



Prime Focus

SEPTEMBER 2006

FORT WORTH ASTRONOMICAL SOCIETY

Planet-Smanet! Pluto gets repossessed!



Size of Pluto compared to the United States.

In August, the International Astronomical League convened in Prague to determine once and for all (until next time) just what is the definition of a planet. Pluto was re-classified as a dwarf planet. Charon, Ceres, and the popularly referenced Xena await their official placement in planetary detention.

The planet definition controversy came to a head when 2003 UB313 (aka "Xena") wasn't invited to the Planet Ball.

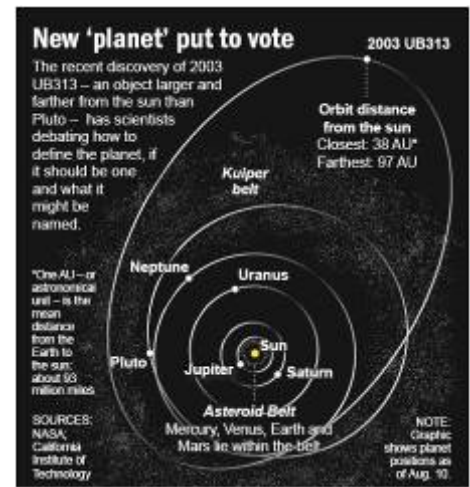
Early votes from the 2500 astronomers from 75 countries had the four oddballs called "plutons" until the IAU backtracked on that in the face of academic scorn.

From Space.com: "Among the scientists who torpedoed "pluton" were geologists, who pointed out, somewhat embarrassingly to astronomers, that it's already a prominent term in volcano science for deep igneous rock formations.

"What were they thinking? The reaction in the geologic community was rolling of eyes," said Allen F. Glazner, a geologist at the University of North Carolina. "It would be like botanists trying to distinguish between trees and shrubs and coming up with the term 'animal.'"

Harvard's Owen Gingerich, who chairs the planet definition panel, conceded: "We perhaps stumbled. After the panel got dozens of objecting e-mails, we backed off," he added.

The IAU general consensus is that although most people alive today grew up with Pluto as the Ninth Planet, Pluto's eccentric orbit that crosses within Neptune's orbit at perihelion and its' slight pitch from the ecliptic plane has long confounded traditional modeling of the planets. With the continued discovery of additional "oddballs" in our solar neighborhood, most astronomers have seen the Pluto-Charon system as Kuiper Belt Objects (KBOs) that "swing into town" from time to time. Most postings in the blogosphere concurrent with the IAU meeting can be summed up as the re-designation being long overdue. But naysayers abound. Hold off on updating your Trivial Pursuit games.

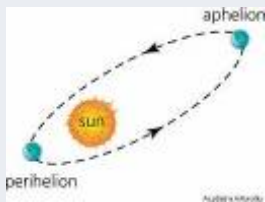


New Club Members:

- Ronnie Downing
- Paul Kocurek
- Ed Kotapish
- Gary Vann

Welcome All!

A petition is being circulated among the 10,000+ professional astronomers to overturn the IAU vote.



Astronomical League Award

Bruce Campbell earned his **Lunar Club** cert & pin!



Pluto's day
6.4 Earth days.

Pluto's year
248 Earth years.

Average distance from sun
3.7 billion miles, or 5.9 billion kilometers.

The planets are lit, how?
-- Matt Reed

(continued: page 2)



September 2006

Moon Phases

local DS time, UT-5

Full Moon (9-7) 1:42pm
(largest of 2006)

Last Quarter (9-14)
6:15am

New Moon (9-22)
6:45am

First Quarter (9-30)
6:04am

Autumnal Equinox
(9-22) 11:03pm




Trojan: An object orbiting in the Lagrange points of another (larger) object. This name derives from a generalization of the names of some of the largest asteroids in Jupiter's Lagrange points: 588 Achilles, 624 Hektor, and 911 Agamemnon.

Saturn's satellites Helene, Calypso and Telesto are also sometimes called Trojans.

The New Horizons

Probe passed the outer boundary of the Asteroid Belt during the third week of August. It is on its way to a Jupiter flyby in December.

**MORE PLUTO
page 6**

Sun	Mon	Tue	Wed	Thurs	Fri	Sat
Indoor Meeting @ 7pm UNT Health Science Center, Research and Education Bldg., Room 100 3500 Camp Bowie Blvd., Fort Worth, TX (just north of FWMSH) Scheduled Program: A presentation by Paul Derrick of CTAS. Travelers' Advisory: The Zodiacal Light is visible in northern latitudes in East before morning twilight for two weeks beginning September 21 st .					1	2  Copper Breaks Star Walk
3 Smart-1 Lunar impact (12:41am local)	4  Labor Day	5	6	7 Full Moon Uranus 0.4° North of Moon	8	9
10	11 	12	13	14 Last Quarter Moon	15	16 Okie-Tex Star Party Begins
17	18	19  FWAS Indoor Meeting	20	21  Star School* Ark-La-Tex SP Begins	22 Autumnal Equinox 11:03pm New Moon	23  3RF Public Star Party
24 Okie-Tex Star Party Ends	25	26	27	28	29	30  Museum Star Party 1st Qtr Moon

"Plutotally* absurd!" is what Allen Stern, lead investigator of the **New Horizons** probe *might have said* if he wasn't spewing venom immediately after the vote by 454 astronomers (out of 2500 attending) who stayed for the final vote. "There are over 10,000 professional astronomers in the world, and for only 5% to vote on this is absurd."

Stern, in charge of the robotic probe on its way to Pluto, said the language of the resolution is flawed. It requires that a planet "has cleared the neighborhood around its orbit." But Earth, Mars, Jupiter and Neptune all have asteroids as neighbors. Jupiter has "50,000" Trojan asteroids, which orbit in lockstep with that planet.

FWAS

P.O. Box 150671
Fort Worth, TX
76108
fortworthastro.com

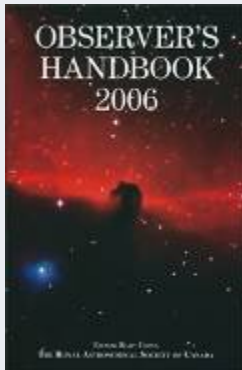
Downloadable sky maps

Sky & Telescope
<http://skytonight.com>

Heavens Above
www.heavens-above.com

Sky Maps
<http://www.skymaps.com/>

Watch the e-group
for Galilean moons in
1-2-3-4 order.



Observer's Handbook

This compact field guide will be available for pre-order in October. Price is dependent upon how many are ordered through FWAS. Past years' have been \$20.00. To order yourself is \$25.95 + \$4.00 S&H

See Harry Bearman for
details

Club Outreach & Networking

UTA – Doug Christianson, Patrick McMahon, Russ Boatwright and other club members set up their equipment in conjunction with other regional clubs for a public star party for the ALCON 2006 convention on Friday, August 3rd. During the star party, the convention's vendors' room was also open for anyone who cared to go and have a look around. All of the reporting participants and attendees said that the convention was an event that they won't soon forget.

Museum – On August 12th, FWAS held its monthly star party at the Fort Worth Museum of Science and History. The waxing gibbous moon and the Jovian system were prominent features of the night sky. The 200+ guests were also given the chance to split several doubles. Jim Walsh had his new Obsession set up with binoculars; and he got ahh's and ooh's from other club members as well as the general public. After several steady hours of the "parade of guests" club members were able to interact with each other, compare equipment, new toys, and solve all of the world's problems.

Lake Whitney – On August 26th, FWAS' Thomas Williamson and his motley crew of musicians entertained at the CTAS & LWAA annual BBQ and star party at Lake Whitney. The afternoon and early evening had several speakers on such subjects as summer targets and updates on Jupiter and on UT's research on white dwarfs. FWAS' & Noble Planetarium's Linda Krouse was the keynote speaker.

Outreach Opportunities:

September – Dinosaur Valley Star Party – email Scott McDonald off list for more info.

September 2nd - Copper Breaks Star Walk – at Copper Breaks State Park. Moon and Summer Triangle. Repeats 10-14. More info: <http://starwalk.org>.

September 23rd - 3RF Public Star Party – at Comanche Springs Dark Sky Campus (12 mi. WSW of Crowell, TX. Repeats 10-21, 11-18, and 12-16. More details at www.3rf.org.

September 30th - Museum Star Party – at the Fort Worth Museum of Science and History. It is usually set up in or near the NW corner of the north parking lot. Repeats: 10-28. (Contact: Louise Greve)

This Month's Sky

Smart-1 Impacts the Moon – On the 2nd/3rd, go to: <http://tinyurl.com/gs8h6>

The Moon Points the Way – On the 5th, Neptune is 3° North of the Moon. On the 7th, Uranus is 0.4° North of the Moon. On the 18th, Saturn is 2° South of the Moon. On the 23rd, Mercury is 1.8° North of the Moon.

Doubles of Jupiter – Shadows Transit - On the 7th @ 9:59pm local and again on the 15th @ 12:37am local. **Satellites Transit** – On the 22nd @ 1:18am local.

Three minor meteor events – go to <http://amsmeteors.org/showers.html>

Also Coming up for Pre-Order

- Guy Ottewell's 2007 Guide
- Astronomy Magazine 2007 Calendar

These are available at much better pricing through the club, than individually.

Random Points of History for September

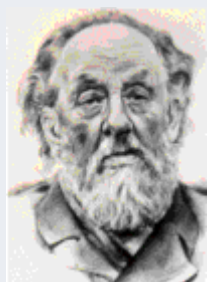


Hartmann



G. D. Cassini

Wigged portraits from the Age of Enlightenment all look the same.



"The Earth is the cradle of humanity, but one can not live in a cradle forever!"

--K.E. Tsiolkovsky

9th – In 1975, the USA's Mars Orbiter/Lander **Viking 2** was launched. Viking 1 and 2 were designed after the Mariner spacecraft. The Landers had experiments to find microorganisms, but the results were inconclusive. They did send back panoramic views of the Martian landscape. The orbiters mapped the planet's surface.

9th – In 1978, the USSR's Venus Flyby/Lander **Venera 11** was launched. It landed on Venus on December 25th of that year, and returned 95 minutes of data. The imaging systems failed

10th – In 1960, the coolest rocket plane ever the **X-15** flew at 2100 mph at an altitude of 80,000 feet. The X-15 aircraft made a total of 199 flights over a period of nearly 10 years from 1959 to 1968. It set unofficial world speed and altitude records of 4,520 mph (Mach 6.7) and 354,200 feet. Information gained from the highly successful program contributed to the development of the Mercury, Gemini, and Apollo spacecraft and the Space Shuttle program.

12th – In 1959, The USSR's Lunar Hard Lander **Luna 2** launched. Luna 2 was the first spacecraft to impact the surface of the moon on September 14, 1959. In 1970, the USSR's Lunar Lander **Luna 16** was launched. It landed on September 20, 1970 at Mare Fecunditatis located at latitude 0°41' S and longitude 56°18' E. 100 grams (~3 ounces) of lunar samples were returned to the Earth. It returned on the 24th as the first automated robot to return to Earth.

13th - **Johannes Franz Hartmann** (d. 1936) in Goettingen, Germany. He became one of the leading astrophysicists of his time. His main work was on defining standards for wavelengths as well as in instrumentation (microphotometer). He developed a method of testing telescope lenses, which is named after him. In 1904 he discovered spectral absorption lines that indicated the existence of interstellar gas and dust. He developed a theory on Novae and discovered that the "minor planet" Eros is not a spherical body. A number of his papers submitted to The Astrophysical Journal are available from the NASA Astrophysics Data System Home Page.

14th - **Giovanni Domenico Cassini** (d. 1712) in Paris, France. Like another Italian, he did early side work in designing fortifications. Worked with all the Big Dogs of The Day, building on their work, and laying groundwork for others as well. Independently discovered the Zodiacal Light and correctly assumed it to be made of a multitude of minute particles (he also assumed the Zodiacal Light to be the pointer from the Star of Bethlehem to the stable in the Gospel of Matthew), Computed the rotational periods of Jupiter and Mars. Discovered the light-time effect; and of course the Cassini Division in Saturn's rings. G.D. Cassini is also referred to as Cassini I, as he established an astronomy dynasty of three more generations, each an accomplished astronomer.

17th - **Konstantin Eduardovitch Tsiolkovsky** (b. 1857) in the Russian village of Ijevskoe, Ryasan Province. THE Rocketry Pioneer. While novelists dreamed of space travel, Tsiolkovsky worked on the math of how-to. Have you read in the techie news this year about a fantastical proposal for a Space Elevator? This guy crunched the numbers for it over a hundred years ago. The early German and American rocketeers studied Tsiolkovsky's papers. These bios are must-reads: <http://tinyurl.com/q7t49>, <http://tinyurl.com/qklcs>, and <http://tinyurl.com/lwf8v>.

28th - **Edwin P. Hubble** (d. 1953) in San Marino, California, USA. In the 1920s, Albert Einstein stated, "I have made my greatest blunder." This pronouncement came when Edwin Hubble demonstrated that the universe was not static and Einstein's cosmological constant was not necessary. Utilizing improved telescopic instruments; he was also able to confirm that those "fuzzy" objects astronomers had seen for years were in fact other galaxies.



In Memoriam

George Maxwell Ruede, 1923 - 2006

George Ruede passed away quietly in the company of his family on Monday, July 31, at the age of 82. A native of Omaha, Nebraska, George served as a naval officer in the Pacific during World War II, reaching the rank of Lieutenant Junior Grade, receiving commendation for cool-headedly keeping his ship on course during a powerful typhoon. On the G.I. bill he earned a Bachelor of Science degree in Business Administration and a Master of Science in Geology. George's career with the U.S. Army Corps of Engineers placed him in the center of many projects that positively affected the lives of Texans: Trinity River flood control; dam design, construction and improvement at Waco, Granger, Aquilla, Cooper, and Sulphur Springs; upper Brazos Valley water desalination affecting Garza, Kent, Stonewall, King, and Knox counties; and research on radioactive ground water pollutants at Carswell Air Force Base. Beyond his passion for geology, George had a gift for understanding and repairing mechanical things, and he was an avid lover of history, astronomy and the fine arts. He was a past president of the Youth Orchestra of Greater Fort Worth and the Fort Worth Astronomical Society. He loved animals, wild and tame, and was a devoted family man.



A scientist to the last, George donated his body to the Texas College of Osteopathic Medicine, University of North Texas Health Science Center, in Fort Worth. He requested that there not be a formal funeral.

Survivors: George is survived by his wife, four children, five grandchildren, and four cats.

The family wishes to express deepest thanks for the many cards, calls, and gifts received, and for the skillful and loving care of Community Hospice.

Imagers' Gallery

Steve Tuttle (FWAS) has been busy this month. These were shot from his backyard; and his capture and process spec's are in the captions.



NGC 891 is an edge-on barred spiral galaxy about 30 million light-years away in the constellation Andromeda. It was discovered by Caroline Herschel in August 1783. ▶

◀ **M13** (The Eagle Nebula) An active star forming region some 7,000 light-years away in the constellation Serpens, close to the borders to Scutum and Sagittarius.



IAU Resolution Pluto

There was a lot of interested banter.

The Consensus:

Pluto
Loses

Be sure to check the e-group archives for this lively discussion.

Trista's old planetary mnemonic has Officially been replaced by Loren's Mnemonic:

**My
Very
Educated
Mother
Just
Served
Us
Nachos**

The Official Text Direct from the IAU webpage...

"The IAU members gathered at the 2006 General Assembly agreed that a "planet" is defined as a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape, and (c) has cleared the neighbourhood around its orbit.

This means that the Solar System consists of eight "planets" Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. A new distinct class of objects called "dwarf planets" was also decided. It was agreed that "planets" and "dwarf planets" are two distinct classes of objects. The first members of the "dwarf planet" category are Ceres, Pluto and 2003 UB313 (temporary name). More "dwarf planets" are expected to be announced by the IAU in the coming months and years. Currently a dozen candidate "dwarf planets" are listed on IAU's "dwarf planet" watch list, which keeps changing as new objects are found and the physics of the existing candidates becomes better known.

The "dwarf planet" Pluto is recognized as an important proto-type of a new class of trans-Neptunian objects. The IAU will set up a process to name these objects.

Below are the planet definition Resolutions that were passed:

RESOLUTIONS

Resolution 5A is the principal definition for the IAU usage of "planet" and related terms.

Resolution 6A creates for IAU usage a new class of objects, for which Pluto is the prototype. The IAU will set up a process to name these objects.

IAU Resolution: Definition of a Planet in the Solar System

Contemporary observations are changing our understanding of planetary systems, and it is important that our nomenclature for objects reflect our current understanding. This applies, in particular, to the designation 'planets'. The word 'planet' originally described 'wanderers' that were known only as moving lights in the sky. Recent discoveries lead us to create a new definition, which we can make using currently available scientific information.

RESOLUTION 5A

The IAU therefore resolves that "planets" and other bodies in our Solar System be defined into three distinct categories in the following way:

(1) A "planet"¹ is a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape, and (c) has cleared the neighbourhood around its orbit.

(2) A "dwarf planet" is a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape², (c) has not cleared the neighbourhood around its orbit, and (d) is not a satellite.

(3) All other objects³ except satellites orbiting the Sun shall be referred to collectively as "Small Solar-System Bodies".

¹ The eight planets are: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune.

² An IAU process will be established to assign borderline objects into either dwarf planet and other categories.

³ These currently include most of the Solar System asteroids, most Trans-Neptunian Objects (TNOs), comets, and other small bodies.

RESOLUTION 6A

THE IAU FURTHER RESOLVES:

PLUTO IS A "DWARF PLANET" BY THE ABOVE DEFINITION AND IS RECOGNIZED AS THE PROTOTYPE OF A NEW CATEGORY OF TRANS-NEPTUNIAN OBJECTS. IT IS FURTHER RESOLVED THAT DEAN CRABTREE'S BELLY IS NO LONGER RECOGNIZED AS A PLANET.

Ancient Skies

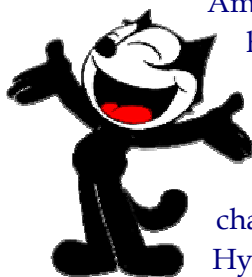


Harry Bearman
Mythologist, MSB

Harry Bearman is FWAS' Oral Historian and Storyteller. He revives the tradition of the Oral Historian as he tells the myths and legends that explained the night sky to the Ancients and their place in the world.

Harry also points out sky treasures unknown to the Ancients.

It's Felis, The Wonderful Cat!



Amongst the animals, heroes, and everyday objects in our heavens are three cats. Let's see, Leo, Leo Minor, and what's the third? It's Felis, The Wonderful Cat!

And just where can you find him now? Problem is he's more of a Cheshire cat nowadays. He's vanished off our charts. Too bad. He'd be sitting right under one of he Hydra's loops.

Joseph Jerome le Francais de La Lande, said "I am very fond of cats. I will let this figure scratch on the chart. The starry sky as worried me quite enough in my life, so that now I can have my little joke with it." Though Le Lande produced no charts with Felis on them, his friend Johann Bode did in his 1801 "Uranographia."



I'm afraid though that Joseph Jerome and Johann picked a poor place to set the little kitty. There's not much there for him (or her) to play with. There's hardly a galaxy, cluster or nebula to be had, except for giant telescopes.



Of all of the so called "Obsolete Constellations," this one is my personal favorite. Leaving out constellations such as the Northern Fly and the Leach were good deeds done by the then newly formed International Astronomical Union (IAU) in 1930. I do think they could have kept the cat, and ditched the Air Pump though.

(No it's not a typo. "Felis" is Latin for "cat" and the "x" you're looking for was a literary device.)

Another useless piece of useless trivia:

Have you noticed that the defined boundaries of the constellations do not parallel the RA and Dec lines on our modern charts? That's because the epoch the IAU chose to define those boundaries was 1875. The precession of the equinox has rotated the grid systems.





Lost in Space

NASA reported in early August that they have misplaced 7 boxes of raw data recordings of visual, audio, and biometric telemetry recordings of the Apollo 11 moon walk. They have searched for the missing materials for over a year. NASA does wish to assure the public that they have lower resolution copies of all of the missing goodies.

Who wants to lay odds on whether the boxes are tucked away in a forgotten closet, or tucked away in a private collection?

As of August 24th the search has been ramped up from a casual lookie-see to a full investigation.

"We've kicked off an exhaustive search," said Dolly Perkins, Deputy Director-Technical at the NASA Goddard field center in Greenbelt, Maryland. "We are pulling every record we can find that has any link to the handling and storage of Apollo records."

"All of the important technical, biomedical and the scientific information from the Apollo landings was transmitted in real time to Mission Control in Houston, recorded and was preserved," Perkins noted. "Those data are not lost, and are in fact secured in the nation's archives." she said.

GETTING THERE IS HALF THE FUN!

-- Danny Arthur (FWAS)

We all have our favorite celestial objects and we have our favorite ways of finding them. Some prefer automation and some prefer star hopping. Each to his own. Within the framework of star hopping, we star hoppers have our favorite ways of finding different objects.

Usually we just look up and find the spot in relation to a particular triangle of stars or some other geometric figure and point your Telrad where it should be. But sometimes, I make a little journey of it and enjoy the view.



Though one can see M8 with no optical aid, my favorite way to get there is to take a tour from the spout of the teapot of Sagittarius over to the only two globular clusters in our galaxy that I know of that can be seen at the same time through a telescope. They are NGC 6528 and NGC 6522. NGC 6522 is the larger of the two though it is only 2 minutes of arc across. They sure look nice together in this rich star field. I hope they both make it through the galactic plane in good shape.

Next I head north to a wonderful dark nebula Barnard 86. It is nestled in this glorious star field right between NGC 6520, a small open cluster and a beautiful orange-ish star. On a good night at our site this dark nebula looks very nice through the club's 12.5-inch scopes. If you get the chance, try it with as big of a scope as possible. You'll like what you see!

There are two more globular clusters on the tour to M8. They are NGC 6553 and 6544. They are two minutes and one minute of arc across respectively. Their setting in this rich star field is what sets them apart. They mostly look nebulous to me.

And then our journey ends at the beautiful Lagoon Nebula, a feast for those looking for beauty amongst the stars. The dark nebula cutting across it makes looking at this nebula special for me.

In the future, I'll be sharing other journeys I make instead of just pointing the telescope right at an object. After all, getting there is half the fun.

3 Rivers Foundation

September 23rd - public star party at the Comanche Springs Campus.

Maps at <http://tinyurl.com/os8r7> & <http://tinyurl.com/qkfw5>. More info on all of 3RF's programs may be found at <http://www.3RF.org> Or contact Larry Smith @ 940.684.1670 or at info@3RF.org.

Okie-Tex Star Party – September 16 – 24th, 2006

If you're not already registered, it's too late.

Ark-La-Tex Star Party - September 21-24, 2006

The Red River Astronomy Club will host a four day Star Party beginning September 21st and concluding, Sept. 24th, 2006 on club property located 13 miles west of Nashville, Ark. The Star Party will have dark skies, plenty of camping space, vendors (Rex's Astro Stuff), PhD and amateur presentations, meals, T-shirts, swap meet, showers, electricity, door prizes, and if cloudy, movies on a 72 inch screen indoors. For more information, and to register on-line, go to: <http://www.rrac.org/starparty/2006starparty.html> or <http://tinyurl.com/glktt>



Launch Velocity

How much more energy (in relative terms) does it take to launch a payload to the west, or to the poles (N or S) rather than to the east?

The difference is the Earth's rotation, which is 460m/s times the cosine of the latitude. Launching due east from the equator gets you a free 460m/s contribution toward the final orbital velocity. Launching due north or south eliminates that freebie. Launching due west adds 460m/s to the necessary velocity. Orbital velocity is about 8km/s, so the difference is not huge but is quite noticeable. This is why spaceports are at the lowest possible latitudes and maximum payload is had by launching due east.

Constellation School @ Weatherford Observatory

John Dowell continues to hold his constellation school at various times in the Fort Worth area. Early Summer classes were at the Casino Beach Park on Lake Worth. The August class was held at John's place in Weatherford and held in conjunction with his mirror grinding class. John likes to share "The Powdered Sugar Doughnut Nebula" which is his favorite DSO, (M57). "Depending on the scope and the eyepiece, it might be a Little Gem out of a six-pack from the corner store, or it might be one of the big ol' honkers from the doughnut shop."

These informal classes are an excellent opportunity to learn and improve star-hopping skills in a small group setting, as well as for learning the night sky in a semi-dark setting.

The **September 21st** class is scheduled to be at John's Weatherford Observatory as well. Watch the e-group for directions and maps.

Fort Worth Museum of Science and History

Now Showing:

(For show times: <http://www.fwmsh.org/home/index.html>)

- **Riders in the Sky: A Tale of the Southwest** (*Noble Planetarium*)
- **Ride!** (*Exhibits*) Complements the **Riders in the Sky** show. Ends Oct. 1st.
- **Ride Around the World** (*Omni Theatre*) Ends Oct. 1st.
- **MindFest–Trip the Light Fantastic!**–Sept. 8 & 9, see website for details.
- **The Ant Bully** (*Omni Theatre*) Ends Sept. 28th.
- **Risk!** (*Exhibits*) Ends Sept. 17th.
- **The Place Where Life Began** (*Exhibits*) Ends Sept. 4th.
- **access/ABILITY** (*Exhibits*) Ends Sept. 10th.
- **Traits of Life in ExploraZone[®]** (*Exhibits*)

The Agent Deep-Star Corundum:

--Our reporter in the field filed this report:

I noticed that the flowerpot on my back step had been moved. That told me that Deep-Star wanted a meeting. After being sure I wasn't followed, I found myself on an unnamed level in an unnamed parking garage. I got out and waited by the car. Soon, there was a voice from the shadows.

"So you have worries?" queried Deep-Star.

"Yes, we all do." I replied, "We fear that we will lose our treasure, and then we will lose our way." I tried to peer into the darkness to make out the speaker's form; but as usual, I failed to discern any features at all, I couldn't even recognize the voice.

"Do you have news for us?" I asked and was answered with "I want you to remember the story of the Phoenix."

"The seafood enchiladas?"

"No," sighed Deep-Star "stay on task. Instead, I want you to think about a new dome West of the Cowgirl Museum. Thirty-six, perhaps forty feet across, and in it will be featured a Texas Stars Exhibit. Do you understand?"

Suddenly I had a million questions but like a child, "Uh, huh." was all I could muster. Finally I squeaked out, "Projector?"

There was a pause.

"Carl Zeiss hybrid."

(stay tuned for further details of this on-going investigative report)



Ron Chrisman



The Power Mag Wheel

FWAS

P.O. Box 150671

Fort Worth, TX

76108

fortworthastro.com

My Little Red Wagon

Prime Focus asks about members' new Toys. This month, Ron Chrisman shares.

PF: What did you get?

My new gear is a Power Mag Wheel (PMW) made by Harry Siebert of Siebert Optics. I use it attached to AP/Baader Mark V binoviewers, primarily with a Celestron 9.25 SCT on equatorial mount. The Power Mag Wheel is similar to the Denkmeier diagonal allowing magnification switching, but the PMW is much more flexible. Harry Siebert put the optics on a rotating wheel (similar to a filter wheel) sealed against the elements. You just dial in one of five settings for magnification changes. My model does .6x reduction, 1x, 1.5x, 2x, and 2.5x.

PF: What other toys did you look at, and why did you decide on this one:

I like to buy the best and cry only once rather than buy something lesser quality and have to resell and trade up later. So I went for the best binoviewers in the Mark V but didn't want to buy multiple sets of eyepieces for magnification changes, and that's where the Power Mag Wheel comes in.

PF: How long did you want it and did you sell any of the neighborhood children to get it?

I wanted it as soon as I spotted it on the Siebert web site: <http://www.siebertoptics.com> It comes in various configurations based on how many magnification elements you want and what type of scope you have. Best of all, it is user configurable at any point in the future--if you get a different scope and need a different magnification scheme, you just swap out the optics much like a filter. I did have to sell off some other hobby items to reallocate funds for this set up :)

PF: Now that you've played with it, are you still thrilled with it?

Yes! Using only a pair of Siebert 24mm wide-angle eyepieces, I can now roam the sky from 0.6x focal reduction to 2.5x power and never have to change eyepieces. Once I have a planet or Messier object in view, I just turn the dial to the next setting to magnify. Not parfocal with each dial setting unfortunately, but easily refocused with just six turns of the scope's focus knob for each magnification setting.

Last Saturday night I roamed Ophiuchus, Aquila, and Sagitta, as well as viewed Jupiter. The night was so good I dialed right up to 2.5x on Jupiter (about 300x on my scope) and the view was still detailed and crisp. Globulars, open clusters, double stars, and Dumbbell Nebula all were framed at just the right magnification I needed with the turn of a dial.

PF: What do you have your eye on for your next accessory acquisition?

Wing eyecups for the binoviewers esp., I need to block peripheral light in my backyard.

PF: What nifty thing does your toy do that you want to tell and I'm too dumb to ask about?

It's not just for binoviewers but can be used with single eyepieces too. I can use it with a refractor on an alt-az mount and now never need to rebalance the scope, as you normally have to do when changing out heavy versus light eyepieces. No changing now! It's like having a click-stop zoom lens with one setting for focal reduction too.

Do you have a new Astro Toy? Let us know and tell us about it.
fwas.primefocus@comcast.net



Tree's Top Ten

Other Things that Neil
Armstrong Could Have Said
When He Stepped on the
Moon

10.
One small step for man.
Ten million frequent flyer
miles for me.

9.
Jeez, what a dump!

8.
That's one small step for
man, once giant leap for
my sock puppet Tinky.

7.
A special thank you to my
Aunt Betty who knit us
these lovely space socks.

6.
Hey, Doris Blassingame of
Montclair High School --
remember when you
wouldn't go out with me?
Well, look at me now --
I'm on the moon!

5.
I'd like to give a shout
out to all my homies on
the planet Earth.

4.
Visa -- it's everywhere
you want to be. Hey, I
just made 5 million
bucks!

3.
Aieeee! Moon weasels!

2.
Holy Crap!

1.
**Okay, I stepped on it --
now let's get the hell
outta here!**

Stargazers' Diary

-- Russ Boatwright & Doug Brown (FWAS)

July 7-8, 8-9, 2006 - Annetta South Star Site / FW Museum - 4/10 – a whole lotta moon

This weekend's star gazing was the most memorable bad sky astronomy experience I've ever known. I'd long since stopped trying to do any observing under much moon, given the futility of it and all. But Friday night, with nothing else much on my social calendar, I asked Doug Brown over to the Star Site to tinker with our scopes under an almost full moon. We took the obligatory high power moon walks over Luna; always impressive. I always imagine that this 400x view through Maytag's 16 inches is a lot like what Mike Collins experienced from his Apollo orbiter while he was waiting for the return of the Away Team on the surface. If the moon had vegetation, then it would almost be tree top level.

This activity was interrupted by the spectacular pass of the ISS- shuttle combo. It was perhaps the best artificial satellite event I've ever witnessed. I was so mesmerized by it, that I just watched it blink out with my naked eyes, while my binos and telescope stood nearby (d'oh!).

Still, even more surprises were in store for this night. We started playing with various EPs and filters on DSO targets on the other side of the night sky from the moon. Medium power and an OIII filter on bright objects were remarkably satisfying visually on certain objects, such as the Dumbbell nebula (M27). The filter did a great job of soaking up moon glow and providing a dark background for some contrast. Prior to this, I'd only dared look for double stars and open clusters under moon wash. Emboldened by this experience, we next dared a peek into Sagittarius; even with the big moon only a few degrees away. We could detect hints of nebulosity on the Lagoon (M8) and Swan (M17), but just barely. However, two of my favorite globs, NGC 6522 & 6528, together in the same FOV near the teapot spout, were surprisingly bright with Luna right next door.

Saturday evening, Doug and I took in a Rangers game in Arlington prior to attending the 'moon madness' star party at the FW museum. A crisply pitched game got us out under the stars earlier than we had hoped. We were greeted by a large number of scopes and personnel, courtesy of FWAS, and a big and appreciative crowd. These are always a great opportunity for public outreach as well as a good bull session with other astronomers. Plus, it's a great chance to view the same targets (in this case, the moon and Jupiter) through a variety of instruments. I would recommend it for anyone in the market for a new scope; a test drive through the most common scope types and apertures.

After the party, Doug and I retired to the Star Site for an adult beverage and to ponder our good fortune at enjoying a great weekend under a less than pristine sky. And while it's still true that moon light makes for difficult viewing, it's certainly not impossible.

Photometry

In August's meeting Ron McDaniel gave a talk on CCD imaging and photometry and how it pertains to the study of variable stars. He spoke on the use of comp or companion stars (within the same FOV) as a standard by which one logs the changing luminosity of the variable study star. "Of course, you've got to check your comp star to be sure you haven't chosen another variable by mistake. That would throw all your data out." Ron said.

The study of variable stars is pretty much a large group effort. Ron told us that there are tens of thousands of stars that are known or suspected to be variable stars, but that the professionals have neither the time nor the resources to study. And this is where amateurs make a real difference. The American Association of Variable Star Observers (www.aavso.org) maintains a database of all known and suspected variable stars, complete with charts. *(This will be continued and in greater detail in next month's PF)*

FWAS

P.O. Box 150671

Fort Worth, TX

76108

fortworthastro.com

Photo Credits:

IAU

Page 1, oddly "lit" solar system graphic

Loren Larson

Page 12, DSS

Trista Oppermann

Page 8, Danny's pic

Page 10, Ron's Pic

*Trista coined the word "Plutotally"

Siebert Optics

Page 10, P.M. Wheel

RCAS

Page 3, guide cover

MSNBC.COM

Page 1 (Pluto graphics)

Public domain

Page 3 images

AstroBoy

as the world's first anime, this robot that wants to be a boy needs no introduction

Other Credits Noted



The Fine Print

Observing Site Reminders

All members ...

- Be careful with fire
- Sign the logbook in the clubhouse
- Put equipment back neatly when finished
- Leave a log note if there is a club equipment problem; also, please contact an FWAS Trustee to let them know
- Turn out the bathroom light and close the door tightly – do NOT lock; *leave the thermostat alone.*
- Maintain Dark-Sky etiquette
- Turn out your headlights at the gate!

Last person out, please ...

- Turn off lights
- Check all doors – closed, but not locked
- Make sure nothing is left out
- Chain the gate when departing site

FWAS Contact information <http://www.fortworthastro.com>

Officers:

Trista Oppermann – President

prezzident@fortworthastro.com

John Dowell – Vice President

vicepres@fortworthastro.com

Harry Bearman – Secretary / Treasurer

sec-treas@fortworthastro.com

Meetings – FWAS meets at 7:00 PM on the third Tuesday of the month at the UNT Health Science Center – Research & Education Building, Room 100; 3500 Camp Bowie Blvd; Ft. Worth. Guests and visitors are always welcome. (Trista Oppermann)

Web Site – <http://www.fortworthastro.com>

E-Group (members only) – Post messages to the group by sending e-mail to fwas@yahoogroups.com. Any message sent to fwas@yahoogroups.com will be automatically sent to all members on the list. Send a blank e-mail to fwas-subscribe@yahoogroups.com to subscribe. Include your real name.

Outreach – items concerning FWAS Outreach activities should be addressed to FWAS' Public Outreach Coordinator at fwasoutreach@yahoo.com. (Dave Titus)

Prime Focus – The FWAS newsletter is published monthly. Letters to the editor, articles for publication, photos, or just about anything you would like to have included should be sent to: fwas.primefocus@comcast.net. (Dean Crabtree)

FWAS Annual Dues - \$40 for adults / families, \$20.00 for students (half-price Jan 1 thru June 30); checks payable to Ft. Worth Astronomical Society; payments can be mailed to P.O. Box 471162, Ft. Worth, TX 76147 or in-person at the next indoor meeting. Membership runs July 1 through June 30. (Harry Bearman)

Discount Subscriptions Available – *Sky & Telescope* (\$32.95), and *Astronomy* (1 year for \$34.00; 2 years for \$60.00). A *Sky & Telescope* subscription through FWAS entitles you to 10% off purchases at SkyTel's on-line store. (Harry Bearman)

Astronomical League Membership – Your FWAS membership also enrolls you in the Astronomical League. This makes you eligible for various observing certificates and you get their quarterly magazine, *The Reflector*. Observing clubs: <http://www.astroleague.org/observing.html> (AL liaison is Tres Ross)

Fort Worth Museum of Science and History See the Museum's website for schedules of exhibits and show times: <http://www.fwmsh.org/home/index.html> (Linda Krouse)

"Either we are alone in the universe, or we are not." -- Arthur C. Clark



Concrete telescope pads & power.
Clubhouse, restroom, picnic & camping.

Drought conditions continue!

Please be aware that a

Fire Ban is in Effect

In most of N. Central Texas,
including the Dark Sky Site.