The American Astronomer

THE QUARTERLY NEWSLETTER OF
THE AMERICAN ASSOCIATION OF AMATEUR ASTRONOMERS

Volume II, No. 2 March 1998

Richard Adduci Receives the Lunar Club Certificate

New AAAA member Richard Adduci, from Eagle, Wisconsin, just received the A.L. Lunar Club Certificate. Richard used his naked eye, 11x80 binoculars, and a twelve inch S/C telescope to observe the 100 lunar features in the program. Way to go, Richard. We are proud of you.

J.W. Van Wyngarden Earns Binocular Messier Club Certificate

A hearty congratulations go to AAAA member Jerry Van Wyngarden of Ajo, Arizona for earning the A.L. Binocular Messier Club Certificate. Jerry used 10x70 binoculars to observe over 50 Messier objects. Must be nice to have those dark Arizona skies in your own backyard. Nice going, Jerry.

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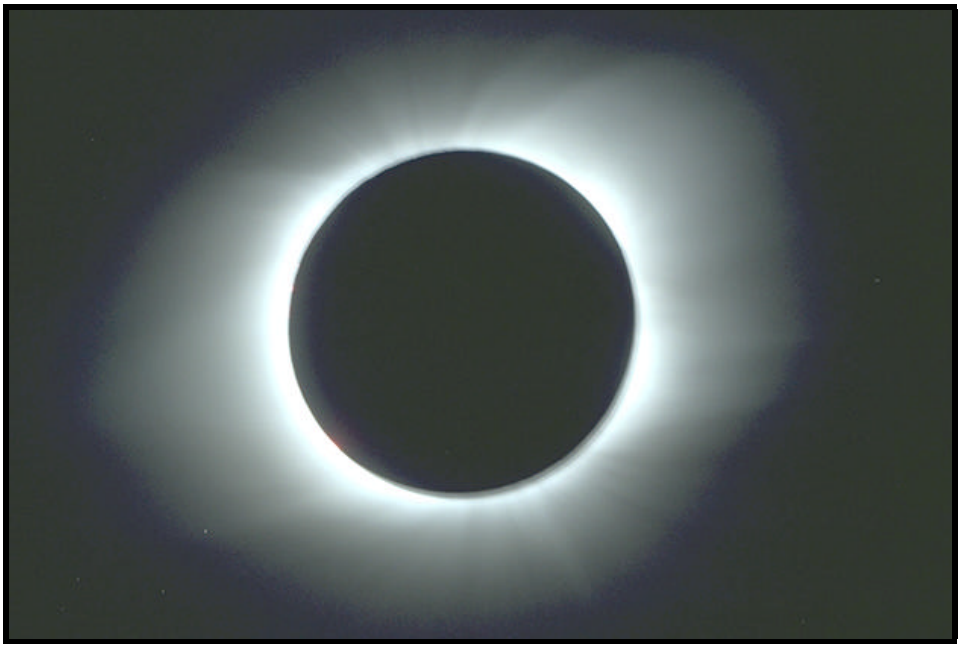

An Eclipse to be Shared

President's Notes

Ed and I just got back from Venezuela where we observed the Total Solar Eclipse of February 26, 1998. What a truly wonderful event. If you haven't seen one, you should try to take one in at least once in your lifetime. It is well worth the money and the effort since it is a highly emotional and personal event. I've seen three now, and this one was rather special. More on that later.

First, I would like to congratulate AAAA members J.W. Van Wyngarden and Richard Adduci for earning Astronomical League observing awards. Richard received the Lunar Club Certificate, while Jerry completed the Binocular Messier Club Certificate. One of the purposes of the AAAA is to bring programs like these to its membership, and we are always happy when you respond. We are very proud of Jerry and Richard for their accomplishments.

As I announced in the last newsletter, I just completed the new Urban Club observing program for the Astronomical League. This program allows amateurs to observe a variety of objects from the comfort of their light polluted backyards. Already we are getting a positive response from the amateur community. Requests for the program flyer are high, and the computer program "Starry Nights" has requested permission to reprint the 100 object database on the company's web page for download by their membership. This is another example of how your support benefits the amateur astronomy community. I hope to send each and every one of you a copy of the Urban Club in the next few weeks.

And now back to the eclipse trip. There were two things that made this eclipse special. The first was that during totality, two bright planets appeared on either side of the sun. To the left was Mercury, and on the right was Jupiter. These two planets framed the sun perfectly, and made for a spectacular sight, one that I will carry with me for the rest of my life.

The second was the local population. Several of us had set up in the town square in front of a small catholic church to observe this eclipse from. We had roped off the area so that we would not be bothered by the locals. You know us obsessive-compulsive

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A Member Society of The Astronomical League

AAAA President John Wagoner and Vice-President Ed Flaspoehler visited the Humbolt Planetarium in Caracas, Venezuela, during their trip to observe the total solar eclipse of February 26, 1998. The planetaium is equipped with an original Zeiss projector, similar to the one that used to be in the Hayden Planuetarium in New York City. John and Ed viewed a planetarium show on the sky as seen from Caracas. They learned that, at the right time of the year, it is possible to see both Polaris and the Big Dipper to the north, and the Southern Cross to the south, at the same time.

An Eclipse to be Shared

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amateurs.

We had observing and photographic programs to run, and didn't want any interruptions. As the eclipse started, about 150 Venezuelans gathered beside us. They honored our lines, and didn't interfere, but we were the focus of this eclipse. Since I was observing only, and not taking pictures, I crossed the line and set up my telescope in the middle of the crowd. I thought that I would share my views of the sun with the local populace since they didn't have access to the nearly professional equipment that we took along on this trip. This move provided two memories that I will always treasure.

The first was that as totality approached, the crowd became more and more excited. As it bacame darker and darker, you could feel the excitment grow, and as second contact was reached, a huge roar went up from the crowd. The combination of totality, and the sharing of this event with your fellow human beings made for a feeling that reached down into the core of your being. This is a feeling that I hope you all will experience someday.

The second memory was the reaction of the locals as they observed the eclipse through my telescope. One by one they looked through the eyepiece and were surprised and amazed by what they saw. The image was crystal clear, and the close up view of the sun being covered by the moon made each one appreciative of this wonder of nature. They couldn't speak English, but their words in Spanish and the looks on their faces more than conveyed the message that they were grateful for this chance to see the eclipse in all of its glory.

In particular, one little girl of about eight or nine kept coming up to the telescope for a look. Then later she brought her sister over and then finally her parents to view the sun. After the eclipse was over, she asked if her parents could take her picture with me.

So as I sat on my stool in front of my scope, she stood next to me on one side and her sister stood on the other side, and her parents snapped a picture. She and her sister then said goodbye, and as she left, she kissed me on the cheek, and I melted into a big puddle. And I said to myself, Joel (Joel Harris, our tour organizer), this one moment alone is worth the price of the trip.

So one of the best memories of the eclipse wasn't the eclipse itself, but the people I shared it with. It always pays to share. That's all for this issue. Let us hear from you and please tell us what you like and don't like about the newsletter. We want to hear what your needs are and how we can best fulfill those needs. Ed and I want to make this a club that you can be proud of and want to share with your friends and family. See you next issue.

John Wagoner - President, AAAA.

Eclipse Report: Feb 26, 1998

by Ed Flaspoehler
Vice-President, AAAA

February 26, 1998, was the day of the last Total Solar Eclipse to be seen this century in the Americas. In Dallas, the eclipse was partial, about 12 percent, and in the western US, no eclipse was seen at all. But those of us fortunate enough, or crazy enough, and now poor enough, to travel to Venezuela, were able to see the full totality of the eclipse.

The path of the eclipse ran in a line passing from the Galapagos Islands in the Pacific Ocean, through Columbia and southern Panama in South America, then through Maracaibo and the Paraguana Peninsula in Venezuela, over the islands of Aruba and parts of Haiti, and on out into the Atlantic Ocean.

I traveled with AAAA President, John Wagoner, and our friend Van Robinson of Dallas, to Venezuela for the viewing. We went with a tour arranged by Joel Harris of Twilight Tours in LA. There were a total of 80 people on the trip.

Totality occurred about 2:08 PM local Venezuelan time, or about 12:08 Dallas time. Venezuela is two time zones to the east of Dallas, on Atlantic Standard time.

The actual times of the eclipse are as follows:

1st contact: 12:36:56
2nd contact: 2:08:06 (beginning of totality)
3rd contact: 2:11:50 (end of totality)
4th contact: 3:34:52

The main feature of this eclipse was the dramatic and unusual position of the planets during totality. From our position, Mercury was very bright just above the Sun, while Jupiter was below. Venus was seen closer to the horizon. It was especially interesting that Mercury was so bright, an unexpected bonus. We seldom see the inner Solar System so dramatically displayed. And there was plenty of time to experience this beautiful arrangement of the planets during the 3 minutes and 24 seconds of totality.

The park and beach at Playa El Pico on the Peninsula de Paraguana was a fine place to set up, except for one thing: the constant 20 mph winds blowing from the east. These winds made observing difficult. We set up near an artificial sand dune left over from some road scraping, which was called "Camp Latrine" by my observing companions, due to some rather obvious biological artifacts near by. But the dune had the advantage of being a good wind break, which made observing more pleasant, and the artifacts were far enough away from my position not to be a problem.

We arrived at the beach way too early, about 8:30 am, almost 6 hours before totality, but this was done to avoid any traffic problems on the access road to the park. We may have avoided the traffic, but eight hours under the sun, with only three and one half minutes of "shade," were enough to give me a real sun burn.

The nearby beaches were packed with people, but in fact, the area we were using was more restricted, with access only by prearranged pass, and crowding was not a problem. Later, during the morning, the Governor of the local Falcon State of Venezuela arrived in his helicopter, and the Venezuelan TV News helicopter flew around from time to time.

There were several local Venezuelans who came by to chat. One group of about 5 guys were students at the Universidad Politechnica "Antonio Jose de Sucre" in Venezuela. Another young man, Jose Antonio Carbonelle, was a fourth year medical student in Caracas, who brought his C-8 telescope with him. TV news reporters were everywhere, looking for people to talk to. At one point, my companions and I were interviewed for Maracaibo TV, but who knows if it actually made the air. I guess they thought my Spanish was better than it actually is.

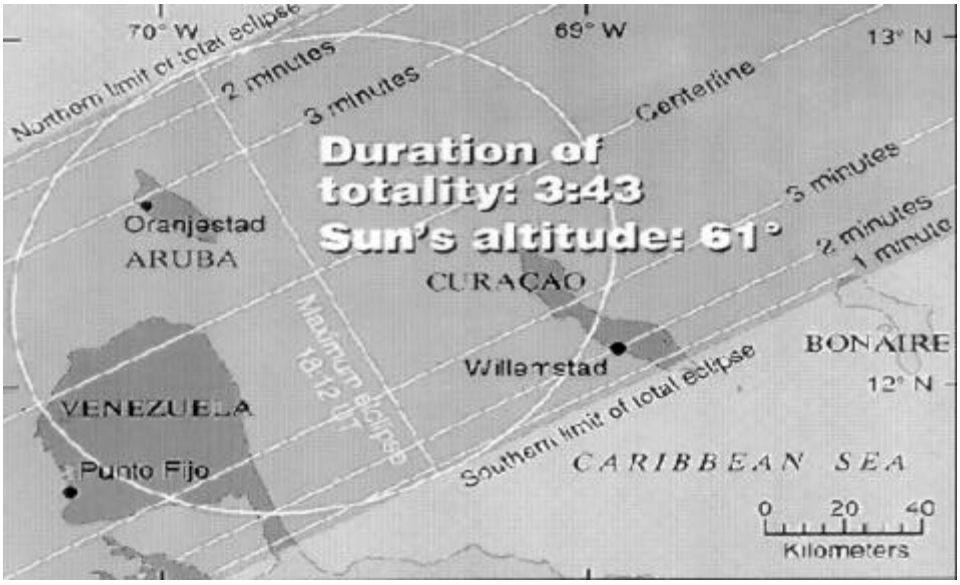
Third Contact Diamond Ring

Mercury and Jupiter Flanking the Eclipsed Sun

I thought the beach was a good idea, and for viewing purposes, I guess it was. But John and Van elected to stay back at the hotel, and view in front of the local Catholic Church. They lost a few seconds of totality by doing this, and I was afraid the crowds of local people would make photographing too difficult. But John said that the church acted as a natural wind break, which I needed badly during my photographic run, and neither John or Van had to stand for hours in the sun getting dehydrated and burned. He also said that the local people were very considerate of the equipment, and very enthusiastic and friendly during the whole event. If I had it to do again, I, too, would have stayed in town.

There is a neat Venezuelan TV web site that has a RealAudio video clip of the eclipse. Check it out. http://www.eclipse98.web.ve

You can also send e-mail to my new friends in Venezuela: Jose Antonio Carbonell's e-mail address is ccarbone@caracas.c-com.net. You may reach Humberto Romero at hromero@reacciun.ve



Early Spring Observing

The Virgo Cluster, Leo, and Coma Berenices

by Brenda Culbertson
culbe999@acc.wuacc.edu

You have made it through the cold weather and many of you have enjoyed the long, cold nights of winter. Nights are now getting shorter, and temperatures are warming up. Soon insects will be buzzing. It's time be out searching for some of the most elusive objects you can look for. I hope that, with the spring season, success will come to all who seek to discover more of the treasurers in God's territory of the heavens. Here are some objects you might like to try...

Getting Started

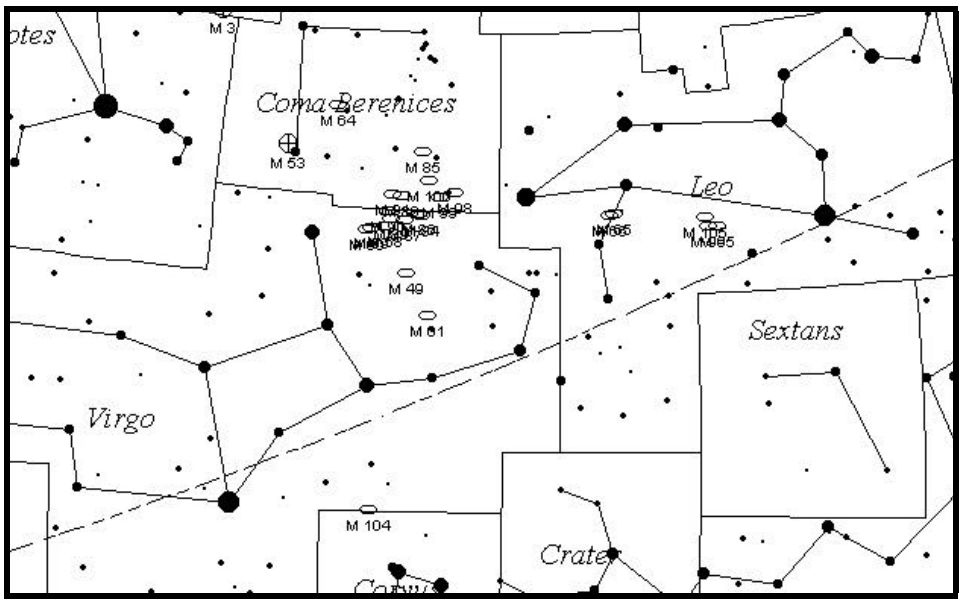
Time to dust off the cob webs again, and clean up the scope. Collimate the optics, align the finder, charge up the batteries, and find the red flashlight. You are gearing up to take a walk through the Virgo Cluster to find a few fun objects, while performing some tricky astro-batics along the way. In other words, your sights will be set to find some objects that, in order to see them, will make you brush up on your observing skills.

Coma Berenices, the other constellation you will explore, will require some agility to get through also. Berenice, herself, was quite agile. Did you know that Berenice is the only nonmythological human honored in the name of a constellation? She was the wife of Ptolemy III and lived in the 3rd century B.C. Berenices, as the story goes, cut off her hair as a gift of thanks to the goddess Venus for the safe return of her husband from a war. Her hubby was pretty upset when he came home to a crew-cut wife, but he was told that Berenices hair was taken from the temple of the gods and placed with the stars. See for yourself.

Easy Objects

I will not call extremely easy objects "naked-eye" objects any more. Doing so is, I guess, politically incorrect nowadays. Since people are putting locks on their electronic information access when their computers come across certain words. So, instead of "naked-eye", I will use something like the term "unaided observing," although I really prefer the original term, "naked-eye." (That ought to be enough times to cause a few lock ups if you are reading this from a web page.)

Believe it or not, there is an object considered to be easy to see in the Virgo Cluster. It is the Sombrero Galaxy, M-104 (NGC 4594), and is about 8th magnitude. It is on the Corvus / Virgo border, but is considered to be in the Virgo Group of galaxies. The Sombrero is a nearly edge-on galaxy with a definite dark lane going across the mid-point. The dark lane can be seen in instruments with as small an aperture as 6 inches, but an aperture of at least 10 inches is recommended.



Coma Berenices holds many treats. It has objects for all observers to see, from easy to difficult. One of the easy objects is another galaxy with a nice dark lane. The Black Eye Galaxy, M-64 (NGC 4826), is also about 8th magnitude, and easily seen with an 8-inch aperture telescope, although some 6-inch 'scopes can be used from dark sites. This galaxy is a spiral with a dark band midway between the hub and the outer areas. The dark band gives this galaxy its name "Black Eye." Maybe this galaxy is the black eye Berenices' husband gave her for cutting off her hair!?!

Do you want to see a naked-eye object? Oops! I mean an object for the unaided eye? Well, if you look between Leo and Gemini, you should find Praesepe (commonly called the Beehive Cluster), M-44, at about 4.5 magnitude. You will see it much easier if you go to a dark site. Binoculars provide an excellent view of this cluster. It is the most noted feature of the constellation Cancer.

Leo has several easily observed objects, as well. Use your telescope to look for the spiral galaxies M-65 (NGC 3623) and M-66 (NGC 3627) in the same field of view. They are 21' apart and can be seen in a pair of binoculars on a good night.

FOR THE 23RD TIME

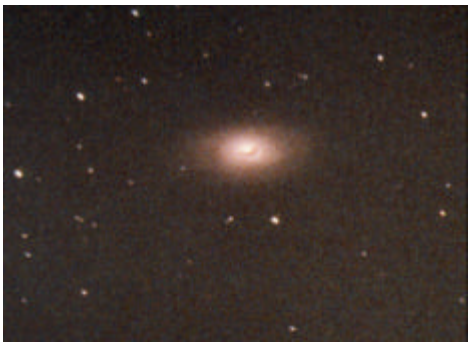
(The 23rd Psalm of Astrophotographers)

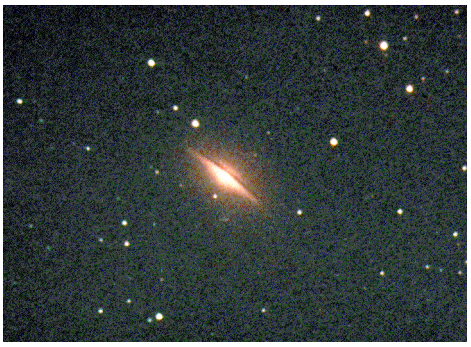
Deep space is my conquest;
More aperture I want.
It maketh me to stay up all night;
It leadeth me to faraway galaxies and nebulae.
Yea, though I struggle through the valley of guiding errors,
I will fear no clouds;
For my scope, thou art with me;
Hot chocolate and my gloves, they comfort me.
I preparest a negative in the presence of faint photons;
All my exposures are too short and my camera locketh up.
Surely, clear and dark skies shall follow me all the nights of my life;
And I will dwell in the heavenliness of the Lord forever.

—-Mark Cunningham

Mark Cunningham is a pastor in Colorado. He is also a very experienced astronomer and one of the best astrophotographers around.

M84/86, M100, M104, and M64. Photos by Mark Cunningham, Craig, Colorado





ASTRO-POETRY CORNER

ELUSIVE METEORS

Meteors, meteors everywhere
but none go through the frame
Of my timed exposure
I hoped would bring me fame.

They fly over there,
My shot is over here.
So I aim over there,
but they do not come near.

This way, that way,
Here, there, and yon,
By the time the night is over,
I wonder who has won.

I'll get the film developed
with trace hope of success,
But when I get the printed
I can see one. (I guess.)

Is it a meteor for real
or just the twinkle of my eye?
Yes, it is confirmed ...
... It is a firefly.

--- BC

Please send your poetry so we may all share your experiences in rhyme

Moderately Difficult Objects

Coma Berenices provides some beautiful objects of moderate difficulty to view. One is the amazing, large, spiral galaxy M-99 (NGC 4254). This galaxy takes on a pinwheel shape, as it shows us its face-on detail at about 10.5 magnitude. One of the features of this galaxy is its extended arms and bright hub.

Another Coma object is M-100 (NGC 4321). This galaxy in the Virgo / Coma Galaxy Cluster is the largest in that group. It is a nearly face-on spiral that is most breath taking. It is also about 10.5 magnitude and is best seen while at the observer's zenith.

Leo gives us another beauty to see in NGC 2903, a spiral galaxy. This galaxy shows many arms and a bright hub. It shines at about 10th magnitude as it waits to be viewed. Its hub is relatively small, but the arms extend far from the core.

Difficult Objects

Clusters like Praesepe are easy to see, but there are some objects which are difficult to to detect, and even more difficult to resolve. The Leo Cluster is one of these difficult groups to see. M-105 (NGC 3379) is clustered with NGC 3384 and 3389. They are around 11th magnitude and can be seen in the same field of view. Fairly large aperture and dark, clear skies are best to use for viewing any of the galaxies in the Leo Group.

The Coma / Virgo group holds many moderately difficult to very difficult objects to find and identify. M-84 (NGC 4374) and M-86 (NGC 4406), at about 10.5 magnitude, can be seen in the same field of view with moderate ease. The most difficult part about observing these two galaxies is finding which one is which among all the other galaxies in the area. They are quite impressive once you get to them.

When it comes to the Coma Berenices / Virgo group, the objective is to get through the area while identifying which object is which, a most difficult task. Don't give up if you seem to get lost; just try a different path through the cluster. Burnham's *Celestial Handbook* has a nice chart of the objects in the cluster. You might try using it. There are also many aids to use if you don't have a Burnham's set, since many star charts devote a special map just to this area. Or, ask someone who knows his way through the group to help you. I found that this was the best advice. I tried three seasons before I made it through with confidence.

Meteor Showers

The major spring meteor showers are the Lyrids, April 21 - 23, between Last Quarter and New Moon this year, and the Eta Aquarids, May 4 - 6, between First Quarter and Full Moon

Don't forget to try your hand at photographing a meteor train. Just point your camera up, open the aperture all the way (or most of the way), open the shutter for about 15 minutes (or less), and let it go. Camera settings may vary, depend upon your lens, film speed, etc. but for most basic 35-mm cameras with a 50-mm lens using 400 ASA color film, these setting should work. Getting a meteor through the frame is another story. (See the poem on this page..)

Other Observing

Venus, Mars, and Saturn should be easy objects for a while during the Spring. Mercury is also visible. And don't forget about the Moon. There will be several occultations occurring between the Moon and bright stars, asteroids, or planets. Check your astronomy magazines for details.

Did you ever wonder how the date for Easter was set? (I hope I get this correct.) The date for Easter is considered to be the first Sunday after the first Full Moon after the Vernal Equinox. The Equinox is March 20, the next full moon this year is April 11, and Easter Sunday is April 12. Check it out!

I hope this list gets you going on your way to spring observing. Don't forget to take time to just look up and greet the new season when you go out for the first time to do some long needed observing. Spring can bring some turbulent weather, so be safe when you go to the remote site. Check the forecast before you go, and be prepared to leave if a sudden storm shows its nasty thunderhead.

Make a plan and go out to enjoy the heavens.

Clear Skies!

NASA Legend to Speak at AL Convention

The Astronomical League has announced that Dr. Story Musgrave will speak at the ALCON '98 Awards Banquet on Saturday, July 25. The convention will be held at French Lick Resort, Indiana, July 21-25, 1998, hosted by the Evansville Astronomical Society and the Louisville Astronomical Society. Dr. Musgrave, who commanded the Hubble Space Telescope repair mission and is tied for the most spaceflights (6) by any human, will give a presentation on the HST repair mission.

Dr. Musgrave participated in the design and development of all Space Shuttle extravehicular activity equipment, including spacesuits, life support systems, airlocks, and manned maneuvering units. Musgrave served as a spacecraft communicator (CAPCOM) for STS-31, STS 35, STS-36, STS-38 and STS-41 and lead CAPCOM for a number of subsequent flights. He was a mission specialist on several flights, as well as the payload commander on STS-61 in 1993.

It was this last flight which served as the first Hubble Space Telescope servicing and repair mission. Through his experiences and accomplishments, Dr. Musgrave will bring the HST repair mission down to earth to share with you at the ALCON '98 banquet.

For more information on Dr. Story Musgrave you may access the NASA web site at: http://www.jsc.nasa.gov/Bios/htmlbios/musgrave.html).

MORE GUEST SPEAKERS SLATED FOR ALCON '98

The ALCON '98 agenda will offer you the opportunity to hear other fascinating speakers. Among them are Dr. Sara Gavit and Dr. James Kaler.

As Flight Team Leader for the Mars Microprobe Mission, expected to launch in January 1999, Dr. Sara Gavit's lecture is sure to provide the listener with a wealth of information on this mission.

Dr. James D. Kaler is Professor of Astronomy at the University of Illinois. A well known astronomy popularizer, he is the author of many excellent astronomy books including Stars; Stars and Their Spectra; Astronomy!; and The Ever Changing Sky and Cosmic Clouds.

The featured speaker of the Friday night Star-B-Que will be Jack Horkeheimer, executive director of the Miami Space Transit Planetarium in South Florida, as well as a founding member and a former journal editor of the International Planetarium Society.

Remember to check out the ALCON '98 website at: http://ourworld.compuserve.com/homepages/sconner

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ALCON '98 registration information can be found in either the February or May 1998 issues of the REFLECTOR, the Newsletter of the Astronomical League. Or write to Charles Miller, ALCON '98 Registrations, PO Box 3474, Evansville, IN 47733