it. We will need to know the cost to fix it by the time of the budget meeting. **Countryside Elementary Science Fair:** Russ Durkee wants us to have a table at the science fair on January 23. The board agrees to do it to improve outreach. Mark Job will do this. **Da Vinci Fest:** This will be January 11. The board agrees to do it to improve outreach. **MESTA Conference:** It will be February 7. This is also to improve outreach. **Updating MAS Board Mail List, MAS Organization Page, VP and BMAL Turnover:** All necessary databases and webpages will get updated to reflect the new members. Steve will take care of this. **Site Plans:** The sites need to have a plan in place for things that they see as needed in the next years for upgrades/maintenance. Greg will contact the site coordinators to get this worked out. The site managers should list the equipment, what maintenance needs to be done, the approximate cost and the rotation of all maintenance. **Site Insurance:** We need to make sure that all new equipment and scopes are covered by insurance. Wayne will take care of this. **End of Year Accounts:** All reimbursements need to be in by December 31 to close out the books. **Budget:** Clayton volunteered to help Chris as a consultant with Quicken books to get reports created and in order to match what MAS needs. The board unanimously appointed Clayton to assist. Thanks to Clayton and Mark for their service to MAS. 🐿

## Directions to the Star Party Locations

For maps and further details about the sites, please go to our website at [www.mnastro.org/facilities](http://www.mnastro.org/facilities).

### **Baylor Regional Park and Eagle Lake Observatory**

To reach Baylor Regional Park, head west on Minnesota Highway 5, through Chanhassen and Waconia, to the town of Norwood-Young America. Turn right onto Carver County Road 33 and continue approximately two miles north. Baylor Regional Park is on the right side of the road, marked with a prominent sign. When entering the park, stay to the right and follow the road approx 1/4 mile.

When visiting the Baylor Regional Park, MAS members are requested NOT TO PARK OR DRIVE on the grass. There is a drive up to the observatory which can be used for loading or unloading or handicapped parking only.

For an alternate route from the southern suburbs, take U.S. Highway 212 west to Norwood-Young America. Turn right at the second traffic light onto Carver County Road 33. Continue two miles north to the park entrance.

### **Cherry Grove**

Cherry Grove is located south of the Twin Cities, in Goodhue County, about 20 miles south of Cannon Falls. To reach Cherry Grove, head south on Highway 52. On 52 about six miles south of Cannon Falls, and just past the Edgewood Inn, is a large green highway sign for Goodhue County Rd. 1 "WEST". Turn right, and follow County 1 straight south for about sixteen miles until you arrive at a "T" intersection with County A. The observatory is immediately at your right, nestled in the shoulder of the "T". Parking is permitted on the site, or along the road, preferably County A.

### **Metcalf**

Head east from St. Paul along Hwy. 94. Exit at Manning Avenue ( exit #253) Turn south (right turn) and then almost immediately turn left onto the frontage road (Hudson Road S). Continue east on the frontage road for about 1.5 miles. Turn right onto Indian Trail, checking the odometer as you turn. Follow Indian Trail south for just about 1.1 miles, where you'll see an unmarked chain-link gate on the right, opening onto a dirt driveway with slight up-slope. This is the entrance to Metcalf.

Belwin / Joseph J Casby Observatory

Head east from St. Paul along Hwy. 94. Exit at Manning Avenue ( exit #253). Turn south (right turn) and then almost immediately turn left onto the frontage road (Hudson Road S). Continue east on the frontage road about 3.4 miles until Stagecoach Trail South, then turn right onto Stagecoach Trail and go east about 2 miles until reaching Belwin Conservancy on your left at 1553 Stagecoach Trail South. From the Belwin driveway entrance, travel about 500 feet and turn left at the gate. Travel about 1/4 mile through the woods until you emerge at the parking area near the classroom building and the Joseph Casby Observatory.

### **Long Lake Conservation Center**

#### **From Western Twin cities**

Take I-94 west to Rogers/MN 101. Go north/right on MN 101 through Elk River, where MN 101 becomes USA 169. Continue north on US 169 approximately 90 miles to Aitkin. At stoplight in Aitkin, turn east/right onto US 169/MN 210 and go out of town eight miles. Then turn east/right, following MN 210 toward Duluth. Proceed seven miles. A large green highway sign marks the turn off 210 to Long Lake Conservation Center. Turn north/left on County Rd. 5. After three miles, turn east/right on gravel County Rd. 88. It is approximately one mile to the LLCC gate. Follow signs to parking and unloading areas.

#### **From Eastern Twin cities**

Go north on I-35 to Finlayson/Exit 195. Turn west/left and go one mile to County Rd. 61 and MN 18. At stop sign turn right/north and go two miles. Follow MN 18 west/left and continue 19 miles to MN 65. Turn north/right on MN 65 and proceed 30 miles to McGregor. Intersect with MN 210 and follow 210 west/left (through McGregor) for seven miles. A large green highway sign marks the turn off MN 210 to Long Lake Conservation Center. Turn north/right on County Rd. 5. After three miles, turn east/right on gravel County Rd. 88. It is approximately one mile to the LLCC gate. Follow signs to parking and unloading areas.

### **Gemini Editors Receive 2013 Member of the Year Award**

In 2012 the MAS Board initiated an award to recognize the MAS volunteer who we felt contributed above and beyond what is expected to improve the overall experience of the MAS membership. That year we gave the award to Lauren Nelson for his outstanding work in providing quality programs for the monthly meetings.

For 2013 the Board has decided to present the award to the two men who work feverishly to produce the six issues of the *Gemini* every year, Fr. Eugene Brown and Brian Litecky. You two consistently put together a quality publication every other month and get it mailed out on time, provided the printer and mail are in order. Despite having to put the final touches on at the last minute, from time to time, you continue to produce the *Gemini* with articles

from members only. I often hear from members how much they enjoy reading the *Gemini*. This is a direct tribute to your hard work in assembling and publishing the *Gemini*.

It is with a great deal of pleasure that I award the 2013 Minnesota Astronomical Society Member of the Year Award to Fr. Eugene Brown and Brian Litecky for your outstanding work in publishing the *Gemini*. Congratulations and well done!

If you are unable to accept your award at Thursday's meeting (December 5) we will mail your awards to you in the next few days.

Sincerely,  
Dave Falkner, president  
On behalf of the MAS Board

### **Corrections to NNSF Article**

The editor regrets these errors in the article about the Northern Nights Star Fest in the December *Gemini*:

The Milky Way panorama photo on page 2 was taken by Jim Knudsen, not Mark Connolly.

The link (page 4, right column, lines 5-6) to the Panoramic Milky Way photos should be:

<https://picasaweb.google.com/111828419621712523011/MilkyWayPhotos?authkey=Gv1sRgCPyOm9T3jJSY9wE>

The quotation on page 4, right column, lines 8 ff) is by Jim Knudsen, not Mark Connolly. (The quote came from his posting on the Imaging SIG forum, <http://www.mnastro.org/forums/viewtopic.php?f=8&t=7226>).

# Minnesota Astronomical Society 2014 Star Party Schedule

Date	Event	Start	End	Location	Comment
March 8, 2014	ELO Public Star Party	7:00 PM	10:00 PM	Eagle Lake Observatory, Baylor Regional Park, Onan	All Weather Event (1st qtr. moon)
March 22, 2014	ELO Public Star Party	7:00 PM	10:00 PM	Eagle Lake Observatory, Baylor Regional Park, Onan	All Weather Event (3rd qtr. moon)
March 28, 2014	Cherry Grove: Messier Marathon	Dusk	Dawn	Cherry Grove Observatory	Cancelled if cloudy
March 28, 2014	LLCC: Star Party	Dusk	TBD	Long Lake Conservation Center	Cancelled if cloudy
March 29, 2014	Cherry Grove: Messier Marathon (alt.)	Dusk	Dawn	Cherry Grove Observatory	Cancelled if cloudy
March 29, 2014	LLCC: Star Party	Dusk	TBD	Long Lake Conservation Center	Cancelled if cloudy
April 5, 2014	ELO Public Star Party	7:00 PM	10:00 PM	Eagle Lake Observatory, Baylor Regional Park, Onan	All Weather Event (1st qtr. moon)
April 14, 2014	ELO Public Star Party - Total Lunar Eclipse	7:00 PM	TBD	Eagle Lake Observatory, Baylor Regional Park, Onan	Cancelled if cloudy Eclipse begins 11:00 PM
April 19, 2014	ELO Public Star Party	7:00 PM	10:00 PM	Eagle Lake Observatory, Baylor Regional Park, Onan	All Weather Event (3rd qtr. moon)
April 25, 2014	Cherry Grove: Star Party	Dusk	TBD	Cherry Grove Observatory	Cancelled if cloudy
April 25, 2014	LLCC: Star Party	Dusk	TBD	Long Lake Conservation Center	Cancelled if cloudy
April 26, 2014	Cherry Grove: Star Party (alt.)	Dusk	TBD	Cherry Grove Observatory	Cancelled if cloudy
April 26, 2014	LLCC: Star Party	Dusk	TBD	Long Lake Conservation Center	Cancelled if cloudy
May 2, 2014	Cherry Grove: Star Party	Dusk	TBD	Cherry Grove Observatory	Cancelled if cloudy
May 2, 2014	LLCC: Star Party	Dusk	TBD	Long Lake Conservation Center	Cancelled if cloudy
May 3, 2014	Cherry Grove: Star Party (alt.)	Dusk	TBD	Cherry Grove Observatory	Cancelled if cloudy
May 3, 2014	ELO Public Star Party	7:00 PM	10:00 PM	Eagle Lake Observatory, Baylor Regional Park, Onan	All Weather Event (1st qtr. moon)
May 3, 2014	LLCC: Star Party	Dusk	TBD	Long Lake Conservation Center	Cancelled if cloudy
May 10, 2014	Astronomy Day - Public Star Party	1:00 PM	10:00 PM	Eagle Lake Observatory, Baylor Regional Park, Onan	All Weather Event (1st qtr. moon)
May 23, 2014	Cherry Grove: Star Party	Dusk	TBD	Cherry Grove Observatory	Cancelled if cloudy
May 23, 2014	LLCC: Star Party	Dusk	TBD	Long Lake Conservation Center	Cancelled if cloudy
May 24, 2014	Cherry Grove: Star Party (alt.)	Dusk	TBD	Cherry Grove Observatory	Cancelled if cloudy
May 24, 2014	ELO Public Star Party	7:00 PM	10:00 PM	Eagle Lake Observatory, Baylor Regional Park, Onan	All Weather Event (3rd qtr. moon)
May 24, 2014	LLCC: Star Party	Dusk	TBD	Long Lake Conservation Center	Cancelled if cloudy
May 30, 2014	Cherry Grove: Virgo Venture	Dusk	TBD	Cherry Grove Observatory	Cancelled if cloudy
May 30, 2014	LLCC: Star Party	Dusk	TBD	Long Lake Conservation Center	Cancelled if cloudy
May 31, 2014	Cherry Grove: Virgo Venture (alt.)	Dusk	TBD	Cherry Grove Observatory	Cancelled if cloudy
May 31, 2014	LLCC: Star Party	Dusk	TBD	Long Lake Conservation Center	Cancelled if cloudy
June 7, 2014	ELO Public Star Party	7:00 PM	10:00 PM	Eagle Lake Observatory, Baylor Regional Park, Onan	All Weather Event (1st qtr. moon)
June 20, 2014	Cherry Grove: Star Party	Dusk	TBD	Cherry Grove Observatory	Cancelled if cloudy
June 20, 2014	LLCC: Star Party	Dusk	TBD	Long Lake Conservation Center	Cancelled if cloudy
June 21, 2014	Cherry Grove: Star Party (alt.)	Dusk	TBD	Cherry Grove Observatory	Cancelled if cloudy
June 21, 2014	ELO Public Star Party	7:00 PM	10:00 PM	Eagle Lake Observatory, Baylor Regional Park, Onan	All Weather Event (3rd qtr. moon)
June 21, 2014	LLCC: Star Party	Dusk	TBD	Long Lake Conservation Center	Cancelled if cloudy
June 27, 2014	Cherry Grove: Star Party	Dusk	TBD	Cherry Grove Observatory	Cancelled if cloudy
June 27, 2014	LLCC: Star Party	Dusk	TBD	Long Lake Conservation Center	Cancelled if cloudy
June 28, 2014	Cherry Grove: Star Party (alt.)	Dusk	TBD	Cherry Grove Observatory	Cancelled if cloudy
June 28, 2014	LLCC: Star Party	Dusk	TBD	Long Lake Conservation Center	Cancelled if cloudy

This schedule is subject to change. Please check the MAS online calendar at [www.mnastro.org](http://www.mnastro.org) for a complete schedule of all MAS events. Cherry Grove Star Parties are held on Friday nights, with Saturday reserved as the backup night if Friday is cloudy. LLCC Star parties are held on both Friday and Saturday night. Eagle Lake public nights are held on Saturday nights only.

The **Casby Observatory at Belwin** is available to MAS members who have completed the Belwin Orientation and training to use at any time. We will not have scheduled star parties at Casby. To reserve the observatory for yourself, please post your request on the Casby Observatory Keyholders discussion forum.

The **Metcalfe Observing Site** is available to MAS members at any time. We do not have organized, scheduled star parties at Metcalfe. Feel free to head out there whenever you wish.

The **Eagle Lake Observatory** holds regularly scheduled public nights. You are welcome and encouraged to bring your own observing equipment to these events. All other nights the observatory is available for trained members use. To reserve the observatory, go to the Eagle Lake reservation calendar at <http://www.mnastro.org/onankey/reservations/reserve.php> Before heading out, Please check the Eagle Lake reservation calendar to verify if there is a outreach event scheduled.

In 2013 daylight saving time begins March 10 and ends on Nov 3.



## MN ASTRONOMICAL SOCIETY

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### How to pay your dues

### February 2014 Volume 39 Number 1

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### To Renew Your *Sky and Telescope* Subscription

New subscriptions to *Sky and Telescope* at the MAS member discount must be sent to the MAS for group membership subscription processing. Send new subscriptions with your MAS membership to the attention of the Membership Coordinator at the MAS at the Post Office box address shown on the back cover of the *Gemini* newsletter.

You may mail your subsequent subscription renewal with payment directly to *S&T* or renew via phone with Sky Publishing at 1-800-253-0245. This method is especially beneficial to those who wait until your subscription is about to expire before renewing *S&T*. If you wish, you may still submit your *S&T* subscription renewal to the MAS when you renew your membership in the MAS and we will enter your renewal on your behalf just as we always have done.

You will still need to send in your MAS membership renewal to the MAS Membership Coordinator at the MAS Post Office box address or renew your membership via *PayPal*.

### How to Subscribe to MAS e-mail Distribution Lists

The MAS uses web Discussion Forums and e-mail distribution lists for timely communications. We highly recommend you subscribe to the MAS general distribution email list.

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), several Special Interest Group (SIG) lists and other lists for special purposes. Archives of the lists are also available by visiting the listinfo page for a specific list.