



Supplement to the **JOURNAL**

of the **ROYAL ASTRONOMICAL**
SOCIETY of CANADA

ANNUAL REPORT 1979

APRIL 1980

PRESIDENTS OF THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

1890-1894	C. Carpmael	1938-1939	W. Findlay
1895	L.W. Smith	1940	J.A. Pearce
1896-1897	J.A. Paterson	1941-1942	F.S. Hogg
1898-1899	A. Harvey	1943-1944	A.V. Douglas
1900-1902	G.E. Lumsden	1945-1946	A.E. Johns
1902-1903	R.F. Stupart	1947-1948	J.W. Campbell
1904-1907	C.A. Chant	1949-1950	A. Thomson
1908-1909	W.B. Musson	1951-1952	C.S. Beals
1910-1911	A.T. DeLury	1953-1954	J.F. Heard
1912-1913	L.B. Stewart	1955-1957	R.M. Petrie
1914-1915	J.S. Plaskett	1957-1959	H.S. Hogg
1916-1917	A.D. Watson	1959-1960	A. McKellar
1918-1919	A.F. Miller	1960-1962	P.M. Millman
1920-1921	J.R. Collins	1962-1964	R.J. Northcott
1922-1923	W.E.W. Jackson	1964-1966	K.O. Wright
1924-1925	R.M. Stewart	1966-1968	M.M. Thomson
1926-1927	A.F. Hunter	1968-1970	J.E. Kennedy
1928-1929	W.E. Harper	1970-1972	H. Simard
1930-1931	H.R. Kingston	1972-1974	J.L. Locke
1932-1933	R.K. Young	1974-1976	J.D. Fernie
1934-1935	L. Gilchrist	1976-1978	A.H. Batten
1936-1937	R.E. DeLury	1978-1980	J.R. Percy

SECRETARIES OF THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

Corresponding Secretary 1890-1901; Secretary 1902-1919, General Secretary 1920-1949;
National Secretary 1950 onwards.

1890-1899	G.E. Lumsden	1932-1935	R.A. Gray
1900-1902	W.B. Musson	1935-1958	E.J.A. Kennedy
1902-1917	J.R. Collins	1958-1964	J.E. Kennedy
1918-1919	W.E.W. Jackson	1964-1971	N. Green
1920-1923	A.F. Hunter	1971-1974	C.E. Hodgson
1924-1927	F.T. Stanford	1974-1977	D.J. FitzGerald
1928-1931	L. Gilchrist	1978-	N. Green

REPORT OF THE PRESIDENT

During the past two years, I have had the pleasure of visiting almost all of the Centres of the Society. I thank them for their hospitality, and I commend them on the extent and diversity of their activities. These activities not only enrich the lives of their members, but also have a significant impact on the growth of astronomy and astronomical understanding in this country.

Public interest in astronomy continued to grow, especially as a result of the spectacular discoveries made by the Pioneer, Voyager and Einstein satellites. Closer to home, the opening of the Canada-France-Hawaii telescope attracted much interest. Without doubt, however, the highlight of the year was the total solar eclipse of 26 February. Hundreds of members witnessed this first-hand, and several Centres played an important role in informing and advising the general public about this event.

The Society continued to flourish at the national level. A very successful General Assembly was held in London on the Victoria Day weekend, and the local organizing committee is to be congratulated on their excellent work. At the General Assembly banquet, Service Awards were presented to Rolland Noël de Tilly and Alf Scott, the Chant Medal was presented to Rolf Meier for his many achievements in amateur astronomy, the Chilton Prize was presented to Warren Morrison for the discovery of Nova Cygni 1978, and the Simon Newcomb Award was presented to William Calnen. Brian Whittaker of Victoria won the Society's award for the best astronomical exhibit at the Canada-Wide Science Fair (which was being held coincident with the General Assembly in London). Professor Gerard O'Neill of Princeton delivered a memorable Ruth Northcott Memorial Lecture on the colonization of space. A successful display competition was again held in conjunction with the General Assembly, with awards going to several Centres and individual members.

Another highlight of the year was the General Assembly of the International Astronomical Union, held in Montreal in August. The Society mounted a very effective display, which was seen by thousands of astronomers from around the world. Thanks go to Mary Grey, Lloyd Higgs and Rolf Meier for producing the display, and to Walter Jutting for attending to the display for several days.

In October, I had the pleasure of presenting the Gold Medal to Nebojsa Duric. The next day, I represented the Society at the Annual Meeting of the American Association of Variable Star Observers. There, Warren Morrison won a Nova Award, and Quebec amateur Bernard Bois was named as most prolific variable star observer of the year. Rolf Meier, basking in the glory of discovering his *second* comet (1979i), was also present at the meeting.

The National Council held four meetings in four cities, as listed in the Secretary's report. A new Speaker Exchange program was instituted, at the instigation of the Edmonton Centre. This is only one of several national programs designed to foster activity at the local level.

The Society's publications continued to flourish, under the general editorship of Lloyd Higgs. The reminiscences of Jack Heard appeared in three issues of the *Journal*, and many other interesting articles appeared in the *Journal* and *National Newsletter*.

As one can gather from this report, the health of the Society is generally good. Nevertheless, several problems loom on the horizon. The overall membership of the Society continues to rise, but a few Centres are struggling to maintain a "critical mass" of members. Other Centres have difficulty in attracting and retaining a core of active officers. To some extent, the same is true of National Council, which cannot depend indefinitely on the efforts of a few interested individuals. The Society's finances and real assets will continue to require attention. The expense of the publications must be kept in perspective, but also kept in line. The problem of publications in the French language seems to have been alleviated, at least for the present, with the aid of the Ruth Northcott Fund. Nevertheless, this problem – and the related problem of amateur vs professional content in the publications – is never far from sight.

In closing, I wish to thank the dozens of individuals who help to run the Society from day to day, and who help to make the larger decisions which affect the Society's future. I am personally grateful to every one of these people for their support during 1979.

John R. Percy

REPORT OF THE NATIONAL SECRETARY

During the past year much progress has been made in several areas of activity within the Society. Some Centres have recently established local observatories, or are busy with plans for building such facilities; other Centres have ambitious designs for quite large telescopes.

Membership has a tendency to fluctuate somewhat, but on the whole continues at a steadily increasing rate.

Four meetings of the National Council were held during 1979, and in order to have as wide a representation of delegates as possible, only one of these meetings was held at the National Office. On February 25th the National Council met in Winnipeg in conjunction with the total eclipse of the sun on February 26th; on May 18th the meeting was in London at the time of the General Assembly; on September 29th the Council met in Toronto, and on December 9th in Edmonton.

As of September 30th, 1979, membership in the Society was as follows, compared with the same date in 1978:

	1978	1979
Calgary	84	74
Edmonton	103	97
Halifax	102	94
Hamilton	55	71
Kingston	21	19
London	40	45
Montreal	68	85
La Société d'Ast. de Montréal	88	97
Niagara	33	42
Ottawa	239	232
Quebec	117	135
St. John's	12	16
Saskatoon	46	42
Toronto	630	667
Vancouver	134	139
Victoria	94	95
Windsor	39	39
Winnipeg	72	68
Unattached to Centres:		
Canada	233	212
United States	400	380
Overseas	44	49
Honorary	15	15
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	2669	2713

The Society is pleased to acknowledge the receipt of annual grants from the National Research Council of Canada, and from the Ministry of Colleges and Universities for the Province of Ontario.

The effective ongoing activities of the Society are due in large measure to the elected Officers of the National and Centre Councils, and to them, and to all the membership, the Society's thanks are extended for continued active support in mutual endeavours.

Norman Green, *National Secretary*

CALGARY CENTRE

The Calgary Centre's general meetings were held for the most part in the Calgary Centennial Planetarium with several others taking place at the University of Calgary and its facilities. In addition to the general meetings there were also nine council meetings held throughout 1979.

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| January | Election of Officers. John Findlay and Dr. Dave Fry spoke of the solar eclipse of February 26, 1979. |
| February | Bert Ellison a member of the Petroleum Department at the Southern Alberta Institute of Technology spoke on the topic of Continental drift and plate tectonics. |
| March | Presentation of eclipse results and photographs taken by Calgary members who travelled to various sites to observe the phenomenon first hand. |
| April | Alan Dyer and Dave Beltcher "The Canada-France-Hawaii Observatory of Mauna Kea." |
| May | Sol Flury "Weather satellites reception equipment at the Southern Alberta Institute of Technology". |
| June | Annual Bar-B-Que was held in unfortunately poor weather conditions at the Centre's observing site situated approximately 10 miles south of the city at the Strathcona Tweedsmere School. |
| September | Dr. Allan Clark "The eclipse from a lear jet". |
| October | This was the month for the Centre's annual outing to the University's Rothney Astrophysical Observatory which was hosted by Dr. Allan Clark. |
| November | The members were treated to a Star Show at the Calgary Planetarium. Following the show John Findlay demonstrated to the members present the motions of the sun, moon and planets. Dunston Pasterfield pointed out the positions of many Deep Sky objects and described some of their more prominent features. |
| December | Dr. John Percy gave a fine and well received talk on "Life on other worlds". |

The Centre also held the annual star nights presentation at the Centennial Planetarium on the nights of September 27, 28 and 29th. The turnouts were most encouraging even though on several nights a cold wind was present.

Finally the annual Banquet was held on December 6th at the Highlander Motor Hotel. Afterwards Lee Robertson spoke to the gathering on his trip to Europe and Russia. All in all the evening was most enjoyable.

The Calgary Centre looks forward to an even more successful 1980.

Steve Kirk, *Secretary*

EDMONTON CENTRE

1979 was a year to remember, with the Edmonton Centre active on several fronts:

Ten General Meetings were held during the year, featuring a variety of topics, speakers and films. Highlights were, in March, David Rodger's talk on Megaliths and Medicine Wheels; in April, Dr. Clifford Anger's presentation on Aurora on Earth and Elsewhere; and in June, a special meeting featuring Doug Beck on Einstein and the Astronomer. These meetings were the results of our speaker exchanges with the Vancouver, Calgary, and Saskatoon Centres. In December, Dr. John Percy spoke to us on Observing Variable Stars for Fun and Profit as part of his tour of western Centres.

Our Observer's Corner meetings switched from a bi-weekly to a monthly time slot during 1979, and continued to be a very popular forum for members' interests in observing, astrophotography, and telescope making.

Another switch involved our moving the location of our General Meetings from the Queen Elizabeth Planetarium to the Public Library. The new room better accommodates the growing attendance at our meetings and has allowed us to begin advertising RASC meetings over the local media, attracting members of the public to our monthly presentations.

Throughout the year, Stardust, our monthly newsletter, provided comprehensive coverage of RASC activities, astronomical events, and members' observing reports.

In October, Stardust celebrated its 25th Anniversary Issue with a special edition that featured, among other items, the minutes to the General Meeting of October, 2004! In November, we began a 5-part series on the first 30 years of Centre history from its formation in 1932.

Public education was a very successful area of Centre effort in 1979. On April 7 and 8, we held a public STARNIGHT in conjunction with the Queen Elizabeth Planetarium. About 1000 people turned out to view celestial wonders through an array of telescopes supplied by RASC members. In September, at 4:00 AM on the morning of the 6th, over 250 people witnessed the total eclipse of the moon at our special ECLIPSE STARNIGHT. A public Lunar Eclipse Seminar held two nights before attracted 35 paying customers. In May, over 50 people registered for our general Astro-Photography Seminar. Together, these Seminars raised over \$325.00 for the Centre.

A major public education project in 1979 was the completion of the 18 panels of our new travelling astronomy exhibit. Titled Discover the Universe, the exhibit will tour shopping centres, conventions and other venues over the next 2 to 3 years.

As 1979 commenced, the Centre was busy searching for a permanent Observing Site. After a summer of survey work, our Dark Site is now Buck Mountain, with the Centre leasing 7 acres on the south slope of the provincially owned land. As an alternative to the 90-minute drive to Buck, the Centre now also has a Near Site just south of the city. Centre members Tony Whyte and Doug Hornbeck have made their Ellerslie Observatory available for use by Centre members. Since the arrangement came into effect in late summer, the 20 cm refractor has been used on numerous occasions for lunar, solar, planetary, and deep-sky observing.

Throughout the year, a number of successful group observing sessions were held. The Perseids, in particular, were well-observed. Of course, in February, the big event was the solar eclipse, with about one-third of the Centre membership travelling to the eclipse path. The round-up meetings afterwards were a highlight of the year, with members acquiring lots of spectacular photographs.

Over the year, the Centre profited from the sale of our Eclipse '79 Slide Sets, which sold well. In May, several Centre members were fortunate to win prizes in the London Centre's Observing Competition at their fine General Assembly. In June, we officially became incorporated under the provincial Societies Act. June was also the month for our long-awaited Second Annual Buck Mountain Summer Solstice Sacrifice and Debauchery. In September, a well-attended Sky Familiarization Session was held under the skies of the Queen Elizabeth Planetarium. December saw representatives in Edmonton from 6 Centres across Canada, as the Centre hosted a National Council meeting at the local Four Seasons Hotel.

While it was never without its headaches and frustrations, 1979 was an incredible year for the Edmonton Centre.

Ivan Rogers, *Secretary*

HALIFAX CENTRE

The Halifax Centre experienced another active year, with plans generated for next year and the future. A planning committee for the Bluenose General Assembly has been industriously working in cooperation with a CASCA committee. Next year will mark the first joint meeting of the RASC and the Canadian Astronomical Society/Société Canadienne d'Astronomie (CASCA). Long-term plans involve the process of incorporation, in preparation for the construction of a Centre observatory. One of our members has generously offered a site for the observatory on his property.

Eleven regular meetings were held, most of which took place at the Nova Scotia Museum on the third Friday of the month. The topics and speakers were as follows:

January 19 "Eclipses, Past and Present", Dr. David Tindall

February 16	“The Other End of the Telescope”, Dr. Steven Boulton
March 16	“Astronomy in Nova Scotia to 1900”, Dr. Roy L. Bishop, Randall C. Brooks and Bill Calnen
April 20	Centre Dinner and Slide Show (Chinatown Restaurant)
May 25	“Review of the RASC General Assembly, London”, “RASCH Observations of Delta Cephei”, Walter Zukauskas
June 15	“Voyager 1 and Jupiter”, Dr. Larry Bogan
July 20, 21, 22	Camping/Observing Weekend (Maple Grove Park and Kejimikujik National Park)
August 17	Tour of Atmospheric Environment Canada, Bedford
September 21	“Designing a Home-Made Telescope”, Randall C. Brooks, Michael Edwards, Jody LeBlanc and John R. MacNeil
October 19	Members Night
November 16	“Astronomical Seeing”, Bill Appleby
December 14	“Infrared Astronomy”, Dr. Norman Scrimger

Activities included a Centre dinner, the third annual camping/observing weekend, several observing sessions, and participation in the Nova Scotia Museum’s Societies’ Show, March 3 to April 16. Our theme for the show was “The History of Astronomy in Nova Scotia”, in conjunction with the March 16 meeting topic. The first Burke-Gaffney Award was presented at the Centre dinner to Bill Calnen for his paper, “Astronomy at King’s College, Windsor, N.S.”. It was with sadness that we learned of the death of our Honorary President, Michael Walter Burke-Gaffney SJ, on January 14, 1979.

Six Halifax members attended the May General Assembly in London. Our delegate, Walter Zukauskas, spoke on observations of Delta Cephei, which had been collected by several Halifax members during the previous fall and winter. Bill Calnen’s paper won the first Simon Newcomb Award, presented by the Halifax Centre, and our Centre’s display, based on Simon Newcomb, also won a prize. A proposed amendment to By-law No. 1, Item 10(a), concerning the election of alternate National Representatives, was made by the Halifax Centre. Randall Brooks was reappointed to the Editing and Membership Committees, and Roy Bishop continues as Chairman of the Historical Committee.

Diane Brooks, *Secretary*

HAMILTON CENTRE

The regular meetings of the Hamilton Centre were held on the first Thursday of each month, at McMaster University. For the first time in recent years the Centre continued its regular meetings through the summer and these were held in July, August and September in the Nature Centre of the Royal Botanical Gardens, ably organized by Brian Mackid. The 70th year of the Hamilton Centre was marked by the construction of our Centre Observatory, work being directed by Peter Ashenurst and Les Powis, with donations of work, time, money and materials by many of the members, and a grant from the Special Projects Fund of the RASC. The observatory is a 16’ x 24’ architectural, fluted concrete block, 2 storey structure, with a 12 foot plywood dome. It is situated just a few miles north of Hamilton and will house a 30” telescope when this is completed.

The speakers and topics for our monthly meetings were:

January	AGN and members night.
February	Dr. John Percy (U of T) – Variable stars for fun and profit.
March	Dr. Jim Yarwood – Cosmology and Chemistry.
April	Dr. Henry Schwarcz – Meteorites and the early history of the Solar system.
May	Members night – D. Baker – Spiral structure of our galaxy. C. Gibbons – Where will the next eclipse be? Just follow your nodes! J. Hudak – Pulsars.

June	Dr. Bill Harris – Globular clusters in galaxies.
July, Aug. Sept.	Brian Mackid at the RBG.
October	Dr. Ian Easson – Neutron Stars.
November	Dr. David Turner – Star formation and the inter-stellar yardstick.
December	Dr. Peter Sutherland – Xray Astronomy

John Hudak is to be congratulated on arranging an excellent series of speakers.

This year Hamilton Centre hosted the spring meeting of the Niagara Frontier Council of Amateur Astronomical Associations (NFCAAA) on May 5th at McMaster. We also staged displays at the Hamilton district Science Fair, and at the Botanical Gardens "Open House", and Mike Holmes conducted a short course of lecture/demonstrations on solar system astronomy to the Junior members of the Royal Botanical Gardens in the Fall.

While weather has hampered many scheduled observation meetings, our "observers' group" has made good use of our observatory. Eric Orr continued to chair the discussion group, one innovation being to formulate a program of activity for the observatory next year. Our Centre newsletter 'Orbit' has experienced a variety of hands on its delicate duplicator: Sherree Smith, Derek Baker and finally Peter Ceravolo. The Editor for most of the year has been Bob Speck whose ingenuity in obtaining articles for publication is almost miraculous.

Mike Holmes, *Secretary*

KINGSTON CENTRE

The year 1979 has been a very exciting and active one for the Kingston Centre. It began with about 46% of our membership joining various expeditions to observe the total solar eclipse on February 26. The eclipse was an unforgettable experience, recorded by David Levy in the form of a one-half hour slide presentation. This excellent show has been seen by many groups in various cities, and won the second prize at the General Assembly in London, Ontario, last May.

We have had the pleasure of hearing Dr. John Percy, President of the R.A.S.C., speak to us in February about the evolution of stars, and Dr. A. Vibert Douglas, our Honorary President, who spoke to us in April about the work of Sir Arthur Eddington.

In June, after several years of work, our Centre completed its own telescope, a 10-inch Newtonian reflector, which we name the *Dr. A.V. Douglas Telescope*, after a person who has made great contributions to the field of Astronomy, the R.A.S.C., and our Centre.

Numerous educational events have been organized throughout the year. David Levy was largely responsible for the work and we owe him much sincere appreciation. The first project was the "Astronomy Day", sponsored by the Kingston and District Science Council under the direction of Dr. James Allen and the Queen's University Physics Department. It took place on February 22, just before the solar eclipse, and several hundred children took part, learning about astronomy in general, telescopes, observing, radio astronomy, and discussing in detail how eclipses happen and how to observe them safely.

A second project was a course in basic concepts of astronomy, including as much observing as possible, given by David at his home outside Kingston.

For the third project, David had made arrangements to enter the Millhaven Penitentiary, a maximum security institution, in order to present the eclipse slide show to about twenty inmates. It was a very well received and successful endeavour.

On August 13th David attended a program of the International Astronomical Union's Commission 46, at the Université de Montréal. There he gave an excellent presentation on teaching astronomy to children. Dr. Douglas and Leo Enright were also present at this 17th General Assembly of the I.A.U.

The summer was very active, with members of the Kingston Centre taking part in several excursions to the Gatineau Hills in the Province of Québec, where David's hospitality and the dark skies made observing a great pleasure. The Holleford crater, not far from Kingston, is a very interesting area which was explored by some of our members in July and again in August.

On the 4th of August, the Centre organized a mall display at the Kingston Shopping Centre, with exhibits of their instruments and photos. The same evening, our Centre held a Public Star Night on the waterfront, during which people came to look through the telescopes and were able to get a small impression of what observing is all about.

David was very busily acquiring various telescopes throughout the year, including a "talking telescope" which he built, together with Constantine Papacosmos of Montréal. He entered it in the refractor category at the 44th annual Stellafane, held in Springfield, Vermont, and it won third prize.

In October Leo, Doug Baker, Denis Belanger, and Angelike attended Clubs' Night at Queen's University and talked to many interested students about astronomy and our Centre. Several of the students attended subsequent meetings.

Weather permitting, all members are keeping active with observing and photographing, ranging from the total lunar eclipse of September 6th, photographed by David from Tucson, Arizona (while Michael and Denis spent the night in the rain on Wolfe Island near Kingston), to sunspot observing, auroras, occultations, deep sky objects, and other phenomena.

Leo Enright continues to be the very enthusiastic editor of "Regulus", our newsletter, which is full of interesting information and keeps us up to date at all times.

Angelika Kahrkling, *Secretary*

LONDON CENTRE

During the year of 1979 the program as conducted at the University of Western Ontario was as follows:

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| January 20 | Seventh Annual Banquet and Annual Meeting, "Artificial Satellites", James Middleton, Systems Manager of SPAR Aerospace, Toronto. |
| February 16 | "Speculations on Early Mans Astronomy – An Anthropological Overview", William Marshall, U.W.O. |
| March 16 | Annual Dr. H.R. Kingston Memorial Lecture, "The Interstellar Yardstick", Dr. David G. Turner, U. of T. |
| April 20 | Members Night. |
| May 18 | Unofficial Opening of the 1979 General Assembly, "M147 Session", hosted by Gerrald Schieven. |
| June 15 | "Properties of Planetary Nebulae", Norman Scrimger, U.W.O. Dept. of Astronomy. |
| July 20 | "The Construction, Care, and Feeding of a Large Portable Amateur Telescope", Prof. Michael M. Taylor, University of Guelph. |
| August 17 | Members, "Stellafane Revisited", Walter K. Campney and Gerald Schieven. |
| September 21 | "A Revolution in Geophysics", Dr. B. Winder, U.W.O. Geophysics Dept. |
| October 19 | "Peculiar and Interacting Galaxies", Dr. Barry Madore, U. of T. |
| November 16 | "The Hamilton Centre Observatory", Peter Ashenhurst, Hamilton Centre. Third Annual Presidential Address, "Murmurings of an Ancient Astronomer", President, London Centre. |
| December 21 | "Observing and Observatories in Southern Arizona", Peter Jedicke, London Centre. |

The Centre continued its service to the community with many public star nights and lectures to service clubs, schools and Scout Troops. Thanks must go to a dedicated Peter Jedicke, who has done much to promote astronomy with his course at Fanshawe Community College and his television program "Telescope."

The members of the Centre have travelled to various events, observatories, planetaria.

Steve Sharpe, Walter Campney and Rob Robotham continue to uphold the Centres' fine tradition of variable star observing. Dale Armstrong and Mark Sinkins of the Observers' Group have noted growth and interest in the group. The ATM Group under Peter Andreae continues in its struggle with the production of fine instruments and hopefully, in the future, the completion of the 30 cm. telescope. "Astronomy London" under the guidance of Eric Clinton and Mike Flegel continues to publish many pages of informative and interesting articles.

In May of 1979 the London Centre had the honour of hosting the General Assembly of the RASC. From the germination of an idea almost five years ago came the dream of hosting the finest G.A. ever. The golden weekend which featured the Society Barbeque, Dinner, and

Song Contest contributed to a G.A. that the London Centre members and its G.A. committee can be proud of.

The new year of 1980 brings with it a team willing to tackle problems and projects as they come along. These include hosting the Spring Conference of the NFCAAA and the ongoing quest for the Centre Observatory and permanent home for the Centre.

I am certain that we will treasure this past year and remember that "London Was Fine in '79."

Tom Glinos, *Executive Secretary*

CENTRE FRANCAIS DE MONTREAL

L'année fiscale 78-79 a vu la Société d'Astronomie de Montréal prendre un essor considérable de 605 membres, nous sommes passés à 841: soit 5 membres à vie, 541 titulaires et 295 étudiants.

Le Conseil d'Administration s'est réuni 11 fois au cours de l'année. Les délibérations furent des plus profitables pour la bonne marche de la Société.

45 réunions hebdomadaires furent tenues, en plus de deux assemblées générales. Au cours de ces réunions, nous avons eu comme conférenciers, les docteurs René Racine et Gilles Beaudet à deux reprises, les docteurs Gilles Fontaine et Pierre Couillard ainsi que MM. Alcide Ouellet et Jacques Trempe, à titre de spécialistes.

Lors des autres soirées, la tribune fut occupée par de nos membres développant divers sujets d'Astronomie. En plusieurs occasions, des jeunes exposèrent leur thème avec le brio de conférenciers chevronnés.

Un des événements les plus importants qui ont marqué les activités de notre Société a été l'organisation d'un concours de constructeurs amateurs de télescopes, tenu sur le terrain de notre futur observatoire, à St-Valérien. Ce fut un succès qui nous incitera à en faire une activité annuelle.

Les travaux à notre observatoire avancent lentement à cause de tracas financiers, de main-d'oeuvre, ce qui ne facilite pas son achèvement.

Notre banquet annuel, auquel ont assisté 47 convives, fut tenu à l'Institut de l'Hôtellerie et du Tourisme du Québec. A cette occasion le trophée "Etoile d'Argent" fut remis au Dr René Racine, qui a beaucoup fait pour l'avancement de l'Astronomie au Québec, et le prix "Georgette LeMoyné" à Mme Mariette Dubé, qui s'est occupée des finances de notre Société pendant plusieurs années. Au cours de ce banquet, on a remis à M. André Paul les prix qui lui avaient été octroyés pour ses deux photographies de l'éclipse totale du soleil du 26 février 1979, au concours de l'assemblée générale tenue à London. On mentionna l'octroi à M. Rolland Noël de Tilly de la médaille "Service Award", qui lui a été décernée à cette occasion, notre secrétaire était à ce moment hospitalisé.

Une centaine de miroirs de télescope furent polis à notre Atelier d'Optique, sous la surveillance de moniteurs compétents.

Notre comptoir de vente qui détaille des accessoires de télescopes, des livres, posters, diapositives, cartes du ciel etc, a rapporté un profit appréciable, remis au fonds général, ce qui nous a permis de boucler le budget du secrétariat.

Nos membres ont empruntés 242 volumes à notre bibliothèque qui en compte un inventaire de 275.

Une visite à l'Observatoire du Québec, amena une cinquantaine de nos membres par autobus, au sommet du Mont Mégantic. Le brouillard s'étant mis de la partie, une bonne partie de notre soirée fut compromise.

Notre Soirée Populaire d'Astronomie fut encore incommodée par la mauvaise température. Toutefois près de 1000 personnes assistèrent à nos conférences, admirèrent nos exhibits et purent contempler quelques merveilles célestes lors des éclaircies trop peu nombreuses.

Deux promotions furent organisées avec le concours de l'Association des Jeunes Scientifiques, au Complexe Desjardins.

L'Astronomie au Québec se développe de plus en plus. La jeunesse étudiante s'y intéresse et de plus, l'établissement d'une chaire d'Astronomie aux universités Laval et de Montréal sont le gage d'un avenir prometteur.

Rolland Noël de Tilly, *secrétaire*

NIAGARA CENTRE

The year 1979 has been one of much progress and success for the Niagara Centre. We experienced a large increase in membership during 1979 due to the several shopping mall displays we held throughout the summer months and Bob Winder's weekly astronomy column in "The St. Catharines Standard". In addition to the large turnouts at our monthly meetings and at our two banquets, several members attended a trip to the David Dunlap Observatory, the NFCAA meetings at McMaster University in Hamilton on May 5th, and at the Niagara County Community College in Sanborn, New York, on November 3rd., Syracuse Astronomical Society Summer Seminar in Vesper, New York, and Stellafane '79 in Vermont.

Attendance at our monthly Observers' Group star nights, under the direction of the O.G. Chairman Ron Gasbarini, was excellent. Our Perseid Meteor Shower observing night in August was also well attended.

Two new projects were started in 1979. In October we produced the first issue of our Centre newsletter, the "Niagara Whirlpool". The newsletter production staff consists of the following people: Editor Robert Jedicke, Hugh Maclean, Ron Gasbarini, Charles Fassel, and Raymond Osborne. In December we planned ahead for our most ambitious project ever: the construction of a 24-inch telescope. The plans for this telescope were designed and prepared by Centre member Bob Winder. We hope to begin the construction of this telescope early in 1980.

Nine regular meetings were presented in 1979. Meetings and programmes for 1979 were as follows:

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|--------------|---|
| January 11 | Annual Meeting and election of Board of Directors, Programme-Speaker: Raymond Osborne, "Rings Around Planets". |
| February 8 | Charles Fassel: Slides of the moon and planets. Hugh Maclean: Slides of an occultation of Venus and auroras. Telescope Symposium: A 'show and tell' presentation of several telescopes and photographic equipment by several members. |
| March 8 | Speaker: Ed Linberg, Buffalo Astronomical Association, "Sundials". Hugh Maclean, Charles Fassel: Slides of the total solar eclipse of February 26, 1979. |
| April 12 | Centre Banquet – Speaker: Rev. Norman Green, "Astronomy in English Literature". |
| May 10 | Members Night: Hugh Maclean, Ron Gasbarini: Reports on Centre activities. Slides shown by several members. |
| September 13 | Charles Fassel: Reports on summer activities and observing sessions with slides. Speaker: Peter Jedicke, London Centre, "Esoteric Extrapolations on Extraterrestrial Existence". |
| October 11 | Film Night: Marvin Scott, home-made movies, "Monarch Butterfly", and "Sky". Charles Fassel: NASA film, "Universe". Robert Jedicke: Slides of a summer trip to David Levy's cottage in Quebec. |
| November 9 | Centre Banquet – Speaker: Dr. John Percy, National President of the RASC, "The Search for Extraterrestrial Intelligence". |
| December 13 | Al Kindy: Report on Centre's finances. Hugh Maclean: Report on changes to be made in our By-Laws. Speaker: Tom Dessert, Buffalo Astronomical Association, "Techniques in Astrophotography". |

Ron Gasbarini, *Secretary*

OTTAWA CENTRE

The following public lecture meetings were held during 1979:

- | | |
|------------|--|
| February 1 | Dr. V. Gaizauskas, National Research Council: "Coronal Holes and The Solar Wind" |
|------------|--|

- February 29 Dr. P.A. Feldman, National Research Council:
"The Strange RS Canum Venaticorum Stars"
- March 21 Dr. M. Bercovitch, National Research Council:
"The Propagation of Cosmic Rays in the Solar System"
- April 25 Dr. A.F. Cook, Smithsonian Astrophysical Observatory,
"Voyager 1 and Jupiter"
- June 13 Professor Bart Bok, Steward Observatory: "Our Big and
Beautiful Milky Way"
- September 14 Dr. J.R. Percy, National President, RASC: "Variable Stars and
Stellar Evolution"
- October 4 Dr. C.S.L. Keay, Newcastle University, Australia:
"Anomalous Sounds from a Fireball"
- November 16 Dr. P.H. Serson, Energy, Mines and Resources Canada:
"The North Magnetic Pole"
- December 11 Film Night: "The Radio Sky", "To the Edge of the Universe",
and "The Radio View of the Universe"

Besides the lecture meetings, the Observer's Group held well attended meetings every month, with talks presented on a variety of observational topics. About 20 members of the Ottawa Centre journeyed to Manitoba and the U.S.A. to watch the total solar eclipse. The partial eclipse was monitored at radio frequencies at the Indian River Observatory. The high point of the year observationally was the discovery of another comet by Rolf Meier, named Comet Meier 1979i, and the award of the Chant Medal to Rolf for his discovery of Comet Meier 1978f.

To the great sadness of all who knew him, our Honorary President, Dr. C.S. Beals, passed away on July 2, 1979. Dr. Beals frequently attended Council Meetings and his advice was well appreciated by the Council. Dr. J.L. Locke, Director of the Herzberg Institute and a long-time member of the Ottawa Centre, has accepted the position of Honorary President.

A. Woodsworth, *Secretary*

CENTRE DE QUÉBEC

L'année 1979 fut des plus intéressantes. Notre Centre comptait 134 membres lors de l'année 1978-79 et 43 membres associés. Cette dernière catégorie de membre associé a été créée cette année en conformité aux statuts de la S.R.A.C.. La version 1979 des publications suivantes a été publiée: "Almanach graphique", "Supplément à l'almanach graphique" et les "Éphémérides astronomiques". Le "Bulletin" ne paraît plus maintenant que de façon irrégulière. En effet, tous les articles de fond sont maintenant publiés dans la revue "Magnitude Zéro", revue officielle de l'Association des groupes d'astronomes amateurs (A.G.A.A.). Notre Centre est membre de cette association. Nous ne publions plus que des nouvelles d'intérêt local dans le "Bulletin". Cette formule permet une diffusion à plus grande échelle des articles d'intérêt sur l'astronomie amateur. Une subvention de \$400 que la S.R.A.C. nous a accordé à partir du "Ruth Northcott Fund" a servi à défrayer une partie de nos publications.

Pour terminer, voici la liste chronologique des conférences et des soirées d'observations (qui ont pu se concrétiser) s'adressant à nos membres et au public en général:

- 14 février "L'activité solaire, son histoire et ses manifestations" par M. Jean-René Roy, Ph.D., professeur d'astrophysique à l'Université Laval. Conférence.
- 9 mars Soirée d'observation à l'observatoire du Collège de Lévis, à St-Nérée de Bellechasse.
- 14 mars "La distance des galaxies" par M. Ermano Borra, Ph.D., professeur d'astrophysique à l'Université Laval. Conférence.
- 18 avril "L'analyse de la lumière des étoiles" par M. Éloi Bolduc, Ph.D., Université Laval. Conférence.
- 5 mai Soirée d'observation à l'observatoire du Collège de Lévis, à St-Nérée de Bellechasse.

- 16 mai "Réalizations des membres" par les membres présents.
 – Projection des diapositives de l'éclipse totale du soleil du 26 février, par MM. Paul Marmet, Damien Lemay et Denys Leclerc. Projection de films 8mm de MM. Edward Bulman et Alphée Nadeau.
 – Présentation d'un système à vide pour l'aluminisation des miroirs par une équipe conduite par M. Maurice Leclerc.
 – Présentation d'un photomètre stellaire réalisé par M. Alphonse Tardif, d'une production de vidéo-astronomie par M. Mario Lapointe, de courbes photométriques de l'éclipse solaire (partielle) par MM. Rolland Larochelle et Alphée Nadeau.
- 1 juin Soirée d'observation à l'observatoire du Collège de Lévis, à St-Nérée de Bellechasse.
- 6 juin Assemblée générale annuelle et élection des membres du conseil.
- 11-12 août "Les perséides". Soirée d'observation à l'observatoire de l'Université Laval à St-Elzéar de Beauce.
- 26 septembre "La cosmologie observationnelle" par M. Edouardo Hardy, Ph.D., professeur d'astrophysique à l'Université Laval. Conférence.
- 6 octobre Soirée d'observation à l'observatoire du Collège de Lévis à St-Nérée de Bellechasse.
- 31 octobre "Les quasars et les pulsars tel que compris par un astronome amateur" par M. Damien Lemay, B.Sc. (génie physique), Rimouski.
- 5 décembre "L'histoire de l'astronomie de l'antiquité à nos jours" par M. Jean-François Lallier, B.Sc. (informatique) et étudiant à la maîtrise en astrophysique, Université Laval. Conférence.

Anita Poulin, *Secrétaire*

ST. JOHN'S CENTRE

The year of 1979 got off with the election of officers at the 1978 September Annual Meeting.

With the election of new officers, it was decided to turn our goals towards an educational astronomy rather than just the observing aspects of astronomy. With this new outlook, we were starting to get the M.U.N. involved with community astronomy. By our October meeting the M.U.N. Physics Department were supporting us in getting an astronomy column in the 'Evening Telegram'. By April 1979, we had been approached to do an astronomy series on our local cable station.

We now have a column in the paper and our first T.V. Program should be aired in January, 1980.

- November '78 A preview of two movies "The Universe" and "What on Earth"
 December "The Christmas Star" as told by Dora Russell
 January '79 "Fields of Space", a movie which was followed by a lively discussion.
 February Constellation study was introduced by Dora Russell and followed up by a trip to the planetarium.
 March "Photos and Slides of Eclipse '79", taken by R. Dodge and G. Dymond.
 April It was members' night where members discuss their interest and view of astronomy.
 May Highlights of the "Voyager 1 Pass of Jupiter".
 June The Last Official Meeting.

G. Dymond, *Secretary*

SASKATOON CENTRE

An extremely cold beginning encouraged the members to start planning a warm-up shack at the new observatory dark site, which did materialize later in the year.

A group of about thirty members viewed the total Solar Eclipse on February 26, 1979, at Carnduff, Saskatchewan. With the Centre was a group from Saskatchewan Media who

recently presented the Saskatoon Centre with a film on the eclipse which showed the members' performance.

The exchange speaker was Alan Dyer, Council Representative of Edmonton, who gave an interesting talk.

The annual public Star Night, held in July, at Diefenbaker Park, was very well received.

The annual August outing was held at the Rystrom dark site in conjunction with the meteor shower. It would have been more enjoyable without the full moon.

At the annual general meeting held in October, the Executive and Council of the Centre were elected.

On December 14, 1979, the National President, Dr. John R. Percy visited the Saskatoon Centre. He gave a lecture on "Life on Other Worlds".

Life Memberships were presented to Gordon Patterson and Merlyn Melby in appreciation for their years of service to the Centre.

Some basic planning for the construction of a telescope was just beginning towards the end of 1979.

Lillia Wilcox, *Secretary*

TORONTO CENTRE

1979 has been a busy year for the Toronto Centre. Several projects have been carried out through the course of the year.

The Solar Eclipse Committee, headed by Mike Watson, put a great deal of time and effort into preparing for the expedition to Gimli, Manitoba. Two aircraft were used to transport 106 people to the runway of this former military base, where the small amount of air traffic, and the excellent co-operation of the airport officials made viewing conditions ideal.

The trip to Gimli was so successful that the Solar Eclipse Committee has remained intact, and is now in the process of organizing a trip to the upcoming eclipse in Kenya.

The Programme Committee has been very active this year under the leadership of Dr. Seaquist. Our regular lecture series consisted of 11 guest speakers, who gave a wide range of talks as follows:

November 17	Dr. Peter Biermann, "Star Formation in Active Galaxies."
December 8	Dr. Barry Madore, "Peculiar Galaxies".
January 12	Peter Jedicke, President of London Centre, "Pioneer Venus Mission".
February 16	Dr. William S. Gillmore, "Star Formation in the Galaxy".
March 9	Ian McGregor, "The Story of a Deep Space Crab".
April 6	Ms. Martine Normandin, "The Galactic Magnetic Field".
May 11	Dr. B. Lester, "Space Astronomy".
June 22	Father Christopher Corbally, "Heavenly Vista – The Vatican Observatory".
September 14	Doug Gies, "Cyg X-1".
October 5	Ian McGregor, "Recent Discoveries about Jupiter".
October 26	Professor John R. Percy, "Variable Stars and Stellar Evolution".

In addition to the regular lecture series, the Toronto Centre, the McLaughlin Planetarium, and the University of Toronto sponsored a public lecture by the astronomer, Bart Bok, who enlightened us and kept us thoroughly entertained by his talk, "Our Big and Beautiful Milky Way".

The major projects undertaken by the Observer's Group this year were the completion of the warm-up hut, and the finishing and installation of the Glassford mounting in our observatory. In the summer the exterior of the Bog was finished by the application of more siding, and some landscaping around the entrance door. The interior of the Bog was completed by the hanging of curtains and astrophotos, taken by our members, to give the place a more "homey" look. In late September, the Glassford mounting and a custom designed power supply, built by Dan Driscoll, were installed in the observatory.

To commence the 1979-80 season, a weiner roast was held on September 21 and 22 at the Bog. The observatory with its new mounting was officially opened on the second night, when Mrs. Anne Scott, our President, rolled off the roof and turned on the power.

MORRIS ALTMAN

CHARTERED ACCOUNTANT

95 KING STREET EAST

TORONTO, CANADA

MBC 1G4

A U D I T O R ' S R E P O R T

To the Members of
The Royal Astronomical Society of Canada.

I have examined the balance sheet of The Royal Astronomical Society of Canada as at December 31, 1979 and the statements of income and expenditures, special funds and accumulated deficit for the year ended on that date. My examination was made in accordance with generally accepted auditing standards and accordingly it included such tests and other procedures as I considered necessary in the circumstances, except as hereinafter noted.

The receipts of the Society, because of their nature, are not susceptible to verification by normal audit procedure and are shown in the financial statements as they have been recorded in the books of the Society. My verification of these items was limited to a comparison of recorded receipts with bank deposits.

In my opinion, subject to the limitation in the scope of my examination noted in the preceding paragraph, the accompanying statements present fairly the financial position of the Society as at December 31, 1979 and the results of its operations for the year then ended, in accordance with generally accepted accounting principles appropriate for non-profit organizations, on a basis consistent with that of the preceding year.

Morris Altman

Chartered Accountant.

Toronto, Canada,
May 5, 1980.

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA

BALANCE SHEET

DECEMBER 31, 1979

(With comparative figures as at December 31, 1978)

	1 9 7 9	1978
<u>A S S E T S</u>		
Current Assets		
Cash	\$ 32,428	\$ 25,861
Short-term deposits	2,000	2,000
Accounts receivable	14,927	17,206
Loans to R.A.S.C. Centres	1,000	1,000
Accrued interest on investments	231	582
Prepaid expenses	145	150
	\$ 50,731	\$ 46,799
Investments		
Marketable securities at cost (Market value - \$2,422; 1978 - \$2,760)	3,019	\$ 3,019
Special Funds		
Building Fund	\$158,170	\$152,409
Special Projects Fund	39,595	36,657
Ruth Northcott Memorial Fund	15,577	14,898
Edward R. Paterson Bequest	10,695	10,000
J. F. Heard Publication Fund	-	1,865
	224,037	\$215,829
Office furniture, equipment and library (nominal value)	1	\$ 1
TOTAL ASSETS	\$277,788	\$265,648
ACCUMULATED DEFICIT (per statement)	15,881	21,660
	\$293,669	\$287,308
<u>L I A B I L I T I E S</u>		
Current Liabilities		
Accounts payable and accrued charges	\$ 11,044	\$ 16,499
Deferred Income		
Membership fees for ensuing year	\$ 11,564	\$ 11,971
Subscriptions to Journal and Handbook	32,205	29,999
Unappropriated life membership fees (Schedule "A")	14,819	13,010
	58,588	\$ 54,980
Reserve for Special Funds	224,037	\$215,829
	\$293,669	\$287,308

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA

STATEMENT OF INCOME AND EXPENDITURES

FOR YEAR ENDED DECEMBER 31, 1979

(With comparative figures for 1978)

	<u>1 9 7 9</u>	<u>1978</u>
<u>I N C O M E</u>		
Membership fees		
R.A.S.C. Centres	\$16,859	\$12,642
Individual members	10,297	7,849
Life membership reserve - annual appropriation	<u>1,191</u>	<u>1,041</u>
	\$28,347	\$21,532
Grants and Donations		
Government of Canada - annual grant	\$ 8,000	\$ 7,150
Province of Ontario - annual grant	1,500	1,500
Miscellaneous donations	<u>56</u>	<u>81</u>
	9,556	\$ 8,731
Publications		
Journal of the R.A.S.C. - subscriptions	\$10,434	\$ 8,558
Observer's Handbook	35,146	33,276
Reprints from the Journal	2,465	2,022
Publication charges	<u>7,355</u>	<u>6,660</u>
	55,400	\$50,516
Miscellaneous Income		
Interest on investments	\$ 932	\$ 1,465
Foreign exchange gains	6,334	4,827
Insignia sales	<u>178</u>	<u>283</u>
	7,444	\$ 6,575
TOTAL INCOME	<u>\$100,747</u>	<u>\$87,354</u>
<u>E X P E N D I T U R E S</u>		
Publications (schedule "B")	\$66,642	\$62,044
Office salaries	16,914	15,756
Employees' welfare contributions	624	450
Stationery, printing and supplies	1,172	1,698
Postage and shipping expense	4,025	3,201
General and office expenses	1,375	1,391
Life membership allotment to Centres	1,203	1,133
General assembly and travel expenses	1,249	1,110
Advertising and publicity	181	201
Telephone	428	288
Insurance	325	338
Library expense	289	166
Insignia, medals and awards	591	1,247
Bad debts written off (recovered)	<u>(50)</u>	<u>109</u>
TOTAL EXPENDITURES	94,968	\$89,132
EXCESS OF INCOME OVER EXPENDITURES	\$ 5,779	
(EXPENDITURES OVER INCOME)		(\$ 1,778)

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA

STATEMENT OF ACCUMULATED DEFICIT

FOR YEAR ENDED DECEMBER 31, 1979

(With comparative figures for 1978)

	<u>1979</u>	<u>1978</u>
Deficit at beginning of the year	\$ 21,660	\$ 19,882
Excess of income over expenditures for the year (expenditures over income) - per statement	5,779	<u>(1,778)</u>
Deficit at end of the year	<u>\$ 15,881</u>	<u>\$ 21,660</u>

SCHEDULE "A"

UNAPPROPRIATED LIFE MEMBERSHIP FEES

Balance at beginning of the year	\$ 13,010	\$ 8,601
Add: Life membership fees received in the year	<u>3,000</u>	<u>5,450</u>
	\$ 16,010	\$ 14,051
Deduct: Appropriation to income account	<u>1,191</u>	<u>1,041</u>
Balance at end of the year	<u>\$ 14,819</u>	<u>\$ 13,010</u>

SCHEDULE "B"

PUBLICATION COSTS

R.A.S.C. Journal

Printing of Journal	\$ 34,179	\$ 30,191
Printing of National Newsletter	7,559	8,457
Editorial assistance	700	605
Distribution costs	2,883	4,174
Reprints	<u>2,503</u>	<u>1,923</u>
	\$ 47,824	<u>\$ 45,350</u>

Observer's Handbook

Printing	\$ 17,812	\$ 15,816
Editorial assistance	635	600
Distribution costs	198	123
Advertising	<u>173</u>	<u>155</u>
	<u>18,818</u>	<u>\$ 16,694</u>

Total Publication Costs

	<u>\$ 66,642</u>	<u>\$ 62,044</u>
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THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
 LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA

STATEMENT OF SPECIAL FUNDS

FOR YEAR ENDED DECEMBER 31, 1979

(With comparative figures for 1978)

	<u>1 9 7 9</u>	<u>1978</u>
<u>BUILDING FUND</u>		
Balance at beginning of the year	\$152,409	\$181,377
Add: Interest earned on investments	\$ 12,486	\$ 10,932
Dividends received	1,681	1,400
Gain on sale of securities	<u>-</u>	<u>1,929</u>
	14,167	\$ 14,261
	<u>\$166,576</u>	<u>\$195,638</u>
Deduct: Rents for Society's office premises	\$ 8,406	\$ 8,229
Transfer to Special Projects Fund	<u>-</u>	<u>35,000</u>
	8,406	\$ 43,229
Balance at end of the year	<u>\$158,170</u>	<u>\$152,409</u>
<u>SPECIAL PROJECTS FUND</u>		
Balance at beginning of the year	\$ 36,657	\$ 35,000
Add: Interest earned on investments	<u>3,288</u>	<u>3,357</u>
	\$ 39,945	\$ 38,357
Deduct: Grants to Centres	<u>350</u>	<u>1,700</u>
Balance at end of the year	<u>\$ 39,595</u>	<u>\$ 36,657</u>
<u>RUTH J. NORTHCOTT MEMORIAL FUND</u>		
Balance at beginning of the year	\$ 14,898	\$ 14,084
Add: Public contributions	-	100
Interest earned on investments	<u>1,310</u>	<u>1,114</u>
	\$ 16,208	\$ 15,298
Deduct: Appropriation for designated purposes	<u>631</u>	<u>400</u>
Balance at end of the year	<u>\$ 15,577</u>	<u>\$ 14,898</u>

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA

STATEMENT OF SPECIAL FUNDS
(Continued)

	<u>1979</u>	<u>1978</u>
<u>EDWARD R. PATERSON BEQUEST</u>		
Balance at beginning of the year	\$ 10,000	\$ 10,000
Add: Interest earned on investments	941	-
	<u>\$ 10,941</u>	<u>\$ 10,000</u>
Deduct: Grants to Centres	246	-
Balance at end of year	<u>\$ 10,695</u>	<u>\$ 10,000</u>
 <u>J. F. HEARD PUBLICATION FUND</u>		
Balance at beginning of the year	\$ 1,865	\$ 505
Add: Contributions received during the year (see note)	525	1,360
	<u>\$ 2,390</u>	<u>\$ 1,865</u>
Deduct: Applied to publication of J. F. Heard Reminiscences	2,390	-
Balance at end of the year	<u>NIL</u>	<u>\$ 1,865</u>

COMPOSITION OF SPECIAL FUNDS AT DECEMBER 31, 1979

	<u>BUILDING FUND</u>	<u>SPECIAL PROJECTS FUND</u>	<u>RUTH NORTHCOTT FUND</u>	<u>EDWARD R. PATERSON BEQUEST</u>	<u>TOTAL</u>
Cash	\$ 7,895	\$ 3,228	\$ 2,299	\$ 304	\$ 13,726
Term deposits	61,000	35,000	8,904	10,000	114,904
Securities (at cost)	84,112	-	4,000	-	88,112
Accrued interest	4,005	1,367	374	391	6,137
Rent deposit	1,158	-	-	-	1,158
	<u>\$158,170</u>	<u>\$ 39,595</u>	<u>\$ 15,577</u>	<u>\$ 10,695</u>	<u>\$224,037</u>
Market value of securities	<u>\$ 84,188</u>	<u>-</u>	<u>\$ 3,180</u>	<u>-</u>	<u>\$ 87,368</u>

NOTE: The sum of \$525 added to the J. F. Heard Fund during the year included a contribution of \$500 by the David Dunlap Observatory.

NOTE RE STATEMENT OF INCOME AND EXPENDITURES

Some of the figures for 1978 in the statement of income and expenditures have been re-grouped to conform with the current year's presentation.

APPROVED ON BEHALF OF THE COUNCIL

John R. Perry PRESIDENT
David J. ... TREASURER

TREASURERS REPORTS

	Calgary	Edmonton	Halifax	Hamilton	Kingston	London	Montreal	Centre d'Astronomie Montreal	Niagara
REVENUE									
Membership Fees	\$1,682.00	\$1,792.10	\$1,614.28	\$1,207.81	\$ 196.00	\$ 1,018.61		\$1,084.00	\$ 776.00
Life Members Grants	83.20		44.80	25.60	25.60	38.40		12.80	6.40
Donations		1,097.59		2,054.15	222.00	314.00			2.00
Educational Activities		688.00							
Interest & Dividends	292.52	290.90	5.82	20.49	28.50	29.26		24.00	7.39
Sales of Handbooks Net		4.00	104.57			-46.50			7.00
Advertising									
General Assembly (incl. Travel Grants)		179.00	116.00			11,872.68		40.00	
Miscellaneous Grants	127.32	473.00		985.95	57.00	607.00			
Miscellaneous		738.00							
Total Revenue	2,185.04	5,262.59	1,885.47	4,294.00	529.10	13,833.45		1,160.80	798.79
EXPENDITURES							NOT REPORTED		
Fees remitted to N.O.	634.80	1,027.85	1,149.20	668.10	117.60	544.00		868.00	355.20
Library	12.00		21.43		31.00	70.41			
Meetings & Newsletters	327.59	205.80	173.19	510.86	24.50	351.43			124.91
Annual Dinner Net	41.40			430.86		28.83			90.00
General Assembly (incl. Travel Grants)		179.00	232.00			11,869.43		40.00	52.88
Equipment & Supplies		643.95	54.00	752.66	387.54	42.51		30.00	163.20
Office Admin./General Exp./Audit	41.39	77.00		17.83		94.18			
Educational Activities		693.42				2.00			
Insurance				185.00					
Awards & Donations			10.00			7.50			
Operating Expenses - Observatory	8.90			2,864.46					
Miscellaneous	61.90	99.84	208.40	407.09	19.22	528.07			28.65
Total Expenditures	1,127.98	3,210.51	1,848.22	5,836.86	579.86	13,538.36		938.00	814.84
Surplus or (Deficit) on Operations	1,057.06	2,052.08	37.25	(1,542.86)	(50.76)	295.09		222.80	(16.05)
Balance from 1978	4,949.46	3,284.30	322.04	1,701.95	79.95	1,055.31		103.30	440.84
Balance to 1980	6,006.52	5,336.38	359.29	159.09	29.19	1,350.40		326.10	424.79
Other Assets			400.00	505.60		984.24			

TREASURERS REPORTS

	Ottawa	Quebec	St. John's	Saskatoon	Toronto	Vancouver	Victoria	Windsor	Winnipeg
REVENUE									
Membership Fees	\$3,947.00	\$1,747.00	\$ 212.00	\$ 598.00	\$8,727.36	\$1,728.00	\$1,296.50	\$ 524.00	\$1,996.00
Life Members Grants	179.20	19.20		6.40	320.00	89.60	121.60		12.80
Donations	712.27	600.00		13.00		109.00			12.00
Educational Activities	263.50	162.00		695.50	338.94				
Interest & Dividends	227.24	389.32							
Sales of Handbooks Net	82.00		8.00	6.00		310.48	1,976.38		22.39
Advertising						21.00	73.50		32.00
General Assembly (incl. Travel Grants)		288.00		153.00	565.00	211.00	218.00		
Miscellaneous Grants							123.00		
Miscellaneous		633.00		172.00	29.65	2,620.57	4.00	18.96	599.00
Total Revenue	5,411.21	3,838.52	220.00	1,643.90	9,980.95	5,089.65	3,812.98	555.46	2,674.19
EXPENDITURES									
Fees remitted to N.O.	2,299.40	1,119.20	127.20	358.80	5,576.70	1,036.80	1,358.40	332.40	621.10
Library	378.48					25.43		34.04	
Meetings & Newsletters	935.66			184.09	2,414.93	654.49	678.78	35.77	342.60
Annual Dinner Net	18.25						94.00		
General Assembly (incl. Travel Grants)		288.00		153.00		211.00	337.62		
Equipment & Supplies	550.93	1,428.50		44.61	583.12	481.25	292.54	53.54	80.75
Office Admin/General Exp./Audit	96.78	630.13		407.55	105.53		34.63		497.70
Educational Activities	766.90	150.00			165.00				
Insurance	205.00								
Awards & Donations							28.43		878.30
Operating Expense - Observatory	514.00	28.60	48.47	38.35	176.88	91.92	131.54		
Miscellaneous									
Total Expenditures	5,565.40	3,644.43	175.67	1,186.40	9,879.55	2,500.89	2,985.73	455.75	2,420.45
Surplus or (Deficit) on Operations	(154.19)	194.09	44.33	457.50	101.40	2,588.76	827.25	99.71	253.74
Balance from 1978	2,642.45	637.76	156.00	(68.01)	2,275.48	1,154.21	18,350.44	341.39	140.70
Balance to 1980	2,488.26	831.85	200.33	389.49	2,376.88	3,742.97	19,177.69	441.10	394.44
Other Assets	4,192.56				9,661.60				4,275.68

In an effort to encourage more observational activities, the format of the Observers' Group meetings underwent a radical change. The two to three hour long structured meetings were replaced by a short one hour "show and tell" type meeting, followed by an observing session. In addition, the number of star parties per month was increased to four each month, on Friday and Saturday nights of the last quarter and new moon weekends. Despite these changes, the number of observers using the observatory this year fell from 390 to 267, although the number of nights used and hours observed increased from 53 and 204, to 68 and 302 respectively. The decreased number of observers can be attributed to a non functioning telescope drive from February to September, and "cloud-outs" on all but four of the twelve planned star parties.

Public Education is a very important activity of the Toronto Centre. A full programme has been carried out in the past year under the leadership of Ian McGregor, Phil Mozel, and Mike Warkentin. The Public Education Programme includes combined lectures and star parties at local libraries, and astronomical displays in local shopping centres.

During the past year, our Property Custodian, Phil Mozel, has carried on the never ending task started by Ted Howard last year, of cataloging and tracking down the various pieces of equipment owned by the Centre, but not at present in our hands. Thanks to Phil's work, more telescopes are now, or soon will be available for the use of our members.

The Toronto Centre acquired some new property at the General Assembly in London, Ontario this summer, in the form of awards for projects entered by our members. The awards included a 6 inch solar screen, a 60 mm refractor telescope, a poster of Jupiter, and the most recent book published by Dr. King.

We were also well represented at Stellafane this summer, where Andreas Gada won an award for making OG's miniature Newtonian reflector telescope.

John Morriss and the Optical Workshop have been hard at work in the past year. A number of members have been making use of the facilities, and John's help, in producing their own telescopes. As well as this, the shop has made great strides forward on the 12 inch Glassford telescope for the observatory.

Scope, under the capable editorship of Andrea Schlecht, has continued to keep the membership informed of Centre activities. We appreciate the work the Scope staff does for us.

There has been only one change in our Council this past year. Richard MacDonald resigned because of other commitments. Richard's place on Council was filled by Andrea Schlecht, who has been very active in her dual roll of Councillor, and Editor of our newsletter, Scope.

John F.A. Perkins, *Secretary*

VANCOUVER CENTRE

The Vancouver Centre emerged from the final year of the decade in a fairly healthy state. Our monthly publication NOVA was saved from financial extinction early in 1979 by a number of members who pooled their efforts to fabricate and market viewers for the total solar eclipse of February 26. Thanks to this venture, a fund was created which should enable NOVA to continue publication without sacrificing its previous high quality.

The Centre continued to use the facilities of the Vancouver Centennial Museum and H.R. MacMillan Planetarium for its activities and our thanks for this privilege go to the Vancouver Museums and Planetarium Association. During the course of the year the planetarium completed the construction of its new Gordon MacMillan Southam Observatory, and the Centre was able to make some use of this facility prior to its opening to the public.

Ten general meetings and an equal number of council meetings were held in 1979 and a picnic took place in June. Through the courtesy of Director David Rodger, our members were able to attend special presentations of each new planetarium show throughout the year.

Programs at our 1979 general meetings were as follows:

- | | |
|-------------|---|
| January 9 | Dr. Gordon Walker, University of British Columbia; "Cosmic Dust". |
| February 13 | Dr. P. Gregory, University of British Columbia; "Radio Astronomy". |
| March 13 | Voyager to Jupiter Films. Bill Phillips, Ken Hewitt-White; "Solar Eclipse Roundup". |

- April 13 Annual Dinner Meeting. Speaker, Mr. Franklyn Shinn; "Concepts and Missed Concepts".
- May 8 Leigh Hunt Palmer, Simon Fraser University and Paul Sykes, U.B.C. "Jupiter Update"
- June 12 Alan Dyer (Edmonton Centre); "Past Present and Future of the Edmonton Centre".
- September 11 Eric Dunn; Report on the Jupiter/Saturn Encounter Missions".
- October 9 David A. Rodger; "The Observation of the Southern Sky from Chile".
- November 6 Member's night. David Hurd reported on his visit to Australian observatories; Basil Chiu showed slides he had taken of recent sunspot activity; David Dodge described his progress on the construction of a 14-inch telescope mirror.
- December 11 Annual General Meeting. Election of Officers. Guest Speaker, National President, Dr. John Percy "Observing Variable Stars for Fun and Profit".

We regret to report the death of two members in 1979, Mrs. Pat Corey and Mr. Dale McKelvey.

James F. Wright, *Secretary*

VICTORIA CENTRE

The Victoria Centre held eight general meetings during 1979, with topics and speakers as follows:

- January 12 Annual General Meeting and dinner (at the Princess Mary Restaurant Vessel): "A Decade under the Galactic Centre-Astronomical Recollections of Chile" – Dr. Jim Hesser.
- February 14 "M Dwarfs, Cepheid Variables and Stellar Taxonomy" – Peter Dawson.
- March 14 Solar eclipse reports by various members and "Cosmic Prospecting" – Chris Aikman.
- April 11 Activities Night, including presentations by Frank Shinn, Donovan Fallows, Michael Hale, George Ball and Jack Newton.
- September 12 "Globular Clusters and the Formation of the Galaxy: New Anomalies in an Old Problem" – Dr. Robert P. Kraft.
- October 10 "Astrophotography" – Jack Newton.
- November 14 "Voyager's View of Jupiter" – Leo van der Byl and Tim Lomas.
- December 12 "Life on Other Worlds?" – Dr. John Percy.

All of the above meetings except the first were held in the Elliot Building of the University of Victoria, and we are indebted to the University authorities for this privilege. Additional to the above, the council met eight times during the year to conduct the Centre's business.

Other highlights during the year included the resurrection of the Centre's newsletter under the editorship of Dr. Leonard Orr: "Skynews Victoria" now circulates monthly to a distribution of 150. As usual, the Centre was well represented at the annual Victoria Hobby Show, April 19-22. About this time also, negotiations began with Fisheries and Environment Canada to house the Centre's historic 4-inch refractor in the now-empty dome of the old Gonzales weather station; negotiations are continuing with some progress to date. This year, the Centre's Astronomy Book Prize was awarded for the first time: Geoffrey Edwards, who graduated from UVIC with first class standing in Arts and Science, was the recipient. Friday evening observing sessions with UVIC's 50 cm reflector continued through most of the year under George Ball's direction. The mirror-making group, under Roger Williams' direction, completed the polishing of five mirrors. The 1980 council was elected by acclamation at the December meeting. Plans are underway to host the 1981 General Assembly on May 16-18 of that year. Paid-up memberships numbered 91 at the close of 1979.

Chris Aikman, *Secretary*

WINDSOR CENTRE

The Windsor Centre held eight regular meetings during 1979. All eight meetings were held at St. Clair College. Two council meetings were held during the year. Instead of our regular field trip in June, the membership decided on the formation of a summer observing program. All three expeditions in June, July and August were held at Point Pelee National Park. A brief resume of the regular monthly meetings follows:

- January 16 Bert Huneault reported on the Astronomical Highlights of 1978. The main feature was presented by Tom Smart: "An Explanation of Some of the Aspects of Einstein's Theory of Relativity".
- February 20 Randy Groundwater gave some hints on observing the eclipse. He showed several methods of using a telescope as well as some methods for those people who don't own a telescope. He also gave some information on photographing the eclipse. Tom Smart gave us some hints on observing Mercury and concluded that the time for the best observing occurred around ten days before greatest elongation.
- March 20 Randy Groundwater presented a preliminary report on the Solar eclipse. The membership reported on some of the local attempts at observing the partial eclipse in the Windsor area.
- April 17 Jim Meredith, Dave Hamilton, Ivan Semeniuk and Bert Huneault, each gave their accounts of the total eclipse following their trips to Winnipeg. John Thompson read a log that Randy Groundwater compiled while he was in Winnipeg for the eclipse. The main feature was a video tape of the C.B.C. coverage of the eclipse.
- May 15 Randy Groundwater announced our new summer observing program. It would take place in June, July and August, at Point Pelee National Park. A discussion was led by Jim Meredith concerning the nature of Tides and their complexities of formation. A feature film was presented entitled "Galileo: The Challenge of Reason".
- September 18 Henry Lee, our appointed member to the Science Centre Committee of Windsor, reported that the main topic of the first meetings was the profitability of a planetarium. Randy Groundwater presented a slide show that dealt with our expeditions to Point Pelee during the summer.
- October 16 Randy Groundwater discussed the positions and the motions of planets for the fall of 1979. Our main feature was a movie narrated by William Shatner on the "Universe".
- November 13 The annual meeting of the Windsor Centre included the election of officers for 1980. Dr. John R. Percy our National President was our guest speaker. He gave a fascinating presentation entitled "Question of Life in the Universe". Several of our members served refreshments at the conclusion of the meeting.

Lorison A. Durocher, *Secretary*

WINNIPEG CENTRE

In the year 1978-79, a total of 10 general meetings were conducted at the University of Winnipeg, and 2 Council meetings at Glenlea or at the homes of some Councillors. Programmes for the general meetings were as follows:

- October 13 Annual Meeting, Election of Officers; "Voyage into Darkness" by Willard Elliot.
- November 10 "The Corona" by Dr. Martin Clutton-Brock; "Building of the University of Manitoba Observatory at Glenlea" by Dr. Bochonko; "101 Club" by Hans Thater; "Lunar and Planetary Group" by Don Hladiuk.

- December 8 "Meteorite site, Lac du Bonnet" by Patrick O'Connor; "Deep-sky Objects" by Hans Thater; "Application of Sidereal Time" by Mr. E.W. Mazerall; "Aligning a Telescope" by Mr. Bill Peters.
- January 12 "To Eclipse or not to Eclipse" by Dr. R. Bochonko.
- February 9 "Stonehenge" by Greg Bailey.
- March 9 "Discovering the Universe – Together" by Mr. Alan Dyer, President of Edmonton Centre; "Eclipse Recaptured" by Bill Krosney and Don Hladiuk; "Eclipse slides" by Father F. Michiels.
- April 13 Two films through the courtesy of Mr. Harlan Creighton, – "Who's out There?", and "The Universe". Also, Mr. Richard Winiarz on the "Eclipse".
- May 11 "Jupiter. . . as seen by Galileo", and "The Voyager Spacecraft", by Mr. B. Peters; "Glenlea Flood" slides by Mr. R. Belfield; "Eclipse" slides by Mr. Bill Lawrence.
- June 8 "Windmills" by Mr. Harry Sevier, Bristol Aerospace.
- September 14 "The Astronomer and the UFO's" by Chris Rutkowski.

The 1978-79 year started off with the Centre's participation in a "Space Odyssey" display at the Eaton's downtown department store. Members gathered together their best astronomical photographs, literature, maps and instruments for this event.

The highlight of the year was, of course, the Solar Eclipse. Preparations which began early in the year culminated as "the day" approached. Efforts were doubled at this time to provide both information services to the public, and to raise money for the C-14 which the Centre had ordered. Among the activities were eclipse seminars, and an Information Centre conducted by members and available at the Manitoba Planetarium. Eclipse lectures were conducted at schools for both students and adults, not only in Winnipeg, but also in outlying towns.

After the Eclipse, seminars entitled "Relive the Eclipse" were held at the Manitoba Planetarium. At this time, packets of 12 eclipse slides, taken by members of the Centre, were available for anyone who wished to purchase a set. All profits realized were deposited in the Telescope Fund.

Some members donated their time to lecture on the topic of basic astronomy in a number of school divisions throughout the city. This was part of the Continuing Education Programmes that these school divisions offered.

The Spring of 1979 brought disastrous news for the Centre. The Glenlea Observatory suffered the results of a flood. Despite the many hours of sandbagging, the wall was not high enough to withstand the force of the mighty Red River. However, the Observatory was not lost, and members banded together for the giant clean-up after the flood. The Observatory was soon in working order again, and is now awaiting the arrival of the C-14.

In retrospect, 1978-79 was an eventful year. The Solar Eclipse provided the greatest excitement and involvement for the Centre in 1979. However, the arrival of the C-14 in 1980 is expected to equal that, and provide opportunities for interesting projects in the upcoming years.

Patricia Berezowski, *Secretary*

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The Gold Medal of the Society was established in 1905 as an encouragement to the study of astronomy. It is awarded to the graduating fourth year University of Toronto Arts & Science student who has both an A standing in his fourth year and the highest average mark in the two full courses and two half courses in astronomy which are contained in the Astronomy specialist programme, provided this average is over 80%. If no student satisfies these criteria, the award is not made.

1906 – *W.E. Harper	1935 – Miss F.S. Patterson	1966 – W.A. Sherwood
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1909 – *R.K. Young	1940 – W.F.M. Buscombe	1968 – P.G. Martin
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1913 – E.A. Hodgson	1956 – D.C. Morton	1972 – M.J. McCutcheon
1914 – G.S. Campbell	1960 – C.R. Purton	1976 – Chris Rogers
1926 – *F.S. Hogg	1961 – R.C. Henry	1977 – M. De Robertis
1929 – P.M. Millman	1962 – J.R. Percy	1978 – D.R. Gies
1931 – W.S. Armstrong	1963 – P.H. Reynolds	1979 – N. Duric
1933 – K.O. Wright	1965 – A.F.J. Moffat	

CHANT MEDAL OF THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

The Chant Medal of the Society was established in 1940 in appreciation of the great work of the late Professor C.A. Chant in furthering the interests of astronomy in Canada. This medal is awarded, not oftener than once a year, to an amateur astronomer resident in Canada on the basis of the value of the work which he has carried out in astronomy and closely allied fields of original investigation.

Awards have been made to the following:

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1941 – H. Boyd Brydon (Victoria)	
1942 – W.G. Colgrove (London)	1953 – Jean Naubert (Centre d'Astronomie de Montréal)
1943 – Cyril G. Wates (Edmonton)	
1945 – Paul-H. Nadeau (Quebec)	1955 – Frank J. DeKinder (Montreal)
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1949 – Frank Sisman (Hamilton)	1959 – Earl Milton (Edmonton)
1950 – *F. Keith Dalton (Toronto)	1967 – R.R. Thompson (Toronto)
	1979 – Rolf G. Meier (Ottawa)

SERVICE AWARD MEDAL OF THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

The Service Award was established in 1959 and, on recommendation of a special committee of the National Council, this small bronze plaque is presented to members who have performed outstanding service to a Centre or to the National Society.

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*J.H. Horning (National Treasurer)	*M.W. Burke-Gaffney, S.J. (Halifax)
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1962 – Jean Asselin (Montréal)	Ernest S. Keeping (Edmonton)
Robert J. Clark (Vancouver)	*W.S. Mallory (Hamilton)
*Jesse Ketchum (Toronto)	1966 – P. Lemieux (Montreal)
Joseph A. Pearce (Victoria)	*S. Litchinsky (Calgary)
1963 – Edwin E. Bridgen (Montreal)	W.J. McCallion (Hamilton)
Miss M. Burland (Ottawa)	W.A. Warren (Montreal)
A. Vibert Douglas (Kingston)	

*Deceased

- 1967 – H.S. Hogg (Toronto)
 P.M. Millman (Ottawa)
 *R.J. Northcott (Toronto)
 *H. Simard (Montreal)
 J.F. Wright (Vancouver)
- 1968 – *D.R.P. Coats (Calgary & Winnipeg)
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 Herbert Fox (Hamilton)
- 1970 – Norman Green (Hamilton)
 J.E. Kennedy (Saskatoon)
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 J.N.R. Scatlift (Winnipeg)
- 1972 – Vern Ramsay (Toronto)
 B.F. Shinn (Winnipeg)
 F. Schneider (Hamilton)
- 1973 – Fred P. Lossing (Ottawa)
- 1974 – Ian Halliday (Ottawa)
 Fred Williams (Victoria)
- 1975 – D.J. FitzGerald
- 1976 – F. Loehde (Edmonton)
 *Ken Chilton (Hamilton)
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- 1977 – P. Marmet (Quebec)
 J.R. Percy (Toronto)
 Mrs. D. Russell (St. John's)
- 1978 – Mrs. Marie Fidler Litchinsky (Calgary & Toronto)
- 1979 – R. Noel de Tilly (Centre d'Astro. Montreal)
 A.W. Scott (Toronto)
- *Deceased

KEN CHILTON PRIZE OF THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

The Chilton Prize was established in 1977 by the National Council of the Society, in remembrance of K.E. Chilton, an active member of the Hamilton Centre. The Prize is awarded annually to an amateur astronomer resident in Canada, in recognition of a significant piece of astronomical work carried out or published during the year.

- 1978 – J.B. Newton (Toronto)
 1979 – W. Morrison (Kingston)

DECEASED MEMBERS FOR 1979

It is with regret we record the decease of the following members in 1979

- | | |
|---------------------------------------|------------------------------|
| Dr. L. Anderson (USA) | Mr. R. Mueller (Toronto) |
| Dr. C.S. Beals (Ottawa) | Mr. D. McKelvey (Vancouver) |
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*Deceased Jan. 26/80

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