

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA



SASKATOON CENTRE

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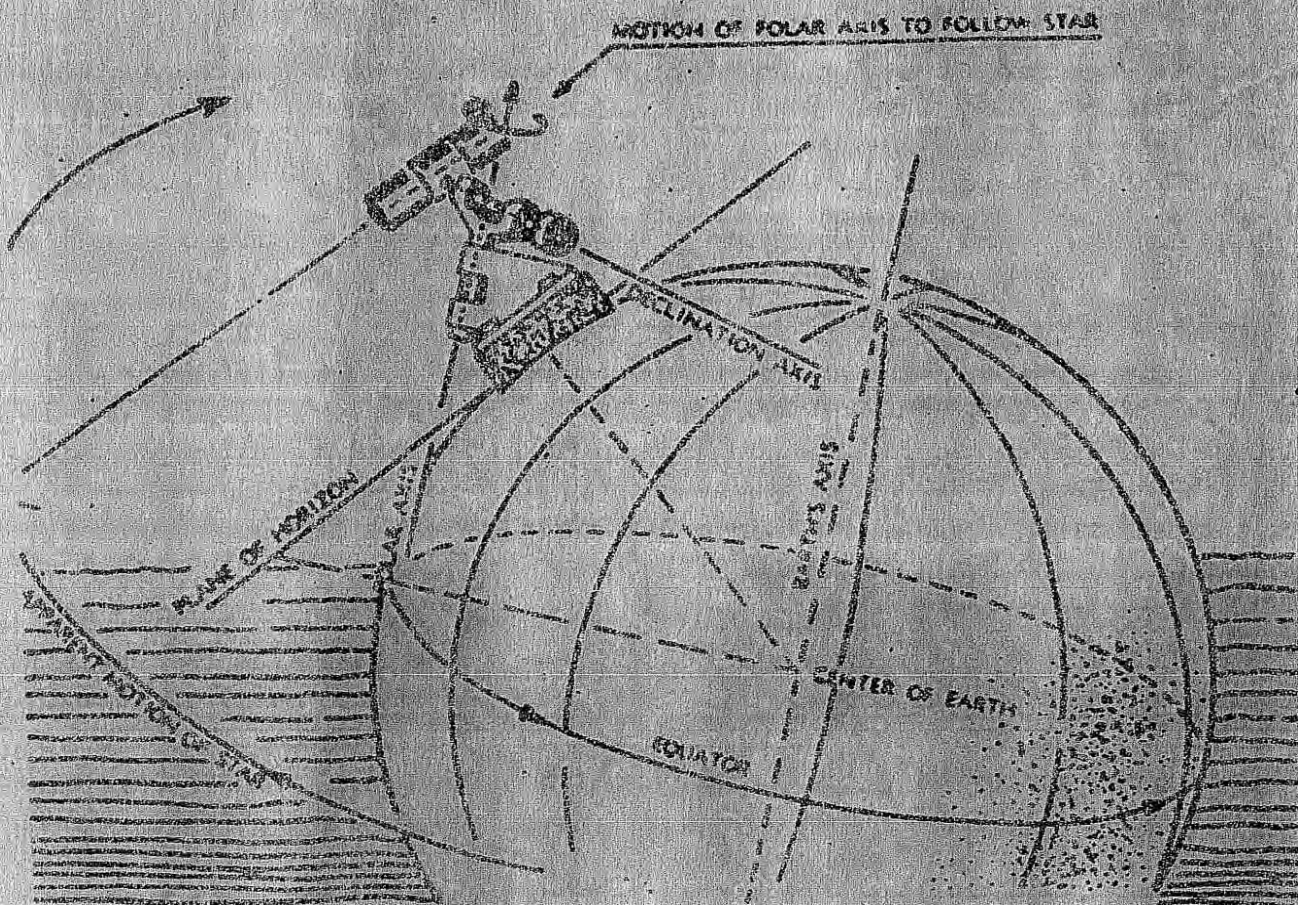
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AUGUST, 1973

NEWSLETTER



The principles of the equatorial mounting.

INDEPENDENT SIGHTING OF A NEW COMET (1975h) BY A SASKATOON AMATEUR ASTRONOMER

To Mrs Illia Wilcox, an active member of the Saskatoon Centre, Royal Astronomical Society of Canada, goes the unique honor of spotting a new comet without prior knowledge that this comet, Comet Kobayashi-Berger-Milon (1975h) had been found and reported on 12 days earlier by a Japanese astronomer.

This comet, the eighth found in 1975, was noticed by Mrs Wilcox during a regular Saturday evening meeting of the active Saskatoon amateur astronomers at Mr Patterson's residence, 79 Baldwin Crescent, where he has his own Observatory. This group of amateur astronomers were looking for faint nebulous objects, (usually referred to as Messier Objects) with their binoculars when Mrs Wilcox located a nebulous cloud in the constellation Delphinus. A check of several star atlases by members of the group showed no known object at that location. At this time no one realized this was a comet, but it's location was recorded for further checking. On Sunday evening it was again observed by several members of the group, and it was noticed that it's location had changed, having moved about 3 degrees in a north-westerly direction. Once again it's location was recorded, and it was suspected this was a comet. On Monday, July 14, Mr Patterson checked all the latest records available to that date at the University, and no new comet was listed that fit the location. On Monday night, Mr Patterson and Mr Melby recorded an accurate location and found the comet had moved nearly 4 degrees still in a north-westerly direction. Two photographs were taken although it should be noted that it is extremely difficult to get a good picture of such a nebulous subject. Knowing now that this was a comet, a telegram was dispatched early Tuesday to the Smithsonian Observatory in Cambridge, Mass, reporting an independent comet sighting, and giving the three recorded positions. Later in the day new information was received confirming that this was a comet that had been reported for the first time ten days previous. While this meant that Mrs Wilcox's name would not be listed as the first observer, the three recorded positions will help to establish a more accurate orbit for the comet, now known as 1975h.

When the weather cooperates, the comet is easily visible in normal binoculars high in the south-eastern sky about 11:30 pm. If it continues to increase in brilliance as it has in the past few days, it should shortly be visible to the naked eye, possibly within the next two weeks. However, it should be noted that comets are very unpredictable, as we all know from our experience with Comet Kohoutek.

No orbit has as yet been established for this comet, so that the prediction of positions and brilliance is still strictly guesswork. Present indications, however, favor the likelihood that this comet will be visible all night from about two to three hours after sunset to about an hour before sunrise.

Members of the Saskatoon Centre will continue to observe and report on this comet, and will keep the News Media advised of any developments.

THE ROYAL ASTRONOMICAL SOCIETY 1968
SASKATOON CENTRE

MEETING NOTICE

Place .. U. of S. Observatory... proceed from there to farm

Date .. Saturday August 9, 1975

Time .. 8:00 pm

Purpose .. ANNUAL FIELD SITING TO BE HELD AT THE FARM

OF MR. & MRS. CHARLIE AUCKLAND

ANNUAL FIELD OUTING

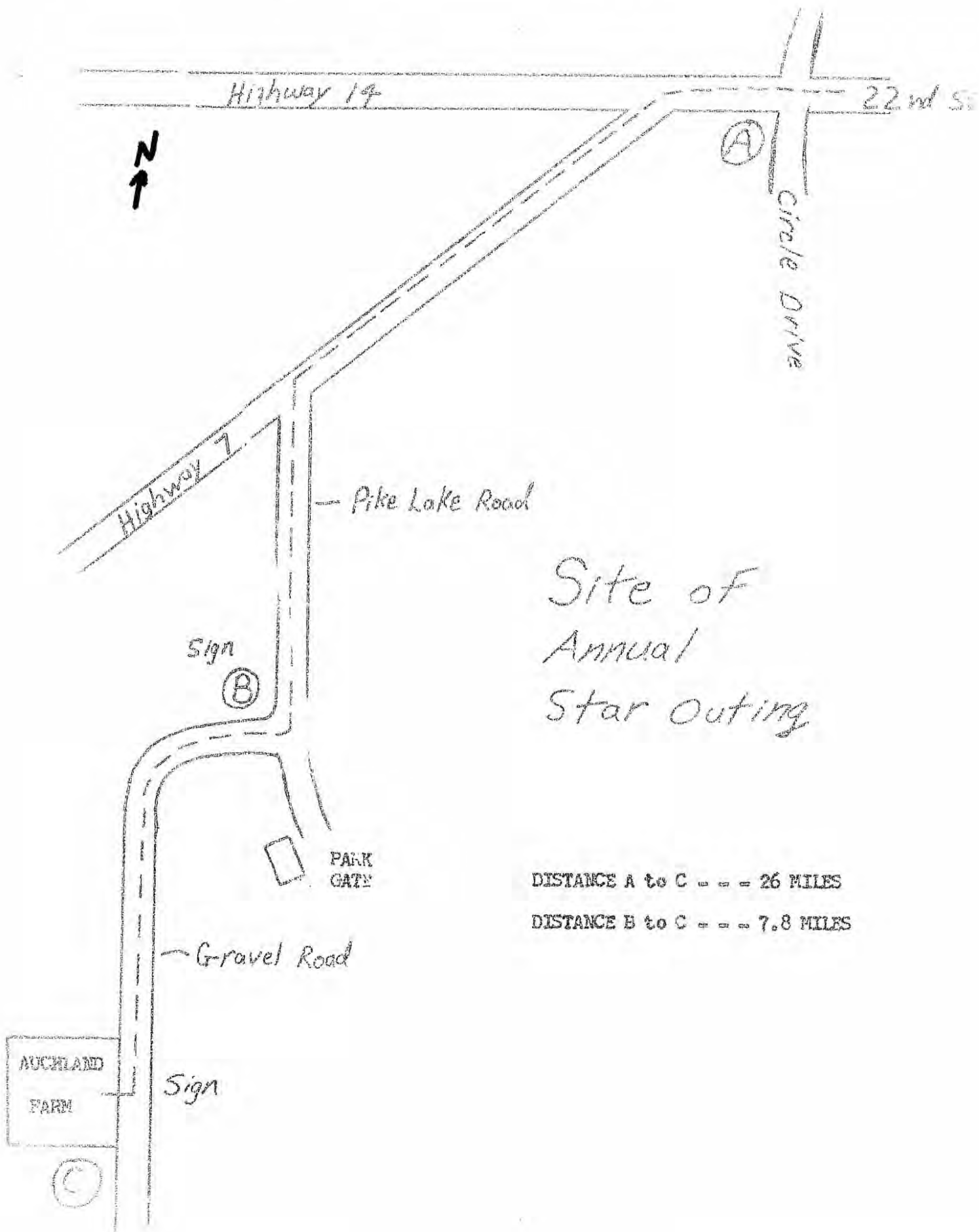
Mr. & Mrs. Auckland of RR#1 have again invited us out to their farm for an evening's viewing, and we owe them a word of thanks for letting us go out there each year. Here are the details. First - the map to the farm is in the Newsletter. The distance is about 26 miles from the traffic lights at Circle Drive and 22nd Street. Follow Highway # 7 to the Pike Lake road and turn off to go to Pike Lake. Just before getting to the gate house into the Pike Lake park, turn right into the concession road. (There will be a sign posted here) Drive along this road for 7.8 miles, and turn right into the Auckland farm yard. Their name is on the mail box, but a sign will be posted here also. It is proposed to meet at the Observatory at 8:00 pm. Dress according to the weather, it can get pretty cool out there so come prepared with a parka or warm clothes. We'll leave the Observatory at about 8:30 so be there if you need a ride or can give some other people rides. I think it might be a good idea to bring something cold or hot in a thermos as well as a lunch or something to munch on. We may also have some hot dogs and coffee there. There is not much of a moon that night to hinder deep sky observations and if the weather is good we can make a complete night of it. Anyone with a telescope or binoculars should bring them along - the more the merrier, and this will be an excellent chance to get away from city lights and pollution.

PLAN TO ATTEND

SEE YOU THERE!!

REMEMBER - - - Saturday August 9, 1975

8:00 at the Observatory.



SPECIAL MEETING - IMPORTANT

DATE - TUESDAY, AUGUST 5th

PLACE - UNIVERSITY OBSERVATORY

TIME - 7:30 pm

AGENDA - DISCUSSION ON CENTRE ENTRIES TO
GENERAL ASSEMBLY IN CALGARY IN 1976

All Centre members who are planning to either place entries for display at Calgary or assist others to do so, are asked to carefully study the 14 different categories outlined, and come prepared to discuss their contribution to a maximum Centre effort.

The Centre should endeavor to have entries in all categories. Some will be group efforts although only entered under one name so assistance will be needed. It is not necessary to go to Calgary to put in an entry. All entries have to be mailed before the meeting.

Plan now to attend this and ensure a maximum Centre effort. Let us not leave everything until it is too late to be of value

ARE YOU AN ACTIVE MEMBER OR NOT?

THE CHALLENGES

1. NAKED EYE Best report on an observing project carried out without optical aid.
2. TELESCOPES Best report on an observing project using binoculars.
3. MOON Best black and white photograph of a thin lunar crescent either less than 48 hours old or less than 48 hours before new.
4. MOON Best set of three eyepiece drawings of any one lunar crater, the three drawings to be done under different conditions of illumination at least two days apart.
5. SUN Best series of either drawings or photographs showing a sunspot group moving across the surface of the sun.
6. METEORS Best report on the observation of a meteor shower, with paths plotted on a star chart and the radiant point indicated.
7. OCCULTATION Best report on an occultation project successfully carried out.
8. PLANETS Best report on an observing project involving Jupiter and/or its satellites.
9. OPEN CLUSTERS Best set of black and white photographs of any four open (galactic) clusters from the Messier Catalogue.
10. GLOBULAR CLUSTERS Best set of eyepiece drawings and descriptions of any four globular clusters.
11. GALAXIES Best report on observations of any four galaxies in any one constellation, with descriptions and field drawings.
12. COLOUR PHOTOGRAPHY Best set of three colour slides of any three astronomical subjects.
13. OPEN CATEGORY Best submission by an entrant of a report on an OBSERVATIONAL project (which may include photography) of his or her own choosing - double stars, aurora, variable stars, asteroids, conjunctions, nebulae, variations of any of the other categories, or whatever.
14. AND FINALLY, A "FUN" PROJECT The most imaginative proposals for dividing the constellation of Hydra and the constellation of Ericarnus each into two new constellations, with new outlines and names which may be mythological or modern or anything in between.

THE REGULATIONS

1. This competition is open to all paid-up members of the R.A.S.C.
2. The work on a project entered must be done by the entrant between May 1st 1975 and April 30, 1976. Old observations, photographs, drawings, etc., must not be submitted.
3. One prize will be awarded in each category, along with 1st, 2nd, and 3rd prize ribbons. In addition, a grand prize will be awarded for the best overall exhibit.
4. No individual may enter in more than three categories, and may enter only one exhibit in each category chosen.
5. The judges will be appointed by, but not necessarily be members of, the Calgary Centre.
6. All entries which qualify will be on display during the 1976 assembly, and the names of the prizewinners will be announced before it closes.
7. In judging the "best" entries the judges will take into account the location of the observing site(s), the size and type of instrument(s), and equipment used, the age and experience of the entrant, the time of year the work is done, the initiative, imagination, care and thoroughness shown in the project, and the neatness and clarity of the presentation.

cont.

8. All entries must be mailed in before the Assembly begins; and it is not necessary for the entrant to attend the assembly in order to qualify. It will be a help if entries are sent in as soon as can conveniently be done when the project is completed; no entry will be accepted bearing a postmark later than May 4th, 1976.
9. Each entry must be accompanied by an official entry form which can be obtained from Mr. U. Haasdyk, 3123 48th St. S.W., Calgary, Alberta, T3E - 3X6. Members planning to enter are asked to write for entry forms at their earliest convenience, stating the categories in which they are interested, in order to give us some idea of the probable exhibition space required.
10. Some categories (eg. No. 6 or No. 7) may require assistance from other people; this is permissible, but the entry should be submitted over the name of the one person only.
11. Any entry which qualifies in more than one category may be entered in one only, eg. a binocular observation of an occultation may be entered in category 2 or category 7, but not both.
12. Entries may be submitted in either English or French.
13. More detailed information about the categories will accompany the entry forms; any queries should be addressed to Mr. Haasdyk.

SEND FOR YOUR ENTRY FORMS TODAY !!

The Editor wonders if the members realize what they are missing by not attending the Saturday night observing and astrophotography sessions at Mr. Patterson's residence; 79 Baldwin Crescent. We have been having very good success in finding messier objects and comets. Many have found it very rewarding to just lay back in lawn chairs with a pair of binoculars, you'll be amazed at what you can see. So far this summer we have found 22 objects in the sky and a comet, and there still remains many messiers to challenge us. Here is a list of some of the objects we have found either in binoculars or in the Celestron 8.

M31	M92
M59 (open cluster)	M15
M103	M11
Double Clusters in Perseus	NGC 6712
M34	M16
M5	NGC 457
M57	M76
M13	M3
M39	M29
M27	M22
M2	M17

THE DUNCAN TELESCOPE

The refracting telescope located in the observatory of the Saskatoon campus was manufactured by Cooke & Sons Ltd. of London & York, England. Funds for the purchase of this telescope were donated by a group of Saskatchewan businessmen, and their names are engraved on a plaque mounted in the Observatory. A brass plate mounted on the pedestal of the telescope identifies it as the Duncan Telescope.

The telescope was installed in the observatory in November 1927, and the total cost of the telescope, associated eyepieces and cameras, plus the Observatory dome was only \$5,000. It is amazing to note that the probable cost today would be more than triple the original figure!!

The basic telescope is a 7 - inch refractor of 115 inches effective focal length. Attached to the telescope is a 4-inch finder telescope of 48 inches effl and a power of 25X. A 3-inch tracking scope is also fitted and is equipped with illuminated double cross hairs for precise following during photography. Additional features of the main telescope is an adjustable aperture, variable from 7 inches down to 1 inch, detachable lens mounts, camera and sunscreens. Additional attachments have been made to permit usage of a 35-mm camera in either direct objective, negative projection or afocal astrophotography.

Over the many years this telescope has been in use, considerable wear has developed. As the main objective lens, a three element achromat, required cleaning and respoling, this was dismounted and shipped to the Astrophysics Department of the National Research Council in Ottawa, and since the telescope was out of action, the opportunity was taken to carry out a complete overhaul. With the aid of members from the Saskatoon Centre, the telescope was dismantled and taken to the Physics Building for overhaul.

All parts were disassembled, stripped and repainted, the brass fittings cleaned and revarnished, all gearing cleaned and burrs removed. Fittings such as crosshairs, light sockets, etc. that have been broken or lost over the years have been replaced. In addition, it is hoped to add special mountings for larger cameras, and to develop a reliable electronic drive for accurate tracking.

When the overhaul was completed, the telescope was even better than it was originally, and our members can be proud that they contributed no small part to this overhaul, and helped keep the cost to a minimum.

- - adapted from an earlier article by Mr. Win Ford

SASKATOON CENTRE ANNUAL WIENER ROAST PICNIC AND CUTTING

Early Friday evening, Saskatoonians were greeted with torrents of rain as members of the Saskatoon Centre breathed sighs of despair. Weeks of clear weather had culminated in a summer downpour, dampening plans for our third annual picnic and outing.

As the hours passed and the possibility of having the wiener roast was washed away, members kept a close watch on the breaking clouds. By 9:00 pm an evening of almost clear skies seemed possible. A small group of hopeful members gathered at Diefenbaker Park at 10:00 pm and within minutes telescopes were set up, and viewing began with the moon.

Lillia Wilcox kept a watchful eye on Cygnus with hopes of spotting the comet, Kobayashi-Berger-Milon, with binoculars. It was soon located and a telescope was turned toward it.

After approximately two hours of observing members enjoyed a light snack, observed the comet once more and then dispersed for the evening.

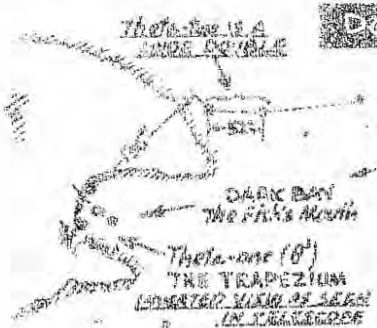
Unfortunately, participation from the general public was minimal, possibly due to the inclement weather and uncertainty of a clear sky. This could also be the reason for low membership turnout, however, those members participating enjoyed the evening.

Our next major outing will be at Auckland's farm near Pike Lake, (details elsewhere in Newsletter.)

See you there!

Halyna Karnuta,
President

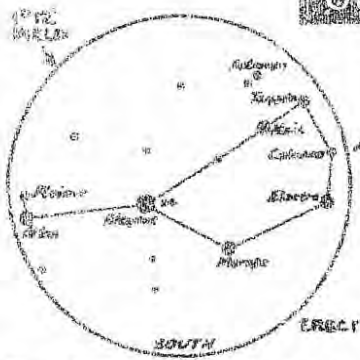
selected SKY OBJECTS



THE TRAPEZIUM IS SEEN PLAINLY IN 6" AT 50X. DIAGRAM SHOWS AREA YOU SEE AT 50X.

DOUBLE STARS	R.A.	DEC.	MAGN.	SEPARATION	POWER NEEDED	REMARKS
γ (Gamma) ARIES <i>Wolf's Head</i>	1 ^h 51 ^m	+41° 03'	4.2 4.4	8.5"	3"-140	WHITE AND YELLOW. GASE?
ϵ (Epsilon) TAURUS <i>Aldebaran</i>	3 ^h 26 ^m	+17° 24'	6.5 6.8	11"	25-110	BOTH WHITE. PLAIN & PLEASANT
θ (Theta-one) ORION <i>The Trapezium</i>	5 ^h 33 ^m	-5° 25'	4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9	4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9	30-140	NE BRIGHT AREA OF 4-5.2. SEE DIAGRAM
α , α' CAPRICORNUS	20 ^h 15 ^m	-72° 40'	3.8 4.5	6.16"	7-100	PRETTY YELLOW PAIR. BOTH HAVE FAIRY COMPANIONS
δ (Delta) DELPHINUS <i>Wahne</i>	20 ^h 41 ^m	+45° 57'	4.5 5.5	10"	25-120	YELLOW AND WHITE. EASY BY 60X
ϵ (Epsilon) CYGNUS	21 ^h 47 ^m	+39° 28'	5.6 6.3	27.4" (1931)	10-50	BINARY. SEPARATION INCREASING FROM 16" IN 1760
μ (Mu) CYGNUS	21 ^h 42 ^m	+25° 21'	4.7 6.0	1.5"	100-200	TEST FOR 4-INCH
δ (Delta) AQUARIUS	22 ^h 16 ^m	-0° 11'	4.4 4.6	2.0"	120-500	BOTH WHITE. TEST FOR 3"

*VISUAL MAG. OF WHOLE CLUSTER AND AVERAGE MAG. OF INDIVIDUAL STARS



THE PLEIADES - WELL-KNOWN OPEN CLUSTER. MAKE A PLEIAD PICTURE IN TELESCOPE AT 50X

OPEN CLUSTERS	R.A.	DEC.	MAGN. ²	DIA.	REMARKS
NGC 752-ANDROMEDA	1 ^h 15 ^m	+37° 25'	6.5	1"	NICE GROUP OF ABOUT 20 STARS
M 34 - PERSEUS	1 ^h 39 ^m	+47° 34'	9.5	30'	ABOUT 60 8 th TO 13 th MAG. STARS
M 45 - TAURUS <i>The Pleiades</i>	3 ^h 44 ^m	+24° 00'	4.5	1° 30'	PRETTY OBJECT... USE LOW POWER
M 38 - AURIGA	5 ^h 36 ^m	+35° 48'	10	20'	"A MASS OF STARS OF A SIMILAR FORM"
M 50 - MONOCEROS	7 ^h 01 ^m	-8° 16'	10	10'	IRREGULAR GROUP OF ABOUT 100 STARS
M 46 - PUPPIS	7 ^h 48 ^m	+14° 42'	11	24'	MANY TINY SPARKLES... FINE FIELD OF VIEW
M 25 - SAGITTARIUS	18 ^h 39 ^m	-19° 17'	8	45'	LARGE AND SMALL STARS
M 11 - SCUTUM	18 ^h 49 ^m	-6° 30'	11	15'	NICE OBJECT... VISIBLE WITH BINOC.

*APPROX. AVERAGE OF TEN BRIGHTEST STARS

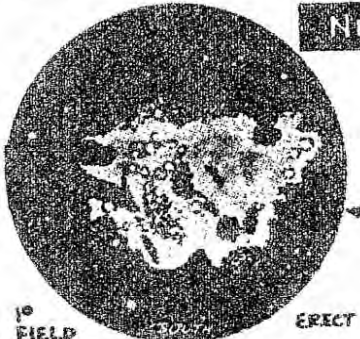
THE PLEIADES (Pleiad - ah-doy)

STAR	MAGN.
ALCYON... ah-SEE-ah-doy	3.0
ASTEROPE... ah-TUR-ah-doy	5.3
CELAENO... ah-LAY-ah-doy	5.4
ELECTRA... ah-LAY-ah	3.8
MAIA... ah-MAY-ah	4.0
MEROPES... ah-MER-ah-doy	4.3
TAYGETA... ah-TAY-ah-doy	4.9
PLEIONE... plee-ON-ah-doy	5.1
ATLAS... ah-TAY-ah	3.8

PLEIONE IS MAIA AND ATLAS IN PAIR. STAR NO 24 (MAG. 8.1) MAKES A WIDE DOUBLE WITH ALCYON AT 117 SECONDS

GLOBULAR CLUSTERS	R.A.	DEC.	MAGN. ²	DIA.	REMARKS
ω (Omega) CENTAURUS	13 ^h 24 ^m	-87° 00'	4.3 12.9	23'	FINEST GLOBULAR IN SKY BUT TOO FAR SOUTH FOR MANY U.S. OBSERVERS
M 4 - SCORPIUS	16 ^h 21 ^m	-26° 24'	6.4 14	14'	A LITTLE OVER 1° WEST OF ANTARES
M 13 - HERCULES	16 ^h 40 ^m	+36° 32'	5.6 13.6	10'	RESOLVABLE WITH 6-INCH
M 12 - OPHIUCHUS	16 ^h 45 ^m	-1° 52'	6.6 14	9'	BLAZE AT CENTER ABOUT 2' DIA.
M 10 - OPHIUCHUS	16 ^h 55 ^m	-2° 02'	6.7 14	8'	RESOLVED WITH 6-INCH. BRIGHT
M 92 - HERCULES	17 ^h 16 ^m	+43° 12'	6.1 14	6'	LUMINOUS CENTER... RESOLVABLE
M 9 - OPHIUCHUS	17 ^h 16 ^m	-18° 28'	7.3 13.5	2.5'	SMALL BUT BRIGHT BALL OF STARS
M 22 - SAGITTARIUS	18 ^h 34 ^m	-23° 57'	5.9 12.9	17'	BIG AND BRIGHT FOR A GLOBULAR... EASY TO SEE WITH 7" BINOCULAR

*VISUAL MAG. OF WHOLE CLUSTER AND AVERAGE MAG. OF INDIVIDUAL STARS



THE LAGOON - FINE OBJECT AT 50X. MAKE DARK NIGHT TO SHOW MILKY NEBULA AROUND STAR CLUSTERS. RESOLVE WITH BINOC.

NEBULAE	R.A.	DEC.	MAGN. ²	SIZE	REMARKS
M 31 - ANDROMEDA	0 ^h 41 ^m	+41° 03'	5	40' x 60'	SPIRAL GALAXY. ONLY ABOUT 20' BRIGHT CENTER IS SEEN. EASY WITH BINOC.
M 42 - ORION	5 ^h 33 ^m	-5° 25'	5	40'	DIFFUSE NEBULA. GOOD OBJECT. INCLUDES θ (THE TRAPEZIUM)
M 81 - URSA MAJOR <i>The Lagoon</i>	9 ^h 52 ^m	+69° 18'	6	10' x 16'	SPIRAL GALAXY. LOW-POWER FIELD SHOWS ALSO M 82 ABOUT 36" NORTH
M 8 - SAGITTARIUS <i>The Lagoon</i>	18 ^h 01 ^m	-24° 21'	6	35' x 60'	DIFFUSE NEB WITH CLUSTER... GOOD
NGC 6572 - OPHIUCHUS	18 ^h 10 ^m	+6° 50'	9.5	10"	PLANETARY. "SMALL BUT BRIGHT" - Marston
M 17 - SAGITTARIUS <i>Horse-shoe NEB</i>	18 ^h 18 ^m	-16° 12'	9	30'	DIFFUSE NEB AROUND A SMALL CLUSTER OF 9 th TO 12 th MAG. STARS
M 57 - LYRA <i>Ring NEBULA</i>	18 ^h 52 ^m	+32° 58'	9	65"	PLANETARY NEB... NOT BRIGHT... LIKE HAZY 9 th MAG STAR. USE HI-POWER
NGC 7662 - ANDROMEDA	23 ^h 24 ^m	+42° 14'	9	30"	PLANETARY... 13 th MAG CENTER STAR

*APPROX. VISUAL MAG. OF CENTER STAR