The American Astronomer

THE QUARTERLY NEWSLETTER OF
THE AMERICAN ASSOCIATION OF AMATEUR ASTRONOMERS

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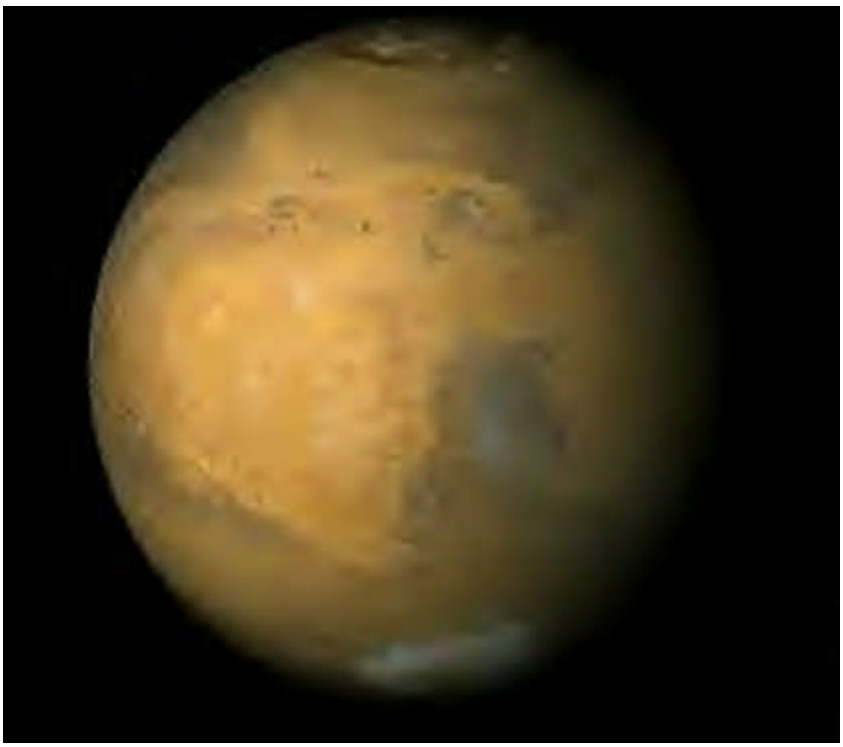

This NASA photo of Mars is a composite created with images snapped by the Mars Global Surveyor. The picture is a made up of color strips taken on nine successive orbits from pole-to-pole over the planet in March 1999. The color in this picture is computer-enhanced and is not as it would appear to the human eye.

The Great Red Planet

Mars Opposition 2001

On June 21, 2001, Earth and Mars will be the closest they have been in 13 years. On that day, the two planets will be about 42 million miles (67.3 million kilometers) apart, the closest they have been since 1988 when they came within 37 million miles (59 million kilometers) of each other. Throughout the summer, and until October when it finally sets, Mars will be prominent in the southern sky, visible in the constellation of Scorpius, and just to the left of Antares. As the space between Earth and Mars narrows, even observers using small, 4 to 6 inch telescopes may be able to make out some of the Martian features, including clouds, surface markings and polar caps.

The Mars viewing gets even better in coming years. On August 27, 2003, Earth will swing to within 34.6 million miles (55.7 million kilometers) of Mars. On that date, the Earth-Mars distance will be the smallest it has been in at least 5,000 years.

Take advantage of this year s close opposition, get your telescopes out into the back yard, and have a blast viewing our closest planetary neighbor. And don t forget to send us your photos and observing reports.

Paulo Raymundo Earns Four Important Observing Awards

A hearty congratulations goes to Paulo Raymundo from Salvador, Bahia, Brazil, for earning three of the Astronomical League s observing certificates: Urban Club, Binocular Messier, and Southern Skies Binocular Club. Then to top it all off, Paulo was awarded the Herschel 400 Certificate, for which he made some of the observations at Cerro Telolo Observatory in Chile. Paulo s certificates were presented to him by AL Vice President Bob Gent during the Texas Star Party. To quote Mike Benson, who coordinates observing awards for the AL, This guy is some kind of astronomer! *Vos felicitamos, Paulo!*

Roseann Johnston Earns Deep Sky Binocular and Lunar Certificates

A hearty congratulations also to Roseann Johnston of Vincent, Al, for earning both the Deep Sky Binocular Certificate and the Lunar Club Certificate from the Astronomical League. Roseann used naked eye, 10x50 binoculars, and her 60MM refractor for her observations. Along with the Binocular Messier and Universe Sampler awards, this makes four observing certificates that Roseann has earned since becoming an AAAA member. Nice job, Roseann. Your enthusiasm and perseverance are contagious.

AAAA Members: When you have completed your AL observing projects, don t forget to submit your observation logs to the AAAA for official certification. Be sure to send COPIES of your records ONLY. Do NOT send originals of your observing logs.

AAAA

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A Member Society of The Astronomical League

A Word from the AAAA

As you can see from this issue of the *American Astronomer*, AAAA members are more active than ever. We have a busy eGroup, hosted by Yahoo, and the AAAA website and AstroMax, the AAAA Online Store, are receiving an increasing amount of traffic. Not only that, but the AAAA continues to have an influence not only in the US, but around the world. Two of our Brazilian members even came to the Texas Star Party, and one of them, Paulo Raymundo from Salvador, Brazil, earned four important observing awards from the Astronomical League. Our US members are also hard at work, and we are pleased and proud to present the AL s Lunar Club and Deep-Sky Binocular certificates to Roseann Johnston.

We have been asked from time to time about the possibility of a national convention for the members of the American Association of Amateur Astronomers. And the answer is now, Yes! StarCon 2002, An International Astronomy Conference, will be held June 6-9, 2002, on the Campus of Washburn University, in Topeka, KS, hosted by the American Association of Amateur Astronomers and the Astronomy Department of Washburn University. The motto of this conference, which will be aimed at providing a fun and informative hands on astronomy event for both AAAA members and the general public, will be Ad Astra per Aspera . Topeka is centrally located for the entire US, and we hope this convention will not only draw attendees from the local area, but will also be an occasion for AAAA members from around the country to meet personally and share astronomical experiences. AAAA Member Brenda Culbertson, who is a faculty member at Washburn University, will be organizing StarCon 2002, and the AAAA will in charge of publicity, registration, and administration. We will have a web page up soon, and will being distributing notices about the convention in late summer. Join us for StarCon 2000, and Experience Astronomy from the Ground Up!

The American Association of Amateur Astronomers is proud to announce a new partnership with LOMO America, Inc., of Palatine, Illinois. For some time now, we have been able to offer observing aids from David Chandler Company, and binocular kits based on the PowerView 10x50 binoculars from Bushnell Sports Optics. Now, with the help of LOMO America, we will be able to offer not only the binocular and telescope kits, but a full line of high quality Russian made telescopes. We will be including these fine astronomical instruments on the AAAA s AstroMax website soon, so watch for further announcements.

Magazine Subscriptions

A regular subscription to* Sky & Telescope *magazine is $39 per year, but you can get it at the club discount through the AAAA for only $30 per year.* Astronomy *magazine is also $39 per year, but the club discount rate is only $29. Subscribe to these magazines or extend your current subscription on the AAAA web page. Or send a check for the correct amount, made out to AAAA, to:

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www.corvus.com

This edition of the *American Astronomer* newsletter can be downloaded in PDF format from the AAAA website. Print it off on your own color printer or read your club s newsletter online in full color!

www.corvus.com/a4-news/a01-jun.pdf

OBSERVING IS THE HEART OF AMATEUR ASTRONOMY

The American Association of Amateur Astronomers provides the AL s FREE Observe Programs on our website 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 Observing Programs which require a published manual must still be obtained from Astronomical League Sales, PO Box 572, West Burlington, IA 52655. (You can now purchase AL manuals online at the AL Sales website, http://www.astronomicalleague.com.)

AAAA encourages you to download these PDF 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. We encourage you to participate in all of the programs which interest you.

AAAA Members who have completed AL observing projects should submit their observations directly to the AAAA for certification. Be sure to send COPIES of records ONLY. Do NOT send original photographs or observing logs.

www.corvus.com/aa01006.htm

A A A A de Brazil!

Hi, Ed!!!

What a pleasure it was to meet you and John personally at the Texas Star Party! Saturday night I got some beautiful star trail photos of the TSP night sky. I'm sending to you the one I liked most, and the picture we got together with that wonderful married couple, Paulo and Cris from Salvador.

I'm happy to be with my family again, but I'm already missing that wonderful week I spent on the Prude Ranch. So many good memories, so many nice people. It was like a dream, a piece of paradise!!! :)

Thank you for all you did for me at the TSP, Ed!

Best Regards,

Leo Andriao
Araraquara, Brazil
leo.iris@uol.com.br

AAAA Vice President Ed Flaspoehler introduces Brazilian AAAA members to each other for the first time at the Texas Star Party. From left to right, Ed, Leo Andriao from Araraquara, Sao Paulo, Brazil, and Paulo and Cristine Raymundo from Salvador, Bahia, Brazil. Photos by Leo Andriao Junior.

Hi John!!

We've just got back from our month long trip to the US. It was great to meet you! We keep remembering those great moments at the TSP all the time. Wonderful people there!

Thank you for having taken your time to go over all those observation notes of mine. Cris guarantees me she heard from someone at the TSP that I was the first person to complete the Herschel 400 list from a Southern Hemisphere location. Do you think that nobody has done that before?

We found our AAAA kit here waiting for us when we got home and will be reading the material this weekend. All the best!

Paulo & Cris. Raymundo
Salvador, Brazil
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Tejat Occultation

This shot is of the Tejat Posterior occultation which occurred here around 22:50, April 27. The thin clouds got in the way of Earthshine.

For your amusement,

Isaac Kikawada
Mountain View, CA
HeidiandIsaac@windandtree.com

Here goes a photo from the June 21 partial solar eclipse here in Araraquara. I took it yesterday when I spent all night long in the Clube Náutico , observing and taking pictures of the sky and the comet Linear C/2001 A2. It was the coldest night of the year here! But it was worth it to endure the cold!!!

To get the comet, I used the hypered black and white film that I bought in the TSP, but I am having problems to find someone who works with this kind of film here. When I get it processed, I will send you the best pictures.

Now I will start to work on the Binocular Messier List to get another pin from John.

Leo Andriao, Araraquara, Brazil
leo.iris@uol.com.br

Measuring the Distance to the Moon

Last February, AAAA member Eugene A. Lanning, of Nebraska City, NE, decided to see if he could use amateur equipment to measure the distance to the moon. His idea was, that since AAAA members are spread out all over the country, they could conveniently take observations from their own back yards, and still provide the wide baselines needed for parallax measurements. Using the AAAA eGroup, he enlisted the help of other AAAA members, including Doug Kniffen from Missouri, Weems Hutto from Texas, and Russ Carlson from Delaware. The team made their measurements based on the occultation of Eta Gemini on April 27th. The reference distance to the Moon is 373,814 km.

PRELIMINARY Results:

Eugene's astrometric data & Weems' Drift data: Average: 367,800 Km (-2%). Individual data points were from +17% to -19%. Eugene's Drift data & Weems' Drift data: Average: 399,800 Km (+7%). Individual data points were from +25% to -10%. Total data average: +3%.

As Weems says, Not too bad for two guys in the back yard!

Eugene Lanning and Family
ealanni@alltel.net

Participants at this year s Texas Star Party assemble on the lawn for the traditional group photo. Popular science writer and AAAA member Timothy Ferris was guest speaker at TSP 2001. McDonald Observatory s Multiple-Mirror Hobby-Eberly Telescope is a popular point of local interest for TSP attendees.

Texas Star Party 2001

The 23rd Annual Texas Star Party was again hosted on the magnificent Prude Ranch, a 3500 acre mile-high guest ranch located six miles northwest of Fort Davis, Texas, in the shadow of McDonald University. With 753 attendees from across the country and around the world, including Australia, Brazil, Canada, and Europe, this was one of the biggest Texas Star Parties ever. TSP week this year was May 13-19, 2001.

The Fort Davis area of west Texas is noted for clear skies and dark nights. In spite of some badly needed rain in the early part of the week, TSP attendees this year were treated to good observing at least five nights out of seven. As a result, there was plenty of activity each night on the observing field. And in between telescopes and observing, attendees had ample opportunity to visit and catch up on each other s activities since last year, as well as make many new friends.

TSP is noted for outstanding guest speakers, and this year was no exception. Well-known science writer Timothy Ferris made his presentation on Thursday evening. Dr. Ferris discussed his new book on Amateur Astronomy, entitled *Seeing in the Dark* , and read a portion from one of the chapters. His premise in this book is that the concept of Professional Astronomer is a modern one, and that important astronomical discoveries were made by people such as Galileo, Herschel, and Newton, who would be considered amateurs today.

Friday s guest speaker was Sky Pub s Steven J. O Meara, who talked about his activities as a Volcanologist. Steven has come up with some interesting theories predicting the timing of volcanic eruptions based on the phases of the moon. Steve illustrated his talk with personal photos of volcanos in Hawaii, Italy, the Philippines, and South America.

Rick Feinberg, Senior Editor of *Sky & Telescope* Magazine was scheduled for Saturday evening, but was called away on family business, so Steven filled in again with a second talk about the Green Flash. (AAAA has come to learn that Steven J. O Meara is the Billy Elliot of Amateur Astronomy, since he pursued a career as a dancer in younger days.)

The Southwest Region of the Astronomical League holds its annual business meeting during TSP, and it is encouraging to hear that SWRAL will be increasing its interest in its member societies and their activities outside of TSP each year. To find out more about the Texas Star Party, visit their web page at http://www.metronet.com/~tsp/

AAAA News and Member Activities

Welcome to the Virtual Study of W. Sumner Davis Th. D

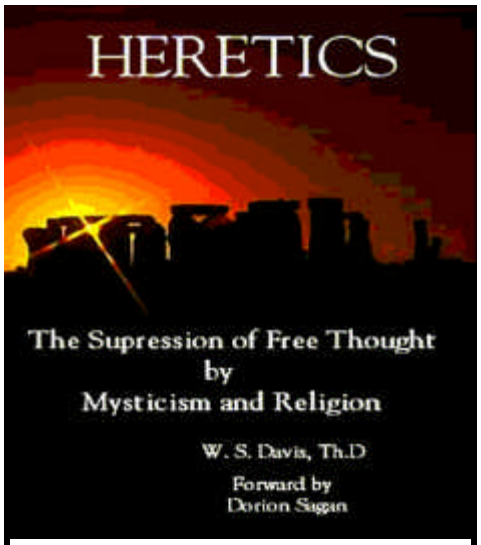
Cosmotheogolian and Author

http://www.powerlink.net/drwdavis/

Dr. W. Sumner Bill Davis joined the American Association of Amateur Astronomers in February, 2001. A resident of Oakland, Maine, he has been a popular speaker, author, and freelance editorial writer on topics ranging from Parenting and Social Issues, to Religious and Church History.

With his wife and best friend Catherine, he enjoys bird watching, gardening, and reading. Bill has special interests in science, especially Astrophysics, Biochemistry, Cosmology, Radio Astronomy and Visual Astronomy. A life long student , he is currently attending courses in Astrophysics, and Astronomy at Colby College in Waterville, Maine. An avid reader and writer, Bill writes between five and seven books each year, as well as articles for periodicals and trade journals. Dr. Davis also contributes to science based editorial reviews as well as reviewing books on theology and religion.

To find out more about Bill Davis, his books and his activities, visit his Virtual Study web site.



As a Cosmotheologian, and having been trained as a Christian Minister, Bill Davis is perfectly qualified to bring into focus the long and often bloody oppression that the Church has exerted on science and free thought. His new book, HERETICS, which explores the question of what science has revealed that was so threatening to the Church, covers the time from the birth of the Christian movement to the civil rights movement. Due for publication in October, 2001. Forward by Dorion Sagan.

ASTEROID 1999 KW4

On May 29, 2001 at 5:00 UT, minor planet 1999 KW4 passed Earth at a distance of 4.67 million miles. This asteroid has a diameter of about 1.4 miles and takes 188 days to orbit the sun.

Visually, 1999 KW4 appeared as a magnitude 11.6 'star' that actually was seen to be moving across the telescopic starfield. It traversed the heavens at a rate of nearly 1 arc second of distance per 1 second of time.

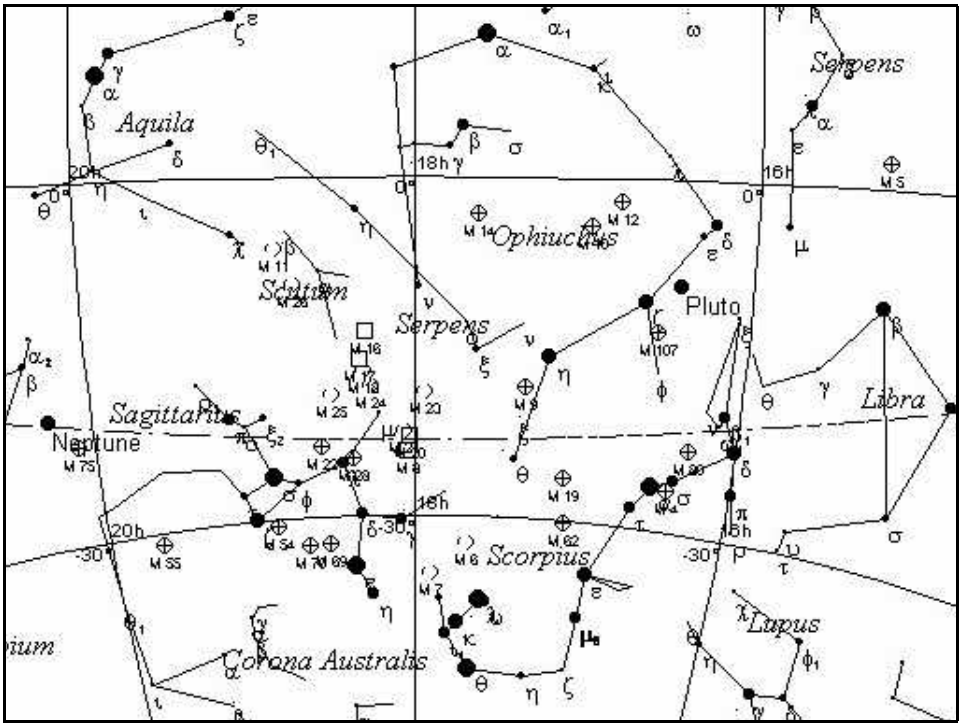
This photograph was taken at prime focus of a Celestron 11" SCT. The asteroid's path (moving towards upper left) was captured on film during the ten-minute exposure from 1:01 to 1:11 a.m. EDT. The camera was an Olympus OM-1 and the film was Fuji Superia 800 ASA.

The AstroGeek

Steven LaFlamme, Bridgewater, MA

Summertime Observing

by Brenda Culbertson
Washburn University, Topeka, KS
stargazr@holtonks.net



The heat is on for most of the country, and celestial objects are just waiting to be adored. We, adoring astronomers of all kinds, are eager for weather conditions to grant access to clear skies. We are anxious to have good seeing to go out and complete our double star activities, or our Messier list, or to just go outside and stand in awe under the arm of the Milky Way.

A few people have written about their observing sessions lately. The reports have been enticing and encouraging for others to go out and look up. Most of the people I have heard from are fairly new to the hobby of astronomy, but not all. The excitement of first seeing the Ring Nebula, or Mars and its ice caps, or any of the clusters in the sky, is catching. The more experienced astronomers reminisce about early days observing. Contrary to common belief, I say that you can go back home and start over with those same easy objects you first found when beginning the art of observing.

Easy Objects:

The easiest objects in the summer sky, besides the Moon, is Mars. Mars comes up in the southeast and crosses the sky close to its rival, Antares. Just look for the brightest red object in the southern area of the sky (for observers in the Northern Hemisphere), and you will be looking at Mars. Antares is the bright red star nearby. Remember: stars twinkle, planets don t.

Look for the asterism, the **Summer Triangle**, as it rises earlier and earlier. The blue stars that are the triangle s points are **Vega** (in Lyra), **Deneb** (in Cygnus), and **Altair** (in Aquila). The three stars are very easy to see as they pass across the sky.

Binocular objects pop into view as the path of the Milky Way is scanned. Some of the favorites are the **Lagoon Nebula**, M8, the **Trifid Nebula**, M20, the **Swan Nebula**, M17, and clusters galore! You can t miss while observing the summer Milky Way, with or without instruments.

Moderate Objects:

While looking in Lyra, check out **Epsilon Lyrae**. Epsilon Lyrae is also called the Double-Double star. Find the triangle attached to the trapezoid. The brightest star in the triangle is Vega. The other triangle point, which isn t attached to the trapezoid, is Epsilon. Since the angle of separation between the pairs changes over time, you might want to keep track of the changes.

Also in Lyra is the **Ring Nebula,** M57. Viewing the Ring Nebula doesn t take high power. A modest sized scope can handle defining the ring. The central star, however, may be a bit more difficult to resolve. Look between the two stars in the trapezoid opposite the side of the triangle. The Ring is about half way in between the two, and slightly inside the trapezoid.

Go to the area of Sagittarius (for Northern Hemisphere observers, this would be along the southern end of the Milky Way arm). Look about three degrees north and just west of Gamma Sagittarii to find a dark nebula called **Barnard 86**. Dark nebulae are slightly more difficult to see than bright nebula because most observers are not used to observing dark instead of bright.

Difficult Objects:

Difficult objects abound in the summer sky. Look in Corona Australis for a diversity of nebulous regions. **NGC 6726, 6727, and 6729** are included in a complex of nebulae ranging in magnitudes from 6 to 11.5. Look for all the spectral classes of stars while observing this small constellation.

Since Mars is the main object this summer, how about finding its two moons, Deimos and Phobos? Give them a try.

Solar, Lunar, and Planetary Observing

Don t forget to observe the planets as they come and go to and from our view. Look for a variety of occultations, too. And, don t forget the Sun and Moon as objects to view. Make sure to view the Sun through safe filters. Meteor showers are always present, so make a point to look for meteoric activity also.

Dates to Remember

July

4:	Independence Day.
5:	Full Moon: Partial eclipse
17:	Moon-Saturn occultation, Moon-Venus occultation
18:	Moon-Jupiter occultation
19:	Moon-Mercury occultation
20:	New Moon
27-29:	Delta Aquarid Meteor Shower

August

4:	Full Moon
11-14:	Perseid Meteor Shower
15:	Moon-Jupiter occultation
18:	New Moon

September

2:	Full Moon
3:	Labor Day
10:	Moon-Saturn occultation
17:	Rosh Hashanah begins, New Moon
22:	Autumnal Equinox
26:	Yom Kippur begins at sundown

The Planets this Summer

Mars will be at opposition on June 21, and will be a brilliant sight in Scorpius all summer as it moves toward the bright star Antares. In July, Mercury will be visible low in the east before sunrise. Venus will shine as a bright beacon in the predawn sky, also in July, along with Jupiter and Saturn just before sunrise.

Brenda Clubertson
stargazr@holtonks.net

Solar Maximum Sunspots

March 28, 2001

Image copyright
Brenda Culbertson
Mayetta, KS

M8
NGC 6523
(with Cluster NGC 6530)

Lagoon Nebula in Sagittarius

Image copyright
Roy Hermann
Shanee, KS

M20
NGC 6514

Trifid Nebula in Sagittarius

Image copyright
Roy Hermann
Shanee, KS

M17
NGC 6618

The Swan Nebula in Sagittarius

Image copyright
Ed Flaspoehler
Dallas, TX

Observing Reports

Mars - 6/9/2001

Just completed a 3 hour observing run of Mars. Seeing was 7-8. Observed with 14.5-inch f/4.5 Dob. 6.7mm eyepiece at 247x produced the best images. The 4.8mm at 345x was just over the limit for seeing conditions. I used no filters Syrtis Major and Sinus Sabaeus were both clean and distinct. The South Polar ice cap drifted in and out. The Northern features were less obvious - only occasional glimpses.

Jerry Bassett, Dallas, TX
acrux@swbell.net

Messiers in/near Sagittarius

The teapot was in a perfect position for viewing on June 9, so I scoured the skies looking for Messier objects. To the left and upward from the lid I found M22, M25, M17, and M16 (although the latter two looked only like smudges and I couldn't see any definitive stars.) M18 was somewhere around M17, but I couldn't pick it out.

To the right and upward from the lid of the teapot, I saw M8 Lagoon Nebula (reminded me of four glowing pearls on a string), and M20 (I had a difficult time deciding if it was M20 or 21, but with further staring , I found it was the Trifid Nebula). I did get a fleeting glimpse of M23, but by the time I returned to look at it more, the moon light was beginning to obliterate my views. So I didn't check it off my list.

M20, M16 (Eagle Nebula) and M17 (Omega Nebula) all appeared like white smudges in my binoculars.

Finally, below Mars, I saw M6 and M7. M7 was clearer and I could see its pointy top.

Sue Scanlon, Upper Mount Bethel PA
dueykair3@aol.com

Another Solar Eclipse - June 21, 2001

It s time again for another Total Solar Eclipse!

This time I will fly to Lusaka in Zambia, South Africa, hopefully to witness and record a 3 1/2 minute event. It will occur on June 21st, the day of the Summer Solstice for Northern Hemisphere folks, but the Winter Solstice for those in the Southern Hemisphere, where I will be located. Of interest is the fact that this will be the first Total Solar Eclipse of the new 21st century and of the new 3rd Millennium A.D.

I plan to include the use of a new Canon GL1, 3-CCD, camcorder mounted piggyback to my Solar Telescope. I hope to capture this eclipse on digital video and produce another TV show for the Cupertino Senior TV Production group known as The Better Part. For the record, this will be my 22nd venture into the moon s shadow.

Ernie Piini, San Jose, CA
EWPIINI@AOL.COM

AAAA Establishes Online Discussion Group

The American Association of Amateur Astronomers has started a new online discussion group, hosted by Yahoo Groups.

The purpose of the group is to create a forum in which AAAA members can share ideas, experiences and challenges, and just get to know each other. If you are an AAAA member, or have friends interested in amateur astronomy and the AAAA, we invite you and them to become a part of this Discussion Group. The Quad-A eGroup now has 120 members.

If you would like to join the AAAA discussion group, please send an e-mail request to: Quad-A-subscribe@ yahoogroups.com or visit the web site at: http://www.yahoogroups.com/list/Quad-A/info.html

www.yahoogroups.com/group/Quad-A

Announcing

StarCon 2002

An International Astronomy Convention

June 6-9, 2002

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Ad Astra per Aspera

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