

Iapetus: East is Least and West is Best Jane Houston Jones

Saturn's moon Iapetus is brighter at western elongation and fainter at eastern elongation, which makes it a great observing project when the Saturn system is in our evening skies...like right now.

I was reading about Saturn's satellites in the RASC 2005 Observers Handbook in early January, just as I was observing the Cassini orbiter's first close-up images of Iapetus on my computer.

Not everyone who takes a look at Saturn observes Iapetus, although it's Saturn's third largest moon.

Iapetus is easier to locate near Saturn at both inferior and superior conjunction, when it is closest to the planet

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Upcoming Star Parties

Club Party	Mar 5	Dillingham
Public Party	Mar 12	Dillingham
Public Party	Mar 19	Kahala/Waikele
Club Party	Apr 2	Dillingham
Public Party	Apr 9	Dillingham
Public Party	Apr 16*	Kahala/Waikele

* Astronomy Day

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Upcoming Events:

- The next meeting is at 7:30 p.m. on Tuesday, March 1st at the Bishop Museum.
- Barry Peckham's next planetarium show is on Friday, March 4th.

President's Message

Do you remember when missions to other planets were rare? During the early days of solar system exploration, spacecraft would take months or years to reach their target, then fly by. They would capture a few images and transmit them to Earth. After a few days the excitement would be over and another long wait would begin.

Once the gravity field had been determined (by one or more passing spacecraft) and interesting targets of observation determined, it was time to attempt to orbit the planet. If that goal was achieved, the next step was a landing. All of these steps could and often did result in failure.

Failures still occur, of course. It wasn't long ago that two U.S. missions to Mars failed. However, the pace of planetary exploration has increased to the point that we may never again see a time when there isn't at least one mission returning data from at least one planet.

Mercury will be orbited by Messenger. Messenger will also fly by Venus twice, but there are also several proposed missions with Venus as their primary destination. Europe has a mission orbiting Earth's Moon. Mars currently has four functioning missions, and NASA plans another during each opposition cycle. Plans call for a mission to orbit Jupiter's icy moons. Cassini is in the early stages of its exploration of Saturn. Hopes are still high that a Pluto flyby can be achieved before its atmosphere freezes out. There are also current and planned missions to comets and asteroids.

Those little points of light we point our telescopes at are becoming more familiar all the time. We can't hope to match the detailed images returned by orbiting spacecraft, but as we all know, there is some-

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Planets Close To the Moon

Times are Hawaii Standard Time

- Mar 5, 21h, M 4.5° S of Mars
(56° from sun in morning sky)
- Mar 7, 16h, M 4.7° SSE of Neptune
(31° from sun in morning sky)
- Mar 11, 04h, M 3.0° SSE of Mercury
(18° from sun in evening sky)
- Mar 19, 08h, M 5.1° N of Saturn
(111° from sun in evening sky)
- Mar 26, 05h, M 0.90° SSW of Jupiter
(171° from sun in midnight sky)

Venus and Uranus are closer than 15o from the sun when near the moon in March.

Other Events of Interest

Times are Hawaii Standard Time

- Mar 9, 23.12h, New Moon
- Mar 12, 08h, Mercury at greatest elongation (18.3° east of the sun in evening)
- Mar 20, 02.33h, Spring or vernal equinox
- Mar 22, 19h, Asteroid 2 Pallas at Opposition
- Mar 25, 10:60h, Full Moon
- Mar 29, 06h, Mercury at inferior conj. with sun (Passes into morning sky)
- Mar 20, 17h, Venus at Superior conj. with sun (Passes into evening sky)

Planets in March

<p> Mercury</p> <p>Will be visible in the West just after sunset for the first 10 days of March.</p>	<p> Venus</p> <p>Reaches superior conjunction late in the month, so is too close to the sun for easy viewing.</p>	<p> Mars</p> <p>Rises about 3:00 am and is best observed just before dawn in the SE. Mag - +1.0.</p>
<p> Jupiter</p> <p>Rises in the early evening. Well placed for viewing from 10 or 11 pm until dawn.</p>	<p> Saturn</p> <p>Excellent viewing from dusk until the early morning hours.</p>	<p> Uranus</p> <p>Rises a couple of hours before the sun – will be better placed for viewing later in the year</p>
<p> Neptune</p> <p>Still too close to the sun to view.</p>		<p> Pluto</p> <p>Rises after midnight. Will be well placed for viewing in late summer.</p>

The February 1, 2005 meeting of the general membership of the Hawaiian Astronomical Society was called to order at 7:33 p.m. by Chris Peterson. Meeting held in the Atherton Halau at Bishop Museum. Thirty-five members and two visitors were in attendance. President Chris Peterson announced that our speaker of the evening, Mr. Peter Jedicke, would be repeating the evening's address a second time at the Planetary Data Center the evening of February 15th. Other future speakers at the POST building on the UH campus would be Toby Owen, March 29, 2005. He will be updating information on the Huygens space probe. **State Science Fair** - April 4th and 5th. We, as an independent agency will be judging those science projects dealing with astronomy and related fields. We have a few board members who will

be judging but we may want to enlist others to review the entries along with us. Anyone interested please contact a HAS board member.

Astronomy Day- April 16, 2005. Barry Peckham is coordinating

with Kahala Mall Management and Barnes and Noble about our activities. Sign ups for the day of sharing will take place at the April meeting.

IFA Open House - will be held Sunday April 10, 2005 from 11 a.m. to 4 p.m. Sign ups to help will be taken at the April meeting.

Newcomers - Chris greeted two visitors, one who joined us as visitors from Tacoma Star Club in Tacoma, Washington and another gentleman who has an interest in asteroids.

School Star Parties - Forrest Luke announced a Thursday evening, February 17 star party at Ka Oala Elementary in Wahiawa.

Club Scope Auctioned - The club's Red 8" Coultter was auctioned off for \$250 to Jim Chock. Barry will be making repairs to the Coultter before turning it over to the new owner.

Banner - Purchase is proceeding and will be in use for the Waikele party later this month.

Asterism Contest Judging - Will take place at the next Club party at Dillingham, weather permitting. Judges will be HAS board members.

NEW BUSINESS



Speaker - Peter Jedicke - National President of the Royal Astronomical Society of Canada

Keys for Dillingham - New gate and lock at Dillingham Field. We have one key and will inquire about acquiring additional keys.

Speaker - Peter Jedicke - National President of the Royal

Astronomical Society of Canada - Mr. Jedicke, the join us for dinner at Kenny's with the gang. He spoke to the membership about "Fragment X - Untold Tales of Comet Shoemaker-Levy 9 , How Science Became Celebrity." Mr. Jedicke related how astron-

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Low sporadic rates sugared by a few minor showers characterize March.

Early March-early April—the **Virginids**. Radiant: 13h00m -04 deg. Generally a small drizzle with maybe up to 5 meteors an hour. Virginid meteors generally emanate from a large area around 2h in RA by 20 deg. in Dec. Virginids are normally slow, but some can be bright. A few leave persistent trains.

Sunday the 13th—the **Gamma Normids**. Radiant: 16h36m -51 deg. Less than 8 meteors per hour. Best seen after midnight. The Moon is not really a problem. A very sharp peak is possible.

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

Molokai In May (The Reminder)

Why is the club planning a trip to Molokai?

Answer: because in all of the 50 states and inhabited Hawaiian islands (that we're allowed on) there is no better place for stargazing than Molokai's east end.

Why is it so good?

Answer: factor in what it takes to be comfortable in a desert under very dark skies. Consider accommodations, convenience and cost. You do the math.

Why go in May?

Answer: Because the spring Milky Way is very low in the south and we can't see it from Oahu. Because many celestial gems surrounding the Southern Cross lie in that part of the Milky Way. Because May weather beats March and April, June and July weather. Because Molokai Ranch offered us a price break in May.

At this typing, there are **3 more units** waiting for takers *or none of us can go*. —Call Barry for more details: 524-2450

Minutes (Continued from page 4)

omy became the talk of the hour, week and month while the comet, Shoemaker - Levy 9 tore into pieces and impacted Jupiter during the summer of 1994. He related his experiences as a friend of David Levy and Gene and Carolyn Shoemaker during that heady time.

Beginner's Topic - Barry Peckham

spoke briefly about the subject of "Exit Pupil" and how it relates to "Eye Relief."

The February meeting adjourned at 8: 47 p.m. A short Planetarium show and discussion of the night skies in February, began about 9:00 p.m..

Respectfully Submitted,
Gretchen West

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and visible to the north and south of the planet, respectively.

But its 79 day orbit takes Iapetus far outside the usual planetary eye-piece view. In fact Iapetus is 3 times further from Saturn than Titan, or 12 ring diameters from Saturn when it shines the brightest. The magnitude of Iapetus varies from 10.1 at western elongation to 11.9 at eastern elongation.

We have known for a long time that the leading side of Iapetus is dark as coal, while the trailing side is bright as snow. We are looking at the bright trailing side of tidally locked Iapetus when it is at western elongation, and we are looking at the dark leading side of the moon at eastern elongation. Why this is so is still under debate, as it has been for the past 334 years.

Cassini discovered Iapetus in 1671 and he made the note that he could only see Iapetus on one side of Saturn and not on the other side. The dark area of Iapetus is called Cassini Regio, in his honor, and may be dark

because the leading side of Iapetus collides with or alters dust from the moon Phoebe. Stay tuned as the Cassini instrument teams study the Iapetus data, and release their findings.

Cassini will have one more flyby of Iapetus in September 2007. This year, on January 1, Cassini flew by Iapetus at a distance of 40,000 miles. The 2007 flyby will be from a distance of 763 miles.

To find Iapetus at either conjunction or elongation, and compare its brightness to nearby stars, use your favorite planetarium program to calculate the extreme magnitudes of Iapetus, and to compare it to nearby stellar magnitudes. SJAA's Akkana Peck created some Iapetus charts which should help you find Iapetus on March 15 and April 24, as it swings from eastern to western elongation.

You'll find and a few other dates charted here as well: <http://www.shallowsky.com/iapetus>.

Read Akkana's monthly column in the SJAA Ephemeris too! <http://ephemeris.sjaa.net/>

Observing Iapetus

Eastern elongation (dark side of Iapetus faces Earth, magnitude 11.9)	Mar 15	Jun 4	Aug 25	Nov 13
Inferior conjunction (Iapetus is north of Saturn)	Apr 15	Jun 25	Sep 14	Dec 3
Western elongation (bright side of Iapetus is facing Earth, magnitude 10.1)	Apr 24	Jul 14	Oct 4	Dec 22
Superior conjunction (Iapetus is south of Saturn)	May 14	Aug 3	Oct 23	

School Star Parties

by Forrest Luke

School and Group Star Parties are being coordinated by Forrest Luke. If you are contacted for a school star party, please have the school contact Forrest directly by phone at 623-9830 or via e-mail at <lukef003@hawaii.rr.com>.

As a reminder, upcoming scheduled school star parties are:

- 11 Mar 2005** **Niu Valley Intermediate**
- 09 Apr 2005** **Bishop Museum Family Science Night**
- 15 Apr 2005** **Pearl Harbor Elementary**
- 26 Apr 2005** **Ala Wai Elementary**
- 29 Apr 2005** **Iroquois Point Elementary (alt. May 6)**
- 13 May 2005** **Lanakila Elementary**
- 27 May 2005** **Kipapa Elementary**
- 03 July 2005** **Deep Impact Night (Bishop Museum)**

President's Report (Continued from page 2)
thing about looking at a planet through
a telescope that connects us to it and
helps us understand our place in the

Universe. In this case, familiarity
breeds fascination.

Chris

Treasurer's Report

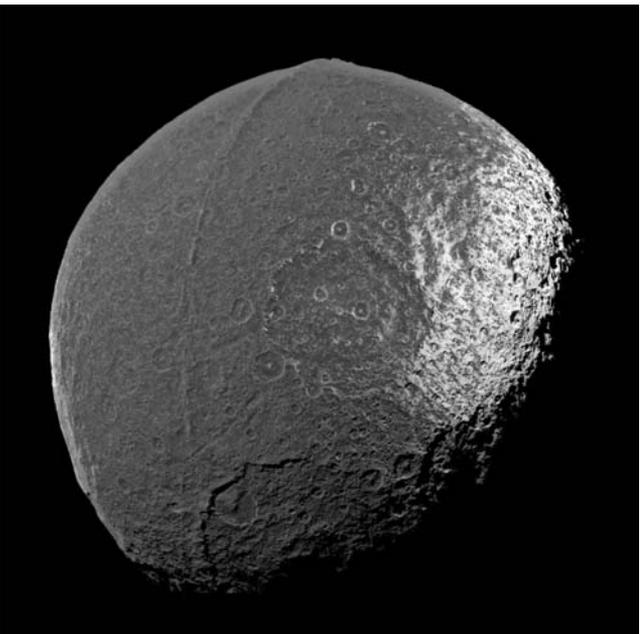
by Jim MacDonald

HAS Financial Report as of February 15, 2005

Initial Balance:.....	\$5,032.44
Receipts:	
Astronomy Payment.....	58.00
Donations	257.05*
Dues Received.....	230.00
S&T Payments	203.69
Total Income:	\$748.74
Expenses:	
Astronews/Postage	157.77
Magazine Subscriptions	296.32
Waikele Banner.....	170.82
Refreshments/Excise Tax.....	11.14
Total Expenses:	\$636.05
Ending Balance:.....	\$5,315.95

The club welcomes four new members this month. They are **James Chock**, **Jeffrey** and **Nancy Sue**, and Jason **Archer**. Many thanks to those renewing their membership and to **John and Karen Swatek** and **James Chock** for their generous donations. Clear skies to all! *includes sale of Coulter telescope.

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The scene is dominated by a dark region, called Cassini Regio, that covers nearly an entire hemisphere of Iapetus.

Credit: NASA/JPL/Space Science Institute

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