



Supplement to the **JOURNAL**

of the **ROYAL ASTRONOMICAL**
SOCIETY of **CANADA**

ANNUAL REPORT 1976

APRIL 1977

PRESIDENTS OF THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

1890-1894	C. Carpmael	1936-1937	R. E. DeLury
1895	L. W. Smith	1938-1939	W. Findlay
1896-1897	J. A. Paterson	1940	J. A. Pearce
1898-1899	A. Harvey	1941-1942	F. S. Hogg
1900-1901	G. E. Lumsden	1943-1944	A. V. Douglas
1902-1903	R. F. Stupart	1945-1946	A. E. Johns
1904-1907	C. A. Chant	1947-1948	J. W. Campbell
1908-1909	W. B. Musson	1949-1950	A. Thomson
1910-1911	A. T. DeLury	1951-1952	C. S. Beals
1912-1913	L. B. Stewart	1953-1954	J. F. Heard
1914-1915	J. S. Plaskett	1955-1957	R. M. Petrie
1916-1917	A. D. Watson	1957-1959	H. S. Hogg
1918-1919	A. F. Miller	1959-1960	A. McKellar
1920-1921	J. R. Collins	1960-1962	P. M. Millman
1922-1923	W. E. W. Jackson	1962-1964	R. J. Northcott
1924-1925	R. M. Stewart	1964-1966	K. O. Wright
1926-1927	A. F. Hunter	1966-1968	M. M. Thomson
1928-1929	W. E. Harper	1968-1970	J. E. Kennedy
1930-1931	H. R. Kingston	1970-1972	H. Simard
1932-1933	R. K. Young	1972-1974	J. L. Locke
1934-1935	L. Gilchrist	1974-1976	J. D. Fernie
		1976-	A. H. Batten

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
1900-1901	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-	D. J. FitzGerald
1928-1931	L. Gilchrist		

REPORT OF THE NATIONAL PRESIDENT

The 1976 General Assembly of the Society was held at the University of Calgary from May 21-24. The full and enjoyable programme included a retiring presidential address by Dr. J.D. Fernie and a Ruth Northcott Lecture on the Canada-France-Hawaii Telescope by Dr. J.L. Locke. An innovation that looks like becoming a regular feature of future Assemblies was the observing competition. Our thanks go to the Calgary Centre for their hard work and generous hospitality.

The major event in the business affairs of the Society has undoubtedly been the sale of 252 College Street and the relocation of the National Headquarters in rented quarters at 124 Merton Street. The full financial implications of this move are yet to be worked out, but meanwhile our new location provides greatly improved working conditions for our Executive Secretary and a more satisfactory and efficient setting for the meetings of National Council. We are deeply grateful to Miss Freeman for her organization and hard work which enabled the move to be made so smoothly.

The physical move of the Society's office is paralleled by a more fundamental transition in our affairs. This is a time when many members are questioning the role of the Society and the relations between the Centres and the National Society. The initiative and energy of Dr. J.R. Percy in proposing and directing a special committee on the long-term aims of the Society have provided a useful focus for these discussions and will undoubtedly lead to some changes in our ways of doing things. Decisions that may be made at the 1977 General Assembly could prove to be of the utmost importance to the Society, and I hope that as many members as possible will come to express their views and to deliberate thoughtfully.

Notre société se doit de servir également nos membres francophones et anglophones. Sous la direction du Dr. Higgs, nous avons publié dans notre *Journal* quelques communications en français et nous espérons que le nombre de telles communications s'accroîtra pendant les prochaines années. Nous signalons aussi les activités diverses de la société d'astronomie de Montréal et le travail de M. Damien Lemay (centre de Québec) qui a gagné le grand prix au concours des observateurs à l'assemblée générale de Calgary.

The Society's Gold Medal for 1976 was awarded to Mr. Christopher Rogers, who is now a graduate student at the University of Washington in Seattle. The prize awarded by the Society at the 1976 Canada-Wide Science Fair was won by Miss Diana Piotrowski of Mississauga, Ontario.

We note with great regret that deaths of Dr. J.F. Heard (a former president) and Mr. K. Chilton (a former president of the Hamilton Centre) on October 5th and November 14th respectively. Both these men were active in the affairs of our Society and in the cause of astronomy. They were also good friends to many of us, and in their passing we have lost much.

On behalf of you all I thank the officers and council for all their work throughout the year and also those who from time to time help the Society by offering their professional services. We depend heavily on these friends and members.

A. H. Batten

REPORT OF THE NATIONAL SECRETARY

1976 has been another year of extensive and varied activity by the Society's Centres across Canada as described in the reports which follow.

During the year Council Meetings were held in Toronto on January 31st, May 21st, and September 25th. The Annual Meeting was held in Calgary on May 22nd in conjunction with the General Assembly and Council Meetings.

Membership in the Society at September 30th, 1976 increased slightly as follows:

	1975	1976
Calgary	61	78
Edmonton	63	78
Halifax	37	50
Hamilton	62	67
Kingston	12	9
London	35	31
Montreal	102	82
La Société d'Ast. Mtl.	53	62
Niagara	25	23
Ottawa	195	191
Quebec	55	92
St. John's	12	11
Saskatoon	56	45
Toronto	594	544
Vancouver	129	155
Victoria	104	83
Windsor	37	46
Winnipeg	52	49
Unattached to Centres		
Canada	186	189
United States	327	322
Overseas	26	36
Honorary	15	15
TOTAL:	2238	2258

The Society gratefully acknowledges the receipt of annual grants from the National Research Council of Canada and the Ministry of Colleges and Universities of the Province of Ontario.

D. J. FitzGerald, *National Secretary*

CALGARY CENTRE

Calgary Centre enjoyed a most successful year in 1976. Membership increased and, of course, the highlight was the General Assembly hosted by our Centre and held at the University of Calgary. Grateful thanks are extended to the University staff for their assistance and suggestions and for the excellent accommodation provided for the meetings. Thanks are also given to the Province of Alberta which hosted the banquet for out-of-province guests on the Saturday evening. Special mention is given to our two hard-working members, Dunstan Pasterfield and Ulrich Haasyk for the Observing Contest started at this General Assembly (and which is being carried on in 1977 by the Toronto Centre) and to the oil companies in Calgary who donated a total of \$850.00 as prize money for the winners in the various categories.

Nine meetings of the members were held - five at the Calgary Centennial Planetarium, two at the University of Calgary and the Christmas Banquet held at the Blackfoot Inn. The August meeting was a barbeque and observing night at the home of the Glen Reeds - this really great night was appreciated by all those who attended. Nine meetings of Council were also held during the year.

Under the chairmanship of John Findlay, a "Practical Workshop" night was initiated in September to be held on the first Thursday of the month at the Calgary Centennial Planetarium.

The meetings were:

January	Annual Meeting and Election of Officers followed by a talk by Dr. D. Kendall, University of Calgary, on "The Ozone Layer".
February	Rev. Dunstan Pasterfield, Centre member, on "Deep Sky Astronomy",
March	Mr. J. Budlong, S.A.I.T., spoke on "Practical Celestial Navigation".
April	Mr. Alan Dyer, exchange speaker from the Edmonton Centre, on "Astrophotography".
May	The General Assembly which included the Retiring Presidential Address by Dr. J. D. Fernie and the Ruth Northcott Memorial Lecture by Dr. J. L. Locke.
August	Barbeque and observing session at the home of the Glen Reeds.
September	Mr. S. Wieser, Director of the Calgary Centennial Planetarium spoke on "The Viking Lander".
October	Visit to the Photographic Zenith Tube (PZT) followed by an observing meeting at the Rothney Astrophysical Observatory at Priddis.
November	Dr. Karen Castle, University of Calgary, gave a talk on "Mass Transfer Between Binary Stars".
December	Christmas Banquet and special program.

The Centre is most grateful to the City of Calgary and Mr. S. Wieser, Director, for the use of the Calgary Centennial Planetarium and to the University of Calgary for the generous use of lecture rooms and the facilities at Priddis.

Marie Litchinsky, *Secretary*

EDMONTON CENTRE

The Edmonton Centre held nine regular and seven council meetings during the 1975-76 season. The regular meetings were held in the Queen Elizabeth Planetarium. At the Centre's Annual Banquet, in November, the President's Award was presented.

Speakers and topics for the regular meetings were:

October	Planetarium presentation: Issac Asimov's "The Last Question".
November	Annual Banquet; Cal Bricker: "Remote Sensing - Seeing Things That Cannot Be Seen".
December	Alan Dyer: "Astrophotography".
January	Planetarium presentation: "South of Capricorn".
February	Jack Winzer and several members of the Telescope Making Group: "Accounts of several telescope projects with a display of finished instruments".
March	Gordon Patterson (Saskatoon exchange speaker): "Activities of the Saskatoon Centre and the construction of a private observatory".
April	John Budlong (Calgary exchange speaker): "Practical Celestial Navigation".
May	Doug Hube: "Progress of the University of Alberta's 20-inch Telescope Project", plus a visit to the Physics Department to see the telescope under construction.
June	Planetarium presentation: "New Worlds Are Coming".

Centre membership rose again this year and the activities of members in telescope making, observing and astrophotography increased. Construction of the Ellerslie Observatory, S.W. of Edmonton, was started by Anthony Whyte and other members. The observatory will house an 8-inch refractor. The Edmonton Centre now exchanges speakers with the Saskatoon Centre as well as the Calgary Centre. The Centre was successful in its application to host the 1978 General Assembly and planning for this was started immediately.

Anthony J. Whyte, *Secretary*

HALIFAX CENTRE

1976 was another active year for the Halifax Centre. The membership has been growing and ten well-attended regular meetings were held during the year:

- January 16 *Some Small Scopes* by Dr. R.L. Bishop.
- February 20 Members' Night.
- March 19 *Spectra and Spectrographs* by Dr. Ted Bednarek, Dr. Gary Welch.
- April 30 *Grand Tour of the Solar System* (7 members).
- May 21 *Naked-Eye Observing* by Mary King.
- June 18 *Calgary Assembly* by Dr. Larry Bogan.
- September 17 *Universal Illusions* by Dr. R.L. Bishop.
- October 15 *Telescope Makers' Seminar* (4 members).
- November 19 *Stellafane* by Bill Parnell,
Astro-Europe by Randall Brooks.
- December 17 *Interstellar Molecules* by Dr. George Mitchell.

During the period May 20 to June 13, the Centre participated in the annual Societies' Show of the Nova Scotia Museum. Much of the credit for the success of this, our first such display, is due to the work of Randall Brooks and Debby Burleson who acted as the co-ordinators for our Society.

Nova Notes, the Centre publication, has continued to thrive under the very capable editorship of Randall Brooks.

Despite the fact that General Assembly 1976 was held in far-off Calgary, three of our members were present. Larry Bogan was our official delegate; he presented a paper and on his return gave us a very comprehensive report of the Assembly. Roy Bishop (who presented a paper) and Peter Reynolds also attended the meetings.

P. H. Reynolds, *Secretary*

HAMILTON CENTRE

The Hamilton Centre had a very active year in 1976. There was the continuing of the mall displays, instituted last year, and an expansion of the public education activities, especially school lectures.

The regular meetings of the Centre were held on the first Thursday of the month and were generally well attended. The topics discussed were varied and the programme was as follows:

- January "Shortcomings of Astrology" K. E. Chilton
- February "Advancements in Astronomy" K. E. Chilton
- March "Doppler Satellite Navigation" C.C.I.W.
- April "X-ray Source, Cygnus X-3" Dr. E. Seaquist
- May "Members Night" due to illness of Dr. Heard
- June "Solving Galactic Structure" Dr. R. Garrison
- October "Extra-terrestrial Life" Orrin Christy
- November "Where the Ice Flows - 1905 Solar Eclipse Expedition to Labrador"
R. Lang
- December "Ten Years of the Hamilton Centre" R. Lang

On top of the regular monthly meeting, the Centre carried out its usual observing nights that were usually well attended. Along with this there were special nights for special attractions, such as eclipses and occultations. The Discussion Group met 9 times at the residences of various members to discuss various topics of current interest.

The Centre's greatest tragedy occurred this year with the death of Mr. Ken Chilton, after a long bout with cancer. His vitality and industriousness will be missed in the future activities of the Centre.

Peter H. Ashenurst, *Secretary*

KINGSTON CENTRE

The early part of 1976 was highlighted for the Kingston Centre by the appearance of Comet West. There were several 5.00 a.m. observing sessions in a row as members took advantage of a run of good weather.

During the summer, there were no meetings as most of the Centre members are students of Queen's University who do not live in Kingston.

September saw a membership drive which for the first time in several years attracted new members from outside the Queen's community. During this latter part of the year, the Centre was presented a lecture by Dr. A. H. Bridle of Queen's University, Physics Department and organized a trip to the Toronto Planetarium.

Ms. Susan McDougall, *Secretary*

LONDON CENTRE

The London Centre held eleven regular meetings at the University of Western Ontario, and sixteen executive meetings. The program for 1976 was as follows:

- January 24 Annual Meeting and Fourth Annual Banquet of the London Centre.
Dr. M.P. Fitzgerald, University of Waterloo – "Galactic Structure".
- February 20 Film night; BBC productions of "Black Holes" and the "Planets".
- March 19 Peter Jedicke, "Stellar Evolution and the H R Diagram".
- April 16 Member's night; Owen Ash, "Stonehenge", President Peter Andraea, "Polishing Techniques".
- May 21 Cancelled due to G.A. in Calgary, Alberta.
- June 18 Richard Crowe, UWO Astronomy, "Planets".
- July 16 Bruce Hamill, UWO Engineering, "Colonization of the Moon".
- August 20 Peter Jedicke, "Stellar Coordinate Systems and Clock Drives".
- September 17 John Conville, UWO Astronomy, "Stellafane 1976".
- October 15 Hugh MacLean, exchange speaker from the Niagara Centre, "Astrophotography for Everyone".
- November 19 Steven Zronik, APRO field investigator "Unidentified Flying Objects Observed in Canada".
- December 17 Film night; "Radio View of the Universe", "To the Edge of the Universe", "Apollo 16".

In addition to these monthly meetings, the London Centre held three very successful public star nights and one centre barbecue during the summer. These activities along with our presence at several shopping malls during the summer months helped increase our membership over last year, by more than 20%. These Mall displays, staffed by our enthusiastic centre executives, were set up at Wellington, City Centre, Westmount, and Oakridge Malls of London, as well as Elgin Mall of St. Thomas and Blandford Mall of Woodstock, Ontario. This display was in general an information booth on the RASC, the London Centre, telescope making, observing techniques, and astronomy in general for the amateur.

Again this year London variable star observers lead the number of personal observations by Canadian AAVSO'ers, and several of our members were also active in telescope making, and observing with the Andrae 16-inch reflector. Also, our plans for a large mobile observatory for the centre are progressing well.

Vice-President Peter Jedicke initiated this year a new course in Astronomy at Fanshawe Community College and he also hosts a monthly local cable television program called "Telescope". "ASTRONOMY LONDON", the newsletter of the centre, produced by Editor Michael Flegel, put in print over a hundred pages of informative and interesting reading this year, and we are glad to see that it is being enjoyed all across Canada. At the Annual Meeting of the centre, Mr. Michael Wallis, Past President and Editor of the London Centre received the Merit Award.

Eric J. Clinton, *Executive Secretary*

MONTREAL CENTRE

During this year the Centre held one general meeting, the Annual Meeting on 23 October 1975. The Board of Directors met five times, twice outside the Observatory. From the middle of May until early August all members were denied access to the Centre's Observatory by COJO – without advance notice. Result: no meetings, no newsletter, insufficient contact between members, and with the general public.

And in the remaining nine months of Saturday (public) and Wednesday (observers) meetings, there may have been five or six suitable observing nights. Of course, some of us managed to follow Nova Delphini to 9th, 10th and even 11th magnitude, and have the photographs to prove it. And Comet West made its appearance here, too, as we can show on (all too few) pictures. But these were not Centre activities, just individual members observations at home.

We made the best of the summer's slump with two "Deep Sky" nights in out-of-town locations, and some of us went to Stellafane.

W. Jutting, *Secretary*

LA SOCIÉTÉ D'ASTRONOMIE DE MONTRÉAL

Notre journal "LE QUEBEC ASTRONOMIQUE" a publié 11 numéros au cours de l'année écoulée, pour un total de 6,600 exemplaires. Le contenu et la présentation du "QUEBEC ASTRONOMIQUE" s'améliorent graduellement. De plus en plus, les maisons d'enseignement manifestent le désir de s'abonner. Une meilleure collaboration entre les membres se fait valoir pour la présentation d'articles plus sérieux et scientifiques.

Une SOIREE POPULAIRE fut organisée au cours du mois de septembre 1976. Malgré la mauvaise température, plus de 400 personnes se sont présentées à la salle d'exposition, où il y eut en conférences, forum de questions et réponses, exhibits etc.

Au cours de l'année, outre nos causeries hebdomadaires lors de nos réunions du mardi soir, nous avons invité à titre de conférenciers: les docteurs Gilles Beaudet, Jean-Louis Tassoul, Gilles Fontaine, Pierre Couillard, de l'Université de Montréal, Dr. Auray Blain, du Planétarium Dow, ainsi que MM. Michel Savage et Jacques Dumas. L'assistance à nos conférences et causeries n'a cessé d'augmenter.

L'équipe du magasin, composée de MM. Pierre Beauchamp, Marcel Legris et Adélar Rousseau, sans oublier notre trésorière Mme Mariette Dubé, met à la disposition des membres et même des personnes de l'extérieur, tout un matériel pour la construction de télescopes (disques de verre, abrasifs, montures, livres, cartes, diapositives, posters etc.) Les quelques profits réalisés ici sont versés aux fonds généraux de la Société.

Un atelier de métallisation des miroirs a été mis sur pied, sous la direction de M. Henry Coia, et a donné à date de fort bons résultats. Cet atelier est à la disposition de tous.

Le SOUPER ANNUEL eut lieu à l'Auberge du Vieux Foyer, à Val David. Au cours de ce souper, le prix "Étoile d'Argent" fut remis au Dr. Gilles Beaudet et le prix "Georgette LeMoynes" à M. Marcel Legris.

La construction de l'OBSERVATOIRE de la Société, à St-Valérien est en bonne voie de réalisation. Les travaux reprendront cet été et nous espérons que l'observatoire sera en opération au cours de l'été 1978.

Pour l'année fiscale 1975-1976, la Société a compté 386 membres, soit une augmentation de 42 membres. Sur ce nombre 56 ont adhéré à la SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA et 18 à la SOCIÉTÉ ASTRONOMIQUE DE FRANCE.

La vente de l'ANNUAIRE ASTRONOMIQUE DE L'AMATEUR a connu un bon succès, ayant approché à quelque cent dollars le coût de l'impression.

Une souscription lancée parmi nos membres, en faveur de l'observatoire, a rapporté plus de \$1,500.00.

LA SOCIÉTÉ D'ASTRONOMIE DE MONTREAL est en plein développement et l'annonce de la construction d'un observatoire au Mont Mégantic, par les Universités Laval et de Montréal, de même qu'une faculté d'astronomie à ces deux universités, vont donner à l'astronomie au Québec un véritable essor, dont notre Société en retirera de précieux avantages.

Rolland Noël de Tilly, *Secrétaire*

NIAGARA CENTRE

This past year continued to be a year of reorganization for the Niagara Centre. While the incorporation necessary for our proposed observatory has been completed, various legal interpretations and modifications took much of the Council's time. Hopefully, the coming year will be one of definite progress toward our goal of constructing an observatory.

In 1976, we moved some of our meetings to the new library on Victoria Avenue which is a newer and more convenient location for our members. During 1976, we had 8 regular meetings and 4 Public Star Nights. The meetings and programmes were as follows:

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|-----------|----|---|
| January | 8 | Annual meeting and election of the Board. Edward Lindberg: "Astronomical Time Pieces and Clocks". |
| February | | No meeting. |
| March | 4 | Hugh Maclean: "The History of the Calendar". |
| April | 8 | Ken Chilton, Hamilton Centre: "Variable Stars". |
| May | 13 | Tony Akkerman: "Telescopes and Telescope Making". |
| June | 4 | Public Star Night. |
| July | 9 | Public Star Night. |
| August | 6 | Public Star Night. |
| September | 3 | Public Star Night. |
| October | 14 | Peter Jedicke, London Centre: "The Colonization of Space". |
| November | 19 | Annual Banquet, Ernst Both, Buffalo Museum of Science, "A Mini Tour of the Universe". |
| December | 9 | Al Kindy: "Comets". |

Lawrence Redman, *Secretary*

OTTAWA CENTRE

During 1976, the Ottawa Centre held eight general meetings with public lectures at the National Research Council building. A quite varied program was presented and attendance was very good at all meetings:

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|---------|----|---|
| January | 27 | Annual Dinner Meeting, Dr. J.L. Locke, National Research Council, "The Canada-France-Hawaii Telescope". |
|---------|----|---|

- February 26 Walter Scott Houston, Haddam, Conn., "Confessions of a Meteorite Hunter".
- March 15 Dr. D.C. ReVelle, National Research Council "Meteoritic Thunder".
- April 2 Observers' Group – "Minor Planets and Their Photometry; Comet West; Greenbank Radio Observatory".
- September 8 Lola Chaisson, Harvard College Observatory, Cambridge, Mass. "Life History of Quasars".
- October 14 Dr. D.A. Russell, National Museum of Natural Sciences, "Death of the Dinosaurs: A Cosmic Catastrophe?"
- November 22 Dr. V. Gaizauskas, National Research Council, "A Trio of Solar Paradoxes: Missing Neutrinos; Sunspot Shutdown; Sunquakes".
- December 8 Film Night – "Solar Atmosphere", "Invisible Universe", "Explorations in Time and Space".

1976 was a good year for observational astronomy by members of the Observers' Group. This active group, under the Chairmanship of Doug Somers, until he left for Queen's University in September, and then under Art Fraser, met regularly the first Friday of each month to report observations and activities. Comets Bradfield, West and D'Arrest were observed and photographed during the year and members of the Group were among the first to report the break-up of the nucleus of Comet West to the IAU on March 12th. Doug Welch continued as the most active observer, capturing both the Observer of the Year and Variable Star Observer awards as he did in 1975. Fourteen members went to the Stellafane Telescope Convention in Vermont and once again brought home a prize; Dr. Fred Lossing won first prize for Newtonian reflectors with a 12-1/2-inch f/3.9 telescope. One member may have set a record for miles travelled in observations – Rob Dick observed the total eclipse in Australia on October 23rd.

North Mountain Observatory continued as a centre for observations, but for the last year in its present location. Because urban spread has so altered viewing conditions there, a new site will be needed for this facility. A committee under the Chairmanship of Peter MacKinnon located a promising new location near the town of Almonte, approximately 30 miles west of Ottawa, and it is hoped the Observatory can be moved in 1977.

The Centre's newsletter, *Astronotes*, published 12 issues during the year and continued as a source of interesting information and often lighthearted commentary for the amateur members. The very able editor for a number of years, Rolf Meier, retired from this responsibility in June and his successor, Jon Buchanan, has maintained the high standard for which this publication has become noted.

E.H. Dudgeon, *Secretary*

CENTRE DE QUEBEC DE LA S.R.A.C.

L'année 1976 s'est révélée très riche en activités, malgré la grève des professeurs à l'Université Laval qui nous à empêché de tenir nos conférences durant l'automne. De 80 membres que nous comptions en février 1976 (année 1975-76), nous voici maintenant avec 105 membres en février 1977 (année 1976-77). Le "Bulletin" a paru à onze reprises. "L'Almanach graphique" a été édité pour la 32e année consécutive. "Les Ephémérides astronomiques 1976" ont été publiées pour la première année.

Quelques uns de nos membres ont participé à une émission télévisée portant sur l'astronomie amateur. Notre Centre a tenu des exhibits à "Expo-Loisir-Information" à Québec, à "Expo-Sciences régionale de Québec", au "Congrès de l'Association des Groupes d'Astronomes amateurs" (A.G.A.A.) et à l'assemblée annuelle de la S.R.A.C. à Calgary. Au congrès de l'A.G.A.A., trois de nos membres ont présenté des conférences. MM. Paul Darisse

et Eloi Bolduc ont été élus respectivement vice-président et trésorier de cet organisme. Notre président, M. Jean-Pierre Bernier a également présenté deux séances de diapositives sur l'astronomie au Centre écologique de Duchesnay.

Lors du concours de projets en astronomie que notre Centre a lancé en 1976, M. Fabien Dolbec s'est vu décerné un prix. MM. Damien Lemay et Mario Lapointe ont gagné de nombreux premiers prix aux concours organisés à l'assemblée annuelle de la S.R.A.C.

Des conférences et des soirées d'observations qui s'adressaient à nos membres et au public en général ont été tenues:

- 14 janvier "Notes historiques sur l'Observatoire de Québec" par M. Paul Darisse. Conférence.
- 11 février "Champs magnétiques stellaires" par M. Ermanno Borra, Ph.D., Univ. Laval. Conférence.
- 10 mars "Le Soleil aussi est une étoile" par M. Jean-Paul Boudreault, Univ. Laval. Conférence.
- 14 avril "La Terre vue du Ciel" par M. Hervé Audet, M.Sc. Conférence.
- 11 août Soirée d'observation à l'observatoire de l'Université Laval, à St-Elzéar. Les Perséides.
- 24 octobre Soirée d'observation à l'observatoire du Collège de Lévis, à St-Nérée de Bellechasse.

Réjean Dutil, *secrétaire*

ST. JOHN'S CENTRE

- Sept. 1975 In September 1975 a public relations committee was set up to make the public aware of the Centre's activities. The committee wrote a letter to the City Hall requesting an appointment with the Mayor. Mr. Harlan Creighton, in our province during the summer months, met with members of the Centre.
- Oct. 1975 Our annual meeting was held in October and the following were elected: Gary Dymond (President), Bill Hurley (Vice-President), David Bennett (Secretary), Dr. P. Lockwood (Treasurer) and Dora Russell (National Representative).
- Nov. 1975 The ideas to apply for an OFY grant was raised and further discussion will follow when applying for this grant. Mr. Randy Dodge gave an interesting lecture on how computers at the Newfoundland and Labrador Computer Services provide us with astronomical data. In January 1976 the centre sold the surplus handbooks on hand.
- Feb. 1976 Correspondence from the National Office was received advising that a travel grant was available for a Centre representative to attend the General Assembly in Calgary.
- Mar./Apr. 1976 In March after our monthly meeting members viewed some slides of Comet West taken by Randy Dodge and Gary Dymond. Plans to observe a partial eclipse of the sun at sunrise on April 22 were made at the monthly meeting followed by a talk on the Sixteen Brightest Stars by Dora Russell.
- June 1976 It was decided to order a complete set of the Society's JOURNALS which were being issued free to Centre libraries from the National Office, prior to moving the national headquarters to the new location.

Plans for the summer were discussed and we then adjourned for the holidays.

Peter Allston, *Secretary*

SASKATOON CENTRE

In 1976, the Saskatoon Centre had a very interesting and active year. With a good showing by several of the members at the Calgary Assembly we managed to capture the Best Centre Award.

The summer outing at Diefenbaker Park was well publicized and very well attended by the general public, even though the weather would not co-operate on either of the two successive nights. Maybe the weather will co-operate in future years.

The annual outing at Awklands was very successful. The transparency of the sky was so good that some had trouble in identifying normal guide stars for locating various objects. The only reason for packing up before dawn was the heavy dew which finally forced us into calling it a night at approximately 3 a.m.

Our monthly meetings were again very informative and entertaining. They included:

Dr. Ray Skinner	White Dwarf and Neutron Stars
Dr. B.W. Currie	Solar-Terrestrial Relationships
Mr. A. Dyer	Astrophotography
Mr. Gerald Borrownand	Manned Space Flight with emphasis on Russian Program
Mr. Ron Waldron	The Christmas Star

Many thanks to all those who helped make 1976 the successful year it was.

Lillia Wilcox, *Secretary*

TORONTO CENTRE

The Annual Meeting of the Centre was held in October to coincide with the change in the Centre's fiscal year. In previous years the fiscal year has run from January to December, but with incorporation of the Centre in October 1974, this was changed to coincide with terms of membership in the Society, that is, from 1 October to 30 September.

It is with great regret that the Centre records the passing on 5 October 1976 of Dr. John Heard, Chant Professor of Astronomy and Director Emeritus of the David Dunlap Observatory, University of Toronto, a former President and Trustee of the Society, and a devoted member of this Centre for 40 years. A donation of \$50 to York Central Hospital has been made in his memory.

The Centre met 6 times in the period 1 January to 1 October. The programmes listed below were arranged by Dr. Clement as Chairman of the Programme Committee, and were well served by Richard McWatters and Andreas Gada as projectionists. Celeste Peters generously contributed her time in preparing refreshments after the meetings.

- January 9 Annual Meeting.
- February 6 Dr. Rene Racine: Globular Clusters: Wonders Never Cease.
- February 14 Joint meeting with the Royal Canadian Institute. Dr. Helen Hogg:
Astronomy in Canada.
- March 6 B. Everson: Black Holes: An Adventure in Curved Space.
- April 9 Dr. R. Watson: Optical Aspects of Australian Astronomy.
- May 14 Robert Pike: Computer Applications to Ray Tracing.

There were also a number of Members' Nights held under the sponsorship of the Observational Activities Committee at the McLaughlin Planetarium.

The year 1976 was another landmark year for Toronto Centre, with the opening in August of the Toronto Centre Observatory. A ten-inch Cave Cassegrain telescope was obtained on permanent loan from the Ontario Science Centre for this project, and in July the Centre received a donation of optical components for 8 and 10-inch reflecting systems from Mr. John Calder of Cambridge, Ontario. The Centre gratefully acknowledges these contributions. The Observational Activities Committee also played an important role in the planning and construction of the observatory building, and it is expected that installation of power, and finishing of the building will be completed in the next year. Bill Peters and Robert Pike, and their committees are to be congratulated for their efforts.

Due to the preoccupation with the observatory, the OAC was not as active as in previous years in observing. However, a successful grazing occultation expedition was organized in August, and the first results of the Sky Brightness Programme were published in the June 1976 issue of the Journal of the Society.

The Finance Committee under Mrs. Ann Scott not only prepared this year's budget, but also arranged liability insurance covering the Centre's activities, and insurance for its property. A licencing agreement was negotiated with Mr. and Mrs. R. Kelsch for the observatory site, and a vigorous membership renewal campaign was organized in the spring under Dr. Clement, Mrs. Scott and Mr. Michael Watson.

The staff of Scope had new faces in 1976 with Celeste Peters as Editor, Jim Cobban as Assistant Editor, Cathy Drake as Advertising Manager, and Steven Morris as Distribution Manager. Bill Ireland of the Planetarium joined as Artist, and his new cover design was introduced with the January 1976 issue of SCOPE.

The Optical Workshop continues under John Morriss to operate twice a week, with 5 mirrors completed and about 12 others in progress. Among the innovations of the workshop this year have been use of a concrete tool for grinding a 12-1/2 inch mirror, use of plastic casting resin for mechanical parts of telescopes, production of guide telescopes from plumbing supplies, and construction of an experimental inverter for operating the Centre Observatory telescope from battery power. The 12-1/2-inch Cassegrain for the Glassford mounting and the Calder telescopes are being completed for use by members of the Centre. The Workshop is now distributing, at nominal cost, all abrasives needed to grind and polish optics. The Workshop also participated in the Astronomy Day programme in August.

The Awards Committee consisting of Harlan Creighton, Ian McGregor and Jim Cobban recommended the following awards which were subsequently ratified by Council:

For Service: Mr. B.R. Chou, Mr. Sydney Fagan, Dr. J.D. Fernie, Mr. James McKenzie, Mr. John Newton, Mr. William Peters, Mr. Bruce Renton, Dr. Rene Racine, Mrs. Ann Scott, Mr. Michael Watson.

For 25 years or more continuous membership: Mr. Donald Austin (joined 1948), Mr. Charles Bartwick (1944), Mr. Raymond Broadfoot (1945) and Mr. John Dewar (1948).

The work of the General Assembly Planning Committee has been greatly slowed by the untimely departure for California of Mr. Ian McLennan. Arrangements for accommodation, financial support and the guest speaker are in progress, and it is the hope of Committee Chairman Mrs. Ann Scott, that things will crystallize in the near future.

Under Ian McGregor the Public Education Committee continued its widely varied and extensive programme, including among its 27 events, astronomy courses at Seneca College and McLaughlin Planetarium, 8 library programmes, Star Nights at Harbourfront, speaking engagements and Astronomy Day '76. The last event drew 1,500 visitors to McLaughlin Planetarium despite the poor weather. The Centre owes special thanks to Ian, Douglas Gies, Richard McDonald, John Morriss, Andreas Gada and Richard McWatters for their efforts. Already requests for the next year have been received and are under consideration.

In spite of the efforts of Dr. Clement's membership renewal group, membership continues to fall. This year's enrollment of 540 is the lowest in nearly 10 years. In addition, notices of transfer to unattached membership in the Society have been received from several members, and will be considered at the next meeting of Council.

Bernt R. Chou, *Secretary*

VICTORIA CENTRE

As in previous years, the University of Victoria has kindly provided accommodation for our regular meetings in the Elliott Building. Our agenda was:

January 9 Annual Meeting and Dinner.

February 11 Dr. W.H. McCutcheon, Physics Department, U.B.C., "The Millimeter – Wave Radio Telescope at U.B.C.".

- March 10 Mr. Phillip Teece, "Observational History: Some Footnotes".
 April 14 Amateur Night – Members Activities During the Year.
 September 8 Mr. R.I. Williams, UVIC, "Messier and His Catalog".
 October 5 Joint Meeting with Vancouver Centre – Dr. D. Crampton, D.A.O., "The Hawaiian Telescope".
 November 12 Panel Discussion.
 December 10 Mr. E. Pfannenschmidt, D.A.O., "Hints and Wrinkles on Amateur Telescopes".

Our Centre once again administered a display booth at the Victoria Hobby Show, held in the spring by the Victoria Lapidary Society. The Centre was also active at the Dominion Astrophysical Observatory during the Saturday evening public nights, providing an opportunity for visitors to view the heavens through various small telescopes.

The popular series "Summer Evenings with the Stars" was a hit again this year, the 5-lecture Session ending with a visit to the D.A.O. Mr. George Ball conducted the weekly observing programme and the mirror-grinding class, both held at UVIC.

The Centre is extremely grateful for the very generous bequest of the late Mr. R.S. Evans, and for the donation of a fully-equipped 2.4-inch Unitron refractor by Dr. Gordon H. Grant.

Membership in the Victoria Centre presently stands at 17 life and 69 regular members.

Frank Younger, *Secretary*

WINDSOR CENTRE

Throughout the year of 1976, most of the regular meetings of the Windsor Centre were held at St. Clair College with an occasional meeting held at the downtown Windsor Public Library. As in past years, the Windsor Centre held eight regular monthly meetings and one field trip. One council meeting was held to plan the up and coming meetings, which were as follows:

- January 20 Mr. Cyril Hallum presented a very interesting impression of his recent trip to New Zealand by means of slides and tape recordings. Mr. Bert Huneault gave the first of a series of explanations of the Observers' Handbook covering such topics as right ascension and declination on a celestial sphere. Mr. Gary Drouin presented a stereophonic tape and slide show on the Universe.
- February 17 Mr. Henry Lee conducted Current Events describing vernal equinox, maximum declination of the sun, the Chinese years being based on the lunar calendar, Kepler's Law, mean and actual sun position and equation of time. Mr. Mario Fabris gave a presentation covering ephemeris time, mean solar time, sidereal and standard time, calculating Windsor time and the Julian day calendar. A film entitled "Cosmic Zoom" was also viewed.
- March 16 Mr. Jim Meredith reminded the members of Current Events including Comet West, St. Patrick's Day, sunrise, sunset, and moonrise. The Julian Day Calendar, the daily operation of Planetariums in Canada, sunspot cycles and occultations were also discussed. Dr. Sanborn continued our series of educational talks by explaining the configuration of Jupiters' satellites and the sun's selenographic colongitude. Mr. Gary Drouin gave an informative presentation on how to use small telescopes together with models of different types of telescopes which members brought in for display. Gary explained the different types of telescopes as well as their advantages and disadvantages. How to mark sunspots, how to use a mount and clock drive, and the use of a telescope during the winter months were also

- discussed. Mr. Ed Keith led an interesting discussion in conjunction with Gary's presentation on how to make your own telescope complete with models of pitch lap, eyepieces, books and charts.
- April 20 Mr. Don Dordevski brought us up to date by mentioning Comet West, Lyrid Meteor Shower, annular eclipse of the sun, Harrington Abel Comet and Mercury's greatest elongation. Mr. Cyril Hallum gave an interesting presentation entitled "Mapping the Skies" including diagrams and charts. We were very fortunate to have as a guest speaker Dr. John Jacobs, who gave a very informative slide presentation on The Long Term Effects of the Sun on the Earth's Climate.
- May Field Trip to Observatory at London, Ontario.
- June 15 Dr. Sanborn presented Current Events mentioning Constellation Hydra, the aphelion of the sun and earth, Mercury's greatest elongation and Lyrid meteors. Mr. Mario Fabris gave a very interesting educational talk on Binary and Variable Stars, followed by a viewing session of the astronomy slide collection owned by St. Clair College which was led by Mr. Gary Drouin.
- September 21 Our Past President, Mr. Bert Huneault gave a most interesting talk on Meteors, Meteoroids and Meteorites. We were extremely fortunate to have as our guest speaker Mr. Ken Chilton from Hamilton who spoke on "Independent Thinkers in Astronomy". Mr. Chilton's presentation was most interesting and he will always be remembered by the Windsor Centre.
- October 19 Dr. Sanborn brought to the attention of all the members of the Windsor Centre that the 16mm film about observing had been filmed by the Centre with the guidance of Mr. Gary Drouin and would be spliced and set for viewing soon. Mr. James Meredith presented Current Events mentioning items of interest from the Observer's Handbook including Orionid meteors and Neptune's position. Our Guest Speaker was Professor John Huschilt, an Associate Professor of Physics at the University of Windsor. His subject was a most interesting talk on the planet Jupiter, reinforced with an excellent slide presentation which was thoroughly enjoyed and appreciated by all.
- November 16 Election of Officers and Council was conducted by Mr. Cyril Hallum. Mr. Henry Lee gave a most interesting educational talk on Comets describing their different tails as well as their history. A sound and slide show entitled "Down the Streets to Earth" was presented by Mr. Gary Drouin.

Heather Hurst, *Secretary*

WINNIPEG CENTRE

The year 1975-1976 marks a special milestone in Winnipeg Centre's 68 years' existence: (1) our long-awaited observatory is now a reality; (2) we are writing our Centre's history and should have it ready for distribution early in the New Year.

Regular meetings were held the second Friday of each month, September through June, in Lockhart Hall, University of Winnipeg. Our Programme Committee, headed by Mr. Wm. Krosney, arranged very interesting evenings for us:

- October 10 Annual meeting, Reception of Reports, etc. Talk by Professor R.
1975 Bochonko on "Occultations and Crazings".
- November 14 "Eclipsing Binaries" by Mitchell Tullock, a third-year student, this being an account of his summer work at the Astrophysical Observatory in Victoria.

- December 12 "Geological Interpretation of Martian Topography" by Prof. G.S. Clarke.
- December 19 Christmas Party arranged by Mrs. Phyllis Belfield, from which we realized over \$100.00 towards the purchase of office equipment.
- January 9 (1) "Interstellar Exploration" by Professor Martin Clutton-Brock;
1976 (2) Slides of the Lunar Eclipses of November 18, 1975 taken in England by Mr. Malcolm Ellis of the British Astronomical Association.
- January 23 "Martian Moons" – an illustrated talk by Mr. Hans Thater.
- February 13 "Cosmology" by Dr. Martin Clutton-Brock, substituting for the scheduled speaker who was unable to attend.
- March 12 (1) Mr. Paul Moffat demonstrated his newly-made table model of a 3" refractor telescope; (2) Mr. Wm. Korsney gave a talk on "Comets in General and Comet West in Particular".
- March 19 Dr. Thomas Bolton, of the Department of Astronomy, University of Toronto – "The Universe through Superman's Eyes".
- April 9 (1) Mr. Lopez, of East African Travel Consultants, an illustrated talk on Africa and in particular Zanzibar, the site of the total solar eclipse of October 23, 1976; (2) Mr. Don Hladiuk showed his slides on the Soviet Spaceship on display at the Convention Centre, and gave his impressions of the show; (3) Mr. Roy Belfield showed slides of his own observatory erected in his backyard.
- May 14 "Little Bangs and Big Bangs" by Professor Richard Bochonko. This was a farewell party for Richard and Helen Bochonko on the eve of their departure for Victoria where Richard will spend his Sabbatical year at the Astrophysical Observatory.
- June 11 "UFO's from an Alternative Angle" by Mr. Ed Barker, of the Planetarium staff, Museum of Man and Nature.
- September 10 (1) A brief preview by Mr. Roy Belfield showing pictures of our new observatory (from the pouring of the concrete to its completion); (2) Mr. Don Hladiuk – slides and talk on his summer geological work, with Mr. Hans Thater; this included slides of the spectacular auroral display in Northern Manitoba.

In addition to the foregoing some of our second meetings held on the fourth Fridays were in the nature of observational gatherings at various strategic places. We also held four regular Council meetings, four Observatory Committee meetings and two Planning Committee meetings.

Despite the busy summer, several of our members, at the request of the Winnipeg School Division, engaged in educational work, giving instruction to school children, Girl Guides and Boy Scouts, all well received. Some of these out-of-town trips entailed a round trip of 300 miles in a day. This represents a total of 19 public programmes given during the year.

Some very well planned displays were put on by our Programme Committee at the various shopping centres, which resulted in some new members joining the Centre.

As an expression of our appreciation for the splendid leadership given by Roy and Phyllis Belfield, National Office awarded them the Bronze Service Medal at General Assembly last May. Warm tribute is paid by our Centre to Roy and Phyllis for their indefatigable work, especially in making the long-desired observatory become a reality.

The following is a resume of various reports received from the Observing Chairmen covering activities during the past year:

Astrophotography: Mr. Belfield reports considerable activity in this field, especially in connection with Comet West, of which several excellent photographs were obtained and were on display at General Assembly in Calgary last May. One member showed some spectacular photographs taken of the Aurora while in Northern Manitoba during the summer.

Aurorae: Mr. Cairns reported that a friend of his, a Mr. Peter Abel, while returning home from Brandon March 31st/April 1st, 1976, witnessed a most spectacular auroral display – from horizon to horizon, lasting four hours – from 12:00 midnight to 4:00 a.m.

Lunar: Mr. Don Hladiuk reports, in part, as follows: "This year I tried to put together a Transient Lunar Phenomena, or TLP watch program in conjunction with the B.A.A. I was planning to use an instrument designed by Malcolm Ellis, a B.A.A. member, called the Crater Extinction Device (CED), but unfortunately this device had a flaw and would make all observations useless; . . . have been thinking along the line of a photometer to make the necessary light measurements."

Occultations: Mr. Clyde Reid states: "As far as I know I have been the only member of the Winnipeg Centre regularly sending Occultation reports to H.M. Nautical Almanac Office. M.H.N.A.O. acknowledges these reports periodically and comments on their accuracy. If there is someone else out there who is making observations, please let me know and we can share our joys and sorrows . . . Over the past year and a half I have made seventeen timings of disappearances and one reappearance . . . which is all I could manage under the circumstances. One of these included the disappearance of a star during the total lunar eclipse of May, 1975."

Planetary: Mr. Hladiuk advises that no written reports concerning our planetary neighbours were received this year. Mr. Hladiuk did informal observations of the planets Mars, Jupiter, Saturn and Venus. With the near completion of our observatory, Mr. Hladiuk states he would like to see a greater participation by the membership in Planetary and Lunar observing . . .

General: One rather full report was received from a non-member. Mr. Gregg Paschak, concerning a "deep red glow near the star Arcturus", which was closely observed by means of a 2-1/2" refractor. Drawings of the event accompanied the report which is on file.

In examining the register for the past six months, it is noted that most members opt for "General" or Deep Sky observing. One or two have expressed interest in Cosmology, others in Comets, Pulsars and Quasars . . . this for the benefit of the various Observing Chairmen.

Ella Dack, *Secretary*

MORRIS ALTMAN

CHARTERED ACCOUNTANT

95 KING STREET EAST

TORONTO 1

CANADA

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, 1976 and the statements of revenue and expense and equity 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 therefore 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, 1976 and the results of its operations for the year then ended, in accordance with generally accepted accounting principles which, except for adjustments in the fixed assets and equity accounts referred to in the notes to the financial statements, have been applied on a basis consistent with that of the preceding year.



Chartered Accountant.

Toronto, Canada,
April 29, 1977.

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

BALANCE SHEET

DECEMBER 31, 1976

(With comparative figures as at December 31, 1975)

	<u>1 9 7 6</u>	<u>1975</u>
<u>A S S E T S</u>		
Current Assets		
Cash	\$ 6,452	\$ 10,856
Short-term deposits	2,000	2,000
Accounts receivable	12,029	9,231
Accrued interest on investments	604	197
Prepaid expenses	<u>496</u>	<u>135</u>
	\$ 21,581	\$ 22,419
Investments		
Marketable securities (at cost)	3,019	<u>\$ 3,019</u>
Special Funds (Schedule "C")		
Building Fund (note 1)	\$173,579	\$ -
Ruth Northcott Memorial Fund	13,467	12,419
Edward R. Paterson Bequest	<u>10,000</u>	<u>10,000</u>
	197,046	\$ 22,419
Fixed Assets (Note 2)		
Land and building - depreciated book value	-	\$ 26,311
Office furniture, equipment and library		2,130
- at depreciated book value in 1975		1
- at nominal value in 1976		<u>1</u>
		\$ 28,441
	<u>\$221,647</u>	<u>\$ 76,298</u>
<u>LIABILITIES AND EQUITY</u>		
Current Liabilities		
Accounts payable and accrued charges	\$ 6,856	<u>\$ 9,459</u>
Deferred Revenue		
Membership fees for ensuing year	\$ 8,899	\$ 6,021
Subscriptions to Journal and Handbook	19,845	13,347
Unappropriated life membership fees (Schedule "B")	<u>7,270</u>	<u>5,983</u>
	36,014	\$ 25,351
Reserve for Special Funds	197,046	\$ 22,419
	\$239,916	\$ 57,229
Surplus (Deficit), per statement	<u>(18,269)</u>	<u>19,069</u>
	<u>\$221,647</u>	<u>\$ 76,298</u>

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

STATEMENT OF REVENUE AND EXPENSE

FOR YEAR ENDED DECEMBER 31, 1976

(With comparative figures for 1975)

	<u>1 9 7 6</u>	<u>1 9 7 5</u>
<u>R E V E N U E</u>		
Membership fees		
R.A.S.C. Centres	\$10,371	\$10,406
Individual members	6,364	5,732
Life membership reserve - annual appropriation	663	566
	<u>\$17,398</u>	<u>\$16,704</u>
Grants and Donations		
Government of Canada - annual grant	\$ 6,500	\$ 6,000
Province of Ontario - annual grant	1,000	1,000
Miscellaneous donations	82	5
	<u>7,582</u>	<u>\$ 7,005</u>
Publications		
Journal of the R.A.S.C.	\$ 6,682	\$ 6,273
Observer's Handbook	27,452	29,833
Reprints and publication fees	5,793	5,650
Advertising	-	2,320
	<u>\$39,927</u>	<u>\$44,076</u>
Less: Agents' discounts	<u>5,369</u>	<u>5,394</u>
	34,558	\$38,682
R.A.S.C. Building (schedule "A")		
Excess of revenue over expense		\$ 350
Excess of expense over revenue	(506)	
Miscellaneous Revenue		
Interest earned	\$ 1,237	\$ 760
Insignia sales	511	269
	<u>1,748</u>	<u>\$ 1,029</u>
<u>TOTAL REVENUE</u>	<u>\$60,780</u>	<u>\$63,770</u>
<u>E X P E N S E S</u>		
Printing of publications	\$48,445	\$46,642
Office salaries	13,830	12,340
Postage and shipping	2,049	1,652
Stationery, printing and supplies	1,181	1,457
General and office expenses	1,163	1,332
Telephone	618	566
Canada pension plan and unemployment insurance	380	310
Library accessions	151	267
Annual life membership allotment to Centres	706	500
General assembly and travelling expenses	1,037	1,088
Insignia, medals and awards	436	725
Insurance (note 3)	209	-
Bank charges and exchange	390	120
Depreciation of office furniture and equipment	-	295
Bad debts	83	358
<u>TOTAL EXPENSE</u>	<u>70,678</u>	<u>\$67,652</u>
<u>EXCESS OF EXPENSE OVER REVENUE</u>	<u>(\$ 9,898)</u>	<u>(\$ 3,882)</u>

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

S T A T E M E N T O F E Q U I T Y

FOR YEAR ENDED DECEMBER 31, 1976

(With comparative figures for 1975)

	<u>1 9 7 6</u>	<u>1 9 7 5</u>
Surplus at beginning of the year	\$19,069	\$22,951
Deduct: Excess of expense over revenue for the year (per statement)	\$ 9,898	\$ 3,882
Book value of fixed assets eliminated from the accounts in consequence of the sale of Society's property (note 2)	27,440	-
Surplus (Deficit) at end of the year	<u>(\$18,269)</u>	<u>\$19,069</u>

S C H E D U L E "A"

BUILDING REVENUE AND EXPENSE

FOR PERIOD FROM JANUARY 1 TO JUNE 30, 1976

(With comparative figures for year ended December 31, 1975)

R e c e i p t s		
Rentals for space not occupied by Society	\$ 1,520	\$ 4,560
E x p e n s e s		
Property taxes	\$ 800	\$ 1,225
Heating	780	1,173
Light, gas and water	282	363
Maintenance and repairs	51	177
Insurance	113	170
Property appraisal	-	500
Depreciation of building and equipment	-	602
	<u>2,026</u>	<u>\$ 4,210</u>
Excess of Revenue over Expense (Expense over Revenue)	(\$ 506)	\$ 350

S C H E D U L E "B"

UNAPPROPRIATED LIFE MEMBERSHIP FEES

Balance at beginning of the year	\$ 5,983	\$ 5,049
Add: Life membership fees received in the year	<u>1,950</u>	<u>1,500</u>
	\$ 7,933	\$ 6,549
Deduct: Appropriation to general revenue for the year	<u>663</u>	<u>566</u>
Balance at end of the year	<u>\$ 7,270</u>	<u>\$ 5,983</u>

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

SCHEDULE "C"
SPECIAL FUNDS

	<u>1976</u>	<u>1975</u>
<u>BUILDING FUND</u>		
Income		
Proceeds from sale of property	\$174,930	
Mortgage interest earned	3,878	
Interest earned on investments	<u>3,250</u>	
	\$182,058	
Expenditures		
Office rents - July 1 to December 31, 1976	\$ 3,718	
Moving costs, including new installations and leasehold improvements	<u>4,761</u>	
	8,479	
Balance - December 31, 1976	<u>\$173,579</u>	
<u>RUTH J. NORTHCOTT MEMORIAL FUND</u>		
Balance at beginning of the year	\$ 12,419	\$ 8,600
Add: Proceeds from Ruth Northcott Estate	-	3,100
Public contributions	150	500
Interest earned	<u>1,098</u>	<u>800</u>
	\$ 13,667	\$ 12,600
Deduct: Appropriation for designated purposes	<u>200</u>	<u>180</u>
Balance at end of the year	<u>\$ 13,467</u>	<u>\$ 12,419</u>
<u>EDWARD R. PATERSON FUND</u>		
Balance at beginning of the year	\$ 10,000	\$ -
Proceeds from testator's estate	<u>-</u>	<u>10,000</u>
Balance at end of the year	<u>\$ 10,000</u>	<u>\$ 10,000</u>

The interest earned by the Paterson Fund, amounting to \$691, has been applied to general revenue.

COMPOSITION OF SPECIAL FUNDS DECEMBER 31, 1976

	<u>BUILDING FUND</u>	<u>NORTHCOTT FUND</u>	<u>PATERSON FUND</u>
Cash in bank	\$ 3,773	\$ 1,170	\$ -
Term deposits and guaranteed certificates	80,000	8,000	10,000
Mortgage receivable	84,000	-	-
Investment securities	-	4,000	-
Accrued interest	4,648	297	-
Security deposit on office lease	<u>1,158</u>	<u>-</u>	<u>-</u>
	<u>\$173,579</u>	<u>\$ 13,467</u>	<u>\$ 10,000</u>

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

NOTES TO FINANCIAL STATEMENTS

FOR YEAR ENDED DECEMBER 31, 1976

1. Building Fund

The property at 252 College Street, Toronto, which had housed the national office of the Society since 1956, was sold on July 30, 1976 for \$185,000. By resolution of Council, the net proceeds of the sale, amounting to \$174,930, were placed in a Building Fund which is to be held for the eventual acquisition of another property. In the interim, a portion of the interest earned by the Fund is to be applied to payment of rents for the Society's present office at 124 Merton Street and to the cost of moving and incidental expenses. Accordingly, the sum of \$8,479 was thus allocated to rents and moving expenses in 1976, leaving a balance of \$173,579 in the Building Fund at the end of the year.

2. Fixed Assets and Equity Account

At the time of the sale of the Society's property, the depreciated book value of the land and building amounted to \$26,311. In consequence of the sale, these assets were eliminated from the accounts and the said amount was charged against the equity of the Society. It was also deemed expedient to write down the remaining fixed assets, consisting of furniture, equipment and library, having a book value of \$1,130*, to a nominal value of \$1, since the book figures no longer reflected the true value of the assets. Accordingly, a further sum of \$1,129 was charged to the equity account. The aforementioned charges, together with the operating deficit of \$9,898 as shown in the statement of revenue and expense for the year, resulted in a negative balance of \$18,269 in the equity account as at December 31, 1976.

*(\$1,000 was realized from the sale of some furniture and fixtures before moving of the office to the new premises)

3. Insurance

In former years, insurance on the furniture and equipment of the Society was included in a comprehensive policy covering the building and was reflected in the statement of building revenue and expense. After the sale of the building, the Society acquired a new policy on the furniture, equipment and library and the cost thereof is now included in the ordinary operating expenses.

4. Lease Commitment

The Society has entered into a lease agreement in respect of the office premises at 124 Merton Street, Toronto, for a period of five years from July 1, 1976, at a yearly rental of \$6,947, subject to additional charges for various services and increases in municipal taxes. The Society has the right to cancel the lease at the end of three years upon payment of a cancellation charge in the amount of \$2,891.

REPORTS OF TREASURERS OF CENTRES

	Calgary	Edmonton	Halifax	Hamilton	Kingston	London	Montreal	Centre d'Astronomie Montreal	Niagara Falls
REVENUE									
Membership Fee	\$1167.50	\$1252.00	\$ 520.00	\$1006.00	\$ 70.00	\$ 770.00	N	\$ 422.00	\$ 250.00
Life Members Grants	44.00	4.00	12.00	12.00	8.00	4.00	O	8.00	
Donations			175.00	109.65		23.45	T		5.00
Educational Activities	168.25	30.18	18.84	1.69	15.00	22.50	R		4.40
Interest & Dividends			99.00	9.00		-3.25	E		23.00
Sales of Handbooks Net							P		
Advertising	9352.26	.15		66.23	17.50	26.46	O		224.00
General Assembly							R		
Miscellaneous							T	\$ 430.00	\$ 506.40
Total Revenue	\$10732.01	\$1286.33	\$ 824.84	\$1204.57	\$ 110.50	\$ 843.16	T E D		
EXPENDITURES									
Fees Remitted to N.O.	803.40	765.00	329.75	177.00	52.50	472.50		393.00	168.00
Library	17.00					51.97			
Meetings & Newsletter	178.24	214.86	172.88	128.20	20.60	146.88			30.00
Annual Dinner Net	36.00			109.42		100.00			236.00
General Assembly	8793.16	5.00	386.00		21.00	7.76		29.00	30.00
Equipment & Supplies			146.25	330.06	15.00	34.01			
Office Administration				90.11					
General Expenses & Audit	20.26	19.93			17.20				1.25
Education Activities									
Insurance				35.00					
Awards & Donations		10.00		45.00					
Operating Expense Observatory					2.10	17.19			96.05
Miscellaneous	12.00			297.30	2.10				
Total Expenditures	\$9860.06	\$1014.79	\$1034.88	\$1212.09	\$ 128.40	\$ 830.31		\$ 422.00	\$ 561.30
Surplus or (Deficit) or Operations	871.95	271.54	210.04 D)	7.52 D)	17.90 D)	12.85		8.00	54.90 D)
Balance from 1975	\$3132.95	\$1016.44	\$ 781.05	\$ 325.61	\$ 85.91	\$ 285.32		Nil	\$ 264.29
Balance to 1976	\$4004.90	\$1287.98	\$ 571.01	\$ 318.09	\$ 68.01	\$ 298.17		\$ 8.00	\$ 209.39

	Ottawa	Quebec	St. John's	Saskatoon	Toronto	Vancouver	Victoria	Windsor	Winnipeg
REVENUE									
Membership Fee	\$1965.00	\$1122.50	\$ 122.50	\$ 480.00	\$5984.75	\$1600.50	\$ 885.00	\$ 466.38	\$ 587.50
Life Members Grants	80.00	8.00		4.00	144.00	48.00	72.00		16.00
Donations	176.95	175.83		100.00	1.00		11711.05		
Educational Activities	254.78						26.00		
Interest & Dividends	55.81				419.80	88.52	80.24	14.88	13.37
Sales of Handbooks Net	59.00		18.75	-45.43	6.00	18.00	9.00	8.25	
Advertising					349.00				
General Assembly	34.13	1094.25		115.00	64.00	179.85	52.00		71.00
Miscellaneous							374.00		112.50
Total Revenue	\$2625.67	\$2400.58	\$ 141.25	\$ 653.57	\$6968.55	\$1934.87	\$13209.29	\$ 489.51	\$ 800.37
EXPENDITURES									
Fees Remitted to N.O.	1179.00	424.50	73.50	288.00	3460.00	963.00	615.00	297.00	293.75
Library	164.45					310.00	57.06		
Meetings & Newsletter	434.58	929.59		129.87	1694.01	542.06	171.96	68.80	112.53
Annual Dinner Net						113.39	466.00	57.97	
General Assembly				92.70	500.00		52.00		71.00
Equipment & Supplies	12.09			62.63	228.49		152.01		58.99
Office Administration	134.16	270.77		2.00	702.68		8.60		
General Expenses & Audit	20.56			2.00	505.49	36.44	64.12		
Education Activities		392.43		88.55	60.22		13.50		
Insurance	50.00				150.00				154.00
Awards & Donations	4.00	20.00		9.92			33.78		
Operating Expense Observatory	119.73								252.50
Miscellaneous		279.75	25.00		1537.66	50.33			32.33
Total Expenditures	\$2118.57	\$2317.04	\$ 98.50	\$ 673.67	\$8838.55	\$2015.22	\$1634.03	\$ 423.77	\$ 975.10
Surplus or (Deficit) on Operations	507.10	83.54	42.75	20.10 D)	1870.00 D)	80.35 D)	11575.26	65.74	174.73 D)
Balance from 1975	\$2388.29	\$ 20.00	Nil	\$ 383.74	\$3,562.42	\$1309.24	\$4029.54	\$ 249.39	\$ 496.06
Balance to 1976	\$2895.39	\$ 103.54	\$ 189.51	\$ 363.64	\$1692.42	\$1228.89	\$15604.80	\$ 315.13	\$ 321.33
Other Assets			\$ 61.00		\$9500.00		\$2282.52		

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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.

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1926 – F.S. Hogg	1956 – D.C. Morton	1971 – Blake F. Kinahan
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	1961 – R.C. Henry	1976 – Chris Rodgers

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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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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- | | |
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