

Saskatoon **SKIES**

Newsletter of the Saskatoon Centre of the
Royal Astronomical Society of Canada
February 1997. Vol. 28, No. 2

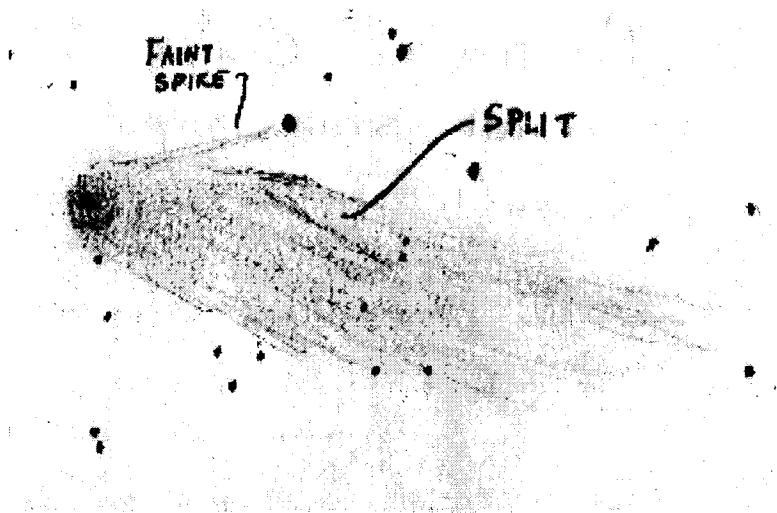


Image provided by Gord Sarty

John Leppert in North Dakota, Fr. Lucien Kemble
in Lumsden and Paul Ferguson and Al Hartridge right here in town
have all been watching it for weeks. When it reaches its peak,
Saskatoon's will be one of the best locations for viewing Hale-Bopp.
Time to get up and look at it!

Los Annoncios del Presidente

Notice of the General Meeting

PLEASE NOTE CHANGE IN LOCATION

Everyone is welcome to attend the next general meeting of the Saskatoon Centre of the Royal Astronomical Society of Canada. The meeting is open to members and non-members alike. Admission is free.

Guest Speaker: Mr. Mark Zalcik, Coordinator L.C. Can-Am, Edmonton, Alberta

Mr. Zalcik is the coordinator of the Noctilucent Cloud Observation Project, and international project to monitor these "night-shining" clouds, now in its 10th year. Mark will speak on the Climatology of Noctilucent Clouds - when and where they form, how they become visible and why amateur astronomers should be interested in observing them. Mark will also show slides of several recent displays.

(Local members Rick Huziak and Gord Sarty are contributing observers for the NLC program).

Other speakers will include: Sandy Ferguson - Teaching Astronomy in Schools and Gordon Sarty - Using the RASC Observer's Handbook - Part 2. (bring Handbooks)

When: Monday, February 17, 1997, 8:00 p.m. in the boardroom

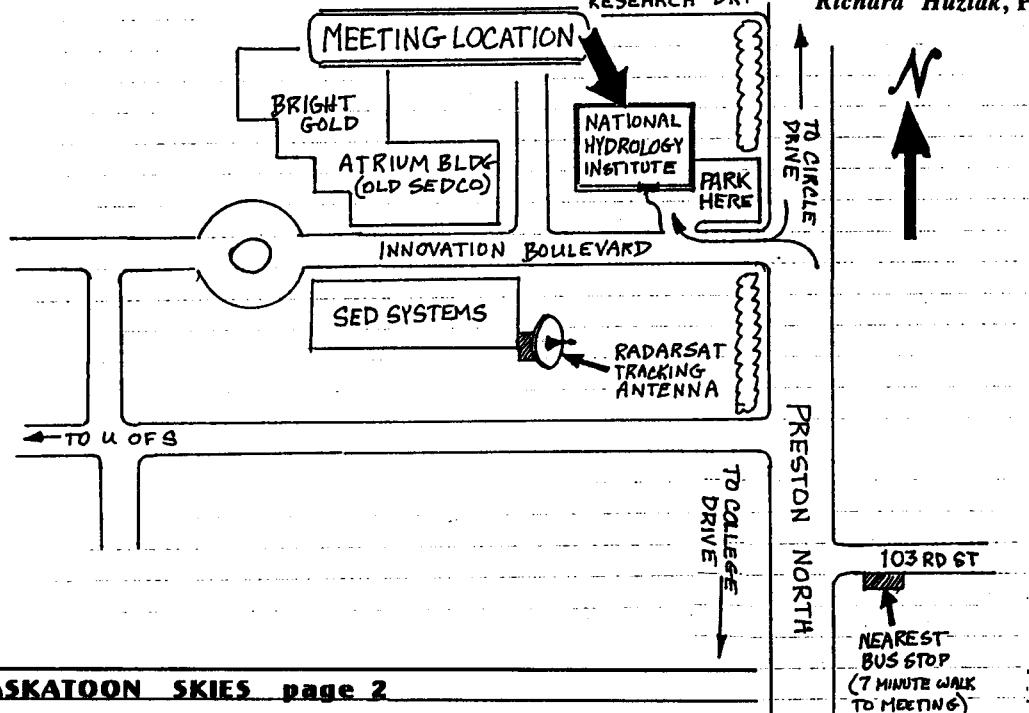
Where: The National Hydrology Research Institute Building, Innovation Place (see the map below)

If we like this location, it could be the new permanent meeting place of the RASC. Please remember to park ONLY in the NHRI parking lot as all other locations in Innovation Place require 24-hour parking permits, and you will be ticketed. On entry and exit to the building, please register with the commissioner. He will have a membership list to quicken this process. Non-members will just sign the guest book. This meeting place was suggested by Bob Christie; he will fill us in on all of the details at the meeting. There is ground-level access, and coffee will be served! Bus service is close by, but anyone who needs a ride, call me at 665-3392 well before and to arrange pickup.

Executive members will meet at 7 p.m. in the NHRI boardroom.

RESEARCH DR.

Richard Huziak, President



Saskatoon Centre

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President: Richard Huziak
Vice-President: Erich Keser
Secretary: Dr. A. Hartridge
Treasurer: M. Williams
National Rep. Dr. Gord Sarty
Editors: Sandy Ferguson
Erich Keser
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Errata: January's Front Cover Photo was by David Cornish, not Rick H. I did manage to get the names of the three grinning kids were right, however. (ed/ek)

Saskatoon Skies is produced by volunteer labour on a monthly basis with summer double-issues. We welcome letters and submissions (articles, images cartoons, drawings and diagrams are all welcome!) Contact Sandy Ferguson (931-3184 or Erich Keser (374-4262) for further details. Items may also be sent as Email in plain ASCII and UUEncoded form to keser@duke.usask.ca as *plain unformatted ASCII text, with line returns at paragraph breaks only*. Signed articles do not necessarily represent the opinion of the Saskatoon Centre.

REPORT ON NATIONAL COUNCIL MEETING - OCTOBER 26, 1996

by Gordon Sarty, Saskatoon National Representative

The following is a brief summary of the above meeting held at York University, Toronto, and is based on the Official Minutes published by Peter Jedicke, National Recorder. Complete Minutes can be found on our web page at <http://www.stmarys.ca/rasc/nat/rasc/.html>. I was not at this meeting, but plan to attend the next one in on March 1, 1997, taking advantage of the RASC's new policy, which allows a National Rep to attend one non-GA meeting and the GA each year, by providing travel and accommodation for the non-GA meeting and 1/2 the travel expenses for the GA.

REPORT OF EXECUTIVE COMMITTEE: New legislation may change the applicability of GST to RASC membership. National Office will keep Centres informed.

REPORT OF NATIONAL SECRETARY: Honourary Member of the Society, Prof. Victor Amazaspovich Ambartsumian, had passed away. Condolences were sent to the appropriate academy.

Re: French Language Publications of Quebec Centre and Centre Francophone de Montreal: The Society has provided \$400 toward the publication of the Alannach Graphique , for French-speaking members, in lieu of the Observers' Handbook. Could these Centre Members receive support by way of a rebate of some such mechanism?.

Various Committees are discussing recognition of observing achievement for beginning members.

Leo Enright has submitted a "Proposal for an Aurora Monitoring and Reporting Group". Council was reminded of the observing groups that existed prior to the 1970's and that there were now opportunities on the Internet for specific observing projects. It was suggested that this proposal be passed on to the Publications Committee . It was reported that an aurora alert system was being coordinated by the University of Alaska.

Ms Bird reported on the transition at National Office and described her duties and activities. The telephone at National Office had been connected to Call Answer. E Mail requires about an hour of her time each day. She described the nature of questions received at NO .

Mr. McCarter asked if a list of resource persons specializing in specific areas was available. This has always been handled informally, but it was suggested that a resource base of answers to common questions be prepared. It was suggested that these questions could become a regular feature in Society publications.

REPORT OF TREASURER: The Treasurer's Report was presented and attached to the Official Minutes. The travel policy described above was approved.

REPORT OF PUBLICATIONS COMMITTEE: Mr. Attwood introduced graphics designer and RASC member, Theo Dimson, who presented possible art designs for the new publication. Mr. Ed Sluga, of Strategic Ink, described services offered by the company. Discussion followed on possible difficulties, scheduling activities, and possible production of promotional materials. A one-year contract between the Society and Strategic Ink is ready to be concluded for six issues of the new publication.

continued on P. 12

Reaching Out -A RASC Member's Opportunity

The wonder of first, scientific encounter can be a powerful experience. A positive exposure could provide a solid building block on which to construct a life-long interest or even a professional career in a particular science. Do you recall your first encounter with astronomy? Was it a personal moment of discovery- a meteor-like awareness of the stars, the actual beauty of the Solar System, or a genuine awe of the age and vastness of the universe?

For some, it might have been a backyard peek through a friend's telescope that opened astronomy's door. For others, a grade school trip to a city planetarium, or an event even less dramatic -- a quiet armchair reading session. Whatever the cause of the first spark of enlightenment in astronomy, this ember of interest would only need to be properly fanned and nurtured to grow into a permanent flame. Later, this interest could be fed by a growing thirst for a deeper knowledge of the heavens.

At this point in a young person's discovery process could enter the experienced, amateur astronomer who, most likely, is a RASC member. There is definitely an important role for RASC members to play in the lives of young people. A member's actions can have a direct, profound and long-term influence on a young person's chosen journey. "We're a bit of a self-centred lot," said a long-time amateur astronomer, whose name now escapes me. "Many of us are loners, and self-absorbed in our interests." When these comments were made, I had been relating the story of a youngster who, at 14, began attending a RASC Centre's monthly, Saturday-evening meetings alone. It was before he could become a member, as there was a minimum joining age, which he had not yet reached.

Young, naive, extremely shy and very ignorant of the field, this young man had a genuine fascination with the heavens. All he needed was a friendly mentor to take an interest and to show him the way. No one, however, stepped forward. The youngster quietly gleaned whatever he could from the Centre's meetings -- the topics of many were beyond his level of understanding. He listened to a naked-eye sunspot lecture and bought a welder's glass, starting his own, primitive sunspot observation program, based on what he had heard at the meeting. After months of daily Sun observing, he sheepishly brought his homemade note pad, showing a record of the sketched sunspots, to one of the Saturday night gatherings. No one was interested. Once of membership age, he finally joined the local Centre. Nothing changed. By then it was too late. He let his membership lapse, went on to other interests and an unrelated career.

It's some 30-plus years later. I'm that youngster who again is a RASC member (three years in good standing), after rediscovering astronomy in 1993. I'm quickly catching up for lost years. Sometimes I think of the might-have-beens, if some amateur astronomer more than three decades ago had taken an interest in a young man who really seemed out of place but was eager to learn. Or, if I would have been more self-confident, forcefully sought attention, and had not given up so easily in frustration. Now, I speak to my children about following their dreams, perseverance, and having a true passion for what they decide to do in life.

As members of the RASC, we have an opportunity to play a unique role that's over and beyond our own specific interests in astronomy. This role is one of reaching out and giving an encouraging, helping hand to those coming up behind us. Without consciously knowing it, we just might change a young person's life and even add to the advancement of astronomy.

by Andrew I. Oakes

Editor's Note: Andrew I. Oakes is an unattached RASC member in Sault Ste Marie, a northern Ontario city with no RASC Centre.

"I've found Planet X" Clyde Tombaugh

Clyde Tombaugh, the discoverer of the planet Pluto, died recently. He was born in Illinois in 1906, and spent his adolescence on the family farm near Burdett, Kansas, exploring the universe with homemade telescopes.

Later he was hired by Lowell Observatory near Flagstaff, Arizona after sending the staff some sketches he had made of Mars and Jupiter, of which he was wanting an opinion. Its director, V. M. Slipher, was so impressed that he immediately hired him for the work of exposing photographic plates in a new planet search program that the observatory's late founder, Percival Lowell, had begun in 1910. Slipher's instructions to the 24-year old farmer were to expose 14-by-17-inch plates, each containing upwards of a million stars, in Gemini, where Lowell's last calculations had given that region as the likely place in which his "Planet X" might be lurking.

Tombaugh began his search on April 11, 1929, making exposures of a particular area one night and then repeating an exposure five or six days later. After a like pair were taken, the professional staff set about using a blink comparator (a device which used an electromagnet to flip a small mirror back and forth in order to rapidly redirect light from one plate to another and thus cause a moving object to jump forward and back). Nothing was found on the plates and Slipher went on to other research while the plates quickly accumulated.

By early summer, as the rainy season approached, the director assigned Tombaugh the blink task. After months of searching he had found several dozen asteroids but no Planet X. Tombaugh remarked that it was "the most tedious work I had ever done...I was in a state of despair." He noted that the asteroid points he had found shifted very little from one plate to the next, and after pondering the problem he realized that he needed to search regions only near the opposition point, since any orbiting body beyond the Earth would be photographed better then, during its most rapid retrograde motion.

That fall he began chasing the opposition point through Aquarius and Pisces and by January he had returned to Gemini. He exposed two plates of the region near Delta Geminorum on January 23 and 29 and after finishing the task of blinking plates of Taurus that he had taken earlier, he reached for the Gemini plates late on the afternoon of February 18.

"I raised the eyepiece assembly to the next horizontal strip," Tombaugh related. "At the center line, I had the guide star Delta Gem in the small rectangular field of the eyepiece. After scanning a few fields to the left, I turned the next field into view. Suddenly I spied a fifteenth magnitude image popping out and disappearing in the rapidly alternating views. Then I spied another image doing the same thing about 3 millimeters to the left. 'That's it,' I exclaimed to myself." The young amateur ran down the hall to Slipher's office and announced, "I've found Planet X. I'll show you the evidence."

Amazingly, as was discovered some time later, the new planet had been overlooked in photographs taken at Mt. Wilson eleven years earlier. Those 1919 images had been missed because of plate defects in one and because Planet X had been swamped by a nearby star in the other.

Although several names were suggested for the new planet, among them Zeus, Constance (Mrs. Lowell), Cronos and Minerva, Pluto was chosen since it was the god of the gloomy underworld and it recalled the name Percival Lowell. As Tombaugh recalled of Mrs. Lowell's visit to the observatory that summer, while still dressed in mourning black, "She came eager to meet the young man who had discovered 'my husband's planet.'" During his search, he had photographed 65 percent of the sky and spent 7,000 hours examining about 90 million star images.

Later, Dr. Tombaugh earned degrees from the University of Kansas and Northern Arizona University. He concluded his career as an astronomy professor at New Mexico State University. Besides Pluto, his discoveries included six star clusters (five open and one globular), a supercluster of galaxies stretching from Andromeda to Perseus, one comet, a nova in 1932, and about 775 asteroids.



Tombaugh possessed a rich, keen sense of humor. He relished his remark when the Smithsonian Institution asked if it could have for its museum the telescope he had made in 1928, built with parts of the farm cream separator and the crankshaft from his father's 1910 Buick, saying, "I told them I was still using it." Of the decades he had devoted to research, he said, "I've really had a tour of the heavens."

David Levy, his friend and biographer, said of his passing, "Until the end, Clyde was an incredibly interesting person to be around. Famous for his puns,

his command of the intricacies of the English language was astonishing. On January 17, 1997, astronomy lost one of its most colorful figures. If planet Pluto were sentient, it would take note of the loss of the man who unveiled its existence to our world almost 67 years ago". Few have seen so much of the universe in such minute detail.

by John Leppert

Deneb Observatory
Sarles, ND 58372-9618
48o56'07"N 99o09'40"W

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NATIONAL COUNCIL MEETING - OCT. 26, 1996

A grant of \$2,500 was awarded to the Vancouver Centre for the purchase of computer equipment for the CARO project. Funds budgeted for special projects in previous years had not been utilized. Details of the project were supplied, including how operating expenses would be handled.

REPORT OF THE LIBRARIAN: There were no developments regarding the library. Mr. Macdonald is investigating the status of small telescopes owned by the RASC and stored at NO. A list of library materials will be available soon. Some videos of Speaker's presentations at Centre Meetings are available.

Reports from the Editors of THE JOURNAL, THE BULLETIN, THE OBSERVERS' HANDBOOK, THE BEGINNER'S OBSERVING GUIDE and the PUBLICATIONS COMMITTEE were received and are attached as appendices to the Official Minutes.

A decision was made that the Annual Report be published as a separate booklet at a cost of no more than \$4,500. The name of the new RASC publication remains as "The Journal of the Royal Astronomical Society of Canada".

REPORTS OF MEMBERSHIP, LIGHT POLLUTION, LONG-RANGE PLANNING COMMITTEES and RASC CALENDAR REPORT: The Membership Report is attached as an Appendix to Minutes. Copyright problems that may exist with the Comet Hale-Bopp booklet will be investigated. Light Pollution Report is attached as an Appendix to the Minutes. Long-Range Planning Report is attached as an Appendix to the Minutes. The Calendar Report is attached as an Appendix to the Minutes.

GENERAL ASSEMBLY : Report is attached as an Appendix to Minutes. A Progress Report was made on the Kingston GA. Both Victoria and Vancouver Centres expressed interest in hosting 1998 GA. Executive Committee will consider both venues.

NGC Certificate is awarded to Mr. Kevin Black (Winnipeg).

The next meeting will be held in London, Ontario, March 1, 1997. A banquet celebrating the Centre's 75th anniversary will follow, with Dr. Paul Chodas of the Jet Propulsion Laboratory as guest speaker. "Predicting Cosmic Collisions" is his topic.

by Gordon Sarty, Saskatoon National Representative

Newsflash: New Observatory Site Search

The Sleaford Schoolhouse, south of Highway 5, off the Colonsay Road appears to be a real possibility for a possible new site for our new Observatory and those of the University. This is an exciting development. Although it is a bit more distant than we would have liked, this is by far the darkest site we have looked at. It also has hooked-up power, an existing fully usable building, and much more. Do yourself the favour of checking this one out on the next clear, moonless night. Call Erich (374-4262 or Rick (665-3392) for directions and take your binocs!

Announcements:

Gastronomy Meeting: Sunday February 16th, 6 PM at Mano's on 8th St.

This popular family event will continue with a dinner "meeting" to honour of incoming February General Meeting Speaker Mark Zalcik from Edmonton. Let us know if you'll be coming so we can reserve comfortable space for all. Please call Al Hartridge at 373-0034 for further details.

The Junior Astronomers will be meeting on **Friday, February 14th at 7:30 p.m. at Alvin Buckwold School.** The group is still growing. It gained another new member in January, to bring the total number of members to nine. For information, call **Sandy Ferguson at 931-3184.**

Binocular Group meeting: Friday March 7th, 7:30pm at Rystrom Observatory

This will be our winter session/workshop, with a snow/blizzard date of Saturday March 8th. For further information about this popular introduction to the night sky and stargazing, please call Kirt Headley (683-0251) or Brian Friesen (384-2963).

Observing Session: Friday March 7th, 8 p.m. at Rystrom Observatory

Take a last good look at our winter constellations from the comfort of our Observatory & Warm-up shelter. Cloud/ date is Sat. March 8th. (Call Darrell at 374-9278 for further information)

ASTRONOMY DAY 1997:

International Astronomy Day is being celebrated on Saturday April 12th this year. (This date, in my opinion is far too early for Canadians to enjoy good weather [read: warm weather] and good skies...ed/sf). Although we are not bound to use this date which is set by the Americans for North America,, the National Astronomy Day Coordinator generally uses the set date so that all Astronomy Day reports from Canadian Centres will coincide with American reports. These are usually written up in publications such as *Sky and Telescope*.

This year we will set up. our displays at The Mall at Circle and 8th throughout the day. We will not hold the usual Astronomy Day public starnight that day, but will invite people to participate in our first starnight of the season at Beaver Creek on the evening of Saturday, May 10th. (This decision is based on years of experience with clouded or stormed-out Astronomy Day starnights).

As usual, we will be looking for the regular volunteers, minions and lackeys (and telescopes) to make both events successful. Astronomy Day is also an excellent excuse for another Gastronomy bash! More about this later.

Sandy Ferguson

For Sale:

Kodak Carousel Projector Bulb: Sylvania ELH 300W 120V 544776 Brand New. Surplus from bulk order for Saskatoon Centre educational presentations. \$25. (lowest in-town price is \$30+taxes)
Call Erich at 374-4262

MINUTES OF Jan. 20 1997 GENERAL MEETING

1. Meeting called to order at 8:00 pm.
 2. **In Memoriam** - Clyde Tombaugh, discoverer of Pluto, has passed at the age of 90.
 3. **New Observatory Update** - Colonsay and Smuts are in the running. See Exec minute
 4. **New meeting site**- see minutes of executive meeting.
 5. Membership list is updated - 46 members to date . Please pay up!
 6. **Raising funds**- see minutes of executive meeting.
 7. **1997 RASC Calendars** - several left - will sell at firesale price of 10.00 each. 8.
 8. **Junior astronomers** --Sandy Ferguson
Met at Sandy's, up to nine kids at present, could not observe because of bad weather.
 9. **Observing Session** -Darrell Chatfield
canceled because of extremely cold weather.
 10. Next month's speaker may be Mark Zalcik (see minutes of executive meeting.)
 11. **Tuktoyaktuk Winter Star Party T-shirts** are available through Rick.
 12. **Presentations:**
The Volcanoes of Io- Tidal pumping - by Zack Drew -
Fighting Light Pollution - Rick Huziak -
Astronomy for Kids - Sandy Ferguson
 13. Meeting adjourned at 10:00 PM.
- *****

ODDS AND ENDS

Comet Hale-Bopp looks like it's going to be a good one! I saw it the morning of January 19 from Rystrom's and my impression of its appearance in my 8 inch telescope is shown in the drawing. I also saw it again on the morning of January 31, about 6:45 a.m. as I walked to work. I carried a pair of opera glasses with me and, with them, I could easily see a short (about 1 degree) tail. From the city with a third quarter moon in the sky!

Well, I think I can safely pronounce the bingo idea dead. I had absolutely no response from the members good or bad (except from Erich of course!). The idea of raising money from honorariums provided from public presentations to schools, etc. is a very good one; these presentations are a much better way than bingo for our members to spend their time anyway.

Loaner Telescope Program:

As of Jan 31, the Centre's telescopes are on loan to the following people:

3.1 inch Tasco refractor: Returned to Rystrom's, Nov. 18/96.

4 inch Astroscan compact reflector: Borrowed by: Sandy Ferguson, 931-3184, Jan. 20/96;
NOTE: March 1997: Reserved for Sandy Ferguson.

6 inch rich field reflector: Borrowed by: Ron Schnor, 343-1256, Sept. 22/96.

Don't forget to bring your handbooks to the next general meeting! **by Gordon Sarty**

MINUTES OF Jan. 20, 1997 EXECUTIVE MEETING

1. Meeting called at 7:00 PM.
2. **New Observatory update:** Colonsay and Smuts are in the running. The Colonsay site also has a building and is a 2 to 3 acre site. It is also fenced and has power. Kim Mysyk is preparing a more accurate budget regarding the new observatory.
3. **New meeting site:** There is still no firm proposal from Park Town.
4. **Membership list:** This has been updated. There 46 members to date.

5. Financial Report - Mike Williams

The income from memberships so far this year is \$775.00. The expenses described are \$593.00. Our major expense is the newsletter at approximately \$93.00 per month. We will stop mailing to non-paid-up members after the end of Jan.

We may stop mailing to other centers as well, which will produce a saving.

6. Raising cash: There is an on going effort to find ways to raise funds for our club:

-charging for talks, groups which want astronomy presentations seem willing to pay honoraria.
-RASC Handbooks, Calendars and Observers guides could be distributed to book stores on consignment. Gord Sarty has contacted some book stores and says we could net \$3.00 per book.

7. Light pollution : Rick spoke to the SK. Eng. society and received a \$100.00 honorarium.

8. Upcoming talks:

- Beaver Creek, Sat, Jan. 25, Feb. 1 at \$20.00 per talk.
- Lakeview School at Brightwater, Mar 4 , \$25.00

9. Newsletter - next issue will have the membership list.

10. 1997 RASC Calendars - several left - "firesale" price of \$10.00 each.

11. Sask. Star Party at Cypress Hills- Erich Keser brought us up to date on arrangements for the July 4-6th, 1997 star party.

12. Next Month's speaker: We hope to get Mr. Mark Zalcik, director of the Noctilucent Cloud Canada - US. program to give us a talk. He will be in Saskatoon on business at this time.

13. Centre Sky & Telescope subscription: we will decide next month if we afford to maintain this.

14. New Business: We will try to organize a Gastronomy Night in conjunction with Mr. Mark Zalcik's visit.

15. Meeting Adjourned at 8:00 PM.

Executive and General Meeting Minutes were submitted by Dr. Alan Hartridge.

Become a Member

Get the RASC Handbook and Journal, plus Sky News and Saskatoon Skies mailed to you regularly. Use the Rystrom Observatory and participate in the many interesting activities of the Saskatoon Centre of the Royal Astronomical Society of Canada. Join Now!

Regular	\$ 40.00	Youth (21 and under)	\$ 22.50
Lifetime	\$900.00	Newsletter only	\$ 12.50

Make cheques payable to RASC Saskatoon and send to RASC Saskatoon Centre, PO Box 317, RPO University, Saskatoon, SK, S7N 4J8, or pay at the General meeting. The membership year runs from Oct 1st. thru Sep 30th.

**See and Photograph the sky's
Winter Wonders
Before it's too late**

Observing and Binocular Night, March 7th or 8th.



Photo by Don McKinnon:

"This photo was taken on my Nikon F3 with Kodak PPF 400 film. The camera was mounted "piggy back" on my telescope and a 180mm Tamron F2.5 lens was used. This photo was taken in December 1996 and exposed for about 8 minutes.

Note the Horshead!"