



**June, 2001**

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*At the June 1 meeting...*

**Science Fair Winners!  
and  
Mars...  
Up Close & Personal!**

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*Houston Astronomical Society*  
**GuideStar**

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**Starline - 281-568-9340**

Houston Astronomical Society presents *Starline* -- a recorded message of Society events and astronomical happenings. This service is updated regularly, so call often to keep up-to-date on Society functions, new comets and more.

**HAS Web Page: <http://www.astronomyhouston.org>**

**Schedule Changes & Up-To-Date Information**

See the *GuideStar's* Monthly Calendar of Events to confirm dates and times of all events for the month, and call Starline for any last minute changes.

**Observatory Site Telephone: 979-732-8861**

# ★★★★★ *The Houston Astronomical Society* ★★★★★★

The Houston Astronomical Society is a non-profit corporation organized under section 501 (C) 3 of the Internal Revenue Code. The Society was formed for education and scientific purposes. All contributions and gifts are deductible for federal income tax purposes. General membership meetings are open to the public and attendance is encouraged.

## ★★★★★ Officers & Past President ★★★★★★

President: Kirk Kendrick ..... H: 281-391-3834  
Vice Pres: Bill Leach ..... H: 713-863-8459  
Secretary: Art Ciampi ..... H: 713-665-5008

Treasurer: Debbie Moran ..... H: 713-666-9428  
Past President: Don Pearce .... H: 713-432-0734

## ★★★★★ Additional Board Members ★★★★★★

Liaison responsibility

George Dolson ..... 713-721-1560  
Bill Flanagan ..... 713-699-8819  
Howard Leverenz ..... 713-957-8667  
Jay Levy ..... 281-557-4920 ..... Field Trip and Observing, Program  
Larry Wadle ..... 281-395-6290

## ★★★★★ Committee Chairpersons ★★★★★★

Audit ..... Gary Hlivko ..... 713-864-2541  
Education ..... Richard Nugent ..... 713-910-5945  
Field Tr./Obsg. .... Steve Grubbs ..... 713-455-5701  
Novice ..... Warren Wundt ..... 713-697-2960  
Observatory ..... Michael Dye ..... 281-498-1703

Program ..... Scott Mitchell ..... 713-461-3020  
Publicity ..... Brian Cudnik ..... 713-460-1093  
Telescope ..... Darin Palmer ..... 713-223-3123  
Welcoming ..... Marg Nunez ..... 713-529-2549

## ★★★★★ Ad-Hoc Committee Chairpersons ★★★★★★

Historian ..... Leland Dolan ..... 713-529-0403  
Librarian ..... Peggy Gilchrist ..... 281-443-8773  
Logo Mds Sales ..... Judy Dye ..... 281-498-1703  
Long Range Plan ..... Bill Leach ..... 281-863-8459  
Parliamentarian ..... Kirk Kendrick ..... 281-391-3834

Publ. Star Party ..... Marg Nunez ..... 713-529-2549  
Rice U. Coord. .... Matt Delevoryas ..... 713-795-0808  
Schedule Obs'v'ty ..... Steve Goldberg ..... 713-721-5077  
Texas Star Pty ..... Steve Goldberg ..... 713-721-5077

## ★★★★★ Special Interest Groups & Help Committees ★★★★★★

These are now listed on the inside of *GuideStar* (not every month). See the Table of Contents

## ★★★★★ Advisors ★★★★★★

Dr. Reginald DuFour, Rice Univ.

Dr. Lawrence Pinsky, U. of H.

## ★★★★★ Dues and Membership Information ★★★★★★

Annual Dues: Regular .... \$33.00  
Associate .... \$5.00  
Sustaining . \$50.00

Student ..... \$5.00  
Honorary ..... None

All members have the right to participate in Society functions and to use the Observatory Site. Regular and Student Members receive a subscription to *The Reflector*. Regular, Student, and Honorary Members receive *The GuideStar*. Associate Members, immediate family members of a Regular Member, have all membership rights, but do not receive publications. Sustaining members have the same rights as regular members with the additional dues treated as a donation to the Society. *Sky & Telescope* mag \$29.95/year, *Astronomy* mag \$29/year -- see club treasurer.

Membership Application: Send funds to address shown on outside cover of *Guidestar*. Attention - Treasurer, along with the following information: Name, Address, Phone Number, Special Interests in Astronomy, Do you own a Telescope? (If so, what kind?), and where you first heard of H.A.S.

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**Call the Starline, 281-568-9340 for updates and changes**

## Welcome to New Members!

The Houston Astronomical Society encourages you to join our group of active amateur astronomers and take advantage of the benefits of membership. As a member you'll have access to the club observing site near Columbus, Texas. (You're required to participate in a site orientation meeting before you get the gate lock combination.) The site has concrete pads for setting up your telescope, restroom and bunkhouse facilities, and areas set aside for camping. No new members this month. You'll get monthly issues of the *GuideStar* newsletter, you'll get to vote and to serve the organization as an officer, and you will be supporting the local amateur astronomy community.

## Special Interest Group Listing

*Any member who wants specific information on a SIG listed below may call the listed individual. Also, see the "Ad Hoc Committee Chairpersons" on the inside front cover and the "Special Help Volunteers" listing (not in every issue).*

Advanced .....	Bill Flanagan .....	713-699-8819
Comets .....	Don Pearce .....	713-432-0734
Lunar & Planetary .....	John Blubaugh .....	713-921-4275
Occultations & Grazes ...	Wayne Hutchison .....	713-827-0828
Advanced .....	Bill Leach .....	713-863-8459

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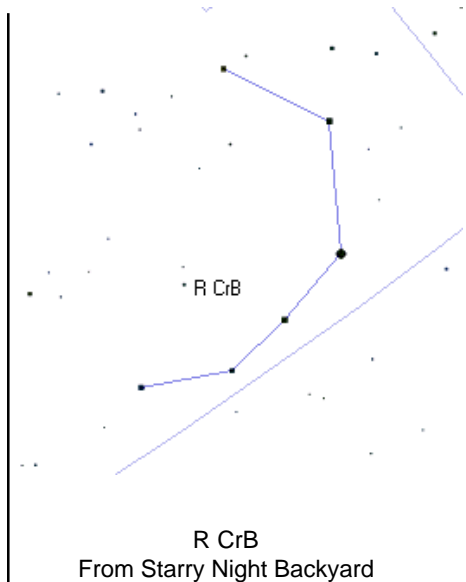
## Observations... of the editor

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by **Bill Pellerin**, *GuideStar Editor*

**M**ars is coming into position for good observing this month. Until now, I've not been impressed with a view of Mars through a telescope. It has always looked like an orange / red disk, with a polar ice-cap on the top (or bottom, who knows?). Nevertheless, it looks like a good apparition is coming and we should all give it a look-see. The maximum angular dimension is about 21 arc-seconds near the end of this month. See Don Pearce's article in this issue for more information.

I've been looking at **R CrB** (the first labeled variable star in Corona Borealis) recently. It's a star that spends most of its time shining at a magnitude of 5.7, and that every so often dims for a few weeks to almost 15<sup>th</sup> magnitude. The generally accepted explanation for the dimming of the star is that it surrounds itself with 'soot' for a few weeks, then burns the soot off and return to its original brightness. I can see this star from my patio, 3 miles from downtown Houston, because it's bright right now. It probably won't go through a dimming cycle again soon, since it did that last year. Still, you can introduce yourself to the star now, and watch it for any change in brightness as time goes on. Go to [www.aavso.org](http://www.aavso.org) to get finder and reference charts for this star. You can also see brightness curves for the star at this site.



*Continued on page 6...*

# ***Houston Astronomical Society***

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***Meeting Notice  
For Friday, June 1, 2001***

## ***Science Fair Winners!!***

***and***

## ***Mars... Up Close and Personal***

### ***Presentation double-header!!!***

***See the astronomy and space exhibits by area students who won recognition at the Houston Science Fair***

***and***

***Mars is going to be at a favorable opposition in June. Find out what you need to know to observe the red planet. (See Don Pearce's article.)***

#### **Schedule of meeting activities:**

All meetings are at the University of Houston Science and Research building. See the inside back cover for a map to the location.

Novice meeting: ..... 7:00 p.m.  
Across from Room 117

Site orientation meeting: ..... 7:00 p.m.  
Classroom

General meeting: ..... 8:00 p.m.  
Room 117

**See the inside back cover for a map  
and more information.**

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*Observations... from page 4*

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I hope the astronomers at TSP are having better skies than we're having this weekend. It is cloudy right now (Saturday, May 19) without much prospect of getting better tonight. I checked out the 'stargazing' link on [www.intellicast.com](http://www.intellicast.com), and it shows (no kidding) a hole of good observing conditions for tonight right over Fort Davis. Who would have thought! Conditions west of Houston (around Columbus) are predicted to be lousy.

I finally managed to sneak a look at the double star list from the April *Sky & Telescope* magazine. It's a good list, put together by double-star observer of renown, Sissy Haas. The double stars that give me fits are the ones for which the magnitude difference between the primary and the secondary star is large (several magnitudes). Trying to pick out a dim secondary when the field is flooded by a bright primary is challenging. I usually try increasing the magnification, which puts more distance between the primary and the secondary, and tends to dim the field. This sometimes works.

Anybody going to the solar eclipse this month? If you go and get some photos, send 'em in and we'll share them in the *GuideStar*. A short article about your eclipse-trip experience would be interesting, too.

If you have a special astronomical interest, check out [www.egroups.com](http://www.egroups.com). There are groups that discuss astrometry and photometry, SBIG imagers, and various groups which are dedicated to telescope types or brands. It's all free (not counting your cost for internet access), and it's a good way to swap stories, ask questions, and get discussions going. If you don't find a group that meets your needs, you can start one!

Have a good month of observing!!

*..Bill*

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# June / July Calendar:

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Photo by Scott Mitchell

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<i>Date</i>	<i>Time</i>	<i>Event</i>
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## *June 2001*

1		HAS Club Meeting
	7:00 p.m.	Novice Presentation - U of H
	8:00 p.m.	General Membership Meeting U of H
5	7:39 p.m.	Full Moon
9		Members Observatory Night-Columbus
12	7:30 p.m.	Advanced SIG Mtg. Rice Univ., contact Matt Delevoryas, 713-795-0808
13	9:28 p.m.	Last Quarter Moon
16		Prime Night-Columbus
21	1:38 a.m.	Summer solstice - summer begins
	5:58 a.m.	New Moon
27	9:20 p.m.	First Quarter Moon

## *July 2001*

3		Moon and Mars near in the sky
4		Earth farthest from sun
5	10:04 a.m.	Full Moon
6		HAS Club Meeting
	7:00 p.m.	Novice Presentation - U of H
	8:00 p.m.	General Membership Meeting U of H
9	12:00 p.m.	Mercury at greatest western elongation
13	1:45 p.m.	Last Quarter Moon (Friday the 13th!!)
20	2:44 p.m.	New Moon

*Send calendar events to [JBlubaugh@aol.com](mailto:JBlubaugh@aol.com)  
or call 713-921-4275.*

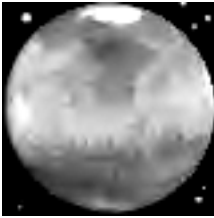
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# *Some Thoughts About Mars*

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*By Don Pearce*

**E**very 15 or so years I develop something like red, or is it orange or ochre fever, that is, I become obsessed with the return of Mars during a favorable opposition. Although Mars comes to opposition with Earth about every 2 years, 2+ months; because of its relatively eccentric orbit, every 7<sup>th</sup> or 8<sup>th</sup> opposition brings it really close. And the difference is not just marginal. At an “unfavorable” opposition the apparent disk attains a maximum size of around 13 arc seconds, while at a really good one, the apparent size exceeds 25 arc seconds. This is almost a fourfold difference in observable surface.



Mars evokes more interest, yes, even emotion than any other planet and I think I experienced why. It happened to me on a night late in April. I have a habit of going out in my yard at very odd hours, and during March and early April I had been watching Mars gradually brighten and then surpass its namesake Antares in brightness. Then for about 3 weeks it seemed to stay perpetually cloudy, when all of a sudden it

cleared and it seemed that Mars had really brightened dramatically.

I then experienced what the ancients perhaps did and could easily see how they could have been afraid of this object that seemed to be more noticeably red as it brightened. I literally felt its ominous presence. I also read a magazine article confirming this line of thinking, suggesting that red (I think

orange is a better match) symbolized bloodletting, and thus death. And of course the name Mars means “God of War” in Roman mythology, and war

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***Mars evokes more  
interest, yes, even  
emotion than any other  
planet***

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*Continued...*



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## ***Mars... from previous page***

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easily translates to death. So we have a planet that is, perhaps, symbolic of blood and death, and then in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries we have astronomers drawing artificial canals, symbolizing intelligent life. It is no wonder that H.G. Wells wrote “War of the Worlds”, an invasion from this dreaded planet, and in 1938 it became a temporary reality for thousands of people. You see, for millennia we have been predisposed to fear and hold this planet in awe. Even though the Mariner and Viking missions should have largely dispelled this kind of thinking, as I write this article someone is probably sending me an e-mail informing me of “artificial anomalies” on Mars.

Of course, from an amateur astronomer’s viewpoint Mars is the only planet that we can clearly see surface features, albeit a challenge. And that challenge adds to Mars’s mystique.

This upcoming opposition on June 13<sup>th</sup> (closest approach June 21<sup>st</sup>) is the 6<sup>th</sup> one since the last “big one” in 1988, and while it will attain an apparent diameter of 20.79 arc seconds, (the largest since ‘88) it is only a precursor to the really big one coming in 2003, but more about that one later. As almost always happens with the opposition just before the closest in any cycle, Mars’s declination will put it far in the south, reaching a maximum altitude of only 34.5 degrees from Houston at the meridian when at opposition. Imagine trying to observe Mars through a telescope from, say, the Chicago area where it will only rise to a maximum of 22.5 degrees above the horizon. This low altitude will only magnify the main problem observing Mars, for to observe it properly you need to use plenty of power. I once sold a four-inch fluorite refractor because it would not deliver as good an image at 400 power as my 8-inch f/6 Newtonian did of Mars in 1988. During an observing session on September 13<sup>th</sup>, 1988, I was able to sketch Mars identifying ten albedo features, including Solis Lacus, Nix Olympica, Tharsis Bulge, the South Polar Cap (or hood), and I even believe I could make out the Valles Marineris region. However, having said that, my first really good view of Mars was identifying Sinus Meridiani on an early morning in 1986 through that refractor. What an experience that was! In

*Continued....*

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## ***Mars... from previous page***

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general, though, I believe in using at least 6 inches of aperture, and working at a minimum of 300x. In fact, I am now using a 6-inch f/10 Newtonian (with a  $\frac{3}{4}$  inch secondary mirror) that I have dubbed the "Marscope." To properly observe Mars I think you need a good optical system, a keen observing eye, good seeing, and plenty of power. The f/7 at our observatory also fills that bill better than any other scope I can think of. Also keep in mind that the albedo features you see are just that, and don't necessarily correspond to topographic structures.

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***On August 27<sup>th</sup>, 2003 the Earth will pass closer to Mars than at any time in history***

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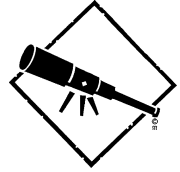
Now for the "big one". On August 27<sup>th</sup>, 2003 the Earth will pass closer to Mars than at any time in history going back to the time of Christ. On that day we will come within .37271 a.u. of it, and Mars will attain an apparent size of 25.11 arc seconds. And of course the reason is that Mars always reaches perihelion at Heliocentric longitude 336 degrees (at least within our lifetime). There is only one day of the year that corresponds to that longitude for Earth and that is August 29<sup>th</sup>, and this opposition, obviously comes very close to that optimum. (Mars actually reaches perihelion on August 30<sup>th</sup>). It will not attain that size again until the year 2287 (Aug.28<sup>th</sup>) when it comes closer, and, in fact, will come closer than the 2003 opposition 5 more times during this millennium.

As a final thought, I was observing Mars early this morning, and the Southern Polar Hood has been extremely prominent, as the southern hemisphere has been undergoing a long winter snooze, just reaching the equinox in June around the time of opposition. Otherwise, its lack of altitude has made observing it difficult, or should I say a challenge.

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# *Observatory Corner*

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*By Michael B. Dye Observatory Chairman*

**M**ost amateur astronomers are out of town this week at the Texas Star Party. This makes it a little hard for the George Observatory to find volunteers. I know because Judy and Mary Lockwood are working there both weekends.



Good news about our Randalls card, we got the January 1 through March 30 report. In the first quarter of this year we had spent \$9,979.93, which is a decrease from the second quarter of last year. For some reason I don't have any information from Randalls for the third and fourth quarters of last

year. I will try to find out where they went and make a report on them. The good news is that the Society will receive a check for \$99.79 from Randalls. This amount will be split (50-50) between the Observatory Committee and the General Treasury. Our account will start over again on April 1<sup>st</sup>. So please link your Randalls card to the Houston Astronomical Society so that the society can

***Please link your  
Randalls card to the  
Houston Astronomical  
Society so that the  
society can benefit from  
this Randalls program.  
Our number is #6618.***

benefit from this Randalls program. Our number is #6618. This is very easy to do, just go to the Courtesy Booth and tell the person what you want to do. We are also in the process of getting a Kroger number that does the same thing at Kroger.

A few months ago I reported that we had a few (two) hubcaps at the Exit Sign. Last month I wrote that we were up to five, also at the Exit Sign. If nothing else, this tells me that more people are using the Observatory Site.

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## ***Observatory Corner... from previous page***

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The number of hubcaps indicates that members seem to be using excessive speed while they are on the Observatory Site. Please don't speed. Our roads are not made for speeds over verrrry slow, and an accident could result when the driver loses control of the vehicle. Also it would be nice if the owners would reclaim their hubcaps.

We still seem to have cows on the Observatory Site. If you see any cows on the Observatory Site, please record this information on your Log Form.

As of the time I write this article, I have not sent out the Fund Raising Letters. I will be doing this by the end of the month. When you receive this letter, please respond with a tax-deductible donation to the Observatory Site.

For the last few months, I have been inserting a paragraph requesting membership feed back concerning installing computers in the Observatory. I have actually got a response. This gives me hope that members are actually reading my articles. This hope was shattered by a long time member who told me he never reads the *GuideStar*. If you have any ideas about the Observatory Site, including providing some sort of computers for controlling the Observatory Telescopes and maybe for CCD processing. Please contact me at [mbdye@aol.com](mailto:mbdye@aol.com) or 281-498-1703.

***Please fill out the appropriate log form when you use the site.***

Remember we use these forms as attendance records and to report Observatory Site problems such as broken toilets.

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## *HAS Web Page*

The Houston Astronomical Society Web page has information on the society, its resources, and meeting information.

The address is: <http://www.astronomyhouston.org>

Want your astronomy work and name on the Internet for the whole world to see? Have some neat equipment? Pictures in film, CCD, hand drawings or video format are all welcome on the page. Do you have an idea to improve the page? I'm listening. Send me Email at [goldberg@sccsi.com](mailto:goldberg@sccsi.com). (You can click on my name on the HAS home page). Or, you can call Steve Goldberg (WebMaster), at 713-721-5077.

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## *HAS Logo Sales*

by *Judy Ann Dye*

If you are interested in any of the following items and would like to place an order, please contact me (Judy Dye) at 281-498-1703, or send a check for the items requested to 12352 Newbrook, Houston Texas, 77072-3910. Below is the current list of logo items for sale:

Grey Hooded Sweatshirt (M to XL) .....	\$25.00
22 Ounce Thermal Cup .....	\$5.00
Observe Messier .....	\$4.00
Observe Comets .....	\$7.00
<b>2001 Observer's Handbooks .....</b>	<b>\$ 15.00</b>

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★   ★   ★   ★   ★   ★   ★   ★  
★   ★   *GuideStar deadline*   ★   ★  
★   ★   *for the July issue is June 15*   ★   ★  
★   ★   ★   ★   ★   ★   ★   ★

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# ***Observatory Duty Roster***

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*by Michael B. Dye, Observatory Chairman*

This is the duty list for June, July and August. Some names may have been moved from one month to another to accommodate some conflicts. If you are listed in this roster, please be sure to contact your supervisor for any information that you may need and the date and time to be at the site. You may change from site duty to open house or from open house to site duty by pre-arrangement with the Site Supervisor for that month. Changes between months require Observatory Chairman coordination.

**June Supervisor ..... Matt Delevoryas ..... 713-795-0808**

Jeff Moore .....	Site	
Mark Mulrooney .....	Site	
Ben Negy Jr. ....	Members Observatory Night	06-09-01
John Norris .....	Site	
Richard Nugent .....	Members Observatory Night	06-09-01
Ralph Overturf .....	Site	
Don Pearce .....	Members Observatory Night	06-09-01
Sim Picheloup .....	Site	

**July Supervisor ..... Cooper Walls ..... 713-461-9590**

Debbie Moran .....	Site	
Marge Nunez .....	Site	
Glenn Ray .....	Members Observatory Night	07-14-01
Mike Reynolds .....	Site	
Henry Schneider .....	Site	
Steve Simpson .....	Members Observatory Night	07-14-01
Larry Wadle .....	Site	
Mark Watson .....	Members Observatory Night	07-14-01

**August Supervisor ..... Dana Lambert ..... 281-933-4627**

Tom Williams .....	Site	
Barbara Wilson .....	Members Observatory Night	08-11-01
Buster Wilson .....	Members Observatory Night	08-11-01
Warren Wundt .....	Site	
John Blubaugh .....	Site	
John Chauvin .....	Site	
Art Ciampi .....	Site	
Brian Cudnik .....	Members Observatory Night	08-11-01

Please remember that Site work can be done anytime and does not have to be done just before Members Observatory Night. Contact your Site Supervisor for details. Names are selected for Site Duty using the current Alphabetical listing for Observatory Key Holders. If any member knows of a conflict please call me before your name is listed.

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# ***Astronomical Vision***

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***By Bill Pellerin, GuideStar Editor  
& Lori Valencic, MEd, RD, LD***

Amateur astronomy is a hobby for observers. Those of us who observe the sky count on retaining our vision in order to be able to make these observations.

We can't depend on our diet to be a fix for all potential vision problems, but we can depend on our diet to reduce the risk of certain diseases of the eye. In particular, the risk of cataracts and macular degeneration can be reduced with proper diet. Cataracts are obstructions that grow in the lens of the eye that block your clear vision and they are normally treated by surgery of the eye. Macular degeneration is a disorder of the macula of the

retina. It is the macula that provides the best spatial resolution (sharpness) of images.

***It is commonly  
believed that eating  
carrots will improve  
your vision.***

***Well, it could be!***

Let's talk about **carrots**. It is commonly believed that eating carrots will improve your vision. Well, it could be! Carrots are rich in beta carotene, and your body converts this substance to vitamin A, which your retina needs. Beta carotene also is an antioxidant, and antioxidants are thought to help in the prevention of cataracts. Studies to determine the benefits of carrots to

your vision are underway, so you can expect to see results from these studies within a year.

In general, antioxidants (vitamins A, C, and E) are helpful, and, dietitians recommend that it is best to get these vitamins from your diet rather than from supplements. When you eat food you get a variety of nutrients making whole foods and a balanced diet your best defense.

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## ***Astronomical Vision... from previous page***

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Other foods to enjoy that provide potential benefits to sharper vision include kiwifruit, spinach and salmon.

**Kiwi** is high in vitamin C. The kiwi is a small fuzzy looking fruit on the outside. On the inside it's a sweet, juicy fruit with edible black seeds and with a taste somewhat similar to a strawberry. As we already have said, vitamin C is an antioxidant believed to be helpful in the prevention of cataracts and macular degeneration. A recent study supports the benefit of vitamin C in the prevention of cataracts.

You're mom always told you to, "eat your **spinach**", and now you have a reason. Spinach contains lutein, a phytonutrient found mainly in green leafy vegetables (such as spinach, kale, collard greens). Lutein is associated with the vitamin A group and is useful in protecting the retina against damage. How about a "Joe's" Pizza from Star Pizza (near 59 on Shepherd or in the Heights)? The "Joe's" Pizza contains ample quantities of spinach and garlic. It's yummy! Or, how about adding a spinach salad to your next meal.

**Salmon** broiled in the oven (or on the grill) is one of our favorite foods. It's very easy to prepare, plus, it takes just a few minutes to cook. Put together a couple of vegetables to go with it and you'll have a quick, delicious meal. Salmon is rich in protein and omega-3 fatty acids. The lens of your eye are made up of proteins and your retina contains omega-3 fatty acids. A study showed that fish eaters (who ate as little as one to three servings of fish per month) were only about half as likely to have problems with macular degeneration as those who ate no seafood. Fish is tasty and it may protect your eyes as well as your heart.



# Special "Help" Volunteers

Any member who wants specific information on a subject listed below may call the individual listed. If you have a moderate knowledge of a special subject and would be happy to have others ask you about that subject, let the editor know and your subject, name and phone will be listed in *GuideStar* in the future. Note that we have listed a few possible areas where you might volunteer, but, of course, you are not limited to these. You can also have a specialty which is a sub-group of another. Note that the number of names for any subject is not limited to only one person. Also see the "Ad Hoc Committee Chairpersons" on the inside front cover and the "Special Interest Groups Listing article.

<u>Subject</u>	<u>Name</u>	<u>Phone</u>
Asteroids .....	Barbara Wilson .....	281-933-1289
Astrometry .....	Richard Nugent .....	713-910-5945
Astrophotography .....	Steve Goldberg .....	713-721-5077
Beginning in Astronomy .....	Peggy Gilchrist .....	281-558-1190
	Amelia Goldberg .....	713-721-5077
Comets .....	Kenneth Drake .....	281-367-1592
	Don Pearce .....	713-432-0734
Computers .....	Matt Delevoryas .....	713-795-0808
	Leland Dolan .....	713-529-0403
	Ricardo Palmeira .....	713-669-1409
Cosmology .....	Ricardo Palmeira .....	713-669-1409
Deep Sky .....	Larry Mitchell .....	281-448-8700
	Barbara Wilson .....	281-933-1289
Double Stars .....	John Blubaugh .....	713-921-4275
Drawing (Sketching) .....	Scott Mitchell .....	713-461-3020
Herschel Objects .....	Larry Mitchell .....	281-448-8700
History, Astro'y - General .....	Leland Dolan .....	713-529-0403
	Ricardo Palmeira .....	713-669-1409
History, Astro'y - Amateurs .....	Tom Williams .....	713-526-2868
Mathematics, Astronomical .....	Richard Nugent .....	713-910-5945
Messier Objects .....	Novice Committee (see inside front cover)	
Photometry .....	Open	
Radio Telescopes .....	John Hiatt .....	713-464-4010
Satellites, Artificial .....	<open>	
Solar Observing .....	Larry Mitchell .....	281-448-8700
Spectroscopy .....	Open	
Thin Crescent Moons .....	Don Pearce .....	713-432-0734
Variable Stars .....	Barbara Wilson .....	281-933-1289
	Tom Williams .....	713-526-2868
Video .....	Larry Mitchell .....	281-448-8700

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## *Other Meetings...*

**Brazosport Astronomy Society** meets at 7:00 p.m. on the 2nd Thursday of each month in the Planetarium of the fine Arts Center at Brazosport College. Call Steve Lamb for program details (409) 297-3984

**Fort Bend Astronomy Club** meets the third Friday of the month at 8:00 p.m. at the First Colony conference Center. Novice meeting begins at 7:00, regular meeting begins at 8:00. Web site: <http://rampages.onramp.net/~binder/>

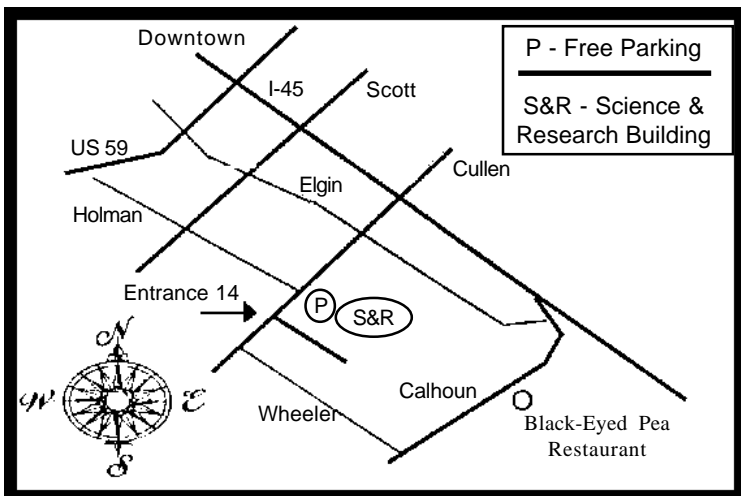
**Johnson Space Center Astronomical Society** meets in the the Lunar and Planetary Institute on the 2nd Friday of each month. Web site: <http://www.ghgcorp.com/cbr/jscas.html>

**North Houston Astronomy Club** meets at 7:30 p.m. on the 4th Friday of each month in the Teaching Theatre of the Student Center at Kingwood College. Call 281-312-1650 or E-mail [bill.leach@nhmccd.edu](mailto:bill.leach@nhmccd.edu). Web site: [www.astronomyclub.org](http://www.astronomyclub.org)

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## *Notes*

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### **General Membership Meeting**

The Houston Astronomical Society holds its regular monthly General Membership Meeting on the first Friday of each month, unless rescheduled due to a holiday. Meetings are in Room 117 of the Science and Research Building at the University of Houston. A Novice Presentation begins at 7:00 p.m.. The short business meeting and featured speaker are scheduled at 8:00 p.m. Also typically included are Committee Reports, Special Interest Group Reports, current activity announcements, hardware reviews, an astrophotography slide show by members and other items of interest.

### **Board of Directors Meeting**

The Board of Directors Meeting is held on dates scheduled by the board at 7:00 p.m. in Room 106 of the Space Science Building at Rice University. Call StarLine for Board Meeting information. Information provided to GuideStar will be published. The meetings are open to all members of the Society in good standing. Attendance is encouraged.

### **GuideStar Information**

The H.A.S. *GuideStar* is published monthly by the Houston Astronomical Society. All opinions expressed herein are those of the contributor and not necessarily of Houston Astronomical Society. The monthly Meeting Notice is included herein. *GuideStar* is sent via bulk rate mail to Regular, Student, and Honorary Members of H.A.S., selected individuals and recent visitors to the General Membership Meeting. Contributions to *GuideStar* by members are encouraged. Electronic submission is helpful. Submit the article in ASCII text, MS-Word (preferred), or WordPerfect format on an IBM format floppy or via AOL (BILLP10566). Mail copy to the address shown on the outside cover or to the editor at 256 East 5th Street, Houston, TX 77007. Copy must be received by the 15th of the month for inclusion in the issue to be mailed near the end of the same month. Or, bring copy to the General Membership Meeting and give it to the Editor, or phone to make special arrangements.

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