

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA



SASKATOON CENTRE

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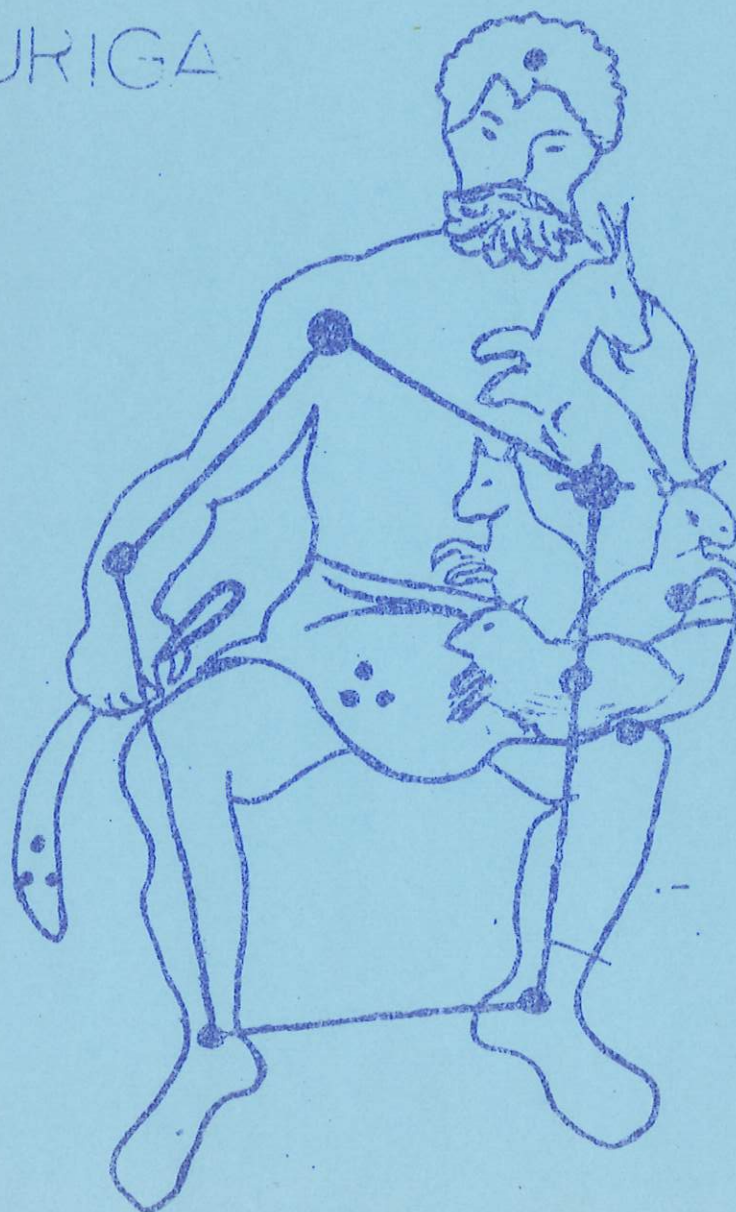
SASKATOON, SASK.

Vol. 5 - No. 3

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News Letter

AURIGA



CAPPELLA

AURIGA

Doug Beck

NAME OF CONSTELLATION:

Astronomical: Auriga (Aurigae)

Common: Charioteer

GENERAL POSITION IN SKY: R.A. $4^h 30^m$ to $7^h 30^m$
Dec. 28° to 56° N.

VISIBLE: Most of Auriga is circumpolar.

MYTHOLOGICAL BACKGROUND: Erichthonius was the King of Athens and the man who first invented the chariot. Chariots became the most common mode of transport in ancient Greece and Rome. Instead of placing the old King in the sky with his chariot, a professional chariot driver was placed there, along with a goat who had given milk for the infant Jupiter. Because of the scarcity of space in the sky at the time when Auriga was placed there, these two unrelated events appear side by side.

| MAJOR STARS: | R.A. | Dec | V | B-V | Type | π | M_v | D | μ | R |
|--------------|---------|-------|------|-------|--------|-------|-------|------|-------|-------|
| Iota | 04 55.0 | 33 07 | 2.64 | +1.49 | K3 II | 0.015 | -2.4 | 330 | 0.021 | +17.5 |
| Epsilon | 59.8 | 43 47 | 3.0 | +0.50 | F0 Iap | 0.004 | -7.1 | 3400 | 0.008 | -02.5 |
| Eta | 05 04.4 | 41 12 | 3.17 | -0.18 | B3 V | 0.013 | -2.1 | 370 | 0.077 | +07.4 |
| Alpha | 14.5 | 45 58 | 0.05 | +0.80 | G8 III | 0.073 | -0.6 | 45 | 0.435 | +30.2 |
| Beta | 57.3 | 44 57 | 1.86 | +0.06 | A2 V | 0.037 | -0.3 | 88 | 0.051 | -18.2 |
| Theta | 57.7 | 37 13 | 2.65 | -0.07 | B9.5pv | 0.018 | +0.1 | 108 | 0.097 | +29.3 |

VARIABLE STARS:

| | R.A. | Dec | Range | Days | Spect | Typ |
|--------|--------|-------|-----------|------|-------|-----|
| Aur | 4 58.5 | 43 45 | 3.73-4.53 | 9883 | cF2 | EA |
| Aur | 4 59.0 | 40 59 | 5.0 - 5.6 | 972 | K5&B9 | EA |
| R Aur | 5 09.0 | 53 | 7.7 - | 459 | | LP |
| Aur | 5 55.9 | 44 57 | 2.07-2.16 | 3.96 | F1&G5 | EA |
| RT Aur | 6 25.5 | 30 32 | 5.37-6.55 | 3.73 | A7&A7 | Cep |
| WW Aur | 6 25.9 | 31 32 | 5.70-6.36 | 2.53 | N | EA |
| VV Aur | 6 32.1 | 38 29 | 5.1 - 6.8 | 3400 | | SR |

DOUBLE STARS ON CHART (selected):

VARIABLES ON CHART:

| R.A. | Dec | Typ | Compon | V | R.A. | Dec | Typ | Max | Min |
|---------|-------|-----|--------|-----|---------|-------|-----|--------|------|
| 5 12 | 34 30 | F | 2 | 7.5 | AE 5 13 | 34 15 | B | 5.0 - | 5.4 |
| EO 5 15 | 36 30 | B | 2 spec | 7.0 | EO 5 15 | 36 35 | B | 7.5 - | 7.55 |
| 5 15 | 37 30 | - | 2 | 7.5 | AR 5 15 | 33 40 | A | 5.0 - | 5.4 |
| 5 19 | 32 45 | B | 4 | 8.0 | W 5 23 | 36 50 | M | 10.0 - | 10.0 |
| 5 19 | 33 20 | - | 6 | 9.0 | S 5 24 | 34 05 | B | 8.5 - | 15.5 |
| 5 21 | 37 20 | K | 2 | 6.0 | RU 5 37 | 37 35 | M | 10.0 - | 10.0 |
| 5 22 | 34 40 | K | 2 | 6.5 | | | | | |
| 5 22 | 34 20 | - | 3 | 9.5 | | | | | |
| 5 25 | 34 20 | - | 4 | 8.5 | | | | | |
| 5 23 | 34 15 | - | 4 | 9.0 | | | | | |
| 5 50 | 37 20 | F | 2 | 6.0 | | | | | |
| 5 56 | 37 10 | A | 2 | 3.0 | | | | | |

DEEP SKY OBJECTS ON CHART:

Galactic Clusters (Open Clusters):

| NGC | R.A. | Dec | m/p | dia' | N* | Δpc | Typ |
|------|--------|-------|-----|------|-----|------|-----|
| 1893 | 5 22.4 | 33 21 | 8.0 | 12 | 20 | 790 | d |
| 1907 | 24.7 | 35 17 | 9.9 | 5 | 40 | 2090 | f |
| 1912 | 25.3 | 35 48 | 7.4 | 20 | 100 | 1100 | e |
| 1960 | 32.0 | 34 07 | 6.3 | 12 | 60 | 1160 | f |
| 2099 | 49.0 | 32 33 | 6.2 | 20 | 150 | 1450 | f |

Galactic Nebulae (Diffuse Nebulae) gn:

| NGC | R.A. | Dec | dia" | m _v * | Sp | Δpc |
|--------|--------|-------|---------|------------------|-----|------|
| IC 405 | 5 13.0 | 34 16 | 30 x 19 | 5.81 | 09p | 670 |
| IC 410 | 19.3 | 33 28 | 23 x 20 | | | 670 |
| IC 417 | 20.0 | 34 12 | 13 x 12 | | | 830 |
| 1931 | 28.1 | 34 13 | 3 x 3 | | | 2500 |

Planetary Nebulae pn:

| NGC | R.A. | Dec | dia" | m |
|---------|--------|-------|------|------|
| IC 2120 | 5 14.8 | 37 33 | 40 | |
| 1985 | 34.5 | 31 57 | 30 | 12.5 |

NOTES ON THE DATA TABLES FOR THE SELECTED OBJECTS

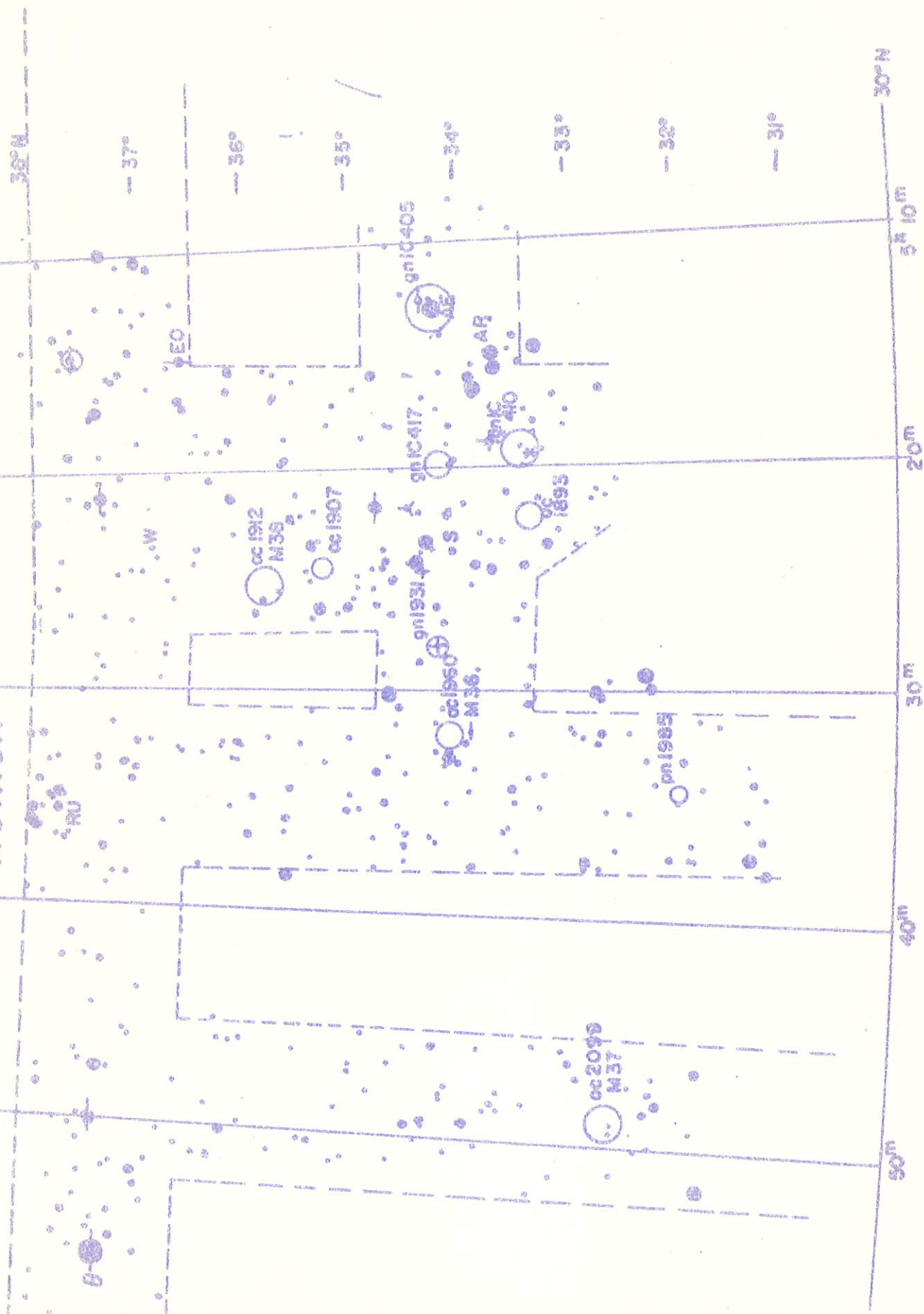
1. The major stars are those in the constellation which are brighter than magnitude 3.55. They are taken from the Handbook. From left to right on the table: right ascension, declination, visual magnitude, blue magnitude minus yellow magnitude, spectral class, parallax (" of arc), absolute magnitude, distance (l.y.), proper motion (" of arc), radial velocity (km/sec).

2. The variable stars are from all over the constellation as taken from the Handbook and from Field Guide to the Stars and Planets. From left to right on the table: designation, right ascension, declination, range (magnitudes of max. and min.), number of days in the cycle, spectral classification, and type (EA-eclipsing variable in the Algol family, LP-long period, Cep-Cepheid, SR-semi-regular).

3. The double stars which appear on the chart are taken directly from the atlas. All information on them is taken from the atlas as well. On the table: designation (if any), right ascension, declination, spectral classification, number of components and visual magnitude.

4. The variables on the chart are also taken directly from the atlas; all information is also from the atlas. On the table: designation, right ascension, declination, spectral classification, maximum and minimum visual magnitude.

AURIGA



5. The deep sky objects on the chart were taken from the Handbook of the Constellations (Vehrenberg). On the galactic clusters table: New General Catalogue number, right ascension, declination, integrated photographic magnitude, diameter in minutes of arc, number of stars, distance in parsecs and type. On the galactic nebulae table: New General Catalogue or Index Catalogue number, right ascension, declination, size in minutes of arc, visual magnitude of the associated star and its spectral classification, if any. On the planetary nebulae table: New General Catalogue or Index Catalogue number, right ascension, declination, diameter in seconds of arc and visual apparent magnitude.

NOTES ON THE FINDER CHART:

The chart was copied from Atlas Borealis. All stars with known positions down to magnitude 13 are plotted on the chart. The major tracts of stars are 1.5° wide. The chart can be used in either of two ways. If you have setting circles on your telescope you can set it for the various positions of the objects as taken from the data tables. Then examining the field in the eyepiece one can make use of the chart to find the exact position of the object. A very faint object may not be seen, but this will be easy to determine because the exact position with respect to the stars is known. Make sure the chart is oriented properly by examining the field around Theta Auriga and turning the chart to suit. If your telescope does not have setting circles start by finding Theta Auriga and orienting the chart. If for instance, you wanted to find M 36 (NGC 1960), you would first locate the stars around Theta Auriga. Move the telescope slowly in right ascension (decreasing) and locate the bright stars as you move. The cluster of stars around RU Auriga will be found quite readily. Stop at that point and move the telescope in declination southward, following the same procedure. On a moonless night M 36 will be fairly easy to locate with a diameter of 12 minutes of arc. Similar procedures could be used to find any object.

GENERAL MEETING

DATE: Tuesday, March 19, 1974

TIME: 8:00 p.m.

PLACE: Room B110, Health Sciences Building
(across from Observatory)

AGENDA: Regular Business

Films: Satellite Astronomy: Progress
and Promise
Seas of Infinity

MINUTES OF THE EXECUTIVE MEETING
Saskatoon Centre, R.A.S.C.
Held in the Observatory, 7:30 p.m., January 28, 1974

Present:

| | |
|-------------------------------|------------------------------|
| Wendel Frenzel, President | Halyna Kornuta, Editor |
| Melodie Andrews, Secretary | Gordon Patterson, Activities |
| Ron Waldron, VP/PR | Hugh Hunter, Library |
| Milton Phenneger, Programming | Doug Beck Dave Pristupa |

Absent:

Alan Blackwell, Treasurer

| Item | Detail | Action |
|------|---|---------------------------------------|
| 12. | The meeting was opened by the President at 7:30 p.m. | |
| 13. | Renovations are progressing in the basement of the Observatory and will take approximately one month. | |
| 14. | Anyone interested in writing a paper for the General Assembly should begin doing so. | |
| 15. | Anyone who is interested in grinding a mirror, please see Doug Beck. | |
| 16. | Ideas for a display for the General Assembly (to be held in Winnipeg) are needed. | |
| 17. | The Editor may co-ordinate a plan for members interested in attending the General Assembly. | |
| 18. | The meeting was adjourned. | CARRIED Ron Waldron Hugh Hunter |

MINUTES OF THE GENERAL MEETING
Saskatoon Centre, R.A.S.C.
Held in the Health Sciences Building
February 19, 1974, 8:00 p.m.

Present:

| | |
|------------------------------|------------------------------|
| Wendel Frenzel, President | Gordon Patterson, Activities |
| Melodie Andrews, Secretary | Halyna Kornuta, Editor |
| Ron Waldron, VP/PR | Hugh Hunter, Library |
| Milton Phenneger, Programing | |

Absent:

Alan Blackwell, Treasurer

| Item | Detail | Action |
|------|-------------------------------------|--------|
| 19. | The meeting was opened at 8:00 p.m. | |

General Meeting, February 19, 1974, cont.

| Item | Detail | Action |
|------|---|-------------------------------|
| 20. | Motion for the January Minutes to be adopted as published. Hugh Hunter, Greg Towsteg. CARRIED | |
| 21. | If anyone is interested in grinding a mirror please contact Doug Beck. | |
| 22. | Those who are interested in writing papers for the General Assembly you should start doing so. | |
| 23. | An observing program is now being held on Saturdays beginning at 8:00 p.m. | |
| 24. | Projects for the General Assembly are still in planning. Possible displays for this Centre could include: a. charts, graphs etc. on Kohoutek; b. photographs taken by members; and c. Doug Beck's Telescope. | |
| 25. | Corrections: Ron Waldron's address should read 510-101 Cumberland Avenue S.; Bill McDonald's phone number to 382-1373. | |
| 26. | Dr. Phenneger introduced two films: Cosmic Zoom and Fields of Space. | |
| 27. | The meeting was adjourned. CARRIED | M. Phenneger Bill McDonald |

MINUTES OF THE EXECUTIVE MEETING

Saskatoon Centre, R.A.S.C.

Held in the Observatory, 8:00 p.m., March 4, 1974

Present:

| | |
|------------------------------|-------------------------|
| Wendel Frenzel, President | Hugh Hunter, Library |
| Melodie Andrews, Secretary | Ron Waldron, VP/IR |
| Gordon Patterson, Activities | Milton Phenneger, Prog. |

Absent:

Halyna Kornuta, Editor
Alan Blackwell, Treasurer

| Item | Detail | Action |
|------|---|--------------------------|
| 28. | The meeting was opened at 8:00 p.m. | |
| 29. | A letter from the National Secretary inquired if this Centre's representative needs financial assistance in attending the Assembly. Answer should be given by the beginning of May. | |
| 30. | A poster from the Winnipeg Centre advertising the Assembly is now in the Observatory. | |
| 31. | Dr. Phenneger asked for a move to pay the small fee for postage on the films that will be shown at future general meetings. | |
| 32. | Motion of adjournment. CARRIED | W. Frenzel R. Waldron |