Guest Speaker
January 3rd Meeting:
Michael Shanahan
Bishop Museum
“50 Years of the Bishop Museum Planetarium”
Clear Nights, Happy star gazing...

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

The Sky Chart provides a chart for Zero, 35, and 40 degrees latitude. Lots of additional information is also provided.

You do not need to be a member of the NSN to use this link: http://nightsky.jpl.nasa.gov/planner.cfm.

Happy star gazing...

Clear Nights,
John G.

Hawaiian Astronomical Society
P.O. Box 17671
Honolulu, HI 9681-0671

President
Chris Peterson
956-3131
chris@higp.hawaii.edu

Vice-President
Leslie Galloway
galloway1001@hawaii.edu

Secretary
Gretchen West
737-4742
gwest002@hawaii.rr.com

Treasurer
Jim MacDonald
261-2162
jim.macd@hawaiiantel.net

The Hawaiian Astronomical Society is now on facebook

NSN News

The Night Sky Network (NSN) has paired up with Earthsky to provide daily sky charts. You do not need to be a member of the NSN to use this link. Just click on this link: http://earthsky.org/tonight.

In addition, the NSN is providing another link for getting information about the night sky such as sunrise,sunset, moonrise, moonset, eclipses, and moon phase for your location.

When you get to the web page, there is additional information you can access in the right column. The weather forecast is okay.

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Happy star gazing...

(Minutes continued from page 7)
telescope for use again as a rental. Chris Peterson urged those members without scopes to rent a scope, use it at home and to join us by bringing it out to star parties.

Science News: During the Fall meeting of the European Geosciences Union, recent results of the Mercury Messenger Mission were announced.

Christmas/Calendars: Jim MacDonald reminded members who had ordered Astronomical calendars could contact Jim to pick up their purchases.

Dillingham Airfield: H.A.S. has received a reply to our request to continue conducting star parties at Dillingham Airfield. We have permission from the Department of Transportation to use the site, but we will have limited gate access. The security guard will close the gates at the posted time, 7:00 p.m. We will be speaking to the guard to establish times for entrance and exits at 8:30 p.m., 10:30 p.m. and 12:00 a.m. We want to maintain a good working relationship with the security guard on site and ask for members help through adherence to the rules.

Star Light Reserve Committee: Chris Peterson will attend the December 14th meeting. Chris indicated that the committee hopes to see the ratification of the bill that will result in the state replacing the existing streetlights with full cut-off fixtures, saving the state money. Harry Zisko informed the membership that he did broach the subject of designating a geographic area as a star light reserve on the North Shore of O`ahu. Harry indicated that Richard Wainscoat exhibited interest in the idea.

International Observe the Moon Night: Took place on October 8, 2011. We hope members celebrated this evening at home and we had a few members who joined us at Geiger Park in leeward O`ahu and at Kahala Community Park in West O`ahu on our regularly scheduled, free suburban star party night.

School Star Party Report: We have no star parties scheduled during December. However, if you are interested in participating in star parties, contact John Gallagher.

Elections: Barry Peckham and Paul Lawler declined to stand for election this year. Leslie Galloway was nominated to stand for election to the position of Vice President. April Lew was nominated to stand for election to the position of At-Large member.

The following were voted into office by unanimous vote. New board is as follows:

President – Chris Peterson
Vice President – Leslie Galloway
Secretary – Gretchen West
Treasurer – Jim MacDonald
Vice President – Leslie Galloway
Treasurer – Jim MacDonald
ASTRONEWS Editor – Carolyn Kaichi
At-Large Members - Susan Girard and April Lew

After the elections were concluded, Peter Besenbruch offered to help with refreshments as well.

Website News: Peter Besenbruch has given the website password to authorized members to help with updating the website.

Guest Speaker: Dr. Richard A. Keen; Instructor Emeritus, University of Colorado at Boulder, spoke to the membership about “Volcanoes and Climate Change Since 1980: A View from the Moon.” His talk encompassed lunar eclipses and weather effects on the observable hues seen during total lunar eclipses. Materials/particulates thrown into the stratosphere take longer to find their way back to the Earth’s surface and affect weather as well as coloring sunsets.

As there was no further business, the meeting was adjourned at 9:12 PM.

Respectfully Submitted,

Gretchen West
Secretary
Treasurer's Report


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by Chris Peterson

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Every year also brings the possibility of the unexpected: a new comet, spectacular meteor shower, or a supernova, for example. Our work with the Starlight Reserve Committee should help keep our skies darker than they otherwise would be. Have a great year of observing in 2012.

Chris

Meeting Minutes

by Gretchen West

Prior to the meeting, many members, their families, as well as our guest speaker and his family partook in a holiday pot-luck dinner. Good food and lively conversation were on the menu. Everyone appeared to have enjoyed themselves.

President Chris Peterson called the December 6, 2011 meeting of the Hawaiian Astronomical Society to order at 7:35 p.m. The meeting was held at the Planetarium on the grounds of the Bishop Museum. There were 28 members and one visitor in attendance.

Associated Lectures: There is no scheduled lecture for the Hawaii Space Lecture Series during the month of December due to the holidays. Additional information about upcoming lectures can be found by calling 808-956-3132 or at http://www.higp.hawaii.edu/prpdc. Regular lectures usually take place at the NASA Pacific Regional Planetary Data Center (PRPDC), room 544 in the Pacific Ocean Science and Technology Building on the Manoa campus of the University of Hawaii.

Astronomical League: Chris Peterson announced to the membership that there would be a special Keck Observatory live lecture in association with the Astronomical League. The lecture is scheduled for Thursday, December 8, 2011 at 7:00 p.m. Titled “Oodles of Exoplanets,” the lecture will cover habitable planets outside our solar system. This will be a web event and the lecture should be available to individuals for a few days at http://www.astroleague.org.

Rental Scopes: Barry Peckham reports that he is cleaning up the recently returned...
The Astronews

Volume 60, Issue 1

page 4

Dawn Takes a Closer Look
by Dr. Marc Rayman

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Credit: NASA/JPL-Caltech/UCLA/MPS/DLR/IDA

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<th>Shower</th>
<th>Activity</th>
<th>Max Date</th>
<th>λ_2000</th>
<th>α</th>
<th>δ</th>
<th>V∞</th>
<th>r</th>
<th>ZHR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quadrantids</td>
<td></td>
<td>12/28-1/12</td>
<td>283.16°</td>
<td>230°</td>
<td>+49°</td>
<td>41</td>
<td>2.1</td>
<td>120</td>
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If you observe this month’s shower or any shower – let us know what you saw!

Happy Holidays, Tom Giguere, 808-782-1408, Thomas.giguere@yahoo.com

Mike Morrow, PO Box 6692, Ocean View, HI 96737.

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“In today’s issue of the journal Nature, astronomers report that organic compounds of unexpected complexity exist throughout the Universe. The results suggest that complex organic compounds are not the sole domain of life but can be made naturally by stars. The compounds are so complex that their chemical structures resemble those of coal and petroleum. Since coal and oil are remnants of ancient life, this type of organic matter was thought to arise only from living organisms. The team’s discovery suggests that complex organic compounds can be synthesized in space even when no life forms are present.”

In a separate article Professor Kwok says the full import of his findings are yet to be determined in the area known as abiogenesis, the study of how life arose from non-living matter. Most biologists believe that some form of self-replicating chemicals must have formed a bridge between inanimate chemical reactions and life.

(Continued on page 7)
Observatory's Notebook

Planets Close To the Moon
Times are Hawaii Standard Time

Jan 2, 14h, M 4.8º NNW of Jupiter
(108º from sun in evening sky)

Jan 13, 15h, M 8.4º SSW of Mars
(121º from sun in morning sky)

Jan 15, 07h, M 6.1º SSW of Saturn
(121º from sun in evening sky)

Jan 24, 21h, M 5.5º NNW of Neptune
(25º from sun in evening sky)

Jan 26, 04h, M 6.3º NNW of Venus
(39º from sun in evening sky)

Jan 27, 13h, M 5.5º NNW of Uranus
(54º from sun in evening sky)

Jan 30, 02h, M 4.4º NNW of Jupiter
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Other Events of Interest
Times are Hawaii Standard Time

Jan 4, Quadrantid meteors
(Favorable year for this major shower)

Jan 4, 14h, Earth at perihelion
(near the sun)
(Distance from sun = 0.98327 a.u.)

Jan 8, 21:31h, Moon Full

Jan 13, 06h, Venus 1.1º SSW of Neptune
(36º from sun in evening sky)

Jan 14, January 1st in Julian calendar

Jan 22, 21:41h, Moon New

Jan 30, 17h, 433 Eros nearest to earth
(0.177 a.u. distance and magnitude 8.5)

Mercury is difficult to observe in January because it is close to the sun the entire month.

Mercury
Mercury Shines brightly in the west after sunset, setting about more than 3 hours after the sun.

Venus
Rises about 10 pm this month and doubles in brightness from +0.2 to -0.5 mag.

Mars

Jupiter is well placed for viewing in the evening sky. It is near the meridian at sunset.

Jupiter
Rises about midnight and can be observed in the morning sky before sunrise.

Saturn
Uranus is in the southwestern sky during the early evening hours.

Uranus

Visible in the southwest after sunset. Very close to Venus on Jan 12 and 13.

Neptune

Dwarf Planet Pluto
Reached conjunction with the sun in December and is still too close to the sun to observe.

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A further quote from the press release says: “The researchers investigated an unsolved phenomenon: a set of infrared emissions detected in stars, interstellar space, and galaxies. These spectral signatures are known as “Unidentified Infrared Emission features”. For over two decades, the most commonly accepted theory on the origin of these signatures has been that they come from simple organic molecules made of carbon and hydrogen atoms, called polycyclic aromatic hydrocarbon (PAH) molecules. From observations taken by the Infrared Space Observatory and the Spitzer Space Telescope, Kwok and Zhang showed that the astronomical spectra have features that cannot be explained by PAH molecules. Instead, the team proposes that the substances generating these infrared emissions have chemical structures that are much more complex. By analyzing spectra of star dust formed in exploding stars called novae, they show that stars are making these complex organic compounds on extremely short time scales of weeks. Not only are stars producing this complex aster, they are also ejecting it into the general interstellar space, the region between stars. The work supports an earlier idea proposed by Kwok that old stars are molecular factories capable of manufacturing organic compounds. ‘Our work has shown that stars have no problem making complex organic compounds under near-vacuum conditions,’ says Kwok. ‘Theoretically, this is impossible, but observationally we can see it happening.’”

In a working paper of 2004 at the Santa Fe Institute, James P. Crutchfield and Olof Gornerup proposed a theory on how “Objects Make Objects” which uses the rapidly developing theory of machines learning to analyze the mathematics of how pre-biotic processes might have led to the bridge between non-life and life. This is one of many explorations in a field called artificial life.

Another pair from the Santa Fe Institute, Stuart Kaufmann and Giuseppe Longo have been putting forth the idea that the whole approach of reductionism (where life and abiogenesis are reduced to a series of complex chemical reactions) is likely to fail. In the article they propose that the present scientific paradigm answers “how” questions but not “why” questions. Darwinian Evolution answers questions such as “why has the vertebrate eye emerged in the evolution of the universe?”

In closing, all cultures have their genesis myths and we are no different. In Western civilization we have been obsessed with grounded finitary causal explanations. In Eastern mythology the approach has been towards the infinitely interconnected reverberating network such as Indra’s net. It may well be we are in the midst of a melding of East and West where the union may lead to a grand new form of science.

My intention has been to provide a hint of different ways to look at the origin of life question and hope it will beseen as a modest thought for your consideration.


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President Chris Peterson called the December 6, 2011 meeting of the Hawaiian Astronomical Society to order at 7:35p.m. The meeting was held at the Planetarium on the grounds of the Bishop Museum. There were 28 members and one visitor in attendance.

**Associated Lectures:** There is no scheduled lecture for the Hawaii Space Lecture Series during the month of December due to the holidays. Additional information about upcoming lectures can be found by calling 808-956-3132 or at http://www.higp.hawaii.edu/prpdc. Regular lectures usually take place at the NASA Pacific Regional Planetary Data Center (PRPDC), room 544 in the Pacific Ocean Science and Technology Building on the Manoa campus of the University of Hawaii.

**Astronomical League:** Chris Peterson announced to the membership that there would be a special Keck Observatory live lecture in association with the Astronomical League. The lecture is scheduled for Thursday, December 8, 2011 at 7:00p.m. Titled “Oodles of Exoplanets,” the lecture will cover habitable planets outside our solar system. This will be a web event and the lecture should be available to individuals for a few days at http://www.astroleague.org.

**Rental Scopes:** Barry Peckham reports that he is cleaning up the recently returned...
In this issue:

☆ New Board Election Results - In the Minutes Report beginning on page 3. Welcome to the new members of our voluntary board!

☆ New Astronews contributor - New member Charles Rykken is taking a stab at contributing an article for the newsletter. Remember, this is your club (thus your newsletter) so whatever you want to contribute within the guidelines of the club policies is gladly welcome.

The Night Sky Network (NSN) has paired up with Earthsky to provide daily sky charts. You do not need to be a member of the NSN to use this link. Just click on this link: http://earthsky.org/tonight.

In addition, the NSN is providing another link for getting information about the night sky such as sunrise, sunset, moonrise, moonset, eclipses, and moon phase for your location.

When you get to the web page, there is additional information you can access in the right column. The weather forecast is okay. The Sky Chart provides a chart for Zero, 35, and 40 degrees latitude. Lots of additional information is also provided.

You do not need to be a member of the NSN to use this link: http://nightsky.jpl.nasa.gov/planner.cfm. Happy star gazing...

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The Hawaiian Astronomical Society is now on facebook.

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.

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Science News: During the Fall meeting of the European Geosciences Union, recent results of the Mercury Messenger Mission were announced.

Christmas/Calendars: Jim MacDonald reminded members who had ordered Astronomical calendars could contact Jim to pick up their purchases.

Dillingham Airfield: H.A.S. has received a reply to our request to continue conducting star parties at Dillingham Airfield. We have permission from the Department of Transportation to use the site, but we will have limited gate access. The security guard will close the gates at the posted time, 7:00 p.m. We will be speaking to the guard to establish times for entrance and exits at 8:30 p.m., 10:30 p.m. and 12:00 a.m. We want to maintain a good working relationship with the security guard on site and ask for members help through adherence to the rules.

Star Light Reserve Committee: Chris Peterson will attend the December 14th meeting. Chris indicated that the committee hopes to see the ratification of the bill that will result in the state replacing the existing streetlights with full cut-off fixtures, saving the state money. Harry Zisko informed the membership that he did broach the subject of designating a geographic area as a star light reserve on the North Shore of O‘ahu. Harry indicated that Richard Wainscoat exhibited interest in the idea.

International Observe the Moon Night: Took place on October 8, 2011. We hope members celebrated this evening at home and we had a few members who joined us at Geiger Park in leeward O‘ahu and at Kahala Community Park in West O‘ahu on our regularly scheduled, free suburban star party night.

School Star Party Report: We have no star parties scheduled during December. However, if you are interested in participating in star parties, contact John Gallagher.

Elections: Barry Peckham and Paul Lawler declined to stand for election this year. Leslie Galloway was nominated to stand for election to the position of Vice President. April Lew was nominated to stand for election to the position of At-Large member. The following were voted into office by unanimous vote. New board is as follows:

President – Chris Peterson
Vice President – Leslie Galloway
Secretary – Gretchen West
Treasurer – Jim MacDonald
ASTRONews Editor – Carolyn Kaichi
At-Large Members - Susan Girard and April Lew

After the elections were concluded, Peter Besenbruch offered to help with refreshments as well.

Website News: Peter Besenbruch has given the website password to authorized members to help with up dating the website.

Guest Speaker: Dr. Richard A. Keen; Instructor Emeritus, University of Colorado at Boulder, spoke to the membership about “Volcanoes and Climate Change Since 1980: A View from the Moon.” His talk encompassed lunar eclipses and weather effects on volcanoes. Dr. Keen spoke at length about weather patterns from 1980 to 2008. He indicated that severe volcanic eruptions, within one year of eclipses, have a decided effect on the observable hues seen during total lunar eclipses. Materials/particulates thrown into the stratosphere take longer to find their way back to the Earth’s surface and affect weather as well as coloring sunsets.

As there was no further business, the meeting was adjourned at 9:12 PM.

Respectfully Submitted,

Gretchen West
Secretary
Comet Lovejoy as imaged by astronauts onboard the International Space Station. The comet flew through the atmosphere of the sun on Dec. 16 and survived to the surprise of experts. See more images posted online on the Hawaiian Astronomical Society new Facebook page as well as links to HAS.

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GUEST SPEAKER
January 3rd Meeting:
Michael Shanahan
Bishop Museum
“50 Years of the Bishop Museum Planetarium”

~Special Thanks~
Dr. Richard Keen
University of Colorado
Dept. of Atmospheric & Oceanic Sciences
Dr. Keen gave a fascinating talk on lunar eclipses at our last club meeting and met with club members at our holiday pot luck earlier in the evening. We were fortunate that Dr. Keen has relatives on the island and could schedule his talk around his visit. See report in Minutes on pg 11 and images on pg 9.

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Upcoming Events:
☆The next meeting is 7:30PM on Tues., Jan 3 at the Bishop Museum Planetarium.
☆Bishop Museum’s next planetarium shows with Barry Peckham are Friday, Jan 6 & 20 at 8:00 p.m. www.bishopmuseum.org/calendar
☆The next Board Meeting is Mon., Jan 2 at 3:30 p.m. at the POST building at UH.