The High Desert Observer

The Bulletin of the Astonomical Society of Las Cruces

May 2006

President's Note

Right after the Texas Star Party your Prez left on Amtrak for the AAVSO (American Association of Variable Star Observers) summer symposium in Rockford, IL. So the whole TSP gang (minus the Prez) pitched in and gave a really good write-up for the HDO on our adventures at the Prude Ranch. Thanks everyone for a great report and pictures. Obviously, I am left speechless, with not much left to say. We did well in prizes again this year; our own Steve Smith won first prize of a Celestron 4 1/2 in. beginner's telescope on Friday giveaway, and Steve B. snagged Bob Reeves's book on Wide Field Astrophotography, and last your Prez won a booklet for beginners on how to find constellations, a red flashlight, and a small screwdriver. I'm sure Steve B. and I needed our prizes badly. Congratulations to Dave on his wide field photo of the Galactic Center and vicinity, and his well deserved inclusion among the Digital Astro Challenge winners. My sincere thanks to Chuck and Jerry for supporting the El Paso museum's star party; sorry I was out of town and missed the fine drinks and food that was promised. My AAVSO report and adventures will be in the June newsletter. See you all at the May meeting this coming fourth Friday (May 26) at the DABCC Room 77 at 7:30pm (Astro-Tidbits starts at 7:10pm... see page 4). Vince D

Report from the Texas Star Party

Nils Allen, Steve Smith and Rich Richins

What a difference a year makes! Last year's TSP was uneventful, other than being rainy and cold. This year's was warm, windy and full of "adventure" (euphemism for glitch).

Our convoy group (Dave Dockery, Steve Barkes, Rich Richins and Steve Smith) met *early* Sunday morning to make the trek to the Prude Ranch (Dick Olson came slightly later; Nils Allen came the next day; while Frank Miller and Vince Dovydaitis drove their campers). To get a prime camping spot, we still needed to arrive a few hours before the gates opened. Less than two hours out, our gas stop in Van Horn was the setting of our first adventure. When we got ready to get back on the road, Rich's truck wouldn't start. After several unsuccessful attempts to start it, it was agreed that Dave and Steve B would go ahead and get a good spot and that Rich and Steve S would stay behind, find a Walmart to buy a new battery and meet the others at the Ranch later. Three key lessons were learned that morning:

Lesson Number 1: There is no Walmart in Van Horn (nearest one is in El Paso).

Lesson Number 2: The only autoparts store in Van Horn is closed on Sundays.

Lesson Number 3: The Van Horn Shell station sells VERY expensive batteries.

This Month's Observer

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Texas Star Party, continued from page 1

After biting the bullet at the Shell station, Rich soon had his battery installed and the duo got back on the road.

When Steve and Rich got to the Prude Ranch, they queued up behind Dick Olson in the long line of cars waiting to get in. The TSP organizers sped up the intake process for the first time by walking down the line of cars, checking registrations and handing out car tags. Unfortunately, when they got to Dave's car he was told that he wasn't "on the list" (another "adventure"). After a quick exchange of cash from Dave's wallet to the gatekeeper's pocket (we didn't ask any questions), Dave was waved through and we set up camp close to the usual place on the central field. The first day was spent setting up the club's awning, campers, tents, tarps, and scopes. The highlight of the evening was Dave's Si Senior grilled chicken, a very tasty and gracious TSP tradition.

It's interesting to observe the upgrades in light-gathering equipment over the years. Most of us have been to TSP multiple times and each time setups evolve a little. Two trends have emerged – first, the complexity of the imaging rigs increases annually. Steve B showed up with his new Losmandy GM-8 mount and 8" Newtonian with a motorized Moonlite focuser. Rich had a GIANT new tripod & wedge. Dave brought his new DSI Pro II CCD camera. The other trend is the proliferation of the big Dobs (they must be reproducing!). Steve B had his 8" homebuilt "Eye Candy" scope, Steve S had his 14" T-Scope, Rich brought his 16" homebuilt truss-Dob, Vince brought his new-to-him-but-rather-old 13" Coulter and Nils brought his newly acquired 20" Obsession. By the end of the week, Dave had added a brand spankin' new 12" Meade LightBridge to the field. There was no shortage of toys to play with!

Starcloud over TSP - 4/25/06, Canon 300D 100mm widefield Sagittarius Region, 9x2min ISO 800 exposures (Dave Dockery)

The first night, the big topic was comet 73P/Schwassmann-Wachmann. The comet was located and viewed through different scopes. Several of the group tried their hand at imaging the different components. Group members also started checking off items from TSP's various observing lists. Completing these lists will reward you with satisfaction AND observing pins, which are a nice reminder of the event. Unfortunately, it clouded up around 1:00 am and the group packed it in for the night.

Days at TSP are typically spent sleeping as late as possible, watching weather reports, visiting vendors (our group did its part to keep them in business), preparing meals or trekking to the chow hall, plotting imaging targets, looking up list objects, taking a dip in the pool, hiking, biking, processing images, making the daily run to Fort Davis for ice and listening to talks. Steve S had his PST solar scope set up for quick looks at the sun each day. Frank led a talk on the March solar eclipse Wednesday afternoon. Like last year, there was a viewing list of daytime objects that could be completed. Rich was the only group member to complete the list this year. Rich was also the only member to enter anything in TSP's Amateur Telescope Making (ATM) round up. He and his "iScope" Dob were highlighted at one of the afternoon talks and he received a certificate at Saturday's awards ceremony.

Monday night was almost a carbon copy of Sunday. Clear skies with marginal seeing, then getting clouded out before the all-important Milky Way targets climbed into the sky. Tuesday night was a total write off - we

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spent the time story-telling and laughing. Another group had a mini-theatre set up and we listened to the sounds of King Kong play over the observing field. At least we got a good night's sleep! Forecasts of increasing clouds and threats of rain thankfully gave way to clear skies and the remaining nights were relatively clear. Lists were checked off, lots of images were collected and plenty of sleep was lost. On Friday night conditions were super and Nils was amazed at what was visible in the 20-incher - Pillars of Creation in M16, Bok globules in M8 – he went list-crazy and stayed up till dawn (then was worthless the next day!). Vince and Dave were especially enjoyed the views through their old and new Dobs – TSP can really bring out the best in a large scope!

Dave Dockery (l) and Nils Allen at the TSP Swap Meet

The adventures continued - one found the two Steves doing solder surgery on Steve B's new motorized focuser in the dark. Steve B stated that Moonlite told him they had NEVER had a focuser failure due to broken wires previously. We always knew Steve like to break new ground! Another "adventure" found us with a visit from Floyd, the resident skunk. Steve S nearly had a heart attack when he looked down in the dark to see Floyd's dark silhouette just inches from his feet.

Our group did pretty well at this year's giveaways. On Friday night, we were nearly skunked (no pun intended) until Steve S won that night's grand prize – a Celestron FirstScope. On Saturday, both Steve B and Vince won books - not bad considering the odds. We also did well in the observing pin department with several individuals completing numerous lists. Also, the evening talks were unusual and interesting (but we were just so durn tired!)

One final "adventure" occurred on Saturday afternoon. A very large gust of wind caused the club's canopy and the buckets of rocks weighing it down to become airborne. Fortunately, no great damage was done, but we spent the rest of the day sans shade. The up side is that it gave us a head start when it came time to pack up Sunday morning.

All in all, it was an excellent experience. If you've never seen the Milky Way rise from a truly dark site, you are missing one of nature's great spectacles. Hopefully, we can rest up and do it again next year – first-timers are strongly encouraged to join the group!

Input from Rich Richins... Despite the weather being a bit windy/cloudy and a leaky air bed, this was by far my most enjoyable TSP of the three I've attended. The combination of a solid imaging rig and the new(ish) 16" dob allowed me to be very productive when the skies allowed it. I obtained reasonable images of several objects (M20, M8, M21, NGC4565, Leo Trio, M81/82) and completed four observing lists. I might have done another list and another image on the final night, but I was so exhausted. Needless to say, I had a nice long sleep when I got back to town on Sunday.

As usual, the company and their antics helped to make the week enjoyable. Steve B had the group laughing regularly (Steve, I think you should give up on the grad school thing, and become a geek comedian). Dave and I found time for a couple of bike rides. And Nils kept us wowed with views from his 20" Obsession (including a 'naughty' view of M101). We met friends and acquaintances old and new, from Takahashi-Brad to Howard Brewington to our ever-present meteorite-collecting neighbor, Doug. Many more stories to tell. They'll have to wait until the meeting.

May Sky Map From Rich

Chart shows positions of objects at about 9 pm (MDT) for mid-May, 9pm for late May

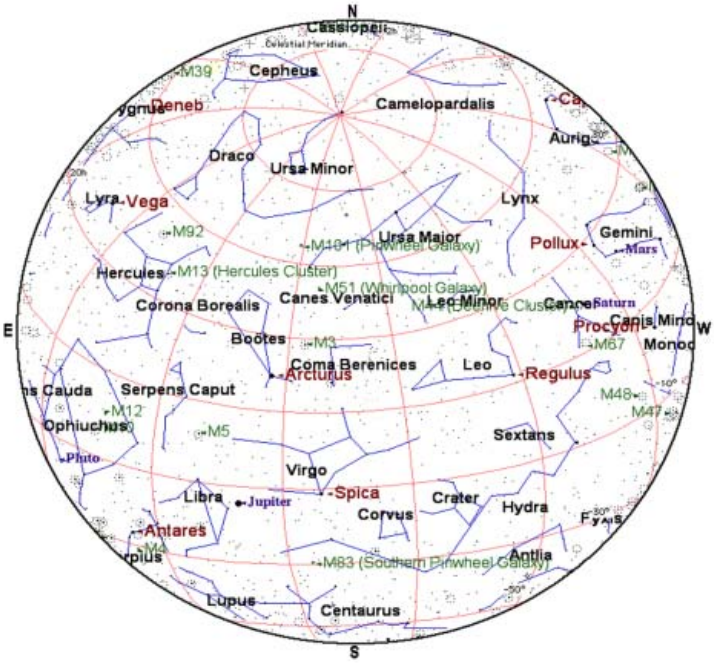
Additional maps are available from the club website.

May 4

May 12

May 20

May 26



Mars

In Gemini,
mag. 1.59,
sets around midnight

Jupiter

In Libra, mag. -2.48,
rises at dusk

Saturn

In Cancer, mag. 0.31, rises
about 1 am

ASTRO-TIDBITS (formerly Beginner's Corner)

Nils Allen, ASLC Education Chairman

Prior to the regular meeting, some of us get together to discuss topics that might be of interest to both beginners and experienced observers. We normally gather about 7:10 pm on the meeting night.

At the April meeting we discussed "realistic expectations and their importance in amateur astronomy." We talked about the results to realistically expect when undertaking observing and/or imaging with various instruments, as well as the time and money it typically takes to achieve those results (not an oft-discussed topic!). For the May meeting, Steve Barkes will present "Star Party Equipment Preparation." The discussion will include repairing a checklist, testing equipment, having a backup observing/imaging plan, and the importance of familiarizing yourself with your setup in the daytime.

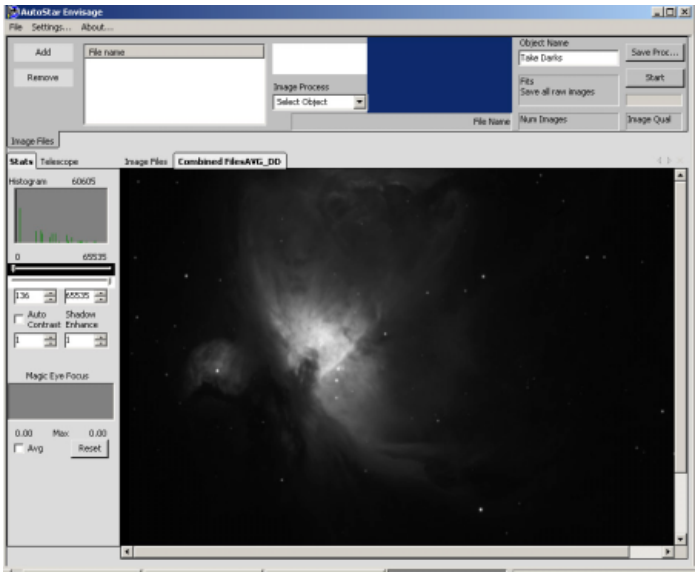
Please let me know if you would like to present a 10-15 minute short topic of general interest – it's a lot of fun, especially if you don't have to do it every single month!

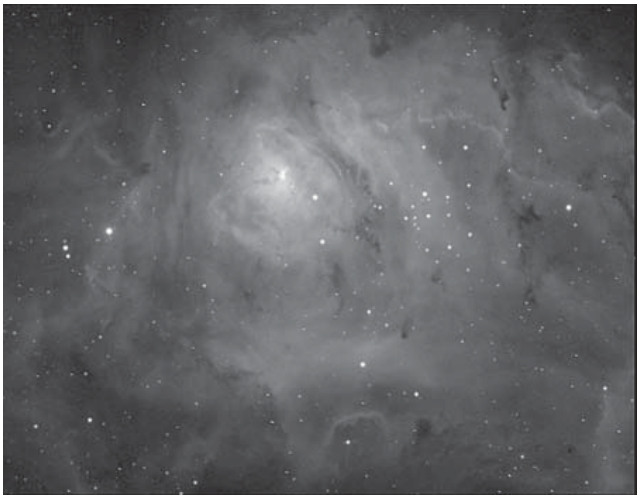
The Meade DSI Pro II CCD Camera (Part 2)

Dave Dockery

Last time I introduced Meade's new line of inexpensive astronomical CCD cameras and discussed some of the positive and negative aspects of the design. This month I'll cover the bundled software and share a recent image captured at the Texas Star party.

The software that ships with the Deep Sky Imager consists of three separate applications: a planetarium/telescope control interface (AutoStar Suite), a camera control/image acquisition package (AutoStar Envisage), and an image-processing package (AutoStar Image Processing). Both the Envisage and Image Processing are accessible from the AutoStar Suite menu. You can also launch them individually. Meade advertises that the camera and software are designed to be user-friendly and I have to agree that they've done a pretty good job of developing a simple intuitive interface for camera setup and acquisition.





M8: 7x2-minute image taken at the TSP though a Meade DSI Pro II CCD camera equipped with a 9nm H-Alpha filter

Envisage has powerful built-in capabilities including: automatic dark-frame subtraction, registration and stacking based on quality of subframe, autoguiding, a real-time histogram display that provides auto-contrast of the live image without affecting the raw data, focusing tools, NASA Drizzle technology, and support for multiple cameras. The Image Processing application provides typical processing tools as well as specialized options for correcting CCD defects, RGB frame debayering or combination, and photometry. The software package is impressive but somewhat lacking in documentation and would benefit from a good step-by-step tutorial. I'm still learning to use the bundled software and although I use the Envisage exclusively for acquisition, I've been using other IP packages for the processing.

I had opportunity to use the camera at TSP and was again impressed with its sensitivity and low noise. Right: a 7x2-minute image of M8 taken at TSP though a 9nm H-Alpha filter.

I'm really happy with the New Meade DSI Pro II and look forward to learning the techniques of RGB CCD imaging in the coming months.

The Astronomical Society of Las Cruces (ASLC) is dedicated to expanding members and public awareness and understanding of the wonders of the universe. ASLC holds frequent observing sessions and star parties, and provides opportunities to work on club and public educational projects. Members receive *The High Desert Observer*, our monthly newsletter, membership in the Astronomical League, including AL's quarterly *A.L. Reflector*. Club dues are $35 per year. Those opting to receive the ASLC newsletter electronically, receive a $5 membership discount. Send dues, payable to A.S.L.C. with an application form or a note to: Treasurer ASLC, PO Box 921, Las Cruces, NM 88004

ASLC members are entitled to a $10 discount on subscriptions to *Sky and Telescope* magazine. S&T subscribers MUST subscribe and renew through the Society Treasurer for the special club rate. To avoid a lapse in delivery, this must be done when S&T sends their reminder, 4 months in advance.

Minutes, April 2006 Meeting

Vince Dovydaitis opened the meeting with a discussion on when to mail the High Desert Observer (HDO). Vince recommended that the HDO be mailed during the second week of the month as a compromise to George Hatfield's suggestion of the first week of the month. The compromise is to plan to have the HDO out by about the tenth of the month.

Vince thanked those ASLC members who supported the MESA (Mathematics, Engineering, and Science Achievement) and Museum of Natural History at the Science Education Day at the Mesilla Valley Mall on April 15. Vince specifically thanked Richard Jones for supporting the event with his solar telescope. There was a discussion about the club telescope and dome on the NMSU campus. It needs some repair work. Marie and Al Hughey volunteered to work on it Vince gave them a key to the observatory. Steve Barkes also volunteered to help. Vince reminded us that we need volunteers to support the Earth Day celebration at NMSU on April 29. We need to bring solar telescopes. Vince asked who would support the star party at the "walk around" at the new Dinosaur Track Museum in El Paso on May 6.

Dave Dockery offered up free color negative film for anyone who wanted it. Nils Allen asked for volunteers for the White Sands School Star Party on May 3. Vince asked who would be going to the Texas Star Party (TSP). He said that we should have a report and presentation at our next meeting on the TSP.

For the evening program, Frank Miller gave a presentation on his trip to Turkey to observe and photograph the March 29 Solar Eclipse. Frank said this would be a dry run for his presentation at the TSP. Frank showed some very interesting images of the eclipse and the Turkish countryside. His talk provoked a lively discussion. Bill Stein, ASLC Secretary

My Observatory, Part 1

George Hatfield

One of the reasons we moved to New Mexico from Washington State was to have better weather for my astronomy "habit." While our home in Anacortes was close to Anacortes Telescope, the weather was generally terrible from an astronomy point of view from October through May… maybe even June. Also our home was on a small lot which didn't permit an observatory. So when we looked for a home in Las Cruces, space for an observatory and dark skies was a definite priority. Fortunately, we found both in the Talavera area to the east of "A" Mountain.

After moving to Las Cruces last December, I started looking at observatory plans. The classic Skyshed design was appealing and certainly was a reasonably priced cost alternative. But I really didn't like their

looks and my carpentry skills are not that great. In February, a used ProDome (http://www.homedome.com/ , manufactured by Technical Innovations in Gaithersburg, MD) became available on Astromart. This was more to my liking. It had only been used a few months and the seller claimed it was in like-new condition. We purchased and picked it up in Tucson. Fortunately it is manufactured in fiberglass sections and bolts together with enumerable 1/4" carriage bolts. Thus it wasn't much of a problem to move it to Las Cruces in a U-Haul trailer.

10' ProDome

The 10 foot diameter dome is equipped with 5 wall rings which makes the sides about 5.5 feet high. It was also equipped with the "Digital Dome Works" option which automates the rotation of the dome and the opening of the shutter. The price included a day of assistance from Kris Koenig, an experienced ProDome assembler. At the time that wasn't an important part of the deal, but after going through the assembly process I was very glad he was available! These are not that easy to put together (contrary to the manufacturer's claims).

The dome was placed on a 4" concrete pad (15' x 15'). The center, where the pier rests, is 3 feet square and 3 feet deep. The pier pad is separated from the rest of the pad with 1" polyurethane foam (blue foam sheeting) to reduce vibration. I had a 10" steel pier built by a guy in Alamogordo who fabricated the piers for New Mexico Skies Observatory. I thought about putting in a concrete pier, but had second thoughts after realizing it would be impossible to move if I changed equipment, or God forbid, I made an error in building it in the first place. The steel pier is bolted to the pad with concrete anchor bolts.

Well, how do I like it? That will have to wait for the June issue. I've run out of room!

June Issue of the HDO

In the future the HDO will be published around the 10th of the month and will no longer be published in the week prior to the monthly meeting. This will provide a consistent schedule for both for those who contribute to the newsletter and for the editor. Articles for the June issue should be to me by Wednesday, June 7. Material should be sent as email (gmhlcnm@msn.com) or as an attached Microsoft Word document. If you have any questions about submitting something to the HDO, please don't hesitate to contact me (532-5648 or via email). Thanks in advance! George Hatfield, Editor, ASLC Newsletter

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