grouped of faint stars.

For those of you with moderate to large instruments, the diffuse nebula NGC 7358 is a very interesting target. Barely visible without filters, the nebula shows up as a small faint elliptical puff of light around two stars when viewed in an eight inch. A ten inch equipped with the Lumicon UHC filter makes the object look like a fat dumbbell oriented north-east to south-west with faint wings of light visible off each side of the dumbbell. Using the OIII filter makes the wings stand out better, making the object look a bit like a small version of M76.

SKY & TELESCOPE NEWS BULLETIN SEPTEMBER 21, 1990

COMETS LEVY AND ENCKE

For those of you who still hope to catch a glimpse of Comet Levy, too bad, the comet is really too far south to be seen well, and it's right in the part of the sky that the Moon will be crossing this week. Perhaps you'll have better luck with periodic Comet Encke, now high in the early morning, moonless sky. This comet returns to the Sun's neighborhood every 3.28 years, but it never gets very bright. This week Comet Encke should be visible in small telescopes as a 9th-magnitude glow in Cancer. Here are some positions in equinox 2000 coordinates for 0 hours Universal time (8 p.m. Eastern daylight time on the previous date):

	R.A. (2000)	Dec.
Sept. 22	8h 27m	+32d 17m
25	8 55	+30 15
28	9 23	+27 44

MOON NEAR SATURN

On Thursday evening, September 27th, the waxing gibbous Moon is stationed between the Sagittarius Teapot on the right and the planet Saturn on the left. Don't miss your chance to observe Saturn's beautiful rings, which are still nearly as wide open as they ever get, before the planet dips lower into the evening twilight over the coming weeks.

The Prairie Astronomer

c/o The Prairie Astronomy Club, Inc.
P.O. Box 80553
Lincoln, NE 68501

First Class Mail

Next Meeting September 25, 1990

Volume 31 #9
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THE Prairie Astronomer

The Herschel Award

by Dave Knisely

The Astronomical League has sponsored a number of observing awards, most notably, the Messier awards for observing all or part of the Messier list of deep-sky objects. With more amateurs having access to apertures larger than six inches, it was apparent that people wanted to go farther and fainter than just the Messier list. Thus, the Herschel award was born, giving more advanced amateurs a list of 400 more difficult deep-sky targets to go after. The book, ``OBSERVE THE HERSCHEL OBJECTS'', has been available from the League for nearly ten years, and is a useful guide to those who are going for the award. It contains the complete listing of objects, including positions, brief descriptions, and an historical account of Herschel and his observations. The book also contains a sample log sheet for recording and later submitting observations for the Herschel Award. For those who cannot complete the entire Herschel list, the League is working on an abbreviated listing of 200 objects for an intermediate award known as the Caroline Award.

If you have already received the Herschel award, there is now a preliminary list of another 400 objects for a future ``400+'' award available from project coordinator Brenda Branchett. These objects are fainter and somewhat more obscure, including two located inside other galaxies! This list is tough and will give diehard deep-sky observers a real challenge.

To get ``OBSERVE THE HERSCHEL OBJECTS'', send $3.50 plus 75 cents for postage to: ASTRONOMICAL LEAGUE SALES, Four Klopfer Street, Pittsburgh, PA, 15209. For those who wish to get the provisional list of the next 400 Herschels, send an SASE to: HERSCHEL CLUB, c/o Brenda Branchett, 515 Glen Haven Drive, Deltona, FL, 32738. This is also the address for verifying your observations and obtaining the Herschel or Caroline Awards. Send your lists and get out and start exploring the wonders of real ``Deep-sky''.

Ask Uncle Sol

by Sheldon Cohen of the Smokey Mtn Astronomical Society

This month's first question comes from little Debbie Dumpster of Dumpster, TN. Debbie asks, ``Uncle Sol, why are the optics for most of our camera's and eyepieces made in Japan?''

Uncle Sol Answers: It took a little research to figure this one out, Debbie, but I finally discovered the answer. You probably have seen those late-night TV commercials advertising audio tapes with subliminal messages on them: ``I really like you,'' ``You're not hungry,'' ``You can be rich,'' and ``Order more tapes!''

Well, the function of a lens is to direct photons to their assigned places, so the more you know about photons the better off you are. Here the Japanese have a tremendous advantage. It seems that their apartments are so cramped for real beds, so they sleep on photons! The subliminal benefit this provides undoubtedly gives them their edge.

The next question was send in by Lance Reventlow, of Morristown, TN. Lance writes:

"Dear Uncle Sol, I read in last month's SMAS bulletin that an 8" f/8 scope used with a 26mm eyepiece is equivalent to an 8" f/4 scope used with a 13mm eyepiece. This is definitely not true! I frequently take my 8" f/4 out into the countryside for star parties, using a 13mm eyepiece. But even with a 26mm eyepiece, my 8" f/8 won't fit in the car!"

Uncle Sol answers:

Lance, you have made a common beginner's mistake. The two scopes, with those eyepieces, are equivalent outside the car. But when you try to put the f/8 inside your car, your automobiles own optics come into play. Until you adjust them, your car cannot benefit from the new eyepiece. If you are unfamiliar with automotive optics, you must first learn to identify the car's primary or objective lens (so called because while you are driving, you can see your objective in it).

Sit in the driver's seat and look 30 degrees to your right and 30 degrees up. You will notice a small mirror, known as the secondary. If your car is a Schmidt Cassegrain, the secondary is attached to the primary lens; if your car is a Newtonian, the secondary is attached to the primary holder, just above the primary.

Now that you've located your car's primary lens, you must adjust the car's focal length to match the change in the telescope. Since auto primaries are zero magnification (technically they are correction plates) this is a simple task. If your car is one of the new models equipped with an adjustable primary holder, move the primary forward to double the distance between the primary and the ocular lens, located behind the rear seat, at the back end of the car's optical train. If you have an older, non-adjustable model, tap with a 16oz ball pein hammer on the primary until it has deformed into a concave hemisphere, or even better, popped out.

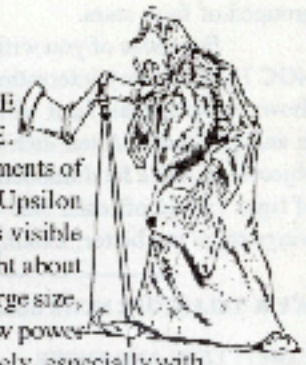
Your f/8 now fits in the car! But before you drive off, you must collimate the car's optics. Climb onto the trunk, and with your head on the car's central axis, look through the ocular lens into the secondary. Have a friend adjust the secondary until the image of your face is centered in it. (Hint: this will be easier if you've painted a black dot on your nose.) Once your face is centered in the secondary, have your friend adjust the position of the 8" on the rear seat (the seat nearest the car's ocular lens) until it occults the black dot.

If you cannot do this, your nose is not aligned with your visual axis. Tap your nose with an operating bar while you twirl around in right ascension. If you hit your nose hard enough, you will see stars. When you are aligned these stars will describe concentric circles: "Oh, there's a pretty blue circle with a 7" radius, but it's not half as pretty as that red one with an 8" radius. Say, they both have the same center!" If you find these adjustments difficult, you may want to invest in an auto collimating eyepiece.

The Prairie Astronomer is published monthly by the Prairie Astronomy Club, Inc., and is free to all club members. Membership status and expiration date are listed on the mailing label. Membership dues are: Junior Members and Newsletter Only Subscribers...$10/yr; Regular Members...$24/yr; Family Memberships...$27/yr; Address all new memberships, renewals, or questions to THE PRAIRIE ASTRONOMY CLUB, INC., P.O BOX 80553, LINCOLN, NE 68501. For other club information contact one of the following officers: Ron Dubus (Pres)435-5688, Dave Knisely (V.Pres)223-3968, Kim Ellen Owen (Sec)423-7440, Lee Thomas(Tres)483-5639, Jack Dunn (2nd V. Pres)475-3013. All newsletter comments and articles should be sent to Newsletter Editor JOHN LORTZ, 12023 PARKER PLZ #105, OMAHA, NE 68154 no later than 7 days before monthly club meetings. Club meetings are held the last Tuesday of each month at Hyde Observatory in Lincoln.

Observing Chairman's Report

by Dave Knisely



THE NEXT SCHEDULED STAR PARTIES ARE ON OCTOBER 12TH AD 19TH AT THE ATLAS SITE. Early fall skies offer a great variety of objects for instruments of all sizes. Take a look about 1.25 degrees west of Upsilon Aquarii for the Giant Helical Nebula, NGC 7293. It is visible in a pair of 7x50 binoculars as a small hazy patch of light about half the apparent diameter of the full moon. Due to its large size, the nebula is difficult to see in telescopes unless very low power is used. The Lumicon UHC and OIII filters help immensely, especially with larger instruments, making the planetary nebula appear as a big fuzzy doughnut with hints of structure.

In Pegasus are a couple of interesting spiral galaxies for moderate apertures. The brightest is NGC 7331, a highly tilted spiral, located 4.3 degrees north and one west of Eta Pegasi. Small instruments show it as a faint fuzzy oval patch with a slightly brighter center, with a ten inch revealing hints of detail in the outer haze. Those of you with large telescopes may want to try your luck at finding Stephan's Quintet, a group of five small and very faint galaxies which are located just under a degree to the south and slightly west of NGC 7331. On a good night, I have glimpsed three of the galaxies in an eight inch Newtonian, but to see all five you need at least a ten inch and very good eyes. Just off the south-west corner of the Great Square about three degrees south of Alpha lies the barred spiral galaxy, NGC 7479. Visible in a six inch, this object's central bar can be seen in an eight inch under good conditions, with a ten inch sometimes revealing the curve of one of the spiral arms.

In northern Andromeda is the bright but small planetary nebula, NGC 7662, located about half a degree south east of 13 Andromedae. Small telescopes will show this object as a fuzzy star, while an eight inch reveals hints of a vague two-shell structure. Of course, the highlight of the fall sky is the Great Andromeda Galaxy, M31, located 1.5 degrees west of Nu. This is a good binocular object due to its brightness and size, but small refractors frequently don't have enough field of view to have a good view of this fine galaxy. The spiral details of M31 are difficult to discern, but some of the brighter star clouds in the south-west arm are visible in a six inch RFT.

In Cassiopeia, about 5.5 degrees west and 2.5 north of Beta, is the beautiful open star cluster M52. It is moderate in size and a bit hard to resolve in small apertures, but it is rich, with about 50 members being easily seen in eight to ten inch apertures. Another interesting cluster, NGC 457, can be found half a degree north-west of Phi, and is a must for small to moderate instrument users. Sometimes know as the "ET" cluster, this group is large and fairly rich, with many bright stars showing color in large instruments.

In Lacerta is an interesting open star cluster, NGC 7296, located about half a degree east of Beta. Small telescopes may show only a few stars in a fuzzy background, but larger instruments make it appear as a small but rich triangular shaped

A Note From The Editor:

Lee and I missed connections this month, but felt it was important to get you this renewal information, thus, this newsletter suppliment.

As long as I've got a bit of space, I wanted to remind everyone that the Prairie Astronomer is published *each month* and that I *love it* when members send interesting stories, articles, etc. for publication. In fact, the more articles that arrive in my mailbox, *the larger the newsletter!*

The Horrorscope For Planetarians feature that I've run the past two months was kindly sent by Jack Dunn (thanks Jack!). Anyway, please send all submissions to John Lortz, 12023 Parker Plz. #105, Omaha, NE 68154, by the Wednesday before each month's meeting.

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SPECIAL NOTICE

Attention: Astronomy, Deep Sky, Telescope Making Subscribers!

A Message from your Treasurer

Your renewals for 1990 are due **by September 15, 1990!** We cannot accept renewals after that date. The same goes for any club members planning to subscribe to these magazines through the club plan for 1991.

All subscriptions run for the calender year. Club rates are:

ASTRONOMY Magazine	**$14.00**
DEEP SKY	**$ 8.00**
TELESCOPE MAKING	**$ 8.00**

Your payment must reach the club post office box **no later than September 15.** Send your money to:

The Prairie Astronomy Club
P.O. Box 80553
Lincoln, NE 68501

The following are club members whose names Kalmbach Publishing lists as subscribers to the magazines (A=Astronomy, D=Deep Sky, T=Telescope Making):

Delmar Motycka (A)
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Ronald B. Veys (AT)
Daniel Neville (AT)
David Knisely (AD)
Donald R. Grant (A)
Richard P. Johnson (AD)
Dennis Dunn (A)
Brendelyn Hartwing (A)

continued next page...

Mark Urwiller (DT)
John W. Johnson (T)
Clint Harness (T)

If you subscribe to any of these magazines through the club, and are *not listed above*, you should enclose your renewal notice with your payment. Otherwise, for those members listed above, simply send your renewal money and discard all renewal notices from Kalmbach Publishing.

This is the only renewal notice you will receive. No new or renewal subscriptions can be accepted after September 15, 1990!

Star Party/Comet Report

by Lee Thomas

Our star picnic/star party was excellent this year, made more exciting by the appearance of Comet Levy. About 30 people showed up for the picnic, at varying times (most were uncertain whether it was a 6:00, 6:30, or 7:00 p.m.). Departure for Atlas Site was at 7:30, with a caravan weaving its way cross country, while suspiciously eying clouds forming on the horizon.

Sure enough, the usual thunderstorms developed. (What would star parties be like without lightning on the horizon!) But, a stalled cold front remained precisely 20 miles northwest of Lincoln all night, spinning a few stray clouds our way and providing a fireworks display, but never completely obliterating the sky.

Comet Levy was a healthy, bright naked eye magnitude 4.0 or so, just passing near M15. The Perseids were in evidence, but not spectacular. Mosquitoes were hungry, but Deet was plentiful, as were soft drinks, lawn chairs, and telescopes. It was nearly a perfect night, and I believe, it renewed everyone's appreciation of the quality seeing we have at Atlas Site.

A Horrorscope For Planetarians

Part Three

Libra	Beware of Scorpios this month. If one begins a fight don't resist!
Scorpio	Find the nearest Libra and beat them to a pulp. I promise they won't fight back.
Sagittarius	Unbeknownst to you, you're a hidden agent of the KGB. One spoken keyword lapses you into a maniacal killing trance. This month you are going to be called into active duty. Don't answer the phone.
Capricorn	Send $5 to all persons with zodiacal sign at top of this list. Add your sign to the bottom of the list and send it to ten friends.
Aquarius	This space available.
Pisces	Seek professional help immediately. You actually believe the stars and planets affect your life!!!

(Written by Robert Reed of the Astronomical Society of East Texas)