



# R. A. C. NEWS

## July/August - 2001



www.rocklandastronomy.com  
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### ADVISORY COMMITTEE

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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

\*Lake Sebago, Seven Lakes Drive, Exit 16, Palisades Interstate Pkwy

\*Silvermine Ski Area, Exit 18, Palisades Interstate Pkwy

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

\*Tahganic State Park Taconic State Parkway, Ancram, NY

• *Special permits are required to observe.*

### SUMMER MEETINGS & STAR PARTIES

#### Friday, July 13

#### Saturday, July 14

#### Friday, July 20

Wawayanda State Park observing for club members and their guests

#### Saturday, July 21

This is the last of three "Up All Night" observing sessions scheduled at Taghkanic State Park. If you've never had the opportunity to experience really dark skies, this is the time and place to be.

#### Saturday, July 28

"Joy of the Universe" Public Star Party will be held at Anthony Wayne Recreation Area located at exit 17 on the Palisades Interstate Parkway. Please come and share your telescope with other club members and interested guests.

#### Friday to Sunday, August 10 - 19

RAC's Summer Star Party will be held at Shady Pines Campground located under the dark skies of Savoy, MA. Reservations are required. Contact Don Urban to reserve your space.

#### Friday, August 17, Saturday, August 18

Stellafane Telescope Maker's Convention in Springfield, VT.

#### Friday, August 17

#### Saturday, August 18

#### Friday, August 24

Observing at Wawayanda State Park for club members and their guests.

#### Saturday, August 25

"Joy of the Universe" Public Star Party will be held at Anthony Wayne Recreation Area, located at exit 17 on the Palisades Interstate Parkway. Please come and share your telescope with other club members and interested guests.

## GOES-8 SATELLITE MONITORING FOR DARK SKIES: IN SEARCH OF THE RARE "DARK BAND" REGION

Since driving to one of our "dark sites" involves time and effort, one question that must come to mind for the newcomer is: How can I be sure that it will be an excellent night for viewing before loading up and heading out?

As many veteran observers know, there is nothing like arriving at a remote viewing site like Waywayanda, setting up, and then watching the sky deteriorate because seemingly great conditions during the day did not guarantee great conditions that night. Although hard-core club members will tell you that holes open up in the sky during the night and that perseverance is needed for all the effort involved with a dark site viewing session, especially after perhaps putting in a day of work earlier, you should be able to predict with certainty what nightfall will bring after you've packed, driven, and set up everything. Fortunately, with a little help from the Internet and by accessing the Geostationary Satellite Images that may be found there, you can predict exactly what will happen once darkness sets in and things have cooled down.

How do you get to these images? (They're great by the way, worth every minute considering the consequences of not reviewing them before heading out.) The following works for me.

- 1) **Yahoo.com** to their Homepage
- 2) Click on **Weather**
- 3) Scroll down to **Yahoo! Categories** and click on **Maps and Observations**
- 4) At **Site Listings** scroll down to **Alphabetical** and click on **GHCC Geostationary Weather Satellite Data**

You will now find yourself at the Global Hydrology and Climate Center with data provided by NASA from Huntsville, Alabama. The first row of thumbnail images is of interest. Specifically, Weather Satellite Imagery for North America from GOES-8 East.

Two of the thumbnails provide the insight needed: **1 km Visible** and **Water Vapor**.

Clicking on these categories brings up almost full screen views of the entire United States from which you can watch an animation of the weather, zoom in further (low, medium, high), or adjust the resolution percent.

Medium zoom, coupled with the defaults of 55% resolution and animation of six frames, works fine. You then actually click on the map itself and then the animation will download at the resolution and zoom you selected for the area where you clicked on the map. The animation will show the trend of the weather pattern and you can extrapolate that information to what you think will happen later that night. It's easy and

makes you feel as though you're in control of your destiny for possible viewing later that night.

What you want to see is very clear, dark regions for both Visible and Water Vapor over the NY/NJ border. This means no haze. If a high-pressure region exists over our area, dark regions will prevail, but there may also be some level of haze on the Water Vapor images. To see if dark regions are really dark, go to low zoom and look around the country for really dark regions somewhere which can serve as a yardstick for our observing area.

Typically, you'll find that really good viewing follows a cold front that has pushed through our area. Nevertheless, a cold front passing through doesn't necessarily guarantee that the sky will have incredible contrast that night due to the ground possibly being saturated with water that the sun couldn't bake off during the day. In this instance, the GOES-8 images would show Visibility to be fairly dark, but the Water Vapor would be full of haze. What you would find that night when observing would be a sky that seems very clear, yet just doesn't live up to your earlier expectations, expectations always being extremely optimistic and hopeful with regard to contrast. You would also find that things in general would be dewing-up quickly once the night cooled things down.

The ideal GOES-8 images are dark regions for both Visibility and Water Vapor. Although more rare to come by, these two conditions do occur together now and then. I've noticed that a "dark band" region for both Visibility and Water Vapor can usually be found on the backside of a major, fast-moving cold front that has moved through. Why the "dark band" region hugs the passing-through cold front, I don't know. When I first noticed this "dark band" region on the images, I found myself immediately going outside to see what the sky was like. This happened during the day, and when I looked up, indeed, the sky was cloudless. There was also a crispness to the air that made you want to breathe deeply. If you washed your hands, they would dry in seconds after removing most of the water with a towel. Later that day I noticed that jet airliners streaming across the sky left no trails behind them. That night...well, I was looking through my telescope. Everyone probably was. Conditions were perfect.

I'd read in *Astronomy*, from an issue years ago, that the best seeing does not come until a day or more after a cold front has passed through. This may be the case, though again, I don't know. What I do know for our area is that if you wait that extra day, the sky has a lot of haze. Also, the *Astronomy* article may have been referring to weather out West which can rid itself of its water content over a couple of days, due to deserts for example, and so waiting a couple of days would probably improve air steadiness. I've never noticed much of a problem for our viewing areas with regard to air steadiness, so I consider it to be somewhat of a non-issue. Incidentally, the worst air steadiness I ever saw was atop Mount Piños (this is where Tony Hallas takes many of his famed astrophotos which routinely appear in *Astronomy*), north of LA in California. I

was staying up all night to see Hale Bopp, and this guy there had a brand new CG-11, which had cooled down for hours. He aimed it at Mars and when I looked through, expecting to be blown away, since this was to be the largest scope I had ever looked through, I was sorely disappointed. Mars was boiling away to the point of not being even recognizable.

From my experience, one of the best viewing nights I have ever had was from Beemerville, NJ about six years ago. A straight-line cold front, perpendicular to longitudinal lines, swept down from the north that must have brought with it incredibly dry air. Although showers had occurred the night before with the passing through of the front, they were followed by a bright sunny day that evaporated all the rainwater on the ground so that by evening everything was dry. Perhaps the "dark band" was directly overhead on the night of observing, though I don't know for sure because I wasn't hip to GOES-8 back then.

Anyway, on the night of observing, no dew collected on any surface all night long (I could have slept on the ground without a problem), and the sky was just lit up. On top of this, it was August 11, a Saturday, the moon was out of the picture (a crescent or less, rising late), and the Perseids were really kicking in after midnight. I remember being able to see the Double Cluster as an easy haze without any optics.

Basically, I couldn't go wrong that night. Just looking up, it was an incredible starry night with meteors as an added bonus. Looking through binoculars, the Milky Way was 3-D with "space walk" views, and looking through a telescope, Jupiter and Saturn could be viewed, a view I hadn't seen through a telescope for more than ten years.

It was a really memorable night for some friends and me, friends I had to plead with to join me since the night before it had rained, and they figured it would still be wet all over the ground the following night. It's up there in my top ten viewing experiences...and in New Jersey, if you can believe it.

**Bob Andre**

### WELCOME NEW MEMBERS

**Roland Roberts & Maria Lee** 76-15 113th St., Apt. 3B  
Forest Hills, NY 11375 (718) 575-9108

**David A. Trapani** 60 Lyon Rd., Waldwick, NJ 07463  
(201) 689-9420

### FOR SALE

**Celestron-8** with yoke and wedgedrive  
Sidereal rate electric drive  
Eyepieces 1 1/4 inch: 12, 25, 40 mm  
Light pollution filter (mercury and sodium lines)  
Polaris pointer  
Barlow lens  
Star diagonal  
Finder scope  
Operating manual  
Celestron general catalog  
Photographic attachments (3)  
Tripod  
Carrying case padded

This scope has been used perhaps ten times. It has been stored in a closet, in its case, and is in perfect condition. I am asking \$550. Original billing \$1345. It is a great instrument.

Keith Borland  
kborland2@aol.com  
(201) 262-5182  
Oradell, NJ

### SCORPIO and LIBRA

According to poetic astronomy, this constellation "is divided into two signs because of the size of its constituent parts, one of which our writers call Libra. The entire constellation appears to have been created because Orion, priding himself on his supreme prowess as a hunter, boasted to Diana and Latona that he could slay any creature arising from the earth. Whereupon, it is recounted that Earth, in anger, sent a scorpion to kill him. Jupiter, admiring the fortitude of both combatants, placed the scorpion among the stars, so that the sight of it might serve as a lesson to men, lest any one of them should grow too self-confident. However, Diana, because of her care for Orion, petitioned Jupiter to grant her the same honor he had so freely bestowed on Earth; and so Orion was placed among the stars in such a way so that when Scorpio rises, Orion sets" (Theony Condos - translator of *Star Myths*).

