

## Comet 17P/Holmes puts on a show!

Have you seen it yet? How could you miss it? There's an extra star in Perseus almost as bright as  $\alpha$  and brighter than  $\delta$  Persei. It's easily visible even from downtown Honolulu. But it's not a star, it's a comet that suddenly ejected millions of tons of dust into surrounding space and brightened from an invisible (even to my telescope) mag. 17 to a naked eye visible mag. 2 (an increase of over a millionfold).

You can see a video of this happening at this site: <http://urltea.com/lzp4>

So grab your binoculars and take a look. As of this writing, the comet has not dimmed and is almost half the diameter of the full moon. We received one of the first photos from (former HAS member) Nicholas Bevir in France.

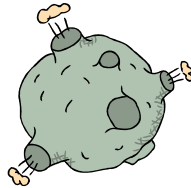
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## Upcoming Star Parties

<b>Public Party</b>	<b>Nov 10</b>	<b>Dillingham</b>
<b>Public Party</b>	<b>Nov 17</b>	<b>Kahala/Waikele</b>
<b>Public Party</b>	<b>Dec 1</b>	<b>Dillingham</b>
<b>Club Party</b>	<b>Dec 8</b>	<b>Dillingham</b>
<b>Public Party</b>	<b>Dec 15</b>	<b>Kahala/Waikele</b>
<b>Public Party</b>	<b>Dec 29</b>	<b>Dillingham</b>

*Note: Jan. meeting will be January 8th, not January 1st.*



## Upcoming Events:

- The next meeting is at 7:30 p.m. on **Tuesday, Dec. 4<sup>th</sup>** at the Bishop Museum.
- Bishop Museum's next planetarium show with **Barry Peckham** is Friday, **Dec. 7<sup>th</sup>** at 7:00 pm.

## President's Message

Elections for the Hawaiian Astronomical Society are coming up. This is an opportunity for those who want to increase their level of involvement with the club and gain experience in running a nonprofit organization. I was asked at the October meeting to explain what the club's officers do, so that's the subject of this report.

The elected officials are the President, Vice President, Treasurer, Secretary, Astronews Editor, and two Members-at-Large. All are members of the Board of Directors and are expected to attend monthly Board meetings. These are scheduled in consultation with Board members and are currently held in the Planetary Data Center on the University of Hawaii campus on the Sunday before the membership meeting at Bishop Museum.

At Board meetings, the Directors conduct the business necessary to keep the club functioning. This includes reporting on, discussing, and occasionally voting on motions relating to the club's activities. Responsibilities include making arrangements for activities such as club meetings, star parties, and participation in special events with the Bishop Museum. The Board sets prices for membership dues and telescope rentals and votes on expenditures of funds for other purposes. (Large expenditures must be voted on by the entire membership.)

The **President** presides over the monthly membership and Board meetings and writes a monthly column for the Astronews. The **Vice President** is in charge of club telescopes and fills in for the President when necessary. The **Treasurer** controls collection of membership dues and club expenditures, provides monthly reports for the Astronews and an annual report for the State of Hawaii, and prepares an annual membership directory. The **Secretary** takes minutes of the Board of Directors and membership meetings and makes them available to the members. The

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Society**  
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**The Astronews** 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 15<sup>th</sup> of each month. We are not responsible for unsolicited artwork.

**Planets Close To the Moon**

Times are Hawaii Standard Time








- Nov 3, 15h, M 1.6° SSW of Saturn  
(65° from sun in morning sky)
- Nov 5, 07h, M 2.7° SSW of Venus  
(46° from sun in morning sky)
- Nov 7, 20h, M 6.2° SSW of Mercury  
(19° from sun in morning sky)
- Nov 12, 11h, M 5.0° S of Jupiter  
(32° from sun in evening sky)
- Nov 17, 02h, M 0.91° SSE of Neptune  
(85° from sun in evening sky)
- Nov 18, 23h, M 1.8° NNW of Uranus  
(108° from sun in evening sky)
- Nov 26, 20h, M 1.7° N of Mars  
(143° from sun in morning sky)

**Other Events of Interest**

Times are Hawaii Standard Time

- Nov 8, 10h, Mercury at greatest elongation  
(19.0° west of the sun in morning sky)
- Nov 9, 02h, 1 Ceres at opposition
- Nov 9, 13:03h, Moon New
- Nov 18, Leonid meteors
- Nov 23, 14h, Moon at perigee only 14  
hours before full moon, high tides  
expected.
- Nov 24, 04:30h, Moon Full

**Planets in November**

<p> <b>Mercury</b> a fine morning ap- pearance during the first half of November, reaching greatest elongation on Nov 8.</p>	<p> <b>Venus</b> shines brightly in the morning sky at magni- tude -4.2. Sets about 4 hours after the sun.</p>	<p> <b>Mars</b> brightens from -0.6 to - 1.3 as it approaches opposition next month. It will be 15" in diame- ter by the end of Nov.</p>
<p> <b>Jupiter</b> is very low in the southwest at dusk and sets about an hour after the sun by month's end.</p>	<p> <b>Saturn</b> rises around midnight and can be viewed in the early morning hours before dawn.</p>	<p> <b>Uranus</b> is nearly overhead at midnight and can be viewed in the evening hours in Aquarius.</p>
<p> <b>Neptune</b> is a little to the west of Uranus and is also well placed for eve- ning viewing in Capri- cornus.</p>	<p>Dwarf Planet <b>Eris</b> is in the constellation of Cetus at RA 1h 37m 21s and Dec -5° 8'40" on Nov 15. Very ad- vanced equipment may find it at mag. 18.</p>	<p>Dwarf Planet <b>Ceres</b> reaches opposition this month and so will be the brightest of the year at magnitude 6.9.</p>

Our monthly meeting began at the usual time in the usual place, officiated by club president Chris Peterson and attended by about 30 members and a couple visitors. Chris announced a Planetary Data Center talk October 30th, on the next Mars Rover mission. He also reminded us of the DAWN mission that will visit Ceres and Vesta by 2015, plus the New Horizon mission to Pluto (also by 2015).

### Announcements:

Lacy Veech Day is an annual event at Punahou School, held this year on October 27th. HAS will set up and staff a booth there, as always.

The SOEST Open House will be held this year from 10 AM until 2 PM on the 19th and 20th of October at the Post Building, the Marine Science Building and the H.I.G. Building.

Annual HAS elections for all positions on the board will be held at the December meeting. Nominations are eagerly sought and one At-Large position is empty and must be filled.

Chris gave an overview of Sputnik history and trivia in commemoration of Sputnik's 50th anniversary.

### New Business:

Member Carey Johnson demonstrated and explained a near-Earth asteroid tracking program he has been

working with for several years. It was pretty scary to watch all the near misses as Earth plowed around the Sun in Carey's dozen-or-more year animation.

Paul Lawler demonstrated the Galaxy Zoo website where folks who pass an on-line orientation quiz can help to catalog real galaxies for science.

Member Harry Zisko showed some pictures of a "Planet Walk" he and Melinda happened upon while wandering the streets of Anchorage recently. Planets and Sun were properly scaled and spaced. The exhibit appears to be a long term installation.

Member-at-Large and Night Sky Network coordinator John Galligher dispersed Network news and played a 5 minute video entitled "What Is A Planet?" Discussion followed.

V.P. Barry Peckham proposed that interested HAS members fly to Kauai and join with the Kauai astronomy group at their regular November star party.

Carey Johnson's 66mm William Optics refractor is for sale.

Meeting was adjourned shortly after 9 PM..

Respectfully Submitted,  
Barry Peckham (sub for Gretchen)

**President's Report** (Cont. from page 2)  
**Astronews Editor** publishes our monthly club newsletter.

**Members-at-Large** have no specific duties outside attendance at Board meetings, but in practice all board members share responsibility for running the star parties at Dillingham Air Field. It usually falls to the President and Vice President to arrange for speakers and to pro-

vide other content for the monthly membership meetings.

Not required in the bylaws, but always in good supply, are camaraderie and the satisfaction of helping to provide a worthwhile service. Please consider serving your club and the hobby of astronomy by running for office.

Chris

Don't let Mars's cold, quiet demeanor fool you. For much of its history, the Red Planet has been a fiery world.

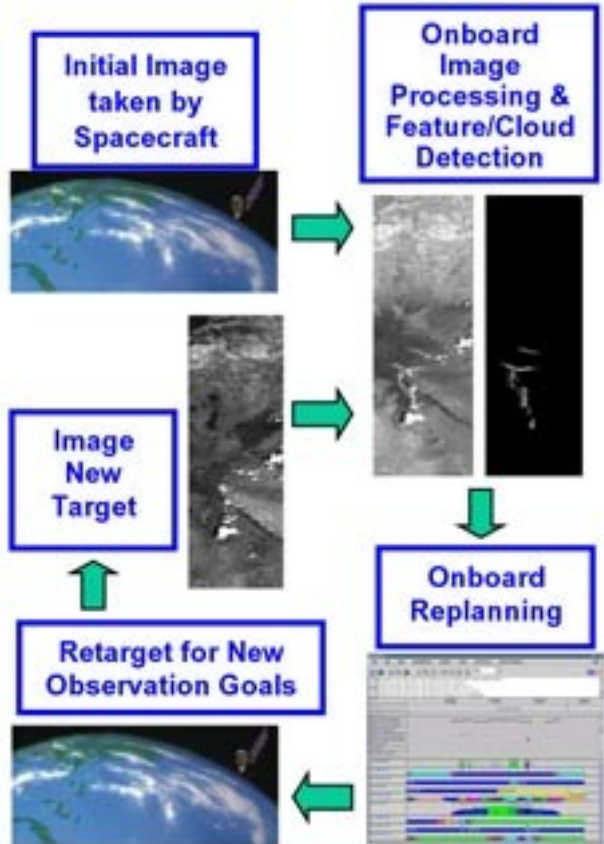
Dozens of volcanoes that dot the planet's surface stand as monuments to the eruptions that once reddened Mars's skies with plumes of glowing lava. But the planet has settled down in its old age, and these volcanoes have been dormant for hundreds of millions of years.

Or have they? Some evidence indicates that lava may have flowed on Mars much more recently. Images of the Martian surface taken by orbiting probes show regions of solidified lava with surprisingly few impact craters, suggesting that the volcanic rock is perhaps only a million years old.

If so, could molten lava still occasionally flow on the surface of Mars today?

With the help of some artificial intelligence software, a heat-sensing instrument currently orbiting Mars aboard NASA's Mars Odyssey spacecraft could be just the tool for finding active lava flows.

"Discovering such flows would be a phenomenally exciting scientific finding," says Steve Chien, supervisor of the Artificial Intelligence Group at JPL. For example, volcanic activity



Just as changing cloud patterns on Earth were identified using Earth Observing-1's Advanced Land Imager along with ScienceCraft software, the THEMIS instrument with ScienceCraft on the Mars Odyssey spacecraft can avoid transmitting useless images.

could provide a source of heat, thus making it more likely that Martian microbes might be living in the frosty soil.

*(Continued on page 6)*

## Join the Friends of the Institute for Astronomy (FifA)

As a "Friend" you can be directly involved in the mission of the University of Hawaii's Institute for Astronomy. You will be invited to meet with IfA and visiting scientists, attend star parties and other activities. You will also receive quarterly newsletters and invitations to special events at the IfA. For more information and an application: [www.ifa.hawaii.edu/friends](http://www.ifa.hawaii.edu/friends)

### **Red Hot** (Continued from page 5)

The instrument, called THEMIS (for Thermal Emission Imaging System), can "see" the heat emissions of the Martian surface in high resolution—each pixel in a THEMIS image represents only 100 meters on the ground. But THEMIS produces about five times more data than it can transmit back to Earth.

Scientists usually know ahead of time which THEMIS data they want to keep, but they can't plan ahead for unexpected events like lava flows. So Chien and his colleagues are customizing artificial intelligence software called ScienceCraft to empower THEMIS to identify important data on its own.

This decision-making ability of the ScienceCraft software was first tested in Earth orbit aboard a satellite called Earth Observing-1 by NASA's

New Millennium Program. Earth Observing-1 had already completed its primary mission, and the ScienceCraft experiment was part of the New Millennium Program's Space Technology 6 mission.

On Odyssey, ScienceCraft will look for anomalous hotspots on the cold, night side of Mars and flag that data as important. "Then the satellite can look at it more closely on the next orbit," Chien explains.

Finding lava is considered a long shot, but since THEMIS is on all the time, "it makes sense to look," Chien says. Or better yet, have ScienceCraft look for you—it's the intelligent thing to do.

To learn more about the Autonomous ScienceCraft software and see an animation of how it works, visit <http://ase.jpl.nasa.gov>.

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

In my youth I regarded the universe as an open book, printed in the language of equations, whereas now it appears to me as a text written in invisible ink, of which in our rare moments of grace we are able to decipher a small segment.

- Arthur Koestler

## HAS Financial Report as of October 15, 2007

Initial Balance: .....	\$4,111.61
Receipts:	
Dues Received .....	66.00
Telescope Fees .....	20.00
Calendars .....	71.28
Magazine Payments .....	66.95
Total Income: .....	\$224.23
Expenses:	
Astronews .....	164.71
Postage .....	2.61
Refreshments .....	7.53
Total Expenses: .....	\$174.85
Ending Balance: .....	\$4,160.99

This month our membership increased by two. They were **David** and **Mary Ann Underwood**. Thanks to everyone renewing their membership this month. Clear skies to all!

## Meteor Log—November 2007

by Mike Morrow

Not a bad month. Sporadic rates are still very acceptable for mid northern observers.

**Sunday the 18th, the Leonids.** Radiant 10h12m +22 deg.

The rates are variable, perhaps 15+ this year. The maximum is forecast for about 5PM which is not to good for Hawaii. There is a good chance the rates will be more than 15 an hour. The radiant is in Leo's head and is visible after 11PM local time. the Moon will be low or setting about this time. Be aware that other peaks may still happen, so be alert for possible late predictions!

**Thursday the 22nd, the Alpha Monocerotids.** Radiant 07h48m +01 deg.

Again the maximum is forecast for about 5PM local time. Rates can raun from about 2 to 3 an hour to about 500. This usually minor shower's most recent outburst was in 1995 over Europe which lasted about 30 minutes. The radiant is some degrees south-east of Procyon. Unfortunately the Moon is full on November 24, but will leave a short observing window before morning twilight sets in.

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

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**Comet 17-P/Holmes: Photo by Nicholas Bevir**