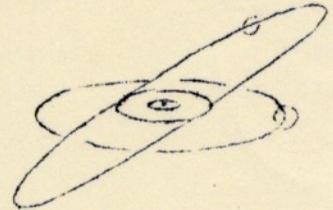
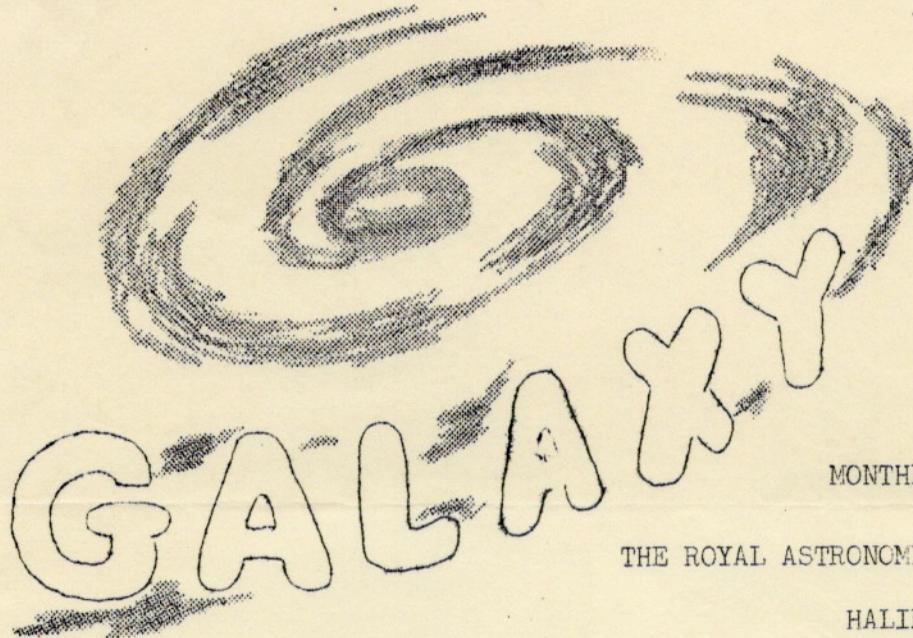


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MONTHLY NEWSLETTER

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

HALIFAX CENTRE

JANUARY 1964

This new year issue sees the resumption of publication of Galaxy after a lapse of almost a year following the departure of its former editor Bert Allen. In case we haven't said it before, thanks Bert, for keeping it going while you were here. We hope the following issues will be worthy successors.

STAR NIGHT

For November we had a grand star party planned at the Horse Field -- five telescopes, ten or more demonstrators and a host of interesting objects for viewing. Double stars, nebulae, planets, satellites. What happened? Weather! even with three consecutive nights to choose from, not one worked. And now the place is covered with snow. Well, we'll try again in the spring. If they can observe in the British Isles, then the weather should be good enough anywhere else, including here!

NOVEMBER'S MEETING

November's meeting had something for everyone, planetarium talk, professional and amateur photos of the eclipse, in fact those who were there said they never had a better evening.

Our president, Dr. Allan Mills, led off with a planetarium demonstration of the circumpolar constellations and then the winter constellations, Auriga, Taurus, Perseus, Orion, etc. with interesting features in each. A chance to review some of these will be provided at the demonstration of the next regular meeting in January.

Following the planetarium demonstration the film of the July eclipse from Clark's Harbour, N. S., made by Allan Mills, was shown. Then Rev. Fr. M. W. Burke-Gaffney showed some slides of the eclipse that he made from an observing point in Quebec (Megantic). The diamond ring effect was well shown in a beautiful orange-red colour. A film on eclipses of the sun borrowed from the N. S. Department of Education was run off. It was about 15 minutes in length with sound -- quite enjoyable.

PROJECT OF THE MONTH

Those of us who subscribe to astronomical magazines are constantly reminded of the interesting events of the following thirty days, for example, at the end of December there will be an eclipse of the moon. At Halifax it starts before dawn and will not be over by the time the sun rises, but later next year there will be better ones from the point of view of completeness. Nevertheless, if the sky is clear that night, the colours of an eclipse are worth seeing even if the whole eclipse cannot be seen. The circumstances of this eclipse are as given in your handbook, page 62.

The eclipse however, is just an aside - as a project, I wanted to draw your attention to the fun of making an observation of the variable star Algol which is a naked eye object and very nicely placed for observation this winter. Here's a chance to get out of the armchair and do a little observing of your own for a change. Now Algol is B Persei, and if you have forgotten the planetarium demonstration of Perseus last month, you can refresh your memory from the star maps in the back of your handbook. In short, locate Orion, which everyone knows, (I hope) and above it and to the left of the Pleiades you will locate Algol, the second brightest star in the constellation. On page 84 of the handbook is a chart of the region with the brightness of the stars in the general vicinity marked. The method of observation is simply to compare the brightness of Algol with the surrounding stars and make a note of your findings. Then when Algol starts to diminish in brightness as it goes into eclipse by its companion, you will find it changing constantly with reference to the other stars. Your results will show that Algol dims for 5 hrs. and the brightness returns to normal for a further 5 hrs. This cycle repeats itself every 70 hours, roughly. Predicted times of minima for early January are: Jan. 1: 7:04 UT,
Jan. 4 3:53 UT, Jan. 7 0:42 UT. For other dates one can get approximately right by adding 70 hours. UT is universal or Greenwich Mean Time. For example Halifax Standard Time is UT plus 4 hrs; the time

of maximum eclipse on Jan. 7 at Halifax is therefore 4:42 AM (E.S.T.) You will notice that the time of the eclipse is roughly 2 hrs. earlier every third day. Around Jan. 19, for example, the time of eclipse, or minimum brightness will be about 10:00 o'clock in the evening. So it's not all early morning stuff. Lets all look into this observing idea and be prepared to discuss it at the next meeting.

RADIO ASTRONOMY

The following suggestion for getting started in radio astronomy was written for the Ottawa newsletter by Gordon Grant of the Ottawa Centre:

"A method of collecting data on meteor rates during meteor showers is to take advantage of the reflection qualities of the ionized trail left by a meteor. The extent of ionisation will depend to some extent on the size of the meteor and the material in it. By selecting a distant transmitter on a frequency of 40 mcs or higher and located at a distance greater than the normal ground wave image, total counts and the duration of bursts of the reflected signal can be made using a simple antenna and moderately sensitive receiver.

There are a number of suitable transmitters already operated for other purposes that can be used to this end. Exact frequency at the receiver and must be known however, since there is normally no opportunity to 'tune-in' the signal. If more elaborate antenna systems are used, they may be directed to the general area of the sky where the greatest number of meteors will appear. These rates should be related to the visual count rates where possible and to the time of day.

A piece of equipment commonly available is the home TV set. It is adequate in sensitivity, of sufficient band width so that tuning is no problem and antennas are available in a range of prices. The distant transmitter is represented by the myriad of TV stations in North America. It may be necessary to wait until the local transmitter signs off in order to have a quiet channel, and then to sit in front of the blank screen, counting the bursts of picture from the distant station. An FM receiver can be similarly used for this set up. Jack Horwood, using this method locally has obtained some interesting count rates. Anyone interested in this idea?"

NOTICES

At the time of writing, I hear that we are planning to have a special star party indoors at the planetarium for the family complete with coke and coffee. Details will be in the mail soon, if not before you receive this copy of Galaxy.

Next Meeting Jan. 29, 8:15 p.m.

The meeting will feature a lecture on the moon by Dr. C. K. Hoyt, Associate Professor of Physics, Dalhousie University. Due to the space exploration program, investigation of the moon is going ahead by leaps and bounds and with equipment previously only available for astronomical problems of the highest priority. If you haven't been following latest developments very carefully in the journals then you are probably hopelessly behind. Here is your chance to catch up, all in one night.

In conjunction with this lecture treat we will have a planetarium demonstration of the Constellation Orion. Come yourself and bring a friend -- lets give Dr. Hoyt a good sized audience.

THE EDITOR.

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