



R. A. C. NEWS

July – August - 2002

www.rocklandastronomy.com
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Observing and Meeting Locations

North Rockland High School Planetarium Thiells, NY
Rockland Community College Suffern, NY
Iron Horse Farm, Mike Pass, 914-496-6320 Campbell Hall, NY
*Anthony Wayne Recreation Area Exit 17, Palisades Interstate Pkwy
*Silvermine Ski Area Exit 18, Palisades Interstate Pkwy
*Wawayanda State Park, 973-853-4462 Highland Lakes, NJ
Taghkanic State Park Taconic State Parkway, Ancram, NY

- Special permits required

JULY/AUGUST OBSERVING

Wawayanda Observing:

Friday, July 5
Saturday, July 6
Friday, July 12
Friday, August 2
Saturday, August 3
Friday, August 9
Saturday, August 10
Friday, August 30
Saturday, August 31

Lake Taghkanic:

Saturday, July 6

Anthony Wayne:

Saturday, July 13
Saturday, August 17

Silvermine:

Monday, August 12 (Perseid's)

RAC Summer Star Party (SSP):

Friday, August 2 thru Sunday, August 11

WELCOME NEW MEMBERS

Douglas G. Berg 8906 19th Ave., Brooklyn, NY 11214
(718) 373-8712

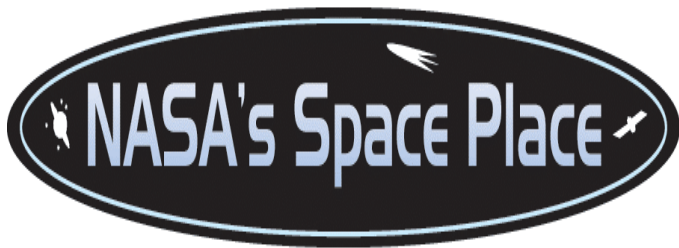
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(917) 446-1966

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Ridge, NY 10977

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NY 10516 (845) 265-2248

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11021

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569-1017



Science Fiction Becomes Science Fact

For more than 40 years, science fiction writers have imagined ways for spacecraft to fly more quickly around the solar system. One idea they came up with was an "ion" engine, powered by a gas called xenon. This allows a spaceship to fly almost 10 times faster than a regular spaceship using the same amount of fuel.

Spaceships powered by this fictional technology have appeared in several science fiction movies. Ion propulsion was mentioned in a "Star Trek" episode in 1968. And in the "Star Wars" movies, the TIE (Twin Ion Engine) fighters that raced around the galaxy used ion propulsion.

But now, the fantasy of science fiction has become a reality. In 1998, NASA launched its Deep Space 1 mission with an ion engine onboard to test. The engine performed exactly as mission operators thought it would. By the time the spacecraft retired in December 2001, the ion propulsion system had accumulated 677 days of operation and had expended well over 90% of the xenon it carried at launch. The ion engine powered the spacecraft past Comet Borrelly and allowed Deep Space 1 to return the best-ever images from a comet.

This means that we can now reach destinations in our solar system that we only dreamed about before. Planning is now underway for NASA's new Dawn mission which will use ion propulsion to travel to two asteroids. Other missions are also considering using this now-proven technology. What was once science fiction has now truly become a reality.

E-Nose is E-Nose is E-Nose

It is very important to keep a "nose" on the air during space missions. Odors from dangerous chemicals in the air must be detected early and fast. One possible danger is hydrazine, the rocket fuel carried on board spaceships. If it leaked into the cabin area, it could do a lot of damage before anyone knew it was there. The job calls for a "super nose" that can detect faint smells far beyond the ability of human beings.

Scientists at Caltech studied the way human and animal noses worked. They thought it might be possible to make a super-nose. NASA thought this was a good idea, so scientists and engineers at the Jet Propulsion Laboratory in Pasadena developed an electronic nose, or "E-Nose." This nose can sniff using a pump, smell using polymer sensors, and decide what's in the air using a mini-computer. E-Nose was developed to monitor the air that the crew in the International Space Station will breathe. It was tried out on the Space Shuttle, and it worked just fine.

E-Nose will also have many uses here on Earth. It can monitor the air inside submarines and in factories to warn people very early if something is making the air unsafe to breathe. It can be used in processing food to tell if food is beginning to spoil. And someday it may be used on another planet or moon to sniff out what's "cooking" up there.

You can find out more about E-Nose and have fun testing your own nose at the Space Place Web site, space-place.nasa.gov/enose_do1.htm. The Space Place has fun and educational activities for parents, children, and teachers -- and lots of facts related to many of NASA's space missions.

This article was provided by NASA's Jet Propulsion Laboratory, managed by Caltech in Pasadena.

LOST VIDEOTAPE

Will the female club member who borrowed the Steven Hawking videotape please contact Don Urban at 201-768-3295 or by email at DUrban@RocklandAstronomy.com? Thank you.

DOES ANYONE CARE ABOUT THIS NEWS-LETTER?

Apparently not. If you did, it would be filled with articles about your observing experiences, star parties you have attended, and that new telescope you just purchased.

But instead, we are treated to a one-page newsletter, as is the case this month.

Before you blame our editor, Lisa, for the sorry state of the newsletter, you must realize that her job IS NOT to write articles, but to prepare it for distribution to the membership.

More than 100 RAC members attended the NEAF. And
as yet, not a single article has been written about NEAF.
How sad!

Come on folks. Time to step out of the shadows.

Don Urban



ROCKLAND ASTRONOMY CLUB - (201)768-3295

July 2002

| | SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|------------------------|-------------------------------------|---|---|---|---|--|----------|
| 1 | 1 Moonset 00:28 Set 11:59 | 2 Sunrise 05:28 Set 20:32 Moonrise 00:50 Set 12:58 ● 3RD QTR | 3 Sunrise 05:29 Set 20:31 Moonrise 01:12 Set 13:57 | 4 Moonrise 01:34 Set 14:57 <i>Independence Day</i> | 5 Sunrise 05:30 Set 20:31 Moonrise 01:59 Set 15:59 | 6 Moonrise 02:26 Set 17:03 "UP ALL NIGHT" OBSERVING AT LAKE TAGHKANIC | |
| 7 | 8 | 9 | 10 Sunrise 05:33 Set 20:29 Moonrise 05:28 Set 21:09 ● NEW MOON | 11 Sunrise 05:34 Set 20:29 Moonrise 06:33 Set 21:56 | 12 Sunrise 05:34 Set 20:28 Moonrise 07:45 Set 22:35 WAWAYANDA OBSERVING | 13 Sunrise 05:35 Set 20:28 Moonrise 09:00 Set 23:08 JOY OF THE UNIVERSE AT ANTHONY WAYNE | |
| 14 | 15 | 16 Sunrise 05:37 Set 20:26 Moonset 00:05 Rise 12:39 ● 1ST QTR | 17 Sunrise 05:38 Set 20:25 Moonset 00:59 Rise 13:51 | 18 Sunrise 05:39 Set 20:25 Moonset 01:01 Rise 15:03 | 19 Sunrise 05:40 Set 20:24 Moonset 01:32 Rise 16:15 | 20 Sunrise 05:41 Set 20:23 Moonset 02:08 Rise 17:25 | |
| PRIME OBSERVING WINDOW | | | | | | | |
| PRIME OBSERVING WINDOW | | | | | | | |
| 21 | 22 | 23 | 24 Sunrise 05:44 Set 20:20 Moonset 05:28 Rise 21:02 ○ FULL MOON | 25 Sunrise 05:45 Set 20:19 Moonset 06:42 Rise 21:37 | 26 Sunrise 05:46 Set 20:18 Moonset 07:45 Rise 22:06 | 27 Sunrise 05:47 Set 20:17 Moonset 08:48 Rise 22:31 | |
| 28 | 29 | 30 | 31 | | | | |



ROCKLAND ASTRONOMY CLUB - (201)768-3295

August 2002

SUNDAY

MONDAY

TUESDAY

WEDNESDAY

THURSDAY

FRIDAY

SATURDAY

| | SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
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| 1 | | | | | Sunrise 05:52 Set 20:12 Moonrise 00:00 Set 13:45 ● 3RD QTR | Sunrise 05:59 Set 20:11 Moonrise 00:26 Set 14:48 WAWAY ANDA OBSERVING RAC SUMMER STAR PARTY PRIME OBSERVING WINDOW | Sunrise 05:54 Set 20:10 Moonrise 00:35 Set 15:52 |
| 2 | | | | | Sunrise 05:59 Set 20:04 Moonrise 05:24 Set 20:30 ● NEW MOON | Sunrise 06:00 Set 20:02 Moonrise 06:40 Set 21:07 WAWAY ANDA OBSERVING | Sunrise 06:01 Set 20:01 Moonrise 07:57 Set 21:39 |
| 3 | | | | | | | |
| 4 | Sunrise 05:55 Set 20:09 Moonrise 01:31 Set 16:56 | Sunrise 05:56 Set 20:07 Moonrise 02:15 Set 17:59 | Sunrise 05:57 Set 20:06 Moonrise 03:09 Set 18:57 | Sunrise 05:58 Set 20:05 Moonrise 04:12 Set 19:47 | | | |
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| 11 | Sunrise 06:02 Set 20:00 Moonrise 09:19 Set 22:06 | Sunrise 06:02 Set 19:59 Moonrise 10:27 Set 22:36 PERSEID METEOR WATCH AT SILVERMINE | Sunrise 06:03 Set 19:57 Moonrise 11:41 Set 23:04 | Sunrise 06:04 Set 19:56 Moonrise 12:54 Set 23:34 | Sunrise 06:05 Set 19:54 Moonrise 14:07 Set --- ● 1ST QTR | Sunrise 06:06 Set 19:53 Moonrise 00:09 Rise 15:18 | Sunrise 06:07 Set 19:52 Moonrise 00:49 Rise 16:24 JOT OF THE UNIVERSE AT ANTHONY WAYNE |
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| 25 | Sunrise 06:15 Set 19:40 Moonrise 08:38 Rise 21:19 | Sunrise 06:16 Set 19:38 Moonrise 09:37 Rise 21:41 | Sunrise 06:17 Set 19:37 Moonrise 10:36 Rise 22:03 | Sunrise 06:18 Set 19:35 Moonrise 11:35 Rise 22:27 | Sunrise 06:19 Set 19:33 Moonrise 12:36 Rise 22:54 | Sunrise 06:20 Set 19:32 Moonrise 13:39 Rise 23:26 ● 3RD QTR | Sunrise 06:21 Set 19:30 Moonrise 14:42 Rise --- |
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