

The Observer

Newsletter of the Brazos Valley Astronomy Club

Volume 4, Issue 1



BVAC Messier Marathon at *Regina Caelorum* Observatory

Observers (L to R): Rakesh Mithal, Derek Kuhl, Tim Cowden, Joe Powell, Judy Culver, Soma Essakiappan, Vivek Sundaram, Vijay Sundaram, and Anjal Sharma. Photo by Mark Spearman.

On a recent cold Friday night (March 4, 2011), ten intrepid observers gathered at Mark Spearman's *Regina Caelorum* Observatory in Wheelock for the annual BVAC Messier Marathon. Mark's Jedi-like ability to chase

away the clouds worked yet again. Did anyone make it all night? Did anyone bag all of the faint fuzzy spots? See the report inside.

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Mark Spearman writes of his experiences at the 2010 TSP

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Want to clean that SCT corrector plate but the prospect seems intimidating? Will Sager tells how.

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Joe Powell reports on a visit to the Apache Point Observatory in New Mexico

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Member Profile: Derek Kuhl

Where are you from originally? I am originally from Southern California. Born in Los Angeles and grew up in Orange County and San Diego.

What is your work? I am a retina surgeon.

How did you become interested in astronomy? I first became interested in astronomy and really anything space related with the excitement surrounding the Apollo program. Watching the first moon landing put a permanent stamp on my brain which has never left. From that point on I wanted to be a "rocket scientist". I spent all of my time with rockets or reading about or looking at the stars. My parents finally relented and purchased for me an 8" Celestron telescope in 1972. That

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Mark Spearman prepares for a night of observing at the 2010 Texas Star Party at Prude Ranch. Photo by Mark Spearman.

Texas Star Party 2010

Story and Photos by Mark Spearman

This was my third Texas Star Party (TSP) at the Prude Ranch. The TSP was started in 1979 by Deborah Byrd and members of the Austin Astronomical Society in 1979 when 50-100 amateur astronomers gathered for a weekend at McDonald Observatory for observing, camaraderie, speakers and a special night of viewing at McDonald Observatory. It moved to nearby Prude Ranch in 1982 and has met there every year (except one) since.

My first TSP was in 2007, now dubbed the infamous

Texas *Storm* Party which was not only clouded over but actually *fogged* out. The only thing to do on those nights was to have "Star Wars" battles in the low hanging clouds with our green lasers. After skipping 2008, I returned in 2009 and was blown away by the dark skies and views of the Milky Way. But that time I decided to camp on site. It was held in April then and got down in the 20's at night (well, maybe the low 30's but it was COLD).

This time I did things differently. First of all, I rented a U-Haul trailer (5X8) and got a motel in town (I did not win the



Home, sweet home

guarantee me the ability to be one of the first to go on but I was the 21st in the line that had formed. The first guys said they got there around 7:30 am! It was a great group of people and I met some really nice guys from the North Houston Astronomy Club (I invited them to our next Star Party). We stood around

lottery to stay in one of the few motel rooms or cabins on the Ranch). I put up an awning and spread my tarp and such was my base. The U-Haul was really cheap, only about \$150 for a week. It made a great place to keep stuff and the slightly larger size made it possible to walk into. It was great to store all the accessories out of the way and to be able to secure it when I was away. The TSP is like one big family and no one steals. There are hundreds of thousands of dollars of equipment sitting in the field and no one thinks about pilfering. Nonetheless, I did not want to create an undue temptation by having a \$600 eyepiece sitting on a table!

I picked up the U-Haul on Friday, May 8 and began packing. The hardest part is to try to remember everything so I started a checklist some weeks before. I began “staging” everything Friday evening and packed up the trailer on Saturday morning. I took off around 11 am and began thinking of stuff I would need that I did not pack. This resulted in several stops at Walmarts across the state (they are amazingly the same). I finally got to Ft. Davis around 9 pm and checked in to the motel.

Day 1: Sunday May 9, 2010

Although the Star Party did not officially start until noon, I got up the next morning and drove to Prude Ranch at 9 am. The year before, I did not arrive until Monday and I had to squeeze into whatever spot I could find. I thought three hours early would

swapping stories of dark skies and plans of what we were going to observe. The Star Party officials came by and checked everyone off and gave us a piece of paper to tape to the windshield so we would not have to stop on the way in. The tension mounted as we awaited the “gun” signifying the rush to the “Upper Field!”

The gate opened right on time—12 Noon. I drove in and found the exact spot I wanted. But there had been really no need to get in line. I could have come an hour later and it would have been just as good. Oh well, at least I now have the timing bracketed!

It was pretty exhausting putting up everything by myself. It was very hot and the ground was extremely hard. I had 12” nails to hold down the tarp and these kept bending when struck with the sledge hammer! The awning was a challenge in the wind but the woman next door helped me as I helped her with her tent. I put up my Losmandy/Gemini tripod along with the TOA 130. But then, I could not find the diagonal holder (*Rats, I knew I would forget something!*) so off with the TOA and on with the C11. (Oh well, I had been feeling pretty proud until the guy next door set up an Astrophysics 1200 mount with a TOA 150! Someone’s always going to have a bigger boat!

After I got things pretty established, I just

piled everything else in the trailer and went to find something to eat and a place to chill—but everything was closed. I finally found a Subway 25 miles away in Alpine (there was a place in Ft. Davis that I found later!). When I was driving back, I could see rain over the Ranch. When I arrived, the tarp was wet with puddles of water around the scope (which was covered) and the tables were wet. The grass on the field is all pretty much dead so walking from field to tarp made a real mess. I started to sweep off the water and began organizing the stuff in the trailer. Then it started raining again! I put everything back in the trailer and was ready to call it quits but someone said that the weather showed a hole in the clouds and that it should clear. So I stayed.

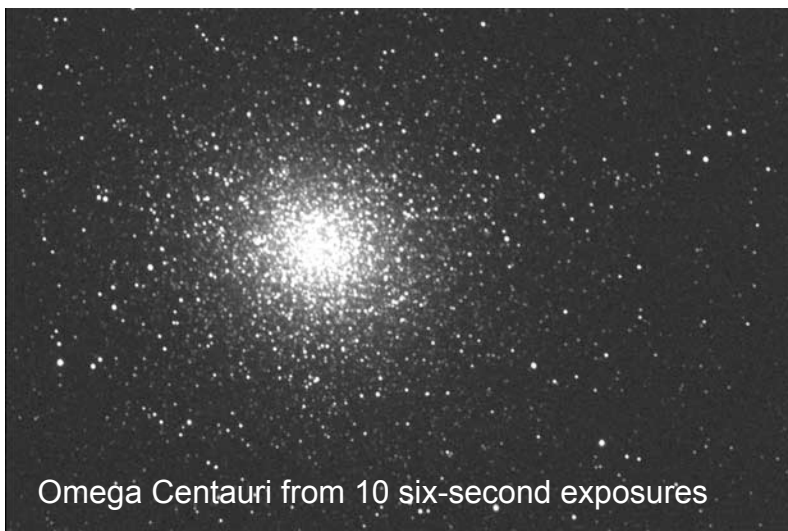
Sunday night did not look too good. A few holes opened up, enough to get a pretty good alignment. Then it began to clear in the south. Most of the guys next to me were setting up for imaging so almost no one was actually *viewing*. About that time, Omega Centauri, the best globular cluster in the skies, was rising and I swung the C11 toward it. My alignment was not perfect so when I looked in the eyepiece, all I could see was a bunch of Milky Way stars. I moved the scope looking for Omega. “Oh my gosh!” I said out loud. It filled the view of the Nagler 31! It was fantastic. All my neighbors wanted a peek and we all were glad we had made the trip, pounded the dirt, fought the wind, and survived the rain. This view made it all worth it. Then, around midnight, it really clouded over. I packed up and went to the motel.

Day Two: Monday May 10, 2010

I tried to sleep late but could not. I am really a poor astronomer—early riser and ready for bed by 10:30! The weather called for high winds—around 25 mph with gusts to 50 or 60. I knew that awning

would not survive so I went to the Ranch and took it down. I also decided to pay for the meals at the Ranch to avoid trying to find something in town and to be with other observers. Lunch and Dinner were great, not for the food (which was not bad) but for the companionship. Everyone there was extremely excited to be there and looking forward to the coming night.

But the wind was ferocious! Huge dobs were blown over, tents were shredded, anything unsecured was blown away. Fortunately, my gear held. The scope was fine (I had it secured with a bungee cord to stake in the ground). Back at the motel, I started my list of Caldwell objects that I wanted to find that night. I got in a short nap and after a



refreshing shower, went back to the Ranch. The chow hall was filled with people excited about the upcoming night which was supposed to be very good. Around sundown, the wind died down and I put everything back up and began to get ready for the night.

I replaced the C11 with the TOA 130 (I had found the missing piece in the trailer). I did some star alignments and the pointing was great. Then I started with Caldwell 31 (IC 405) the “Flaming Star Nebula” in Auriga. It turns out that there is a reason it is not in the NGC list. A total magnitude of 9.2 over a 30x20 minute was not going to happen in a 5.1” scope at twilight. Oh well, on to C-39, the Eskimo. It was small but very bright. At 200x I could see some detail using averted vision (or was it averted imagination?).

After it got dark there was still a glow in the west. At first, I thought this was still twilight but the sun had gone down long ago. Someone

explained that it was Zodiacal Light, something I never see at home.

I picked up the pace on the Caldwell's. As it got darker it also got clearer and more transparent. By 10:45 pm I had snagged 5 new objects. By midnight, it was 20. By the time I quit around 3:30 am I had 42. Some of these were unbelievably dim objects for such a small scope. I could actually see Barnard's Galaxy (Caldwell 57).

Around 2 am, I could also see the Crescent Nebula in Cygnus (C. 27) and, for the first time, I saw the North American Nebula with no filter. It was simply obvious in the scope.

I packed up around 4:30 am and got back to the motel around 5. Amazingly enough, I was not that sleepy.

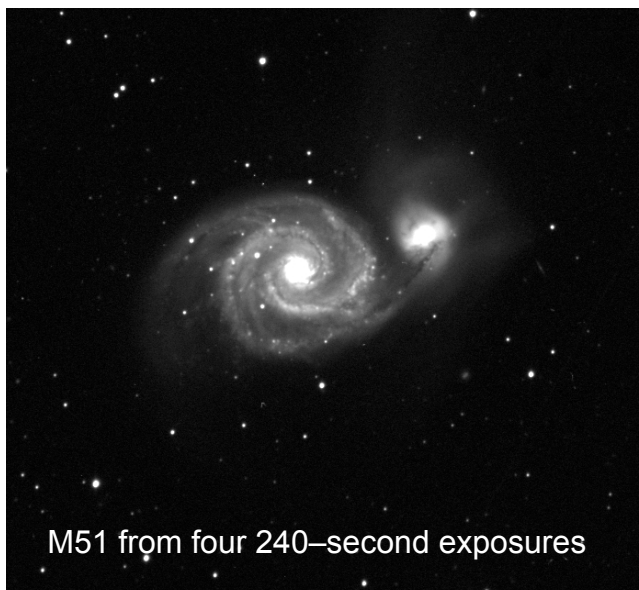
Day 3: May 11, 2010

The day was relaxing. The wind picked up again but was not like Monday. At dinner, I met some nice folks who were "newbies" to astronomy and wanted to learn all they could. So one of the first objects had to be Omega Centauri for the newbies. They were impressed. Although I had not planned on it, I decided to try to "snap" some images of Omega. I put in the CCD and shot some unguided images of only 6 seconds. Later I stacked 10 of these and the image was not too bad given it was a scant 10 degrees above the horizon.

That worked so well, I thought I would try for M51. I was able to get four 240 second shots before the tracking went crazy (I forgot to set it to imaging mode and when it "bumped" the mount, it really bumped it!). But these were not too bad and give an idea of how dark the skies were there.

Around midnight I went to the snack bar and got some coffee and a snack. One of my new

friends looked up and said, "Uh oh, clouds!" But it was only the Milky Way coming up. On the way back, I had both hands full so I could not hold my flashlight. But I really did not need it; I could see fine by the light of the Milky Way. I took off the camera and found a few more Caldwell's. By this time, it was about 2:30 am and time to turn in. Walking back to the truck (parked outside the Ranch) I was again amazed



M51 from four 240-second exposures

at the brightness of the Milky Way. We have all seen pictures of it taken with time exposures. Those give you an idea of how this looked. It was utterly fantastic.

The next day I packed up and went home. I had only planned for three nights. But it was too little viewing for the setup required. Next time, I will stay longer and, hopefully, get a cabin or a room on the Ranch. All in all, it was a great experience that I will never forget.

Brazos Valley Astronomy Club

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Cleaning Your Corrector Plate

Story and Photos by Will Sager

It was a day I long dreaded. I could no longer ignore all the gunk on my Celestron SCT corrector plate. Years of humid, dewy Texas nights had deposited a fine layer of pollen and dust and I could just imagine all of the photons colliding and scattering with all of that debris. Something had to be done – but what? A mistake in cleaning and my corrector plate could be trashed.

A bit of searching astronomy web sites and I turned up an article by the Arkansas Sky Observatory (www.arksky.org) that claimed I could achieve a clean, streak-free corrector plate if I followed their directions - exactly. I did and I did.

This article summarizes the ASO technique in case you want to give it a try. The ASO method is exacting and not everybody thinks all this fuss is necessary (more about this later). It did give me a sense that my plan of attack was carefully thought out and I was well supplied for the task.

The ASO cleaning guide stresses that you should not clean your corrector plate (or other optics) too much. They note that modern coatings are extremely thin films deposited on the optical surface that cleaning will degrade over time. A thin, diaphanous layer of dust will not seriously degrade observing. Nevertheless, the first step should always be a gentle dusting with a soft brush. According to ASO, this alone will be sufficient about 60% of the time.

Any optical-quality brush will do, but for big SCT corrector plates, those sold for camera lenses are often too small to be efficient. ASO says that a 2-inch “delicate trim” paint brush found at Lowes or Home Depot will do. You want an ex-

ceptionally soft brush, such as one that does not feel prickly when you push it against your cheek. I used a large, soft makeup brush that I found in the cosmetics department of a drugstore.

I first dusted the metal surfaces and then the corrector plate itself. The ASO guide says to use very soft pressure and to pull the brush across the surface, always in the same direction – not back and forth. The object is to move all of the particles off the surface and not to propel them up into the air, where they can come back down on the plate. Typically, this will get the loose particles, but some will be left behind because dew



My dirty, dusty corrector plate

and pollen sap have stuck them to the surface. In many cases, this simple dusting will be enough to get you back to observing.

Although it may seem a good approach, the ASO folks warn not to use compressed air to blow the dust off of optical surfaces. They claim that this will not remove the stuck-on debris anyway and droplets of the propellant can be blown onto your plate.

The ASO system uses two solutions for cleaning. One is a cleaner solution and the other is a rinse. You also need a soft, lint-free tissue for wiping. The cleaning solution is one that ASO

concocted with lots of trial and error. The guide claims that these solutions will not leave streaks as long as the humidity is less than 65%. For your solutions and cleaning, the following supplies are needed.

1. distilled water (supermarket)
2. “pure” isopropyl alcohol (pharmacies or drug stores)
3. “regular” blue Windex (supermarket)
4. Kodak PhotoFlo solution (camera store)
5. pure combed cotton surgical swabs (medical supply)
6. two atomizers or squirt bottles (drugstore)
7. coffee filters (supermarket)
8. pure white Kleenex with no additives (supermarket)
9. clean and sterile quart mixing jars (WalMart)
10. sterile eye dropper (drug store)

You want “pure” isopropyl alcohol because



Swabbing with cleaning solution

the “rubbing alcohol” sold at most markets is only about 70% alcohol and the rest is additives, some of which is impurities that you don’t want on your optical surface. Likewise, Windex can also



Dusting with a soft brush

contain things that can leave a film behind. Blue Windex is best, but needs to be filtered. I also found the “pure cotton surgical swabs” to be hard to find, so I ended up ordering some optical wipes from Duchek Consulting (duchekconsult.com). All of the other stuff, I found at the supermarket or WalMart.

The first step in mixing the solutions is to filter both the Windex and the distilled water using clean coffee filters. To make up the cleaner solution, you combine 1 ounce of filtered Windex

with 1.5 ounces of alcohol and add two drops (no more, no less) of PhotoFlo. Next add 12 ounces of filtered distilled water to fill the bottle. For the rinse solution, add two drops of PhotoFlo to 12 ounces of filtered distilled water. Put the cleaner solution in one of the squirt bottles and the rinse in the other. Label them so you don’t get them mixed up. Now you are ready.

The ASO guide recommends positioning yourself so you are looking across the tilted corrector plate towards a window with bright open sky. This is so you can see reflected light off your corrector

that will show up streaks. The guide also recommends that you not clean your corrector if the humidity is more than 65% because streaking will occur. This could be a problem in humid Texas.

The ASO guide says to assume a comfortable position because this job will take a while. Have your supplies within easy reach.

First mentally divide your corrector into quadrants. You begin in the top left quadrant and work around to the bottom left quadrant. Next, spray a generous amount of cleaner on your cotton swab so that it is wet but not dripping. Remember to only use one side for cleaning and not to turn it over where your fingers have been.

Starting in the upper left quadrant, daub (do not rub) this section until you have generously smeared the cleaning solution across this section. Pull the swab across the surface; do not rub or push. The idea is to move the liquid across the surface to break the adhesion of the deposits on the glass. Before the liquid collects in large areas and before it starts to dry, immediately wipe the quadrant with a Kleenex tissue. Once again, you pull in one direction only. Follow each swipe of the Kleenex immediately with another swipe with a dry Kleenex. Keep replacing the tissue with one that is fresh and dry.

Once you have completed the first quadrant, do the same with each successive quadrant, overlapping slightly with the previously cleaned areas. If you find a bit of streaking at the overlap zones,



A final rinse and wipe to finish

use a fresh cotton swab sprayed with a small amount of cleaner to touch up those areas.

The final step is optional. If there is any streaking left, use the rinse solution to finish. Spray a small amount of rinse on a cotton swab and rub it across the entire glass area quickly and lightly. Follow with a fresh, dry Kleenex in the other hand to absorb any remaining moisture.

As you can see from the photos, this technique worked well on my 9.25" Celestron corrector plate. What started out as a messy, blotchy surface ended up looking nice and clean. ASO says that this technique can be used on other optical surfaces, such as binoculars, camera lenses, and eyepieces – but should not be used for mirrors.

It's Not That Hard!

So says Clayton Jeter, owner, operator, and five star general of **Advantage Telescope Repair**. Clayton has cleaned hundreds of corrector plates and says that this quick method works just great.

“For a good cleaning without removing the corrector (quick version):

1. Brush off the corrector plate with a large camel hair brush (craft or art supply store)
2. Turn the OTA in a somewhat downward position to keep water from going down into the

OTA.

3. Use a micro-fiber cleaning towel and pour distilled water on the towel.
4. Wipe the corrector with the wet towel and then dry with a dry micro-fiber towel. Use large circular motions and soon all the grease, oil, and grime will disappear.
5. The end”

Clayton Jeter (stonebloke@gmail.com)

A Visit to Apache Point Observatory

Story & Photos by Joe Powell

During my visit to Sunspot, New Mexico last year, I toured Apache Point Observatory (APO; www.apo.nmsu.edu) atop Sacramento Peak. The APO is part of the Observatory of the Southwest Consortium, which also includes Fred Lawrence Whipple Observatory, National Solar Observatory, National Radio Astronomy Observatory (all in New Mexico), McDonald Observatory in Texas, and Kitt Peak Observatory in Arizona. The complex consists of four telescopes built over the last decade and overlooks the Tularosa Basin

through exhibits that pertain to the APO, such as one about the Mosaic Imaging CCD camera (see photo). It is a short 1.5 mile drive from the Sunspot Visitor Center to the APO parking area. A self-guided tour of the grounds is permitted. However, unlike the National Solar Observatory (see last issue), the observatory buildings are not open to the public.

The first stop on my tour was the 2.5 meter Sloan Digital Sky Survey (SDSS) telescope and Mosaic Imaging CCD camera. The telescope and



of South Central New Mexico at 9147 feet elevation. The APO is privately owned and supported by the “Astrophysical Research Consortium” (ARC). Its mission is: “To operate the observatory to further astronomical research by the scientists and students of its member institutions”. The ARC consists of seven member institutions (see photo).

I began my fieldtrip with visit to the Sunspot Visitors Center that contains lecture rooms, indoor and outdoor exhibits, a gift shop, and public facilities. The visitor center also has several walk-

camera are housed in the big building in the photo background. The SDSS telescope is designed to map the entire sky with a 3 degree field of view. The photo of the small instruments shows the APO’s Infrared All-Sky Camera, which automatically provides sky conditions in the thermal infrared.

The second tour stop was the SDES 0.5 meter photometric telescope. This scope is used to monitor subtle changes in atmospheric temperature and pressure during the course of the sky survey. It measures the transparency of the atmosphere



The Visitor's Center



Member Profile: Somasundaram Essakiappan

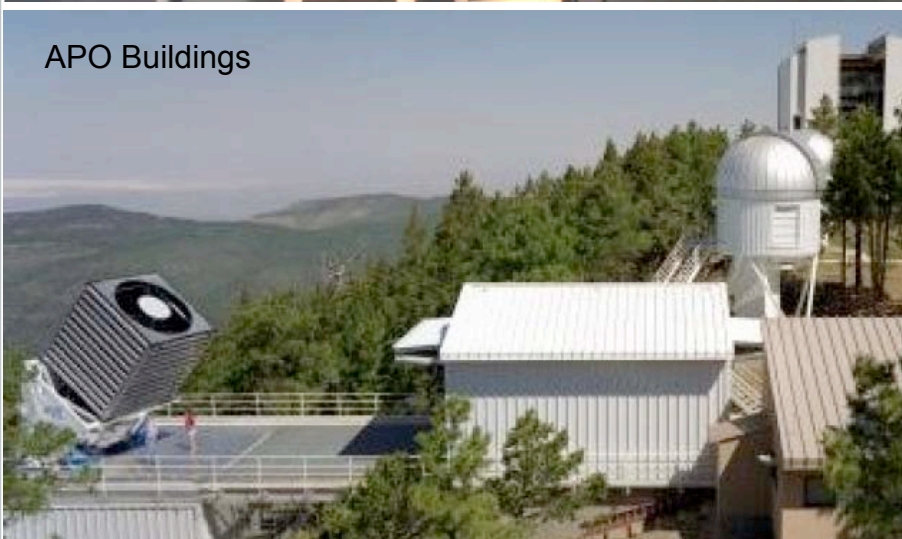
Where are you from originally? I am originally from Tuticorin, a city of around half a million in the state of Tamil Nadu in South India. This city is about 80 miles from the southern-most tip of mainland India. My city is literally surrounded on all sides by industries and manufacturing facilities. The lights from the city's industries are visible even from tens of miles outside the city. This makes any thought of astronomy a daydream. I may have caught a glimpse of Venus, Mars and the usual bright suspects in the 17 years I lived there.

What is your work? I am a graduate student working on my PhD in Electrical Engineering. My specialization is Electric Power and Power Electronics. My research now focuses on operation and control of solar photo-



CCD camera exhibit

APO Buildings



continued on p. 13



APO grounds



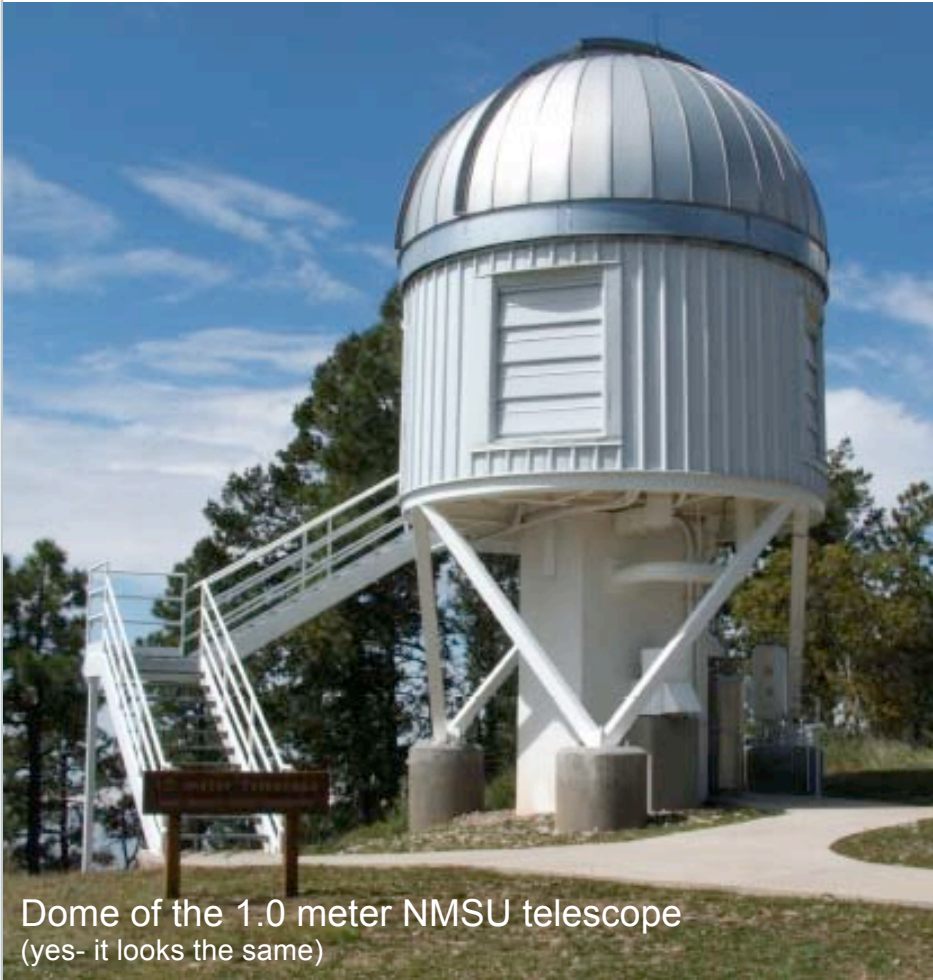
Dome of the 0.5 meter SDSS photometric telescope

and pressure during the course of the sky survey. It quantifies the transparency of the atmosphere and brightness of the sky.

The third stop on my tour was the 1.0 meter NMSU telescope. It is a computer-controlled scope used for research and graduate instruction in the study of nebulae, galaxies, star clusters, and galaxy clusters.

My last tour stop was the 3.5 meter ARC telescope, which is the largest at APO. The primary mirror was fabricated using spin-casting technology, producing a hollow mirror weighing $1/5^{\text{th}}$ as much as solid glass. This telescope is used with spectrographs and imaging devices to make observations at optical and infra-red wavelengths. It is a general purpose telescope for studies of all kinds of astronomical objects that range from the solar system to the most distant galaxies.

To explore the APO requires only a morning or afternoon and can be easily combined with the nearby NSO tour (weather permitting because thunderstorms are a normal



Dome of the 1.0 meter NMSU telescope
(yes- it looks the same)



A common hazard



Infrared all-sky camera (right)

Dome of the 3.5 meter ARC Telescope



afternoon occurrence). In the summer, the Tularosa Basin temperature can easily be $>100^{\circ}\text{F}$ with Sunspot at a comfortable 72° , perfect for picnics.

Apache Point Observatory is located in the Lincoln National Forest. The nearest town, Cloudcroft, NM, is a 25-mile scenic drive away, lined with aspen, pine, and spruce. Beware of large, roaming animals which can make dusk and night driving challenging. Sleeping accommodations range from National Forest campgrounds to motels in Alamogordo, NM, 45 miles away. The nearest major airport is in El Paso, TX, about 150 miles to the south.



Derek *(continued from p. 3)*

also required me dragging them to dark sky sites since we were city folk. I still have that same telescope and with it's combination of portability and light grasp, I count it as my favorite.

What is your favorite aspect of astronomy? I really enjoy DSO observing the best but that is not really so well adapted for a city dweller. I am trying to broaden my horizons by taking on the Astronomical league Observing Clubs one at a time. I have finished and received the certification for the Lunar and Binocular

Messier Clubs. Those were really eye openers. I have finished the observing requirements for the Messier club and I am working on the Urban, Earth Orbiting Satellite and Herschel 400 clubs.

Do you have other hobbies?

Other hobbies include cooking, gardening, and photography.

Soma *(continued from p. 10)*

Voltaic power generation.

How did you become interested in astronomy?

When I was at university, right across the road from campus was the Birla Planetarium where open house events were regularly held. The enthusiasm at these events was usually very high since this part of the city

has a lot of educational institutions. I remember standing in line for hours at their Mars event.

But it was only after I moved to College Station did I get the opportunity to look up the sky. And it was pure chance that I happened to be at one of the Texas A&M Observatory open house events in September 2009. I learned about BVAC there. I became a member of the club and started to attend meetings regularly. At this point I had a basic understanding of astronomy – stars, nebulae, galaxies and supernovae, but BVAC *continued p. 18*

Messier Marathon 2011

Compiled from actual eyewitness accounts by Will Sager

It was a cold and windy night as ten hardy BVAC observers set up scopes for the annual Messier Marathon on March 4th (see cover photo). The Messier Marathon is a marathon observing session during which an observer tries to see as many objects from the Messier catalog as possible in a single night. In mid to late March, it is theoretically possible to see all M objects in a single night; although, it is very difficult because a few objects have to be picked out of the evening and morning twilight. For the BVAC it has become an annual excuse to get out the telescopes and to stay up most of the night observing.

As has become tradition, Mark Spearman hosted the marathon at his observatory, *Regina Caelorum*, near Wheelock. Not only is Mark's location one of the least light polluted in the area, but Mark has a remarkable track record for chasing away the clouds. Once again, the sky was mostly clear, as a result of a recent cold front passage, but this came at a price: cold and wind.

Mark prepared his Takahashi TOA 130 mm refractor on a tripod outside the observatory dome where he could more easily scan the sky. He would be using his 31 mm Nagler eyepiece for wide views and an Ethos 13 mm eyepiece for

closer inspection. Anjal set up a similar refractor, an APM/TMB f/6 APO outside. Derek Kuhl used a vintage 8-inch Celestron Schmidt-Cassegrain scope on an alt-az mount with a 24 mm Panoptic eyepiece. Tim Cowden readied his 10-inch Dobsonian reflector. Darkness fell and the shootout began.

It was a contest of will with the cold and wind and the cold eventually won. Several first time marathoners stayed for a few hours and then intelligently went home. Soma Essakiappan spied 27 M objects using only 7x50 Nikon binoculars. Judy Culver and Joe Powell worked together, also with 7x50 binoculars, and found 24 M fuzzies. The hour around midnight claimed a number of observers, including Anjal, who bagged 33 M objects, Derek, who logged 67 M objects, and Mark, the host, who finished with 41 M objects seen. Tim Cowden was the champion of the evening. He stayed at the eyepiece until 4:45 am, sticking with it through periods of cloud and haze, and finishing with 73 logged M objects.

Despite the challenging weather, all observers claim to have had a great time, to have learned a lot about the sky and their scopes, and to be looking forward to next year's marathon.

Kevin Gassen works on his new observatory in February



★ ★ ★ Club Photos ★ ★ ★



Anjal addresses club members at a pre-star party meeting at Mark Spearman's house in April

Tim Cowden gets some help aiming his Dob from an attendee of the star party at CUMC in December. Soma and Judy try to figure out where he is pointing.



Tim Cowden, James Rosedahl, and Don Bray Waiting for dark at Judy's observatory



Don Bray's backyard observing set up



The Pleiades by Anjal Sharma. APM 130 mm f/4.8 apochromatic refractor with a 0.8X focal reducer and QHY8-OSC camera.

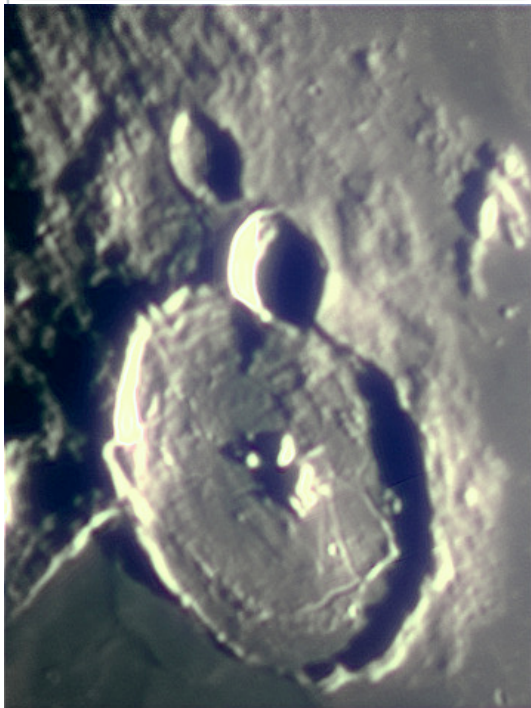


(top right) Recent "supermoon" full moon by Don Bray.

(top left) Jupiter by Derek Kuhl. CPC-11 Celestron SCT at f/40

(bottom left) Lunar crater Gassendi by Anjal Sharma

(bottom right) M83 Southern Pinwheel Galaxy by Mark Spearman.



Club Activities 2011

BVAC Meetings are usually held on the third Friday of the month at different locations.

April 29, 2011. Club meeting at Mark Spearman's house near Wheelock. Attending members stayed to observe from Spearman's *Regina Caelorum* observatory and grounds.

April 9, 2011. Bryan Family Campout at Austin's Colony Park. BRASS and BVAC volunteers held a star party for campers.

March 18, 2011. Club meeting at Judy Culver's observatory in northern Brazos County. Judy gave a tour of her observatory and held a star party after the meeting.

March 4, 2011. The annual Messier Marathon was held at Mark Spearman's observatory, *Regina Caelorum*. See story on p. 14.

February 18, 2011. Club meeting at the Texas A&M Observatory. The main order of business was planning for the Messier Marathon in March.



Soma *continued from p. 13*

opened this new world of learning opportunities to me. I started getting interested in the professionals' work in astronomy.

Thanks to BVAC and its inspiring members my observing skills have infinitely increased since 2009, which is mathematically correct because it used to be zero before that. Right now my sole observing gadget is a Nikon 7x50 binocular and I'm planning on buying an 8 inch scope later this year after I move to a bigger house. I am also a member of the TAMU chapter of "Students for

Exploration and Development of Space" (SEDS) where I've got the opportunity to interact with former NASA astronauts and scientists.

My favorite part of astronomy, in addition to observing the near-earth and deep sky objects, is to try to learn about the fundamental dynamics of particles, spacetime, etc..

Besides astronomy, I absolutely love history. Quite recently I have been interested in historical connections between ancient Sanskrit and ancient Persian, holding interesting conversations with my Iranian friends



(left) Don Bray helps a visitor at a star party at CUMC
(below) Karl Aufderheide awaits darkness at Judy Culver's observatory

