

# THE FBAC OBSERVER

## SEPTEMBER, 2002 VOL 16, NO. 9

Fort Bend Astronomy Club, P.O. Box 942, Stafford, TX 77497-0942

### WHAT'S HAPPENING IN SEPTEMBER

**Sunday, September 1**—Look 40 minutes after sunset at Venus which is  $1.4^\circ$  to the lower left of Spica. Mercury is very low in the west,  $18^\circ$  to the lower right of Venus.

**Monday, September 2**—Venus is  $2^\circ$  to the right of Spica.

**September 3—5**, Look 1 1/2 hours before sunrise. Use your binoculars and spot the Beehive Cluster  $1^\circ$  north (upper left) of Jupiter. Look low in the ENE for a very old Moon on September 5. 40 minutes after sunset, look for Venus about  $10^\circ$  above the WNW horizon. Mercury is almost below the horizon.

**Friday, September 6**—Look for Jupiter 35 minutes before sunrise. Also, look low in ENE sky for a very old Moon.

**Friday, September 6**—New Moon at 10:10 p.m. CDT.

**Saturday, September 7**—30 minutes after sunset, use your binoculars to spot a very young Moon low in the western sky. Mercury is skirting the tree tops. Look low in the SW sky.

**Monday, September 9**—Early morning puts Jupiter in Cancer and is now  $40^\circ$  east of Saturn which is in Taurus.

**Thursday, September 12**—One hour after sunset, look for Antares, the eye of the Scorpion, high in the SSW. Could Sagittarius be far behind?

**Friday, September 13**—The Moon is just past First Quarter.

**Saturday, September 14**—45 minutes before sunrise, use your binoculars to spot Mars  $10^\circ$  ESE of Regulus.

**Friday, September 20**—The Moon is approaching Full, known as “Fruit Moon” or “Harvest Moon”.

**FBAC MEETING, FIRST COLONY CONFERENCE CENTER. 7 PM—BE THERE**

**On September 20**, Mars is at aphelion, farthest distance from the Sun, 155 million miles. Mars is now as faint as it will get. Wait until August 2003!

**Sunday, September 22**—Autumnal Equinox occurs at 11:55 a.m. CDT. The equinox occurs when the Sun crosses the celestial equator around March 21 and September 23 of each year. In September, because of precession, the Sun now crosses the celestial equator in Virgo instead of Libra. Equinox means equal day and equal night, time wise.

**Thursday, September 26**—At sunset, can you spot Venus in the daytime? Venus is  $39^\circ$  from the Sun. Binoculars and telescopes show it as crescent, 26% full, and  $2/3$  arcminute across.

**September 27-September 30**—Arise early in the mornings and catch the parade of 3 planets, Mars, Jupiter, and Saturn across the morning sky. The distance covered by them in the sky is  $81^\circ$ . A special treat is Saturn casts a shadow on its rings giving it a striking 3-D appearance.

## **EAST DOME REPORT KEITH RIVICH**

The FBAC owns and operates a 18", fork mounted newtonian telescope which is housed at the George Observatory in Brazos Bend State Park. As part of our agreement with the Observatory we are responsible for supplying volunteers during nights of public use, which includes all Saturday nights and some Fridays. In return we are allowed full access to the scope for personal use. Included with the scope are a full set of Televue eyepieces and filters, several sets of star-charts and reference books, a computer with charting programs and a CCD camera. To have access to this equipment you **MUST** go through a short training program **AND** volunteer at least once each quarter. The training can take place on the same night that you volunteer.

During the dark-moon period, which runs from several days prior to third-quarter moon to several days past new-moon, use of the scope is scheduled due to demand. At all other times the scope is available on a first come basis. If you volunteer for a public night, even during the dark-moon period, then the scope is yours for the remainder of the night. To schedule a dark moon night I must be contacted no later than the full-moon prior to the next observing runs. Each month I will publish the current East-dome volunteer schedule, observing schedule, and research team schedule.

### **SEPTEMBER SATURDAY NIGHT SCHEDULE**

<b>SEPT 7</b>	<b>J. DELLINGER / B. DILLON / J. ELLIS</b>
<b>SEPT 14</b>	<b>T. HISERODT / G. JANSSEN / R. STOUT</b>
<b>SEPT 21</b>	<b>B. COBB / G. COBB / OPEN</b>
<b>SEPT 28</b>	<b>B. MACKAY / M. NEUMAN / R. NEUMAN</b>

For online information and updates go to [www.geocities.com/icgalaxies](http://www.geocities.com/icgalaxies)

### **DARK MOON OBSERVING SCHEDULE**

<b>Asteroid team:</b>	<b>AUG 29, 30 SEPT 3, 4, 6, 8</b>
<b>Supernova:</b>	<b>NOT SCHEDULED</b>
<b>Terry Hiserodt:</b>	<b>SEPT 3 (Beginner CCD and observing)</b>
<b>Don Jarvis</b>	<b>SEPT 5 (Beginner CCD and observing)</b>
<b>Open dates:</b>	<b>AUG 26, 27, 28 SEPT 2, 9, 10</b>

For online information and updates go to [www.geocities.com/icgalaxies/observingschedule.html](http://www.geocities.com/icgalaxies/observingschedule.html)

These observing teams are open for all Club members. Participation is strongly encouraged!

Also available are the clubs 8" dobsonian reflector and the Solaris scope (for viewing sun w/ H Alpha filter).

The clubs Meade 8" and 10" LX-200 loaner scopes are available for use. For an update on availability please call me or go to [www.geocities.com/icgalaxies/lx200.html](http://www.geocities.com/icgalaxies/lx200.html)

**Editors Note: Keith will be doing the September Novice presentation on Star Hopping!**

# FBAC MEETING FRIDAY SEPT. 20

## A Few Words From The President Elect

*After a couple of wrong turns I thought I had found it. It wasn't fancy but it had a good feel. People were milling around, talking to each other or dragging chairs out of what looked like a secret compartment off to one side of the room. Tables were set up on the other side and a slide projector presided over one in the center. Another table in the back groaned under an assortment of goodies: cake, chips, cookies, queso dip, picante sauce, a cornucopia of artery clogging stuff. I hesitated in the doorway until someone came hustling a long black tube up the sidewalk, mumbling something about collimation. I knew then that this was the place. This was the Fort Bend Astronomy Club.*

Well, maybe it didn't happen exactly like that. Sometimes my imagination runs wild. But I bet there are lots of you out there who've had something akin to this happen. You want to join an astronomy club and, like me, you look around the web or ask someone you know and finally, one fine Friday night, show up at the door of the First Colony Conference Center for your first FBAC meeting. I showed up in January, 1999. I don't remember a lot about the program but I do remember one thing. I remember the people. I remember they actually talked to me. Imagine that. A complete stranger walks in the door and an insider is interested in you. For me it was a revelation.

Time warp forward four years. I'm an insider now. It's August, 2002. Time to elect a new slate of officers. The elections take their customary 30 to 40 seconds to complete and I find myself driving the whole train. And I'm proud to be that driver. Thank you, FBAC, for electing me to the office of President.

Now, lets get down to business. First of all, I don't have a grand vision for the club. I wish I did. FBAC is well established and previous club leaders have done an outstanding job. I like to take things in chunks and first want to work on three or four things we can accomplish without much sweat. One is rejuvenating Astronomy On Wheels. AOW has been languishing lately, and I think it's important to get it back on track. In case you are a newcomer to the club and don't know what it is, we use AOW to work with schools, church, and civic groups to introduce them to astronomy. It's a star party, too, so it gives you a chance to convince your significant other that you should go observing on week nights. Leonard Pattillo has been the leader of this effort for years and will continue to coordinate it. He and I have already talked with the science coordinators at FBISD and they were very receptive. We are also putting the word out in other venues that we are back in business. We already have a star party scheduled for October 10, 2002, a Thursday night, so plan on helping out.

The next involves the way we handle and allocate club funds. I believe the membership should have more say in how we spend money. At the September meeting I will be proposing a change to the club by-laws that will allow this to happen. It's important that you attend so you can have a say in how the vote goes on this subject.

The third is light pollution. Now you're thinking: He said we could do this without much sweat. If he thinks we can do anything about light pollution, he's crazy. Maybe I am. Maybe I'm tilting at windmills. But we started down this road a year or so ago and I don't think we have had enough push from FBAC members. We've let others do the work when we should be in the trenches. Actually I'm generalizing. At least one and maybe two members have done huge amounts of work with little recognition. It's time for all of us to get involved. What's my plan? I don't have one. But with your help, we can formulate one and make a difference even if it's only a small one.

So, exactly who is this guy that's asking you to do all this stuff? Many of you may know me only as the person who sits behind the treasurer's table soliciting membership dues or selling T-shirts. We have about 140 members and it's hard to get personal with everyone. So, to help you get familiar, here's a small bio:

I'm a native Texan, born not far away in Conroe. Lived most of my life in or around the Houston area. Air force vet, attended college all over the place but never got a degree. Worked at NASA and in the aviation business but most of my career has been in the broadcast industry as an engineer. I've worked for the past five years in Missouri City for a partnership of broadcasters called the Senior Road Tower Group. My wife and I live in Sugar Land and our kids grew up a long time ago. The dog died so there's nobody at home anymore. My original passion in life was amateur radio. Got my license when I was 16 years old. In 1996 I discovered astronomy and my bank account hasn't been the same since. I own, at last count, six telescopes but their combined apertures probably don't equal that of at least one club member's single dob. I'm not a master observer. I'm still learning new things and hope to be learning new things until I become stardust.

Before I quit, I want to talk about leadership. This is a year of complete change in officers in FBAC. Usually there's someone who hangs on for a second term but not this time. To the outgoing officers President Keith Rivich, Vice-president Jack McKaye, and Secretary Dennis Borgman, I say thank you. Thanks for countless hours you spent working on club projects. Thanks for being the kind of leaders FBAC needs. To the incoming officers, Vice-president Derek Newton, Secretary Joe Dellinger, and Treasurer Terry Hiserodt, I'm pleased that you are part of the leadership team for the coming year. I look forward to working with each of you.

That's enough for now. I could go on a lot longer and will continue in the next Observer. Until then, clear skies and don't let the mosquitoes bite.

Wes Whiddon,  
FBAC President Elect

# "Constellations" Myths and Reality

## PICTURES IN THE SKY

by Leonard Pattillo, FBAC

Every night a pageant of Greek mythology circles overhead. Perseus flies to the rescue of Andromeda, Orion faces the charge of the snorting Bull, Boötes herds the bear around the North Pole, and Argo, the ship of the Argonauts, sails in search of the Golden Fleece. These legends, along with many others, are depicted in the star patterns that astronomers call "constellations." The word constellation is from the Latin word '*Constellatio*' meaning "set with stars."

Constellations are an invention of the human imagination, not of nature, mostly by the Greeks and Arabs and early Mesopotamians. They are the expression of the human desire to impress its own order upon the apparent chaos of the night sky. Constellations have been named after most anything the human mind can conjure up. At one time there were over 200 constellations.

Modern science has told us that these twinkling points of light are glowing balls of hydrogen gas, but the Greeks, Romans, Egyptians, and Arabs, to whom we owe many of our constellations, knew nothing of the science of astronomy. These early ancients were not aware that, with a few exceptions, the stars of a constellation have no connection with each other but lie at widely differing distances. Chance alone has given us the 'W' of Cassiopeia, the great square of Pegasus, the sickle of Leo, or the stick figure we call 'ET' (NGC 457). The one dimension we humans lack is the third dimension of space. The division of the night sky into recognizable patterns had practical purposes. A ship's navigators beyond the sight of land, travelers in the trackless desert who needed sign posts, and the farmers who wanted a calendar and for the shepherds who needed a nightly clock all used the star patterns to guide them and help them through the forbidding blackness of night.

As mentioned before, at one time there were over 200 constellations. Some of these were vanity constellations named after kings, queens, insects, birds, etc. Most were not recognized by the astronomical community. So in 1922, the first General Assembly (i.e., the IAU), officially adopted the list of eighty-eight constellations covering the entire sky that we use today. Where the ancient Greeks and others imagined their gods and heroes populating the sky, modern astronomers have discovered the existence of an equally fantastic number of objects with names such as red giants, white dwarfs, Cepheid variables, pulsars, quasars, black holes, and the equally important but elusive dim-fuzzy object.

Newcomers to astronomy are disappointed to find that the great majority of patterns in the sky bear little or no resemblance to the figures whose names they carry. That really does not matter as long as we use these figures to help guide us to the object we are searching for. It is within the boundaries of these constellations that we search for that dim fuzzy object, the elusive nebula, the gallant galaxy, or the planetary nebula we need to complete our drawing, log, or photograph.

# Pictures in the Sky

Some observers draw the lines outlining the constellations on their star charts, a sort of connect the dots and others do not. It is whatever is easiest for you to follow. However, you must remember that telescopes turn images upside down and sometimes even backwards, making it difficult to match what you see with the naked eye or in your finder scope with what you see in your telescope. Fortunately, there are fixes for this situation. One solution is to use a special prism in your finder scope called an Amachie Prism. Special mirrors make the image in your finder scope match the image in your telescope. Another system involves a more ancient and archaic method of using your star charts upside down and sometimes even turning them over and viewing them from the back. Not a very practical method at best. So no matter which system you are using and works for you, use it. As the saying goes "If It Ain't Broke, Don't Fix It."

It has been said by experienced observers that in order to be serious about astronomy, you need to be able to identify at least 10 constellations. Identifying 10 of the largest and most recognizable ones is ideal because they will lead you to the other not so recognizable ones. In this hobby, it's what ever it takes to get the job done. That is what we do when we go out into the darkness and do our thing. And if sharing our discoveries with our fellow observers enhances our own education, then so be it.

Happy Hunting,  
Leonard Pattillo, Fort Bend Astronomy Club

**Post Script:** If you have ever wondered how the constellations were invented, we have to turn back the calendar many thousands of years. We have to go back 5,000 years to the days of the Sumerians and Chinese when those ancient peoples looked on the night sky with wonder and mystery. We have to return to a time when people looked on the night sky as a source of fear and comfort, of hope and despair. Most of all the sky was a place of wonder and mystery. The sky was also a vast battlefield where the gods and demons fought in deadly combat. Ancient and dusty records tell us that ancient people the world over based their beliefs on events they saw occurring in the sky.

Names did not appear to these patterns at this time, these came 4000 or so years later by the Greeks and Arabs depicting their gods. These characters names were not done simply for amusement, but in deadly earnest. The invention of these creatures of the night served a very useful purpose, an attempt to explain the many motions of a bewildering number of sky objects. By naming the star patterns, it was easier to keep up with them. By using this method it could easily be explained just what they were observing.

Leonard Pattillo, FBAC

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## Charles Messier ... the "M" Behind M13 and Other Objects

Taken from SPACEWATCH - FRIDAY  
By Joe Rao, Special to SPACE.com  
Posted: 07:00 am ET, 16 August  
2002



How often in looking through books on astronomy have you noticed star clusters and nebulae designated by the letter M, followed by some number? There's a man, a famous astronomer, behind that M, but he's not remembered for his main pursuit.

In recent weeks in this column, we've written about other M's, including M3 in the constellation of Canes Venatici and M5 in the constellation of Serpens.

The M, as serious backyard astronomers know, is the initial of the famed 18th Century comet observer, Charles Messier (1730-1817). Messier was deeply interested in discovering comets, but he was plagued by the same trouble that besets all comet hunters: finding "comets" that were not comets at all but only star clusters and nebulae. His hopes were dashed so often that for his own convenience he kept a list of these deceiving objects, which he published in a catalogue.

### FINDING M13

This beautiful cluster of stars stands nearly overhead at dusk for Northern Hemisphere observers on balmy midsummer evenings. It's known as the Great Globular Cluster ... or M13 ... and resides in the constellation of Hercules. To locate Messier 13, look for the four stars, known as the "Keystone", which supposedly forms the body of Hercules. A keystone is the stone atop an arch, and has this shape (narrower at one end). Between the two western stars of the keystone, you will find the Great Globular Cluster of Hercules. It is about a third of the way along a line drawn from stars Eta to Zeta. Actually, it was not Messier, but Sir Edmund Halley of Halley Comet fame who first mentioned this object in 1715, having discovered it the previous year. Messier first saw the cluster in June of 1764 and described it as a "round and brilliant nebula with a brighter center, which I am sure contains no stars."



Located at a distance of about 25,000 light years, the Hercules Cluster, roughly 140 light-years in diameter, has been estimated to be a ball of tens of thousands of stars. M13 is the finest globular cluster in the northern skies. At sixth magnitude, it is just visible to the naked eye on clear, dark nights and is easily spotted with a pair of binoculars.

SKY MAP: Find M13 by looking for the stars that surround it.

# Secretary's Report For August 16, 2002



The meeting got started around 7:20 in the evening with 37 members present. Hal Coward started out the meeting talking about variable stars and how to observe them and record data to report to different organizations. So what is a variable star? This is a star that varies in magnitude either due to another object orbiting around it or the output of the stars' energy changing. Hal talked about several different types of variable stars and how to go about viewing them through a telescope, binoculars and a few are even naked eye variables. Through the overhead projector he presented the cycle of some of the variable stars whether they are cycling every few days or after so many years. He concluded his talk by mentioning a web site that if members were interested in getting involved in sending in their observations at [www.asteroid.org](http://www.asteroid.org) especially for somebody attempting this for the first time. Hal finished his talk at 8:10 PM. There was a short break.

Keith announced if there were any new members presents and there was **Anna Phillip** who is actually the astronomer and her father **Steve**.

The next subject that was brought up was Clearwater Ranch and who was attending the star party there in September during the dates of the 5th – 8th. This was chosen due to the fact that Krause Springs has gotten very light polluted. Keith stated that if you have not made your reservations one needs to call Clearwater Ranch at 830 232-6686. He went on to show some of the digital pictures that he had shot the last time he was up there. Basically what the observing field looked like and how the cabins were inside. The only thing that one needs to bring is bed linens, a pillow, food, and possible a red light bulb if your cabin faces the field.

Steve Goldberg got up announced Telescopes for Telethon this Saturday to be held out at Tinsletown over by Westpark and the Beltway. This is an event that FBAC has done for the last two years in which we have received two different Meade LX-200(8 & 10 inch) for collecting the most amount for muscular dystrophy. This enabled FBAC to have some wonderful loaner scopes for members to use. Steve mentioned that for those helping out they would get a MD T-shirt.

Elections took place starting at 8:45 and finishing up in about 10 minutes with

Wes Whiddon – President

Derek Newton – Vice President

Terry Hiserodt – Treasurer

Joe Dellinger – Secretary

Good luck to the new officers who will take effect in September.

Team reports were given by Bill Dillon in which the asteroid count is now up to 137. He also mentioned that on August 12, 2002 Joe had managed to image another GRB at 11:40 PM. This is the second one for Joe. Joe took the images then left the zip disk on Dillon front door step the next morning for Bill to process. Within 19 hours after shooting the GRB the magnitude had dropped from 18th to 20th mag!

The last and final announcement was about 2002NY 40 asteroid, which is an earth crossing asteroid. Keith made up some finder charts for those that interested in viewing it Saturday night.

The meeting ended at 9:40 with a count of who was going to Chili's after the meeting at Williams Trace and Hwy 59.

Tracy Knauss

# CLUB MEETINGS & FBAC OFFICERS

## **FORT BEND ASTRONOMY CLUB**

The next meeting will be Friday, September 20, at our regular meeting place. Dues are \$28/ year for the first member of a household, \$3 for each additional member at the same address.

## **HOUSTON ASTRONOMICAL SOCIETY**

The HAS meets the first Friday of the month in room 117 of the University Of Houston Research building. The Novice program begins at 7:00 and the main meeting at 8:00.

## **JOHNSON SPACE CENTER ASTRONOMICAL SOCIETY**

Refer to the JSCAS web site for meeting sites. There is a link on the FBAC web site.

## **NORTH HOUSTON ASTRONOMY CLUB**

The North Houston Astronomy Club meets on the 4th Friday of the month at Kingwood College. The meeting starts at 6:45 p.m. and the main meeting begins at 7:30 p.m.

## **FBAC OFFICERS AND PHONE NUMBERS**

President: Wes Whiddon	265-7614	Newsletter Editor: Leonard Pattillo	980-1175
Vice-President Derek Newton	313-1765	Librarian: Alec Cruz	713-702-9069
Treasurer: Terry Hiserodt	495-4012	George Observatory	242-3055
Secretary: Joe Dellinger	531-5417	Membership Chairman: John Harrison	835-0577
Alcor: Tracy Knauss	(409)-798-7917	Refreshments: Jack McKaye, Jayne Lambert	
East Dome Cord. Keith Rivich (K2)		FBAC loaner scope: Bruce Webb	342-5975

**All phone numbers A/C 281 unless otherwise indicated.**

**FBAC HOME PAGE: <http://www.fbac.org>**

THE SECRETARY'S REPORT APPEARS ELSEWHERE IN THE  
NEWSLETTER

IF YOU HAVE INTERNET CAPABILITIES, CHECK OUT THE FBAC NEWSLETTER ON THE CLUB'S WEB SITE. BY GETTING THE NEWSLETTER OFF LINE, YOU SAVE THE CLUB MONIES THAT CAN BE SPENT FOR OTHER CLUB THINGS.

**[HTTP://WWW.FBAC.ORG](http://www.fbac.org)**

**Also, we are in the process of re-instating Astronomy On Wheels. There is a star party tentatively set for Thursday, October 10. Further info in the October newsletter.**