



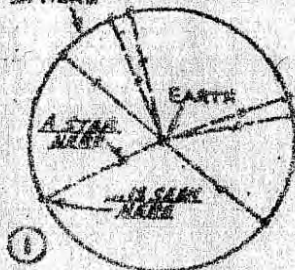
SASKATOON CENTRE

President: Halyna Kornuta
 Editor: Greg Towatego
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NEWSLETTER

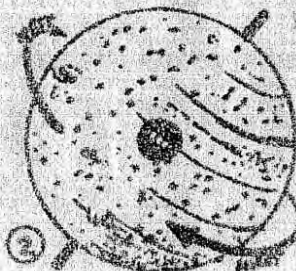
CELESTIAL SPHERE



1

THE CELESTIAL SPHERE IS A BIG IMAGINARY BALL WITH THE EARTH AT ITS CENTER

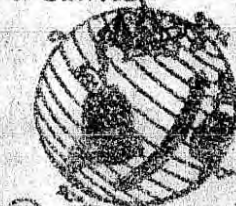
How it seems...



2

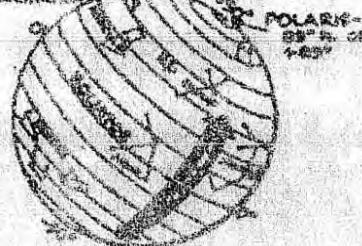
... THE EARTH STANDS STILL WHILE THE CELESTIAL SPHERE ROTATES AROUND IT

40° N. PARALLEL OF LATITUDE



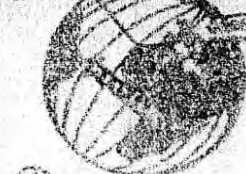
3

40° PARALLEL OF DECLINATION



LATITUDE ON EARTH IS DECLINATION IN SKY

PRIME MERIDIAN OF EARTH



4

PRIME MERIDIAN OF SKY



LONGITUDE BECOMES RIGHT ASCENSION

EDITORIAL

As far as our activities for 1975 went, I think that we can say that we accomplished just as much if not more than in past years. Much of this can be attributed to the new observing facility which we were able to use, that being Gordon Patterson's observatory with the Celestron-8 telescope. Speaking for myself, I can say that I have seen more Messier Objects and other various objects in the past year than I had ever seen before.

The active members in the Centre were kept busy for a good part of the summer chasing Comet Kobayashi-Bergner-Milon, Nova Cygni and other deep sky objects. We were also fortunate to have been able to use the big sky camera which took many of the pictures which were on display at the October General Meeting. During the winter months we concerned ourselves mainly with astrophotography because of the many advantages in taking astrophotos in winter. Most of these are outlined in an article on cold weather astrophotography by G.E. Patterson which appeared in the February 1975 Newsletter. He also encountered many problems in pursuing this type of work, but most of these have been overcome.

Although the Observing and Astrophotography group started out with many "bugs" in its equipment, they are gradually being worked out and we are really getting down to business. We now have a variable frequency electronic clock drive with a coarse fast - slow hand control. After trying out many different tracking methods (the unaided drive is not adequate on long exposures) we came to the conclusion that the best method was the "off-axis" eye guiding method. In this system the photographer must sit at the scope for the duration of the photograph and keep a guide star centered in a set of lighted crosshairs by means of the hand-held fast-slow control. We have also overcome the focussing problem by means of a knife-edge focussing unit which has also been built by G.E. Patterson. We also develop and print our own black & white pictures and are now

getting to the stage where we will be able to develop our own color slides. Out of all this we hope to get some good pictures for the '76 General Assembly at Calgary.

During the summer we had a visitor from the Vancouver Centre down for a Saturday night meeting and recently James Patterson was down from the Arctic to join us. The visitor from near Vancouver was surprised at the work we were doing, which was a compliment to our Centre. Now all we need is for more members to come and use this facility.

Judging from the turnout at General Meetings it would appear that our old friend "chronic inertia" is back to haunt us. Many members who do not come to meetings should consider attending. It is understandable that many members cannot come due to valid reasons such as distance or night classes, but there are also many of you who could come, but don't. The question is WHY??? There are many activities and opportunities in our Centre, but to take advantage of them you must show up and be reasonably active. I see members from out of town who have come great distances to attend meetings, so there is no reason why more city members can't travel a few miles to attend.

See you all at the General Meeting.

Greg Townstega (Editor)

Greg Townstega

THE ROYAL ASTRONOMICAL SOCIETY 1203 SASKATOON CENTRE	
MEETING NOTICE	
Place	Rm B110, Health Sciences Bldg, U of S
Date	Tuesday, 20 January 1976
Time	8:00 p.m.
Purpose	January General Meeting
Speaker	Dr. Roy Skinner - on
	* Neutron Stars & White Dwarfs
(Handbooks may be available)	

Please note: The Observatory phone number is 243-2083.

SASKATOON CENTRE, 1976

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HEESE, Richard HILSTROM, C.T. HOLDEN, Dr. F.A. HUSTER, Hugh	120 9th St. E. 101 31st St. W. 1805 Morgan Ave. 213 32nd St. W.	Saskatoon Saskatoon Saskatoon Saskatoon	244-6844 374-2591 652-0144
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WATT, Dr. P. W.	1104-620 Spadina Cres.	Saskatoon	244-7389
WALDRON, Ronald W.	245 St. Laurent	Saskatoon	382-5428
WARNER, Lee	117 31st St. W.	Saskatoon	652-3792
WESOLOWSKI, Michael	11 Brown Cres.	Saskatoon	374-5331
WILCOX, Lillian	2527 Clarence Ave.	Saskatoon	343-7452
WILCOX, Tony	2527 Clarence Ave.	Saskatoon	343-7452
YOCHIM, Blair	140 Anderson Cres.	Saskatoon	374-1993
YOUNG, James.	2513 Melrose Ave.	Saskatoon	242-4661

.....

PHYSICS FOR FUN PROGRAM FOR JANUARY, 1976

Wednesday, January 14, at 8:15 pm

NEWTON'S CIRCUS OF PHYSICS

The students of Physics present Newton's three-ring circus of Physics, a light-hearted look at everything you've always wanted to know about physics (but didn't think you could understand). Put on by the Physics Club students.

Wednesday, January 28, at 8:15 pm

FILM SHOW

- An added sense in detection of nuclear radioactivity
- A sea we cannot sense (low-level radiation in our environment)
- Joseph Fraunhofer - Dispersion and Diffraction

The lecture and the film show will be given in Room 107 of the Physics Building on the University Campus. Showings are free and open to the public. Make a date to attend - you will enjoy it and learn something new.

OBSERVER'S CORNER

Many members, especially new ones, may not be aware that many interesting deep sky objects can be viewed without the use of a telescope, but rather with a set of binoculars and in some cases with the naked eye. Listed here are some of the more easily found objects, with maps showing how to locate them. Members are encouraged to get out into their back yards and have a try at finding these. First, look for them with binoculars, and if you have a telescope soon up for a closer look. If enough members take interest in finding these, a regular column may follow in other Newsletters.

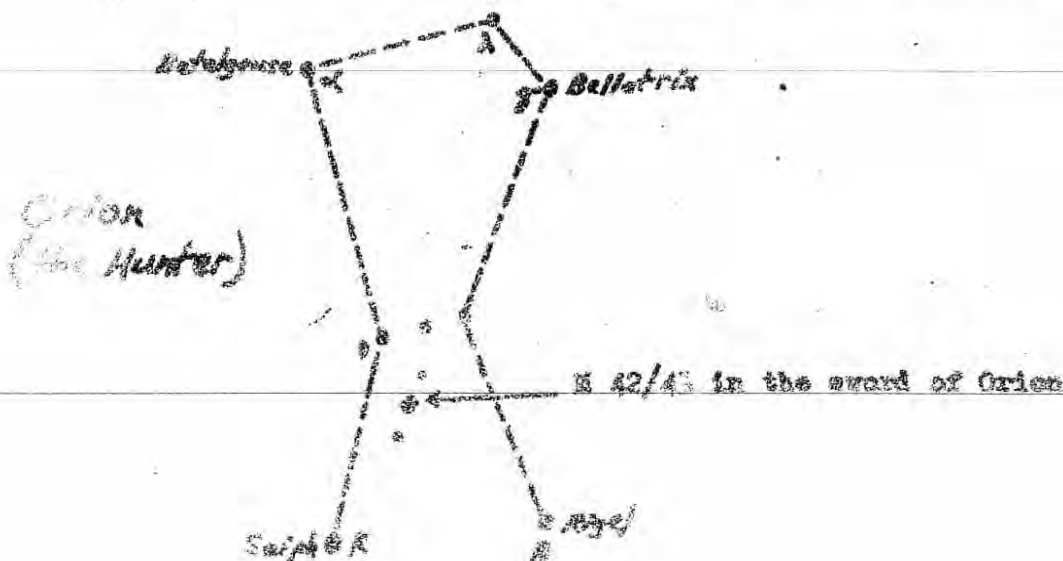
ORION NEBULA Messier 42/43

Type: Diffuse nebula

Position: Right Ascension (R.A.) $5^{\text{h}} 34^{\text{m}}$ Declination $-5^{\circ} 20'$

Located in the constellation Orion. Orion is located in the southern sky and is one of the most easily recognizable constellations. This object is a favorite among amateur astronomers.

What to look for: In binoculars, look for a hazy bluish, irregular patch of light. It covers about 30 minutes of sky.



PLATONIC # 45 "The Seven Sisters"

Type: Open Cluster

Position: R.A. 3h 45.7^m Declination +24° 01'

Located in Taurus. Rises in the east and crosses sky at a high angle. The Pleiades are easily recognizable with the naked eye. Also makes a beautiful binocular object. Too open to be seen completely in most telescopes. The cluster covers 120 minutes of arc. It is one of the most well known clusters, because it is so easily recognizable.

What to look for:



PERSEUS DOUBLE CLUSTERS NGC 884 & 869

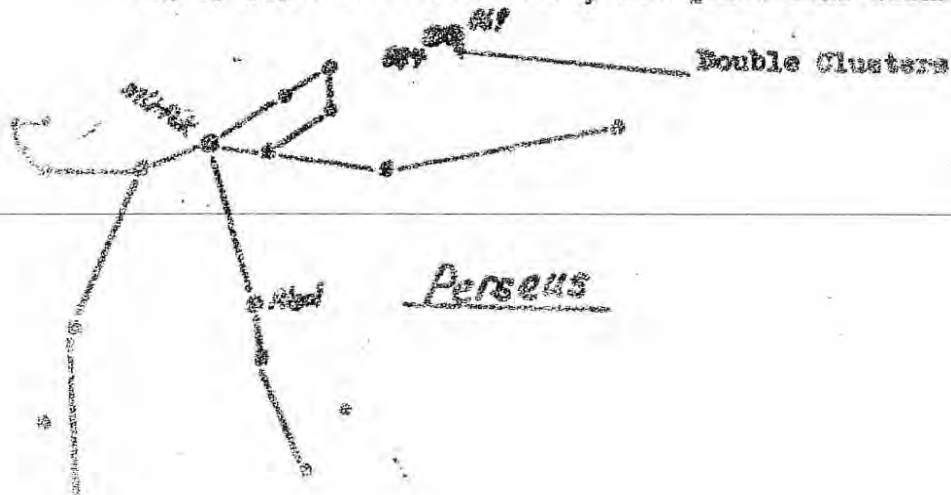
Type: Open clusters

Position: NGC 869; R.A. 02h 16.9^m Declination +57° 01'

NGC 884; R.A. 02h 20.3^m Declination +56° 59'

The Double Clusters are in Perseus. Perseus will be very high up in the sky by darkness. Rises in the northeast. Again, this object is almost strictly a binocular object, being too large to all fit into a telescope view. They cover 240 minutes of arc.

What to look for: In binoculars you should see two clouds of stars side by side. If you continue to look, you will see that they are highly populated with stars, and quite well defined.

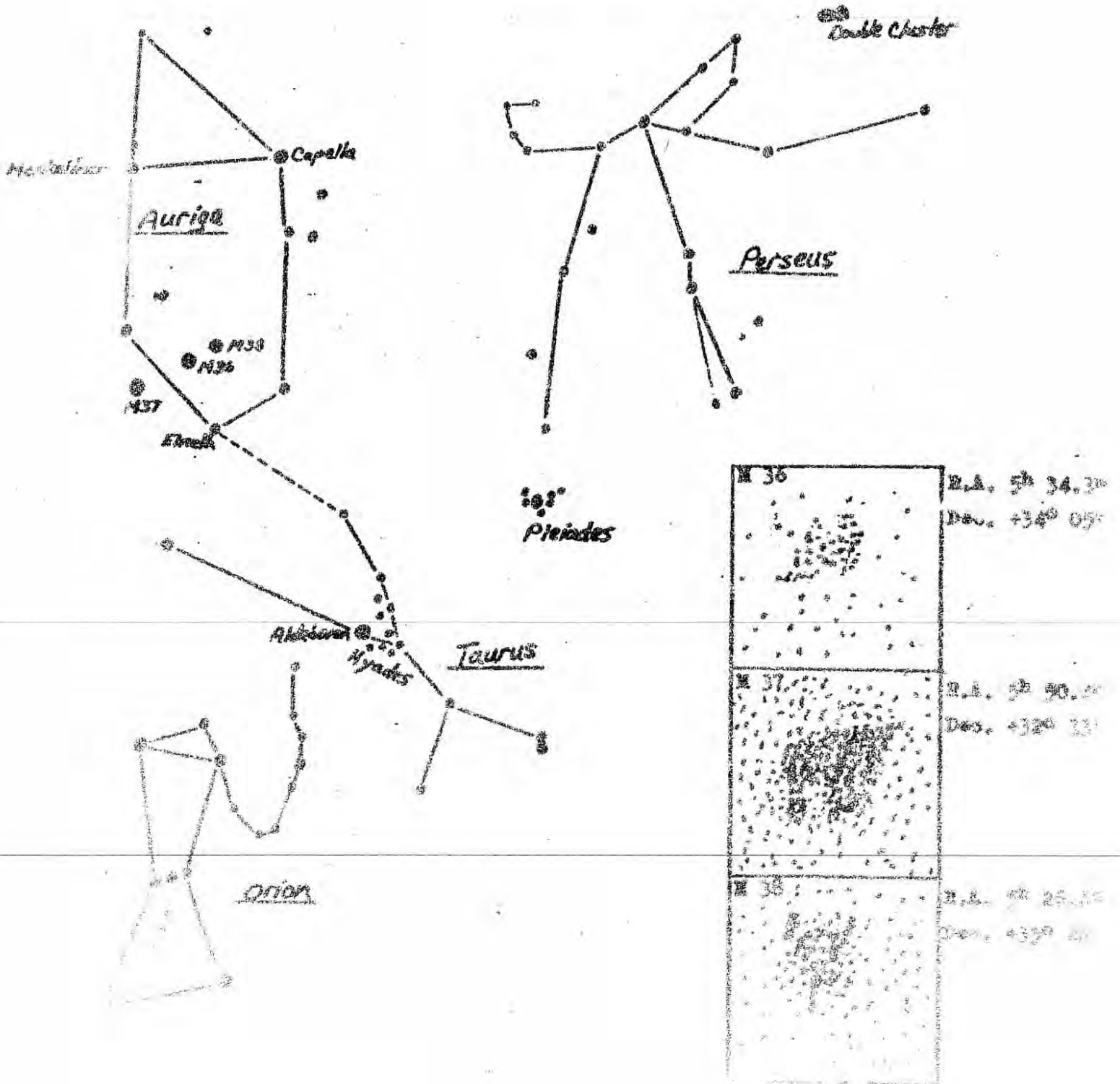


MESSIERS 36, 37, 38

Type: All three of these are open clusters.

Positions: They are in the constellation Auriga. Auriga is about an hour to the left of Perseus. (see chart)

What to look for: None of these are as large as the Pleiades or the Perseus clusters, however, they are quite bright. Since they are so close together, if you find one, you should find them all.



OBSERVING HINTS

- 1.) Let your eyes get dark adapted before starting work. You will notice a difference after ten minutes or so.
- 2.) If you are using charts outside, use a flashlight with a red cellophane screen over the front. You will then be able to read your material without ruining your night vision.
- 3.) Dress warmly and be comfortable. You will not be very successful if you are too busy getting warm. The answer to this problem is a pair of skidoo boots with felt liners, and a skidoo suit if you have one. For looking at high objects a lawn chair is useful.
- 4.) Be on the lookout for ice crystals and fog. These things can creep up on you while you are looking for something, and you may think you are looking in the wrong area.
- 5.) Do not breath on lenses as you will fog them up. Once your binoculars, etc. are outside, leave them out there until you are finished, as they will get covered with condensation every time you take them in the house. (Note: Condensation will form on and inside anything like a telescope, camera, or set of binoculars which have reached outside cold temperatures and are then brought inside to the normal warm, humid atmosphere. While it is easy enough to wipe the exterior of the lenses, it is not so easy to clean the inside of them. To avoid this situation, always carry a large plastic bag in which the instrument can be tightly wrapped to exclude the inside air. Let the instrument warm to inside temperature before removing the plastic wrapping.)

Seeing is Poor...

AIR DISTURBANCE



...WHEN STARS TWINKLE LIKE CRAZY (AIR DISTURBANCE)

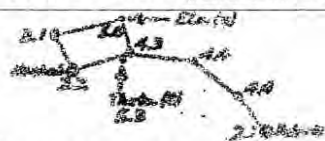


...WHEN YOU CAN'T SEE $3\frac{1}{2}$ MAG. STARS, SUCH AS MEGREZ. (MAGNITUDE SKY IS NOT CLEAR, AS STARS, CLOUDS, MOON, FOG OR HAZE)

GOOD SEEING



STARS SHINE WITH A FAIRLY STEADY LIGHT (THE AIR IS CLEAR)



YOU CAN SEE MAG. 5 STARS NAKED EYE, SUCH AS ETO. AND THERE IS THE LITTLE DIPPER (THE AIR IS CLEAR)

You can Avoid...



...THE FULL MOON



...LATE AFTERNOON SUN



...LONG AIR BLANKET



...HEATED ROOF TOPS



...ROOM-BATHING



...LATE AFTERNOON SUN



...LATE AFTERNOON SUN

MINUTES OF A GENERAL MEETING OF THE SASKATOON CENTRE, RASC, HELD IN RM.
B-110, HEALTH SCIENCES BUILDING AT 8:00 P.M. ON 16th DECEMBER/75.

Present: Halyna Kornuta (President), Jim Young (Vice President), Lillia Wilcox (Secretary), Gordon Patterson (Centre Rep.), Greg Towstego (Editor), Hugh Hunter (Librarian), Merlyn Melby (Activities), Alan Blackwell (Treasurer).

Absent: Doug Beck (Sub-Councillor)

Minute	Subject	Action
33.	Moved that the meeting be opened.	Halyna Kornuta
34.	Moved that November minutes be adopted as published.	G. Patterson, J. Young
35.	The exchange of speakers with the Edmonton Centre was discussed.	H. Kornuta
36.	New comet, 1975p - Comet Bradfield should become visible in January 1976.	G. Patterson
37.	Dr. Koehler, Physics Dept. gave an interesting talk on Radio Astronomy and used slides to illustrate. Questions followed.	
38.	Meeting adjourned to Observatory for coffee - 9:00 pm.	J. Young, Tory Wilcox

Minutes prepared by:
Lillia Wilcox,
Secretary, Saskatoon Centre, RASC

MINUTES OF AN EXECUTIVE MEETING OF THE SASKATOON CENTRE, RASC, HELD IN RM.
B-110, HEALTH SCIENCES BUILDING AT 9:05 P.M. ON 16th DECEMBER/75.

Present: Halyna Kornuta (President), Jim Young (Vice President), Lillia Wilcox (Secretary), Gordon Patterson (Centre Rep.), Greg Towstego (Editor), Hugh Hunter (Librarian), Merlyn Melby (Activities), Alan Blackwell (Treasurer).

Absent: Doug Beck (Sub-Councillor).

Minute	Subject	Action
39.	Moved that the meeting be opened.	H. Kornuta
40.	Speaker exchange with Edmonton discussed and was decided that each Centre pay travel expenses of its own member.	G. Patterson J. Young
41.	January General Meeting speaker to be Dr. Ray Skinner, Physics Dept.	
42.	Meeting adjourned to Observatory - 9:30 pm.	J Young, M. Melby

Minutes prepared by:
Lillia Wilcox,
Secretary, Saskatoon Centre, RASC.