

## Crabbiness in Late Winter — Barry Peckham

Our two Dillingham star parties this February were high in frustration and low in satisfaction. Poor seeing, bad transparency and everywhere the curse of passing/forming clouds made viewing a fruitless chore for those of us who have seen much better nights... yet the clear patches kept us there on the field, unable to abandon hope. No dew settled upon our optics to end our misery, so we just kept on trying. It is rare that we get any luck with the night sky in February, and these two torturous events were still better than the fare offered to most of our mainland counterparts, but so many perfect days in Hawaii this February seem to warrant a perfect night or two. If not now, when?

March is upon us, bringing with it the end of winter and, soon after, the end of

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## Upcoming Star Parties

<b>Public Party</b>	<b>Mar 10</b>	<b>Dillingham</b>
<b>Club Party</b>	<b>Mar 17</b>	<b>Dillingham</b>
<b>Public Party</b>	<b>Mar 24</b>	<b>Kahala/Waikele</b>
<b>Public Party</b>	<b>Apr 7</b>	<b>Dillingham</b>
<b>Club Party</b>	<b>Apr 14</b>	<b>Dillingham</b>
<b>Public Party</b>	<b>Apr 21*</b>	<b>Kahala/Waikele</b>

\* *Astronomy Day*

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## Upcoming Events:

- The next meeting is at 7:30 p.m. on **Tuesday, Mar. 6<sup>th</sup>** at the Bishop Museum.
- Bishop Museum's next planetarium show with **Barry Peckham** is Friday, **Mar. 2<sup>nd</sup>** at 7:00 pm.

## President's Message

We earthlings used to be limited to a single point of view toward anything in the night sky. The small size of the Earth compared to the vast distances to the planets and beyond means that all astronomers on Earth have essentially the same physical perspective toward the heavens.

The era of spaceflight has changed things in that regard. Two of the most dramatic and exciting examples of new perspectives are sights that we couldn't see at all from Earth: the far side of the Moon and the Earth itself as a planet seen from afar.

Most of our improved views of planets are simply the result of getting closer, but sometimes the different viewing angle makes the difference. A view back towards the Sun makes the faint rings of the gas giant planets more visible because small particles scatter more light forward than back.

Sometimes we just get lucky. The Galileo spacecraft was in a better position than Earth to see the impact of the pieces of Comet Shoemaker-Levy 9 into Jupiter. Those impacts occurred just out of Earth's sight but in full view of Galileo.

Now, however, we are beginning to see the deliberate use of multiple spacecraft to view phenomena from different viewpoints simultaneously or sequentially with different instruments. Some of the many spacecraft at Mars have even been used to image each other. Now the European Space Agency's Rosetta mission (as I write this, swinging around Mars on its way to a comet) will use an ultraviolet spectrometer that is a twin to one being flown on the New Horizons mission to Pluto to do follow-up observations of Io's plasma torus and Jupiter's auroral activity after New Horizons passes Jupiter and flies

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**Planets Close To the Moon**

Times are Hawaii Standard Time

- Mar 1, 16h, M 1.0° NNE of Saturn  
(159° from sun in midnight sky)
- Mar 11, 13h, M 6.0° S of Jupiter  
(92° from sun in morning sky)
- Mar 15, 16h, M 1.7° SSE of Mars  
(41° from sun in morning sky)
- Mar 16, 05h, M 2.0° SSE of Neptune  
(35° from sun in morning sky)
- Mar 16, 18h, M 1.3° SSE of Mercury  
(27° from sun in morning sky)
- Mar 21, 02h, M 3.7° NNW of Venus  
(34° from sun in evening sky)
- Mar 28, 19h, M 1.1° NNE of Saturn  
(130° from sun in midnight sky)










**Other Events of Interest**

Times are Hawaii Standard Time

- Mar 3, 08:17h, Moon Full
- Mar 5, 06h, Uranus at conjunction with sun  
(Passes into morning sky)
- Mar 18, 16:43h, Moon New
- Mar 21, 09:09h, Vernal Equinox
- Mar 21, 16h, Mercury at greatest elongation  
(27.7° West of the sun in morning sky.)
- Mar 25, 08h, Mars 0.95° SSE of Neptune  
(44° from sun in evening sky)

Uranus is closer than 15° from the sun when near the moon in March.

**Planets in March**

<p> <b>Mercury</b></p> <p>is visible low in the eastern sky before sunrise during the last half of the month.</p>	<p> <b>Venus</b></p> <p>shines brightly in the western evening sky at Mag. -4.0. Sets about 3 hours after the sun.</p>	<p> <b>Mars</b></p> <p>rises a couple of hours before sunrise at magnitude +1.4. Still too small to view any detail.</p>
<p> <b>Jupiter</b></p> <p>rises about midnight and shines brightly in the morning sky at magnitude -2.1.</p>	<p> <b>Saturn</b></p> <p>reached opposition on February 10, so is in the sky most of the night. Look for it in the southeast at dusk.</p>	<p> <b>Uranus</b></p> <p>is at conjunction with the sun this month and cannot be viewed.</p>
<p> <b>Neptune</b></p> <p>can be found low in the east before sunrise in March. Look for it very close to Neptune on March 25.</p>	<p> Dwarf Planet <b>Pluto</b></p> <p>rises about 1:00 am and can be viewed before dawn in the eastern sky.</p>	<p> Dwarf Planet <b>Ceres</b></p> <p>is too close to the sun to be viewed in March.</p>

President Chris Peterson called the February 6, 2007 meeting of the Hawaiian Astronomical Society to order at 7:32 p.m. The meeting was held at the Atherton Halau of the Bishop Museum. In attendance were twenty-five members and three visitors, Renée, Gene, and Joe.

## OLD BUSINESS

Hawaii Space Lecture Series- The Hawaii Space Lecture will present two lectures during the month of February. Dr. Christian Veillet, Executive Director of the Canada-France-Hawaii Telescope will lecture on the SMART-1 Lunar Mission, "From Launch to Crash." The lecture will take place on February 13, 2007 at 7:30 p.m. The second lecture will take place on February 27th, 2007. The tentative subject of this lecture is slated to be on Asteroid Hayabusa-Itokawa. Both lectures will take place at the NASA Pacific Regional Planetary Data Center, POST 544. For further information you can go to <http://www.higp.hawaii.edu/prpdc>.

## IN THE NEWS

President Peterson spoke briefly, reviewing last month's lecture on "Killer Asteroids" by Dr. David Tholen, Dr. Robert Jedicke, Dr. Nick Kaiser and U.S. Astronaut Dr. Ed Lu. Chris explained Dr. Lu's newly postulated method for the use of ion drive to power a possible mission to redirect near earth asteroids.

Chris also discussed current astronomy news items: An ancient galactic collision has been revealed through the use of computer simulations which detected galactic tidal

debris through the measure of gravity of the central part of the Andromeda galaxy; The New Horizons Mission reports that the spacecraft will soon be passing Jupiter and its moons. ; The Rosetta Mission of the European Space Agency will be getting a gravity assist from the planet Mars as it continues on its mission to rendezvous with an asteroid.

## NEW BUSINESS

Upcoming Speaker – Don Mackholz will be joining us at our April 2007 meeting as a speaker. He will be in Hawaii to observe comet P-96 Mackholz.

Star Party Report – Forrest Luke brings us news that we have a school star party at Iolani School on March 2nd. Forrest sent a sign up sheet around for those willing to help out on that evening.

Astroscan Sale – The Astroscan, donated to the club by Susan Girard, will be up for sale at the March General Membership Meeting.

Give Away – Member Jay Wrathall brought and gave away various astronomy related materials.

Messier Challenge in March – At-Large member, Susan Girard, urged all members to challenge themselves to set a binocular or telescope challenge goal for themselves during the month of March. If you don't feel that you can complete a full Messier Marathon, do a half marathon or just set a goal for yourself. Our March 17 Club Star Party is our target date. So practice. Come out and challenge yourself !! Jim Bedient pointed out that the Astronomical League has Messier

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Low sporadic rates sugared with a few minor shower characterize March.

Early March thru early April, **the Virginids**. Radiant 13h00m -04 deg.

The radiant position is for about March 25th. one might expect up to about 5 meteors an hour at best. The radiant is about 2 hours in RA and 20 degrees in Declination. The best activity will most likely occur about full Moon this year. Virginids are normally slow, but some can be bright and a few may leave persistent trains.

That is about it for this month. April will be better... maybe.

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

## Join the **Friends of the Institute for Astronomy (FIa)**

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 form go to [www.ifa.hawaii.edu/friends](http://www.ifa.hawaii.edu/friends)

### *Minutes* (Continued from page 4)

Awards for those who complete a Messier Marathon.

Astronomical League – Jim MacDonald reports that HAS members have not been forgotten. HAS members will be receiving the Astronomical League publication in the near future.

Astronews – If anyone has an article or other materials they think is appropriate for publication in the Astronews, please contact Astronews editor, Paul Lawler.

Yahoo Group – New member, Carey Johnson introduced members to an unofficial yahoo tech group chat room, available to members.

Short Notes - Vice President, Barry Peckham added his voice to Susan Girard's in urging members to work toward a personal best in challenging themselves in a partial Messier Marathon in March. Barry also shared a book, "Half Hour with the Stars," published in 1864.

Night Sky Network – John Gallagher introduced the club to the most recent NASA Night Sky Network teleconference discussing Moons and Rings of Planets of the Solar System.

The meeting was adjourned at 9:15 p.m. and refreshments were served.

Respectfully Submitted,  
Gretchen West

**Crabbiness** (Continued from page 1)  
the winter sky. Remember that increasing hours of daylight whisk away the sky we associate with winter. Both our planet's progress around the sun and also its tilt gang up against Orion in springtime. A Messier marathoner must spot objects hiding in the autumn constellations of Pisces, Cetus and Triangulum while they are washed now in the pink sunset twilight. That sort of hunt isn't for everyone, but everyone is encouraged

"donkey stars" flanking this cluster (also called "the Manger") and then savor this bright bunch of stars at low power. It contains some 300 members and their light takes over 500 years to reach our eyes. Below and to the right (south) of M44 lies a crab-leg star that is also just left (north) of M67, a cluster with an unusual shape (see for yourself!) and a distinctive age: over 10 billion years. M67 is visible in binoculars but responds well to



to expand their list of targets, and Charles Messier has many suggestions for you.

Rising into a good part of the sky at a good time of night, the celestial crab offers 2 Messier star clusters for binocular users. The Crab constellation accompanies Hydra's head, which helps us to find both M67 in Cancer and Hydra's own M48 cluster, but let's begin with the Crab's brightest cluster. With binoculars focused and ready, you can trace a line between Gemini's Pollux and Leo's Regulus. The Beehive cluster, M44, can be seen with unaided eyes near the center of that line. Note the 2

aperture and to magnification.

Now take your unaided eye from the nearby crab-leg star (Alpha Cancri) and travel across the sky to the right (south), through Hydra's head and continue an almost equal distance past the head to the first visible star.

A few degrees beyond this star lies the barely visible M48. At magnitude 5.8 it is a challenge for bare eyes but beautiful in binocs. A scope will show several yellowish stars mixed in with several dozen white ones. This cluster, located on the outskirts of the Milky Way, is only a bit closer to us than the Orion Nebula.

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**HAS Financial Report as of February 15, 2007**

Initial Balance: .....	<b>\$4,750.22</b>
Receipts:	
Donations .....	8.05
Dues Received.....	178.00
S&T Payments.....	98.85
Astronomy Payments.....	68.00
Bumper Sticker Sales .....	12.00
Total Income:.....	<b>\$364.90</b>
Expenses:	
Astronews.....	79.10
Excise tax .....	19.20
Magazine Subscriptions.....	233.80
Postage .....	4.05
Refreshments .....	8.45
Total Expenses: .....	<b>\$344.60</b>
Ending Balance: .....	<b>\$4,770.52</b>

This month we added three new members. They were **Renee, Elza and Devin Yamashiro**. The club thanks **Daniel Fischberg and Jay Wrathall** for their cash donations. A thank you is also in order to all renewing their membership this month. Clear skies to all!

**President** *(Continued from page 2)*  
 down its magnetotail. This will allow study of the connections among them.  
 In the distant future, our descendants can expect even more dramatic

new views. What will the Sun look like from another solar system, or the Milky Way from Andromeda!

Chris

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 So the celestial Crab will offer you a beehive and a snake's head for late winter companionship. If they don't make you crabby enough, use the snake head's 2 companion stars to find 2 fine clusters. Messier star clusters 44, 48 and 67 will help to entertain sky watchers until a glut of galaxies heralds the rise of Virgo.

And for those of you still paying attention, I hereby declare that an unspecified (but worthy) prize shall be awarded to the first person who can correctly identify the north edge of each cluster image. Send your answers by analog clock face time to <barry@litebox-telescopes.com>. Example guess: "For M67 image, north is at about 8 o'clock position."

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Photographer Wayne Levin (yes, relation) took a photo on the top of Mauna Kea capturing his image surrounded by a sun halo.