

MONTHLY NEWSLETTER

HALIFAX CENTRE

ROYAL ASTRONOMICAL SOCIETY OF CANADA

June 1960

MESSAGE FROM THE PRESIDENT

In the May issue of GALAXY I wrote concerning Moonwatch Project, Smithsonian Institution, Astrophysical Observatory, Cambridge, Massachusetts. The following letter from Mr. Leon Campbell, Jr., who is in charge of this project, describes fully the setting up of such a local observing team. As it will require at least 6 to 8 persons to organize a Special Station I would appreciate hearing from anyone who is interested in joining this group.

June 1, 1960.

Mr. B. W. Allen,
Halifax Centre, R.A.S.C.,
419 Windsor Street,
Halifax, N.S.

Dear Mr. Allen:

The prospect of having a Moonwatch team in Halifax is indeed welcome, and I am obliged to you and your association for having laid the groundwork. I am confident that you will find this observing a rewarding experience, for you will be contributing to a worthwhile scientific project.

Moonwatch ideally is carried on by a group of 20 or so active participants, who observe satellite transits regularly and frequently. The opportunities for observing depend mainly on location, weather, and

instrumentation--but there are other factors as well.

As time goes on, I am confident that the higher inclined satellites will become more numerous and from that point of view the opportunity for observing from your latitude will be enhanced.

It may not be possible to find 20 active participants, and therefore I should like to set forth the minimum requirement that you surround with at least 6 or 8 persons who will avail themselves for observing at least once or twice a week. If this minimum number is to be the result, then I propose that your station be in the status of Special. We would expect your station to observe at least once or twice a week, depending on opportunity, and this would mean that an individual in such a group would participate half the number of times per week that the station was on the observing line.

I believe you know that the basic, essential data is the position (in azimuth and altitude or in right ascension and declination) to within a degree of arc, and the instant of time it occupies that position to within one second of time. There will be predictions available, and based on them small fans of say 4 or 5 degrees of arc may be set up so as to intercept the satellite as it passes through the arc of the telescope "fence".

As for timing, the Dominion Observatory's time signals may be used as a reference and a tape recorder and stopwatches or combination of both may be used to record the time of transit.

Under the condition that your station will need telescopes, we would consider the loan of say 4 or 5 M-17 elbow telescopes, of about 6 degree field, and a few stopwatches. We would expect you to make formal application if you so desire these instruments.

The reporting of observations is by telegraph or airmail and for each specific orbiting object we specify the means of transmission of the report.

When you have organized your group, it will be appropriate for you to fill out and return to me one of the enclosed registration forms; the other is for your station files. I would presume you would become team leader, but this, of course, is up to the team itself to decide.

There will be other matters to discuss with you, but at the moment these become significant upon receipt of your registration form.

I shall be pleased to provide further assistance, and please feel free to call upon me.

Cordially yours,

Leon Campbell, Jr.
In Charge of Moonwatch Project.

EDITORIAL

The Halifax Centre of The Royal Astronomical Society of Canada is the only Centre east of Quebec City and thus can be considered as representing the Atlantic Provinces as far as amateur astronomy is concerned.

It is unfortunate that this area and especially Halifax, as it is the key city, does not have more to offer the amateur astronomer. It is true that at St Mary's University, under Father Burke-Gaffney, basic astronomy is taught but the need for a small observatory and associated facilities is evident. Weather conditions on the coast are not ideal for viewing but there are sufficient number of good viewing nights to warrant serious thought along this line. Under present conditions the younger generation is being deprived of this basic knowledge which to-day is important and which to-morrow, with the increased interest in outer space, will be that much more important.

Even with very limited equipment many people in the Atlantic Provinces are following their chosen hobby of astronomy. To date our membership has been composed mostly of people from the Halifax area but I feel that we should broaden our field to include as much of the Atlantic Region as possible. The Universities of the Province have within their walls many young people who might want to follow a hobby during their school year and so this area should **not** be forgotten. It may be that we should associate more closely with one of the Universities in Halifax.

Halifax has the potential to become the leader of the Atlantic Provinces in amateur astronomy. This of course will only be realized through a broadening of our Centre's activities.

B.W.A.

NEWSLETTER

SIX INCH MIRROR TELESCOPE KIT: Mr. Harold P. Snider, 24 Stanley Place, Halifax, Nova Scotia, has a 6 inch mirror telescope kit that he wishes to sell. Mr. Snider purchased the kit in 1958 and tells me that he is willing to sell it at a reduced price. For further information please telephone 4-3014.

HALIFAX CENTRE NEWS

JUNE MEETING NOTICE: There will be not regular June meeting of the Halifax Centre of The Royal Astronomical Society of Canada. By popular request a public viewing night will be held on the evening of July 4, 1960, in the Horse Field at the westerly end of Jubilee Road. All members are asked to attend and those who have telescopes please bring them along.

MAY MEETING REPORT: The May meeting of the Halifax Centre of The Royal Astronomical Society of Canada was held on the evening of Wednesday the 25th. in the Planetarium Room of the Nova Scotia Museum of Science.

Mr W. F. Take, Ist. Vice President, gave a very interesting planetarium showing describing in detail the many constallations which were visible, in Halifax, during the month of May. At the end of the showing a number of 35 m.m. slides were also projected.

Through the courtesy of the United Kingdom Information Service the members were privileged to see a 16.m.m. film "The Inquisitive Giant", which showed in detail the construction of the 200 foot radio telescope at Jodrell Bank Experimental Station in England.

THE PLANET MERCURY: Nearest to the sun at a mean distance of 36 million miles, Mercury therefore revolves the most rapidly of all the planets; its speed at perihelion is 36 miles a second, or twice the speed of the earth's revolution, and its period of revolution is only 88 days. Its orbit has greater eccentricity (0.2) and higher inclination to the ecliptic than has any other principal planet except Pluto. Mercury is the smallest of the principal planets; its diameter, 3100 miles, is only 50% greater than the moon's diameter. Mercury is the only planet whose period of rotation and revolution are the same.

Mercury reached greatest eastern elongation on June 19th. setting about 1 1/2 hours after the sun. During the month it has been possible to follow the movement of this planet with the naked eye.

HALIFAX CENTRE Ist. VICE PRESIDENT MARRIES: Mr. W. F. Take was married to Miss M. J. Mc Neil on saturday June 25, 1960, at The Cathedral Church of All Saints, Halifax, Nova Scotia.

Best wishes go out to the bride and groom from all members of the Halifax Centre.

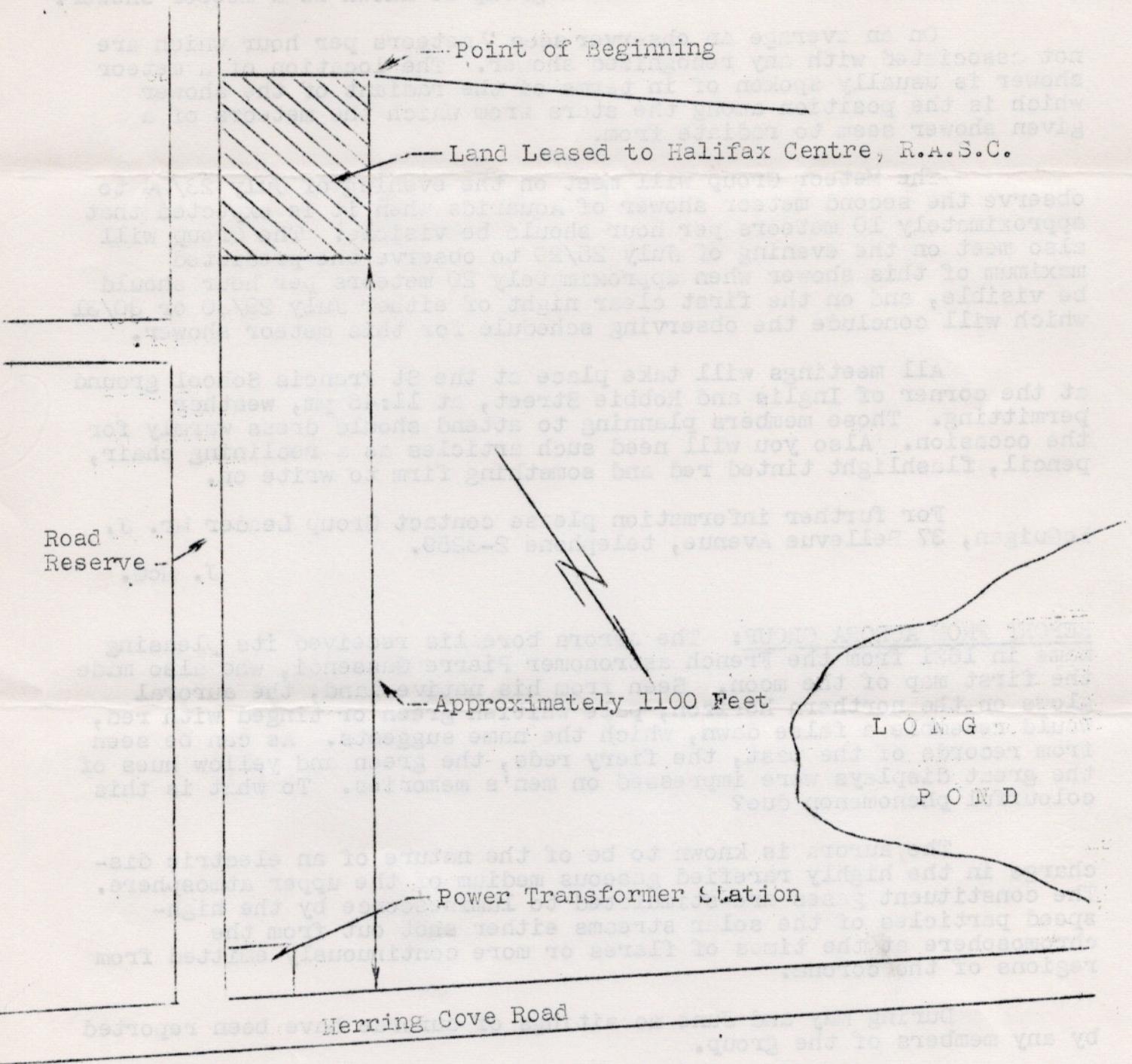
LAND FOR VIEWING CENTRE AND CLUBROOM: As announced in the April issue of GALAXY the Halifax Centre has been granted a lease, by the Provincial Government, on land at the south end of Long Pond on the Herring Cove Road. The area of land in the grant is approximately one and three tents acres. The term of the grant is for ten years. The description of the grant reads as follows: "Beginning at Crown Post and Stones No. 1898 at the most southern angle of a lot of land granted by the Crown to John Vincent Baker on the thirty-first day of October in the year 1940, under Grant No. 22403, in the District of Herring Cove, in the County of Halifax; thence to run by Astronomic bearing, north thirty-eight degrees fifty-six minutes east, along the northeast boundary line of the said Baker grant, four chains six links; thence south forty-seven degrees thirty minutes east three chains; thence south thirty-eight degrees fifty-six minutes west four chains fifty links; thence north forty degrees west three chains five links to the place of beginning, containing one and three-tenths acres, more or less, as shown on sketch.

LOCATION

of

LAND LEASED TO THE HALIFAX CENTRE

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA



REPORT FROM METEOR GROUP: Meteoroids are small solid particles moving in orbits about the sun. On entering the earth's atmosphere at velocities from 10 to 45 miles per second they become luminous and appear as meteors or fireballs and, if large enough to avoid complete vapourization, in rare cases they may fall to the earth as meteorites.

Meteors are visible on any night of the year. At certain times of the year the earth encounters large numbers of meteors all moving along the same orbit. Such a group is known as a meteor shower.

On an average an observer sees 7 meteors per hour which are not associated with any recognized shower. The location of a meteor shower is usually spoken of in terms of the radiant of the shower which is the position among the stars from which the meteors of a given shower seem to radiate from.

The Meteor Group will meet on the evening of July 23/24 to observe the second meteor shower of Aquarids when it is expected that approximately 10 meteors per hour should be visible. The Group will also meet on the evening of July 28/29 to observe the predicted maximum of this shower when approximately 20 meteors per hour should be visible, and on the first clear night of either July 29/30 or 30/31 which will conclude the observing schedule for this meteor shower.

All meetings will take place at the St Francis School ground at the corner of Inglis and Robbie Street, at 11:45 pm, weather permitting. Those members planning to attend should dress warmly for the occasion. Also you will need such articles as a reclining chair, pencil, flashlight tinted red and something firm to write on.

For further information please contact Group Leader Mr. J. McGuigan, 37 Bellevue Avenue, telephone 2-3259.

J. McG.

REPORT FROM AURORA GROUP: The aurora borealis received its pleasing name in 1621 from the French astronomer Pierre Gassendi, who also made the first map of the moon. Seen from his native land, the auroral glows on the northern horizon, pale whitish green or tinged with red, would resemble a false dawn, which the name suggests. As can be seen from records of the past, the fiery reds, the green and yellow hues of the great displays were impressed on men's memories. To what is this colourful phenomenon due?

The aurora is known to be of the nature of an electric discharge in the highly rarefied gaseous medium of the upper atmosphere. The constituent gases are stimulated to luminescence by the high-speed particles of the solar streams either shot out from the chromosphere at the times of flares or more continuously emitted from regions of the corona.

During May and June no sightings of aurorae have been reported by any members of the group.

B.W.A.

GENERAL ARTICLES

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA: The Royal Astronomical Society of Canada is an organization devoted to the advancement of astronomy and allied sciences. Membership in the Society is open to anyone in the world interested in astronomy. Most of the professional astronomers in Canada are members, but amateurs contribute largely to the total membership.

The Society has a long history. Its origins go back to 1868 when a Toronto Astronomical Club was founded by eight amateur astronomers. In 1890 an expanded group obtained a charter under the Revised Statutes of Ontario as the "Astronomical and Physical Society of Toronto". In 1903, King Edward VII permitted the use of the word "Royal" and the Society became "The Royal Astronomical Society of Canada".

From 85 members in 1893, the Society has now grown to nearly 2,000 members. For some years after incorporation, the regular meetings of the Society were held at the residences of the members. As it grew, they were shifted to buildings of the University of Toronto. In 1906, a branch was formed at Ottawa, and thus the idea of Centres of the Society came into being. There are now 14 such Centres in Canada, stretching from Halifax in the east to Victoria in the west. Once every year, when the annual meeting is held, representatives from these Centres meet together.

It is hardly possible in a few words to indicate the enormous scope of the Society's activities, and the real power that they give to astronomical knowledge and interest in Canada. There are two main areas of activities sponsored by the Society. One area is the publications. The JOURNAL appears bi-monthly, six issues a year, as a medium for spreading astronomical knowledge in Canada, and the work of Canadian astronomers internationally. The OBSERVER'S HANDBOOK appears each year, a compendium of about 80 pages of information invaluable for any person who wishes to "keep up with the sky".

The other activities are those of the Centres. Each Centre of the Society conducts programs of its own and holds regular scheduled meetings, most of which are open to the general public. Members take part in various kinds of sky observations, such as the study of aurorae, meteors, sun-spots, variable stars and artificial satellites.

New Centres may be established at any time within Canada when there is sufficient, continued interest to warrant this. A minimum of twenty-five persons meeting together for at least a year, is the usual standard before a charter can be granted to a Centre. Our Constitution does not permit the Society to accept as Centres groups outside Canada, but these may be considered affiliated groups if they so wish.

In 1956 the Society passed a milestone when it purchased its own home, after renting various office suites for half a century. Its permanent home is a substantial brick property in the heart of Toronto, near the corner of College Street and Spadina Avenue. This location is

ideal for easy access to the University, being just a block west of the present campus, but directly south of and adjacent to the new extension campus. To reach the Society headquarters by public transportation you take a Spadina street car or bus, or a Carlton street car. Under the supervision of the Executive Secretary, the office is open from 9 a.m. to 5 p.m. Monday through Friday, and the phone number is WALnut 3-3784.

At headquarters is housed the astronomical library of the Society which contains several thousands of volumes of monographs and astronomical periodicals. Over fifty periodicals are received regularly, most of them in exchange for the Society's JOURNAL. A set of 700 astronomical slides is also here. Any of these books or slides may be borrowed by mail.

The Society offers two medals each year, the Chant Medal for the most outstanding Canadian amateur contribution to Astronomy and the Gold Medal for the student who graduates from the Mathematics and Physics course at the University of Toronto with the highest standing in Astronomy.

The Toronto Star,
March 1, 1958.

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HALIFAX CENTRE

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

List of Members - June 30, 1960

Dr. R. L. Aikens	42 Bellevue Ave., Halifax.
Mr. David Aikens	42 Bellevue Ave., Halifax.
Mr. R. G. H. Allen	63 Chebucto Road, Halifax.
Mr. B. W. Allen	419 Windsor Street, Halifax.
Miss Patricia Amerault	185 South Park Street, Halifax.
Mr. H. M. Curran	P.O. Box 303, Halifax.
Mr. Donald Duchene	64 LeMarchant Street, Halifax.
Miss Margo Dunsworth	11 Regina Terrace, Halifax.
Mr. Gordon Harria	56 $\frac{1}{2}$ Lawrence Street, Halifax.
Mr. Gordon Hart	55 Inglis Street, Halifax.
Mrs. Fred Heath	75 Crichton Avenue, Dartmouth.
Mr. Peter G. Hebb	111 LeMarchant Street, Halifax.
Mr. Murray Higgins	405 Bayers Road, Halifax.
Mr. James McGuigan	39 Bellevue Avenue, Halifax.
Mr. John Manolopoulos	8 Waegwoltic Avenue, Halifax.
Mr. C. F. Moseley	11 Pine Street, Dartmouth.
Mr. Roger Mosher	57 Duffus Street, Halifax.
Miss Carolyn Naftel	27 $\frac{1}{2}$ Hemlock Avenue, Halifax.
Mr. K. D. Naugler	18 Ralph Devlin Drive, Halifax.
Mr. H. F. Roberts	60 Victoria Road, Halifax.
Mr. John Ryan	New Victoria, Cape Breton, N.S.
Mr. R. C. Stanners	Canadian Armed Forces, Europe.
Mr. Wm. Take	C/O N.S. Museum of Science, Halifax.
Mr. Michael Tweedie	16 Norwood Street, Halifax.
Mrs. W. B. Wallace	61 Oxford Street, Halifax.
Mr. Brian Wheelock	S.S. No.1 Armdale, Halifax.
Mr. D. G. Withers	13 Brussels Street, Halifax.

BIBLIOGRAPHY OF BOOKS ON ASTRONOMY

at

THE NOVA SCOTIA MUSEUM OF SCIENCE

- AN INTRODUCTION TO ASTRONOMY by Robert H. Baher
OUR WONDERFUL UNIVERSE by C. A. Chant
GENERAL ASTRONOMY by Sir James H. Jeans
PALOMAR by Helen Ulright
PICTORIAL ASTRONOMY by Alter and Clemenshaw
THE UNIVERSE AROUND US by Sir James H. Jeans
TRANSACTIONS OF THE INTERNATIONAL ASTRONOMICAL UNION VOL. VII, 1952
THE HISTORY OF ASTRONOMY by Georgio Abetti
SOURCE BOOK IN ASTRONOMY by Shapley and Howarth
ASTRONOMY II, ASTROPHYSICS AND STELLAR ASTRONOMY by Russel, Dugan and Stewart
HOW TO MAKE AND USE A TELESCOPE by Williams and Moore
ASTRONOMY FOR EVERYONE by Martin Davidson
GUIDE TO THE PLANETS by Patrick Moore
THE NATURE OF THE PHYSICAL WORLD by Eddington
SUN MOON AND STARS by William I. Skilling
FOUNDATION OF PHYSICS by Lindsay and Morgenau
CONSIDER THE CALENDAR by Bhola D. Panth
SUN'S TRUE BEARING OR AZIMUTH by John Burdwool
ASTRONOMY WITHOUT A TELESCOPE by Maunder
SCIENTIFIC USES OF EARTH SATELLITES by Van Allen
THE BIRTH AND DEATH OF THE SUN by George Gamow
THE STARS ARE YOURS by Pichering
THE STARS by Jeans
FIELD BOOK OF THE STARS by Olcott
THE INTERNAL CONSTITUTION OF THE STARS by Eddington
THE STORY OF VARIABLE STARS by Campbell and Jacchia
GALAXIES by Shapley
BETWEEN THE PLANETS by Wateon
THE MILKY WAY by Bok and Bok
OUR SUN by Menzel
EARTH MOON AND PLANETS by Whipple
ATOMS STARS AND NEBULAE by Goldberg and Aller
TELESCOPES AND ACCESSORIES by Demitroff
ASTRONOMY WITH THE NAKED EYE by Garrett P. Servis
THE MYSTERIOUS UNIVERSE by Jean
THE END OF THE WORLD by Kenneth Hewer
ATOMS IN ACTION by George Russell Harrison
SUN SPOT IN ACTION by Stetson
THE BOOK OF STORMS by Eric Sloane
THE SUN AND ITS INFLUENCE by Cellison