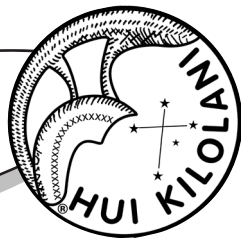


The Astronews



Volume 58, Issue 10

OCTOBER 2010

www.hawastsoc.org

President's Message

by Chris Peterson

September 18th was International Observe the Moon Night (IOMN). At Kahala Community Park we had a good crowd of people before clouds and the threat of rain forced us to close down early. Before that happened, though, we were able to showoff crescent Venus, a one-band-short Jupiter, and other sights in addition to the Moon.

Unfortunately, Jupiter was still rather low when the clouds blocked it for good. I was hoping to view it and Uranus together since they were less than a degree apart that night. Both are moving retrograde now as we overtake them and they reach opposition on September 21st. Because Jupiter's orbit is closer to us, its retrograde motion is more-pronounced and separates it from Uranus by over three degrees in mid-November before they return to prograde motion and Jupiter passes just barely more than half a degree from Uranus on January 3rd. I might just be able to squeeze them both into the field of view of my medium-power eyepiece then. That would make a good picture!

There were hundreds of events planned for IOMN. The Moon's phase was about midway between first quarter and full, so we saw areas that

(Continued on page 11)

Inside this issue:

President's Message	1
Closer Look	2
Minutes	3
NASA Space Place	4
Observer's Notebook	6
Night Sky Network News	7
Calendar	8
Meteor Log	9
Treasurer's Report	10

Upcoming Events:

☆The next meeting is 7:30PM on **Tues., Oct. 5** at the Bishop Museum Planetarium.

☆Bishop Museum's next planetarium shows with **Barry Peckham** are Friday, **Oct. 1 & 15** at 8:00 p.m.
www.bishopmuseum.org/calendar

☆The next Board Meeting is Sunday, **Oct. 3** at 3:30 p.m. at the POST building at UH.

☆ Upcoming Star Parties ☆

Club Party-Dillingham **Oct. 2**

Public Party-Dillingham **Oct. 9 & 30**

Kahala/Waialele Party **Oct. 16**



ASTRONOMY TOUR:

*An Invitation to the Top of Hawaii from
Peter Michaud, Gemini Observatory:*

The world's greatest astronomical resource is only a short flight away, yet how many HAS members have actually been to the summit area of Mauna Kea and seen the inside one of state-of-the-art observatories on Hawaii's highest peak?

If you have been deprived of that experience, I would like to extend an invitation to HAS members to organize a trip to the Big Island to visit Mauna Kea during the summer of 2011. As part of this trip, members who participate will be treated to an insider's tour of the Gemini North 8-meter telescope.

In addition, stargazing at the mid-level facilities is among the best anywhere on our planet and any astronomically-themed trip to the Big Island would be incomplete without plans to take advantage of that "resource!" ☆

NOTE FROM THE EDITOR:

This is a wonderful opportunity that has been extended to us. HAS used to take part in excursions of this sort, but *we would need a volunteer to help coordinate this effort.*

We first need to determine how many members (and their families) would be interested in participating in such a tour. Contact myself or a board member and we will determine if we have a large enough group. The cutoff is around 12 individuals. Remember that children under 16 are *not* permitted up to the summit (as well as those pregnant or with certain health problems).

Again, while this is an exciting offer, it will not be able to happen without volunteers. Please let us know if you're able to assist. Mahalo..



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http://nightsky.jpl.nasa.gov/club-view.cfm?Club_ID=453

The **Astronews** is a 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 email. The deadline is the 16th of each month. We are not responsible for unsolicited artwork.

President Chris Peterson called the Sept. 7, 2010 meeting of the Hawaiian Astronomical Society to order at 7:47 p.m. The meeting was held at the Planetarium on the grounds of the Bishop Museum. There were 28 members in attendance.

School Star Party Report: Board member **John Gallagher** reported that the Island Pacific Academy's Starry Night activity in Kapolei on July 16th was a success. Seven astronomers from the H.A.S., along with four other astronomers associated with the school provided the large crowd with good views of the night skies.

Associated Lectures: **Chris Peterson** reports that the next Hawaii Space Lecture Series talk will take place at 7:30 pm, on Tuesday, Sept. 28. Dr. Steven Desch of Arizona State University will give this month's lecture. The subject of this month's talk will be "Cryovolcanism on Charon and Other Kuiper Belt Objects." Should you be interested in any upcoming lectures or for information you can contact NASA PRPDC at 808-956-3132 or on the Web go to <http://www.higp.hawaii.edu/prpdc>.

The Institute of Astronomy (IFA) at the University of Hawaii at Manoa will host a talk by Dr. David Sanders. Dr. Sanders will discuss galactic cannibalism. The IFA talk will take place Thursday, Sept. 23 at 7:30 pm. Call IFA for details.

EYI: On Sept. 7 and 8 2010, two Near Earth Objects (NEOs) tiptoed between the Earth and our moon. The two asteroids made close passes to Earth; one seen on a Northern Pacific route and the second visible at the Antarctic.

Updated Website – Board member **Harry Zisko** is in the process of revamping some pages on the H.A.S. website, <http://www.hawastsoc.org>. Please let Harry know if you find anything that needs correcting. Other changes will be forthcoming.

Movie News – The IMAX movie *Hubble 3D*, has been showing during daytime hours at the Dole Cannery Theaters in Iwilei. Those who have seen the 45-minute movie give it high marks. Check it out!

Moon Watch – Saturday, Sept. 18 has been designated "International Observe the Moon Night." Sidewalk astronomers will be sharing the night sky and most notably the moon. We hope to see larger groups at this month's gathering, since we will have blurbs in the Star Advertiser and Mid-Week publications. As always we encourage H.A.S. members to join club astronomers at Kahala and Waikale for our monthly suburban star parties. Come out and enjoy the night skies. Share in providing information to the public. You can also learn to use a telescope!

Upcoming Events – **John Gallagher** has assumed the mantle of school star party coordinator. He has set up processes for teachers to request star parties on a sign-up on the Night Sky Network link. Upcoming star parties are as follows:

Niu Valley Middle School	Sept 16th (Thurs)
Mililani Uka	Oct 13th (Wed)
Mililani Ika	Oct 15th (Fri)

We are also participating in the annual *Astronaut Lacy Veach Day of Discovery* at Punahou School on October 16. If you are interested in helping out, contact **Gretchen West**.

Imaginarium Visit – Due to unforeseen circumstances the H.A.S. visit to the Windward Community College Imaginarium has been postponed. The building is undergoing renovation and construction. We hope that we will visit the Imaginarium in November. Keep your eye on the ASTRONEWS for further details.

Reminder – **Chris Peterson** reminds H.A.S. members that our club astronomers volunteer their time during public star parties at Dillingham Airfield and at Kahala and Waikale community parks. Club star parties are a respite for them, so if you come out to Dillingham Airfield on a club star party night, please do not expect astronomers to spend all their personal time to show you the night sky. These times are used by our astronomers to view the skies and pursue objects on an individual basis.

(Continued on page 7)

The Hunt is On!

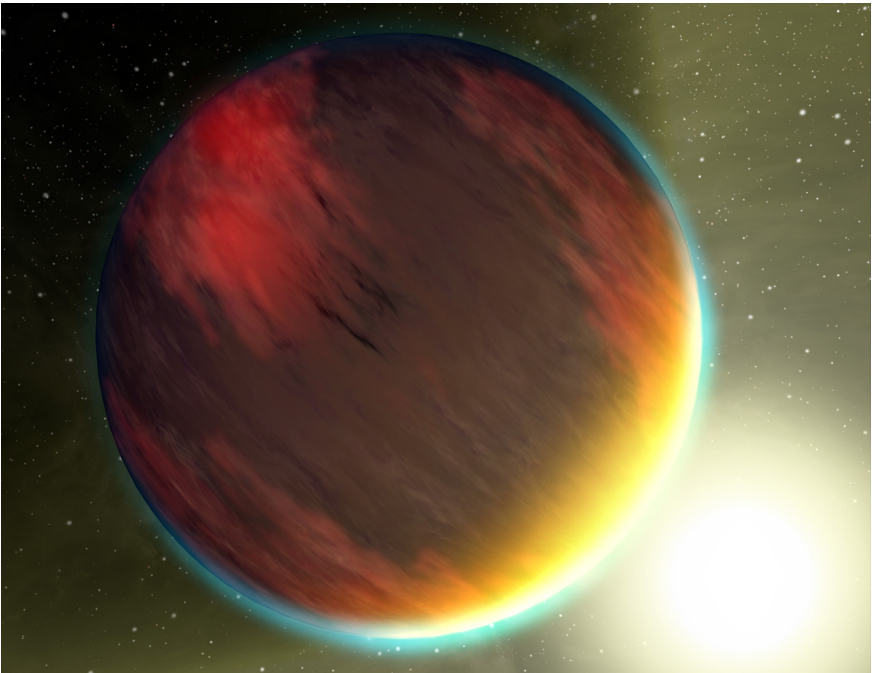
By Carolyn Brinkworth

The world of astronomy was given new direction on August 13, 2010, with the publication of the Astro2010 Decadal Survey. Astro2010 is the latest in a series of surveys produced every 10 years by the National Research Council (NRC) of the National Academy of Sciences. This council is a team of senior astronomers who recommend priorities for the most important topics and missions for the next decade.

Up near the top of their list this decade is the search for Earth-like planets around other stars—called “extrasolar planets” or “exoplanets”—which has become one of the hottest topics in astronomy.

The first planet to be found orbiting a star like our Sun was discovered in 1995. The planet, called “51 Peg b,” is a “Hot Jupiter.” It is about 160 times the mass of Earth and orbits so close to its parent star that its gaseous “surface” is seared by its blazing sun. With no solid surface, and temperatures of about 1000 degrees Celsius

(Continued on page 9)



Artist's rendering of hot gas planet HD209458b. Both the Hubble and Spitzer Space Telescopes have detected carbon dioxide, methane, and water vapor—in other words, the basic chemistry for life—in the atmosphere of this planet, although since it is a hot ball of gas, it would be unlikely to harbor life.



Upcoming School Star Parties



Wed.	10/13	Mililani Uka Elementary
Fri..	10/15	Mililani Ike Elementary
Fri.	11/12	Leihoku Elementary, Waianae
Fri.	12/10	Kamehameha Schools (Pending)

If you are interested in helping out at a School Star Party, sign up at the HAS meeting or contact the Star Party Coordinator: **John Gallagher** at 683-0118 (leave message) or e-mail at gallaghej002@hawaii.rr.com. If you are contacted for a School Star Party please have the school submit a request at http://nightsky.jpl.nasa.gov/club-eventrequest.cfm?Club_ID=453 (note underline between Club_ID).

WITHOUT A TRACE – A FLASH IN JUPITER’S SKY

story courtesy of Gemini Observatory

Observing a fireball streaking through the atmosphere of another planet is a rare occurrence. However, two amateur astronomers did just that on June 3, 2010. Their images prompted the twin Gemini Observatory telescopes in Hawai‘i and Chile to join other telescopes around (and above) the world to see if the object left any trace of its passage into Jupiter’s cloudtops.

Unlike previous collisions with Jupiter, where large, dark scars appeared in its clouds for weeks (e.g. Shoemaker-Levy 9 (D/1993 F2), which hit in 1994), this event apparently vaporized entirely in Jupiter’s upper atmosphere without marring the planet.

The object that made the flash, called a superbolide, likely measured between 8-13 meters across, with a mass between 500-2000 metric tons (10 meters is the approximate height of a 3-story building, 1000 metric tons is approximately the mass of 150 school buses). Several objects of this size probably impact Jupiter each year.

The discoverers are part of a community of amateur astronomers who diligently monitor planets in the Solar System for transient events like this one. “More and more amateur astronomers are becoming involved in high-resolution imaging of Jupiter and Saturn, taking advantage of new technology to produce stunning images that are of great value to planetary researchers and enthusiasts everywhere,” says Anthony Wesley, one of the amateurs credited for the images, “This last year has seen Jupiter monitored and imaged by amateurs more often than ever before, a trend that is certain to continue into the future.”



Amateur astronomer and HAS club member Barry Peckham took this image on Sept. 26 through the eyepiece of his 8” Dobsonian telescope.



Planets Close To the Moon

Times are Hawaii Standard Time

Oct 9, 09h, M 3.4° NNE of Venus
(28° from sun in evening sky)

Oct 9, 14h, M 3.4° SSW of Mars
(31° from sun in evening sky)

Oct 17, 10h, M 4.4° NNW of Neptune
(122° from sun in evening sky)

Oct 19, 18h, M 6.5° NNW of Jupiter
(147° from sun in evening sky)

Oct 20, 00h, M 5.8° NNW of Uranus
(150° from sun in evening sky)

Mercury and Saturn are closer than 15° from the sun when near the moon in October.

Other Events of Interest

Times are Hawaii Standard Time

Sep 30, 23h, Venus 6.5° S of Mars
(34° from sun in evening sky)










Oct 7, 08:44h, Moon New

Oct 16, 15h, Mercury at Superior Conj. with sun (Passes into evening sky)

Oct 21, Orionid meteors
(Unfavorable year for this major shower)

Oct 22, 15:37h, Moon Full

Oct 28, 15h, Venus at Inferior Conj. with sun (Passes into morning sky)

 Mercury Starts too close to the sun to be observed all month.	 Venus Starts Oct. shining brightly in the evening, but by the end of the month is in conj, with the sun and enters the morning sky.	 Mars Starts the month high enough to view (34°), but is lost in the glare of the sun by month's end.
 Jupiter Reached opposition Sep 21 and so will be very favorably placed for viewing in the evening sky all month.	 Saturn Appears low in the east before dawn, but will be better viewed later in the year.	 Uranus Very close to Jupiter in the evening sky.
 Neptune Rises before Jupiter and is visible in the evening sky.	 Dwarf Planet Pluto Is still in view north of the Sagittarius "teapot" in the very early evening.	 Asteroid 6 Hebe Reached opposition on Sep 20 at mag +7.1 and is still well placed for viewing in the late evening.

(Minutes continued from page 3)

We would like to remind club members that we do have club scopes that are available for rent, at very reasonable rate. Contact Vice President **Barry Peckham** for further details.

Starlight Reserve Committee - At-Large board member **Harry Zisko** will attend the next Starlight Reserve recommendation committee meeting on Sept. 23. Member Mel Levin asked whether there is any legislation regarding light trespass. Harry indicated that he would bring the issue up at the meeting.

For Sale— Secretary **Jim MacDonald** reports that club members have the opportunity to make a group purchase of the update of Sky Tools, Sky Tools III, at a reduced group price of \$135.00 for a group of 2 to 9, or \$108.00 for a group of 10 or more. Jim also reports that Sky & Tel is offering a special on their 2011 calendars. Members can order copies for \$6.50 each (reg. \$12.00). Please contact Jim if you are interested in either Sky Tools or the Calendar.

Barry Peckham shared information about the Rhode Island astronomy club he visited recently. Barry related that the skies he observed and the viewing area available pleasantly surprised him.

Poniatowski's Bull was the subject of a short discussion this month. Barry pointed out how to identify surrounding stars to find this interesting object. He said he was able to find this object while visiting the Kauai astronomy club.

Another object discussed was Barnard's Star (about mag. 8 to 8.5). The object is about 62 light-years distant. Barry also showed a short power-point presentation on the libration of the moon.

To the delight of all, Planetarium guide and longtime member **Joanne Bogan** led us through the current nighttime skies over Hawaii, showing us which planets are visible and other interesting objects.

As there was no further business, the meeting was adjourned at 9:23 p.m. Birthday cake and other refreshments were served.

Respectfully Submitted,
Gretchen West
HAS Secretary



FOR SALE

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DOBSONIAN TELESCOPE

\$275

(includes \$45 Telrad)

Call Mel Levin
395-6724



Hawaiian Astronomical Society

Event Calendar

< October 2010 >						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	1 6:00 PM Club Star Party (D)	2
					 Sunset: 6:20 PM	
3	4 7:30 PM Club Meeting	5	6	7	8 6:00 PM Public Star Party(D)	9
				 Sunset: 6:13 PM		
10 Columbus Day	11	12 6:15 PM Mililani Uka Elem SP	13	14 6:15 PM Mililani Ike Elem SP	15 3 events: Click here to view	16
				 Sunset: 6:07 PM		
17	18	19	20	21	22	23 Sunset: 6:02 PM
						
24	25	26	27	28	29 5:30 PM Public Star Party(D)	30
					Sunset: 5:58 PM	
31	1	2	3	4	5	6

Special Thanks

I was really surprised and, yes-delighted by the wonderful show of kindness and affection when the membership celebrated my 90th birthday at the September meeting. You gals and guys know how to warm an old man's heart--and it worked!!

So many thanks and mahalos to all concerned--it was a wonderful way to start off my birthday celebration.

Mel Levin



(1700 Fahrenheit), there was no chance of finding life on this distant world. Since that discovery, astronomers have been on the hunt for smaller and more Earth-like planets, and today we know of around 470 extrasolar planets, ranging from about 4 times to 8000 times the mass of Earth.

This explosion in extrasolar planet discoveries is only set to get bigger, with a NASA mission called Kepler that was launched last year. After staring at a single small patch of sky for 43 days, Kepler has detected the definite signatures of seven new exoplanets, plus 706 “planetary candidates” that are unconfirmed and in need of further investigation. Kepler is likely to revolutionize our understanding of Earth’s place in the Universe.

We don’t yet have the technology to search for life on exoplanets. However, the infrared Spitzer Space Telescope has detected molecules that are the basic building blocks of life in two exoplanet atmospheres. Most extrasolar planets appear unsuitable for supporting life, but at least two lie within the “habitable zone” of their stars, where conditions are theoretically right for life to gain a foothold.

We are still a long way from detecting life on other worlds, but in the last 20 years, the number of known planets in our Universe has gone from the 8 in our own Solar System to almost 500. It’s clear to everyone, including the Astro2010 decadal survey team, that the hunt for exoplanets is only just beginning, and the search for life is finally underway in earnest.

Explore Spitzer’s latest findings at <http://www.spitzer.caltech.edu>. Kids can dream about finding other Earths as they read “Lucy’s Planet Hunt” at <http://spaceplace.nasa.gov/en/kids/storybooks/#lucy>.

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

Meteor Log - Oct. 2010

by Mike Morrow

Sporadic rates remain good for northern observers.

Thursday October 21st the Orionids. Radiant 06h20m, +16 deg. The Moon is near full which will be not to good.

The average rate should be about 20 meteors an hour. Shower smeteors are very fast, some are bright, and often leave persistent trains.

The months other showers are very weak having only 4 or less meteors an hour.

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

Treasurer's Report

by Jim MacDonald

HAS Financial Report for the month ending as of Sept. 15, 2010

Initial Balance:	\$4,575.04
<i>Receipts:</i>	
Donations	117.00
Donations	37.00
Dues Received	84.00
Magazine Payments	66.95
Total Income:	\$284.95
<i>Expenses:</i>	
Astronews	134.04
Bank Charges	5.00
Liability Insurance	320.00
Magazine Subscription	34.00
Total Expenses:	\$497.04
Final Balance	\$4,362.05

We gained a two new members this month. They are *Susie and Toby Clairmont*. A special thanks to *Alyce Ikeoka* for her donation in memory of *Forrest Luke* and to an *anonymous* donor. Thanks and clear skies to all renewing their membership this month.

Final call for SkyTools 3

So far we have seven orders for the latest version of SkyTools. If we can get three more buyers, purchasers will receive a 40% discount off of the list price. It's a terrific program that several of us use on a regular basis to locate our nightly viewing targets. The club's order needs to be submitted soon to take advantage of this offer so if you are interested, contact Jim MacDonald at jim.macd@hawaiiintel.net. You can also see our original notice on page 11 of the August Astronews or visit <http://www.skyhound.com>

2011 Astronomy Calendars

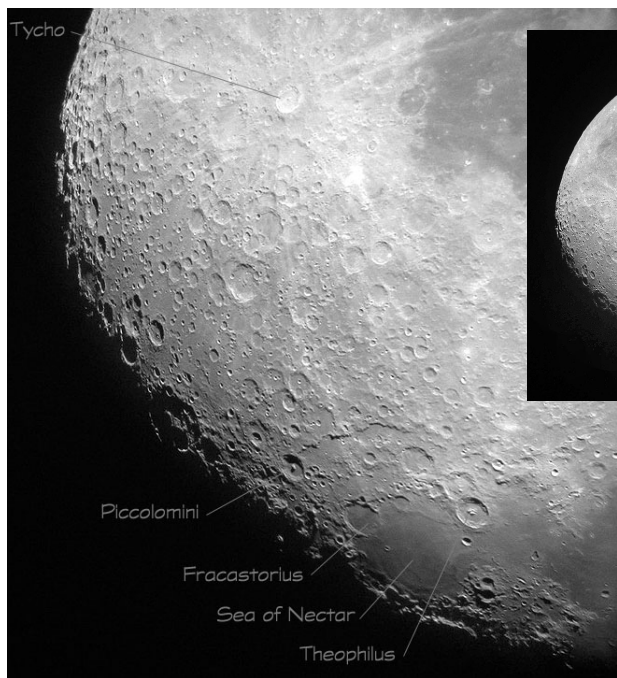
Again, Astronomy Magazine is offering its calendar to club members for \$6.50 apiece. The calendar retails for \$12.95 and they will ship our order without charge. This is a terrific deal for those interested in astronomy. These calendars make a nice gift for friends and family. Contact Jim MacDonald via e-mail or at the upcoming membership meeting. Once again, our order needs to be submitted soon.

(President continued from page 1)

are in darkness at first quarter. That's a bonus of lunar observing – it appears different each time you look at it.

The Moon has been the subject of international close-up viewing in recent years. Japan, China, and India all sent successful missions into lunar orbit, and they are all talking about more missions. Currently, however, only NASA has an ongoing lunar mission, the Lunar Reconnaissance Orbiter (LRO). It has just finished its one-year Exploration Mission. This was designed to investigate areas of interest that may be visited by humans or robotic explorers. Now LRO is entering its Science Mission. This is designed to investigate scientific questions about the Moon, such as those concerning its composition and history. The orbit will be changed from a 50-km circular orbit that required frequent adjustments to maintain its shape to a more elliptical one that requires much less fuel to maintain. We should be able to look forward to several more years of new data about our nearest celestial neighbor.

Chris 



***Image credit:
B. Peckham***

Images of a waning
gibbous moon taken on
Sept. 26.



CLUB MEETING REMINDER!!



October's club meeting will be held at ***Atherton Halau***
("old" location--building Ewa of the Planetarium).

Location of November's meeting is still tentatively set for
**November 2 at WINDWARD COMMUNITY COLLEGE
IMAGINARIUM.**

Please stay tuned or check for more information.

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Image of the Gassendi Crater region near the Moon's terminator taken on 9/18/10 during International Observe the Moon Night at Kahala Park. Our oblique view of the surface allows the sunlight to provide sharp definition to the Moon's features.

Image credit: Barry Peckam
See President's Message for related story.