

# The FBAC Observer

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August, 2005

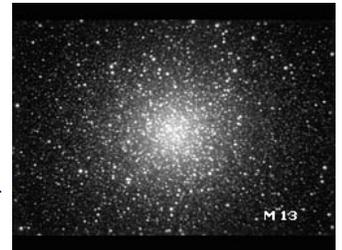
## *Through the Looking Glass*

By Tracy Knauss

**Okay, so you want to start logging** the splendors of the night sky. You've been out observing through your telescope on clear nights and become familiar with how it works. Now you want to go a step farther, but how do you go about it? Where do you start?

The first decision is how to log objects and which forms to use. When logging different wonders of the universe you must go into more detail about the objects because there is no drawing to compare them to. When you're logging objects think about describing these items to someone who has never seen them before. Let's take two different Messier objects, M13, M51 and one planet, Mars. Refer to the basic information (at the end of this article) on questions to answer about that particular object. A few other questions you might answer is what type of telescope you are viewing through and with what eyepiece or power? Were you viewing it with a telescope that tracked or not? Was the moon visible? What phase was it in? Any of the foregoing will make a big difference in the amount of detail you can pick up. How far above the horizon are you viewing the object? An object close or low to the horizon will have less detail than an object straight overhead because you are looking through less atmosphere. An object low on the horizon is like looking down a highway on a hot summer day and trying to view through the waves of heat coming off the highway. It just isn't clear! Where were you when you observed this object? Your backyard or a dark rural site? Also, try using several different eyepieces to view the object and just because it is written somewhere that this object can't be seen or will be very dim, don't let that deter you. I've looked at several different objects that were described as being faint, but was still able to see detail in them. Also try using different filters to bring out detail. And if you use a filter, enter that into your log. I have also downloaded a neat little program to enter data into your computer, it is called TSOL (The Simple Observing Log) by David Green. Go to <http://www.davidpaulgreen.com> and download the program if you like, it even has a way to import your drawings or pictures if you decide to sketch them and a night vision mode to use out in the field.

Okay back to our original question, how would you describe M13? I would describe M13 through my 10" f5, using a 16 mm Nagler, as a globular cluster that is highly concentrated and circular in shape. Almost all stars are resolvable except those directly at the core which have a glow or haze due to concentration. The center is much brighter and denser than the rest. It also seems to



have stars radiating from the center to the edges. It is easily detectable from my backyard but in this case, I viewed it on 07/13/01 at 10:30 PM at the George Observatory. The object is 80° above the horizon with a third quarter moon. I would also put an asterisk by this object to let myself know that it was wonderful to observe and a great one to show to the public at the George Observatory.

Now to describe a non-stellar object such as M51 using the same scope as above, but out in a dark rural site. The overall shape of the object is a face on spiral galaxy with two arms spiraling out from the center of the galaxy. One arm spirals out from the top and the other from the bottom of the galaxy. The core is bright and easy to detect. H2 regions can be seen throughout the galaxy and at the end of one arm it looks as if there is another, much smaller, galaxy attached to it, but with no detail. The smaller galaxy has a bright core with diffuse edges and is circular in shape. There are numerous stars superimposed throughout the galaxy. The object was viewed at 45° above the horizon with no moon present. The same object as viewed from the George Observatory with no moon



present would read something like this: The overall shape is circular with the core or center being brighter. The edges are diffuse and I cannot make out any spiraling pattern. It looks as if there might be another galaxy close by. As you can tell, the difference is due to the transparency of the night sky. So how do you determine transparency of the night sky? Typically West Texas has wonderful transparency but is rather poor in seeing. Look at the charts on the following page to determine transparency and seeing.

To view a planet such as Mars, these might be the questions: Can you see the polar caps? Any surface detail on the planet? When I first viewed Mars I really didn't know the names of the surface details, so I just called it what it looked like to me, then looked up the name the next day. My observation went something like this: Can see both polar caps with the northern one being more prominent. I can also make out a feature that looks like Africa (Syrtis Major); it is darker brown in color, than the orangish color of the planet. This was viewed through a 12.5" f6 scope using a 7 mm Nagler eyepiece at midnight with the planet 40° above the horizon at the George Observatory.

This is the **seeing scale** that I obtained from David Levy when I first started observing and the one that I still use today to summarize sky conditions. It is rated on a scale of 1-10.

0	rain or other precipitation
1	completely clouded sky
2	mostly clouded sky
3	partly clouded sky
4	very hazy sky
5	moderately hazy sky
6	slightly hazy sky
7	suburban clear sky
8	unusually good suburban sky; Milky Way in Cygnus visible with adverted vision
9	good rural sky; Milky Way and M31 visible
10	superb country sky; no trace of haze or cirrus

Here are some simple questions to answer when observing different objects. This list originally came from Barbara Wilson.

<b>Galaxies</b>	<b>Diffuse Nebula</b>	<b>Planetaries</b>	<b>Globulars</b>	<b>Open Clusters</b>
Shape Is center brighter?	Overall shape Is any portion of the nebula brighter or darker?	Easy or difficult to identify in the starfield?	Loose, medium or highly concentrated?	Is cluster easy to identify from background stars?
Is the core diffuse, compact or stellar?	Is the outer edge sharply defined or diffuse?	Any color seen? Is a disk seen?	Is any part resolvable?	Any portion where the stars are more concentrated?
Any mottling bright or dark patches within the galaxy?	Any stars nearby or within the nebula?	Are the edges sharp or diffuse?	Are the outer edges visible?	Is the cluster resolved completely?
Any spiral pattern seen?	Any stars nearby or within the nebula?	Is the center brighter darker or the same brightness as the outer edges?	Is the center brighter?	Any nebulosity surrounding or near the cluster?
Are the edges diffuse or sharp?		Is the central star visible?	Is the center denser?	Are the stars similar in magnitude?
Any stars superimposed in the galaxy?				How many stars in the cluster? Less than 50, 50-100, more than 100?

So go out and look at the wonders of the night sky and try your hand at logging. It gives me something to look back on later and I can also remember the object more due to writing the information down. There are very few objects that I have looked at that I did not write anything about them, unless, of course I was looking through somebody else's glass. Enjoy!!

## WHAT'S HAPPENING IN AUGUST

Moon occurs at 11:05 p.m. EDT, so the Moon can't be seen tonight.

### Monday, August 1

Here's a quick guide to the bright bodies of the solar system. Within an hour after sunset, look for Venus very low in the west and Jupiter low in the WSW (more on these brilliant evening planets tomorrow). Mars rises north of east after midnight. As morning twilight begins to brighten, Mars is high in SE, while the young crescent Moon is in ENE. About 1 1/2 hours before sunrise on Tuesday look for Orion rising in the east and the Gemini Twins, Castor above Pollux, rising to the crescent moons lower left. Saturn emerges below Pollux later this week and Mercury appears below Saturn after midmonth.

### Tuesday, August 2

Within an hour after sunset, look for Venus low in W and Jupiter in WSW, 30 degrees to the upper left of Venus. These two brilliant evening planets will be fascinating to track as they move 1 degree closer to each other each evening until their rendezvous on September 1. About 1 1/4 hours before sunrise on Wednesday, look for the last easy old crescent Moon low in ENE with Pollux 2 degrees to its upper left and Castor 4 1/2 degrees above and a little left of Pollux.

### Wednesday, August 3

Locate the Gemini Twins, Castor above Pollux, low in NE to ENE 1 1/4 hours before sunrise on Thursday, and keep track of them for the next half hour. About 40 minutes before sunrise, if the sky is very clear, use binoculars to try for Saturn 11 degrees below Pollux, and an exceedingly fine thread of a lunar crescent within 5 degrees left of Saturn. From Michigan its only 17 hours until New Moon. From New England, which catches its view about an hour earlier, the Moon is 18 hours before New and slightly easier.

### Thursday, August 4

Today at 6 p.m. EDT, the Moon is 406,632 km (252,669 miles) from Earth, its greatest distance of this year. New

### Friday, August 5

Only 20 minutes after sunset, Venus is low in W, and the very thin young crescent Moon may be visible in binoculars very low in WNW, 24 degrees to Venus lower right. From Michigan, the Moon's age (time elapsed since New, when it passed the Sun) is about 22 hours. (Folks in the Southwest U.S. will have a much easier time spotting the Moon because its higher and sets later, in a darker sky.) As the sky darkens, look for Jupiter 27 degrees upper left of Venus.

### Saturday, August 6

The Moon is much easier to see this evening, but you must look early. Half an hour after sunset, locate Venus in the west with the young crescent Moon 13 degrees to its lower right. Jupiter is in WSW 26 degrees upper left of Venus. As the sky darkens, look for Spica 10 degrees left of Jupiter. By next Wednesday evening the Moon will pass all three objects.

### Sunday, August 7

About 45 minutes after sunset look low in the west for the nearly 3-day old crescent Moon, with Venus less than 2 degrees to its upper left. Note Jupiter 25 degrees to Venus upper left. A crescent Moon will be seen near Venus monthly five more times during Venus current evening appearance, on Sept. 6, Oct. 6, Nov. 5, Dec. 4 and Jan. 1.

### Monday, August 8

This evening within an hour after sunset, look for the 4-day old crescent Moon low just south of west, with Venus 9 degrees to its lower right and Jupiter 15 degrees upper left. Track the Moon nightly as it passes Jupiter and the bright zodiacal stars Spica and Antares within the next week.

### Tuesday, August 9

Face WSW at dusk to find Jupiter 3 or 4 degrees to the upper left of the crescent

Moon. Look early enough to catch Venus low in W, 20 degrees to Moons lower right. As sky darkens, look for the blue-white star Spica within 10 degrees left of Jupiter. (Look for this star again tomorrow!) The reddish star Antares, heart of the Scorpion, is west of due south and just over 45 degrees east of Spica.

### Wednesday, August 10

About 30 to 45 minutes after sunset binoculars show the star Spica just below the Moon. From Michigan the gap between the star and the Moon's southern cusp (lower point of the crescent) is only about one-quarter of the Moon's width. The star becomes visible to the unaided eye as the sky darkens, then the gap between Moon and star slowly widens until they set over two hours after sunset. As seen from space just above the Earth's Arctic regions, the Moon will cover the star. Starting next month the Moon will cover Spica from someplace on Earth every 27-28 days until 2007. The first event visible from the U.S. occurs on December 25, but it happens after sunrise from Michigan.

### Thursday, August 11

Within an hour after sunset, look for the fat crescent Moon in SW, Venus very low in W, and Jupiter-Spica 9 degrees apart in WSW. Tonight the Moon sets within three hours after sunset, leaving the sky dark and moonless for the rest of the night, excellent for viewing the peak of the Perseid meteor shower. Meteors from this shower enter Earth's atmosphere at a speed of 60 km/sec (134,000 miles per hour), from a direction near the boundary between the constellations Perseus and Cassiopeia. Meteors can be seen anywhere in the sky, but if you extend their paths backward, all the true members of this shower will trace back to a common "radiant" point below the "W" of Cassiopeia, which climbs ever higher in the northeastern sky until first light of dawn. An hour before sunrise, look in ENE for Saturn 12 degrees below Pollux.

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## Friday, August 12

About an hour after the Sun reaches its high point in the south today, watch for the Moon rising some 30 degrees south of east. About 1 1/2 hours before sunset, look for the Moon in the south. This evening the Moon passes First Quarter phase and appears 90 degrees or one-quarter of a circle east of the Sun. At sunset the Moon's right half is illuminated. An hour later the Moon is approaching SW and Venus is very low in the W. Find Jupiter 20 degrees upper left of Venus, Spica 9 degrees left of Jupiter, and Antares 20 degrees left of the Moon.

## Saturday, August 13

An hour after sunset, the waxing gibbous Moon is in SSW, with reddish Antares, heart of the Scorpion, 6 or 7 degrees to the Moon's left. One star close to the Moon's lower right and two stars 3 and 6 degrees to Moon's upper right mark the head of the Scorpion.

## Sunday, August 14

Tonight as the sky darkens, Antares is 7 degrees to the Moon's right. A pair of stars of 2nd and 3rd magnitudes, 0.6 degree apart and some 11 degrees to the Moon's lower left, marks the end of the Scorpion's tail.

## Monday, August 15

This month's southernmost Moon passes directly south about 1 1/2 hours after sunset. From East Lansing, MI, the Moon is only 18 degrees above the horizon, nearly 6 degrees lower than the midday Sun of the winter solstice of Dec. 21. Binoculars show, less than one degree to Moon's lower right, a 3rd-magnitude star, Gamma in Sagittarius, marking the tip of the Archer's arrow and the tip of the spout of the Teapot. Just over 3 degrees left and 5 or 6 degrees lower left of that star are the two other stars of the spout which also mark the middle and lower star of the

Archer's bow. The top star of the bow (and of the Teapot) is 6 degrees upper left of the Moon and 7 degrees upper left of the tip of the spout. Finally, four stars in a trapezoid some 9 to 13 degrees east of the Moon mark the handle of the Teapot.

## Tuesday, August 16

The Moon is in S to SSE at nightfall. Binoculars show the four stars of the handle of the Teapot 2 to 7 degrees to the right of the Moon. Beginning about 8 days from now, the Moon will rise after nightfall, allowing a brief period of dark sky viewing of the Milky Way, whose center lies about 5 degrees upper right of the Teapot's spout.

## Wednesday, August 17

Tonight find Venus very low just south of west at dusk, with Jupiter 15 degrees to its upper left, and Spica about 8 degrees left of Jupiter. Venus is crossing the celestial equator and sets nearly due west. Watch Venus set farther S until November 5-6.

## Thursday, August 18

One hour after sunrise these mornings, Mars is high in SSE. Summer has just begun in Mars' S hemisphere. Through a telescope, the planet's S pole is tipped 15 degrees toward Earth, but the rapidly shrinking S polar cap may be hard to observe. Although the N pole of Mars is tipped away from Earth, it is surrounded by a N polar hood of haze which extends well onto the visible face of Mars. To tell the difference between N and S on Mars, nudge the telescope a little; if you move the telescope S, the S edge of Mars will be the last to go out of the field. Low in ENE an hour before sunup for the rest of this week, find Saturn 13 degrees below Pollux, and Mercury within 6 degrees below Saturn.

## Friday, August 19

Early this morning, at 2 a.m. EDT, the

Moon passed the perigee (closest point of its orbit), 357,393 km (222,074 miles) from Earth. That makes today's Full Moon the 2nd closest of the year. Tonight the Moon rises in ESE about 25 minutes after sunset, as seen from southern Michigan. When the Moon is rising or setting, regardless of its distance, it always seems much larger than when its overhead, even though when overhead the Moon is nearly 4000 miles closer. This effect, occurring only in the mind of the beholder, is called the Moon illusion.

## Saturday, August 20

Tonight within an hour after sunset, look very low south of west to see Venus with Jupiter 12 degrees to its upper left, and Spica 8 degrees left of Jupiter. The Moon, just past full, rises 10 degrees south of east just under an hour after sunset. For the next five nights, from the latitudes of Michigan, Moon rises less than half an hour later each night.

## Sunday, August 21

Tonight the Moon rises just one degree south of due east about 1 1/4 hours after sunset, before the sky darkens fully.

## Monday, August 22

Venus and Jupiter are just 10 degrees apart low in WSW to W within an hour after sunset. Moonrise tonight occurs about 1 hour 40 minutes after sunset, some 8 or 9 degrees north of due east. An hour before sunrise on Tuesday, the Moon is high in SSW, with Mars not yet in S and 23 degrees to Moon's upper left. Low in ENE find Saturn with Mercury 7 degrees lower left. Tomorrow Mercury is at greatest elongation 18 degrees from Sun, as far as it gets from the Sun during the current morning appearance.

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## Tuesday, August 23

Tonight the sky gets very dark, but only briefly. This allows a fine view of the Milky Way until the Moon comes up some 18 degrees N of due east just over two hours after sunset and lights up the whole sky. If you're up for another hour after moonrise, watch for Mars rising 13 degrees to the Moon's lower left.

## Wednesday, August 24

At the end of twilight, about 1 3/4 hours after sunset, go to a dark place and look for the Milky Way, appearing as clouds of steam rising up from the spout of the Teapot of Sagittarius in the south. It continues up through the Summer Triangle and the Northern Cross nearly overhead, and down through Cassiopeia and Perseus in the northeast. The patch of the Milky Way just south of the center star of the Northern Cross is very interesting to observe with binoculars. Known as the Cygnus Star Cloud, it is part of the spiral arm in which our Sun is located and can easily be resolved into stars. Compare it to the more distant Greater Sagittarius Star Cloud (the puff of steam over the spout), in the spiral arm next inward from our location in the Galaxy. Tonight, the Moon, two-thirds full, rises in ENE about 2 1/2 hours after sunset. About another half hour later, Mars rises 4 or 5 degrees to Moon's lower right. They're still only 6 degrees apart as dawn brightens on Thursday, when they're very high in the southern sky.

## Thursday, August 25

At dusk, notice Jupiter 7 degrees upper left of Venus, and Spica the same distance left of Jupiter. Tonight, the Moon, just over half full, rises 32 degrees north

of east three hours after sunset, some 14 degrees left of Mars and a little lower. In another hour use binoculars to see the Pleiades star cluster 2 degrees to the Moon's left. Moon and star cluster appear even closer together at dawn's first light on Friday. Several times next year, the Moon will occult or cover some of the stars of this cluster. An hour before sunup on Friday, Mercury appears low in ENE, 10 degrees lower left of Saturn.

## Friday, August 26

Nearly an hour after sunset, Venus and Jupiter are just 6 degrees apart very low in W to WSW, and now can both fit within the field of view of most 7-power binoculars. Ranking next in brilliance in the early evening sky are the yellow-orange star Arcturus some 33 degrees above Venus, and blue-white Vega nearly overhead.

## Saturday, August 27

Within an hour after sunset, low in W to WSW, look for Venus with Jupiter 5 degrees upper left, and Spica 7 degrees left of Jupiter.

## Sunday, August 28

Tonight, within an hour after sunset, locate Venus low in W to WSW with Jupiter 4 degrees upper left. Look nightly and catch them at their closest on Thursday, September 1. Also this week, watch the Moon overtake the Gemini Twins, Saturn, and Mercury at dawn. Tonight's northernmost Moon rises over 40 degrees north of east about 5 1/4 hours after sunset and passes within 15 degrees south of overhead within 3 hours after sunrise on Monday.

## Monday, August 29

At dusk, look low in W to WSW for Jupiter only 3 degrees upper left of brighter Venus. Can you still see Spica? Its 6 to 7 degrees left of Jupiter and a bit lower. An hour before sunrise on Tuesday, look for the Gemini Twins, Castor 4 1/2 degrees above Pollux, just to the left of the waning crescent Moon well up in the eastern sky. Look also for Mercury low in ENE, 15 degrees lower left of Saturn.

## Tuesday, August 30

At dusk find Venus and Jupiter just 2.2 degrees apart, with brighter Venus to the lower right. An hour before sunrise on Wednesday, locate the waning crescent Moon between E and ENE. Look for Saturn about 5 or 6 degrees to Moon's lower right, Pollux and Castor 9 and 13 degrees above the Moon, and Mercury some 20 degrees to Moon's lower left.

## Wednesday, August 31

In early evening twilight, one day before their closest approach, the brilliant pair of planets is separated by only 1 1/2 degrees, with brighter Venus almost directly below Jupiter. Using binoculars if needed, look for the star Spica just over 6 degrees to their left. An hour before sunrise on Thursday, Moon is low in ENE with Saturn 9 degrees upper right and Mercury 10 or 11 degrees below. Mars is high in S, and Sirius, the brightest star, twinkles vigorously low in SE. Which now appears brighter, Mars or Sirius?

**August calendar credit: Abrams Planetarium**



**FBAC Club Meeting  
Friday, August 19, 2005  
7:30 PM**

**First Colony Conference Center  
3232 Austin Parkway  
Sugar Land, TX**

Subject: [FBAC] Asteroid Borgman

For those of you not at last Friday's meeting, and didn't catch it in Jim's minutes, the A-Team announced the naming of an asteroid after

Dennis. The submitted citation reads:

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Borgman            95219    Dennis Borgman, Renaissance Man

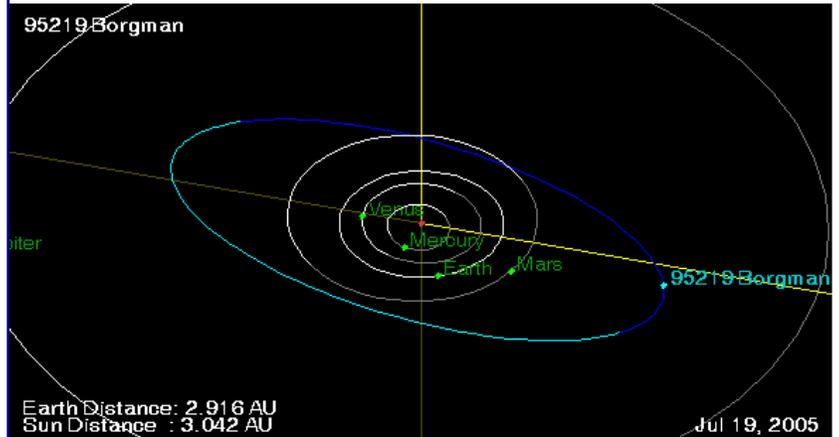
(95219) Borgman = 2002 CT14

Discovered 2002 Feb. 8 at Needville.

Machinist, carpenter, electrician, plumber, programmer, amateur astronomer, and leader, Dennis Borgman (b. 1952) has given generously of his time and talent to the public, the George Observatory, and the Fort Bend Astronomy Club.

Co-discoverers were Alex, Joe, and Don Wells. Congratulations to Dennis for this well-deserved honor!

--Bill Dillon



# Telescopes For Telethon

## Saturday, August 13

### 5-11 PM

## Tinsel Town Theater

# Beltway 8 and West Park

There's not an activity that we are involved in more important than this one. The first weekend produced almost \$500.00 for MDA but we can do better. Please help us collect for Jerry's kids this month. Bring your telescope or just yourself for a few hours on Saturday, August 13. If you come (and I'm hoping you do) you should also bring water, drinks, and food. See you then.

—Wes Whiddon

**Fort Bend Astronomy Club**  
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*Dedicated to the acquisition and dissemination of information pertaining to the science of astronomy*

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**We're On The Web**  
[Http://www.fbac.org](http://www.fbac.org)



You are invited to submit your opinions for inclusion on this page. Please be thoughtful and respectful of others in your comments. Rants will not be published. All articles should be 450 words or less and are subject to editing for clarity and length before publication. Please submit in Word format to:  
[stargazer411@earthlink.net](mailto:stargazer411@earthlink.net)

**The Fort Bend Astronomy Club** meets on the third Friday of every month except for those months when special meetings are called. The next regular meeting will be at 7:30 PM on August 19, 2005 at the First Colony Conference Center, 3232 Austin Parkway, Sugar Land, TX. Dues are \$30/year for the first member, \$5 per additional household member. Student dues are \$15/year.

The **Houston Astronomical Society** meets the first Friday of the month in room 117 of the University of Houston Research Building. The novice program begins at 7:00 PM and main meeting at 8:00 PM.

For the **Johnson Space Center Club**, refer to the JSCAS web site for meeting times and sites. There is a link on the FBAC web site.

**North Houston Astronomy Club** meets on the 4th Friday of the month at Kingwood College. The meeting starts at 6:45 PM, main meeting at 7:30 PM.

This month brings us to a critical time in the life of our club: selection of officers. Anyone who works for a living and has a boss knows that an organization typically is a reflection of it's leaders. And I believe that to be true even more so in volunteer organizations. It's hard enough in a company that actually pays it's people to get them to do their job. But in an organization like ours where there's no compensation other than an occasional pat on the back or kick in the butt, it's even harder.

The definition from Webster's dictionary of a volunteer is someone who enters into or offers himself for a service of his own free will. In my opinion the critical phrase in that statement is "own free will". There's not a person in FBAC who doesn't have free will and the power to exercise it. Exercise of free will can mean a lot of things. It can mean attending or not attending club meetings. It can mean participating or not participating in something like Telescopes For Telethon. It can mean helping or not helping a novice observer. It can mean explaining or not explaining to a visitor at the George Observatory what a globular cluster is.

But there's another phrase in Webster's definition that's almost as important: "offers himself for service". In fact, when I think a little harder about it, maybe that's the most important phrase. If we are part of a volunteer organization like FBAC, we, by definition, have offered ourselves for service. That's critical and important to the life of our club. Think about it. If we don't exercise our free will and offer ourselves for service, what's going to happen? The answer is nothing.

So as we approach this time of officer selection, please consider how you can be an important part of FBAC. Don't let Mister Webster down.

Wes Whiddon

**FORT BEND ASTRONOMY CLUB**  
**P.O. BOX 942**  
**STAFFORD, TX 77497-0942**



**A NON-PROFIT  
ORGANIZATION  
DEDICATED TO ASTRONOMY  
BY TEACHING, SHARING,  
AND OBSERVING**

FBAC Meeting Minutes July 15, 2005

- Meeting Started at 7:35 p.m.
- David Jenkins welcomed everyone and introduced the officers.
- The Novice and Main program—D.J. McCracken on planning and recording an observation session. Terry Hiserodt on sidereal time, lists and references
- Break at 8:32 p.m.
- Break ended at 8:51 p.m.
- Presentation continued
- Secretary's Report—Tonight's minutes should be posted either when I get home or when I log onto my Internet account tomorrow morning. Please submit any corrections to me via NetSlider. Also Please sign up for East Dome Saturday night volunteering. A signup list is here on the table.
- Treasurer's report—current balance is \$1823.11. We currently have 118 members.
- East Dome Committee Report—Dennis Borgman reviewed the EDC/Officers meeting. Budget items were discussed with Barbara Wilson. The main topic was East Dome Scheduling and volunteering. New links on the website and other efforts are underway to improve the club's volunteer efforts at the George Observatory.
- East Dome Training—Bill Dillon presented certificates for those people who attended the recent training session. Individual training is available.
- A-team report—2 discoveries this month. An asteroid discovered by Don Wells, Joe Dellinger and Alex Cruz has been

named Borgman honoring club member Dennis Borgman. Congratulations Dennis!

- Steve Goldberg discussed Telescopes for Telethon—Cinemark Tinsletown (on Beltway 8), July 16<sup>th</sup> and August 13<sup>th</sup> Senior Road Tower group is matching contributions dollar for dollar. HAS will celebrate their anniversary at a picnic September 24<sup>th</sup> at their Columbus Observatory. All clubs are invited. Gates open at 10 am. Please RSVP by September 10<sup>th</sup>. Around 3:00 p.m. HAS will supply food and side orders, bring your own drinks. The next HAS meeting will feature Don Machholz on "My Life as a Comet Hunter" This will be on the first Friday of August.
  - Dennis reminded everyone of the loaner scope program.
  - The Regional Astronomy Club meeting will be on October 21<sup>st</sup> at the HCC central building. Astronomy Day will be held on October 22<sup>nd</sup>.
  - Dennis Borgman is in charge of the officer nomination committee for next month. The President, Vice-president and Secretary positions will be open.
  - Wes Whiddon (with 2<sup>nd</sup> and 3<sup>rd</sup>s by David Jenkins and Tracy Knauss respectively) moved that a program committee be formed with the Vice-President being in charge of the committee to organize programs for the year. The discussion centered on it being a huge job for only one person. This committee would be from 4-6 members at the discretion of the V.P. The motion carried. David Jenkins volunteered to be on this committee.
  - Chili's Count
- Adjournment at 9:47 p.m.