

The Astronews



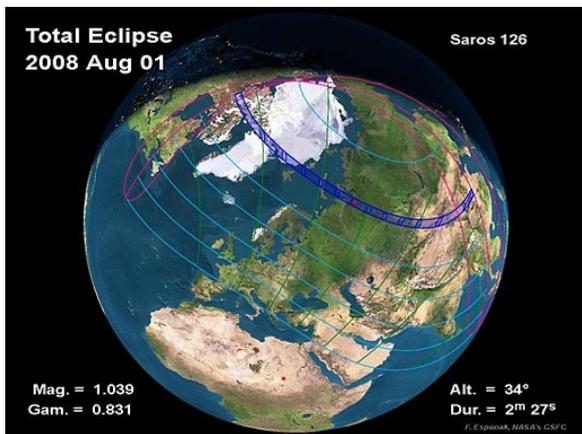
Volume 56, Issue 10

www.hawastsoc.org

October 2008

October Guest Speaker

Joanne Bogan has lined up Joe Ciotti as the guest speaker for the October meeting. His talk will be: "Adventures along the Silk Road between Pakistan and China to view the August 1st total solar eclipse."



NASA image:

<http://eclipse.gsfc.nasa.gov/SEmono/TSE2008/TSE2008.html>

Upcoming Star Parties

Club Party	Sep 27	Dillingham
Public Party	Oct 4	Kahala/Waikele
Public Party	Oct 18	Dillingham
Club Party	Oct 25	Dillingham
Public Party	Nov 1	Kahala/Waikele

Inside this issue:

President's Message	2
Club Information	2
Minutes	3
NASA Space Place	5
Observer's Notebook	6
Meteor Log	7
Minor Planet Report	7
Calendar	8
Election Info	9
Treasurer's Report	10
Special Election Notice	11

Upcoming Events:

- The next meeting is at 7:30 p.m. on **Tuesday, Oct 7th** at the Bishop Museum.
- Bishop Museum's next planetarium show with **Barry Peckham** is Friday, **Oct 3rd** at 7:00 p.m. www.bishopmuseum.org/calendar
- The next Board Meeting is Sunday **Oct 5th** at 3:30 p.m. at the POST building at UH.

President's Message

The Hubble Space Telescope has accomplished a lot since it was launched in 1990. From orbit it is able to observe objects in wavelengths of light ranging from ultraviolet through visible and into the infrared. Its precise pointing accuracy allows it to observe faint objects repeatedly to build up enough signal for a good image such as it did for the Hubble Deep Field images.

You may recall that, at first, Hubble was an embarrassment for NASA. The 2.4-meter primary mirror was figured very precisely but, due to a simple human error, incorrectly. However, because the Hubble was designed to be serviced by astronauts, all was not lost.

The first servicing mission, in 1993, was the most critical. Corrective optics were introduced to correct for the problem with the mirror, and Hubble began producing the hoped-for results. Also, the solar arrays that had vibrated when moving between daylight and darkness were replaced by a more stable set.

Further servicing missions over the years have kept Hubble operating and supplied it with new sensors. After space shuttle Columbia was lost in 2003, NASA decided that no more servicing missions to Hubble would be allowed. Since the Columbia accident, the policy has been to inspect the shuttle on orbit. If dangerous damage is found, the astronauts can remain at the space station while a rescue mission is sent. The orbits of Hubble and the International Space Station are very different, so a shuttle can't visit both. However, the success of several missions since Columbia has convinced NASA that it can risk one more servicing mission to Hubble.

This mission, currently scheduled to lift off on October 10th, should extend

(Continued on page 11)

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The **Astronomer** is the monthly newsletter of the Hawaiian Astronomical Society. Some of the contents may be copyrighted. We request that authors and artists be given credit for their work. Contributions are welcome. Send them to the Editor via e-mail. The deadline is the 16th of each month. We are not responsible for unsolicited artwork.

Meeting Minutes

by Gretchen West

President Chris Peterson called the September 2, 2008 meeting of the Hawaiian Astronomical Society to order at 7:48 p.m. The meeting was held at the Atherton Halau on the grounds of the Bishop Museum. There were twenty-three members and one visitor in attendance. Our visitor, Doug Hazelwood, is interested in constructing telescopes and wants to learn as much as he can.

Hawaii Space Lecture Series – As there were no lectures during August, two lectures have been scheduled for the month of September. On Tuesday, September 16th Dr. Paul Abell of the Planetary Science Institute and the NASA Johnson Space Center will speak on “Piloted Missions to Near-Earth Objects via the Orion Crew Exploration Vehicle.” A second lecture will take place on Tuesday, September 30th. At that time Dr. Jeffrey Gillis-Davis will speak on “Messenger’s Upcoming Second Encounter with Mercury: A Look to What’s to Come and a Look Back to What’s Been Done.” Lectures for the Series take place at 7:30 pm in the NASA Pacific Regional Planetary Data Center, room 544, on the fifth floor of the Pacific Ocean Science and Technology Building at the University of Hawaii at Manoa. For further information you can contact NASA PRPDC at 808-056-3132 or on the Web go to <http://www.higp.hawaii.edu/prpdc>.

Reminders: Club nights at Dillingham Airfield are reserved for club astronomers to spend quality time viewing the night skies. As much as we enjoy sharing the skies with visitors on public star party nights, H.A.S. members need some downtime to enjoy the skies solo. If you as an astronomer wish to bring a friend or two out to these gatherings it is understood that these visitors are to stay around your own scope.

Upcoming Event: This year’s Astronaut Lacy Veach Day of Discovery will take place Saturday, October 25th at Punahou School in Manoa from 8:00 am to 2:00 pm. This science event for students, their parents and educators is a yearly event that celebrates the life of the late Hawaii born U.S. astronaut Lacy Veach. This year’s guest speaker will be Astronaut Stan Love, who is the co-inventor of the gravity tractor along with Astronaut Ed Lu. It is postulated that in the future this conceptual device will utilize an ion drive and will enable us to redirect any near-earth objects to a new path and avoid a collision with Earth. Astronaut Stan Love will also speak at the Hawaii Space Lecture Series in October. As for the Lacy Veach Day of Discovery Gretchen West is looking for H.A.S. members to help out in manning a display table at the event. Pleased contact Gretchen if you are interested in representing the club during a 2-hour shift.

Early Shopping: Jim MacDonald reports that Astronomy magazine is offering their very attractive 2009 calendars to H.A.S. members at a special price. While the usual price is \$12.95, Jim reports that the club price should be somewhere around half price plus postage. He will be announcing the price at the October meeting and he will be taking orders along with payments at that time.

School Star Party Report: Forrest Luke reports a star party will take place at Mililani Uka in September. The party that had been previously scheduled for the month for Pearl Harbor Elementary for October has been rescheduled for the Spring.

(Continued on page 4)

Come Out To A Star Party: We invite all members to come out and enjoy our Hawaiian skies at our public star parties at Dillingham Air Field and at Kahala and Waialeale Community Parks.

Resignation: Current ASTRONEWS editor, Carey Johnson reports that he will resign his position as editor as of October 2008. This leaves us without an ASTRONEWS editor. Should you, as a member of the club, be interested in taking on this interesting challenge, please contact club president Chris Peterson at chrisp@higp.hawaii.edu.

Video Presentation: ASTRONEWS editor, Carey Johnson presented a series of images that charted his progress in becoming a more polished astro-imager. Carey explained his progression of telescopes and software as he learned more about imaging through astrophotography.

Fabrication isn't Easy: Tom Broussard displayed and explained the fabrication of an aluminum wedge that bolts on to the tripod mount for his telescope. Through trial and error Tom created a functional wedge and saved money in the bargain. Necessity is the mother of invention or should I say, "Father."

Pierre Schwarr Scope Available: Peter Besenbruch displayed and spoke briefly about the 6" Dobsonian Telescope formerly owned by long-time club member Mary Miller. Peter is interested in finding a new home for this fast, low-powered scope. The mirror is a Pierre Schwarr and reported to be a fine one. While it may need some work, a comparable scope of this quality was reported to have sold on the mainland for @\$750.00. Should anyone be interested, contact Peter Besenbruch, our club Webmaster.

More to Share: Harry Zisco shared his experiences in finding a more durable and stable mount for the 5" NexStar he and Melinda have had since @2001. Harry and Melinda have purchased a new Versigo alt-az mount from Orion along with adapter rings and a dovetail that enables the NexStar to hold on the mount.

Book Review: Gretchen West shared a new publication, Lights in the Sky, Identifying and Understanding Astronomical and meteorological Phenomena by Michael Maunder. This 2007 publication is part of the British "Patrick Moore's Practical Astronomy Series. The book is a good informational book for beginners and seasoned astronomers alike, covering a range of concepts. Gretchen was fortunate enough to find this book at the Kaimuki Public Library but hopes to order her own copy soon.

Kauai Trip Reminder: Vice President Barry Peckham reminded members in attendance that the Kauai astronomical group is hosting members from HAS on Kauai in September, when they will visit a Barking Sands viewing spot as well as join the Kauai club at their usual Kaumakani Field viewing area. Although this is not a club sponsored trip, Barry hopes that members will join him and other HAS members on the weekend of September 26th and 27th.

Never Too Old To Learn! - Vice President Barry Peckham spoke briefly about the unusually good late August viewing at Dillingham Airfield. Barry reminded club members that the month of September is usually very good. Whether viewing naked

(Continued on page 11)

Extreme Starburst by Dr. Tony Phillips

A star is born. A star is born. A star is born.

Repeat that phrase 4000 times and you start to get an idea what life is like in distant galaxy J100054+023436.

Astronomers using NASA's Spitzer Space Telescope and ground-based observatories have found that the galaxy gives birth to as many as 4000 stars a year. For comparison, in the same period of time the Milky Way produces only about 10. This makes J100054+023436 an extreme starburst galaxy.

"We call it the 'Baby Boom galaxy,'" says Peter Capak of NASA's Spitzer Science Center at the California Institute of Technology in Pasadena, CA. "It is undergoing a major baby boom, producing most of its stars all at once. If our human population was produced in a similar boom, then almost all people alive today would be the same age."

Capak is lead author of a paper entitled "Spectroscopic Confirmation of an Extreme Starburst at Redshift 4.547" detailing the discovery in the July 10th issue of *Astrophysical Journal Letters*.

The galaxy appears to be a merger, a "train wreck" of two or more galaxies crashing together. The crash is what produces the baby boom. Clouds of interstellar gas within the two galaxies press against one another and collapse to form stars, dozens to hundreds at a time.

This isn't the first time astronomers have witnessed a galaxy producing so many stars. "There are some other extreme starburst galaxies in the local universe," says Capak. But the Baby Boom galaxy is special because it is not local. It lies about 12.3 billion light years from Earth, which means we are seeing it as it was 12.3 billion years ago. The universe itself is no older than 14 billion years, so this galaxy is just a youngster (Capak likens it to a 6-year-old human) previously thought to be incapable of such rapid-fire star production.

The Baby Boom galaxy poses a challenge to the Hierarchical Model of galaxy evolution favored by many astronomers. According to the Hierarchical Model, galaxies grow by merging; Add two small galaxies together, and you get a bigger galaxy. In the early years of the universe, all galaxies were small, and they produced correspondingly small bursts of star formation when they merged. "Yet in J100054+023436, we see an extreme starburst. The merging galaxies must be pretty large."

Capak and colleagues are busy looking for more Baby Boomers "to see if this is a one-off case or a common occurrence." The theory of evolution of galaxies hangs in the balance.

Meanwhile... A star is born. A star is born. A star is born.

See more breathtaking Spitzer images at www.spitzer.caltech.edu/Media/mediaimages. Kids can play the new Spitzer "Sign Here!" game at spaceplace.nasa.gov/en/kids/spitzer/signs.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Planets Close To the Moon

Times are Hawaii Standard Time

- Oct 1, 13h, M 4.8° SSW of Venus (30° from sun in evening sky)
- Oct 6, 22h, M 2.4° S of Jupiter (89° from sun in evening sky)
- Oct 9, 23h, M 0.81° N of Neptune (124° from sun in evening sky)
- Oct 12, 02h, M 3.5° NNW of Uranus (150° from sun in evening sky)
- Oct 24, 18h, M 4.5° SSW of Saturn (44° from sun in morning sky)
- Oct 27, 01h, M 6.5° SSW of Mercury (17° from sun in morning sky)
- Oct 31, 22h, M 2.68° S of Venus (37° from sun in evening sky)

Mars is closer than 15° from the sun when near the moon in October.

Other Events of Interest

Times are Hawaii Standard Time

- Oct 6, 11h, Mercury at inferior conj. with sun (Passes into morning sky)
- Oct 14, 10:03h, Moon Full
- Oct 21, Orionid Meteors
- Oct 21, 23h, Mercury at greatest elongation (18.3° west of the sun.)
- Oct 28, 13:14h, Moon New
- Oct 29, 11h, 4 Vesta at opposition

<p> Mercury makes a morning appearance, best seen during the third week of October.</p>	<p> Venus gradually gets higher in the evening sky after sunset, setting two hours after the sun by month's end.</p>	<p> Mars is too close to the sun for viewing in October and November.</p>
<p> Jupiter is in the southern sky near the meridian as the sun sets, well placed for early evening viewing.</p>	<p> Saturn is visible in the early morning sky before dawn. Its rings are getting quite narrow.</p>	<p> Uranus is well placed for viewing in October in the evening sky in Aquarius</p>
<p> Neptune is west of Uranus and is well positioned for evening viewing in Capricornus.</p>	<p> Dwarf Planet Pluto can still be seen in Sagittarius near Jupiter in the early evening.</p>	<p> Asteroid (4) Vesta reaches opposition on October 29 at about magnitude 6.4.</p>

Full Moon spoils the minor shower as well as the major Orionid peaks, but the crescent Moon favors checking the October 5, 3 to 5 AM interval that produced video-detected outbursts from a radiant around 11h00m +78 deg in 2005 and 2006. Sporadic rates remain good and there are the Taurids in a possible swarm return with the Moon new late in the month.

Wednesday the 8th, the Draconids. Rates are variable from zero to storm. Radiant 17h28m, +54 deg. The waxing gibbous Moon's late evening to midnight rising time leaves part of the night to check for activity.

Tuesday the 21st, the Orionids. Rates are about 15 to 20 per hour. At times the rates have reached near 50 meteors per hour. Shower meteors are very fast, sometimes bright, and often leave persistent trains.

If you are interested in observing meteors contact Tom Giguere at 672-6677 or write to Mike Morrow, P.O. Box 6692, Ocean View, Hawaii 96737

Minor Planet Report - October '08 by Carey Johnson

Comet Events

- 10/8 C/2008 L2 (Hill) [1.385 AU] from Earth, Mag. 17.98
- 10/10 P/2001 J1 (NEAT) [0.980 AU] from Earth, Mag. 16.9
- 10/19 P/2008 Q2 (Ory) Perihelion [1.382 AU] M 16.7

Asteroid Events

- 10/2 2002 GM5 [0.011 AU] from Earth, Mag. 14
- 10/7 2005 TQ45 [0.044 AU] from Earth, Mag. 21.2
- 10/29 2005 VN [0.0104 AU] from Earth, Mag. 15

Comets	Magnitude		Asteroids	Magnitude	
	Oct 1	Oct 31		Oct 1	Oct 31
C/2008 A1 (McNaught)	7.7	8.6	(4) Vesta	6.5	6.3
85P/Boethin	10.1	8.7	(2) Pallas	8.0	7.6
C/2006 OF2 (Broughton)	11.0	10.8	(1) Ceres	8.2	8.0
C/2007 N3 (Lulin)	11.1	10.5	(9) Metis	8.8	8.3
19P/Borrelly	11.1	12.3	(11) Parthenope	9.6	10.1
C/2007 W1 (Boattini)	12.0	13.6	(216) Kleopatra	9.8	10.2
C/2007 G1 (LINEAR)	12.3	12.3	(43) Ariadne	9.9	10.7
7P/Pons-Winnecke	12.7	13.2	(27) Euterpe	10.4	10.1
6P/d'Arrest	13.1	15.6	(532) Herculina	10.5	10.0
C/2006 W3 (Christensen)	13.9	13.6	(354) Eleonora	10.5	10.5
205P/Giacobini	14.1	15.0	(130) Elektra	10.5	11.0
C/2007 Q3 (Siding Spring)	14.2	13.8	(50) Virginia	10.5	11.0
144P/Kushida	14.3	12.6	(141) Lumen	10.6	10.5
C/2008 J1 (Boattini)	14.3	14.7	(79) Eurynome	10.6	11.0

See <http://www.geocities.com/quarkcsj/calendar.html> for more up to date info.

HawaiianAstronomicalSociety : Calendar - Microsoft Internet Explorer

Address <http://tech.groups.yahoo.com/group/HawaiianAstronomicalSociety/cal/>

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October 2008 [Printable View](#)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28 [Add]	29 [Add] New Moon Comet C/2008 A1 (McNaught) Perihelion (1.041 AU) M 7.9	30 [Add] 7:30p Messenger/Mercury lecture	1 [Add] 20-2 Eta Cetids	2 [Add] Asteroid 2002 GM5 Near-Earth Flyby (0.011 AU) M 14	3 [Add]	4 [Add] 22-11 October Cygnids 4-10 World Space Week 6:30p Kahala & Waikale Public Star Parties
5 [Add] 8-30 October Cetids 3:30p HAS Board Meeting	6 [Add] 22-23 Delta Aurigids (DAU) MESSENGER, 2nd Mercury Flyby	7 [Add] 7:30p HAS Meeting	8 [Add] 7-27 Arietids (Autumn)	9 [Add] 6-10 Draconids (GIA) Meteor Shower	10 [Add]	11 [Add]
12 [Add] 5-16 Northern Piscids	13 [Add]	14 [Add] Full Moon	15 [Add]	16 [Add]	17 [Add]	18 [Add] 10-27 Epsilon Geminids (EGE) 6:30p Dillingham Public Star Party
19 [Add]	20 [Add]	21 [Add] 15-29 Orionids (ORI) Meteor Shower	22 [Add] Mercury At Its Greatest Western Elongation (18 Degrees) M - 0.6	23 [Add]	24 [Add]	25 [Add] 8a Lacey Veach day 6:30p Club Star Party
26 [Add]	27 [Add]	28 [Add] New Moon	29 [Add] 2005 VN 4.1 LD / 0.0104 AU from Earth M 15	30 [Add]	31 [Add] For more events look here.	1 [Add] Asteroid 4 Vesta At Opposition (6.5 Magnitude) 6:30p Kahala & Waikale Public Star Parties

[Previous Month](#) | [Next Month](#)

2009 HAS Board of Directors Elections

Excerpts from the HAS By-Laws

II Board of Directors

Section 1.

- C. The BOD shall consist of the five officers and two directors elected at-large by the Society.

Section 2.

- A. Nominees for board members shall have been members of the Society for at least six (6) months and currently be in good standing.
- B. At the November general membership meeting, a committee shall be appointed by the president to present nominations for each member of the board at the December meeting. The Society then shall elect by ballot two (2) board members at-large and five officers.

III. Officers

Section 2.

A. The duties of the President shall be:

- a) The President shall govern the monthly membership meeting in an orderly manner.
- b) The President shall preside over BOD meetings.
- c) The President shall effect the objectives of the Society as directed in the Articles of Incorporation.
- d) The President will establish committees as the need arises.

B. The duties of the Vice President shall be:

- a) In the absence of the President, the Vice President shall perform the President's duties.
- b) The Vice President shall assist the President in the President's duties.
- c) The club telescopes shall be the responsibility of the Vice President. The Vice President shall keep track of the telescopes and collect all user fees.

C. The duties of the Treasurer shall be:

- a) Keep correct books and records of account.
- b) File the yearly corporate exhibit with the Department of Commerce and Consumer Affairs.
- c) Maintain membership records.
- d) Present monthly Treasurer's reports at the general membership meeting and supply the Secretary with a copy for records.
- e) Publish an HAS directory.

D. The duties of the Secretary shall be:

- a) Keep and maintain minutes of the general membership meetings and BOD meetings.
- b) Keep up-to-date on laws affecting non-profit corporations.
- c) Keep By-Laws current.

E. The duties of the Editor shall be:

- a) To publish the HAS "Astronews".



Treasurer's Report

by Jim MacDonald

HAS Financial Report as of September 15, 2008

Initial Balance:	\$4,615.00
Receipts:	
Calendars	13.00
Donations	50.00
Dues Received	252.00
T-Shirt Sales	45.00
Total Income:	\$360.00
Expenses:	
Astronews	224.21
Excise Tax	3.38
Liability Insurance	324.00
Magazine Subscriptions	99.90
Refreshments	30.22
Total Expenses:	\$681.71
Final Balance	\$4,576.37

The club membership increased by five these two months. The new members are **Jon Gabriell, Craig Gorsuch, William and Anastasia McSwain and Doug Hazelwood**. A special thanks to **Gregory McCartney** for his donation. Thanks and clear skies to all renewing their memberships.

HAS Yahoo Group

<http://tech.groups.yahoo.com/group/HawaiianAstronomicalSociety/>

Upcoming School Star Parties

- Wed. 11/19 or 20 Camp Erdman for Mililani Uka 5th grade.
- Fri. 1/23 Mililani Middle School 6-8 PM for a science night.
- Fri. 4/17 Hanahauoli School near Punahou (100 estimated).
- Fri. 4/24 Pearl Harbor Elementary (moved from Oct. 08).
- Wed. 4/29 Lanakila Elementary.
- Thur. 4/30 Ala Wai Elementary.
- Fri. 5/1 Mililani Mauka Elementary.

If you are interested in helping out at a School Star Party, sign up on the monthly sheet at the HAS Meeting or contact the Star Party Coordinator: Forrest Luke at 623-9830 or e-mail at lukef003@hawaii.rr.com

Notice:

There will be a Special Election at the October 7th meeting to fill the vacancy of the “Astronews” Editor.

(Continued from page 2)

Hubble’s lifetime by several more years. New gyroscopes, batteries, guidance equipment, and insulation will keep Hubble operating smoothly. New instruments include the Wide Field Camera 3 and the Cosmic Origins Spectrograph. The Space Telescope Imaging Spectrograph and the Advanced Camera for Surveys will be repaired. If all goes well, Hubble will be better than ever and fit for at least five more years of work.

Chris

(Continued from page 4)

eye, with binoculars, or with a scope, views of the sky should be wonderful.

Barry informed the members assembled that some of the stars that we have seen in numerical lists by magnification have changed. In a recent listing in Wikipedia, the apparent magnitude of stars is as follows: #1- Sirius; #2 – Canopus; #3 – Arcturus; #4 – Alpha Centauri A; #5 – Vega; #6 – Rigel; #7 – Procyon; #8 – Achernar; #9 – Betelgeuse; #10 – Hadar (Agena); and #11 – Capella A. As you can see the apparent magnitude of some stars have changed position. Is it Wikipedia or is it fact?

Light Pollution: There was a short discussion about the club becoming more involved in speaking up about the problem of light pollution. Some members would like to see us become more vocal about the intrusion of light pollution in our night sky.

Along with that some of the members reported that during the recent Perseid Meteor Showers they counted over 200 meteors between the hours of 11:00 p.m. and 2:00 a.m.

As there was no further business, the meeting was adjourned at 9:07 p.m. Refreshments were served.

Respectfully Submitted,
Gretchen West, HAS Secretary

Did you know?

Members are welcome to come to Board Meetings.

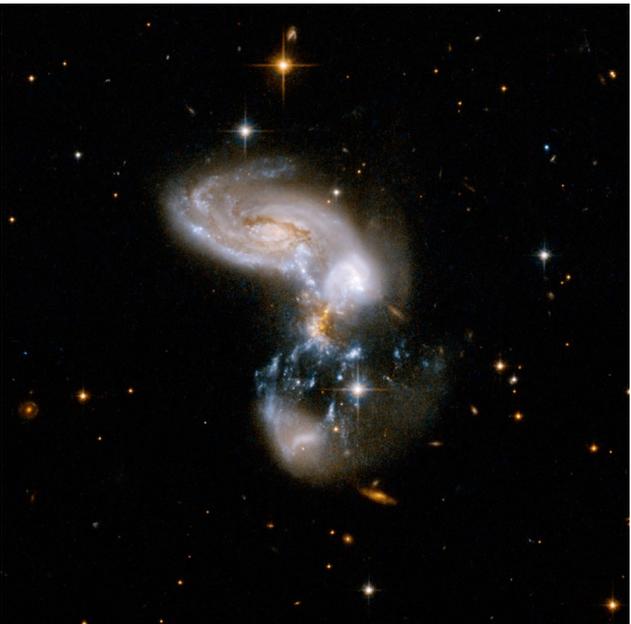
HAS By-Laws: II. Section 4.

A. Board of Director meetings shall be held as often as necessary, or upon the request of three (3) board members. The President shall chair the meetings and any H.A.S. member may attend.

B. Notice of BOD meetings will be available from board members.

You can find the date and time of the BOD meeting on the front cover.

**H.A.S.
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The “Baby Boom” galaxy loosely resembles the galaxy shown here, called Zw II 96, in this Hubble Space Telescope image. This galaxy is only 500 million light-years away, while the Baby Boom galaxy is 12.3 billion light-years away.

(See NASA’s Space Place article on page 5.)

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