

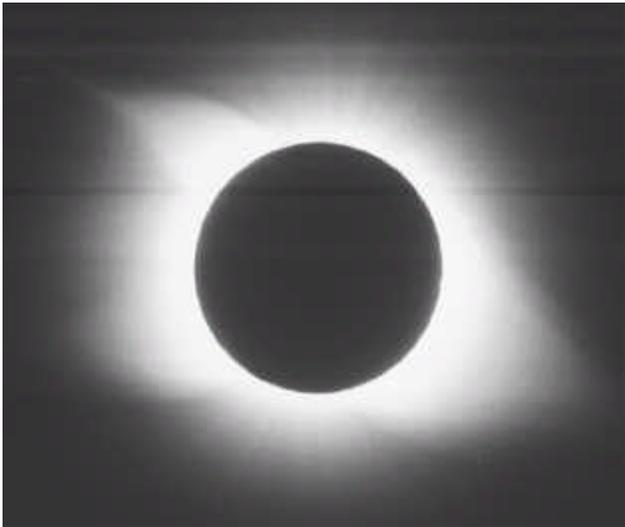


The American Astronomer

THE QUARTERLY NEWSLETTER OF
THE AMERICAN ASSOCIATION OF AMATEUR ASTRONOMERS

Volume III, No. 3

June 1999



The Rocket Ship Corona Solar Eclipse of November 3, 1994

AAAA President John Wagoner and Vice-President Ed Flaspoepler traveled with Joel Harris of Twilight Tours, Inc., to view the eclipse of November, 1994, in Bolivia. Ed took this picture of the solar corona on Kodachrome 64 slide film using a Meade 2045 f/10 telescope. The exposure time for this photograph was 1 second.

At the End of the Millennium

Total Solar Eclipse - August 11, 1999

The most heavily populated areas of Europe and the Middle East will experience the rare pleasure of a total eclipse of the sun on Sunday, August 11, 1999. Mid-eclipse occurs at 11:00 AM UT just west of Bucharest, Rumania. First contact of the lunar shadow with a populated area is Land s End in Great Britain, at approximately 10:15. From there, during the next hour, the shadow passes over some of the major cities of Europe, including Stuttgart, Munich, Salzburg, and Bucharest, before crossing the Black Sea into eastern Turkey, and on over Iraq and Iran, ending just west of Pakistan and the Indian sub-continent at 12:30 UT. The duration of totality at mid-eclipse is 2 minutes and 23 seconds, while in Turkey, it is only 2 minutes and 8 seconds.

Many amateurs from the US and other countries are planning trips to Europe just to view this eclipse. Prospects for clearest skies are in Turkey, which gives a good compromise between duration of totality and the likelihood of clear skies. The further west one goes into Europe, the greater the chance of overcast skies. But this fact is not preventing eclipse chasers from planning trips to the more modern capitals of Europe instead of Turkey and the politically charged countries of Iraq and Iran.

On the web site of the American Association of Amateur Astronomers, (URL: <http://www.corvus.com>), you can find a page of tips and guidelines from experienced eclipse chasers on how to make successful photographs of any eclipse. If you are planning a trip to this eclipse, be sure to send us a report of your experiences, and copies of your photos, so we can share them with other AAAA members and post them on the AAAA web site.



AAAA Members Earn Messier Certificates at TSP 99

Two AAAA members, Sonya Monier from McKinney, Texas, and Bruce Vitellaro from Arlington, Texas, actually completed their Astronomical League Messier programs at the Texas Star Party. Both received the Honorary Messier Certificate for observing all 110 Messier objects using a telescope. Messier Certificates were presented at TSP by Kathy Machin, AL Observing Coordinator (right), and Steven J. O Meara (left), an editor from *Sky & Telescope* Magazine. Bruce Vitellaro is standing next to Kathy, flanked by co-recipients Lucien Bolduc and Ray Knox. Unfortunately, Sonya Monier had to go home a day early, and missed the photo. We sure are proud of these two veteran observers and are glad they are AAAA members.

Brenda Clubertson Earns Lunar and Sunspotter Certificates

Brenda Culbertson from Mayetta, Ks. used an 8-inch Schmidt Cassegrain and 8x40 binoculars to earn the Astronomical League's Lunar Club certificate. After she observed 100 features on the moon, she turned right around and earned the AL's Sunspotters Certificate by observing, following, sketching and even photographing 25 sunspot groupings. Very nice job, Brenda.

Stephen LaFlamme Earns Double Star Certificate

Stephen LaFlamme from Bridgewater, Ma. earned the Astronomical League's Double Star certificate. Stephen observed and split 100 double stars using an 11-inch Schmidt Cassegrain telescope. Way to go Stephen. We are happy to have you as an AAAA member.



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A Member
Society of
The
Astronomical
League

President's Letter

Wow!!! Have AAAA members been busy this last quarter, including yours truly. This year's Texas Star Party was wonderful. We had eight straight nights of clear skies and we literally killed ourselves. We stayed up all night and slept all day and completely turned our body clocks around. But it was fun, fun, fun.

As you know, I am the TSP Observing Chairman and run the observing programs there. I made this year's telescope program especially hard by selecting all planetary nebula. Little bitty ones. Boy, did I catch the flack. One astronomy club out of Houston went so far as to take a life size man target and shoot it full of holes with pistols and rifles (hey, this is Texas) and then sign it and present it to me at the TSP Friday night meeting. But the good news is I had a record number of attendees participate in my programs. 105 observers completed the binocular program, while 152 completed the telescope program. I gave out a total of 257 TSP observing pins.

But the really good news is that two AAAA members, Sonya Monier from McKinney, Tx. and Bruce Vitellaro out of Arlington, Tx. actually completed their Astronomical League Messier programs at the Texas Star Party. Both received the Honorary Messier Certificate for observing all 110 Messier objects using a telescope. We sure are proud of these two veteran observers and are glad they are AAAA members.

Next, our own Brenda Culbertson from Mayetta, KS. Completed not one but two Astronomical League observing programs. Using an eight inch Schmidt Cassegrain and 8x40 binoculars, Brenda acquired the Lunar Club certificate. She observed 100 features on the moon using the naked eye, binoculars, and a telescope. Then she turned around and earned the AL's Sunspotters Certificate by observing, following, sketching and even photographing 25 sunspot groupings. Since I do solar work myself, Brenda and I have been exchanging notes. Very, very nice job, Brenda. You continue to add to your arsenal of observing skills.

Finally, our own Stephen Laflamme from Bridgewater, MA. earned the Astronomical League's Double Star certificate. Stephen observed and split 100 double stars using an eleven inch Schmidt Cassegrain telescope. Since I run the Double Star program, I was able to review Stephen's observing logs and I can honestly say I have never seen a finer set of notes and drawings. Way to go Stephen. We are happy to have you as an AAAA member.

So, as you can see, your fellow club members have been very busy. I hope to see your name on a certificate in the future. If there is anything we can do to help you toward this goal, please let us know.

Best always,

John Wagoner - President - AAAA

OBSERVING IS THE HEART OF AMATEUR ASTRONOMY

The American Association of Amateur Astronomers, as a member society of the Astronomical League, is pleased to announce a new service from its Internet Web Page, <http://www.corvus.com>. We are providing the AL's FREE Observe Programs in Adobe Acrobat Portable Document File format at no charge as a service to members of the AAAA, the Astronomical League, and the astronomical community at large. The Observe Programs which require a published manual must still be obtained from Astronomical League Sales, PO Box 572, West Burlington, IA 52655.

You will need Adobe Acrobat Reader Version 3.0 or higher to read these files in your web browser or after download for later use. This Reader software can be obtained FREE from the Adobe web page. <http://www.adobe.com>.

AAAA encourages you to download these files for your own use, and to distribute them, in either electronic or printed form, to your friends and other interested observers, as an encouragement to further participation in amateur astronomy.

AAAA members are eligible to earn any of the AL's observing awards. Observing is the heart of amateur astronomy. We encourage you to participate in all of the programs which interest you.

AAAA Letters

Hello AAAA

I have been a member of AAAA for a couple of months, and I thought I would touch base, since so far all of the communication has been one-way. Based on what I've seen so far in the publications, the AAAA seems to be made up of many expert astronomers who are also nice people.

I've gone right to work on the Urban Club, as I live in North Orange County, CA, which is on the eastern edge of the LA area. I've been observing for about 1 1/2 years and have previously observed about half of the Urban Club list, but I've chosen to start over with new observations to earn the certificate; so far I've logged about fifteen. Thanks very much for putting this program in place.

*William J. Domino
Yorba Linda, CA
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Hi William,

It is good to hear from you. I'm happy to see you working on one of my programs. I hope to be able to award you a certificate sometime in the future.

If it is of any help, if you still have your prior observations, you can use those toward the Urban Club. You need not to have made all the observations while a member of the AAAA and Astronomical League. We allow experienced observers in the program, as well.

Ed and I are working on this month's newsletter and will have that out shortly. If in the future you would like to contribute to the newsletter, please let us know. Even if it is just your personal observing experiences,

we would love to hear about them. Until then, thank you for the nice letter. You have made my day.

Best regards,

*John Wagoner,
President AAAA*

Dear AAAA,

I just wanted to say thank you for publishing my astrophoto of Feb. 15th of the spectacular Venus/Jupiter Conjunction in February. It was quite a surprise when I received Vol.III, No. 2 of the Newsletter and saw my astrophoto next to Mr. Flaspoebler's on the front page. I truly have a passion for astrophotography and astronomy and enjoy being a member of the AAAA. Hopefully, I can continue to send you future astrophotos of astronomical events to share with your readers and fellow members and hobbists.

Thanks again,

*Ron Zinconer
rzinconer@uri.edu*

Dear Ron:

Thanks for sending us an e-mail. I did not know your online address before.

Yes, thank you very much for your beautiful photo. It looks very nice on the front page of the newsletter, and I have also posted it on the AAAA web page, as well. I also have a letter and drawing from you that John Wagoner forwarded on to me. I have posted it on the AAAA web page, too.

Thanks for being a member of the AAAA, and keep up the good work.

Sincerely,

*Ed Flaspoebler,
Vice-president, AAAA*

Hey! Forget About Y2K - What About Eta Carina!

Talk about natural disasters and catastrophic loss. Just keep your fingers crossed that Eta Carina doesn't go hypernova anytime soon.

Eta Carina is a star visible in the southern hemisphere. It's been described by astronomers as the weirdest star in the known universe, and it's been acting more weirdly than usual recently. It also appears to be a candidate to go hypernova someday, which, according to current models, would release a powerful enough burst of gamma radiation to end all life on earth, even at our distance of 7500 light years.

This star has doubled its brightness in the last week, which fits none of our models of stellar mechanics, so it actually has astronomers just the slightest bit nervous. However, this star has acted very weird in the past without frying us, so the odds are in our favor. There's just no way to be sure.

What we see today from Eta Carina happened some 7500 years ago. So the doubling in brightness that we're seeing now, which is why astronomers say the star is probably beginning another major eruption, actually happened long, long ago, although right here in our own galaxy, not so far away.

The odds are (hopefully) good that this new eruption will only be like the last one, some 150 years ago, and only flare up to supernova levels. That would be no threat to us. But if it is going (or went) hypernova, and that's what we're seeing the beginning of, we could have serious problems. Just in the last year or so astronomers have postulated that hypernovas are the source of the gamma ray bursters that US defense satellites have been detecting for the past 20 years or so from deep space. Such gamma radiation, even at a distance of 7500 light years, could well be lethal to all life on earth.

If it does turn out to be a hypernova, the gamma radiation would (I believe) be following the light and would arrive here perhaps a month later. There would be, I understand, a blue glow in the night sky in the region from whence the gamma radiation is originating, giving us an eerie warning a few weeks before doomsday.

Again, the odds are very much that this star is not yet ready to die and go hypernova. But the problem is, they can't be sure right now. When this star does die, it apparently is so large it will collapse into a black hole, and in the process go hypernova. Its fate is apparently sealed, it's just a question of does it happen (from our perspective) next week, or ten thousand years from now.

In the meantime, beware of stars that go bump in the night.

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http://www.mindspring.com/~lugo/lugo_home.htm*

Crisis at Stellafane

STATE PRISON THREATENS HISTORIC "HOUSE OF THE STARS"



The vote is in. The town of Springfield, Massachusetts, has voted to accept a state prison to be built within 3 miles of the historic Stellafane observing site. The bright nighttime lights of the prison will destroy the dark skies at Stellafane. The Springfield Telescope Makers thank all those who have given their support thus far. However, this situation is far from over!

We may have lost this battle, but the war is not over. We are working on a strategy to keep up the fight. We are keeping the petition going as a means to strengthen our arguments. There will be more to follow.

A petition regarding the Prison in Springfield is being prepared that will be sent to the governor of VT and the town of Springfield. If you are interested in reading or signing the petition, visit the stellafane web site.

NOTE: Everyone is encouraged to sign the petition regardless of what state or country they are from. Getting out the word about Stellafane's crisis country wide and through international appeal will be a big help! Thanks!

www.stellafane.com



The Prude Ranch, a summer guest ranch near Ft. Davis, TX, is host to the annual Texas Star Party. TSP Observing Coordinator John Wagoner, aka AAAA President, awarded more than 200 telescope and binocular observing pins to TSP attendees this year. Here, he presents a pin to Olin Chisholm of Dallas. AAAA Vice-President Ed Flaspoeehler is noted for his enthusiasm at observing sessions. Here he enjoys a night under the stars near McDonald Observatory.

Texas Star Party 1999

Since 1980, the Texas Star Party, held each year at the Prude Ranch, near Ft. Davis, Texas, has been the premier observer's star party in the US. 1999 was another banner year for TSP, as more than 600 amateur astronomers spent a week under some of the darkest skies in the country, pursuing their various observing programs, attending talks and presentations by prominent astronomers, and generally enjoying the fellowship that the family atmosphere at TSP generates.

Sentiment rather than science permeated TSP 99, as guest speakers wretched a pantheon of astronomical deities in homage during their evening talks. From Stephen J. O'Meara's eulogy of Walter Scott Scotty Houston, accompanied by the silver throat of Kathleen Battle crooning *O Holy Night*, to David Levy's retrospective of the life of comet expert Eugene Shoemaker, supported by the monumental Jupiter movement from Holst's *Symphonic Suite, The Planets*, TSP speakers eschewed long lists of factual data, instead focussing on the effects of age on a Baby Boom generation of great astronomers grown old. Even USNO scientist Brent Archinal concluded his somewhat rigorous analysis of star clusters with carefully chosen bits of poetry designed to inspire his audience. And, as a stylistically fitting conclusion to a week of guest speakers, Ray Villard, Public Relations Director of the Space Telescope Science Institute, regaled the assembled amateurs with an awe inspiring presentation of the newest batch of jaw dropping HST images, after barely making a nod to HST history and purpose. The data analyzers who restricted their activities to the afternoon paper sessions were the serious amateurs who are the backbone of non-professional astronomy.

Observing at TSP is a good as it gets when the weather cooperates. Past TSP's have seen El Nino and La Nina influence weather patterns that restricted observing. But this year, although some nights had poor observing due to isolated local clouds caused by larger weather patterns moving through the state, this year, the weather came in from the northwest, giving alternate days of high and low pressure. It is only when moisture comes in from the Pacific over Mexico that truly disruptive weather occurs at Ft. Davis. At least one

night this year was the best in recent TSP history, and observers on Friday night were kept busy until dawn. But other nights ranged from murky to downright overcast. Still, over 200 attendees out of 600 were able to earn TSP observing awards throughout the week, so obviously, there were plenty of moments for good observing.

The Texas Star Party doubles as the Annual Convention of the Southwestregion of the Astronomical League. But the annual SWRAL meeting, also held each year at TSP, has become nothing but a business meeting for running TSP. Discussions centered around port-o-potties, housing reservations, room quotas, and Prude Ranch accommodations, and the list of elected SWRAL officers reads like a Who's Who of TSP organizers. Meanwhile, SWRAL clubs outside of Dallas and Houston, including AAAA, remain in limbo when it comes to being part of the SWRAL and the Astronomical League.

Still, the Texas Star Party remains the quintessential observer's star party, run efficiently and attended by some of the most enthusiastic amateurs in the country. Many operating procedures considered normal here could well be adapted to other star parties. For instance, the Great Texas Giveaway, Parts I and II, held on both Friday and Saturday nights, is a model of how a door prize event should be handled. Names are called quickly, and prizes distributed efficiently by a crew of runners who make sure that not only is each door prize distributed to its winner, but that his name and address is collected so that a thank you note can be sent to the donor.

Vendors abound at TSP, and at least one AAAA member I know (G) spent too much money on new telescope equipment. But for the cost conscious, there is also the flea market on Friday afternoon, where you just might find that out-of-the-way item you can't live without.

So if you are looking for an exciting way to spend a vacation under the stars, consider attending TSP 2000 at the Prude Ranch in Ft. Davis, TX. Contact the TSP Registrar, 1326 Mistywood, Allen, TX 75002, for more information. Or visit the TSP web page at <http://www.metronet.com/~tsp>.

Ed Flaspoeehler, AAAA

M a g a z i n e S u b s c r i p t i o n s

Subscribe to *Astronomy* or *Sky & Telescope* magazine. Both magazines have regular monthly star charts, plus a calendar of what to view each month. A regular subscription to S&T is \$39.00 per year, but you can get it at the club discount through the AAAA for only \$29.00 per year. A regular subscription to *Astronomy* is also \$39 per year, but you can get it at the club discount for only \$29.00. You can subscribe to either magazine, or extend your current subscription, on the AAAA web page. Or send a check for the correct amount, made out to AAAA, to:

AAAA, 3131 Custer Rd., Suite 175/175, Plano, Tx. 75075 - <http://www.corvus.com>

WELCOME TO THE ASTRO-GEEK'S HOME PLANET



OK. Just who IS the Astro-Geek?

My name is Stephen LaFlamme and I live in Massachusetts with my wife and two children. I am 35 years old and work as a retail pharmacist. My interest in astronomy goes back to the mid-1970s, when *Star Wars* and *Close Encounters* were the big movies. As a young teenager, those flicks convinced me that I could go out on any starlit night with binoculars and expect to see a flying saucer whizz by. No such luck, but I did manage to discover Venus. My interest grew during my high school years and I squeezed ten years of observing out of a department store 60mm refractor. Over the past five years, my passion for the hobby has



grown astronomical, tremendously.

My Telescopes

At 11:38 p.m. on December 24, 1978, I received my first telescope. It was a 60mm refractor - Jason Explorer Model 307. For the next 12 years, I put that little scope through every observing challenge possible with such a small lens. From 1990 to 1996, I observed with a Celestron Super Polaris C-8. This was a HUGE improvement over my little refractor.

When I made the decision to build an observatory in my backyard, I decided on the Celestron CG-11 package (now sold as Celestron CM-1100). Under actual observing conditions, this telescope package is a winner. I plan to keep this telescope for a long time, and am quite happy with it overall.

My Observatory

In the fall of 1996, I made the decision to add the ultimate accessory to my astronomy equipment collection, my own backyard observatory. Groundbreaking began in

early March, 1997. I slowly and cautiously constructed the square building which would support the rotating dome. I am a pharmacist by trade and most of my carpentering skills I learned from my Dad. The project wore into summer, but this was a labor of love! The dome was finally assembled atop the building during the 4th of July weekend. The neighbors started gawking!! But I still had more to build. The interior had to have paneling and carpeting and the outside needed to be landscaped. It was late September when I finally got to set up my telescope inside. I cannot tell you how exhilarated I felt on September 25, 1997 - my very first night of observing in a brand new observatory. Yes, it was a long time to completion, but I am very pleased with the final result.

I am very happy that I followed my dream of having an observatory in my backyard. My stargazing time has, at least, tripled!! It is so comfortable that 3 to 4 hour observing sessions seem to whizz by. I have a desk and a built-in corner bookcase to hold atlases and supplies. It is wired for both regular and red lighting and the building is equipped with a burglar alarm. There is even



a telephone out there so I can call up friends to come over for observing!!

Video Astronomy

Presently, recording video images through the telescope is my main astronomy-hobby interest. Where astrophotography frustrates me to no end, I get good results with a video camera with relative ease. I feel that there is a lot of creative potential with this type of imaging and I am quite eager to start experimenting and fine-tuning my technique. For now, I will leave the time-exposure CCD imaging to others, as I feel that overall image quality must improve and

price must come down before I will get involved.

Several months ago, my local astronomy club, the Astronomical Society of Southern New England, purchased an AstroVid 400 video camera from Adirondack Video Astronomy. This small black & white camera fits into the telescope where the eyepiece would normally go. A video feed cable carries the signal to a hi-resolution monitor which displays the image. My club allows this camera equipment to be borrowed by members. I brought the AstroVid 400 home last August to try it out. Soon, I was looking at live video of the moon, Jupiter, Saturn and many double stars. Imagine my surprise when all four members of epsilon Lyrae (the double-double) were clearly resolved on the monitor!! I began to record these images



onto a standard VHS tape through a VCR. After several nights of recording, I edited all of the best views together and dubbed in some music and narration. I presented this video at our club's next meeting and fellow members seemed impressed!!

For Christmas, I received a Snappy video snapshot device put out by Play Inc. This little gadget plugs into the printer port of my computer and allows for any type of video input to be halted with the press of a button. This frozen image can then be enhanced with the included Snappy software, PhotoShop, PhotoDeluxe or even Microsoft Paint!! You can adjust the resolution, brightness, contrast, size, and more. Although the AstroVid 400 records in black and white only, it is very easy to colorize the images with the proper software. One advantage of using the Snappy device on a rolling video source is that you can grab a frame that seems to be a bit sharper during one of those fleeting moments of exceptional seeing.

I have now purchased an AstroVid 2000 camera, which is the super-deluxe version of the AstroVid 400. I have many projects in mind for this new equipment. I would appreciate hearing from YOU if this is something that interests you as well. I am very eager to learn all that I can!! Please e-mail me!! And visit my web page!!!

Stephen LaFlamme, AAAAA

Summer Observing

by Brenda Culbertson

stargazr@mail.holton.k12.ks.us

Summer is upon us. So are the mosquitoes and short nights.

You can solve the problem of mosquitoes with some insect repellent or special bug begone candles. I have even seen insect repellent discs you pin to your clothing. I tried a flea collar for people. It worked pretty well, except the area it protected was limited to about one-third the body. I wore it as a hat band and put another through my belt loop. These are pretty effective and decorative, too. I found them at K-Mart and I'm sure they are elsewhere by now as well.

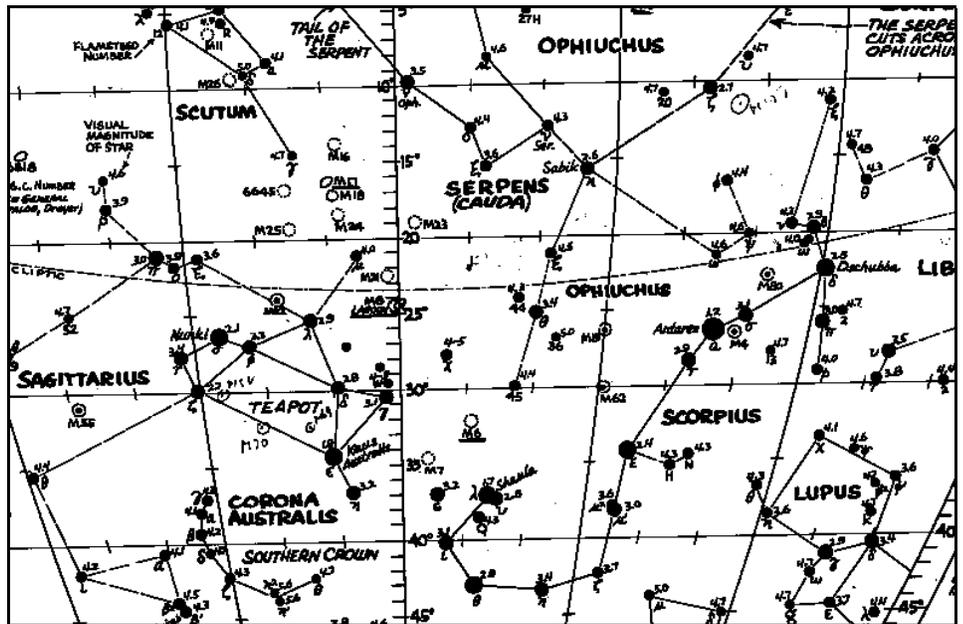
The problem of short nights is one that no one can fix. The fact is that summer has short nights. So, make the most of them. Get out and view the Milky Way and all the wonderfully awesome stuff God put in it. Nights are warmer, breezes are generally more slight, and there is so much to see in the brief time called a summer night.

And, good news for you who get the after-observing munchies! I found a good way to have my Oreos and eat them too! Oreo Granola Bars by Nabisco. The package says, Goodness of Granola. Does that mean Oreos are not good? Anyway, they taste pretty good...much better than those nasty low-fat Oreos, and each one is only 120 calories. Ok, that may not be REAL good, but the health nuts among us might not feel so guilty eating these than they do eating the original cookies. On to more observing...

No matter if you prefer naked-eye viewing, binocular viewing, or telescopic viewing, there is always something for you, no matter what the season. Summer is one of my favorite times because I don't enjoy frostbite, runny noses, or wearing a ton of clothing.

I'm taking the summer off work (not by choice, mind you) and can sleep in. I have been working on several projects to keep my eye sharp and my experience level high. I can't sleep in too late since one of my projects is to follow the sunspots across the face of the Sun as maximum approaches. If you want to ooooo and ahhhhh, check out the Sun, but do it safely.

Speaking of the Milky Way ... go out when the bright arm of our galaxy is overhead and look at it through a pair of binoculars. Any power will do. Begin at the southern-most end of the arm and pan left and right as you climb up the arm. Keep going past zenith, on to the northern-most point you can see. You will come across so many objects you will want to do it again. Keep track of these objects and find out their names since many of them are Messier



Summer Constellations: Sagittarius and Scorpius

objects and can be counted toward your Binocular Messier Club Certificate from the Astronomical League.

Also, while you are looking, put the binoculars aside and find as many of the objects as you can without aid. Many are naked-eye objects. Early meteors seem to travel the Milky Way and you may observe a few of those on Moonless nights.

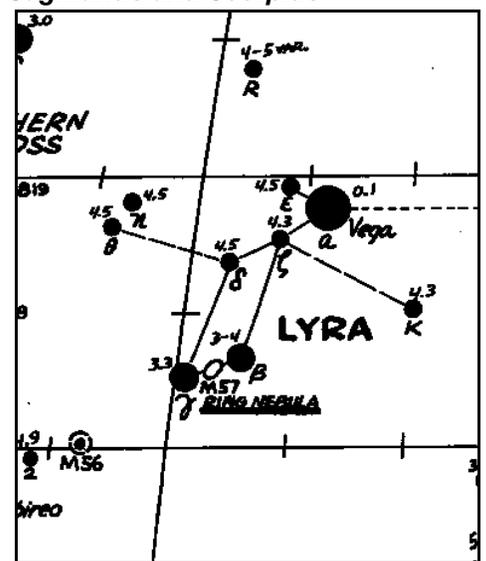
If you are trying photography, shoot a piggy-backed shot of the large southern area of the Milky Way. You will be pleasantly surprised at the colors that come out after an exposure of a few minutes. When you get your photos printed, if you see a broad, short meteor, look again and make sure it isn't a firefly pretending to be a meteor.

Easy Objects

Near the southern end of the Milky Way is Scorpius. In Scorpius is the red supergiant, Antares. A little over 1 degree west of Antares is the largest, nearest globular clusters to us. It is M4. You may be able to detect M4 naked-eye on a good, dark night.

A couple other objects that are naked-eye lie in Sagittarius, also near the southern end of the summer Milky Way. M8, the Lagoon Nebula, and M20, the Trifid Nebula, are favorites for the beginning observer to view. They should both be in the same field of view in most binoculars and wide-field telescope eyepieces. M8 is about 5 degrees west and a little north of Lambda Sagittarii. It is a large, bright nebulous area that gives more detail with higher power eyepieces or larger diameter telescopes.

M20 is just north of M8. M20 is a tighter concentration of nebulous material. Photographs will show differing colors in the nebula. Dark patches separate the region as



Summer Constellations: Lyra

pedals of a flower are divided. Higher power will divulge more detail in this object.

Moderate Objects

Again to Scorpius for a few relatively challenging objects such as the resolution of stars in the M80 cluster. Each star is 14 - 15 mag and a 6- or 8-inch aperture is needed to begin to distinguish stars. A very large aperture will bring out more detail of this cluster and its individual components. Look for it about 4 degrees NW of Antares.

Go to the overhead position, into Lyra and find Epsilon. This star may appear as a double, but is actually a double, double. See if you can resolve its four components, then go to M57, the Ring Nebula.

M57 is a planetary nebula with a central star visible in high power. To find M57, make

S u m m e r O b s e r v i n g

an imaginary line between Beta and Gamma Lyrae, then go about half way along the line and just a little south. It will appear as a very small disk in low power, but higher power will show the smoke ring effect. Try to resolve the 14th mag central star, and decide on what color the ring appears to be.

Difficult Objects

I ll put this one in this category although some may argue about the extent of difficulty. Seeing where something isn t (or where something is dark) is just as difficult for many as seeing the extremely faint things. Again, look in Scorpius. Go to Lambda Scorpii and look about 2 1/2 degrees NW. You should find a nebulous field with dark patches inside bright, wispy areas.

Corona Borealis is not void of challenge. The Corona Borealis Galaxy Cluster is just for the experienced observer with a large aperture telescope. It is a cluster of galaxies whose brightest members are about 16th magnitude. The cluster holds around 400 member galaxies and is located in an area about half a degree wide in the SW corner of the constellation. Get the big guns out for this one.

Now go to Aquila and look about 2 degrees south of Lambda. See anything? Anything unusual, that is?

Other

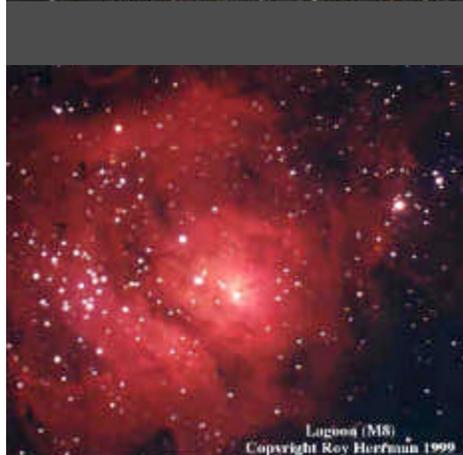
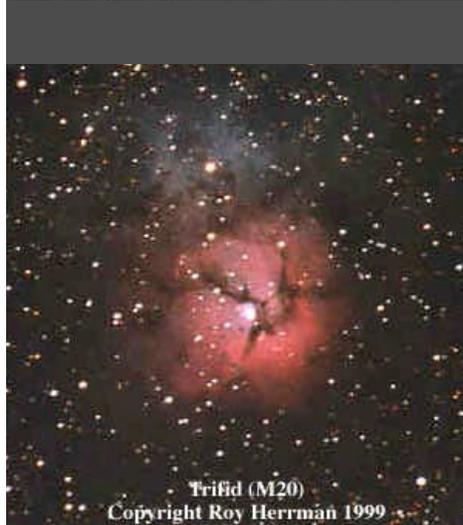
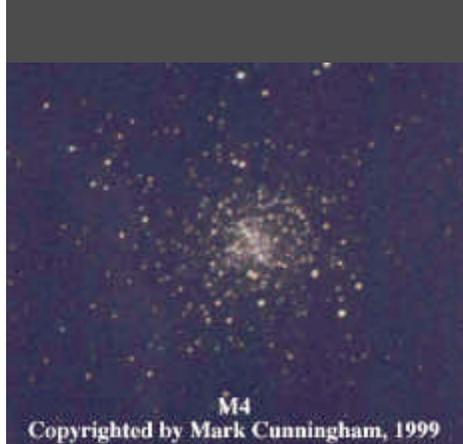
This summer the Perseid Meteor Shower is occurring during New Moon in August. You can t miss this one, although you may miss the total solar eclipse that will occur August 11 unless you are one of the lucky ones who get to travel to Europe to experience it.

Planets, anyone? Now that Pluto is back where it usually is, and is called what it is usually called, we can leave the politics alone and go look for it. All the planets are available to us for viewing. Consult your favorite astronomy magazine for finder charts if you need them.

Comet Lee will be around for a while. And new asteroids are being discovered as we speak. Random objects are all around us and new findings are continuous.

How about the Moon? Nothing new? A New Moon occurs monthly (lunar monthly) so go out and see how soon after New Moon you can detect our closest neighbor.

The Sun is always around. Check out the sunspots by projecting an image through your telescope or binoculars on a white surface. You should be able to see some of the huge spots that traverse the solar face. BE CAREFUL NOT TO LOOK DIRECTLY INTO THE SUN WITHOUT PROPER FILTERS!!!!!! You won t want to be the blind astronomer.



Dates to Remember

June 13	New Moon
June 14	Flag Day
June 18	Regulus is 1.0 Degree South of the Moon
June 20	Father's Day
June 21	Summer Solstice
June 28	Full Moon
June 30	Neptune is 0.6 Degrees South of the Moon, Occultation
June 13	New Moon
June 14	Flag Day
June 20	Father s Day
June 21	Summer Solstice
June 28	Full Moon
June 30	Beta Taurids
July 04	Independence Day
July 12	New Moon
July 14	Venus is at its brightest (-4.5)
July 28	Full Moon (Partial Eclipse)
July 28 - 30	Delta A uarid Meteor Shower
August 11	New Moon (Total Eclipse)
August 11-14	Perseid Meteor Shower
August 26	Full Moon
September 06	Labor Day
September 08	Mercury in Superior Conjunction
September 09	New Moon
September 19	Yom Kippur begins
September 23	Autumnal Equinox
September 25	Full Moon
September 26	Venus at its brightest (-4.6)

There are several occultations of various sorts, as well as eclipses and other astronomical events over the next few months. Check your calendar for dates. Also *Sky & Telescope's* News Bulletin and *Sky at a Glance* will give specific information. You can e-mail me with your geographical coordinates and I'll check into any for you.

Brenda Clubertson
stargazr@mail.holton.k12.ks.us

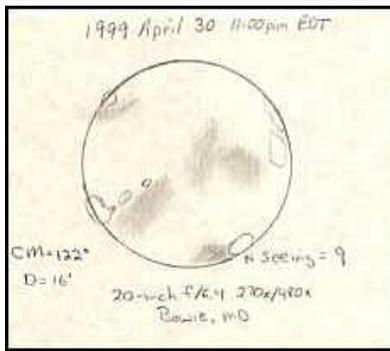
MarsWatch 1998-1999 Apparition

Linking Amateur and
Professional Mars

Observing Communities

The International MarsWatch is a group founded by amateur and professional astronomers more than 30 years ago to facilitate better communication between the amateur and professional Mars observing communities. Visit the Astronomical League's MarsWatch web page for hundreds of images of Mars taken during the current apparition.

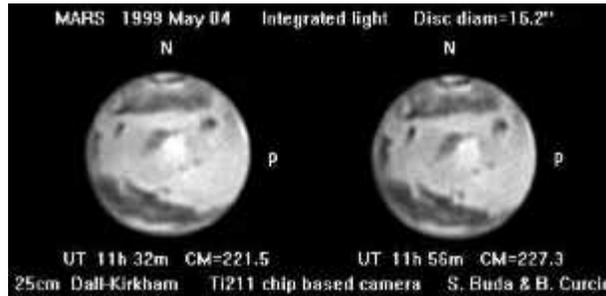
www.astroleague.org



Strikingly nice view of the north polar cap and surrounding areas. Clear connection between Mare Boreum/Mare Acidalium and Nilokeras. Various darker/lighter areas in Nilokeras. In the south, Solis Lacus was clearly visible - a much different view from when I last saw in 1988, when we were facing the south polar cap. A bright area was seen just following Solis Lacus. A bright area on the following side is either clouds over Nix Olympica or morning clouds.

Bob Bunge, Bowie, Maryland, E-mail: rbunge@radix.net, 20-inch (50 cm) f/6.4 reflector, 480x, 03:15 UT, Seeing: 9 out of 10.

Stefan Buda & Bratislav Curcic, Melbourne, Australia (5km from the city centre). Homemade CB211 clone CCD with a mechanical shutter; 10-in. (25.4 cm) f/16 Dall-Kirkham (homemade) + 3X Barlow (effective f/50). No filters.



The seeing was weird 4th of May in Melbourne. It started as absolutely atrocious and we almost packed up the scope. Luckily, we've had a 'last peek' and miraculously the seeing improved from about Pickering 2 or 3 to a solid 7 (fleetingly). As usual, patience was the ticket and we walked away with quite a few good images couple of hours later. Transparency was again low (< 4), as is more or less expected around here.

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