



# R. A. C. NEWS

## July/August - 2000

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### Observing Locations

**Iron Horse Farm** Campbell Hall, NY  
914-496-6320

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

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

• *Special permits are required to observe.*

### OBSERVING SESSIONS

Saturday, July 8<sup>th</sup> and August 5<sup>th</sup> – Lake Sebago

Saturday, July 22 and August 12<sup>th</sup> & 19<sup>th</sup> – Anthony Wayne

\*\*Note - August 12<sup>th</sup> the Perseid Meteors can be viewed.

### STAR-B-CUE NEWS FLASH!

Reserve this date: Saturday, September 23, 2000, for this years club sponsored Star Party and barbecue to be held at Iron Horse Farm in Campbell Hall New York.

On Friday September 15 a club meeting will be held to preview the nights special attractions for the following weeks star-b-que (we will utilize the planetarium at Rockland High School). The September newsletter will provide more info.

### WELCOME NEW MEMBERS

**Jose & Linda Alvira** PO Box 309, Ft Montgomery, NY  
10922 (914)446-4336.

### BARLOW BOB'S CORNER

What the Rainbow Star Spectroscope Can Do For You

The Rainbow Star Spectroscope does everything mentioned in their advertisement and more. It can be used to add a new dimension to an observing session.

You can put it in any telescope to observe the hydrogen spectrum absorption lines in Vega and the molecular bands in Betelgeuse. Some friends and I put in in an 18 inch telescope and observed the spectrum of all types of stars. A larger aperture telescope is needed to bring out the fainter absorption lines.

At an observing session, this grating spectroscope can also be used to observe the bright emission spectrum lines in lights. You can see the spectrum of Mercury or in sodium street lights. You probably could find florescent or incandescent lights on cars, buildings, or towers.

These two observations can be used to explain how scientists use the known bright emission spectrum of elements to decode the unknown dark absorption spectrum of light from a star located a million light years away from Earth.

This spectroscope can also search for planetary nebula. Normally you put an Oxygen III Nebula Filter in your telescope and observe planetary nebula. Through this filter, the planetary nebula stands out among the stars because of its distinctive color.

When you observe the sky through a grating or prism spectroscope, all the stars have a little rainbow colored ab-

sorption spectrum. However, planetary nebula does not have this colored spectrum. This nebula simply appears as a point of light. It gives off light in one Oxygen III Wavelength.

The Rainbow Optics Star Spectroscope is the ultimate toy of the new millenium - after the CCD camera. Consider the following: In 1929, Edwin Hubble announced a relationship between the redshift in the spectra of galaxies and their distances, indicating that the universe was expanding. Today, amateur astronomers can create an image of the redshift in the spectra of stars with a CCD camera through the Rainbow Optics Star Spectroscope Holographic Diffraction Grating. There have been recent articles written about the subject.

You can purchase the visual spectroscope model. However, for a higher price, you can buy their visual/photo/CCD model. While you may not own a CCD camera, someone else does. You could be the first kid on your block to own this ultimate toy and observe the fingerprints of the stars.

**Barlow Bob**

### **FOR SALE**

Meade 10' dob (1219 mm focal length) f/4.5, with 2" focuser and 1 1/4' adapter, Telrad, three Televue plossils (26,17,10.5), 2X barlow, moon filter. \$500.00. John (914)362-1016.

### **SHADES OF GRAY**

In light of appeals for dark skies in recent newsletters, it should be pointed out that the sad truth about Northern New Jersey viewing areas is that the skies are extremely light polluted and probably getting worse.

The extent of the light pollution problem of Northern New Jersey became painfully obvious to me years ago when flying in late at night from out West. The plane was empty and just about everyone was sleeping. With the cabin lights off and the dim footpath lights easy to keep out of sight, sitting in a window seat, with no one next to me, I cupped my hands to the window and peered out up at the stars. At 33,000 feet, with the moon having set hours ago, even through the less-than-perfect airplane window-glass, it was amazing to see how dark the sky could be, and how distinct all the stars were.

Looking down at the ground over Northern Arizona, Southern Utah, Western Colorado, or Northern New Mexico, no artificial light whatsoever could be seen. Scanning from the ground up to the sky, it was difficult to tell where the ground ended and the sky began. Distant cities, typically way off in the distance, were nonexistent. Streetlights were zero. Maybe I'd see a vehicle or a light somewhere far off, but most of the time there was nothing.

Moving East, out over Middle America--Kansas, Missouri, Illinois, and Indiana--small towns could be made out whose light pollution was negligible. Off in the distance maybe a small city or two could be seen, but for the most part they had only small domes of light above them. I figured that if anyone wanted really dark skies around there, an hour's drive would easily accomplish it.

After flying over Western Pennsylvania and Western New York, the skies were still fairly dark, especially out around Western Pennsylvania. But always a city or two could be seen

somewhere in the distance. Still, I was impressed that this region had such dark skies and seemed to be bucking the trend.

However, as soon as the plane flew over New Jersey, it was as though someone had flicked on a light-switch. The whole State was bathed in sky glow. It was as though individual domes of light had long ago blended together to form a continuous superdome. It was ridiculous. And for the most part, no portion of the state seemed spared from this affliction.

I came to the realization that no matter how good a night I might have had observing stars from Western New Jersey, the contrast available was poor in comparison to what a really dark sky is like.

Urban sprawl keeps growing; small cities become small metropolises, and before you know it, your once dark sky now has a light dome.

**Bob Andre**

### **NYS LIGHT POLLUTION BILL UPDATE**

Oh, so close, but no touchdown! A delay of game penalty has been assessed for the summer, however, we still have the ball for the next legislative session.

A6357 was revised to become A6357a on May 26<sup>th</sup>. It passed on June 13<sup>th</sup> with a vote of 113/32. (See the Assembly web site for the voting record.) From there it went to the Senate to be reconciled with S6799a. S6799a became S6799b on June 19<sup>th</sup> to make it "same as" A6357a. Three additional sponsors were added to the senate bill for a total of 11. (There were only 6 sponsors in the assembly.)

A change in wording and a penalty clause made the DEC responsible for enforcement. DEC doesn't have the \$ or staff to perform this function, and this killed the bill before it got in the Senate. Even the Rules Committee couldn't move it at such a late date with other pieces of legislation ahead of it (gun control, school violence, jet-skiis!). It was an unforeseen, legal technicality. Enforcement should have been specified at the local level with code enforcement by planning/zoning boards and building inspectors.

Grannis's office promised to revisit the bill in the fall to fix it, to make it even better, and to consult with others including SELENE. We intend to hold him to the last part. The legislature is concerned about strong objections from the business community, who feel they need all that light to advertise. The legislature clearly understands the issues and wants to keep all of us happy. Also, a really good bill will serve as a model for other states.

With all this in mind, please write bread and butter thank you letters to your legislators, bill sponsors, and their staff for their help and patience. They work hard, and words of appreciation can brighten their day.

Thank you to all of our supporters out there - known and unknown. We have learned a lot from this experience, and everybody should be proud of the progress made so far. It is going to take more work, and more support will be needed. We will be planning new strategies and building more alliances. The raw troops are now seasoned and respected veter-

ans. "Grass roots" efforts work! Don't think for a second that you can't make a difference.

We need some help. Do you want a government of, by, and for the people (and a future view of the starry night)?

E-mail [selene@ggw.org](mailto:selene@ggw.org) Web site <http://www.ggw.org/selene>