

NORTHERN LIGHTS

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Roaming the Region

by Janet Stevens

Last November, while visiting Bolivia where he successfully observed the total solar eclipse, Jerry Samolyk of the Milwaukee Astronomical Society was kind enough to think of us and sent us a post card. It only took his post card eight weeks to reach us (and you thought the U. S. Post Office was slow!).

In the last issue of *Northern Lights*, we mentioned that the Cedar Amateur Astronomers had held a star party at the Saturn of Cedar Rapids car dealership, and received a donation of $1,000 in appreciation for all their hard work. In December, their society opted to use this money to construct a "Cookbook 245" camera as described in Richard Berry's *The CCD Camera Cookbook*. A short three months later, this system is online for use by members at their observatory

Astrofest (September 15-17) will see several changes this year First, on-site registration will be $100 to induce attendees to preregister, so make sure that you get your money in early. The Chicago Astronomical Society has instituted a voice mail system to handle Astrofest inquiry calls. All telephone calls will be returned as soon as possible. More information will be forthcoming in the Astrofest brochure, which should be mailed out early in May.

Tom Shultz of the Naperville Astronomical Association has instituted a new section of their membership meetings. He is the coordinator of an "Observations" segment at their meetings. The primary purpose of this portion of the meeting is for the more experienced members of their society to share their knowledge of astronomy and discuss the methods they have used in the past with those members who are newer to our avocation. This time is fixed at the beginning of their monthly meetings.

Dan Koehler, the new editor of the *Focal Point*, the newsletter of the Milwaukee Astronomical Society, has instituted a column in their newsletter, "On the Lighter Side". Each issue will have a column updating the latest information on light pollution. Dan reports that Rep. James Baumgart (D., Sheboygan) is again sponsoring legislation regulating outdoor light fixtures in the State of Wisconsin. This year the legislation will be aimed primarily at reducing Wisconsin's dependence on imported energy, emphasizing the economic savings to the state. Last year the astronomical community was considered a "special interest group" with all of its negative connotations. This year, Mr. Baumgart wants to de-emphasize this aspect of the legislation.

It was reported by David Bachtell of the Southeastern Iowa Astronomy Club that March 2-3, were two of the best nights for viewing he had ever seen. On Friday, March 3, a few S.I.A.C. members and about 20 visitors saw a stunning view of Mars at their John H. Witte, Jr. Observatory. Their Clark refractor performed remarkably well that night, at 1,150 power. This is close to the

Don't Forget The 1995 N.C.R.A.L. Convention!

Fargo-Moorhead Astronomy Club is hosting the 1995 North Central Region of the Astronomical League (NCRAL) annual convention. It will be held June 23-24, 1995 at the Moorhead State University's Comstock Memorial Union in Moorhead Minnesota. Registration will be $17 per person before May 20 and $22 thereafter. More detailed information can be obtained by contacting Fargo-Moorhead at the address below or contact your society's ALCor.

Fargo-Moorhead Astronomy Club
M.S.U. Planetarium
Moorhead State University
Moorhead, Minnesota 56563

theoretical limit of the refractor. Observers could easily see the polar caps and details on the surface of Mars. By the way, Tony Bachtell, Dave and Marion's son whom many of you know from the NCRAL conventions, is now in the U.S. Air Force and has been transferred to Anchorage, Alaska for three years.

Matt Ver Steeg, President of the newest member of the NCRAL, the Central Iowa Astronomers, and also a member of the Des Moines Astronomical Society, has spent some time remotely operating the 24-inch telescope at Mt. Wilson Observatory. Matt is part of a research project imaging and archiving N.G.C. galaxies.

The Rockford Amateur Astronomers will unveil their "newest gem", a solar observatory, on Astronomy Day, May 6. We all can view this "gem" at ALCON '96, which will be held in Rockford next year by the R.A.A.

While you are waiting with bated breath for your chance to visit Rockford and see this unique instrument, send us your articles, cartoons, or even tidbits for this column by e-mailing at 73357.1572@compuserve.com. We hope to hear from you soon!

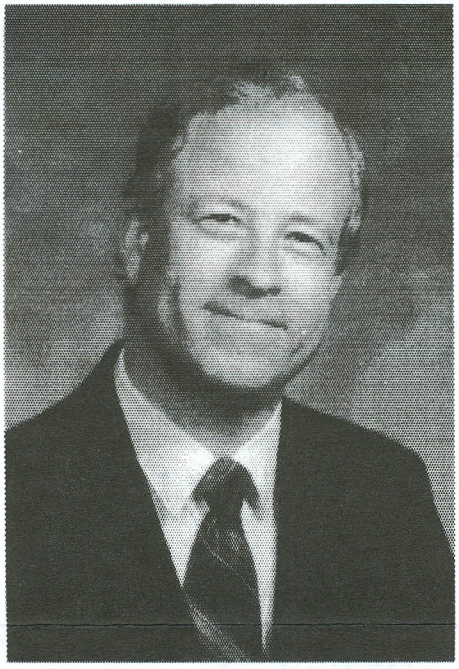
From the Chairman

by Paul Castle, NCRAL Chairman

If you were unable to attend the NCRAL Convention in Burlington, Iowa last year, I would like to introduce myself, your new Regional Chair.

In 1985, I served as Vice-Chairman of the North Central Region, and as convention chair in 1986. In 1991, I accepted the position of AL Book Service Chairman, a position I still hold. I have been President of the Popular Astronomy Club, in Rock Island, Illinois, since 1980. My primary interests include transient lunar phenomena, and planetary and double star observing. I have had reports published in *Selenology*, the newsletter of the American Lunar Society, and *Moon Glows*, a newsletter published by the British Astronomical Association.

It is my pleasure to serve you in the NCRAL and I will do so to the best of my ability. I welcome any comments or suggestions you may have concerning the Region. Our member societies exist to serve the interests of the individual amateur astronomer and the astronomical interests of the public, but the NCRAL exists to serve the member society. Let us work together for the betterment of all the societies.



North Central Regional Chairman Paul Castle.

It is getting to that time of year again when I look forward to the North Central Regional Convention. It is a time of fellowship and camaraderie, the renewing of old friendships, and the making of new ones. The Regional Convention is one of the highlights of the year, expanding my amateur astronomical experience beyond my own backyard and beyond my local society. It is great to reaffirm the knowledge that there are many more people out there loving and appreciating the same wonders of the sky, people of which I am normally not aware. This joy of sharing is one of the great attractions of the Regional and National League conventions. I urge you to set aside the weekend of June 23-24, and join us in Moorhead, Minnesota, for our Regional Convention. You will not regret it!

Speaking of this time of year, I need to remind you that it is time to be thinking of whom you would like to serve the Region as officers in 1995-96. You might even consider volunteering to serve as an officer. By the time you read this, your society's ALCor should have received a letter calling for nominations. Included in this letter is a list of each officer's duties.

Frank Roldan has graciously consented again to handle the nomination and election process. To nominate someone (with his or her consent, of course) or to run for office yourself, please contact Frank. Any such intention should be sent to him accompanied with a brief introduction before May 15, 1995. If you have any questions, you may contact

Northern Lights is the newsletter of the North Central Region of the Astronomical League. It is published quarterly in January, April, July, and October. Individual subscriptions are $3.00 per year and group subscriptions for NCRAL members only (minimum 10) are $2.00 per copy per year, all sent to the same address. Send checks made payable to *Northern Lights* to: *Northern Lights*; P.O. Box 8067; Rolling Meadows, IL 60008-8067.

Articles and ideas for articles about any astronomical topic of interest to amateur astronomers are invited and should be mailed to the above address or e-mailed to 73357.1572@compuserve.com. *Northern Lights* is edited by Berton and Janet Stevens. All material is copyright 1995 by the authors and used with their permission.

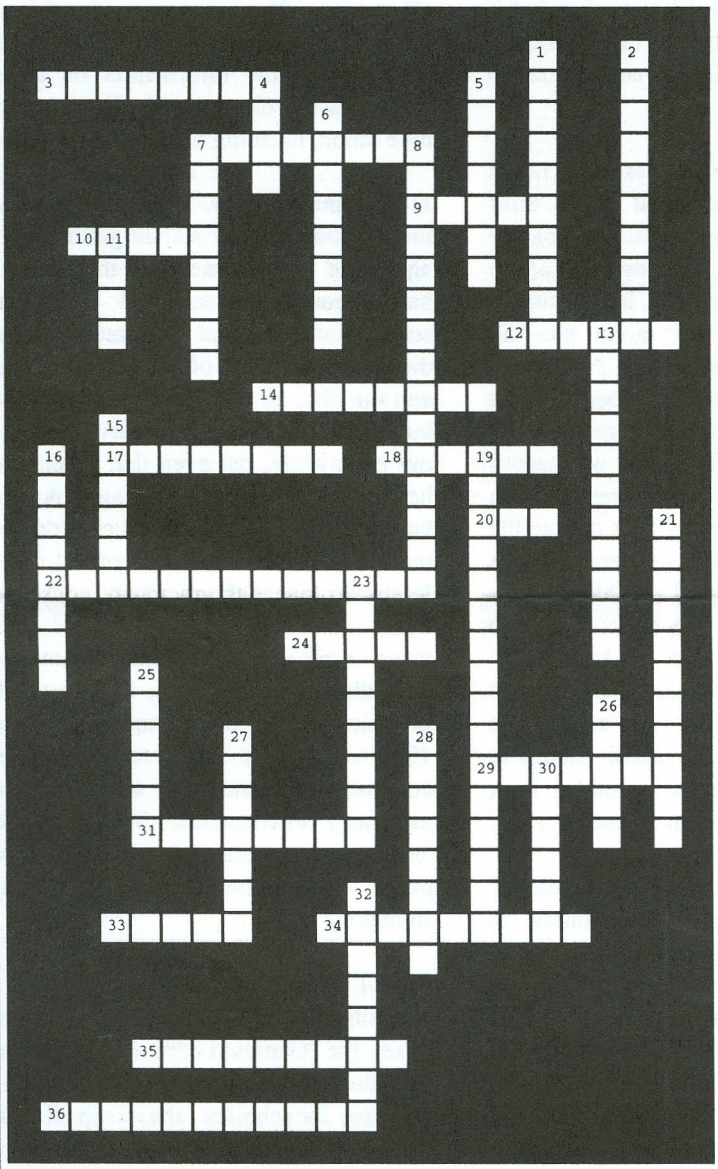
either Frank or me. Thank-you for giving this matter your serious consideration.

Frank Roldan
NCRAL Nominations Chair
N1090 Brookside Drive
LaCrosse, WI 54601
(608) 787-1730

Paul Castle
NCRAL Chairman
2535 - 45th Street
Rock Island, IL 61201
(309) 786-6119

By now your society's ALCor should also have received a letter from our Vice-Chairman, Sharon Stauffer. It is part of her responsibilities to handle the nominations for the Regional Award. Included in her letter were the Award's purpose and rules for nomination. ALCors, please distribute this information among your membership. We of the North Central Region have been blessed with many outstanding amateur astronomers whose contributions to the science and hobby of astronomy should not go unrecognized. Take this opportunity to put forth one of them.

Our last NCRAL Chairman, Marion Bachtell, instigated what I believe has been a very useful tool for our region, the *Regional Directory*. While doing some updating on it a few weeks ago, it occurred to me that you might like to see some changes made in your own society's entry. Perhaps the addresses of your contact person(s) have changed, or something of historical significance has happened in the life of your society that you would like to have included. If so, send your updated information to me and I will see that it is added. Every society will receive a revised copy when I can get all the information together.



Crossword Puzzle

by Randall Wehler

Across:

3. solar facial blemishes.
7. sounds like Aunt Emma in a dilemma.
9. slow transportation to a solar eclipse.
10. feeling of restlessness when viewing Saturn's rings.
12. _____ is believing.
14. connect the dots in a constellation.
17. embarrassed big guy.
18. earlier made type of Ford car.
20. abbreviation of "Telescopes Love People".
22. 88 different connected dots.
24. a cleanser not to be used on optical surfaces.
29. beat of the heart when celestial objects appear too close.
31. type of lines formed to check automobile exhaust.
33. aspirin name for a designation.
34. real bright idea.
35. particle targeted for Earth.
36. uninflected linguistic joining of words.

(Answer on Page 6)

Down:

1. what the best-selling telescope has risen to.
2. two helions.
4. what you become if discovering a supernova.
5. not just disks seeming to touch but what SETI people try to make.
6. writing instument's partial shadow cast by the Sun.
7. puny planet.
8. cars lined up, parked at a star party.
11. type of Chevy car.
13. slope of a hill walked up to observe.
15. nobody's fault.
16. type of dinner roll eaten at observing picnics.
19. major division of an astronomy textbook.
21. taking a picture of a round object.
23. falling in water while observing.
25. attorney-to-be turned astronomer.
26. Arctic bear.
27. catalogue of preventable mistakes.
28. looking south to observe.
30. dot at the end of a sentence.
32. act of hailing someone at a star party.

I wish all of you a great summer of observing!

Blue Moon?

by Philip Hiscock, Newfoundland

(Reprinted from *The Focal Point*, newsletter of the Atlanta Astronomy Club)

If you pay attention to the sky, you will know that each month there is a full moon. It gives you something to howl at while you are down on the waterfront, if you need it. Modern folklore has it that full moons make for better parties and higher booking rates at mental hospitals, but the studies I have heard about seem to deny the relationship.

People have been saying that "according to folklore" a second moon in a calendar month is a "blue moon". So, they say, this is the origin of the phrase "once in a blue moon". Don't believe them! "Once in a blue moon" is old, about 150 years old, but the age of the two-full-moons-in-a-month meaning of "blue moon" is less than 10 years. The older meaning may be wishy-washy and the newer one solid and technical, but do not let anyone tell you they have replaced one with the other.

It is not rare to see two full moons in a month. Because the moon and our calendar are not in sync and all the months but February are longer than the moon's synodical cycle, it happens about seven times in every nineteen years. That is every thirty-three months on average. Months have different lengths, so the phenomenon moves around a bit. In 1999, there will even be two "blue" moons. If you think about it, it is a little like getting paid every second Friday and finding some months you get paid three times instead of twice.

Meaning is a slippery substance. The phrase "blue moon" has been around a long time, well over 400 years, but during that time its meaning has shifted around a lot. I have counted six different meanings carried by the term, and at least four of them are still current today. So that makes discussion of the term a little complicated.

The earliest references to the term are in a phrase remarkably like early references to "green cheese". Both were used as examples of obvious absurdities about which there could be no argument. Four hundred years ago, if someone said, "He would argue the moon was blue", the average Sixteenth Century man would take it the way we take the phrase, "He would argue that black is white". This understanding of a blue moon being absurd (the first meaning) led eventually to a second meaning of "never". To say that something would happen when the moon turned blue was like saying that it would happen on Tib's Eve (at least before Tib got a day near Christmas assigned to her).

Of course there are examples of the moon actually turning blue; that is the third meaning - the moon visually appearing blue. When the Indonesian volcano Krakatoa exploded in 1883, its dust turned sunsets green and the moon blue all around the world for the best part of two years. In 1927, a late monsoon in India set up conditions for a blue moon. The moon here in Newfoundland was turned blue in 1951 when huge forest fires in Alberta threw smoke particles up into the sky. Even by the nineteenth century it was clear that although visually blue moons were rare, they did happen from time to time. So the phrase "once in a blue moon" came about. It meant then exactly what it means today - that an event was infrequent, but not quite regular enough to pinpoint. That is meaning number four, and today it is still the main one.

I know of six songs that use "blue moon" as a symbol of sadness and loneliness. In half of them, the poor crooner's moon turns to gold when he gets his love at the end of the song. That is meaning number five: check your old Elvis Presley or Bill Monroe records for more information.

Finally, in the 1980's comes the most recent meaning of blue moon - the second full moon in a month. I first became aware of the new meaning of the term in late May, 1988, when it seemed all the radio stations and newspapers were carrying an item on this interesting bit of "old folklore" since there were two full moons that month. At the Memorial University of Newfoundland's Folklore and Language Archive we get calls from all over, from people wondering about bits of folklore, and in that month I began getting calls about blue moons.

I searched high and low for a reference to the term having this meaning, or for any other term used to describe two moons in a single calendar month. However, it was all in vain. There just seemed to be no history to this term. Through that research I uncovered the information on other meanings of "blue moon". But not this blue moon, meaning number six.

In December, 1990, with a new "blue moon" coming on, I started getting calls again and I searched harder this time. I had already exhausted all the usual sources of historical and astronomical dictionaries, indexes of proverbial sayings and the like. A brand new edition of the huge Oxford English Dictionary had come out meanwhile, but even that seemed to have nothing on this new usage. A new tack was called for. Almost every day I use computer networks to contact other folklorists around the world (in fact I send this column all around the world each week on one of the networks), so I started with them. Nevertheless, no one could give me an earlier use of the term than the 1988 wire stories. I then turned to other computer networks, for scientists and especially astronomers. Still no luck. "Blue moon" seemed to be a truly modern piece of folklore, masquerading as something old.

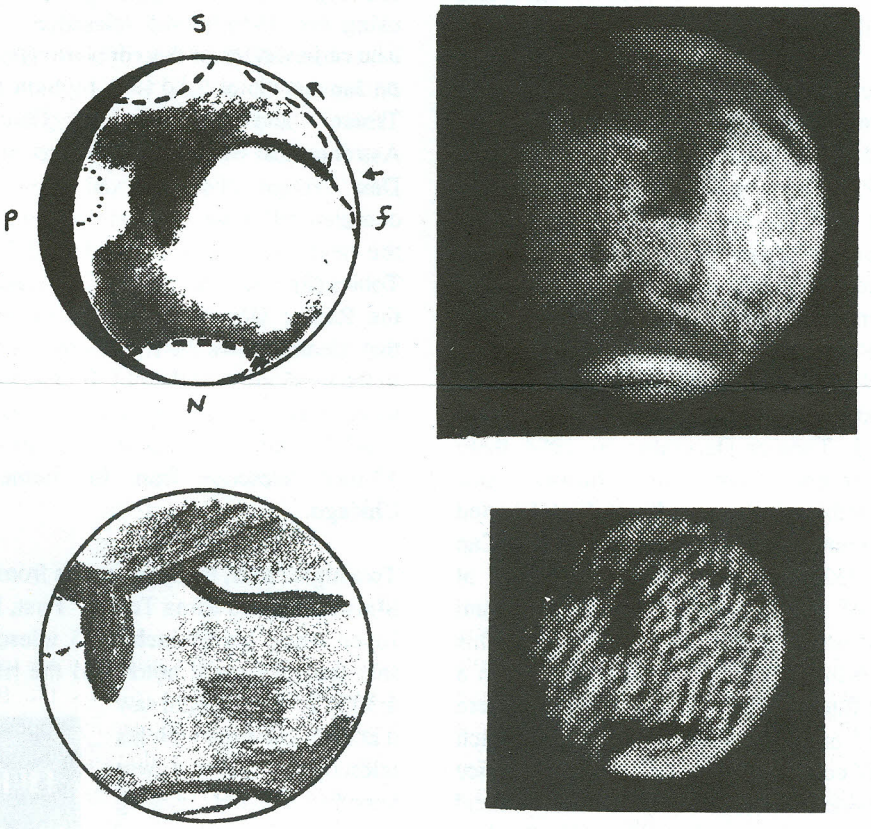
Then I remembered that the term was a question in one of the Trivial Pursuit boxes, the "Genius II edition", which was published in 1986. Trivial Pursuit is a fine company for scholars - they keep all their files and they can tell you the source of

any bit of information in any of their games. Yes, they told me, that question came from a certain children's "Facts and Records" book, published in 1985. Where the authors of that book got it, no one seems to know.

The term, used this way, must have been very local before the publication of the children's book, so local that it was never written down by amateur or professional astronomers, or by the newspapers that might have been searched by dictionary makers. It certainly was very rare. Perhaps it was even made up by the authors of the children's book as a safeguard against plagiarism. This is sometimes done to be able to prove in a court of law that a later work had stolen from your own - how else would they have gotten something that you invented? Well, if this is what the authors did, they have lost out because the term immediately entered the folklore of the modern world and it has become as living a meaning of the term "blue moon" as any of the earlier ones. Since it has a kind of technical meaning that most of the earlier meanings lacked, it will probably last a whole lot longer, too. "Old folklore" it is not, but real folklore it is.

Philip Hiscock is Archivist at the Memorial University of Newfoundland Folklore and Language Archive.

Mars Opposition 1994-1995



Views of Mars during the Winter, 1994-95 opposition of Mars from the International Mars Patrol. The first drawing was done on December 26, 1994 by Gary L. Cameron (Ames, Iowa). Note the Rima Tenuis on the right-hand (east) edge of the North Polar Cap (N.P.C.). The upper right CCD image, by Donald C. Parker (Coral Gables, Florida) was taken on December 31, 1994. The Rima Tenuis is clearly visible. The lower left drawing by Daniel M. Troiani (Schaumburg, Illinois) made on January 26, 1995 shows the notch at 332° longitude that marks the origin of the Rima Tenuis. The lower right CCD image by Mark Schmidt (Racine, Wisconsin) shows the Rima Tenuis cutting across the polar cap.

Happy Mars Opposition: Rifts Observed in Mars' North Polar Cap!

by Dan Troiani

(Reprinted from *The Martian Chronicle*, the newsletter of the International Mars Patrol, a Program of the Association of Lunar and Planetary Observers.)

Observations made during the months of December and January have given us very strong evidence that the Rima Tenuis and the Rima Borealis are back. First detected in 1888 by Giovanni Schiaparelli, he called it "Rima Tenuis" because it appeared to be a very faint rift running through the fluctuating cap. Schiaparelli had gained fame by using the term "canali" to describe threadlike patterns across the Martian terrain. This is the 5th aphelic apparition in a row in which the Rima Tenuis was observed. It looks different from past apparitions, but some of that could be due to Mars' north polar region being tilted more toward the Earth than at previous oppositions.

These are very hard objects to observe and have appeared to be wide and diffuse at their edges in CCD images. Visual observers see them as very thin lines starting at a very small notch at Martian longitude 332°. In January, both Hiroshi Ishadoh of the O.A.A. Mars Section (Japan) and Don Parker (Coral Gables, FL) observed a shadowy streak in the North Polar Cap (N.P.C.) that Masatsugu Minami of the O.A.A. believes to be the early start of the Rima Borealis.

It appears that we now have received enough observations to conclude that we are seeing both the thin rift of the Rima

Tenuis and the larger diffuse Rima Borealis. So far we have 21 visual and 17 CCD images to date from 14 observers from around the world.

The first signs of the polar rifts were in Don Parker's CCD images in late October and in November. They show that the N.P.C. had a very faint, dark, diffuse thin rift cutting the cap lengthwise. D. Niechoy of Germany saw a rift of some kind in the cap on December 2. Next, Samuel R. Whitby saw a notch in the N.P.C. at 80° longitude on December 20 and observed the N.P.C. cut in half the next night, by a large diffuse rift of some kind. Then on December 26, 1994, three observers from the Midwest saw something in the cap. It was first detected as a notch in the Martian North Polar Cap at 332° longitude (Rima Tenuis) at 05:05 U.T. by Daniel Troiani (Schaumburg, IL). Dan observed with his 17½-inch f/4.5 telescope at 317x with a red filter (W#25). Seeing conditions were a 9.5 on a 1-10 scale (10 best). The notch was confirmed by Gary Cameron (Vice President of the Des Moines Astronomical Society) of Ames, IA at 06:40 U.T. when he observed it as a dusky notch with half the N.P.C. being brighter than the other half. CCD images using a W#23A filter by Mark Schmidt (Racine Astronomical Society) at 07:21 U.T., after heavy processing, showed both the notch and the rift cutting across the N.P.C.

Images obtained by Don Parker using his 16-inch f/6 telescope on December 31, 1994, during a polar cap measuring procedure, observed the whole rift cutting across the North Polar Cap. He made both a visual drawing and CCD images in red light using a W#25 filter. From Don's cap measurement it appears that the N.P.C. is slightly smaller than normal for this time of season (Ls°, the longitude of the Sun in the sky as seen from Mars). These observations of this small cap size support the idea that Mars is going through a warmer period than normal. It started in late December 1979, when the Rima Tenuis first appeared after not being seen in more than 60 years.

One of our younger observers, Ted Tstryk, from Bristol, VA, made some wonderful drawings of it in the beginning of January, using his 10-inch f/4.5 telescope. The next observations of this rift were reported on January 25 at 2:50 U.T. by both Dan Troiani and Dan Joyce (Chicago Astronomical Society). The next night, Dan Troiani observed and drew the complete rift at his backyard observatory the next day. Mark Schmidt and Chris Tobias (Racine A.S.) took CCD images at the Racine Observatory the same night that clearly shows the Rima Tenuis notch in the south edge of the N.P.C. Later that same night, Dan Joyce observed many small fine rifts in the cap through his own 10-inch telescope from his home in Chicago.

Two nights later, many observers from the Midwest viewed Rima Tenuis. First, Dan Joyce using his 20-inch f/4.5 telescope saw the very small notch and the rift at 4:30 U.T. Dan Troiani saw it at the same time with his telescope. The rift was very thin, but dark, making it easily visible at times of fine seeing. Two other Chicagoland observers had good views. Darren Drake used his own 17½-inch telescope said the rift was visible, but hard to see. Jesse Carrol (Chicago A.S.) plainly saw the rift through his 6-inch f/10 Newtonian. On January 30, Mark Schmidt got the best CCD images of the Rima Tenuis starting at the small notch in the N.P.C. at 332°longitude and cutting across the cap.

As of the end of January, there were 311 total observations received by ALPO's Mars Section from all over the world.

If you are interested in observing Mars or any other object in our Solar System, you will want to join the Association of Lunar and Planetary Observers (A.L.P.O.). Members can obtain introductory drawing materials and advice on drawing the planets. You can get A.L.P.O. membership information by writing to:

Harry D. Jamieson
A.L.P.O. Membership Secretary
P.O. Box 16882
Memphis, TN 38186

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Deadline for the next issue is May 31, 1995. We need you to write an astronomical article for us. Start writing it today!

