S T A R D U S T

A monthly publication of the

EDMONTON CENTRE, ROYAL ASTRONOMICAL SOCIETY OF CANADA

And the

QUEEN ELIZABETH PLANETARIUM

MEETING: December 8, 1968 8:15 pm

Room V 107
Math-Physics Building,
University of Alberta.

SPEAKER: Mr. Barry Brown

Mr. Brown will speak on "Photoelectric Measrement of Variable Stars".

PRESIDENT'S MESSAGE:

Amateur Astronomy is a hobby which can hardly be matched by any other for the fields that are available for you to work in. To name a few there are Lunar Observations, Planetary, Variable Stars, Aurora (Northern Lights), Meteor Showers, Man Made Satellites and many others.

As you can see from the above it is not necessary that you have a telescope to take an active part in Amateur Astronomy.

There is a saying that if you can walk around a barrel you can build a telescope. This saying is absolutely true although some of us may be finding it more difficult to reach the barrel as the years go on.

I would like to welcome those of you who joined our Society last month and if you have any problems in Astronomy, please let us in on them.

The time is here to wish all of you "A MERRY CHRISTMAS AND A VERY HAPPY NEW YEAR".

Angus Smith.

NOVEMBER MEETING:

The November meeting was taken up with the annual reports. The guest speaker, Mr. Scott Reed, highlighted this meeting with his topic, "The Planet Earth". His interesting and informative talk was enjoyed by all and the research that went into his topic was much appreciated.

The secretary and treasurer remind you that the annual dues should be paid at this meeting to enable them to compile an up-to-date mailing list for January. You may not receive "Stardust" if your name is not on the list. When all dues are paid the executive will be able to make plans for the year.

OBSERVER'S NOTES:

In the past six Fridays we have had only three evenings of reasonable observing. There has been a good response from active observers who have brought their telescopes to the Planetarium and made a valiant effort to see clusters and other Messier objects.

Angus Smith reports that the seeing from his observatory is very poor due to cloud cover and he is now wondering whether he is living closer to Vancouver than to Edmonton.

Ralph Haechel reports poor conditions in his area, however, he has been able to observe Saturn and Venus. Early one morning he observed Jupiter and Mars. After repairs to his stop-watch were made his short-wave receiver gave out and this does not help in occultations. Oh well!! the quiet evenings during your hunting trip to the west will even things out. (He is taking his 6" reflector for company.)

AURORA: Chris Gainor

At the November meeting more people showed an interest in observing Aurora than there were kits available. The forms will be ordered and when they arrive observers may get them from me.

The drawings displayed by Brian Dowling showed the beauty in the many forms and colours of an Auroral display.

THE DECEMBER SKY:

Sky watchers will be very busy during December as Saturn and Venus are in the evening sky and Jupiter and Mars in the morning.

On Friday, December 13th the Geminid Meteor Shower will be seen. This shower is one of the most active with an hourly rate of 50.

Saturday, December 21st the Winter Solstice begins and on Sunday the 22nd the Ursid meteors are most active. There is an hourly rate of 15 for this shower.

SPACE NOTES:

Apollo 8 will go to the Moon!! The National Aeronautics & Space Administration has announced that Apollo 8 will prepace for orbital flight around the Moon. Crew members will be Commander Frank Borman, Command Module Pilot James A. Lovell and Lunar Module Pilot William A. Anders.

The team will first orbit the Earth to insure the flight conditions of all systems before leaving on the journey to the Moon. They will establish a lunar orbit at about 70 miles above its surface. The entire mission will last approximately six days. The launch of Apollo 8 will be no earlier than December 21, 1968.

N.A.S.A. has also named the crew members for Apollo 10. The crew will be made up of Thomas P. Stafford, John W. Young and Eugene A. Cernan. Appollo 10 is scheduled for the second quarter of 1960.

PLANETARIUM NOTES:

The Planetarium field in Canada has expanded again. The H.R. MacMillan Planetarium directed by Dave A. Rodger is now open in Vancouver. In Toronto the MacLaughlin Planetarium has also opened with Dr. Henry King as the Director. We in Edmonton with these two new facilities every success.

The Friday telescope night is going very well. We at the Queen Elizabeth Planetarium appreciate the assistance the members of the R.A.S.C. have given. This undertaking is becoming known for we have received calls of inquiry about it.

The Queen Elizabeth Planetarium is presenting the annual program "The Star of Christmas". This program will run until Sunday, January 5, 1969.

In the New Year we will present a program called "The Gift of Light". We take light for granted yet for the astronomer it is his most valuable

tool. The Gift of Light will portray the many ways that man has used light to advantage through the ages.

We would like to take this opportunity to wish each and everyone

" A MERRY CHRISTMAS AND A HAPPY NEW YEAR".

PHOTOGRAPHING THE NIGHT SKY

The night sky holds many wonderous objects that the enthusiastic amateur will want to capture on film. The greatest drawback in stellar photography is that your telescope will require a drive, the instrument must be in perfect alignment with Polaris for if it is not you will have a blurred image, the stars will leave trails caused by this misalignment. Unwanted motion will also be magnified as the power of the telescope is increased. If the camera is mounted on the side of the telescope tube the night sky can be photographed in all it's splendor. In working in this manner we escape motion accented by magnification, since the camera is covering a greater field than the telescope, motion that may appear great at the eye-piece while guiding will go practically unnoticed by the camera. Our camera, by using this method will be able to capture entire constellations and an interesting photo-atlas can result. A system of driving is still required. This may be done by mounting a system of gears on the polar-axis and driving by hand. By using a fairly high power at the eye-piece and distorting a bright star in the field reasonably close tracing may be done.

Before we now dash out with our camera and a handful of gears there are still a number of problems to be overcome. The main problem is the selection of gears. A number of gears may be readily available but they will have to mash properly and be of a good reducing ratio. You will want one large gear mounted on the polar-axis driven by two or three (or more) smaller ones. This aids in keeping motion to a minimum and allows you to turn the first gear at a faster rate with less strain on you while guiding the telescope. Alignment with Polaris is still a must but a few trial runs will bring you close for Five or Ten minutes of exposure.

Practice. Practice is perhaps the most important aspect of the whole operation. You will want to be able to align your telescope with Polaris quickly and be able to follow a star smoothly, so that when your camera is in operation you and the drive will operate as a unit. Practice with all equipment mounted as this makes a difference to your driving.

-----to be continued.

LETTER FROM NATIONAL:

Dear Member:

Because our old Constitution and By-laws were registered only in the Province of Ontario and because they were quite inadequate for a Society now holding valuable roperty, the Council of The Royal Astronomical Society of Canada decided several years ago to apply for a new Charter under the provision of Part II of The Canada Corporations Act. Since then, a Committee has spent many hours drafting a new Constitution and By-Laws as the basis of this application: expert legal advice has been sought and acted upon. The Council considers that a motion passes at the last Annual Meeting of the Society on March 15, 1968, authorized us to go ahead with the application for the Charter.

The purpose of this letter is to acquaint members with the proposed Constitution and By-Laws in a summary fashion, and to invite them to register their approval or disapproval. The detailed document will be published later, but steps are being taken to allow all members to see the document now and any member who wishes a copy at this time may have it by applying to the Executive Secretary at 252 College Street.

The name of the Society is to be registered as The Royal Astronomical Society of Canada 1968. The addition of "1968" is an expedient recomended by our legal adviser in the application to ensure its acceptance; it will be dropped in a year or two.

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Representation on Council: Each Centre may elect one member to the Council for each 200 members or portion thereof and one further member for each additional 200 members or portion thereof.

Finance Committee: A Finance Committee of three members, including the Treasurer, will replace the present Trustees and will be responsible for the administration and investment of the special funds of the Society, reporting to the Council. Investment may be made in securities authorized under the Canadian and British Insurance Company Act.

Proxies: Voting by proxy at annual or special general meetings of the Society is introduced.

Apart from these, to the best of my judgement, there are no significant changes in the By-Laws, but the new document is much clearer then the old one, conforms to the Canada Corporations Act and will put the Society in a safer and sounder position.

PLEASE COMPLETE AND RETURN THE BALLOT.

With thanks for your co-operation.

yours very truly,

(signed) Norman Green,

National Secretary.

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