

## COMMENTARY ON A COMET - CLARE AND MEL LEVIN

Well, there have been reams of descriptions etc. of the spectacular COMET 17P/HOLMES. In fact Chris devoted most of the November club meeting to this subject. So let us tell you of an interesting wrinkle on this comet story. It goes like this ---our son Larry is under dark skies, 3,000 miles away in rural Ashland Oregon on about Nov, 5th, and he has Clare's 16x70 binoculars plus his cell phone in hand. The wrinkle is that he wants us to tell him {he has no Astronomical knowledge} how to find this comet.

So, now comes the self deflating part of the saga--we thought we knew the night sky fairly well. Not really well like those who've been doing this for 30 or more

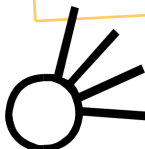
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## Upcoming Star Parties

Club Party	Jan 5	Dillingham
Public Party	Jan 12	Kahala/Waikele
Public Party	Jan 26	Dillingham
Club Party	Feb 2	Dillingham
Public Party	Feb 9	Kahala/Waikele
Public Party	Feb 23	Dillingham
Club Party	Mar 1	Dillingham



## Upcoming Events:

- The next meeting is at 7:30 p.m. on **Tuesday, Jan. 8<sup>th</sup>** at the Bishop Museum.
- Bishop Museum's next planetarium show with **Barry Peckham** is Friday, **Jan. 5<sup>th</sup>** at 7:00 pm.

## President's Message

The night of December 13/14 brought more showers of the rain than the Geminid meteor variety, but there were occasional breaks in the clouds that made observing possible. I walked outside about 1:45 a.m. and was rewarded very quickly with a bright meteor that started near Mars and headed east. It lasted well over a second and brightened near the end when it seemed quite a bit brighter than Mars (although the red planet was hidden by clouds at the time, making a quick comparison impossible). I knew I had been lucky early and didn't invest much more time on that rainy evening, but I did see a few more short streaks. How many did you see?

Speaking of Mars, it reached opposition on Christmas Eve, but our closest approach to it came on December 18th. That's because Mars had previously passed through its perihelion and is now getting farther from the Sun. Before the 18th, Earth's motion towards "lapping" Mars made more difference than Mars's gradual movement away from the Sun. Between the 18th and the 24th, Earth's approach was slightly outraced by the retreat of Mars. Now that we are past opposition, however, and Earth is pulling out in front of Mars again, the distance separating the two will grow faster. So if you haven't had a look at Mars lately, don't wait too long or you'll miss your best opportunity.

On the other hand, you have until January 14th to observe Mars while it's closer than it will be during the next opposition in January of 2010. By January 17th it will appear smaller than during the worst opposition of the current cycle in March of 2012. On January 5th, Mars will appear the same size as on April 14th, 2014, the closest approach of that opposition. The 2016 opposition will bring Mars closer than it got this time, 2018 closer still, but the 2018 and '20 oppositions will both be better than this one. Happy viewing!

*Chris*

**Hawaiian Astronomical  
Society**  
**P.O. Box 17671**  
**Honolulu, Hawaii 96817**

### **President**

**Chris Peterson**

956-3131

chrisp@higp.hawaii.edu

### **Vice President**

**Barry Peckham**

542-8658

barry@liteboxtelescopes.com

### **Secretary**

**Gretchen West**

737-4742

gwest002@hawaii.rr.com

### **Treasurer**

**Jim MacDonald**

261-2162

jim.macd@hawaiiantel.net

### **Board Members-at-Large**

**John Gallagher** 683-0118

gallaghej002@hawaii.rr.com

**Harry Zisko** 262-1947

harryz@pobox.com

### *The* **Astronews Editor**

**Carey Johnson**

216-1410

quarkcsj@hotmail.com

### **HAS Webmaster**

**Peter Besenbruch**

prb@lava.net

*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.

President Chris Peterson called the December 4, 2007 meeting of the Hawaiian Astronomical Society to order at 7:35 p.m. The meeting was held at the Atherton Halau of the Bishop Museum. In attendance were twenty-two members and two visitors.

**January H.A.S. Meeting** - The regularly scheduled January 2008 General Membership Meeting of the Hawaiian Astronomical Society, usually held on the first Tuesday of the month, will be held this year on January 8th, 2008.

**Hawaii Space Lecture Series** - There is no lecture scheduled for the Hawaii Space Lecture Series for the month of December. For further information you can contact NASA PRPDC at 808-056-3132 or on the Web go to <http://www.higp.hawaii.edu/prpdc>.

**Star Party Report** - Forrest Luke reports that H.A.S. has no school star parties scheduled during November or December of 2007, or January of 2008. We will participate in the Kapolei Middle School Spring Fling around April 25, 2008.

**General Information** - H.A.S. President, Chris Peterson reminded everyone that the planet Mars is nearing opposition. On the evening of December 18th Mars will be at it's closest to Earth, while on December 24th Mars will be at opposition to the Sun. The red planet will also be viewed within 2 degrees of the moon on the evening of December 23rd. We will have some close views of this planet this month, so keep your eyes on the skies.

H.A.S. President, Chris Peterson discusses the Phoenix Mars Lander, and reminded us of its launch back in August. The lander is about half way to its destination and is slated to arrive May 25, 2008. On another note, the Space Shuttle lift-off is to take place December 6th with former University of Hawaii member, Astronaut Stan Love. Dr. Love will take multiple space walks and be in charge of the operation of the space shuttle arm.

**Former Member Gets Award** - Former member Olivier Guyon recently received an award from the United States of America. Dr. Guyon received the "President's Early Career Award for Scientists and Engineers" for his work on setting up adaptive optics at the Subaru Telescope on Mauna Kea.

**Visitors** - We had four visitors join us at the meeting this month. The father and son team of Greg and Brian McCartney have joined us as members. Rachel Stevenson and Joe Masiero both decided to visit us for the first time at tonight's meeting. We hope to see you at our suburban and dark sky star parties.

**Kauai Trip** - H.A.S. Vice-President Barry Peckham has planed an astronomy night in cooperation with the Kauai Educational Association for Science and Astronomy. The weekend of January 5th, club members from the Hawaiian Astronomical Society will participate in a star party with members of the Kauai astronomy club at their viewing site in Hanapepe. We are hoping that members from Oahu with scopes join those of us who are already going. We hope others will bring scopes along to enhance the viewing and cooperation between clubs there on Kauai. If you are interested please contact Barry Peckham.

**Elections** - The annual elections for the Hawaiian Astronomical Society took place at the December meeting. The newly elected Board of Directors for 2008 is as

*(Continued on page 4)*

follows:

<b>President:</b>	<b>Chris Peterson</b>
<b>Vice-President:</b>	<b>Barry Peckham</b>
<b>Treasurer:</b>	<b>Jim MacDonald</b>
<b>Secretary:</b>	<b>Gretchen West</b>
<b>ASTRONEWS Editor:</b>	<b>Carey Johnson</b>
<b>At-Large Members:</b>	<b>John Gallagher</b> <b>Harry Zisko</b>

We would like to thank Joanne Bogan for chairing the elections again this year. We would also like to thank Richard Frey for his outstanding help during the past year. Richard has been instrumental in the distribution of the AS-TRONEWS. Thank you Richard.

**Guest Speaker** - Our last meeting of the year culminated with a very interesting talk by second year grad student, Rachel Stevenson, from the Institute for Astronomy at the University of Hawaii. She gave an informative talk on Comet 17/P Holmes, the spectacular comet that has been visible in the night skies during the month of October and November.

Rachel spoke of the comet's discovery in 1892 by Edwin Holmes in Edinburgh, Scotland and of how the comet was "lost" for over 60 years, until the 1960's. The erratic although typical comet has had visible outbursts three times before. It is believed to be somewhat typical in composition, made up of water ice and carbon. The comet became naked eye visible, going from mag. 18 to mag. 2 in less than twenty-four hours. The short-period comet has a visible nucleus and another visible part, which Rachel referred to as "Blob B!" Rachel indicated that the blob appears to be moving apart from the nucleus and may diverge or disappear completely.

Rachel also discussed the Stardust Mission, which was retasked to view Comet Temple I in 2011 and 2014.

**Night Sky Network Teleconference** - At-Large member and Night Sky Coordinator John Gallagher informed members about the upcoming teleconference, which will discuss the Phoenix Mission. Dr. Chris McKay will conduct the teleconference. Anyone who is interested in any of the teleconference information should contact John Gallagher.

**Geminid Meteor Showers** - The Geminid meteor showers will have its peak viewing time at about 6:45 am HST on December 14th.

The meeting was adjourned at 8:47 p.m. and refreshments were served.

Joanne Bogan provided a Planetarium for interested members following the meeting.


Respectfully Submitted,  
Gretchen West, Secretary, H.A.S.

*(Continued from page 1)*

years. Actually this story is for those relatively new to amateur astronomy as the "know it all's" can stop reading now. We found out that the true test of dark sky knowledge is leading a completely inexperienced observer, like our son, to a specific object in the sky. A real lesson in star hopping. Since he could recognize the Pleiades, we led him to the Perseus OB association via a line from the Pleiades to Polaris--{he knew where north was}. by advancing one fourth of the way. From Mirfak--the brightest star in the area - a short binocular hop of 1/2 to 1 binoc field south should bring him close to the comet.

Another way would be to draw a line from gamma to delta Cassiopeia, then go 1.5 times that distance to the double cluster in Perseus then twice that distance to Mirfak, etc. We tried both, but the first worked best and voila he exclaimed--"I got it and boy is it gorgeous". What a thrill for him, and us as well.

One of the lessons from this experience is that, though one may know the constellations well enough, it is the relationship of one to another that takes a little more "knowing". Sure, most of us know the summer triangle and the several groups that flank Orion. But how about Camelopardalis, the head of Hydra, or exactly where is Lacerta, plus dozens more.

This inter-relationship to depict a whole integrated night sky is for us a daunting task, and one which novices should take seriously--Ah, but we digress--the principal part of this essay is to point out yet another facet of this wonderful comet and to allow those words to reverberate--"BOY IS IT GORGEOUS"!!! . 

## Sky and Telescope

Sky and Telescope Magazine has changed its renewal procedures for current subscribers. Upon receipt of a renewal notice you should respond directly to the notice if you wish to renew your subscription. You may send a check or credit card information directly without routing your request through HAS. Our subscription rate continues to be \$32.95.

New S&T subscribers and subscribers to Astronomy Magazine must continue to refer their requests to the club treasurer as has been done in the past.

## HAS Yahoo Group

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

Join the

### Friends of the Institute for Astronomy (IfA)

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)

## HAS Financial Report as of December 15, 2007

<b>Initial Balance:</b>	<b>\$4,187.38</b>
Receipts:	
Donations	253.05
Dues Received	590.00
Magazine Payments	336.85
<b>Total Income:</b>	<b>\$1,179.90</b>
Expenses:	
Astronews	241.35
Magazine Subscriptions	170.40
P.O. Box Rent	84.00
Refreshments	7.80
<b>Total Expenses:</b>	<b>\$503.55</b>
<b>Final Balance</b>	<b>\$4,863.73</b>

This month we gained three new members. They are Charlie Liv-ermore, Randy and Sally Trager. We would like to especially thank John Sandor, Gary Shimazu, Wilfred Kekoanui, Daniel Fischberg, John Swatek, Robert Humphreys and an anonymous donor of \$200 for their wonderful gifts. Thanks also to everyone renewing their membership this month. Merry Christmas, a Happy New Year and clear skies to all!

## Chicken Little Report - January 2008 by Carey Johnson

### Meteor Showers

1/1 – 1/5 Quadrantids Peaks Jan 3/4

1/28 – 2/21 Alpha Centaurids Peaks Feb 8/9

### Comets

1/1 8P/Tuttle Near-Earth Flyby 0.251 AU

1/5 194P/2007 W2 (LINEAR) Closest Approach to Earth 0.865 AU

1/27 8P/Tuttle Perihelion 1.027 AU

2/2 46P/Wirtanen Perihelion (1.057 AU)

### Asteroids

1/9 2005 WJ56 Near-Earth Flyby 0.028 AU

1/28 2007 TU24 1.3 LD / 0.0032 AU from Earth

1/30 2007 WD5 Near-Mars Flyby (Potential Impact)

Planets Close To the Moon

Times are Hawaii Standard Time

- Jan 4, 18h, M 7.0° S of Venus  
(38° from sun in morning sky)
- Jan 10, 15h, M 0.42° S of Neptune  
(30° from sun in evening sky)
- Jan 12, 13h, M 2.3° NNW of Uranus  
(54° from sun in evening sky)
- Jan 19, 14h, M 1.1° N of Mars  
(145° from sun in evening sky)
- Jan 24, 18h, M 2.6° SSW of Saturn  
(147° from sun in morning sky)










Other Events of Interest

Times are Hawaii Standard Time

- Jan 2, 14h, Earth at perihelion  
(Closest to sun for 2008 at 0.98327 AU)
- Jan 7, 01:36h, Moon New
- Jan 4, Quadrantid meteors
- Jan 10, 3h, 15 Eunomia at opposition
- Jan 22, 03:34h, Moon Full
- Jan 28, 14h, Mercury 0.28° NNW of Neptune (19° from sun in evening sky)

Mercury and Jupiter are closer than 15° from the sun when near the moon in January.

Planets in January

 <b>Mercury</b> has a fine evening apparition late in January, reaching greatest elongation on Jan 21.	 <b>Venus</b> shines brightly in the morning sky at magnitude -4.0, but is getting lower and rises about 2 1/2 hours before the sun.	 <b>Mars</b> will be in the sky almost all night. It fades rapidly from about -1.5 to -0.5 magnitude during the month.
 <b>Jupiter</b> is low in the east in the morning sky. By month's end it will be less than a degree from Venus.	 <b>Saturn</b> rises in mid-evening during January. Magnitude +0.7.	 <b>Uranus</b> is in Aquarius in the southwest at sunset and can be observed in the early evening.
 <b>Neptune</b> is low in the west southwest at sunset and can be viewed in the early evening in Capricornus.	 Dwarf Planet <b>Pluto</b> can be observed in the morning sky. Near the end of the month it is close to Venus.	 Dwarf Planet <b>Ceres</b> is visible in Aries near the border of Cetus during the evening hours.

## 2008 Meeting & Star Party Dates

<b>Dillingham Club Only</b>	<b>Club Meeting</b>	<b>Kahala/Waialeale</b>	<b>Dillingham Public</b>
<b>Jan 5</b>	<b>Jan 8</b>	<b>Jan 12</b>	<b>Jan 26</b>
<b>Feb 2</b>	<b>Feb 5</b>	<b>Feb 9</b>	<b>Feb 23</b>
<b>Mar 1</b>	<b>Mar 4</b>	<b>Mar 15</b>	<b>Mar 8</b>
<b>Mar 29</b>	<b>Apr 1</b>	<b>Apr 12</b>	<b>Apr 5</b>
			<b>Apr 26</b>
<b>May 3</b>	<b>May 6</b>	<b>May 10*</b>	<b>May 24</b>
<b>May 31</b>	<b>Jun 3</b>	<b>Jun 7</b>	<b>Jun 21</b>
<b>Jun 28</b>	<b>Jul 1</b>	<b>Jul 12</b>	<b>Jul 5</b>
<b>Jul 26</b>	<b>Aug 5</b>	<b>Aug 9</b>	<b>Aug 2</b>
<b>Aug 30</b>	<b>Sep 2</b>	<b>Sep 6</b>	<b>Aug 23</b>
<b>Sep 27</b>	<b>Oct 7</b>	<b>Oct 4</b>	<b>Sep 20</b>
<b>Oct 25</b>	<b>Nov 4</b>	<b>Nov 1</b>	<b>Oct 18</b>
<b>Nov 22</b>	<b>Dec 2</b>	<b>Dec 6</b>	<b>Nov 29</b>
<b>Dec 20</b>	<b>Jan 6, 09</b>	<b>Jan 3, 09</b>	<b>Dec 27</b>
<b>Jan 24, 09</b>		<b>Jan 31, 09</b>	<b>Jan 17, 09</b>

\* Astronomy Day



## Ultraviolet Surprise

by Patrick L. Barry and Tony Phillips

How would you like to visit a universe full of exotic stars and weird galaxies the likes of which astronomers on Earth have never seen before?

Now you can. Just point your web browser to [galex.stsci.edu](http://galex.stsci.edu) and start exploring.

That's the address of the Galaxy Evolution Explorer image archive, a survey of the whole sky at ultraviolet wavelengths that can't be seen from the ground. Earth's atmosphere blocks far-ultraviolet light, so the only way to see the ultraviolet sky is by using a space telescope such as NASA's Galaxy Evolution Explorer.

About 65% of the images from the all-sky survey haven't been closely examined by astronomers yet, so there are plenty of surprises waiting to be uncovered.

"The Galaxy Evolution Explorer produces so much data that, beyond basic quality control, we just don't have time to look at it all," says Mark Seibert, an astronomy postdoc at the Observatories of the Carnegie Institution of Washington in Pasadena, California.

This fresh view of the sky has already revealed striking and unexpected features of familiar celestial objects. Mira is a good example. Occasionally visible to the naked eye, Mira is a pulsating star monitored carefully by astronomers for more than 400 years. Yet until Galaxy Evolution Explorer recently examined Mira, no one would have guessed its secret: Mira possesses a comet-like tail 13 light-years long.

"Mira shows us that even well-observed stars can surprise us if we look at them in a different way and at different frequencies," Seibert says.

Another example: In April, scientists announced that galaxies such as NGC 1512 have giant ultraviolet spiral arms extending three times farther out into space than the arms that can be seen by visible-light telescopes. It would be like looking at your pet dog through an ultraviolet telescope and discovering his ears are really three times longer than you thought!

The images from the ultraviolet space telescope are ideal for hunting new phenomena. The telescope's small, 20-inch primary mirror (not much bigger than a typical backyard telescope) offers a wide field of view. Each image covers 1.2 degrees of sky—lots of territory for the unexpected.

If someone combing the archives does find something of interest, Seibert advises that she or he should first search astronomy journals to see whether the phenomenon has been observed before. If it hasn't, email a member of the Galaxy Evolution Explorer science team and let them know, Seibert says.

So what are you waiting for? Fire up your web browser and let the discoveries begin!

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

## What's In It For Me? Got a Minute? or Two!

Astronomy, for me, is pure enjoyment. I set up my telescope and reach into the night sky to view beauty beyond compare. I have been bitten by the “bug,” seduced by the “dark sky,” and fallen into a love affair that encompasses the entire universe. I thrill in observing the night sky and greet my “old friends,” the planets, the constellations, and other deep sky objects, as they return to my night sky every season, to engage in a continuing conversation with a widening universe. My participation in viewing the night and daytime sky has only grown as I have learned more. I continue to challenge myself to learn more and find more objects in sky.

I began my experiences with this club as a complete novice, realizing now how little I actually knew. I had considered myself an educated individual and have come to realize that I knew so little then. Currently, I am still learning and enjoying every moment of the learning process. I crave more information and understanding of the structure of the universe, and although I don't completely understand concepts and theories I read about and hear in lectures and on video, I am fascinated and seek to learn more.

I love visual astronomy and seek every opportunity to share the daytime and evening sky with others; through outreach with the club; with other “sidewalk astronomers” who set up scopes on city streets to open the skies to passers by; with my elementary and intermediate school students; and in the privacy of my own backyard and neighborhood.

My mentors are the friends I have come to know and cherish in my astronomy club, the Hawaiian Astronomical Society. They greeted me as a newcomer to astronomy with open arms. They provided me with a venue where I was encouraged to view the night sky. They nurtured my interest in all aspects of astronomy. They allowed me to take part in “hands-on” experiences with real telescopes and gave me the opportunity to manipulate telescopes as a part of that experience. My mentors were at my side to encourage, inform, and support my interests astronomy.

As a member of the club I enjoy the informational meetings and I enjoy being able to show others the wonders of the universe, available to everyone who is willing to spend a little time looking up. I freely give my time going to schools and to youth groups to give star parties. I am rewarded with satisfaction when an individual at the eyepiece of my scope experiences the “WOW!!!” moment; when they see part of the universe for the first time.

I hope that my enthusiasm in astronomy encourages others in some way to be more aware of the universe that awaits them overhead, And even if they are only able to look up into the sky and view their universe “naked eye” or with a pair of binoculars, I will be happy that I have been able to help expand their understanding of their universe and their enjoyment of the night sky.

Gretchen West

**THE HAWAIIAN ASTRONOMICAL SOCIETY**  
**MEMBERSHIP APPLICATION**  
**2008/2009**

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Additional family members. Each	\$2.00	_____
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<i>Astronomy</i> Subscription	\$34.00	_____
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Stephane Takbou of France made this montage of two images made from the same optical configuration to evaluate the size of the Coma of Comet 17P/Holmes 12/17/2007.