# NATIONAL NEWSLETTER

## April 1981

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Vol. 75, No. 2

The campus of the University of Victoria, Victoria, B.C. provides a spectacular background for the 1981 General Assembly of the RASC, June 26-29, 1981. Make plans now to attend!

# NATIONAL NEWSLETTER

## April, 1981

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Centre and local items, including Centre newsletter should be sent to the Regional News Editor. With the above exception, please submit all material and communications to:

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Deadline is six weeks prior to month of issue.

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## Clearing the Housekeeping

The year 1981 marks the publication of the 75th volume of the *Journal of the RASC*. During the time that our Society has published its *Journal*, membership has grown to about 2700 across the country and around the globe. The RASC is one of the largest bodies of amateur and professional astronomers in the world. *The Observer's Handbook*, now in its 73rd edition, is bigger and better than ever, and enjoys a reputation for excellence worldwide. In spite of the vagaries of the Post Office, your Society manages to deliver 6 issues of the *Journal* and *National Newsletter* a year, which your editors hope are interesting and informative. Rosemary Freeman, our Executive Secretary, manages the day-to-day operations of the National Office with great skill and efficiency.

All of this costs money. Many of our readers will be aware of the large increases in costs of printing, along with other essential materials and services needed to run any business. The current fee structure was established in 1978. While income through membership dues and grants from government has remained stable, the Society's expenses have risen steadily, and your Council must now face the prospect of an operating deficit in 1981. It has become necessary to consider an increase in the dues. Members will receive along with their notice of the Annual Meeting to be held in Victoria in June, a proposed revision of the National Society By-Law stipulating membership dues. The new dues proposed are $20 for regular, $12.50 for youth and $300 for life members. Your Council feels that small, relatively frequent increases are more desirable (i.e. less painful) than an infrequent large increase, and has endeavoured to pare expenses to a bare minimum. A dues increase is a regrettable but necessary step. We hope that you, the members, will support this moderate increase at the Annual Meeting.

## Call for Nominations

There will be one vacancy in the Executive of the Society which is to be filled at the election during this year's Annual Meeting. After several years of service, our National Secretary, Rev. Norman Green, has indicated that he wishes to step down at the end of his current term in June.

The By-Laws provide that "any five members of the Society, in good standing, may nominate candidates for any office, provided that such nomination, accompanied by a letter of acceptance from the nominee, shall be received by the Secretary of the Society not less than sixty days before the date for the annual meeting."

Such nominations are welcomed, and should be sent to the Chairman of the Nominating Committee, Dr. John Percy, c/o the National Office of the RASC, 124 Merton Street, Toronto, Ontario M45 2Z2, no later than *April 21, 1981*.

## International Astronomical Youth Camps 1981

With a history of twelve successful years of international youth camps behind it, the IAYC organisation takes pleasure in announcing its plans for 1981. As always, the aim of the IAYC will be to further interest in amateur astronomy, and to promote understanding amongst young people of different nations. To fulfill this intention, two IAYC workshops will take place, one in Egypt and another one in Southern Germany. These ventures are being organised by the organising committee of the IAYC – the IWA – in association with the Al-Ahram Youth Science club in Egypt. The date of commencement for the Egyptian IAYC will be around the tenth of August 1981, and for the three week duration of the camp participants will be accommodated in buildings at the Egyptian site of Ismailia on the Suez Canal.

The programme will comprise a balanced blend of events both astronomical and nonastronomical. All participants will be asked to join one group out of a selection of seven, each dealing with a different specialist topic of astronomical interest. A substantial proportion of each participant's time will be spent in discussion and making observations and calculations with his or her fellow working group members. Participants are encouraged to contribute their own ideas and plans for the working group, but each group is under the supervision of a capable leader who will be on hand to make suggestions and to give help when required. In addition to the astronomical activities, there will be also a leisure programme consisting of games – both light-hearted and more thought-provoking, sport, and other social events. Excursions, including a trip to Sinai, are presently being planned.

The total cost for participation in the IAYC 1981 will be approximately 300 DM to cover accommodation, food, and working and recreational programmes. Participants either may make their own travelling arrangements to Egypt or can join an IAYC group flight leaving from central Europe and with a specially reduced fare.

The second IAYC will be held in Germany near the Bavarian town of Obersteinbach, in an old castle now being used as a youth hostel. It will also be an international workshop with a programme similar to that of the Ismailia camp. Working groups will range from topics in the solar system to various aspects of stellar astronomy. This IAYC will start in the end of July, 1981, lasting for three weeks.

Restrictions of the premises available at the camp sites limit the number of participants of the IAYCs 1981 to sixty persons in Ismailia, resp. forty to fifty persons in Obersteinbach. Nevertheless, all interested young people between sixteen and twenty-two years of age are invited to write to the below address for further information and an application form:

Martin Grossmann
Horstmarer Landweg 256/3,
4400 Muenster
Federal Republic of Germany

# Nouvelles des Centres français

**de Damien Lemay**

Le samedi 31 janvier 1981 s'est déroulé au Planetarium Dow de Montréal, un colloque sur l'astrophotographie. Une idée originale d'André Paul de la SAM, les animateurs étaient:

1 *Denis Bergeron*: exploitation scientifique des clichés astronomiques par l'intermédiaire du projet Problicom.
2 *Andre Paul*: technique spéciale de chambre noire appliquée à l'astrophotographie.
3 *Real Manseau*: la construction et l'utilisation d'une monture Poncet en astrophotographie.
4 *Michel Rebetez*: la photographie lunaire et planétaire (détermination des temps de pose).
5 *Jean Vallieres*: photographie des objets lointains, comme des galaxies, amas ouverts, nébuleuses.

Il y avait quelques trente (30) réservations faites à l'avance, mais aidé par des conditions météorologiques favorables, on totalisait plus de quatre-vingt-dix (90) inscriptions lors de cette journée memorable, plusieurs personnes étant venues de l'extérieur. L'enthousiasme manifesté laisse présager la réussite de belles photos inédites qui pourront être publiées dans les revues d'astronomie. Il a été suggéré de répéter cette expérience, qui deviendra probablement un évènement annuel. Le revenu net accumulé lors de cette "premiere", servira au financement du prochain colloque.

Dans un autre ordre d'idée, la SAM tente une nouvelle expérience pour rejoindre les membres qui, pour diverses raisons, ne peuvent assister à la reunion régulière de chaque mardi soir. Une fois par mois le samedi après-midi il y aura rencontre de 13:30 à 16:00 heures au Planetarium Dow. Des animateurs et conférenciers traiteront les sujets désirés.

A Québec, Alphonse Tardif expérimente l'hypersensibilisation du film 2415 de KODAK, ce dernier remplace le film HIGH CONTRAST COPY (HCC). Ce nouveau film est facilement disponible, conserve la propriété principale du HCC, c'est-à-dire un grain extrêmement fin. Cependant, il a un avantage marqué pour l'astrophotographie, le traitement avec un mélange d'azote et d'hydrogène augmente considérablement sa vitesse tout en lui conservant la finesse de son grain. La poursuite des expériences optimisera le mélange des gaz, le temps et la température au contact des gaz, de même que la mécanique permettant d'effectuer l'hypersensibilisation. Nous en reparlerons.

# Thank You, Dr Hogg

**by Ian G. McGregor**
**Toronto Centre**
**Associate Editor**

For anyone interested in astronomy and a reader of the Toronto Star newspaper Saturday edition a regular feature to be read every week has been Dr. Helen Hogg's astronomy column "The Stars". Each week a different topic would be discussed – the appearance of the planets, a special event like a meteor shower or an eclipse, recent discoveries by professional astronomers, and the activities of amateurs across Canada.

If you saw "The Stars" column on January 19, 1981 you were no doubt saddened to learn that Dr. Hogg is retiring as writer of the column after 30 years. There has been a weekly astronomy column in the Star since 1940 when Dr. Peter Millman became its first writer, then followed by Dr. Frank Hogg, and then on January 13, 1951, by Dr. Helen Hogg.

For Canadians her column has been invaluable for showing the work of both amateur and professional Canadian astronomers. For example, on May 27, 1978 appeared the headline "Canadian found comet visible with telescope" and on July 7, 1980, "Former Kingston man given astronomy medal". In these and in many, many other columns Dr. Hogg has highlighted

Canadian astronomy and wherever possible, the RASC. And this she has done in the informative, interesting, and easy to read style of her weekly columns.

We in Toronto owe Dr. Hogg a special debt as her promotion of astronomy has no doubt caught the attention of many people who have eventually become members of our Centre.

Dr. Helen Hogg has retired as the writer of "The Stars". But with this change she has more time to return to the stars as she states "I will have more time for my lifelong field of research on globular star clusters".

I am sure I speak for many of her readers both past and present when I say "Thank you, Dr. Hogg. Your efforts have been appreciated".

NOTE: At the present time it is not clear if there will be an astronomy column in the Toronto Star in the future. I would urge all RASC members to write to the newspaper to show that there is a large reading audience who wish to see an astronomy column a regular feature of the Star.

# The Failure of Scottish Astronomy in the Eighteenth Century – Part I

**by Ian Stuart**
**Hamilton Centre**

A funny thing happened to Scotland on its way to the 19th century – it became civilized. In an age before foreign aid for developing countries, Scotland in the 18th century transformed itself from one of the world's most backward countries into one of its most advanced. Scotland accomplished this by sending its aristocratic youth abroad on the 'Grand Tour' of European capitals. They returned to Scotland full of new ideas, political reforms, and most important, scientific knowledge. In the course of the 18th century, Scotland became a world leader in science, particularly in the fields of medicine and engineering. However, despite this dramatic improvement in Scotland's scientific stature, Scotland failed to develop a strong astronomical tradition.

When one looks at the list of great astronomers throughout history: Ptolemy, Galileo, Kepler, Copernicus, Herschel and others, one is made aware of the fact that there is a conspicuous absence of any Scottish astronomers. The Scots never did produce a major astronomer, nor did they as a people make any dynamic contribution to the advancement of the science. This is unusual since evidence indicates that astronomy papers were the second or third in the number presented to the members of the Royal Society of Edinburgh in the 18th century.

Upon close examination of the conditions in eighteenth century Scotland, there appear several possible explanations for the lack in the development of a strong astronomical tradition.

The first, and perhaps the most important reason for the failure in the development of a strong Scottish astronomical tradition lay in the fact that Scotland could not really afford the cost of astronomical instruments. A good domestically built 5″ refracting telescope cost nearly £60. A complete observatory equipped with quadrants, pendulum clocks and orreries cost approximately £400. This was well beyond the price of all but the most wealthy amateurs of Scotland. The Scottish universities were funded by town councils who, in general, could not see the value of giving large amounts of money for astronomical research. Edinburgh University did not get a fully functioning observatory until 1826.

The costs mentioned above were for domestically built instruments, which were few and far between. Most of the astronomical equipment in Scotland was imported which further increased the price. Transporting a telescope to Scotland in the 18th century was a risky business. Shipping a telescope to Scotland left the instrument's critical adjustment screws, and in the case of reflectors, their mirrors open to salt water corrosion as well as extreme variances of temperature. Shipping the telescope by land via stagecoach was no safer due to Scotland's

rough and incomplete roads. There was of course the possibility of the telescope being damaged or stolen by highwaymen.

Poor road conditions limited the location of larger telescopes from where they could most effectively be used, such as on top of the smaller hillocks away from the major cities. As a result, astronomers had to contend with the increasing problem of smoke and heat disturbances associated with Scotland's growing urban centres. The resulting unstable atmosphere near cities ruined seeing conditions. In 1769, on the day of Venus' transit of the Sun, the members of the Royal Society took out an ad in the Edinburgh newspaper asking the inhabitants to refrain from lighting their fires from three o'clock until sunset.

The third reason for the lack in the development of a strong astronomical tradition in Scotland can be attributed to Scotland's geographical unsuitability. From an astronomical standpoint, Scotland is poorly situated. Glasgow and Edinburgh are both nearly at 56° north latitude, while Aberdeen is at 58° north latitude. This extreme northern location causes short summer nights with extreme atmospheric disturbance caused by the heat of the sun on Scotland's mountainous and rather barren terrain during the long summer's day. England is more fortunate in this respect because the land is flatter and more lush. The ground therefore holds more water which tends to reduce the amount of heat irradiated by the ground into the night air, causing less disturbance of the air.

The advantage of Scotland's long winter nights was negated by two astronomical disadvantages. First, the ecliptic only attains a maximum angle above the horizon of 57.5° at Edinburgh and Glasgow, and 55.5° at Aberdeen. This means that the planets could only be studied in any detail when the planet was at or near the high point on the ecliptic. In the case of Jupiter, this would happen once every 12 years; Saturn, once every 24 years. When the planets reached the lowest point along the path of the ecliptic, they would only rise roughly 8.5° above the southern horizon and would in most cases be cut off by the mountains. In between these two points along the ecliptic, the planets would rise high enough to be seen, but not high enough to escape the effects of atmospheric distortions and heat haze. Secondly, being so far north, the sky was often disturbed by auroras that sometimes reached the zenith. Aurora activity was unusually strong during the 18th century. There is a possibility that these auroras may have hidden some of the more northerly galaxies from Scottish astronomers that Messier recorded in his catalogue of nebulae.

However, the opportunity for observations on the long winter nights was most severely hampered by Scotland's climate. In the winter, the climate of Scotland is strongly influenced by the westerlies and the warm Gulf Stream which causes the sky to be nearly constantly overcast.

The economic and geographical encumbrances that I have just described caused Scottish astronomy to take a different course from that of England or France. In the next issue, I will discuss some of these differences. Also, we'll take a look at some Scottish astronomers and their contribution to and influence on the science of astronomy.

Reprinted from *Orbit*

## Centre News

Vancouver Centre has recently been the recipient of some very generous gifts. In the 1981 January issue of *Nova*, Tom Tothill acknowledges the gift from Dr. Art Crooker of a finished 16-inch f/6.3 Pyrex mirror, a testing stand and large eyepiece. The mirror has a central hole for a Cassegrain focus, and is already figured and aluminized.

In the meantime, B.C. Research has indicated that it will donate a 24-inch minor grinding machine to the Vancouver Centre. The only problem now is where to set it up... .

Randy Attwood of Toronto Centre has been preparing a series of television shows on astronomy for the past four months. The first three shows were aired in January and February over Rogers Cable Television in the metropolitan Toronto area and were well received. Monthly shows are to be produced starting in the spring.

# NAVIGATION vs ASTRONOMIE

**par Raymond Auclair**
**Unattached Member**

(Extrait d'une présentation faite dans le cadre de l'assemblée générale 1980 à Halifax) Normalement, on s'intéresse à l'astronomie pour approfondir nos connaissances et pour élargir notre vue de l'univers. Mais il arrive que notre profession nous oblige à s'y intéresser; c'est le cas pour les officiers de navigation, par exemple.

Je veux vous faire part des problémes auxquels le navigateur doit faire face lorsqu'il "affronte" l'astronomie telle que nous la connaissons aujourd'hui.

*Problème numéro un*

La science de la navigation devient de plus en plus complexe. Le navigateur ne peut plus se contenter de savoir mener son navire à bon port ou de connaitre la route à suivre entre deux points. Il doit maintenant être un expert en relation de travail, en conservation d'énergie, en électronique ... . Bref, la place de la navigation astronomique, jadis la fierté du monde maritime, devient de moins en moins importante pour le navigateur.

Autrefois, un navigateur se devait de connaitre par cœur le nom et la position de la soixantaine d'étoiles utilisées en navigation. II pouvait les identifier dans le firmament, sous n'importe laquelle latitude. Il pouvait reciter et méme expliquer les différentes formules mathématiques à utiliser pour obtenir la position du navire à partir de quelques observations de ces astres. Quoi de plus naturel: en mer, la connaissance de l'astronomie était souvent le seul outil à sa disposition pour trouver la position de son navire.

Avec l'avènement de différents systèmes électroniques de navigation et face à tous ces domaines on il doit se spécialiser, le navigateur n'est plus motivé envers l'astronomie. Il n'a plus le temps de s'intéresser à l'astronomie comme ses prédécesseurs le faisaient.

*Problème numéro deux*

Le deuxième problème vient de l'astronomie elle-même. Les systèmes de coordonnées utilisés en astronomie sont souvent inutilisables par le navigateur. Vous avez entendu parler des coordonnées équatoriales, écliptiques et galactiques.

Considérons d'abord le système équatorial. La première figure nous montre une sphère qui sert à représenter la voûte céleste que l'on voit de la terre. Nous voyons présentement cette sphère de l'extérieur et de l'est. La circonférence indique la projection, sur le firmament, du méridien local de l'observateur. On dira, d'un astre situé sur cette circonférence, qu'il passe au méridien. L'ascension droite d'un tel astre sera égale à l'heure sidérale au méridien de l'observateur. De là, on peut calculer facilement l'angle au pole de tout astre en faisant la différence entre l'heure sidérale et l'ascension droite de l'astre en question. La déclinaison de l'astre, elle, est calculée, sur le méridien céleste de l'astre, à partir de l'équateur céleste (d'où le nom du système de coordonnées).

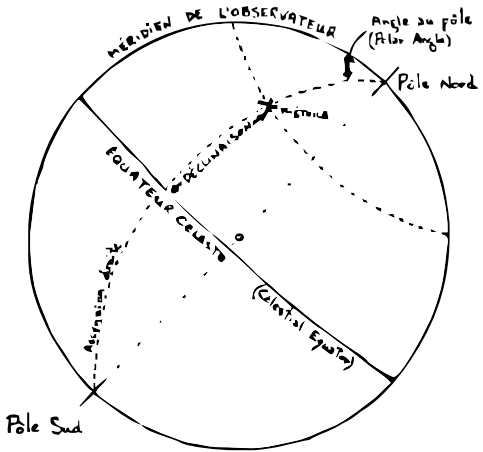
Ce système se prête bien aux observations des astronomes carla plupart de vos instruments ont une monture équatoriale. On n'à qu'a aligner l'axe de cette monture parallèlement it l'axe de rotation de la terre, trouver l'heure sidérale pour sa position, calculer l'angle au pôle de l'astre a observer puis à règler l'autre axe en fonction de la déclinaison et, bingo, on tombe dessus.

Mais voilà, le navigateur se sert de l'astronomie pour la trouver, sa position. Il ne connait donc pas l'heure sidérale pour sa position et, de plus, le navire n'offre pas une plateforme assez stable pour y installer un instrument dont l'axe pounait être correctement orienté. La seule référence stable (?) disponible, pour notre observateur marin, est l'horizon. Ses calculs astronomiques seront donc basés sur un système de coordonnées horizontales.

La deuxième figure nous montre la sphère céleste selon ce système horizontal. Le seul point commun avec la sphère précédente est cette circonférence qui représente le méridien de l'observateur.

La position de l'astre sera indiquée par sa hauteur au-dessus de l'horizon, mesurée à l'aide

## SPHERE CELESTE
### Coordonnées Equatoriales



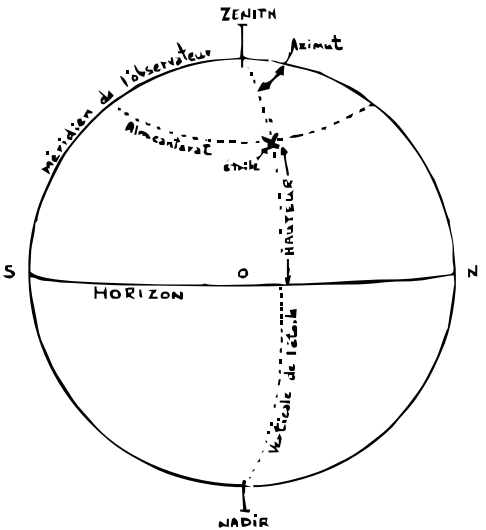

Base (Référence) : EQUATEUR

ANGLE AU PÔLE = Diff. entre HEURE SIDÉRALE & ASCENSION DROITE

DÉCLINAISON = ARC entre l'Equateur et l'étoile mesuré sur l'ascension droite

FIG. 1

## SPHÈRE CELESTE
### Coordonnées Horizontale




Base (Référence) = HORIZON

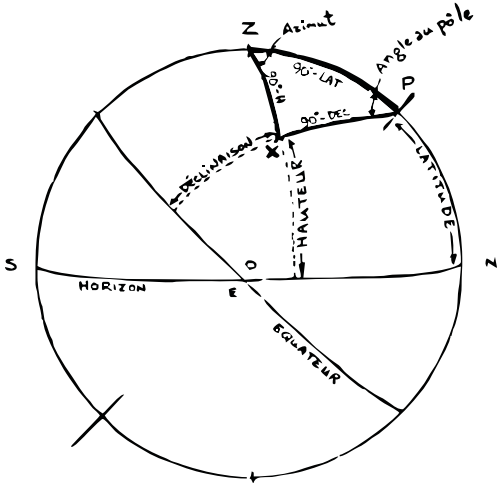
AZIMUT = ANGLE AU Zénith entre le méridien et la Verticale

HAUTEUR = ARC entre l'HORIZON ET L'ETOILE mesuré sur la Verticale

FIG. 2

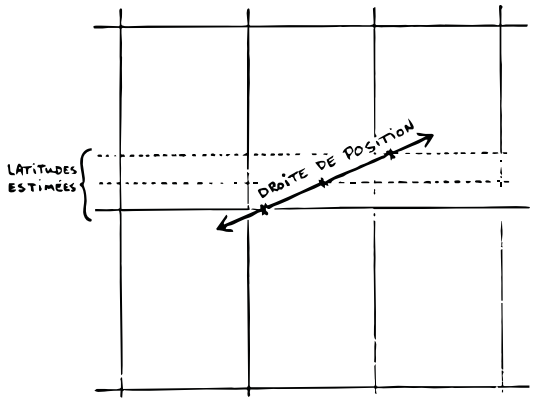
# SPHÈRE CELESTE

## Combinée




1° $\cos P = \dfrac{\sin H - \sin(\text{LAT}) \times \sin(\text{DEC})}{\cos(\text{LAT}) \times \cos(\text{DEC})}$ (LATITUDE ESTIMÉE)

2° LONGITUDE (Pour la latitude estimée) =
Angle au pôle à Greenwich − Angle au pole calculé




1° Le navigateur choisit trois latitudes
2° Il calcule une longitude pour chacune
3° Il relie ces trois points

d'un sextant, et son azimut (sa direction), mesurée à partir du nord, à l'aide d'un compas ou d'une boussole.

Une fois l'observation faite, le navigateur doit faire coïncider les deux sphères afin de trouver sa position. La troisième figure nous montre le triangle sphérique PZX (aussi appelé triangle de position) qui résulte de la superposition des deux systèmes de coordonnées. Il trouvera les données équatoriales, pour l'astre observé, dans un almanach nautique qui donne les éphémérides à toutes les heures, à partir de Greenwich (longitude zero). Il estimera une latitude et fera les calculs nécessaires pour trouver la longitude, sur cette latitude, d'où il aurait pû observer la hauteur qu'il a obtenu au sextant. Il recommence ce même calcul pour deux autres latitudes, une de chaque côté de la latitude estimée. Il reliera les trois points ainsi obtenus et saura que sa position se situe quelque part sur cette ligne de position.

A l'aide de deux autres observations, prisent en même temps, il trouvera sa position qui se trouve à l'intersection des trois lignes de position.

Malgré l'utilisation d'almanach plus précis, de tables ou de calculatrices plus exactes, il est difficile d'obtenir une precision meilleure qu'un mille. Et c'est la question de la précision qui nous amène au

*Problème numéro trois*

Afin de pouvoir observer la hauteur d'un astre au-dessus de l'horizon, il faut, naturellement, voir à la fois l'astre et l'horizon. Le jour l'horizon est très facile à voir mais seul le soleil est visible. La nuit on a une multitude d'astres disponibles mais il fait trop noir pour voir l'horizon. En fait, le navigateur ne peut prendre les observations nécessaires au calcul de sa position que durant la période dite du crépuscule nautique, c'est-à-dire lorsque le soleil se trouve entre 6° et 12° sous l'horizon. Cette période, qui revient deux fois par jour, ne dure malheureusement qu'une demie-heure. Si le temps ne lui permet pas de faire régulièrement ses observations, il devra marcher à l'estime. Ainsi sa position devient de moms en moins précise, ce qui peut mettre en doute, dans certains cas, la sécurité du navire.

Le jour, le soleil peut donner un ligne de position qui pouna réduire les possibilités d'erreur, mais la nuit?

Si nous étions au debut du siècle, je répondrais: La nuit, rien à faire. Mais grâce aux efforts des astronomes amateurs qui observent fidèlement les occultations d'étoiles par la lune, nous avons maintenant un moyen de nous en sortir.

En effet, les astronomes professionnels nous ont apportés des almanachs de plus en plus précis et faciles à utiliser. Mais il fallait beaucoup plus de données pour préciser les éphémérides de la lune. Elle est si près de nous que plusieurs facteurs, méme minimes, peuvent affecter sa position apparente.

*Un travail d'équipe*

II a fallu plusieurs dizaines d'années d'observations, surtout celles d'occultations d'étoiles par la lune, pour préciser Ics éphémérides de notre satellite naturel. Il aurait été trop coûteux d'affecter, à ces observations, tous les observatoires professionnels. D'ailleurs cette approche monopolistiquc nous aurait privé de toutes les découvertes spectaculaires qui nous rendent l'astronomie si intéressante. Non, il a fallu compter sur le travail des astronomes amateurs qui ont très bien répondu à l'appel et dont la qualité du travail permet aux navigateurs d'utiliser la lune et d'obtenir ainsi des positions presqu'aussi précises qu'avec les étoiles. Quels avantages en retirent les navigateurs?

D'abord, la lune est un astre facile à identifier; pas besoin d'un cours de trois ans pour la reconnaître dans le firmament. Et, ce qui est plus important, la lune éclaire l'horizon (directement sous elle) suffisament pour les besoins du navigateur.

Ainsi, grâce aux efforts conjoints et au travail d'équipe des astronomes professionnels et amateurs, la navigation est maintenant plus precise et plus sûre, où que nous allions dans le monde.

# A Fire In The Sky

**by Stewart Krysko**
**Edmonton Centre**

It was a clear night, that is as clear as can be expected from downtown Edmonton. I was walking to my car, which was parked in a Jasper Avenue car dealer's lot, when I noticed a bright, purple colored object in the sky approaching from the east. It travelled east to west, passing about 6 to 8 degrees south of Polaris. My first impression was that it was some kind of unusual aircraft. As it passed to the north its full identity became apparent. This fireball was composed of 3 bright pieces accompanied by 10 to 15 fainter chunks. It slowly dimmed as it approached the western horizon, giving the impression that it was fading due to atmospheric extinction as it got further away, rather than burning out or going below the horizon. I happened to glance at my watch when I first noticed the object, and the time was 6:19:05. As soon as it faded away I checked the time once again and it read 6:20:10. It took over a minute to go from horizon to horizon – extremely slow for a normal meteor or fireball! Quite astounded by the whole event, I scrambled into the office to borrow a pen and paper to record the details of my observation while they were still fresh in my mind.

This particular fireball was well observed, both visually, by thousands of northern Alberta residents, and photographically by the Canadian Meteor Patrol. Over the next few days I collected the visual reports from the general public, while Dr. Alan Blackwell of the University of Saskatchewan gathered information from the prairie meteor cameras. The bolide was recorded on two of the cameras, including one at Vegreville, Alberta. Using this information, some facts regarding the object's trajectory could be determined.

It travelled about 7 km/sec at an altitude of about 60 to 80 km. Dr. Blackwell's main intertst was to determine where (if at all) this object reached the ground. When I observed the meteor, it was travelling in a horizontal trajectory. It gave no indication of any pieces falling to the ground at that point. I also received a report from 30km west of Edson, where, as the person also described, the fireball disappeared toward the western horizon. This indicates that if the object didn't skip back into space, it likely came down somewhere west of the Rockies, well beyond the limit of the prairie meteor camera system.

There are two unusual things about this particular object, one being that it travelled so incredibly slow, and the other that it entered the atmosphere almost parallel to the ground. Because its speed was less than that of escape velocity, Dr. Blackwell has postulated that it must have been a satellite dropping out of orbit. The next morning I called the Cheyenne Mountain complex in Colorado Springs and the Cold Lake tracking station and neither one would confirm that it was a satellite re-entry. The Russians, however, launched three Cosmonauts into orbit that week, and I believe that the meteor may have been part of the launch vehicle. The "man made" satellite idea seems to be the most acceptable at this moment. However, another very exciting idea has been proposed. Perhaps this object was not a man-made satellite but a natural satellite – a small chunk of rock that had been orbiting the earth for the last five billion years, essentially earth's second moon!

# General Assembly 1981 – Victoria's The One

The programme of the 1981 General Assembly which is to be held June 26 to 29 on the campus of the University of Victoria, Victoria, B.C. has been set. As in previous years, the reception on Friday night will be followed by a slide and discussion session. The Song Contest will also take place that evening. Paper sessions will be held on Saturday. The government of the province of British Columbia has generously agreed to sponsor the Annual Banquet which will be highlighted by the Ruth Northcott Lecture. There is a full programme of optional tours on Sunday and Monday, which include harbour cruises, tours of the Butchart Gardens and of the Institute of Ocean Sciences and Pacific Geoscience Centre. Sunday features a buffet supper and tour at the Dominion Astrophysical Observatory.

The registration fee of $20 covers all on-campus events including the reception, banquet and group photograph. Off-campus activities (tours, etc.) are separate items. Arrangements can be made for either on-campus or hotel/motel accommodation.

There are two classes in the display competition: individual and centre. All entries must be original and cannot have been presented at any previous General Assembly. Individual and Centre exhibits may involve demonstration of any homebuilt equipment or techniques, observational projects, or whatever. It is hoped that the open category will encourage wide participation and novel types of displays. There will be merit awards for unusual initiative or distinction. Entrants need not appear in person, but it is hoped that they will. Deadline for entries is June 1, 1981.

For registration information and contest entry forms, write:

Victoria Centre of the RASC
Dominion Astrophysical Observatory
5071 West Sannich Road
Victoria, B.C.
V8X 4M6

## To all Members of the R.A.S.C.

**by Bernard Hobdell**
**Sir William Herschel Society**

I am writing to you on behalf of the Astronomer Sir William Herschel who discovered the planet Uranus in 1781. The shadow cast by the great stature of this Dedicated Man of Science, is spanning across the centuries. It is touching each and every one of us.

His ancestral home in Bath, England is in danger of destruction.

Will you please answer this call from the past, and send your financial support (no matter how small) to perpetuate the memory of this great man.

Address Donations To:

The William Herschel Society
290 High Street
Batheaston
Bath, BA1 7RA
England

(*Editor's Note*: An article on Herschel House appeared in the last issue of the NNL. The National Council of the RASC has already responded to this worthy cause with a donation.)

## Telescope Tariff Changed

The Budget introduced by the Minister of Finance on October 28th, 1980, included the enactment of new rates of Customs Duty that came into force on the 29th day of October 1980, and have applied to all goods mentioned in said paragraphs (i.e. 1–8 inclusive of ways and means motion, Customs tariff, number 2, June 2nd 1980) imported or taken out of warehouse for consumption on or after that day ... , included is tariff item number 46203-1 of schedule 1 which states "astronomical telescopes having an objective mirror not less than 3″ nor more than 20″ in diameter or having an objective lens not less than 2½″ nor more than 8″ in diameter; mountings therefore; parts of all the foregoing" shall have FREE duty for "British Preferential Tariff" and "Most Favoured Nation Tariff" (i.e. England and USA respectively) and 30% "General Tariff". The rates in effect prior to those proposed October 28th, were 2.5%, 14.1% and 30%. Then and now, one will still have to pay the 9% Federal Sales Tax. Contact your nearest Customs official before importing a telescope or parts to verify if your purchase meets the requirements for Item No. 46203-1.