

DISLIGHT

Rockland Astronomy Club Journal ~ October 2006

THE NEW STATION

Atlantis astronauts snapped this photo of the newly expanded International Space Station shortly after undocking on Sunday, September 17, 2006. After six days docked in orbit, Atlantis left the station with a new, second pair of 240-foot solar wings, attached to a new 17.5 ton section of truss with batteries, electronics and a giant rotating joint. Photo credit: NASA

**SAVE THE DATE
CHILDREN'S SPACE
& ASTRONOMY FAIR
OCTOBER 7TH
FREE ADMISSION**

DETAILS ON PAGE 3





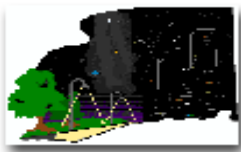
DISTANT LIGHT

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GET DISTANT LIGHT VIA EMAIL
 (requires Adobe Acrobat): send an email to Memberships@RocklandAstronomy.com

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 Complete and mail the Membership



International Dark Sky Association



PLEASE NOTE OUR NEW ADDRESS:

Rockland Astronomy Club,
 225 Route 59, Suffern, NY 10901-5203

[CLICK HERE FOR MONTHLY SKYDATA: P. 5](#)

[CLICK HERE FOR RAC MEETINGS SCHEDULE AND ADVISORY COMMITTEE: P. 6](#)

LETTER TO THE EDITOR

OBSERVING REPORT

Lake Taghkanic, Tuesday September 26, 2006

The drive was a short 1:20 from White Plains. (going between 65 & 70 mph mind you) I got there 1st pulling in at 7:55pm.

If you have been there before you know that you can see the Milky Way as soon as you get out of you car. But last night the sky was so good that you could see not only see bright sections of the Milky Way but dark ones as well.

Andromeda and the Double Dtar Cluster in Perseus were visible to the naked eye!

Through the scope: We started in Sagittarius; and we could not move any of our scopes without seeing something! Like M16, M17, M18, M25, M20, M21, M22, M23. Through my 31 you could see all three galaxies in the Andromeda cluster M31, M32, M110. And you could see structure on the western side of Andromeda as well. M13 in Hercules, M73 & M72, M27, M11, M27, M71, M15, M2, M13, M92, M8, M33, M81 & M81, Vail Nebula, all three sections (I've never seen

the middle one), North American Nebula, Pelican Nebula, Eagle Nebula (WOW!!!), Omega Nebula, Saturn Planetary Nebula (which looks like a green golf ball), M57 Ring Nebula in Lyra (boring), M27 the Dumbbell Nebula had a green glow, M76 the Little Dumbbell, Lagoon Nebula, and the Trifid Nebula.

As you can tell it was a really good night. We all spent time looking through each other's scopes. And the three of us started to pack it in around 11:45 pm.

If you can tell by my email, half the reason I write them in such detail is because I'm trying to get people out there. Astronomy can't be done from your couch. And I think the club is filled with what I like to call "armchair astronomers". Astronomy is a very rewarding hobby. And the small amount of time that we get to enjoy it because of the weather, and the lunar cycle, makes it even tougher to get out. My two friends and I live very busy lives, but we make the time whenever possible.

George D. Andrew
 RAC Member

RAC MEMBERSHIP APPLICATION

Club members receive this journal, enjoy special prices for annual subscriptions to S&T and ASTRONOMY magazines, discounts to club events and much more. Make checks payable to RAC and mail with this form to: Rockland Astronomy Club, Attn: Memberships, 225 Route 59, Suffern, New York 10901-5203.

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Note: The Journal is sent to Members via email. For mailed hard copies, add \$18/year.

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Senior Citizen (65+)	\$15	\$28	\$40	\$65	+\$18/yr.	_____
High School Student	\$10	\$18	\$25	\$40	+\$18/yr.	_____
Grand Total						_____

RAC SPECIAL EVENT

2006 Childrens Space & Astronomy Fair

Saturday, October 7, 2006, 11AM – 3PM

Suffern, NY, FREE Admission

Presented by the Rockland Astronomy Club and The Lower Hudson River Valley Challenger Center.

- > Meet a NASA Astronaut
- > Learn about space and astronomy with scientists and astronomers.
- > Tons of exciting activities and hands-on demonstrations.
- > Solar observing
- > Simulated space missions in hi-tech simulator rooms
- > See real moon rocks
- > Planetariums shows
- > Space and astronomy crafts

Directions: 225 Rt. 59. Suffern, NY. Take exit 14b off the New York State Thruway. Turn South onto Airmont Rd. The Challenger Center is located next to Applebee's at the intersection of Rt. 59. For more information please call: 845-357-3416 ✪



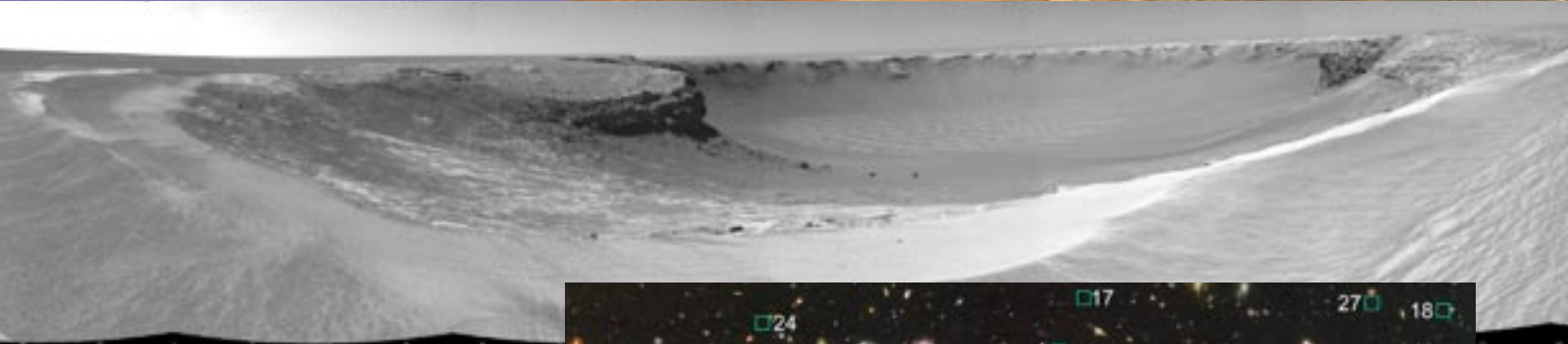
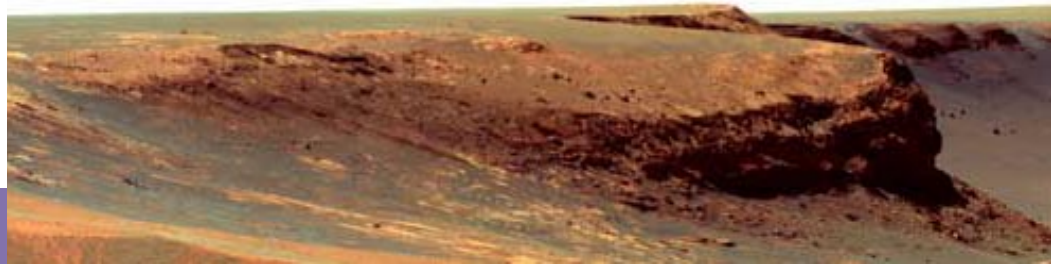
SCOPE FOR SALE

StarMaster 11" F/5.43 Zambuto Portable Dob

Rare reflector provides tack-sharp, contrasty views: Saturn's Encke Division observed one fabled evening up at Wilcox County Park (which blew everyone's socks off!)
> Excellent cond. w/ orig. boxes, certificates
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NEWS FROM OUT THERE



Mars 'Victoria Crater' Seen from 'Duck Bay'

9/28/06

NASA's Mars rover Opportunity edged 3.7 meters (12 feet) closer to the top of the "Duck Bay" alcove along the rim of "Victoria Crater" during the rover's 952nd Martian day, or sol (overnight Sept. 27 to Sept. 28), and gained the vista above of the crater. The rover's navigation camera took the seven exposures combined into this mosaic view of the crater's interior. This crater has been the mission's long-term destination for the past 21 Earth months. The far side of the crater is about 800 meters (one-half mile) away. The rim of the crater is composed of alternating promontories, rocky points towering approximately 70 meters (230 feet) above the crater floor, and recessed alcoves, such as Duck Bay. The bottom of the crater is covered by sand that has been shaped into ripples by the Martian wind. The rocky cliffs in the foreground have been informally named "Cape Verde," on the left, and "Cabo Frio," on the right. Victoria Crater is about five times wider than "Endurance Crater," which Opportunity spent six months examining in 2004, and about 40 times wider than "Eagle Crater," where Opportunity first landed. The great lure of Victoria is an expectation that the thick stack of geological layers exposed in the crater walls could reveal the record of past environmental conditions over a much greater span of time than Opportunity has read from rocks examined earlier in the mission. ★ Image Credit: NASA/JPL-Caltech



Hubble Uncovers Galaxy Gold Mine

Astronomers analyzing two of the deepest views of the cosmos made with NASA's Hubble Space Telescope have uncovered a gold mine of galaxies, more than 500 that existed less than a billion years after the Big Bang. This sample represents the most comprehensive compilation of galaxies in the early universe, researchers said. The discovery is scientifically invaluable for understanding the origin of galaxies, con-

sidering that just a decade ago early galaxy formation was largely uncharted territory.

Astronomers had not seen even one galaxy that existed when the universe was a billion years old, so finding 500 in a Hubble survey is a significant leap forward for cosmologists. This Hubble Space Telescope image shows 28 of the more than 500 young galaxies the researchers uncovered in their analysis of two Hubble surveys. ★

Credit: NASA, ESA, R. Bouwens and G. Illingworth (University of California, Santa Cruz)



Full Oct 7 Last Qtr Oct 14 New Oct 22 First Qtr Oct 29

OCTOBER SKYDATA

Highlights

- Oct 8 Draconid meteors
- Oct 16 Saturn 2° south of Moon
- Oct 16 Mercury at greatest eastern elongation (25°)
- Oct 19 Juno 0.3° north of Moon
- Oct 20 Orionid meteors
- Oct 23 Mars in conjunction with Sun
- Oct 24 Jupiter 5° north of Moon
- Oct 24 Mercury 1.4° north of Moon
- Oct 25 Antares 0.4° north of Moon
- Oct 25 Mercury 4° south of Jupiter
- Oct 28 Mercury 4° south of Jupiter

Orionid Meteor Shower

The best viewing window for the Orionids is Friday, Saturday, and/or Sunday morning, October 20-22. 1am - 6pm local daylight time are the best hours. Other mornings in the period of October 17-25 may also be favorable.

The Orionids are capable of producing interesting activity from October 17-25. Maximum rates seen from a dark site may reach 20-25 per hour, but sometimes there are lulls even around the traditional maximum of October 21. Any given morning session may be more or less interesting than expected. In any case, clear mornings during the activity period are always good times to look for meteors from dark sites.



The Orionids are fast meteors, perhaps a bit faint on average but capable of producing fireballs. Note that the radiant is north of Betelgeuse and not right in the middle of Orion. A minor shower called the Epsilon Geminids has a nearby radiant that can cause confusion, but usually produces only 1-2 meteors per hour. Early activity from the Taurids can produce a few nice, slow meteors from radiants farther west. Finally, 5-15 sporadic meteors are usually visible each hour from dark sites. The Orionid shower generally possess a strong interest due to the stream's link to Halley's comet. This link was indirectly made in 1911, when Charles P. Olivier recorded the similarity between the orbit of the Orionids and that of the Eta Aquarids of May. Since 1868, this latter stream had been known to be related to Halley's comet, however, this link between Halley's comet and the Orionids is not considered definite. One very unusual feature of the Orionids is that they tend to display unpredictable maximum. A study published in 1982 also revealed the Orionids generally possess a double maximum.

What appears to be the best explanation of the Orionids' irregular occurring date of maximum, was made in 1970. It was noted that the "stream density varies along the orbit," and "there is no fixed periodically recurring position of maximum or secondary maxima." It was concluded that the density changes were not random and that the displacement of activity "can be explained by the presence of debris field filaments along the stream orbit."

In 1975, when radar equipment was utilized. Radio-echo rates were found to slowly increase but, suddenly, at a time generally attributed as the maximum of the Orionids, rates drastically declined. Just as curious was the finding that rates had doubled during the next 24 hours, and then were followed by the normal decreasing rates for every day thereafter. It was concluded that as Earth entered the Orionid stream, it first intersects a halo with a slight variation of density, then a gap and then another steep increase." It was claimed that this apparent structure confirmed the presence of filaments. ★

Prime Observing Window

Tuesday Oct 17 through Thursday Oct 26

Sun & Moon Rise & Set Times

Date	Sunrise	Set	Moonrise	Set	Phase
Oct 7	18:39	07:32	18:39	07:32	Full
Oct 14	07:06	18:18	Prev Day	15:10	Last Qtr
Oct 22	07:15	18:06	07:42	18:03	New
Oct 29	06:24	16:56	13:24	23:57	First Qtr

Planetary

Visible Planets in the Night Sky

October 1

	Rise	Transit	Set	Mag
Mercury	08:43	14:01	19:20	1.6
Venus	06:17	12:23	18:29	-3.9
Mars	07:29	13:12	18:56	1.8
Jupiter	10:18	15:20	20:23	-2.3
Saturn	02:55	09:52	16:49	0.4

October 15

	Rise	Transit	Set	Mag
Mercury	09:23	14:14	19:05	4.6
Venus	06:51	12:32	18:13	-3.9
Mars	07:21	12:51	18:22	1.8
Jupiter	09:37	14:36	19:36	-2.2
Saturn	02:07	09:02	15:58	0.4

October 31

	Rise	Transit	Set	Mag
Mercury	08:00	12:43	17:26	1.3
Venus	06:31	11:45	16:59	-3.9
Mars	06:13	11:29	16:46	1.8
Jupiter	07:52	12:47	17:43	-2.1
Saturn	00:10	07:04	13:58	0.3

All data calculated for Suffern, New York, Eastern Time:
Latitude: 41:06:48 N; Longitude: 74:08:38 W

The RAC Essentials

MONTHLY CALENDAR

**201-768-2238
or 845-47STARS**

Message Hotline: The latest information or last minute changes to club events.

Prime Observing

Saturday October 7
11 am – 3 pm

October 17 thru 26

Children's Space & Astronomy Fair
Lower Hudson Valley Challenger Center,
Suffern N.Y.: Meet a NASA Astronaut
Free Public Admission

Tues, October 10, 8pm

Advisory Board Committee Meeting
LHVCC, Airmont, N.Y.

Fri/October 13 & 14,
20 & 21

Observing at Wawayanda
(members night)*

Sat, September 23

Up all night Observing at Taghkanic
State Park (members night)*

LOCATIONS

**North Rockland
High School Planetarium**
Hammond Road, Thiells, NY

Rockland Community College
College Road, Suffern, NY

**Lower Hudson Valley
Challenger Center**
Rt. 59, Suffern, NY

**Anthony Wayne
Recreation Area***
Exit 17, P.I.P., NY

Silvermine Ski Area*
Exit 18, P.I.P., NY

Wawayanda State Park*
973-853-4462,
Highland Lakes, NJ

Taghkanic State Park*
Taconic State Parkway,
Ancram, NY

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Don Urban (L)
Dr. Saeed Safaie (H)
Andrew Warrington (H)

*Special permits required to observe at these locations. Contact Frank Bifulco for permit info.

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