

North Jersey Astronomical Group

The Dark Sky Observer

A Publication of the North Jersey Astronomical Group

July/August, 1998

Vol. Xi, No. 7

August Meeting

As usual, there will be no meeting in August as most members will be enjoying their summer vacations.

September Meeting

The next business meeting will be held at 8:00 p.m. Wednesday, September 9 in Richardson Hall room 226.

Telescope Nights at the Iris Gardens

The spring season of Telescope Nights ended April 30th. Public Telescope Nights will resume in the fall, however we will hold "members only" Telescope Nights at the Iris Gardens in Montclair on Wednesday nights through the summer (weather permitting). Contact Ruth Koenig at dkoenig@intercall.com or 973-340-4640 for more information.

The Dark Sky Observer

is a publication of the North Jersey Astronomical Group (NJAG), whose purpose is to promote the study and knowledge of the science of astronomy. The Dark Sky Observer is produced monthly for NJAG members by NJAG members.

FROM THE EDITOR: Remember the Dark Sky Observer needs your input! Letters, comments, suggestions, and articles are welcomed and encouraged. Contact the editor at a meeting, at (201) 778 - 3038 or at this address:

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Summer Skies

Though they are often known as "shooting stars," meteors are really bits of dust and rock burning up in the Earth's atmosphere. When the Earth plows through a trail of debris left behind by a comet, we get a shower of meteors. The Perseid meteor shower occurs every August and produces at least 10 meteors per hour (up to 100 or more can be seen away from city lights).

METEOR SHOWERS

Some of the better showers of the year are listed in the chart below.

Even when there isn't a shower, you can see a meteor. The Solar System is filled with dust so the Earth is always running into this material. With patience, you may be able to see two to three per hour on almost any clear dark night away from city lights. If you're lucky, you may spot a really bright one. If a meteor hits the

ground, it is called a meteorite. Unfortunately it is very rare to find a meteorite, especially here in NJ. Most meteors, even ones that look like they've fallen nearby, are vaporized miles above the surface of the Earth.

You don't need to use a telescope to see meteors. In fact the field of view of most telescopes is too small to be able to point it at a meteor before it disappears. The best equipment to view them are your own eyes! ☆

For a weekly update on the night sky call our StarLine at: 973-614-9220

Shower	Date	Meteors per Hour
Quadrantids	Jan. 3	.95
Lyrids	Apr. 21	.15
Eta Aquarids	May 4	.30
South Delta Aquarids	Jul. 29	.20
North Delta Aquarids	Aug. 7	.20
Perseids	Aug. 11	.95
Orionids	Oct. 21	.20
South Taurids	Nov. 3	.12
North Taurids	Nov. 10	.12
Leonids	Nov. 17	.12
Geminids	Dec. 13	.58
Ursids	Dec. 22	.15

For more information about meteors visit the following Web sites:

- **Gary Kronk's Comets and Meteor Showers**
<http://medicine.wustl.edu/~kronkg/index.html>
- **Bethany Sciences**
<http://www.rahul.net/resource/regular/products/bethany-sciences/bethany.html>
- **North American Meteor Network**
<http://medicine.wustl.edu/~kronkg/namn.html>
- **New England Meteoritical Service**
<http://www.meteorlab.com/homepage.htm>

“When shall the star be blown about the sky Like the sparks blown out of a smithy and die?”

-- Yeats
The Secret Rose

Stargazing

Membership

Renewals

If there is a red circle on your mailing label on the back page you need to renew your membership dues! Remember that a one year membership costs only \$15 per year for an Individual Membership, \$20 per year for a Family Membership, and \$10 for an MSU student. Family memberships cover spouses and all children 18 and under. Make your check out the North Jersey Astronomical Group and mail to: NJAG, PO Box 1472, Clifton, NJ 07015. ☆

Wednesday August 1

At a summer camp in Sussex County. Contact Mary Lou West for more information and directions: 973-744-3221 or west@astro.montclair.edu.

Saturday, September 6

At Pleasant Acres campground in Sussex, NJ. Contact Gene Faulkner for more information and directions: 973-779-7932 or wizbang@intercall.com.

David Malin at Rutgers

8 PM, SUNDAY, AUG 9, 1998
Piscataway, NJ

World-renowned astrophotographer David Malin will give a lecture and slide presentation at Rutgers University. His topics will be photography, followed by a tour of the more challenging spectacles of the Southern Sky. This talk will be quite technical and is open only to the amateur astronomy community, not to the general public (as per Mr. Malin's request).

The meeting facility will be at the new "Allison Road Classroom Building" which is just across Allison Road from the Physics/Astronomy department (Serin Bldg) on the Busch campus of Rutgers University in Piscataway NJ (near New Brunswick). There is a BIG sign there you can't miss it. Seating shouldn't be a problem either since it holds up to 400. For more information see: <http://idt.net/~lewycky/malin.html>.

METEOR WATCH

Tuesday, August 11, 1998

Riker Hill Art Park (Beaufort Ave., Livingston)

From 8:00 to 10:00 p.m., join us for the annual Perseid Meteor shower. Our telescopes will also focus on other wonders of the night sky. Our telescopes can't see through clouds! In case of inclement weather, call 973-596-6529 after 6:00 p.m. (rain date: August 12). Recommended for adults and children ages six and up. Free. ☆

Directions to Rutgers:

From the New Jersey Turnpike and from Route 18 northbound

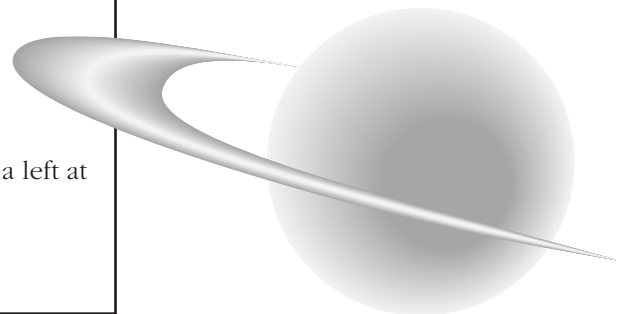
- Leave the Turnpike at exit 9 and take Route 18 northbound (after the Turnpike toll booths, keep to the right and merge onto Route 18 northbound).
- Go 4.0 miles, passing over US Route 1, through two traffic lights And over the Raritan River.
- IGNORE the exit for George Street/Rutgers University. Do NOT exit before crossing the river.
- Immediately AFTER the bridge is a traffic light. You should be in one of the two right lanes at this point. Proceed straight through the intersection. You will then be on Metlar's Lane. Take the first left, just 0.3 miles after the light, onto Sutphen Road.
- You are now on the Busch Campus.
- Continue 0.3 miles to a stop sign and turn right onto Frelinghuysen Road.
- After another 0.4 miles you will see Parking Lot #53-A on your left. Park anywhere in the lot
- Cross Frelinghuysen Road and walk along it in the direction you were driving, past the Campus Bus Stop and the Physics Lecture Hall (building 51 on the campus map) until you reach Serin Physics Laboratory (building 52 on map). The Allison Road Classroom Building is just across Allison Road from the Serin Bldg.

See also: <http://www.physics.rutgers.edu/dept/directions.html>

Directions to Riker Hill Park

Route 280 is accessible from NJ Turnpike Exit 15W or Garden State Parkway Exit 145.

- Take Route 280 West to Exit 4A
- Take Eisenhower Parkway south. Go straight at the first light.
- Cross the railroad tracks and go up the hill.
- Make a left onto Beaufort Ave.
- Make a right turn to continue on Beaufort. A few blocks down make a left at the sign for Riker Hill Art Park.
- Go straight at the stop sign. Keep to the right at the fork in the road.
- Telescopes will be set up at the very top of the hill.



Armageddon: Movie Review

By John Miksits

Not everything is perfect. At least that's what I know at this time. And so I can make some comments about the new movie Armageddon. Bruce Willis and his band of merry oil riggers are called to duty by the United States government in attempt to drill a hole in a fast moving asteroid and place an atomic bomb down the hole. The world only has about 18 days until impact. If they fail in their attempt to deflect the object, then it is The End. I like it when the heroes save the world from destruction.

This movie is characteristically American. If you don't know already, a portion of the asteroid destroys the Chrysler Building in NYC. There are several other towns around the world get clobbered also. The scenes of foreign lands just don't seem cohesive by the nature of the film. Generally, in a Willis movie the action takes place in one spot. Do I dare say, "who cares about the other parts?" I am biased by my reading of a review that said the producers could have left these scenes out and it would not have mattered.

The economy of the movie also got to me. Let me explain. NASA in all its newfound wisdom built a double-sided launch pad. Why place two billion-dollar spacecraft next to each other at launch? These shuttle-like spacecraft were built before the world knew about the doomsday asteroid. Launching a rocket is risky and very expensive. I don't think NASA would do such a thing from past experience with the Challenger incident. But I guess if private industry bids lower than government worker unions, anything is possible!

I think the physics of the movie was wrong at times. These shuttles had to land on the asteroid. The endless tumult of floating objects the crews had to avoid did not seem real. This was very large asteroid: the diameter had a width the size of the State of Texas. I guess the small floating portions would come to rest on a thing so large and close. Maybe next week my opinion will be different. Wait for a matinee or use a discount ticket. ☆

What Do I Do When It's Cloudy?

by Gene Faulkner

Each month a new magazine arrives at my house, either Sky & Telescope, or Astronomy. In fact, for those with subscriptions, these magazines arrive as much as six weeks early! The editors of these magazines must have their reason for publishing and shipping this early. Probably the same reason that I read them early.....planning. The best kept secret in astronomy.....planning.

When the magazines arrive I read all the letters to the Editor, then articles about all the new "stuff" about discoveries, and just maybe the Editorial. I take a skim through the entire magazine to see what's up in the sky for that month. And in one of these magazines there is always a section called the OBSERVER'S CHALLENGE.

I pull out a pencil or pen and circle all the star clusters, doubles, eclipses, etc., and the date and time. The reason I circle them is to locate this information more readily after dark. The circles will stand out and always act as a "reminder." Next I look at the observer's challenge article, see if this particular object is visible with my scope, and mark this section with an asterisk, as well as placing a circle around the Right Ascension and Declination. I love to search for "something new" each time I go out to observe, and the Observer's Challenge gives it to me.

Now that I know what's coming my way next month, I start to lay out a plan. Do I need a dark site? What is the magnitude of this object? If I need a dark site I will head for West Milford, or Sussex, N.J., or even go as far as Albany, N.Y. I check my equipment like the batteries, the eyepieces, and make sure I not only bring my cameras, but film. The last thing

to check is the weather.

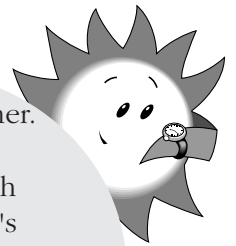
OH, OH! Looks like possible overcast with showers likely. That's nothing new in New Jersey. An example: For the month of June, two nights were suitable for observing. There goes all that planning.

What can I do when it's cloudy? This is what I did. I pulled out my three volume set of Burnham's Celestial Handbooks, picked out one of the constellations that are visible in my area, and checked out what's there.

WOW! Here we are in Hercules, which just happens to be nearly overhead at 11 p.m. In Volume II, we find the constellation Hercules on pages 950-996. A list of doubles and multiple stars are given, with the name listed first, then distance, position angle, the year measurements were made, magnitude, a few descriptive notes, and finally the Right Ascension and Declination. This is followed by variable star listings, then star clusters, nebulae and galaxies. The next few pages get interesting, covering the major bright stars found in Hercules (formed by the letter H). Pictures of star clusters, nebulae, etc. are included, some of which are the famous M13, Nova Hercules 1934, and M92. There are many other objects in Hercules, but you will need a 200 inch telescope to see them.

More information can be acquired by reading these notes on the history of each constellation. And if your out observing and find an object that you don't know what it is, you can mark down the Right Ascension & Declination, and check the volumes the following day, you'll find it there.

What else can you do when it's cloudy or raining out? ☆



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Contact Kevin (stargazer@intercall.net) to be added to the list.

News Views

A random sample of interesting articles on astronomy/space

- James Glanz, "Exploding stars point to a universal repulsive force," *Science*, Jan. 30, 1998, Vol. 279, p. 651.
- Tony Reichhardt & Alison Abbott, "Science struggles to gain respect on the Space Station," *Nature*, Feb. 19, 1998, Vol. 391, p. 732.
- Bisnovatyi-Kogan, "At the border of eternity," *Science*, Feb. 27, 1998, Vol. 279, p.1321.
- George Musser, "Glow in the Dark," *Scientific American*, March 1998, p.18.
- R. Cowen, "Dust disks hint at baby solar system," *Science News*, April 25, 1998, Vol. 153, p.260.
- R. Monastersky, "Space dust may rain destruction on Earth," *Science News*, May 9, 1998, Vol. 153, p.294.
- Michael Disney, "A New Look at Quasars," *Scientific American*, June 1998, p.52. ☆

Mars Surveyor 2001 Scaled Back

The Mars Surveyor 2001 was originally intended to collect samples via a rover. These were to be picked up on a sample return mission in 2005. Due to a misjudgment of the cost of the complex rover, it has been rescheduled on the Mars Surveyor 2003 mission. Mars Surveyor 2001 will now use a design similar to the Mars Surveyor '98 spacecraft which will land near the Martian south pole. JPL scientists are now contemplating a bold equatorial touchdown within the Valles Marineris for Mars Surveyor 2001. ☆

Space Station Delayed

The launch of the first piece of the International Space Station has been delayed until November 20, 1998. The Russians have not completed final assembly of a critical service module. As a result, the first space station crew will not fly until July 1999. Completion of the station is expected in January 2004. ☆

Spacecraft Galileo Toys

NASA's Jet Propulsion Laboratory (JPL) has signed another licensing agreement with Mattel Inc. Mattel plans to release a "Hot Wheels Jupiter/Europa Encounter Action Pack" in early 1999. In addition to a detailed model of Galileo, there will be a reproduction of the atmosphere probe and one of the radio telescopes in the Deep Space Network used to communicate with the spacecraft. ☆

Sprites

"On this date in 1989, University of Minnesota scientists obtained the first video image of the strange luminous displays above electrical storms now called red sprites. The video was acquired quite by accident during the test of a low-light camera being readied for a rocket launch. The luminous column of light appeared to extend into the ionosphere (more than 60 km). Since then, thousand of sprites have been recorded by scientists, confirming the long-ignored reports of storm watchers that go back over 100 years." ☆

Saturday August 1
Sunday August 2
Monday August 3
Tuesday August 4
Wednesday August 5
Thursday August 6
Friday August 7
Saturday August 8
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Wednesday August 12
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Saturday August 22
Sunday August 23
Monday August 24
Tuesday August 25
Wednesday August 26
Thursday August 27
Friday August 28
Saturday August 29
Sunday August 30
Monday August 31

Ruth:

These printouts are for fixing the top of page 2, under Stargazing.

The date for the first event (Wed, Aug. 1) is incorrect.

Please just cut out and paste up the date that is correct for this one...

Thanks, MB