Starscan

Johnson Space Center
Astronomical Society

Volume 26, Number 4-6 April/May/June 2010

Our March Trip to Fort McKavett

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Un mensaje del Presidente
(A message from the President)

Greetings:

OK Folks… Very sorry this is late but a lot went on the "family plate" toward the end of last month, April, May, and now June. If you can't tell, this is a compilation issue. The cool, crisp mornings have been spectacular for observing that pervaded in these months are now gone. Now as we slide into June and the Summer we have to try and observe around the clouds and sometimes thunderheads. The May 22nd star party at the LPI was an exercise in dodging "sucker holes" but all in all, it was a very successful event.

At the same time, your club needs your help. The Starscan is the club's newsletter. Certain matters have kept it from production but one of those happens to be member contributions. Anything original and written by a member has priority in being in print. The same goes for photos. We'd love nothing more than to publish the JSCAS CCD Messier compendium. However, if nothing is contributed, your editor may opt to data mine and use whatever is available and the Starscan that month can and will be as small as necessary to get the job done. It can also be as large as you want depending upon what is contributed.

The same applies to the meetings… we need door prizes, and people to step up and help with the novice talks as well as the main speaker talks. Remember, this is your club.

David Haviland

LETTER FROM THE EDITOR
By Connie Haviland

Hey Everyone!!!

I have been out exploring a different kind of space, *Inner Space*, preparing for not only our daughter's SeaBase trip in Florida this month, but possibly our trip in July. This has taken up a lot of my time and mental strength (long story, don't want to go there) so my time has been there. Now Dave has done a great job and I will be back after the trip. Enjoy this edition.

Connie Haviland

LETTER TO THE EDITOR

Dear Connie & David,

I was wondering what you would think about including information about the International Humans in Space Symposium – Youth Art Competition in an upcoming edition of Starscan. I would think this would be a good thing for the kids / student section. See information below. Let me know what you think. Thank you,

Doug Holland
Advanced Development
Systems Architecture and Integration Office
NASA / Johnson Space Center
Tel: (281) 483-3638
Email: s.d.holland@nasa.gov

Star Parties for 2010

Bob Taylor

May 22nd, 7 p.m. LPI—Moon and Planets
May/June, Date TBA "dusk" - Haak Winery
Oct 7-10th Fort McKavett!!!
Oct 15th – All Clubs Meeting (?)
Oct 16th – Astronomy Day at the George Observatory
November 20th, 7p.m. LPI—Jupiter

Need volunteers

What's Happening at the George!!!

Saturday Public Observing – All times are dusk to 11:00 p.m..Please contact the following building manager teams to volunteer:

Saturday Public Observing – All times are dusk to 11:00 p.m. Please contact the following building manager teams to volunteer:

June 05: Building Managers - Sexton/McCollum carlsexton@hotmail.com / justinmccollum@hotmail.com

June 12: Building Managers - Knauss/Rivich birdbarn2000@yahoo.com / icgalaxies@cs.com

June 19: Building Managers, Lockwood/Kingsley mplockwood@att.net / gnjkingsley@att.net (TSP)

June 26: Building Managers, Lockwood/Mills mplockwood@att.net / k5jmm@yahoo.com (TSP)

May 22:

June 19th, 10 a.m.–1 p.m. – Seasons

July 17th – 10 a.m.–1 p.m. – Comets

For more information e-mail Spaceday@lpi.usra.edu or call 281-486-2106.

For more information, go to
http://www.lpi.usra.edu/education/space_days/
Or call Katy at (281) 486-2106
3600 Bay Area Boulevard, Houston, Texas

[Dear fellow astronomers]

I am pleased to announce the opening of the International Academy of Astronautics Humans in Space Symposium Youth Art Competition! Please learn about the Competition by visiting www.humansinspaceart.org You can also use a more direct link http://www.dsls.usra.edu/meetings/IAA/artContest/ to the competition.

This online competition invites children aged 10-17 years old to express what they think about the future of human space exploration via literary, visual, musical or video art. Artists' entries must be received by September 30, 2010 in order to participate in the competition. The winners will have their art displayed in an online gallery and will be invited to attend the Humans in Space Symposium in Houston, TX in April 2011. Please tell any youth who might be interested about the Art Competition and encouraged them to submit an entry!

Also, as you know, the competition must be very well advertised worldwide, or it will not be a success. Thus, if you don't mind, please email out the competition website link to all education groups, schools, space-associated entities, youth organizations, arts groups, businesses, community groups, etc. Please also forward the attached flyer, either as is or after adapting it to be more suitable for your local environment, so that people receiving your email can have a printable announcement to put up on bulletin boards or to hand distribute. Please feel free to also print out flyers yourselves to manually distribute or post for display.

Thank you in advance for your effort to advertise the Art Competition. I sincerely hope that we will have children participating from around the world in this competition.

Jancy

Jancy C. McPhee, Ph.D.
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Human Research Program
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SEE NEXT PAGE FOR THE FLYER

BE INSPIRED

BE CREATIVE

BE HEARD

Announcing the Opening of

The Humans in Space Symposium International Youth Art Competition

What is the future of human space exploration, and *why* is it important?

Witness, shape and participate in the "Next Golden Age of Human Space Flight"

Who: 10-17 year olds anywhere in the world

How: Express yourself through:
- Visual Art
- Literary Art
- Musical Composition
- Video Art

When: Submit your entry by Sept. 30th, 2010.

Why: Win and have your art displayed in the Online Gallery and be invited to come in person to display your art at the April 2011 Humans in Space Symposium in Houston, Texas. See for yourself what is happening right now in human space exploration. Meet current human space exploration leaders, including astronauts and scientists. Show them what *you* have to say!

Visit www.humansinspaceart.org to enter and submit your art!
[Direct website address is: http://www.dsls.usra.edu/meetings/IAA/artContest/]

Introducing: The Greater Houston Astronomical Coalition
From Bram Weisman (bram@weisman.us)

Fellow Astronomers,

On Feb. 5 a small group of dedicated persons met to discuss common issues that arise in trying to manage community outreach. Those present were Aaron Clevenson (NHAC), Alan Rossiters (HAS), Jimmy Newland (FBAC), Ron Sterlekar (JSCAS), Mahfuz Krueng (HAS) and Bram Weisman (HAS).

What prompted this meeting was the realization that several of the clubs have overlapping membership and that the members have a vast and overlapping geographical arrangement. Thus, we really don't have distinct territories for outreach. Several of the clubs are struggling with outreach coordination. Even within our own organizations, it is difficult to keep up with event particulars and who has RSVP'd. At times we are strapped for volunteers and look to our neighboring clubs for support, especially when we perceive the event to be close to their membership.

Many of us don't feel competitive about outreach. We simply like to do it, and we like to help the other clubs when we can. We're not shy about asking for help when we are coming up short. If we pool our resources (members), ultimately we can serve the public better because we have better chances of finding people to do events at various places and times. For this purpose, we created the Greater Houston Astronomical Coalition (GHAC). All that was needed to complete the package was a shared tool for outreach coordination. We think the best tool for that is the Night Sky Network (NSN). We now have a GHAC account on NSN which anyone in the Greater Houston area can join.

Some features of the NSN calendar and event entries:

* Volunteer RSVP section so we can see which events need more support
* A map of all event locations, so we can see geographically which events we can respond to.
* Publicly search-able, but details of events can be private (for club members only)
* Sunset time, skymap and weather for each event location
* Communications options (you decide which ones you want):
    - o Event announcements by e-mail
    - o Event cancellations by e-mail
    - o Event cancellations by text message
    - o Event cancellations by phone (not sure if it's automated)
* Google map directions to each event

Benefits to your group:

* No more digging through e-mails to figure out who RSVPd
* A single repository for all pertinent event info
* Access to a library of materials to help you with outreach
* A larger pool of volunteers to help cover events which might otherwise stretch your limits

Benefits to the public:

* One place for the public to request outreach events in the Greater Houston Area, rather than contacting each club separately to try to figure out who can help them.

Ordinarily, your club would have to apply to NSN to have your own club account, but GHAC is different. NSN membership is not required. NSN membership has a few other advantages, so we don't know why you wouldn't apply.

NSN membership brings additional benefits including:

* Increased club exposure
* A calendar dedicated to your club for your club specific events (but we recommend scheduling all outreach on the GHAC calendar).
* Rewards for outreach including Outreach Toolkits and Service Pins
* Free outreach handouts (posters, CDs, pins, flash cards, lithographs, etc.)

Whether you sign up for GHAC, join NSN as a club, or both, the cost for this service is the same. It's FREE! So, if this sounds good to you please register in the GHAC account. Aaron or I will promote you to "active member" usually within the same day. If you are the outreach coordinator for your club, let us know and we'll make you a club coordinator in the GHAC account. If you are an outreach coordinator, we can add your club name and link on the GHAC info page upon request, similar to HAS and NHAC. And if you decide as a club to apply for NSN membership, we can help you setup your club's NSN info page to point to GHAC for outreach requests. If you have any questions, feel free to contact Aaron or me and we'll answer to the best of our ability. The NSN administrators are also very supportive. Apply for GHAC membership here: http://nightsky.jpl.nasa.gov/club-apply.cfm?Club_ID=1240
You've really nothing to lose. If you decide you don't like participating in GHAC, you can always withdraw. But please, if you have concerns, let's discuss them and see if we can come to consensus first.

Best regards,
Bram Weisman (on behalf of GHAC)

Universe Has Billions More Stars Than Thought (Counting all of those twinkling lights in the night sky just got a lot harder.)
Wed Mar 24, 2010 03:15 PM ET | content provided by AFP
From: http://news.discovery.com/space/stars-universe-cosmos.html

THE GIST:
Astronomers could have miscounted the number of galaxies in the universe. Old, distant galaxies are often missed because their light may be obstructed. The discovery could add powerfully to knowledge about the timeline by which stars and then galaxies formed.

Figure 1: Only a small part of the light spectrum is visible to the human eye, which is why astronomers use ultraviolet, gamma and other radiation sources to observe the universe.

Astronomers may have underestimated the tally of galaxies in some parts of the universe by as much as 90 percent, according to a study reported on Wednesday in Nature, the weekly British science journal.
Surveys of the cosmos are based on a signature of ultraviolet light that turns out to be a poor indicator of what's out there, its authors say.
In the case of very distant, old galaxies, the telltale light may not reach Earth as it is blocked by interstellar clouds of dust and gas -- and, as a result, these galaxies are missed by the map-makers.

"Astronomers always knew they were missing some fraction of the galaxies... but for the first time we now have a measurement. The number of missed galaxies is substantial," said Matthew Hayes of the University of Geneva's observatory, who led the investigation.
Hayes' team used the world's most advanced optical instrument -- Europe's Very Large Telescope (VLT) in Chile, which has four 8.2-meter (26.65-feet) behemoths -- to carry out the experiment.
They turned two of the giants towards a well-studied area of deep space called the GOODS-South field.

The astronomers carried out two sets of observations in the same region, hunting for light emitted by galaxies born 10 billion years ago.
The first looked for so-called Lyman-alpha light, the classic telltale used to compile cosmic maps, named after its U.S. discoverer, Theodore Lyman. Lyman-alpha is energy released by excited hydrogen atoms.
The second observation used a special camera called HAWK-1 to look for a signature emitted at a different wavelength, also by glowing hydrogen, which is known as the hydrogen-alpha (or H-alpha) line.
The second sweep yielded a whole bagful of light sources that had not been spotted using the Lyman-alpha technique.
They include some of the faintest galaxies ever found, forged at a time when the universe was just a child.
The astronomers conclude that Lyman-alpha surveys may only spot just a tiny number of the total light emitted from far galaxies. Astonishingly, as many as 90 percent of such distant galaxies may go unseen in these exercises.
"If there are 10 galaxies seen, there could be a hundred there," said Hayes.
The discovery could add powerfully to knowledge about the timeline by which stars and then galaxies formed.
"Now that we know how much light we've been missing, we can start to create far more accurate representations of the cosmos, understanding better how quickly stars have formed at different times in the life of the universe," co-author Miguel Mas-Hesse said in a press release issued by the European Southern Observatory (ESO).
Only a small part of the light spectrum is visible to the human eye, which is why astronomers use ultraviolet, gamma and other radiation sources as additional sources for observation.

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(side note from the editor: for those who may not know of GOODS, here is a little bit about them.
GOODS [GOODS: *The Great Observatories Origins Deep Survey*] unites extremely deep observations from NASA's Great Observatories, Spitzer, Hubble, and Chandra, ESA's Herschel and XMM-Newton, and from the most powerful ground-based facilities, to survey the distant universe to the faintest flux limits across the electromagnetic spectrum. GOODS data track the formation and evolution of galaxies across cosmic time and map the history of universal expansion using high redshift supernovae. The survey covers a total of roughly 320 square arcminutes in two fields centered on the Hubble Deep Field North and the Chandra Deep Field South. It incorporates a Spitzer Space Telescope Legacy Program to carry out the deepest observations with that facility at 3.6 to 24 microns, a Hubble Space Telescope Treasury Program for deep high-resolution optical imaging, and a Herschel Space Observatory open time Key Program with the deepest far-infrared observations at 100 to 500 microns. The space-based observations are complemented by ground-based imaging and spectroscopy, including extensive commitments of ESO and NOAO observing time. GOODS public data products are extensively used by the astronomical community at large.)

Contributed by http://www.stsci.edu/science/goods/

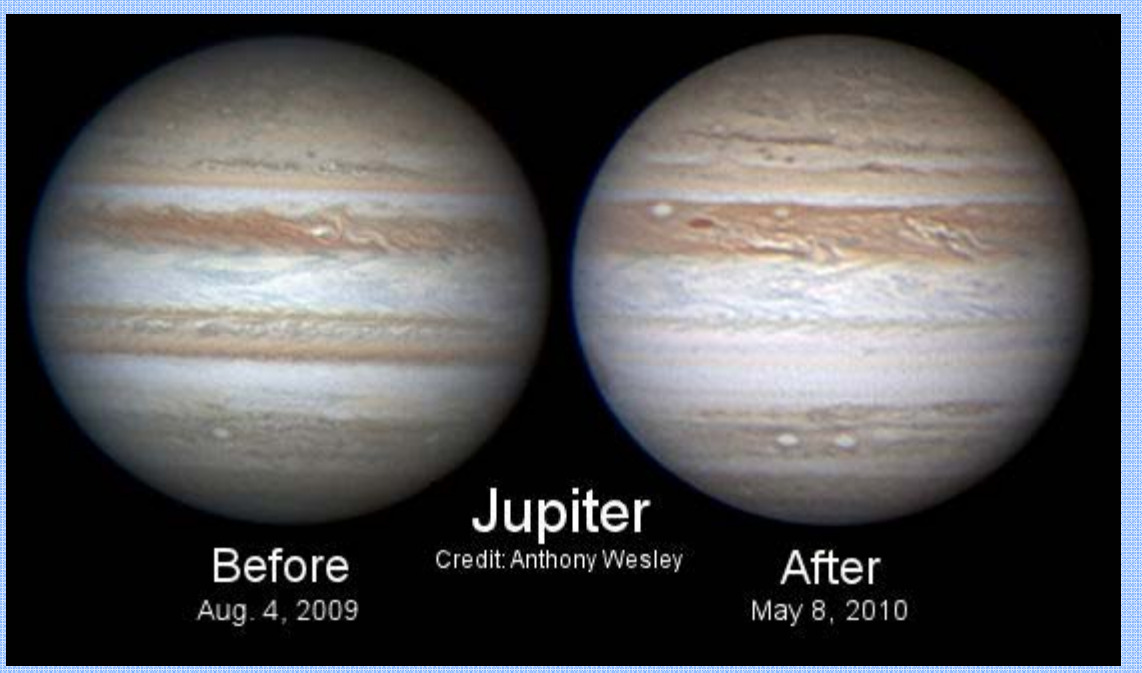
From: http://science.nasa.gov/science-news/science-at-nasa/2010/20may_loststripe/

Big Mystery: Jupiter Loses a Stripe

Lost: A giant belt of brown clouds big enough to swallow Earth twenty times over. If found, please return to Jupiter.

May 20, 2010: In a development that has transformed the appearance of the solar system's largest planet, one of Jupiter's two main cloud belts has completely disappeared.

"This is a big event," says planetary scientist Glenn Orton of NASA's Jet Propulsion Lab. "We're monitoring the situation closely and do not yet fully understand what's going on."Known as the South Equatorial Belt (SEB), the brown cloudy band is twice as wide as Earth and more than twenty times as long. The loss of such an enormous "stripe" can be seen with ease halfway across the solar system.



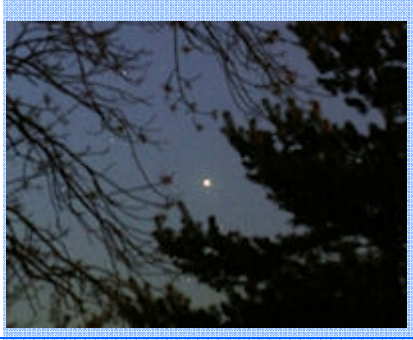
Without the SEB present, Jupiter's Great Red Spot is surrounded by almost uninterrupted white. Anthony Wesley took this picture on May 18, 2010.

"In any size telescope, or even in large binoculars, Jupiter's signature appearance has always included two broad equatorial belts," says amateur astronomer Anthony Wesley of Australia. "I remember as a child seeing them through my small backyard refractor and it was unmistakable. Anyone who turns their telescope on Jupiter at the moment, however, will see a planet with only one belt--a very strange sight."

Wesley is a veteran observer of Jupiter, famous for his discovery of a comet hitting the planet in 2009. Like many other astronomers, he noticed the belt fading late last year, "but I certainly didn't expect to see it completely disappear," he says. "Jupiter continues to surprise." Orton thinks the belt is not actually gone, but may be just hiding underneath some higher clouds.

"It's possible," he hypothesizes, "that some 'ammonia cirrus' has formed on top of the SEB, hiding the SEB from view." On Earth, white wispy cirrus clouds are made of ice crystals. On Jupiter, the same sort of clouds can form, but the crystals are made of ammonia (NH3) instead of water (H20). What would trigger such a broad outbreak of "ammonia cirrus"? Orton suspects that changes in global wind patterns have brought ammonia-rich material into the clear, cold zone above the SEB, setting the stage for formation of the high-altitude, icy clouds. "I'd love to send a probe in there to find out what's really going on." Indeed, Jupiter's atmosphere is a mysterious place which would benefit from exploration. No one knows, for instance, why the Great Red Spot is red—or what has sustained the raging storm for so many years. Neither does theory explain why the twin equatorial belts are brown, nor why one should vanish while the other remains. "We have a long list of questions," says Orton.

This isn't the first time the SEB has faded out. "The SEB fades at irregular intervals, most recently in 1973-75, 1989-90, 1993, 2007, 2010," says John Rogers, director of the British Astronomical Association's Jupiter Section. "The 2007 fading was terminated rather early, but in the other years the SEB was almost absent, as at present." The return of the SEB can be dramatic.



Jupiter beckons to amateur astronomers from the pre-dawn sky. Lyle Anderson of Duluth, Minnesota, took this picture on May 19, 2010.

"We can look forward to a spectacular outburst of storms and vortices when the 'SEB Revival' begins," says Rogers. "It always begins at a single point, and a disturbance spreads out rapidly around the planet from there, often becoming spectacular even for amateurs eyeballing the planet through medium-sized telescopes. However we can't predict when or where it will start. On historical precedent it could be any time in the next 2 years. We hope it will be in the next few months so that everyone can get a good view.

"I'll be watching every chance I get," says Wesley. "The revival will likely be sudden and dramatic, with planet-circling groups of storms appearing over the space of just a week or so." Indeed, says Orton, "anyone could be the first to spot the return of the SEB." Jupiter shines in the eastern sky before dawn: sky map. Point your optics at the "morning star" and … is that *really* Jupiter? Happy hunting!

Author: Dr. Tony Phillips | Credit: Science@NASA

From: http://science.nasa.gov/science-news/science-at-nasa/2010/04may_dawn/

How Capt. Kirk Changed the World

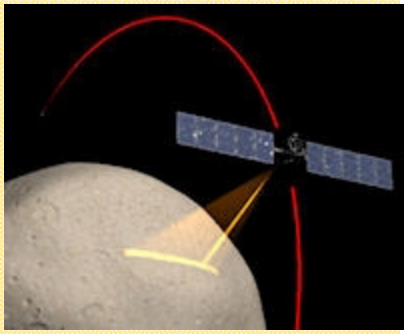
May 4, 2010: "Standard orbit, Mr. Sulu." Captain Kirk barks out the order with such confidence. He knows the USS Enterprise can slip in and out of planetary orbits with ease. But it's only easy in the realm of science fiction. In the real world, such maneuvers have been impossible --until now.

Figure 1: An artist's concept of Dawn in "standard orbit" around asteroid Vesta.

Enter Dawn, NASA's cutting edge mission to the asteroid belt. Powered with a futuristic sounding new technology called "ion propulsion," this spacecraft will perform space moves rivaling those of the Enterprise.

At this very moment, Dawn is slowly climbing away from the sun, beyond Mars, on its way to its first destination, asteroid Vesta. Dawn will enter "standard orbit" around this rocky world for a year, exploring its mysteries.

Then Dawn will do something unprecedented in real-world spaceflight: exit the orbit of one distant body, and fly to and orbit another. The second destination is asteroid Ceres. "Dawn will be the first spacecraft ever built to orbit two target bodies after leaving Earth," says Marc Rayman, Dawn chief engineer at NASA's Jet Propulsion Laboratory. "There's not even a concept for doing such a mission with conventional propulsion systems. The spacecraft would have to carry so much fuel, it would be too heavy to launch."



Instead, Dawn relies on ion propulsion, which doesn't require a huge spacecraft. Rayman first heard the term years ago while watching – you guessed it -- Star Trek.

Scotty: "I've never seen anything like it--and ion propulsion at that!"

YouTube: http://www.youtube.com/watch?v=IjR36EAR_B4 , Using solar arrays spanning 65 feet, Dawn collects power from the sun to ionize atoms of xenon.

These ions are expelled by a strong electric field out the back of the spacecraft, producing a gentle thrust. The weightless and frictionless conditions of space flight allow this gossamer force effect to build up, so the spacecraft
gains speed slowly and continuously.

"Dawn isn't exactly a hot rod," says Rayman. "It would take 4 days to go from 0 to 60. But it ultimately achieves fantastically high velocity while consuming very little propellant. It uses only a kilogram of xenon every 4 days." Typically, conventional rockets thrust for a few minutes at most before they run out of fuel, then they coast to their destination. Dawn's engines, on the other hand, are almost constantly active.

Dawn's Chief Engineer Marc Rayman of JPL. In the Youtube video, William Shatner likens Rayman to Scotty of the Enterprise. "Dawn will thrust for 5 ½ years!" says Rayman. "It's already been thrusting for 591 days. That's 62% of the time it's been in space." This means Dawn must be very fuel efficient. "A typical Mars orbiter could consume more than 600 pounds of propellants to enter orbit around the red planet," says Rayman. "With its ion propulsion system, Dawn could do it with less than 60 pounds of xenon." Add all of these advantages together and you get a spacecraft that can accomplish – well – the impossible. "Dawn is taking us, in the truest sense, up close to two distant, alien, unexplored worlds." Its destinations -- Ceres and Vesta – are two of the biggest asteroids in the solar system. Indeed, Ceres is so big, it is actually classified as a dwarf planet, and Vesta is not far behind. Yet to date they've been studied only from a great distance, so they're virtually unknown. What is known is that they're not alike. "Vesta is more like the rocky bodies of the inner solar system, one of which is right under our feet," explains Rayman. "And Ceres is more like the icy moons of the outer solar system. Scientists think it may even have a subsurface ocean of liquid water!"

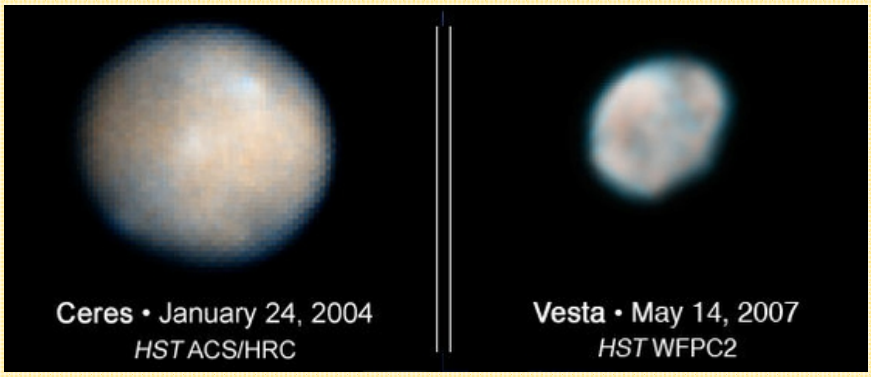


Figure 2: Hubble Space Telescope photos of Dawn's targets, giant asteroids Ceres and Vesta. Credit: NASA/HST

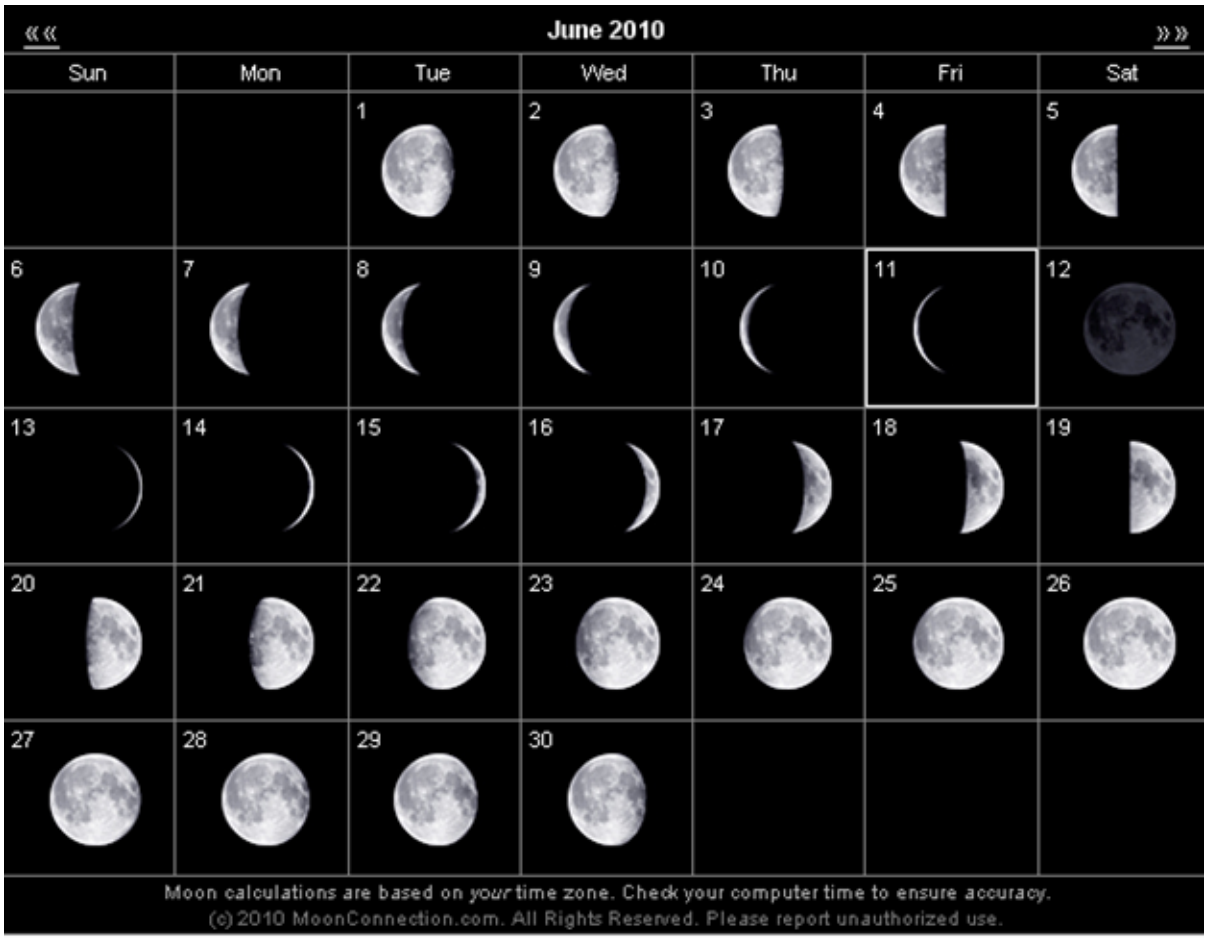
Dawn's instruments will collect data and images to uncover the secrets these two bodies conceal and perhaps reveal why they're so different from one another even though they inhabit such similar regions of the solar system. "This mission will help us understand what the conditions were when Vesta and Ceres formed at the dawn of the solar system. It will fit more pieces in the grand puzzle of how our solar system formed and evolved – and perhaps how others do as well."

Executing new cosmic maneuvers, exploring alien worlds, answering profound questions – Dawn has it all. But Rayman thinks the most compelling aspect of missions like Dawn may be that we are, in a sense, going along for a deep-space ride. "Dawn is taking us all on a virtual trip through the cosmos. It's not just a mission by the JPL team, or by NASA, or by the U.S and its partner countries. It's a mission of humankind -- something that represents all of us who share a spirit of adventure and curiosity, a passion for exploration. It's an extension of ourselves into the universe."

As one Star Trek crew member with particularly pointy ears would say -- "Fascinating."

Author: Dauna Coulter | Editor: Dr. Tony Phillips | Credit: Science@NASA

PHASES OF THE MOON FOR THE MONTH OF JUNE-2010



SUNRISE AND SUNSET SCHEDULE FOR JUNE-2010

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 Twi A: 4:47am Twi: 5:54am Sunrise: 6:21am Sunset: 8:17pm Twi: 8:44pm Twi A: 9:51pm Moonrise: none Moonset: 10:29am	2 Twi A: 4:46am Twi: 5:54am Sunrise: 6:21am Sunset: 8:17pm Twi: 8:44pm Twi A: 9:52pm Moonrise: 12:09am Moonset: 11:24am	3 Twi A: 4:46am Twi: 5:54am Sunrise: 6:21am Sunset: 8:18pm Twi: 8:45pm Twi A: 9:52pm Moonrise: 12:40am Moonset: 12:17pm	4 ◑ Twi A: 4:46am Twi: 5:53am Sunrise: 6:20am Sunset: 8:18pm Twi: 8:45pm Twi A: 9:53pm Moonrise: 1:09am Moonset: 1:09pm Last Qtr: 4:14pm	5 Twi A: 4:45am Twi: 5:53am Sunrise: 6:20am Sunset: 8:19pm Twi: 8:46pm Twi A: 9:54pm Moonrise: 1:37am Moonset: 2:02pm
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Daylight Saving/Summer Time is in effect for the entire month.

Folks:
In times past, people that have wanted to take advantage of the club discount have had to write their check, put it in with the renewal slip, and then either mail it to me at my home or chase me down at a meeting. In most cases, within a week, I have sent out the renewal. Sometimes, and I don't really mind, the renewals have gone out at my expense for the postage. Without hesitation, question, or fail, it is not the most efficient means to maintain club subscriptions. So as secretary, I'd like to try something new...

You get all your stuff ready for the subscription, whether it be Astronomy or Sky & Telescope, you keep it - you hang on to it. Email (most reliable) or tell me when you see me that you want to take advantage of the club discount for either or both of these publications and that you need a supporting letter. What I'll do is get the letter together and email the "letter from the treasurer/secretary" back to you as a PDF. You print it off, and enclose it with your renewal. For this to work your computer must have Adobe Reader (which is free) and a means to print it. I would like this procedure to become the "Standard Operating Procedure" for Astronomy/S&T discounts through JSCAS. For those still not in the computer age, we can process things as we have in the past.

Clear skies,
David Haviland

NEED A NEW CLUB SHIRT?

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CONTACT CONNIE AT:
conniescreativedesign@gmail.com

Webpage is under construction, but will be up soon and I take PayPal as well.

ACTUAL PICTURES OF WHAT I HAVE DONE BOTH LIGHT AND DARK BACKGROUNDS

Light pollution:

Any adverse effect of artificial light including sky glow, glare, light trespass, light clutter, decreased visibility at night, and energy waste.

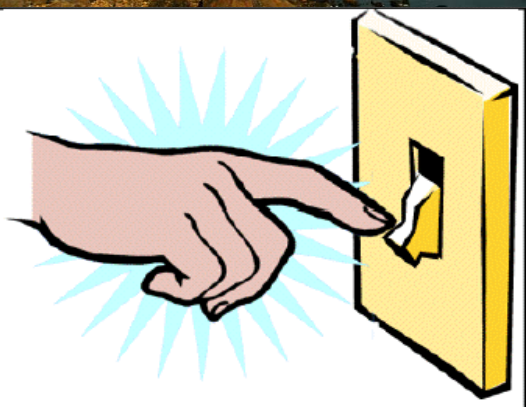
.Do you have a question about light pollution, protecting the night sky, or IDA's resources? **Get Help from IDA** http://www.darksky.org/mc/page.do?sitePageId=56399

Photograph © Phil Hart

IDA
THE LIGHT POLLUTION AUTHORITY

Help turn off the lights...

Join the
International Dark-Sky Association (IDA)
http://www.darksky.org
"To preserve and protect the nighttime environment and our heritage of dark skies through quality outdoor lighting."



Houston Area Astronomy Clubs

Brazosport Astronomy Club
Meets the Third Tuesday of the month, 7:45p.m.
At the Planetarium
400 College Drive
Clute, Texas (For more information, contact Judi James at the Planetarium 979-265-3376)

Fort Bend Astronomy Club http://www.fbac.org
Meets the third Friday of the month, 7:00 p.m.
Houston Community College Southwest Campus—Main Lecture Hall
10141 Cash Rd
Stafford, Texas 77477

Houston Astronomical Society http://spacibm.rice/edu/~has
Meets the first Friday of the month, 8:00 p.m.
University of Houston, University Park
Science and Research Building, Room 117

North Houston Astronomy Club http://www.astronomyclub.org
Meets the fourth Friday of the month, 7:30 p.m.
In the Teaching Theatre at Kingwood College
20000 Kingwood Drive
Kingwood, Texas

Galveston Stargazers
Meets the first Wednesday of the month At Home Cut Donuts, 6807 Stewart Rd, Galveston, TX From 7PM to 9PM.
Contact: Jim Gilliam at Jim.Gilliam@dars.state.tx.us or
At (409)795-3620, M - F, 8AM to 5PM

Starscan Submission Procedures

Original articles of some relation to astronomy will be accepted up to 6 p. m. (18:00 hrs) on the 25th of each month. THE most convenient way to submit articles or a Calendar of Events is by email and is preferred, but hard copies (CD, disk) are also accepted. All articles must include author's name and phone number. Also include any picture credits. Word, WordPerfect, and text files will be accepted. I have set up a special email account so that I can keep all of the Starscan articles, pictures, information, etc, separate from all of the other email I get. This makes is much easier to edit and set up the Starscan

Please send all submissions to:
conniesstarscanaccount@gmail.com

The author of individual articles bears all responsibility for publishing any e-mail addresses in the article on the World Wide Web

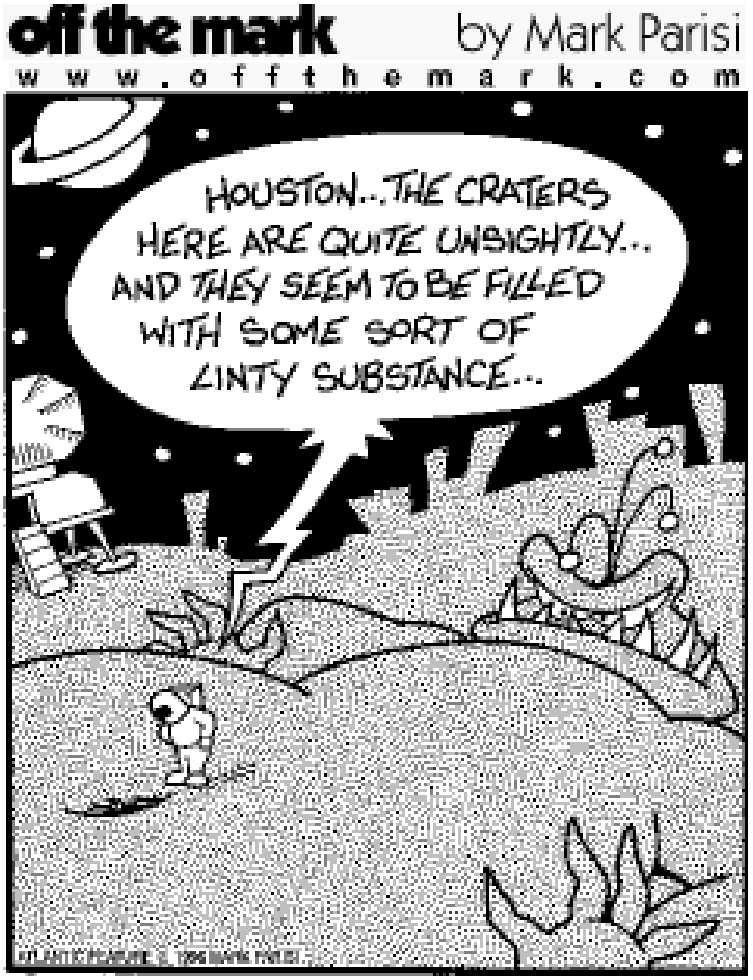
Johnson Space Center
Astronomical Society

2008-Club Officers

President – David Haviland
Vice President – Chris Randall
Secretary – David Haviland
Starscan Editor – Connie Haviland
Star Party Chairperson – Bob Taylor
Librarian – Bob and Karen Taylor
Historian – Chris Randall
Scientific Expeditions – Paul Maley
Web Master—Chris Randall

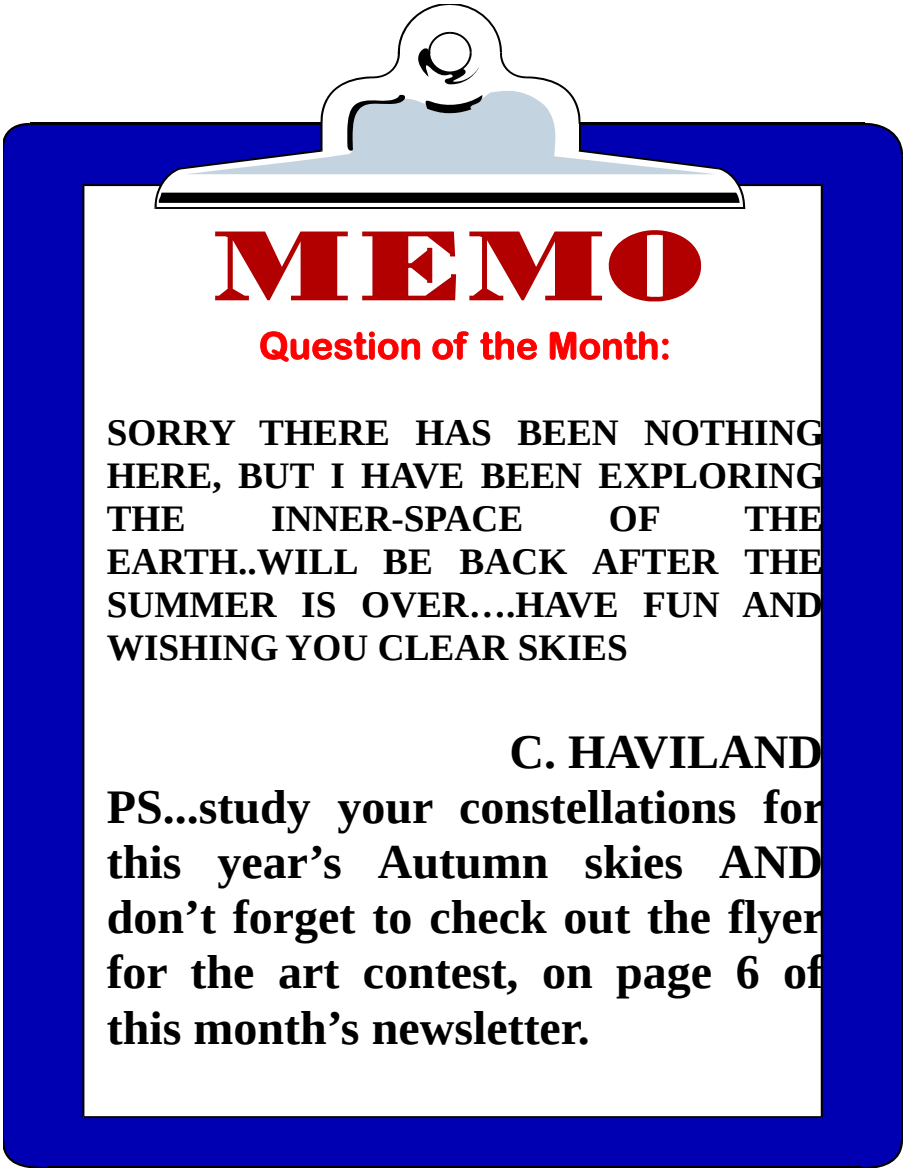
SIGS

Observing Awards – Triple Nickel
Astronomy 101 — Triple Nickel
CCD Imaging – Al Kelly
Binocular Observing – "OPEN"
Telescope Making – Bob Taylor
Deep Sky Observing – Hernan Contreras



Astronomy and Kids

This is the section strictly for kids (or kids at heart). We will be including information, stories, ideas, puzzles or anything that has to do with astronomy. The only difference here is, it will be directed for children. We don't discourage parents or any other adult to get involved. In fact, we encourage it strongly. So we hope you enjoy this section and if it touches a child's interest in astronomy, our goal has been achieved. Enjoy!!



MEMO

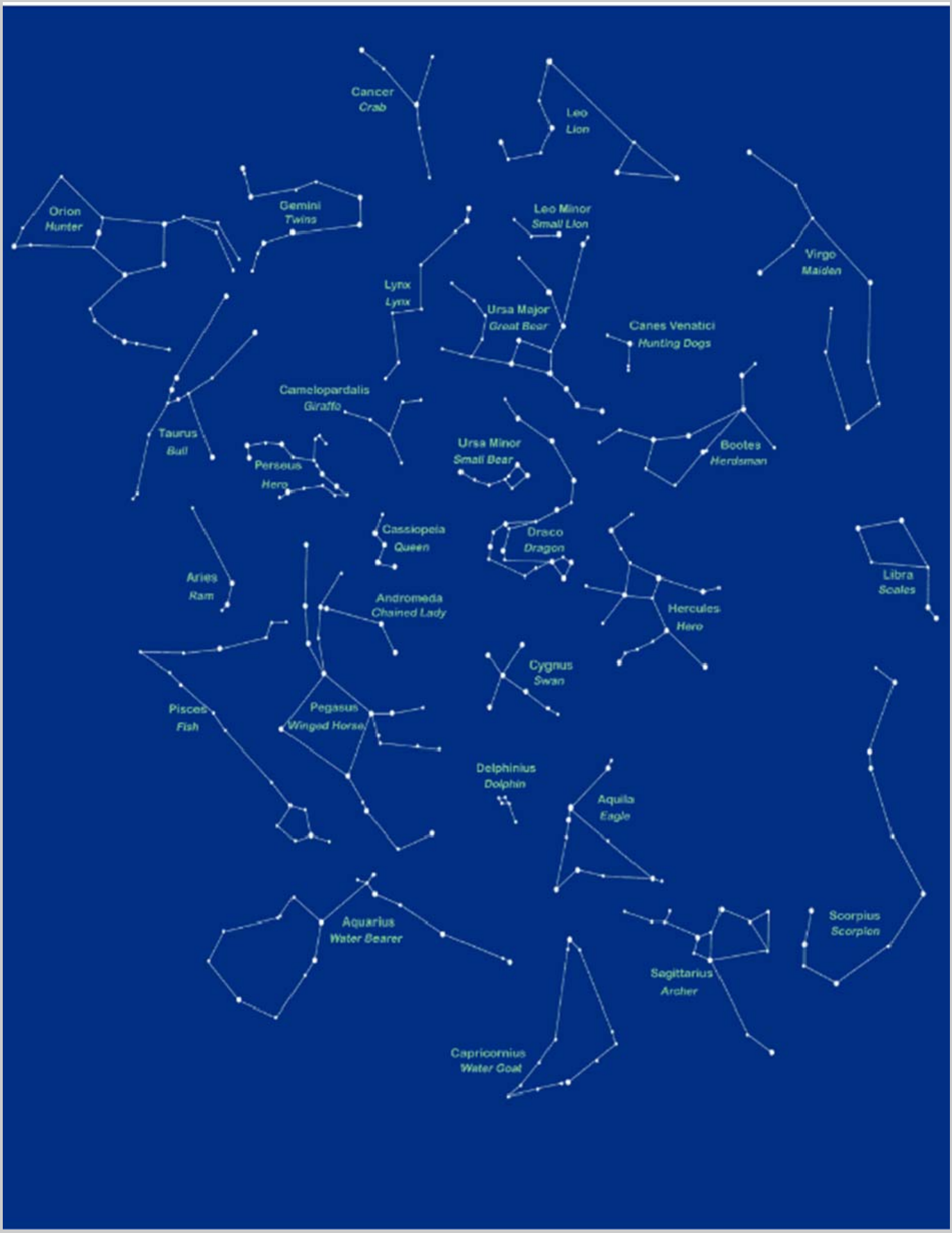
Question of the Month:

SORRY THERE HAS BEEN NOTHING HERE, BUT I HAVE BEEN EXPLORING THE INNER-SPACE OF THE EARTH..WILL BE BACK AFTER THE SUMMER IS OVER….HAVE FUN AND WISHING YOU CLEAR SKIES

C. HAVILAND

PS...study your constellations for this year's Autumn skies AND don't forget to check out the flyer for the art contest, on page 6 of this month's newsletter.

LEARN YOUR CONSTELLATIONS



Snoopy says, never stop looking up..reach for the stars and may you always have clear skies!!!!