



STARDUST

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ROYAL ASTRONOMICAL SOCIETY OF CANADA

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TWO MEETINGS THIS MONTH

Our regular meeting, to be held in Room 111 Arts Building at 8:15 p.m. on March 10 will be in the nature of a Quiz Program. We suggest you review your Handbook or any other source of information on Astronomy that you may have at your disposal.

Also the council is meeting on Friday, March 4 and we may anticipate some committee reports - probably on the following items -

1. The Observatory
2. The Planetarium
3. The Library.

The Edmonton Centre is delighted to learn that our National President, Dr. McKellar of the Dominion Astrophysical Observatory, Royal Bay E.C., will be visiting Edmonton on March 31. Arrangements have been made for him to address a special meeting of the Society, to be held in Room 142 at 8:15 p.m. We hope that all members and their friends, and even ex-members who have not renewed their dues, will make a special effort to turn out and welcome Dr. McKellar. We are sure your attendance will be well rewarded.

THE ECLIPSE

This copy of STARDUST will, we hope, be in your hands in time to give you a last minute reminder of the total eclipse of the moon due on March 12-13. Those who are attending the Observatory on that night will have their plans well organized, but for the many who will probably be observing from their own back-yards (or bedroom windows) we are repeating a little of the essential data given last month. Here is the timetable, in Mountain Standard Time:

Moon enters penumbra,	10:34 p.m.
Moon enters umbra	11:38
Totality begins	0:41 a.m.
Totality ends	2:16
Moon leaves umbra	3:18
Moon leaves penumbra	4:22

Amateurs observing with the naked eye or with low-power glasses can make useful observations of the brightness and coloration of the moon at various stages of the eclipse. A useful scale to aid in estimating luminosity is suggested by the French astronomer A. Danjon, as follows:

Luminosity

- 0. Very dark eclipse, moon almost invisible, especially in mid-totality.
- 1. Dark eclipse, gray or brownish coloration, details distinguishable

2. Deep red or rust-colored eclipse, with a very dark central part in the shadow, outer edge of the umbra relatively bright.
3. Brick-red eclipse, usually with bright rim to the shadow.
4. Very bright copper-red or orange eclipse, with a bluish very bright shadow-rim.

Estimates of the luminosity should be made at frequent periods and the time of each reading recorded. Special notes should be made on coloration, with special attention to differences observable in various areas of the moon's surface. Record should be made of any flashes observed. They will probably be meteors, but who knows? With the eyes of thousands watching the eclipsed moon, Mr. K. might find this a fitting occasion to try another shot!

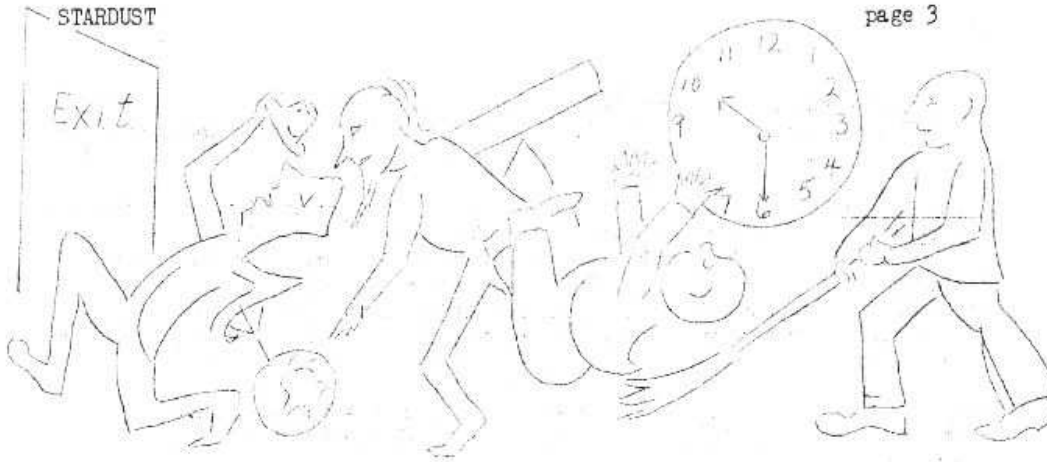
Totality To all those hardy souls who venture forth to the Observatory
Coffee to watch the eclipse, the Editor and Mrs. Page extend a cordial invitation to drift over to the house any time between 1 and 2 o'clock for coffee and doughnuts. It's only three blocks - remember the number, 8444-117 Street. You may bring your binoculars if you wish, and the Celestar will be in action on the back steps. This invitation is extended to all members and friends within hailing distance. Clear weather, and good seeing!

President's First I would like to add further comments regarding the Lunar
Message Eclipse. Observers should be out in force on this occasion. In fact, according to the latest word reaching me, something new is being added. It is intended to keep in touch with the Calgary Centre by mobile radio units located in each Centre. Our librarian, Fred Jensen (who is also a radio HAM) is offering his services in this connection. We await with interest for a report of the results. It is an experimental effort but may well mark the beginning of a far more ambitious project which could be a credit to the Edmonton Centre.

Reference has again been made elsewhere in this issue to the questionnaire. Next years program is currently under consideration. Many of our members have extensive knowledge of subjects that should have a place on our agenda. Why not tell us about them? Your interests and wishes will serve as a valuable guide. Our editor too will be pleased to learn of any suggestions, activities or observations. It all helps to make a better STAR.DUST and a better CENTRE.

We have all recently received Ballots from Headquarters of the Royal Astronomical Society for election of National Officers for 1960. I feel we have a duty as members of The Society to exercise our franchise and submit our ballot accordingly. A good response from the members must be most encouraging to the national executive. These people have offered their services - and their efforts warrant our support.

-James Harrington.



"It may be only 5:30 Universal Time, but it's 10:30 University Time. Out you go!"

Time and Space

Our congratulations to President Harrington for getting our last two meetings away practically on the dot. However, it still seems difficult to get our business done before the man with the broom is ready to start his. What is the solution? We gather from our Secretary that there is a possibility of reverting to our former practice of using two rooms, one for the meeting and one for refreshments. If this is done, it might be well to have a clear understanding with the University authorities as to when they wish each room vacated. They have been very kind to us, and we do not wish to trespass on their generosity. If necessary, it might be worth while considering starting our meetings a little earlier.

Here and There

We are grateful to SKYWARD for their kindly notice of us in their last issue. Somehow we always regard Montreal as the elder brother among our centres. Indeed, we gladly confess that it was SKYWARD'S own example that stimulated us to see if we couldn't do something about improving our format. We haven't finished yet; we still have our dreams. Thank you, Montreal!

And just yesterday, by the way, the mail brought us the first copy we have seen of GALAXY, the monthly news-letter of the Halifax centre, which (the letter we mean) appears to have recently been re-born. We found the February issue delightful reading, and congratulate our Haligonian confreres on their enterprise. May GALAXY continue to expand!

The Sky

The naked-eye planets will all be in the morning sky for at least a part of the forecast period (Mar. 16 to April 15). Mars and Venus will be pretty low, although they might be seen a little before sunrise. Jupiter will now be rising from 4 to 6 hours ahead of the sun, with Saturn about 15 degrees behind, that is, farther east. If you have binoculars or a telescope, this will be a good opportunity to observe Jupiter's satellites and Saturn's rings.

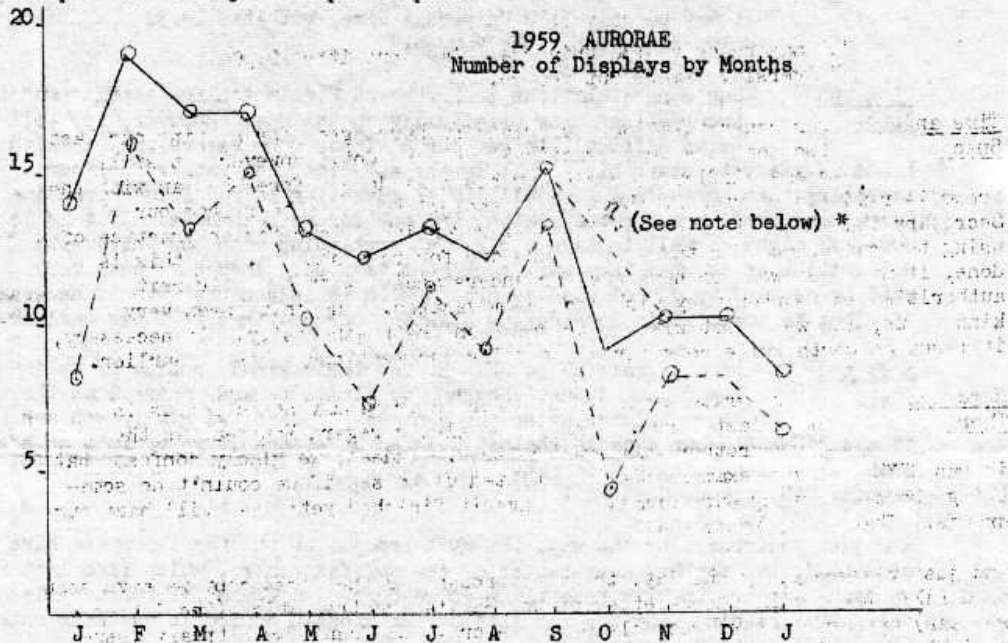
Two or three hours before sunrise would be the best time. Around April 7th you might also look for Mercury just before dawn; it will rise about an hour ahead of the sun.

Variable Stars: The Edmonton Centre has had a very successful year in observing variable stars, with four members participating.

The four members are: Robert Allin, Bruce Bohannon (now of Calgary Centre), Donald Rosenfield, and Christine Rosenfield, who made a total of 1,277 observations of nearly 100 different variable stars, with Robert Allin contributing 1,158, Don Rosenfield 50, Chris Rosenfield 39, and Bruce Bohannon with 30 observations for the year.

Canada on the whole made a good showing in the world-wide A.A.V.S.O., having 8 observers who made 1,669 estimates. Only 3 other countries produced more estimates.

Next year we may have a program for observing variables in the Orion Nebula so simple that even you can participate.



1959. * August and November were cloudy 15 days, October was cloudy 21 days.

Dotted line ---- indicates maximum number of displays reported by one observer.

December 1959 totals ----- Earl Milton 7 - 7, Franklin Loehde 3 - 3

Robert Allin 8 - 8, Bruce Bohannon (1 - 1

in Edmonton 1 - 1 in

Calagary)

(No negative reports)

Aurora Displays A gradual decrease in the number of aurora displays as 1959 progressed is clearly illustrated by the preceding graph. To be sure, there are the typical spring and fall maxima, but a downward trend seems to be present. The broken curve indicates the maximum number of displays reported by single observers, and it is interesting to note how closely the two curves parallel each other. Earl Milton feels that October's low total is partly due to the predominantly cloudy nights encountered during the month.

In December, 20 reports were submitted for 10 displays. Robert Allin led the group with 8 reports. Others contributing were Earl Milton, Franklin Loehde, and Bruce Bohannon.

In January, 1960, 30 reports were submitted for 8 aurora displays. Robert Allin again led the group with 9 reports. Others contributing were: Earl Milton, 6; Franklin Loehde, 2; incidentally, Earl Milton submitted the most negatives, with 12 reported times of no aurorae. Although negatives are not very exciting, they give much weight to aurora statistics in firmly establishing the number of displays per month and the duration of each display.

A scientific paper on Aurorae in Edmonton over the last six years is being prepared by Earl Milton, who says the results are "astoundingly good". Mr. Milton has spent many hours on this project, the results of which will be presented at Montreal. You see, your reports have not been in vain.

A new Aurora form is in the making, and, although perhaps not better, it is much bigger and, we hope, simpler to use. At the proper time an appeal will go out for its use.

Comet Burnham So far no one has reported having seen Comet Burnham for fairly obvious reasons. We have had very few cloudless evenings during the past month. At the time of writing, however, there seems to be good promise of clearer weather. See Franklin's map in last month's issue, then turn your glasses on Cetus. We are awaiting the first report - Phone GE91403.

Astronomers At Large -- Earl Milton During past weeks a number of groups have requested tours through the University Observatory. In the coming months, there will be many more. As the opening of the Planetarium draws near, the the Edmonton public is going to become increasingly "star-conscious".

From the members of the general public that take these observatory tours, we have a potential source of members for our Centre. It is up to us to cooperate with these people. If they have enough interest to visit the Observatory, many will have interest enough to attend some of our meetings. A few of these people, if encouraged, will join our group permanently. Many of our present members were introduced to astronomy at the Observatory, and they will remember how instrumental a part the telescope played in their astronomical debut.

It is therefore a duty for all of our membership to be interested in fostering our observatory programme. Most of the present requests for observatory tours

are being refused, as the few members of the observers' group cannot possibly carry out the programmes required for these tours alone! They need help. There are many jobs not requiring knowledge of the telescope itself. All that is required is a few facts about astronomy. You can help us. We need your help. Without your help this programme cannot continue at the level that will be required to satisfy the public demands when the planetarium is in operation. Try to do your share, remembering that you as an amateur astronomer possess a better-than-average knowledge of the stars.

Please! To date only 12 questionnaires have been received by the Secretary in connection with the survey being made to find the total number of instruments owned by Society members. What have you? Don't be too modest to mention that 2½ power pair of opera glasses stowed away in the cupboard, if that's all you have. But do please get the information away to the Secretary ~~before~~ March 15 at latest. Once again, what you prefer most to observe, and any other work in which you might like to take an active part. Earl's timely article above suggests one field in which some of us might be of assistance. The Secretary's address once more: Dr. D. R. Crosby, 7821 Saskatchewan Drive, Edmonton, Alberta.

Annual Montreal Meeting Earl Milton will be taking a trip east next month to represent the Society at the Council. So far, he has been voted \$95.00 towards expenses by Toronto, and anticipates that this together with the contribution from our own Society will enable him to cover the cost of the trip. It is Earl's purpose to present "western" views to the Council, and members of our Society are asked to be prepared to make suggestions which might be of interest to the national council. This may be done either at the regular May meeting, or by mail if sent to the Centre before March 25. Calgary, which has asked Earl to represent them also, has already submitted some of its views to be expressed to the Council.

We take this opportunity of wishing Earl "Bon voyage".

All communications to STARDUST should be addressed to the Editor, S. Frank Page, 8444 - 117 Street, Edmonton, Alberta.