

FOCUS

Vol. 54, No. 3, March, 2009

The International Year of Astronomy!

DELAWARE ASTRONOMICAL SOCIETY



Next Meeting – March 17, 2009 at 8:00 PM
~ The Seeds of Life ~

Can Genetic Material be Transported Through Interstellar space?



Speaker: Anthony Nicastrò, West Chester State University
at the Mt. Cuba Astronomical Observatory

FROM THE PRESIDENT ■ *Hank Bouchelle*

I am sure that those of you in attendance enjoyed last month's program as much as I did. We had three wonderful speakers, and I know I learned a lot about clocks and many things I did not know about the Messier list of deep sky objects.

I am very pleased that David Groski, an accomplished telescope maker, technical adviser to MCAO, and long-time DAS member, has accepted my appointment to the Board of the DAS as an At-Large Board Member, filling the seat formerly occupied by Emil Volcheck.

Speaking for myself, I have missed Emil's presence at our meetings, and words fail me as I try to express my admiration for him. Please be sure to offer Dave your congratulations and good thoughts. Like Bob Mentzer, he is also a trustee of the Observatory, and brings many strengths to the DAS Board of Directors.

This is the year in which we elect our At-Large Board members. If you have a nomination to make, please let Sarah Baird know. Contact information appears elsewhere in the Focus.

Also, Bob Mentzer has put together a collage of images of Emil for the observatory and our dinner meeting. I congratulate him on his thoughtfulness and initiative.

For the record, I now wear two hats. The Trustees of MCAO have appointed me manager of that facility. While the DAS and MCAO are two distinct entities, I think it is important for me to work with both institutions for the advancement of both.

(continued on page 6)

It's MESSIER MARATHON Time!

Annual DAS Event March 27th



Charles Messier

It's time again for the DAS Annual Messier Marathon, a challenge to locate all 110 items in the Messier Catalog between sundown and sunrise. And this year's event will take place Friday, March 27th at a great dark sky site on the banks of the Elk River in nearby Maryland, courtesy of Board Member-At-Large and Awards Committee Chairman Gus Swartout. Directions to this location, in St.

John's Manor outside the town of North East, can be found at the bottom of the last page of this issue of *FOCUS*.

"The Marathon is not a race but a gentle competition to find all 110 objects before sunrise," says Gus. "The only restriction is that this is a manual event. Use of a mount's 'go to' capabilities are not allowed."

The site is located 15 minutes south of Elkton. There are bathroom facilities and will be hot drinks and food for all. DAS members are encouraged to stay for the duration or for just a few hours. "All are welcome," encourages Gus. "Come out and do the whole event or show up for an hour or two."

Last month's newsletter mentioned a book available in the DAS library, *The Year Round Messier Marathon* by Harvard Pennington, that makes easy work of locating Messier objects.

This Marathon looks to be an outstanding event at a great dark-sky location. Members are encouraged to come and enjoy the beginning of another viewing season and the fellowship of the Society. **If attending, please email Gus at DaveSwartout@gmail.com** so adequate refreshments will be available. See **YOU there!!**



COMING EVENTS at the OBSERVATORY...

NEW Emil J. Volcheck Memorial Planetarium Series Announced Mt. Cuba Observatory Presents SciDome Digital Planetarium Shows

Presented as part of 2009 International Year of Astronomy events marking the 400th anniversary of Galileo performing the first telescopic observations of the heavens.

Sunday April 5, 7:00 pm "Astronomy changes History-important historical events influenced by astronomical events"

Sunday June 7, 7:00 pm "Eclipses, occultations, elongations, conjunctions and other wondrous astronomical events"

Come join us and enjoy these shows at our newly installed digital planetarium — one of the first of its kind in the United States.

Series seating is limited to 15 people, so please reserve early!! Call 302-654-6407

MCAO PUBLIC NIGHTS ■ Hank Bouchelle



The Mt. Cuba Observatory Public Nights continue year round! In addition to learning about many aspects of the heavens, you'll have a chance to visit and

view our new all-digital full-dome planetarium, one of the first of its kind in the entire United States! You can pick up a schedule when you next come to a meeting - or get the latest updated version off the website at: <http://MountCuba.org>. Programs are presented on Monday nights at 8pm. Some upcoming events are:

March 9-- Sheila Vincent--"Tales of the Sky"

Mar 23-- Jack Fisher --"The Beginning of Modern Astronomy"

Apr 6-- Lynn King-- "Life and times of Caroline Herschel"

Apr 20-- Bob Mentzer --"Tycho and Kepler"

May 4-- Scott Jackson-- "Exosolar Planets"

May 18-- Stan Owocki-- "The Brightest Super Nova Ever"

June 8-- Bill Sharp-- "Meteors & Showers"

June 22-- Judi Provencal-- "Puzzling Pulsating Stars"

Observing with the Delaware Astronomical Society...

STAR PARTIES AT MT. CUBA ■ Tom Sidowski

Star parties are usually held on the grounds of the Mt. Cuba Astronomical Observatory. You can bring your own scope or just come to observe through others. Telescopes in use may include the club's 12.5" Newtonian reflector, 17" Coulter Odyssey 2, or 6" Orion SkyQuest XT6 Dobsonian (when not on loan). Star parties are always weather permitting.

SAWIN OBSERVATORY REMINDER

■ Tom Sidowski

The DAS maintains a club observatory on the grounds of the Mt. Cuba Astronomical Observatory. The Sawin Observatory houses the club's permanently mounted 12.5" reflecting telescope and a 17.5" Coulter Odyssey 2 Dobsonian telescope. It is for the use by club members once they are trained and checked-out in a simple operating procedure. Members who are interested in becoming key holders of the Sawin Observatory should contact me at 239-1844 to arrange for training in the use of the facility.

LOANER TELESCOPES ■ Tom Sidowski

One of the best advantages of being a member of the Delaware Astronomical Society is that all members have the privilege of being trained to use and then borrow equipment owned by the club for personal use. Currently, we have two scopes available for loan: a Celestron 8" Schmidt-Cassegrain, and a 6" Orion SkyQuest XT6 Dobsonian reflector. The loan is for at least a month. If you're interested in checking out either of these scopes, contact Tom Sidowski at 239-1844.



LIBRARY NEWS ■ Glenn Bentley

The DAS Library would like to thank Michael Cimososi who has donated additional titles to our collection. I invite the membership to drop by the library after the March meeting to check out the new materials. Clear skies!

DAS Special Interest Groups for Photography and Telescope Construction...

DAS ASTROPHOTOGRAPHY SPECIAL INTEREST GROUP ■ *Bill Hanagan*

The AP SIG will meet on Friday, April 3 at 7:30 P.M. at Mt. Cuba. Please mark your calendars. The special topic for the April meeting will be “High Dynamic Range (HDR) Photography,” with an obvious emphasis on how it applies to astrophotography.

For the May meeting, I would like us to start meeting again at member’s own imaging sites. Please consider hosting the May or June Meeting and let me know ASAP.

The DAS astrophotography special interest group (DAS AP SIG) meets on Friday nights at 7:30 P.M. every other month at Mt. Cuba regardless of weather. The SIG also meets for photo shoots scheduled on 1-2 day notice to synchronize with the weather.

The monthly meetings are informal and typically include the presentation of astrophotos taken by the members along with an extended question and answer period. Objects commonly photographed include constellations, auroras, lunar eclipses, and planetary photos, as well as a wide variety of deep-sky objects such as nebulae, galaxies, star clusters, etc. The topics discussed cover the entire gamut of astrophotography, from how to get started with a minimum of equipment, to polar aligning your telescope, all of the way to the fine points of using auto-guiders and post-processing digital images.

You can get started in astrophotography with just your current camera mounted on a tripod or a motorized telescope by taking wide field photographs of meteor showers, conjunctions, constellations, and star trails. As you move to progressively fainter and smaller subjects, you’ll need better equipment. Joining the AP SIG is a great way to learn what equipment you need and what works well before you spend your money.

If you are interested in joining the AP SIG, just email your name, address, and phone number to me at hanaganw@comcast.net (using “@” and “.” in place of ? and ?).

Finally, PLEASE consider submitting one or more of your favorite astrophotos for publication in the Focus. There is no reason this needs to be a recent photo, since many deep-sky objects appear the same from year to year. You can email your photo(s) to our FOCUS editor, Joe Neuberger at JRNeuberger@gmail.com. Please include a brief description of how you made each photo along with a by-line so each photo can be properly credited. You might even put it all together in a Microsoft Word document so Joe can see how you would like it to appear. Joe has done a great job improving the look of the FOCUS, but like all newsletter editors, he needs as much material as he can get from club members.

DAS AMATEUR TELESCOPE MAKING SPECIAL INTEREST GROUP ■ *Bill Hanagan*

The DAS Amateur Telescope Making (ATM) Special Interest Group (SIG) meets on evenings and weekends according to the availability of the members and the particular projects that are underway. Currently the ATM SIG has a medium Dob building program under way. The general range of activities of the ATM SIG includes all manner of telescope making, mirror making, and the making of

accessories for telescopes and observing.

Anyone interested in joining the ATM SIG should email their name, address, and phone number to me at hanaganw@comcast.net (using “@” and “.” in place of ? and ?). Meeting dates are announced primarily by email, so if you are interested in telescope making, be sure to let me know!

DAS FORUM / E-MAIL SITE ON YAHOO

■ *Don Shedrick*

This is a restricted e-mail service for use by DAS members for DAS purposes. To use this site, go to <http://groups.yahoo.com>; search for Delaware Astronomical Society; and click on the link that comes up. To join, you must have a Yahoo ID and password; if you don’t, you can register at this time by following Yahoo’s instructions. You will then be allowed to “Join the group” upon clicking in that box. You must then register for the DAS group and add your profile by clicking on “add new profile” and completing the form.

When adding or editing your profile, you will need to enter your actual name in the “Real Name” box so you can be identified as a DAS member so Don Shedrick can approve your application to join the DAS group, and everyone will know to whom they are communicating. Finally, specify your desired email address for delivery of messages. Note- you may choose to not have your name and email address displayed to anyone other than DAS members who are members of the Yahoo DAS email group.

For more detailed instructions, go to the DAS website under DAS Resource Links.

Astro-Photography with a CCD Webcam

Webcam Image 1 - worse of series



Webcam Image 2 - best of series



Webcam Image 3 - best 200 aligned



Saturn photo by Bill Hanagan 2/24/09



Niche Found in Lunar and Planetary Imaging ■ Bill Hanagan

The lowly webcam fills a unique niche in the arsenal of equipment used by the astro-photographer. It isn't much good for photographing galaxies or faint nebulas because it isn't cooled and doesn't have a large sensor area. And, without "hacking" into its electronics, a webcam can't do long exposures. However, those features aren't needed to photograph the planets, which are small and bright. Further, the webcam has features that are important for the job that other cameras lack: it can take very short exposures in rapid succession and download them continuously to a computer. By shooting several hundred very short exposures very quickly, a webcam can capture and accumulate photos that happen to be taken at select moments when the seeing is significantly better than average. Afterward, computer software can be used to select the best images, align them with each other, and stack them in order to produce a single, low noise image that is much sharper than even the most expensive astronomical CCD cameras can obtain.

The four photographs of Saturn provide an example of webcam imaging. The first two photos in the sequence are representative of the best and worst individual images obtained out of a series of 600 images. The best 200 frames were aligned and stacked in Registax (version4) to give the third image. The stacked image was then sharpened using wavelet processing in Registax, producing the fourth and last image.

The raw photos were obtained with a Philips ToUCam Pro 740K CCD webcam using a Televue 2x barlow and a Celestron CG-11 SCT. After allowing the telescope to cool off for 2 hours, a 600 frame video (.AVI) was captured over 1 minute at 10 frames per second with each frame receiving an exposure of 1/25th of a second.

You might have noticed from the photos that Saturn's rings are currently almost edge-on. As a result, over the next few months you have a chance to see and perhaps photograph the shadows of several of Saturn's moons on the face of the planet. And, when the moons pass behind Saturn, they can be eclipsed, disappearing into its shadow and re-appearing hours later. Such events are commonplace for Jupiter, but with Saturn they only happen when the plane of Saturn's rings is near the Sun, and that only happens twice in the 29.457 Earth years that it takes Saturn to orbit the Sun.

Titan is the largest moon of Saturn, but at 0.82 arc-seconds its angular size is quite small. This is still large enough that an 8" or larger telescope with high quality optics should show Titan as "disk like" under favorable seeing conditions. Further, when Titan's *shadow* falls on the planet, the high contrast between the dark shadow and the bright cloud tops allows the shadow to be seen with a telescope as small as 6" provided the seeing conditions are good. Titan's shadow falls completely on the face of Saturn for several hours beginning at the following times: March 12, 5:00 A.M.; March 28, 3:55 A.M.; April 13, 2:45 A.M.; April 29, 1:45 A.M.; and May 15 at 12:45 A.M. Titan itself just grazes the planet on March 12 and it passes slightly above it on all the later dates, so it should be readily visible against the black backdrop of space. Unfortunately, all of these shadow appearances begin with Saturn only about 15 degrees above the horizon for observers in our area. Titan's shadow transits Saturn's meridian several hours later, but for all of the above dates the transit is obscured from our view either by daylight or by Saturn setting.

New Location Announced for May Dinner Meeting

~Speaker: **Sally Byrne** on “*Legends of the Night*”~Make Your Reservations NOW!

With the closing of the *Terrace At Greenhill*, Board members have been working feverishly to find a new location for the May Dinner Meeting. Through the efforts of members Lynn King and Bob Mentzer, the **White Clay Creek at Delaware Park Restaurant** has been chosen for the May 19 event. Speaker is Sally Byrne on “Legends of the Night,” with a fellowship hour from 6:00 to 7:00 p.m. and the program beginning at 7:00.

All entrees come with butternut squash soup, house salad, herb roasted red Bliss potatoes, vegetable medley, and Napoleon dessert.

There is a choice of two entrees: (note: Those requiring a vegetarian option are asked to contact

Bob Mentzer at 302-764-1926 for accomodation.)

1. **Chorizo Stuffed Chicken Breast**--Boneless chicken breast stuffed with Chorizo sausage, Asiago cheese, and herbs drizzled with a sun dried tomato and Cilantro cream sauce--for \$33.00, and
2. **Cedar Planked Salmon**--7oz. cut salmon filet roasted and served on a cedar plank and brushed with a maple glaze--for \$36.50.

A reservation form appears at the bottom of page 9. Please join fellow members of DAS for this annual evening of fellowship and the presentation of our *Porter Educator* and *Amateur Astronomer* awards. President Hank adds, “I look forward to seeing you there!”

MAGAZINE SUBSCRIPTIONS ■ Bob Mentzer

You can now mail *Sky and Telescope* subscriptions, at the club rate, directly to S&T. If the renewal card says \$32.95 you will save 5 cents over the \$33 we charge for a renewal. Both S&T and *Astronomy* send out renewal notices about 6 months before your subscription expires. These renewal

forms don't have the expiration date for your subscription. But this information is part of the mailing label that is printed on the front cover of each month's magazine. So if you're not sure of your expiration date, check the magazine label before you send S&T a check. *Astronomy* subscriptions must still be processed through the club to get the favorable subscription rate.

Nominations Closing Soon for this Year's “Porter Educator” & “Amateur Astronomer” Awards

COMMITTEE SEEKING FINAL NOMINATIONS FOR MAY PRESENTATIONS ■ Gus Swartout

The awards committee is looking for nominations for both the Amateur Astronomer Award and the Luther Porter Educator Award.

The Amateur Astronomer Award is open to all DAS members. If you have identified a candidate from our monthly meetings or star parties please do not hesitate to nominate them. Last year's recipient for Amateur Astronomer was Bill McKibben. You can find many of his photographs published in our own *Focus* news letter.

The Luther J. Porter Educator Award honors an individual who has made a substantial contribution to astronomy education and/or awareness, as either a professional or as a dedicated amateur. Luther J. Porter was a long-time member and devoted supporter of the DAS and served for many years as its Treasurer.

The awards are presented at the annual dinner meeting held in May. Nominations can be submitted to any of the Award Committee members; Bob Karcha, Bill McKibben and Gus Swartout.

DAS ELECTIONS ■ Sara Baird

I can be contacted at SBaird@udel.edu for the submission of nominations for upcoming elections.

2009 OBSERVER'S HANDBOOKS ARE IN!

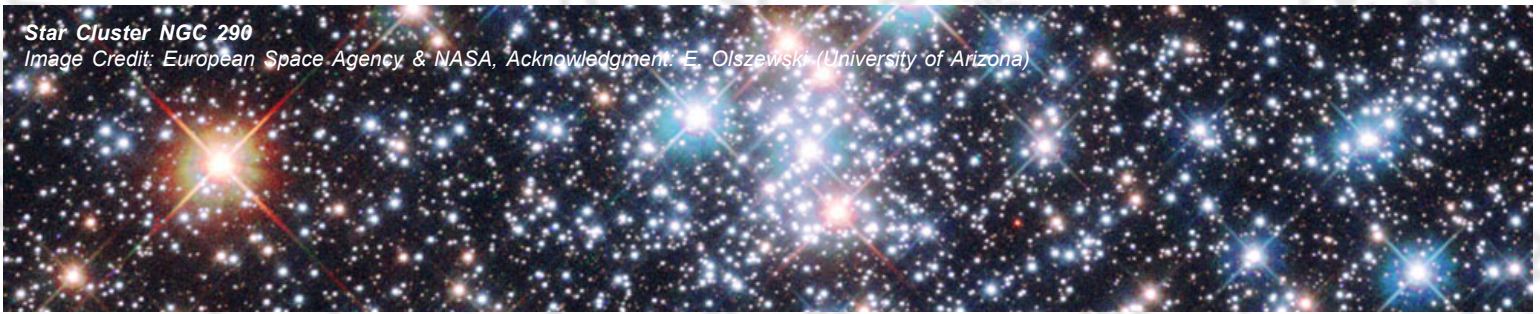
■ Bob Mentzer

The 2009 Observer's Handbook is in. You can pick it up at the March meeting or I can mail it to you for \$2 extra (\$18 + 2=\$20). I have one extra left, so someone can order it for (\$18) by calling me at 764-1926 or E-mail -- RobMentzer@comcast.net

MEMBERSHIP EXPIRATION NOTICES

■ Bob Mentzer

If you receive the *FOCUS* by email, you will be notified by email. If you receive it in the mail and the mailing label on the envelope containing your *FOCUS* is marked with Red Marker, your membership is expiring or has expired. To continue to receive the *FOCUS*, *Sky and Telescope* or *Astronomy*, and *Reflector*, send the renewal form on page 10 with your check to: DAS, c/o Robert Mentzer, 605 River Road, Wilmington, DE 19809



FROM THE PRESIDENT *(continued from page 1)*

I take these responsibilities very seriously. Please let me, Bob, or Dave know if you have any concerns. I would especially love to hear ideas about how we might advance astronomy education. In my 35 years of teaching, I have found my home.

And, mark your calendars for the third Tuesday in May. We have found a wonderful speaker, and the evening will include our awards ceremony.

Below is an abstract sent to me by this month's speaker, Anthony Nicastro regarding the March meeting presentation, *The Seeds of Life*. I hope to see you there.

Abstract: **The Seeds of Life**, *Can Genetic Material be Transported Through Interstellar Space?*

The origin of life on Earth still puzzles astrobiologists. The improbability of assembling replicable molecules sheltered from the environment by a cell wall led some to speculate that genetic material seeded Earth very near the end of the late heavy bombardment about 3.8 billion years ago. Though this 'panspermia' hypothesis only pushes the question of the origin of life farther out in space and further back in time, the question as to whether macromolecules and genetic material can survive the perils of space is being systematically addressed. This lecture examines the issues involved

DAS BOARD MEETING AGENDA

7:00 p.m., March 17, 2009

at the Mt. Cuba Astronomical Observatory

Review of February's minutes	Lynn King
Treasurer's report	Bob Mentzer
Standing Committee Reports/Requests/Notes:	
Focus/Publications	Joe Neuberger
Library	Glenn Bentley
Education	Bob Karcha
Sawin Observatory	Tom Sidowski
Observing	Greg Lee
Astronomy Course Update	
Dinner Meeting	All
Costs?	
Awards Chair	Gus Swartout
Update:	AAY, LJPA
Initial discussion, Emil's donations	Hank Bouchelle
MCAO Trustees meeting	Hank Bouchelle
Agenda Topics?	
Refreshments?	
Facility Lock up	
Other?	

in transporting such material via meteoroids, the research conducted to determine the viability of macromolecules and organisms to long-duration exposure in interplanetary space, and my new work to find the limits to long-term survival in interstellar space.



It's a Worldwide
Star Party...
**100 HOURS
OF ASTRONOMY**
2-5 APRIL 2009

Last month's *FOCUS* featured an article on some regional *100 Hours of Astronomy* events planned for April 2nd through 5th. It's a good time to get out, enjoy the beginning of spring and share your love of Astronomy with neighbors and friends. Click the logo at left to go to <http://www.100hoursofastronomy.org/all-content>. There you'll find new resources just made available making it easy to share useful information about the Universe. You'll be joining in a worldwide celebration of Astronomy!

There are even events specifically for children with their own website known as *100 Hours of Astronomy Junior*. You can click the logo at right to be taken to those child-specific resources.



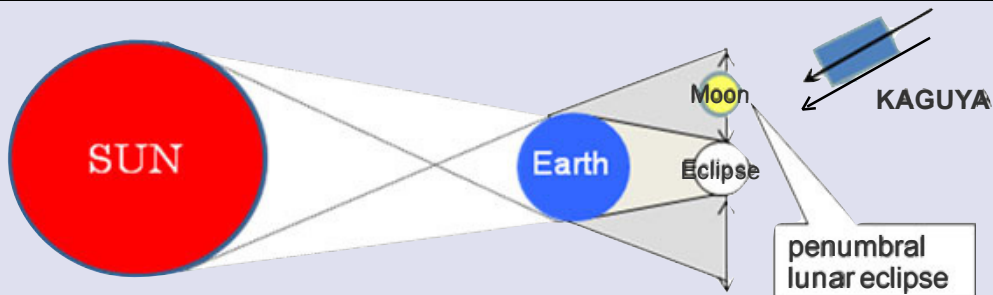
**ASTRO-PHOTO
of the
MONTH**

Otherworldly Solar Eclipse

February 25, 2009: For the first time, a spacecraft from Earth has captured hi-resolution images of a solar eclipse while orbiting another world.

Japan's Kaguya lunar orbiter accomplished the feat on Feb. 9, 2009, when the Sun, Earth and Moon lined up in a nearly perfect row. From Kaguya's point of view, Earth moved in front of the Sun, producing an otherworldly "diamond-ring" eclipse. Click on the photo for a movie of the event recorded by Kaguya's onboard HDTV camera. Click on title for JAXA website.

©JAXA/NHK



FOCUS needs your photos!
PLEASE send to editor at
JRNeuberger@gmail.com

FOCUS would like to publish multiple member photos each month, so asks your submissions. PLEASE consider participating.

Speaker Programs for the Coming Months

- April 21** *Hank Bouchelle* **Gerard Kuiper**
- May 19** **Dinner Meeting:** *Sally O'Byrne--*
Legends of the Night
- June 16** *Billie Westergatrd*
Dynamics of Black Holes

**WEBSITE
of the
MONTH**



**3-6-09
Kepler
Mission
Rockets
to Space
in Search
of Other
Earths**

Kepler... NASA's first mission capable of finding Earth-size and smaller planets around other stars.

The centuries-old quest for other worlds like our Earth has been rejuvenated by the intense excitement and popular interest surrounding the discovery of hundreds of planets orbiting other stars.

The Kepler Mission, [NASA Discovery mission #10](#), is specifically designed to survey our region of the Milky Way galaxy to discover hundreds of Earth-size and smaller planets in or near the habitable zone and determine how many of the billions of stars in our galaxy have such planets.

Check out what all the excitement is about by visiting <http://kepler.nasa.gov/>.

“Warm Plasma Cloak” Discovered Enveloping Earth

Anne Minard, [National Geographic News](#), January 7, 2009

The Earth is dressed in layers that protect it from the sun's fierce winds, and scientists have identified a new one they call a “warm plasma cloak.”

The magnetosphere—the shield of ions and electrons that envelops Earth—extends far beyond the atmosphere, defending the planet from the harmful solar wind.

Charles “Rick” Chappell, a physicist at Vanderbilt University in Nashville, Tennessee, led a research team that assembled information dating back decades to describe the new magnetosphere layer.

Some of the first hints of the cloak first showed up in data from research satellites in the early 1970s. The cloak was finally confirmed by NASA's Polar satellite, which ended a 12-year run in April 2008.

The cloak's discovery creates a theoretical home for particles that didn't fit with any of the other understood parts of the Earth's magnetosphere, Chappell said.

“The cloak particles didn't fit with any of the other regions.”

The results appeared in fall 2008 in the *Journal of Geophysical Research*.

FLYING HORSEMAN

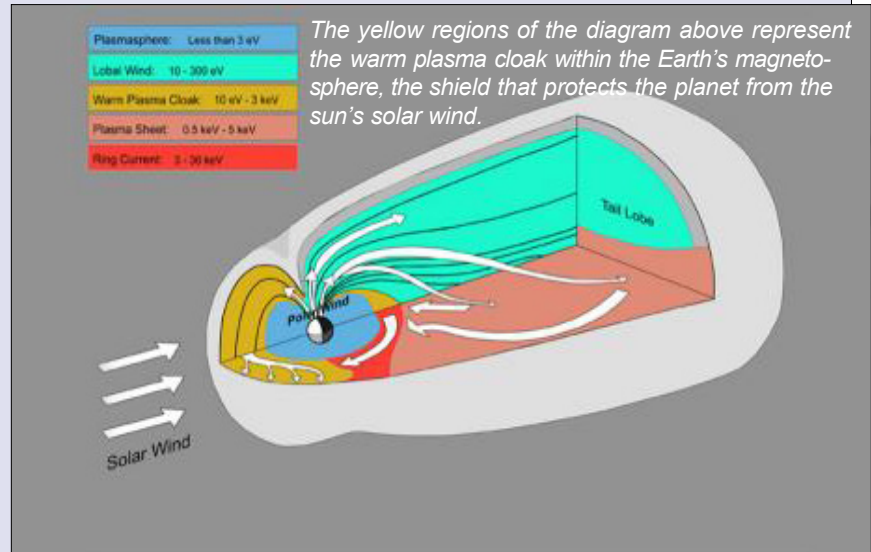
Chappell and his colleagues called the layer the “warm plasma cloak” because it conjured an image for them of a person on a horse, wearing a long cloak. Plasma is ionized gas found in space.

The cloak's tails billow in response to the direction of solar winds.

The warm plasma cloak begins thinly on the nightside—or darkside—of the planet and wraps around to the dayside, where it becomes thickest until noon. In the afternoon, convective winds push the cloak out toward the edge of the magnetosphere, where it's peeled off by solar winds.

Depending on where it is relative to Earth, and the energy of the solar wind, the cloak can be found anywhere from 13,000 to 65,000 miles (20,000 to 105,000 kilometers) above the Earth's surface. It is always thickest on the planet's dayside.

The most notable magnetic field elsewhere in



the solar system is that of Jupiter's.

“Jupiter's magnetosphere would be the largest object in the solar system if you could see it—larger than the Sun,” Chappell said.

Earth's magnetosphere is more than a million miles in the tail, which trails off in the downwind direction from the sun. It's so far-reaching that the moon orbits through it every month.

MAGNETIC BOON AND BANE

The formerly mysterious warm plasma cloak is also implicated in one of the menacing effects of the magnetic field—damage to dozens of human-made satellites over the years.

“The warm plasma cloak is part of the environment that communications and weather satellites fly in,” Chappell said. “It will play a role in how much the spacecraft charge electrically.”

The magnetosphere can induce power surges in the electrical grid on Earth, triggering blackouts, interfering with radio transmissions, and disrupting GPS signals, Chappell pointed out—especially when it's perturbed by changes in the sun's solar wind.

Michelle Thomsen is a space physicist at Los Alamos National Lab in New Mexico who was not involved in the new study, but reviewed it prior to publication. She called the paper “interesting and useful.”

“The proposed new name is catchy and could be a worthwhile addition to the magnetospheric taxonomy,” she said.

DAS BOARD MEETING--MINUTES

7:00 p.m., February 17, 2009

PRESENT: Hank Bouchelle, John Case, Bob Mentzer, Lynn King, Bill Hanagan, Dan Chester, Glenn Bentley, Bob Karcha, Dave Swartout, Tom Sidowski; Joe Neuberger, Dave Groski, Sarah Baird. Also attending: Billie Westergard and Rene Van Caneghem

TREASURER'S REPORT: Bob M. reviewed finances.

Report attached to hard copy of the minutes. Since *FOCUS* has been put on line, we have saved approx. \$1,000 a year. Next expense will be the Astronomical League due in June.

MINUTES: Approved. No comments.

EMIL VOLCHECK: Emil passed away January 24, 2009.

Hank Bouchelle announced he has been appointed Manager of MCAO and has asked Dave Groski, and he accepted, to serve out Emil's term as at large DAS Board member. At the general meeting a moment of silence was held in his honor. Hank asked what we would like to do regarding contribution in Emil's name to MCAO. Per Dave Groski MCAO is thinking of library or planetarium. Hank asked if the DAS Board would like to do something or wait until MCAO makes a decision. DAS will wait until MCAO makes a decision. Diana Volcheck left memory cards and write up for members to have. Bob M. suggested we do a framed picture of Emil in his memory to hang at MCAO.

AWARDS: Gus S. reported he has a nomination for Luther Porter Award and looking for more nominations.

DINNER MEETING LOCATION: Bob looked into Delaware National Country Club, White Clay Creek at Delaware Park, Newark Country Club and two caterers Food4Thought and Gallagher & Gallagher. Prices range from \$33 - \$49 for country clubs and \$20 - \$33 for caterers. Hank asked that Lynn research extra charges from Food4Thought. Need to make a decision by 3/1/09. Billie Westergard asked what the status was about his approaching Mt. Cuba to see if MCAO could help defray some of the costs. Hank asked that he use his discretion. We should invite MCAO's board members at their own expense.

TREE PROJECT AT MCAO: Bob M. reported on the ongoing project. Initial cutting of 23 trees about a year ago. Final cutting of 12 trees in near future. He passed around before and after pictures. Bob has obtained permission to cut trees to the south on property not owned by MCAO. Wood free to whoever wants it.

EDUCATIONAL PROGRAMS/ASTRONOMY COURSE: Greg Lee not present - no report.

FOCUS: Per Joe N. no problems. Everyone agreed Newsletter is impressive.

LIBRARY: Books are on table free to a good home. Rene Van C. asked if DAS or MCAO was interested in subscribing to Discover Magazine for their library. He is going to subscribe for a year and donate magazine to library.

SAWIN OBSERVATORY: No report.

ELECTION CHAIR: Sarah B. has accepted. Need slate by April.

SPEAKER SERIES: Hank is still researching how to leave a legacy that would fund a lecture series hosted by DAS/MCAO and controlled by DAS. He is looking for feedback. Bill H. suggested it be in conjunction with the Vernon Lector Series through U of DE. Bill H. felt that U of DE would be better to manage it. Hank would like to see a bylaws change so that there would be somebody who would make sure that the lecture series would continue. He would like an independent Award's Chair that would be a continuous position not elected position. He would like to have all named grants issued in name of DAS have a charter.

YEAR OF ASTRONOMY 2009: Hank talking to Judy Provencal and Harry Shipman. Harry putting together lecture series. Venue Clayton Hall. Two local speakers, one from Berkley. Hank asked that Judy and Harry keep us informed. Lynn is trying to get Michael Lemonick to come and speak. She will coordinate with Harry and Judy.

Respectfully submitted,
K. Lynn. King, Secretary

FOCUS CLASSIFIED:

Apogee RA-88-Semi Apo Right -Angle Giant Binoculars, 88 mm objectives, multi coated on all air/glass surfaces Two sets of matched eyepieces - 20X and 32X. Mount negotiable. Bill Zeitler--302-478-9173 --Billzeit@aol.com



May Dinner Meeting Reservation Form & Entree Order

NAME: _____

1. Chicken Entree \$33.00 x _____ (number) = Amount \$ _____

2. Salmon Entree \$36.50 x _____ (number) = Amount \$ _____

Total \$ _____

Mail along with your check made out to DAS to: Robert Mentzer, 605 River Road, Wilm. DE 19809

DAS CONTACTS Please call any of us with your concerns!

Board members:

Officers

President: Hank Bouchelle -- 983-7830 or HBouchelle@live.com
 also, By-Laws issues, programs

Vice-President: John Case -- 836-4888 or case@udel.edu

Secretary: Lynn King -- 764-8816
 also, Messier Club

Treasurer: Bob Mentzer -- 764-1926 or Robmentzer@comcast.net
 also, Sky & Telescope & Astronomy magazine issues

Board Members at Large

Bill Hanagan -- 239-1844
 also, ATM and Astronomical Photography Special Interest Group

David Swartout -- 836-4618 or DaveSwartout@gmail.com
 also, Awards Committee Chair

Vacant

Standing Chairs

Publications: Joe Neuberger -- 655-2142 or JRNeuberger@gmail.com
 also, *Focus* contributions/submissions

Education: Bob Karcha -- 999-9509

Observing: Greg Lee -- 762-5358
 also, What's Up?

Observatory: Tom Sidowski -- 239-1884 or Sidowski@udel.edu
 also, Star Parties

Library: Glenn Bentley -- 410-869-0706

Other Chairs:

Sarah Baird - 561- 0810 or SBaird@udel.edu
 Youth Coordinator, Elections Chair

Renee Van Caneghem -- 410-392-3718
 Archivist

Sheila Vincent -- 322-4739
 Ad-hoc star parties

MCAO Web Page: www.MountCuba.org

DAS Web Page: www.DelAstro.org



FOR NEW MEMBERSHIPS or RENEWALS

If you have questions, call any of the member representatives listed. Otherwise, just check the appropriate boxes and complete the form below. Print it or cut it off and send it with your check to Bob Mentzer at his address on the form. The magazine prices are group rates to DAS members. If you're just joining us for the first time, **THANKS, and welcome to the DAS!**

MEMBERSHIP or RENEWAL FORM

Please make checks payable to DAS, c/o Robert Mentzer, 605 River Road, Wilmington, DE 19809

New Member	<input type="checkbox"/>	Senior/Family Membership	\$20.00	<input type="checkbox"/>
Renewal	<input type="checkbox"/>	Junior membership (16/under)	\$10.00	<input type="checkbox"/>
		Sky and Telescope Magazine	\$33.00	<input type="checkbox"/>
		Astronomy Magazine	\$34.00	<input type="checkbox"/>

NAME _____

STREET ADDRESS _____

Total Submitted _____ \$

CITY _____ STATE _____ ZIP _____ TELEPHONE _____

E-MAIL ADDRESS _____

Directions to St. John's Manor & the DAS Messier Marathon March 27th

West on route 40 towards Elkton. Continue past the intersection with Route 213 for 1/2 mile and then turn left onto Landing Lane. Continue 1/2 mile and turn right onto Old Field Point Road. Follow Old Field Point road for 5-3/4 mile to the entrance to St John's Manor. Look to the sign on the left hand side of the road. Turn left onto Casparus Way. And follows for 3/4 of a mile. We are on the left at the address 321 Casparus Way. Look for the signs.