



THE OBSERVER

SAN BERNARDINO VALLEY AMATEUR ASTRONOMERS

Member of The Astronomical League

2009, International Year of Astronomy

<http://sbvaa.org/>



Volume #51, Issue 4

Since 1958

April 2009

Meeting:

April 18, 2009

Location:

San Bernardino County
Museum, 7:00 p.m.
Redlands, CA. California St.
exit, I-10 Fwy.

Pre-meeting Dinner, 5:00 p.m.,
Hometown Buffet, Loma
Linda, CA

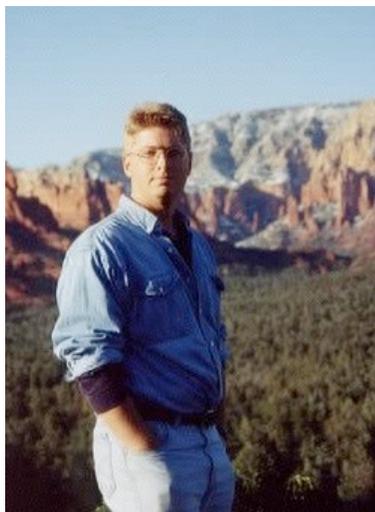
After the meeting telescopes
will be set up for viewing and
members will be available to
answer questions. Bring your
telescope to observe with us.

*No telescope is too humble, and
beginners are always made
welcome!*

After viewing the group will
head for Coco's in Redlands,
Tennessee exit, I-10 Fwy.

Program

Helping change the face of our national parks night
skies by offering contemporary solutions to Light
Pollution.



Tyler E. Nordgren, PhD

Dr. Tyler E. Nordgren is Associate Professor of Physics at University of Redlands, CA, and a former astronomer at the U.S. Naval Observatory and Lowell Observatory in Flagstaff, Arizona. Dr. Nordgren will be speaking at the San Bernardino Valley Amateur Astronomers April 18, 2009 club meeting at the San Bernardino County Museum at 7:00 p.m. and is free to the public. The talk will be on the 12 month sabbatical he

took where he visited 12 national parks in 12 months.

His journey entitled "Stars Above, Earth Below" was an exploration carrying him all across our country's national parks system. He began to see and understand that each and every park had different needs in a quest to find ways to prevent light pollution and to restore or preserve the night skies view.

In today's world, the ever expanding population and building around our national parks has slowly but surely decreased the state of visible night skies do to light pollution. In the words of James Butts, President of the San Bernardino Valley Amateur Astronomers, it's a real pleasure to have such a noted champion for the cause of eliminating as much light pollution as can be done and still have smart growth and planning for parks and communities speaking to our club and community.

(Cont. on pg.2 see: About Our Guest Speaker)

About Our Guest Speaker

(Cont. from pg.1)

Kids and their urban families don't have that connection to a greater universe today without driving for more than an hour, so there are no trips to see stars for today's urbanite kids. We also look forward to his book expressing his views on the park system and his photographic journal on this inspirational connection with Mother Nature during his sabbatical.

Tyler Nordgren is an astronomer and Associate Professor of Physics at the University of Redlands. He earned his BA in Physics from Reed College and a MS and Ph.D in Astronomy from Cornell University. At Cornell, Tyler used the Palomar Observatory and the Very Large Array to measure the size of dark matter halos around galaxy pairs undergoing the first phase of collision.

As a post-doctoral researcher at the U.S. Naval Observatory, Tyler's knowledge of interferometry was a great help in constructing the U.S. Navy Prototype Optical Interferometer, creating a new generation of interferometers which astronomers which are now able to observe stars with spectacular resolution which is unmatched by others. While working at the NPOI, Tyler directly observed the diameters of such household named stars as Pollux and Polaris.

For greater insight to his work you can read an article written by Dr. Nordgren titled "Plumbing the Depths of Polaris". Another interesting article by him is titled "The Optical Interferometer: Completing the Work of Galileo". Both can be found online. Tyler's work on the Multi-channel Fourier Transform Spectrometer (mFTS) which he developed along with others at the USNO, Flagstaff, may enable the detection of Earth-sized planets in orbits around other stars.

You may also read about the C-N (Chengalur-Nordgren) Galaxy Pair Sample, which is an ongoing project to determine the dark matter content of individual galaxies by using observations of the relative motions of galaxies in pairs. Dr. Nordgren's graduate work was on galaxy pairs.

Saturday, May 2, Astronomy Day at the Museum. Public viewing from 8:00 to 9:30 p.m. Our president Jim Butt's will give an indoor program at the same time. Tell you friends and neighbors to come out and get up close and personal with the universe!

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Calendar of Upcoming Events

April 18, Club meeting at the Museum
April 25, Star party, location to be announced
May 2, Astronomy Day at the Museum.
May 16, Club meeting at the Museum
May 22 - 25, RTMC, Big Bear
May 23, Star party date for those who don't go to RTMC
June 13, Club meeting at the Museum
June 20, Grandview - the ultimate star party!

Editor's Message

By Jim Sommer

We have an excellent speaker this month. Someone who is doing something about light pollution, not just talking about it. Perhaps we can take inspiration from him and begin pressuring our local governments to reduce light pollution here where we live. It's not just about being able to see the night sky better, it makes good economic sense too. Better directed light enables use of lower wattage fixtures which, in turn, means lower power costs. Bottom line? It saves everyone money!

Spring in the Desert : Messiers in the Heavens

By Cliff Saucier

This time of year can make for challenging conditions as the weather is unsettled, but when it's good, it just makes us want to get out under the stars. Well, it was good for our Messier weekend. Very good.

I like to camp for a couple of nights in a dark sky this time of year, at least getting a chance of some good conditions, and this year's trip took me back to Afton Canyon with HiDAS, the astronomy club from Apple Valley that I've been affiliated with for four years or so now. Martin Carey was going to come along, and a friend of his, Bob Noss, who some of you had met before at Calico and Grandview. You may not remember Bob, but you wouldn't forget his twenty-five inch Obsession. We knew the RAS star party in Landers was going to be well attended, and they didn't need more of a crowd. And the skies in Afton Canyon can be *so* dark! As for HiDAS, this was their first club attempt at a camping star party in some time, and the weather couldn't have been better.

Passing Barstow the wildflowers started showing. Large drifts of yellows and white. Nice. Then the off ramp to the campground. A few of us were able to show early on Friday and save spots for those to come. Afton can be quite popular with the off-road crowd, and we were fortunate in getting our choice of sites.

By the evening we had six scopes on the field, ranging from my ten-inch to Bob Noss's twenty-five. The Boy Scout troop at the end of the campground couldn't wait for it to get dark, and the off-road guys were just as excited, but had to stay cool. Couldn't let on that they were just as up for it. They all showed up and saw some sights. It was a good night, and we had a long session. Saturday was hiking the beautiful canyons. Mother nature at her best! Eroded canyon walls of pink and pastel lime, shading into grays and oranges, looking like melting ice cream. Wildflowers and even a desert iguana, my first.

Martin Carey made his appearance Saturday afternoon, with Sharon and son Matthew and their tent trailer...and the twenty! More HiDAS members showed as well, and we were fielding nine or ten scopes. The clarity of the sky had diminished somewhat, but we still ate our fill, as it were. Two or three of their group may be joining us in Grandview this summer, we were saying how good it can

be there, and the great turnout of members. Sunday morning came in on howling winds, and we packed up and got away the best we could. A couple nights of perfection, shoe-horned between storm fronts.

GMARS Messier Marathon

By Rudy Rodriguez

"It went well. I was greeted by Alex McConauey and several other RAS members. I had two students with me and we were told that there was plenty of food, so we headed to the house first and met up with John Deems and his son. There was at least a hundred people in attendance. David Ho of HoTech was there letting astronomers use his laser collimator.

Looks like they added a few more concrete pads and roll-off observatories since the last time I was there. As soon as it got dark my students and I started looking through my 12.5" Dob and 2 pair of binoculars. We also looked through Capella, their 22" truss-tube Dob in the center of the telescope field. There was one gentleman who was having trouble setting up his Meade LX90 with GPS and GOTO. He was a newbie that had heard about RAS's messier marathon and had traveled from Santa Monica with his two daughters. I got him up and running, but he hadn't aligned his finderscope, so it was difficult for him to locate his two alignment stars. I invited him to where I was set up and showed him and his oldest daughter about ten messier objects before they got cold and headed back to the comfort of their tent.

The seeing was not bad. I had SQM readings of 21.13 to 21.54 throughout the night. It didn't seem that dark though as the whole horizon seemed to have some sky-glow. A few astronomy students from Mt. San Jacinto College had set up next to me and were about to leave. They had been looking through a 3.1" refractor, so I invited them to look through my scope before they left. They stayed for an addition half-hour looking and asking questions before they left. Later, a reporter from the Press Enterprise interviewed me and my students. Told her which club I belonged to and that I was a high school teacher. My students shared their experience of taking the class.

By then it was much a forgone conclusion that I was not going to view all 110 messier objects, so I ventured over to the telescope where I spent the rest of the night (until 5:30 a.m.) watching two guys set up on their concrete pads do some digital astrophotography. One guy was a newbie and the other a veteran from OPT. It was interesting to talk to both of them and hear the problems that they were experiencing. The newbie's batteries gave out on his drive, so I gave him some of mine so he could continue his photo session. Around 2 a.m. we had clouds roll in and block different parts of the sky the remaining part of our session.

All in all, I liked their hospitality and their facilities, but I still think Johnson Valley is a darker site. I know Martin and Cliff went to Afton Canyon for their messier marathon and Jim Sommer went to Cottonwood Springs where his Stellarvue group meets each March and October. They each were going to take SQM readings as well. Not a great night, I probably only saw about 45 of the messier objects, but in the spirit of the IYA I had fun!"

IYA Activities: 100 Hours of Astronomy

By Matt Wedel

One of my favorite aspects of amateur astronomy is introducing the public to celestial wonders at outreach events. Whether that first look is the beginning of a lifelong passion or just the highlight of someone's evening, it's nice to be able to give others a chance to see something they may never have seen before. So I was really looking forward to the worldwide 100 Hours of Astronomy outreach on April 2-5, one of the cornerstone projects of the International Year of Astronomy.

Unfortunately, it looked like the 100 Hours were going to be a bust for me. I knew that I was going to have to miss the club's Saturn Party on April 4th to pick up my wife from the airport. On April 2nd I drove out to Mentone School for the planned outreach, only to be clouded out. By the end of the day on April 3rd, I was pretty down: one event canceled, another I knew I would have to miss, and the sky was still a block of solid lead. Was it to be 100 Hours of Astronomy, or 100 hours of staring glumly at the clouds?

Ah--but then! As I was heading home from work, the sun

broke through the clouds in the west, and started pushing hard on the ones overhead. Would it clear? I ate a nervous dinner, hopping from the table to the front door, but the sky emptied out like a stadium after a big game. As the sun set there was not a cloud to be seen. I walked to downtown Claremont and set up my little Orion Mak in the Village Square, a public plaza with fountains, outdoor seating, restaurants, and the town movie theater, at about 7:30, and pointed it at the first-quarter moon.

For the next two and a half hours I had a nearly constant stream of visitors, of every age and ethnicity. Sometimes one person would stop and look and then run off, drag their friends out of the coffeehouse or away from the movie ticket line, and make them look, too. Parents lifted toddlers to the eyepiece and older folks leaned on canes while they studied the play of light and shadow along the terminator. I was pleased to find that several visitors had heard about the 100 Hours of Astronomy on NPR. Many people noticed the movement of the moon through the field of view and correctly deduced that this was because of the Earth's rotation. I got a lot of great questions and told a lot of people about the International Year of Astronomy and the many anniversaries it coincides with--the 400th anniversary of Galileo's application of the telescope to astronomy, the 200th anniversary of Darwin's birth, the 150th anniversary of the first publication of his *On The Origin of Species*, the 40th anniversary of the first moon landing, and the 5th anniversary of the landing of rovers *Spirit* and *Opportunity* on Mars.

The response from the public was overwhelmingly positive. Everyone who looked was impressed, and almost everyone thanked me. Several people told me it was the highlight of their evening. The highlight of my evening was simply getting out and doing it. That little telescope has spent too many Friday nights in the closet. On Friday, April 3, in the space of two and a half hours, it brought the moon down to earth for my visitors--all 144 of them.

Some of Matt's visitors included these three gypsies who wanted a photo of themselves with Matt's Orion Mac 90. I guess you never know what will happen when you practice sidewalk astronomy.

