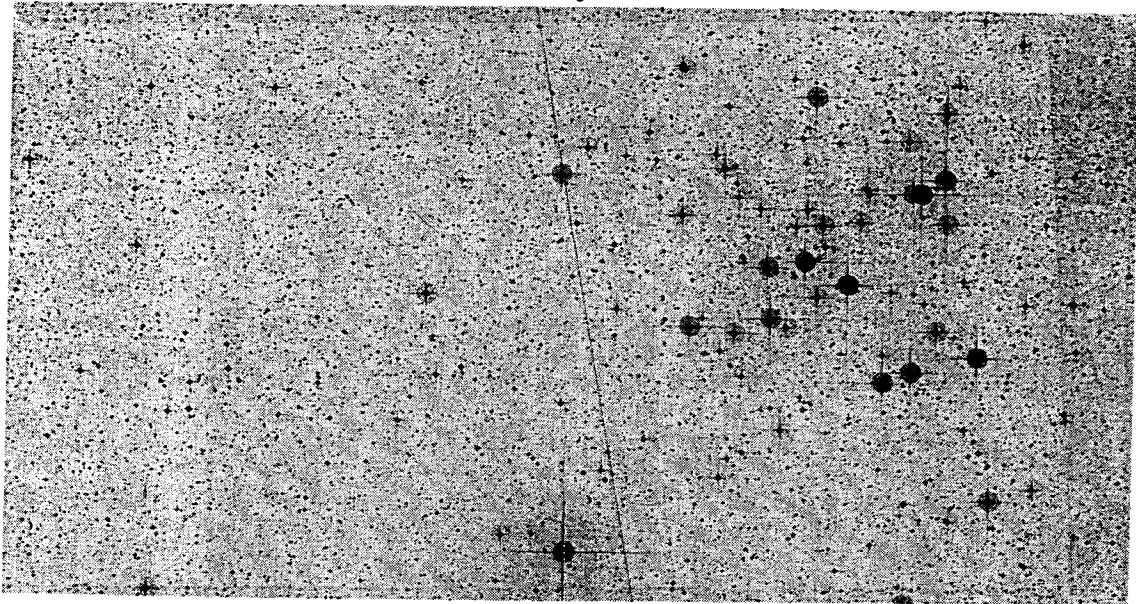


# *Saskatoon*

# *Skies*

The Newsletter of the Saskatoon Centre  
of the Royal Astronomical Society of Canada

Volume 30, Number 01  
January 1999



M41 (NGC 2287) in Canis Major is a beautiful open cluster; easy in binoculars and telescopes of all sizes. This is one of the objects described in Sandy Ferguson's beginning astronomy article found on page 13. M41 contains over 100 stars, with about 25 stars brighter than 10<sup>th</sup> magnitude. The cluster is about 2350 light years away. To be seen so well from that distance indicates that most of the brightest stars are true red or blue giants! This photo is from the Digital Sky Survey (DSS).

## RASC Calendar Happenings

| Date (1999) | Event                                     | Contact        | Telephone |
|-------------|---|----------------|-----------|
| Jan 13      | Executive Meeting at Open Door Society    | Erich Keser    | 374-4262  |
| Jan 15      | Junior Astronomers Meeting - 7:30 pm      | Sandy Ferguson | 931-3184  |
| Jan 18      | RASC General Meeting - 7:30 pm            | Erich Keser    | 374-4262  |
| Jan 22      | Junior Astronomers Meeting - 7:30 pm      | Sandy Ferguson | 931-3184  |
| Jan 23      | Gastronomy Dinner at Tony Tomas - 7:00 pm | Les Dickson    | 249-1091  |
| Feb 5       | Junior Astronomers Meeting - 7:30 pm      | Sandy Ferguson | 931-3184  |
| Feb 12      | Junior Astronomers Meeting - 7:30 pm      | Sandy Ferguson | 931-3184  |
| Feb 15      | RASC General Meeting - 7:30 pm            | Erich Keser    | 374-4262  |

### The 1999 RASC Calendar is Still Available.

This edition features a larger size, 10 by 12.5 inches (was 8.5 x11). Also, all photos are in colour for the first time. The 1998 edition was the "Best Calendar" winner in the Ontario Printing and Imaging Association's annual competition. The same high quality has been retained in the new, larger, 1999 version. Copies will be available for sale at the December meeting. Excellent Christmas gift! Contact Jean Dudley <Dudley@siast.sk.ca>

**U of S Observatory Hours** - the U of S Observatory will be open to the general public on Saturday evenings from 7:30 pm to 9:30 pm from January to February. On clear evenings visitors may view Jupiter and its moons, the colourful Alberio binary star system, the Hercules star cluster and Saturn and its rings through the 6" refractor. Free admission. More info -call 966-6429.

### ANYONE WE KNOW?

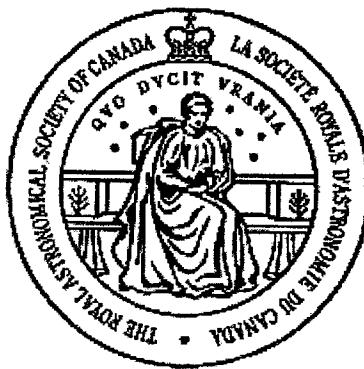


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# Saskatoon Centre

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***Saskatoon Skies*** is published monthly by the Saskatoon Centre of the RASC. Distribution is approximately 140 copies per issue. ***Saskatoon Skies*** welcomes unsolicited articles, sketches, photographs, cartoons, and other astronomy or space science articles. Articles can be sent by mail in any format to the Centre's mailbox. Submissions may also be sent by e-mail - preferred as **plain unformatted ASCII text files without line breaks**. Images sent by e-mail should be UUEncoded or as attached .GIFs. Send e-mail submissions to the editor at [huziak@SEDSystems.ca](mailto:huziak@SEDSystems.ca). Submitted materials can be returned upon request. A separate subscription to ***Saskatoon Skies*** is available for \$12.50 per year. Articles may be reprinted from ***Saskatoon Skies*** without expressed permission (except where otherwise stated), but source credit is requested. **DEADLINE for submissions is the 26th of each month.** ***Saskatoon Skies*** accepts commercial advertising. Please call the editor for rates. Members can advertise non-commercial items free of charge.

## President's Report

by Erich Keser

This year will mark the thirtieth anniversary of the Saskatoon Centre, as we know it today, according to *Looking Up* the official history of the RASC.

*"Having received the unanimous support of the National Council in September, the organizers held the first meeting of the new Saskatoon Centre on November 17 [1969] in the university observatory. Among the thirty-three founding members was Professor J. E. Kennedy, national president of the RASC at the time. Dr. F. A. Holden and Gordon N. Patterson were elected as president and secretary respectively. Between them, they spoke four times during the first year."*

*Films, some observing, and a tour of the N.R.C.'s Meteorite Observation and Recovery Project, rounded out the season."*

The absolute veracity of this account is questioned by the one putative eyewitness we have available, our Honourary President and most senior member, the selfsame Professor J. E. Kennedy. As Ed recalls it, he was out of town for the founding meeting due to other commitments as National President. (Having an in-house historian is a mixed blessing; it blesses us with a sense of our own past, but curses us with the inability to embroider it the way we might otherwise prefer).

Nevertheless, even given the fact that *Looking Up* also mentions an earlier Saskatoon Centre from 1947 to 1951, and other earlier signs of amateur astronomical life in "toon town", a thirtieth birthday is hardly an event that should be allowed to go by quietly. It is a time to celebrate, and a time to take stock; to decide what things from the past we should take along, what new starts have to be made or continued, and what bad habits we'd better quit before they become chronic.

It is ironic - and highly appropriate - that both the 1997 and the 1998 Saskatchewan Summer Star Parties featured a continuation of some of the MORP meteorite recovery work that the founders of our Centre toured thirty years ago. And it is equally ironic - and appropriate - that we are in the process of finalizing a partnership with the University. *Looking Up* recounts that:

*"The campus observatory was the focus of Centre activities throughout the 1970's. Some members put a great deal of effort into renovating the old 7-inch refractor so that it would be more convenient to operate, and various groups within the Centre used it on a regular basis. The public came in large numbers to open houses every Sunday; over 7,000 signed the visitors book in 1972. Excellent publicity by the media encouraged even more to come so that an open house had to be held on Wednesday as well, and group tours scheduled for Friday attracted so many from across the province that Thursdays had to be used for this purpose too."*

Thus, we are, in a sense, coming home after 20 years on our own, using the observatory that was and is Gordon Patterson's legacy at the Rystrom farm, as we have moved most of what Gord left us (and will soon move the 16" research grade telescope he dreamed of) to a new joint observing site we will be using cooperatively with the University.

We no longer operate the University Observatory (though we are still welcome to observe there), but now engage in many other astronomy-education activities which founders like Gordon would surely smile on. There are our public starnights at Beaver Creek, our Youth Program and the many talks and observing sessions our members give. There is the Saskatchewan Summer Star Party, with its unique character as both a superb dark sky star party and a really beginner and family friendly event. And even our new and distant dark site has proved much more popular with new people, young people and neighbours than we could ever have anticipated.

Our meetings, too, have turned something of a new leaf. *Looking Up* goes on to comment that :

*"The monthly meetings of the Centre have continued along similar lines, with nearly all the speakers being local members and with films and videos providing some variety."*

Our meetings have lately been blessed with exciting presentations by members of the Physics department - (weren't those mind-expanding!) - and by leading members of the astronomical community from other Centres. In the coming January 18th meeting we feature the most exotic such import yet. The keynote presentation will be by the irrepressible Mark Kaye from the Hamilton Centre (forgive him, he's formerly from Calgary!). He will be making our Centre a key part of a prairie Centre tour of a "dynamite audio visual presentation". It's a meeting no one will want to miss.

But there is also one bad habit that our Centre really should not carry on into its middle years. *Looking Up* ends its history of the Saskatoon Centre with the sentence:

*"Though membership has not grown from its established forty-to-sixty person base, the Centre can be proud of its varied programs to attract and retain members."*

Indeed, a part of the Oct. 1st, 1971-Jan 17, 1972 Financial Statement, as reported in our February 1972 (Volume 3, Copy 2) NEWSLETTER (it only became Saskatoon Skies some years later),

*"Memberships:*

|                          |          |
|--------------------------|----------|
| 25 Senior @ \$10.00      | \$250.00 |
| 31 Student @ \$5.00      | \$155.00 |
| 1 Life Membership Rebate | \$ 4.00" |

Thus, there were 57 members in our Centre twenty-seven years ago. This is rather startling because we only have a few more members than that right now. Although our rolls exceeded eighty members around the end of last summer, a recent check reveals that we are only in the mid-sixties right now. Indeed, in one of the guest presentations last fall, Roland Deschenes detailed how the Calgary Centre had to find ways of not just recruiting, but of retaining members.

Considering the many exciting things we will be doing this year, we are surely in a fine position to finally burst out of our timeworn membership rut this, our Thirtieth Anniversary Year. Each and every one of you can help, by coming to meetings, by bringing a friend, by making sure that your friends and acquaintances have renewed, and of course, by joining or renewing yourself...NOW, in time to really get in on the party preparations!

# RASC GASTRONOMY DINNER



*"Remember! Tony Tomas is the Best place  
for Chicken & Ribs"*

**Where:** **Tony Tomas Restaurant at the Mall at Circle & 8th**  
(beside Walmart)

**When:** **Friday, January 23, 7:00pm**

Bring your spouses and kids!

**RSVP Les Dickson ph.249-1091 (for a head count).**

Les also has a few food discount coupons available - first come, first serve.

## FUNDRAISING WITH FIRELY BOOKS by Jean Dudley <[Dudley@siast.sk.ca](mailto:Dudley@siast.sk.ca)>

In the December newsletter, you will find an ad for the *Firefly Books* that the Saskatoon Centre has for sale. I am still taking orders. I also will have some **RASC Calendars** and the following books for sale at the next meeting. I ordered **Adult** : a couple of copies of the new **Night Watch**, one of the **Backyard Astronomer**, two **Exploring the Night Sky**, two **Exploring the Sky by Day**, one **Photographic Tour of the Universe**; **Children**: one **Other World's**, one **Adventure of the Soujourner**, one **Space Facts**.

## UPCOMING MEETING DATES FOR JR. ASTRONOMERS & YOUTH GROUP

**1999 Meetings:** Meetings are held on the following Friday nights at 7:30 p.m. in the Students' Lounge of Nutana Collegiate, on the corner of Victoria Ave. and 11th Street.

| Jr. Astronomers | Youth Group |
|-----------------|-------------|
| Jan. 15th       | Jan. 22nd   |
| Feb. 5th        | Feb. 12th   |
| Mar 12th        | Mar. 19th   |
| Apr. 16th       | Apr. 23rd   |
| May 7th         | May 14th    |

**May 22nd: International Astronomy Day -**  
displays & starnight  
**Late May or Early June: Season wrap-up BBQ**  
Sleaford Observatory

The Royal Astronomical Society of Canada  
 Saskatoon Centre Incorporated  
 Balance Sheets  
September 30, 1998 and 1997

|   | <u>1998</u>      | <u>1997</u>   |
|---|------------------|---------------|
| <b>Assets :</b>                           |                  |               |
| <b>Current Assets;</b>                    |                  |               |
| Cash (note 1)                             | \$ 6,849         | 1,792         |
| Savings (Telescope Fund)(note 2)          | 2,651            | 2,997         |
| Raffle Account                            | 395              | -             |
| Accounts Receivable                       | -                | 25            |
| Inventory Books                           | 170              | -             |
| Deposit (Cypress Hills)                   | 200              | -             |
| Prepaid Supplies (toner)                  | 220              | -             |
| Prepaid Expenses (Sandy-Travel)           | <u>213</u>       | <u>50</u>     |
| <b>Total Current Assets</b>               | <u>10,698</u>    | <u>4,864</u>  |
| <b>Fixed Assets @ cost;</b>               |                  |               |
| Office Equipment                          | 2,225            | -             |
| Rystrom Observatory                       | 6,013            | 5,859         |
| Warmup Shelter                            | 5,851            | 4,773         |
| Underground Wiring                        | -                | 3,015         |
| Storage Shed                              | <u>653</u>       | <u>653</u>    |
|   | <u>14,742</u>    | <u>14,300</u> |
| <b>less accumulated amortization</b>      | <u>9,830</u>     | <u>10,918</u> |
|   | <u>4,912</u>     | <u>3,382</u>  |
| <b>Library</b>                            | 1                | 1             |
| <b>Equipment</b>                          | <u>7,326</u>     | <u>7,114</u>  |
| <b>Total Fixed Assets &amp; Equipment</b> | <u>12,239</u>    | <u>10,497</u> |
|   | <u>\$ 22,937</u> | <u>15,361</u> |
|   | <u>=====</u>     | <u>=====</u>  |
| <b>Liabilities and Equity :</b>           |                  |               |
| <b>Current Liabilities;</b>               |                  |               |
| Accounts Payable                          | \$ 25            | -             |
| Deferred Revenue                          | 79               | -             |
| Prepaid Membership                        | 303              | 662           |
| Star Party Pre-registration               | <u>105</u>       | <u>-</u>      |
| <b>Total Current Liabilities</b>          | <u>512</u>       | <u>662</u>    |
| <b>Equity;</b>                            |                  |               |
| ( <i>per accompanying statement</i> )     | <u>22,425</u>    | <u>14,699</u> |
|   | <u>\$ 22,937</u> | <u>15,361</u> |
|   | <u>=====</u>     | <u>=====</u>  |

On behalf of the Executive :

Eric N Kese ----- President

M. McAdam ----- Treasurer

G. Williams ----- Auditor

See accompanying notes to financial statements.

The Royal Astronomical Society of Canada  
 Saskatoon Centre Incorporated  
 Income Statement  
Years Ended, September 30, 1998 and 1997

|                                   | <u>1998</u>      | <u>1997</u>  |
|-----------------------------------|------------------|--------------|
| <b>Income :</b>                   |                  |              |
| Membership Fees                   | \$ 2,403         | 1,751        |
| Life Member Grants                | 58               | 58           |
| Donations                         | 5,356            | 871          |
| Cypress Hills Star Party          | 6,356            | 3,954        |
| Member Surcharge (newsletter sub) | 277              | 264          |
| Member Special Surcharge (Key)    | 15               | 25           |
| Observers Handbook                | 215              | -            |
| Firefly Books                     | 499              | -            |
| Skywatcher Triva Calendar         | 116              | -            |
| National Calendars                | 555              | 258          |
| Advertising                       | 75               | 25           |
| Astrophotography Handbooks        | 75               | 330          |
| Raffle & Bingo                    | 4,191            | -            |
| Silent Auction                    | 600              | -            |
| Telescope Rentals                 | 230              | 145          |
| Interest                          | 8                | 4            |
| Miscellaneous -                   | 213              | 3            |
|                                   | <u>\$ 21,242</u> | <u>7,688</u> |
| <b>Expenses :</b>                 |                  |              |
| Educational Activities            | \$ 6,498         | 3,218        |
| Equipment Maintenance             | 101              | -            |
| Fees to National Office           | 1,507            | 1,072        |
| Astrophotography Books            | 25               | 110          |
| Firefly Books                     | 354              | -            |
| Skywatcher Triva Calendars        | 75               | -            |
| Library                           | 95               | -            |
| Office Administration             | 843              | 311          |
| National Calendars                | 411              | 214          |
| Newsletter & Postage              | 858              | 868          |
| Observers Handbook                | 172              | -            |
| Observatory Utilities             | -                | 50           |
| Silent Auction                    | 309              | -            |
| Insurance                         | 288              | 288          |
| Subscriptions                     | 53               | 52           |
|                                   | <u>11,589</u>    | <u>6,183</u> |
| Surplus before amortization       | 9,653            | 1,505        |
| Amortization                      | 1,927            | (633)        |
| Net Income (loss) for year        | <u>\$ 7,726</u>  | <u>872</u>   |
| Equity beginning of year          | 14,699           | 13,827       |
| Equity end of year                | \$ 22,425        | 14,699       |
|                                   | <u>=====</u>     | <u>=====</u> |

See accompanying notes to financial statements.

The Royal Astronomical Society of Canada  
 Saskatoon Centre Incorporated  
 Statements of Changes in Financial Position  
 Years Ended September 30, 1998 and 1997

---

|  | <u>1998</u>      | <u>1997</u>      |
|--|------------------|------------------|
| <b>Operating Activities:</b>                             |                  |                  |
| Net earnings   | \$ 7,726         | 872              |
| Item not requiring cash outlay:                          |                  |                  |
| Amortization   | <u>1,927</u>     | <u>633</u>       |
|  | <u>9,653</u>     | <u>1,505</u>     |
| Cash provided by (applied to) operating working capital: |                  |                  |
| Accounts Payable   | 25               | -                |
| Accounts Receivable                                      | 25               | (25)             |
| Deferred Income  | 79               | -                |
| Deposit Cypress Hills                                    | (200)            | 60               |
| Prepaid Membership                                       | (359)            | 567              |
| Prepaid Expenses   | (553)            | (50)             |
| Star Party Registration                                  | 105              | -                |
| Calendar Deposits  | -                | (55)             |
|  | <u>878</u>       | <u>497</u>       |
| Cash provided by (applied to ) operations                | <u>8,775</u>     | <u>2,002</u>     |
| <b>Investing Activities:</b>                             |                  |                  |
| Additions to equipment                                   | (3,669)          | (253)            |
| Cash provided by (applied to) investing activities       | <u>(3,669)</u>   | <u>(253)</u>     |
| Increase (decrease) in cash position                     | <u>5,106</u>     | <u>1,749</u>     |
| <br>Cash position beginning of year                      | <br><u>4,789</u> | <br><u>3,040</u> |
| Cash position at end of year                             | \$ 9,895         | 4,789            |
|  | =====            | =====            |
| <br>Cash position at end of year is comprised of:        |                  |                  |
| Cash   | 6,849            | 1,792            |
| Savings  | <u>3,046</u>     | <u>2,997</u>     |
| Net cash at end of year                                  | <u>\$ 9,895</u>  | <u>4,789</u>     |
|  | =====            | =====            |

See accompanying notes to financial statements.

The Royal Astronomical Society of Canada  
Saskatoon Centre Incorporated  
Notes to Financial Statements  
September 30, 1998

Significant Accounting Policies

- (a) Observatory and buildings are recorded at cost and are amortized using the straight-line method over 20 years.
- (b) Observing equipment is recorded at cost and is not amortized.
- (c) Library items are carried in the accounts at a nominal value of \$1, new additions are expensed during the current period.
- (d) Office equipment is recorded at cost and amortized using the straight-line method over 5 years.
- (e) Computer equipment is recorded at cost and amortized using the straight-line method over 3 years.

1. Cash Summary:

|                             |              |
|-----------------------------|--------------|
| Cypress Hills               | \$ 880       |
| Star Party Pre-registration | 105          |
| Prepaid Membership          | 303          |
| Calendars & Books           | 409          |
| Scope Loaner Program        | 135          |
| Sleaford Site Project       | 364          |
| Raffle & Silent Auction     | 4,162        |
| Current Operating           | <u>- 491</u> |
|                             | \$ 6,849     |
|                             | =====        |

2. Savings (Telescope Fund)

|                                  |                  |
|----------------------------------|------------------|
| Opening balance                  | \$ 2,997         |
| <i>additions:</i>                |                  |
| expenses paid by current account | 102              |
| interest                         | <u>— 2</u> 104   |
| <i>withdrawals:</i>              |                  |
| transfer to current account      | 5                |
| transfer to Sleaford             | <u>— 445</u> 450 |
| Closing balance                  | \$ 2,651         |
|                                  | =====            |

You are invited to the  
**General Meeting of the Saskatoon Centre**  
**Monday, January 18, 1999 at 7:30 p.m.**  
Conference Room, National Hydrology Research Institute building  
Innovation Boulevard

**Presenting:**  
**Mark Kaye, Hamilton Centre, RASC**  
*"Three Decades Of Observing, Making Looking Up Easier"*

The talk uses slides to cover all of the observing sites we have made over the years and the ways we have made observing easier or conditions better. Intermixed will be lots of astrophotos from each location and the show will end with a set of slides set to music.

This event is open to the genereal public. There is no admission charge.

### **Into the New Millenium**

by Les Dickson <[dickson@sk.sympatico.ca](mailto:dickson@sk.sympatico.ca)>

There has been a seemingly unending debate recently about when the new millennium starts: year 2000 or year 2001. Here are two authoritative web sites that contain information regarding this debate:

the **Greenwich Observatory in England**

<<http://greenwich2000.com/millennium/index.htm>><http://greenwich2000.com/millennium/index.htm>>

and the **Astronomical Applications Department of the U. S. Naval Observatory**

<<http://riemann.usno.navy.mil/AA/faq/docs/faq2.html>><http://riemann.usno.navy.mil/AA/faq/docs/faq2.html>>.

Both sites give clear arguments for adopting Jan. 1 2001 as the start of the third millennium. The Greenwich site has a great deal of information about the start of the new millennium as it is the headquarters for the British celebrations of the year 2000/2001. This site notes that the third millennium starts at midnight (0:00hr) on Jan 1 2001 at Greenwich so that, officially, countries to the east of Greenwich cannot celebrate the first sunrise of the new millennium until Jan. 2 local time. I really don't buy that argument, but visit the site and decide for yourself.

The U.S. Naval Observatory site has much more to offer amateur astronomers other than Y2K-related material, including background information on common astronomical phenomena, calendars and time and related topics, data services, and software products.

I want to acknowledge Keith Brown of the Chemistry Department of the University of Saskatchewan for bringing these sites to my attention. Visit his site and see his own take on the "start-of-the-millennium problem" at <<http://chem4823.usask.ca/millenium.html>><http://chem4823.usask.ca/millenium.html>>.

This NEWSLETTER, with the exception of the cover page, is copied on a Risograph Model TR1510 copier at 3 pages per second!

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### Helen & Tom Dean Visit the Saskatoon Centre

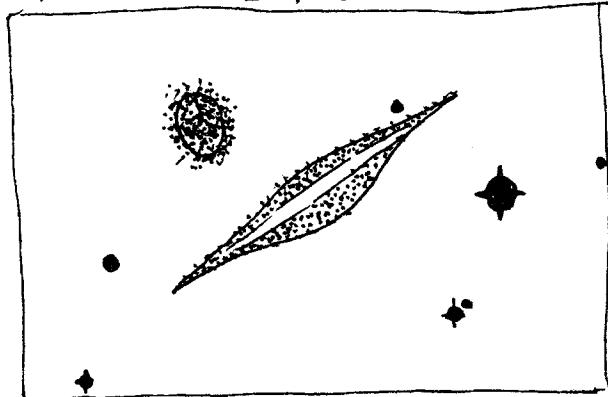
Tom Dean of the Hamilton Centre of the RASC and Saskatoon Centre member-from-Yorkton, Helen Dean visited the December General Meeting. Tom gave a short impromptu presentation on the Hamilton Centre to our members. Tom is the Kingston Centre's ATM (Amateur Telescope Making) Chairman, the Hamilton MIAC Fireball Coordinator, and the out-going Observing Coordinator. Tom is Helen's son. Over the Christmas break, Tom and Helen ground and polished a 7-inch mirror!

*Please renew now - it's not too late!*

Membership runs from Oct. 1 to Sep. 30. Please send payment to the Centre mailbox.

**Regular - \$40.00   Youth - \$22.50   Life - \$720.00**

*NEAT OBJECTS!*



*MESSIER OBJECTS!*



Rick Huziak '99

**NOVICES CORNER: THE WINTER SIX**

by Sandy Ferguson

The long winter nights are almost here again and, although it is tempting to sit indoors and practice armchair astronomy, I'd like to encourage our new members to bundle up and spend some time getting to know the winter's brightest stars and constellations. The group of six constellations known as the "Winter Six" have all cleared the southeastern horizon by 9:00 p.m. in mid-December, and remain visible well into the spring. The members of this group are the constellations (in order of rising) Auriga, Taurus, Orion and Gemini, Canis Minor and Canis Major. Their brightest stars form a stunning oval, which offers a lot of observing possibilities for naked eye, binocular and telescopic viewing.

Although Orion is probably the best known of the group and the easiest to spot, if you are not familiar with any of them (but do recognize the Big Dipper), you can use the Dipper to get into the area. Figure 1 shows how you can use the stars Alpha and Delta of the Dipper to locate the brightest star in Auriga (Capella) or the stars Beta and Delta to locate the brightest stars in Gemini (Castor and Pollux). Alternatively, if you know Orion, you can use Orion as a guide to the other constellations in the group.

Well, now you've braved the sub-zero temps and have succeeded in locating this magnificent bunch of stars! Following are suggestions for naked eye, binocular and telescopic observing, with Figure 2 giving details of some of the features and objects available in each constellation.

The most valuable observations you can make with the naked eye is to familiarize yourself with the shape of each constellation. In order to locate an object of any kind within a constellation, you need to know your way around it. Once you have become comfortable with the patterns and bright stars, spend some time

observing how the constellation orients itself in relation to the horizon as it moves across the sky, from rising in the eastern half to setting in the western half. Gemini, for example, rises on its "side" and sets

"upright". If you are not aware of this change, you may find it difficult to identify a constellation at another time of night or later in a season.

To recognize these changes is not difficult, because if you actively observe over the course of a season or longer, you will notice how the constellation screws. Take time to observe the different star colours. For

instance, Betelgeuse, the upper left "shoulder" star in Orion, is reddish/orange; Rigel, the lower right star in the same constellation, is bluish/white. At the risk of over-simplifying, stars are different colours due to their ages, temperatures and chemical make-up (young stars are hot and blue, middle age stars yellow and old stars orange and red). Look for the following features in each constellation in the group.

## NAKED EYE

|                    |  |
|--------------------|--|
| <b>Orion</b>       | the distinctive belt and sword area  |
| <b>Auriga</b>      | Capella, its brightest, white star; the "Kids", a triangle of stars containing the eclipsing variable Epsilon (also naked eye, but it won't eclipse again until around January of the year 2010) |
| <b>Taurus</b>      | the Pleiades cluster (called the Seven Sisters, although you can see only six naked eye); the orange colour of Aldebaran; the "V" shape of the Hyades  |
| <b>Gemini</b>      | Castor and Pollux, both yellow/white colour  |
| <b>Canis Major</b> | Sirius, the brightest star in the sky  |
| <b>Canis Minor</b> | Sorry, other than identifying Procyon, this is a dead naked eye area   |

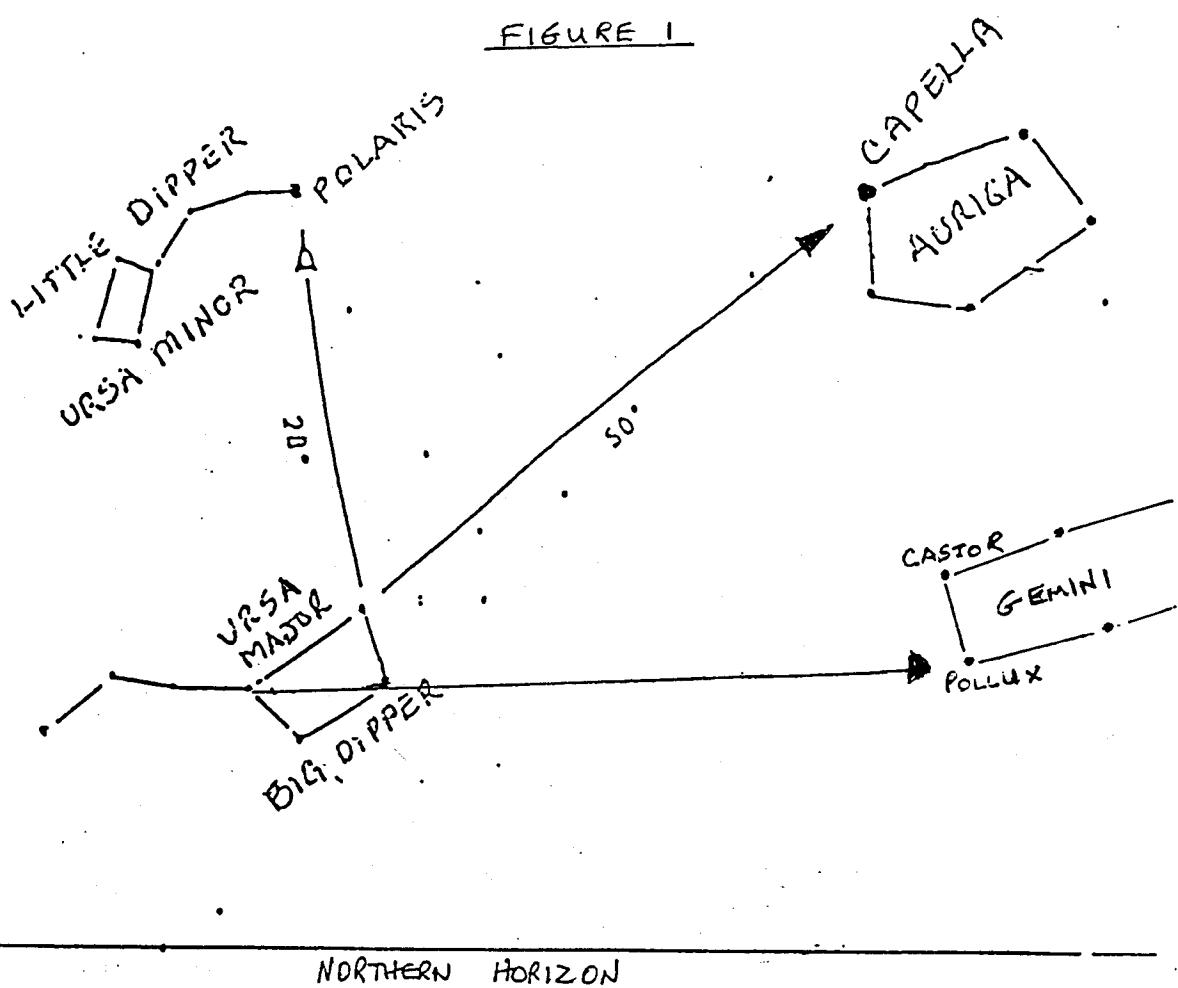
## BINOCULARS

|                    |   |
|--------------------|---|
| <b>Orion</b>       | M42, a greenish/white fuzzy patch that is the center "star" of the sword                        |
| <b>Auriga</b>      | M36, M37 & M38 - large open clusters that can also be visible to the naked eye under dark skies |
| <b>Taurus</b>      | M45, the Pleiades, the six naked eye stars become many more                                     |
| <b>Gemini</b>      | M35, another large, open cluster  |
| <b>Canis Major</b> | M41, yet another open cluster   |
| <b>Canis Minor</b> | Still unexciting  |

## SMALL TELESCOPE

|                    |  |
|--------------------|--|
| <b>Orion</b>       | M42 and M43 (emission nebula adjacent to M42); the "Trapezium", a group of stars - eclipsing binaries embedded in M42. Component A eclipses every 65 days in a 20 hour eclipse, which varies from magnitude 6.7 to 7.7, with a 2.5 hour minimum; Component B eclipses every 6.5 days. These eclipses are fun for someone getting involved with variable star observing. Also, there are lots of double stars. CHALLENGE OBJECT: try for the companion of Rigel. At magnitude 6.7 it can be split with a 6" 'scope. |
| <b>Auriga</b>      | M36, M37 and M38 again   |
| <b>Taurus</b>      | M1, the Crab Nebula, the remains of a supernova, which occurred in 1054 CE; The Pleiades lose their character in a telescope, due to the narrow field of view that prevents your observing the complete structure  |
| <b>Gemini</b>      | M35 and its companion cluster NGC 2158, which is 1/2 degree southwest of the larger cluster. They are a nice pair in the same field at low power.  |
| <b>Canis Major</b> | M41 and NGC 2362, another open cluster   |
| <b>Canis Minor</b> | CHALLENGE OBJECTS: try for some faint 14th mag. galaxies -there's not much else!   |

FIGURE 1



**Editor's Request:** When submitting articles electronically, please submit them as *generically* formatted as possible. Please do not use unnecessary tabs, indents, etc. and do not use a number of spaces for indents, especially in tables (use a tab)! Note that almost all formatting must be stripped out when the articles are received, then put back in by the editor to fit the page widths of this newsletter. Stripping out unwanted formats is what takes the most time during editing! Also, if possible, please observe the general formatting of the articles in this newsletter. The 'rules' I use are: 5 spaces at the beginning of each paragraph, one space after commas, and 2 spaces after periods. If you want anything italicized or bolded, please put '\*'s one either side, but do not put it all in all-caps, since I have to completely retype the cases to lower letters! I'd like to thank everyone for submitting articles. I have enough material for a few issues, but don't stop! I can always use more!

FIGURE 2