



Supplement to the JOURNAL

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

ANNUAL REPORT 1982

APRIL 1983

PRESIDENTS OF THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

1890–1894	C. Carpmael	1940–	J.A. Pearce
1895–	L.W. Smith	1941–1942	F.S. Hogg
1896–1987	J.A. Paterson	1943–1944	A.V. Douglas
1898–1899	A. Harvey	1945–1946	A.E. Johns
1900–1902	G.E. Lumsden	1947–1948	J.W. Campbell
1902–1903	R.F. Stupart	1949–1950	A. Thomson
1904–1907	C.A. Chant	1951–1952	C.S. Beals
1908–1909	W.B. Musson	1953–1954	J.F. Heard
1910–1911	A.T. DeLury	1955–1957	R.M. Petrie
1912–1913	L.B. Stewart	1957–1959	H.S. Hogg
1914–1915	J.S. Plaskett	1959–1960	A. McKellar
1916–1917	A.D. Watson	1960–1962	P.M. Millman
1918–1919	A.F. Miller	1962–1964	A.J. Northcott
1920–1921	J.R. Collins	1964–1966	K.O. Wright
1922–1923	W.E.W. Jackson	1966–1968	M.M. Thomson
1924–1925	R.M. Stewart	1968–1970	J.E. Kennedy
1926–1927	A.F. Hunter	1970–1972	H. Simard
1928–1929	W.E. Harper	1972–1974	J.L. Locke
1930–1931	H.R. Kingston	1974–1976	J.D. Fernie
1932–1933	R.K. Young	1976–1978	A.H. Batten
1934–1935	L. Gilchrist	1978–1980	J.R. Percy
1936–1937	R.E. DeLury	1980–1982	I. Halliday
1938–1939	W. Findlay	1982–	F. Loehde

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	1978–1980	N. Green
		1981–	R.P. Broughton

THE REPORT OF THE PRESIDENT

The Annual Report of the Society provides considerable insight into the activities of the Centres and your National Council. The 1982 edition is no exception. It presents a fascinating picture of the wide range of endeavours undertaken by the amateur and professional astronomers of the Royal Astronomical Society of Canada. The "hands-on" work such as variable star observing, comet search, telescopic equipment design and construction and even 'virtual' nova discoveries confirm our members' commitment to the world's oldest yet newest science. As even greater indication of their desire to promote astronomy are the extensive public education programs that they have devised to introduce even more people to our "first love".

Despite the current prolonged economic slump we've been experiencing, our membership has held up remarkably well and in some Centres, with special efforts, we've seen increases occur. We are still receiving inquiries about forming new Centres. It is a healthy sign.

During 1982, on behalf of the Society and in conjunction with the National Museum of Science and Technology and the National Research Council, our immediate Past-President, Dr. Ian Halliday, and our Second Vice-President, Mary Grey, undertook to publish a series of useful and bilingual News Bulletins on Halley's Comet, due for a perihelion visit in 1985-86.

This year saw the General Assembly go to the University of Saskatchewan in Saskatoon and the host's organizing committee provided excellent weather, excellent facilities, and a good program for all the delegates including a tour of turn-of-the-century Saskatchewan at the Western Development Museum. The paper session was well handled by the Physics Department's Dr. Ray Skinner. At the Assembly Banquet the Simon Newcomb Award was presented to Phil Mozel from Toronto and our new National Librarian, for his excellent paper on "The Woodstock College Observatory". For outstanding service to their respective centres and to the Society as a whole the Service Medal was presented to Dr. Douglas Hube of Edmonton and Gordon Patterson of Saskatoon. Many awards were given to individuals and Centres for the first-class work done in the observing disciplines.

On the lighter and more social side of the Assembly delegates were treated to an entertaining array of slides and movies depicting everything under the sun and the traditional "high standard" in pyramid building and creative artistry in the song contest was maintained in Saskatoon. The efforts and success of Saskatoon Centre members in the 1982 General Assembly proved beyond doubt that quality of membership means more than quantity of membership. Thank you again.

In the spring the Canada-wide Science Fair was held in Toronto and three astronomically-related entries won recognition for their student creators from our Society and memberships in their local Centres. They were Keith Hitchon of Calgary, Jeffrey Hatt of Toronto and Michael Buckthought of Ottawa.

During the year a donation of \$30,000 from a Society member was gratefully received and an ad hoc committee's recommendation that it be used to assist Council Members defray their travel expenses to Council meetings was accepted.

Our publications continue to be popular under the editorships of Dr. Roy Bishop for the *Observer's Handbook*, Dr. Alan Batten for the *JOURNAL* and Dr. Ralph Chou for the *National Newsletter*. The *Observer's Handbook* is in considerable demand around the English-speaking world and the requests for duplication rights have made it necessary to have our new solicitor, Blake F. Kinahan, draw up a licensing agreement to handle such requests.

Our Society is indeed fortunate to have from amongst its members many very talented individuals who gladly serve the Society. Our out-going President Dr. Ian Halliday, former Recorder Harlan Creighton, and long time librarian Frederic Troyer are excellent examples. We must thank them for the excellent jobs they performed. If the past is any guide we will undoubtedly be benefiting from their good advice years from now. Thank you for the past and the future of the Society.

The big challenge for the coming year facing our Society and our Centres in particular will be to build a future based upon our successful past efforts and tempered by today's economic realities. We must find even better ways in which our Society can serve its members. I am confident that we will meet this challenge, as we have others in the past, and continue building an organization which is the envy of many around the world.

FRANKLIN C. LOEHDE, *President*

REPORT OF THE NATIONAL SECRETARY

1982 saw the patriation of Canada's new constitution, and so it seems appropriate to reflect on our Society's constitution and how well we are living up to the objects it sets forth. The reports from the Centres contained in this Annual Report give us strong evidence that we can be proud of our endeavours. We are stimulating interest and promoting and increasing knowledge of astronomy through excellent lecture programs, public star nights, campground talks, scout and guide training; we are maintaining and acquiring more and more impressive observatories, telescopes, and other equipment all the time; we do publish an amazing array of Centre publications in addition to our national publications; we do make grants to Centres and make awards to individuals to further their study and advancement of astronomy. Let us proclaim these worthwhile accomplishments and let us applaud those active members who have given much to sustain these goals. We should also acknowledge those who have helped the Society financially – the very generous donor of the \$30,000 which, we hope, will give members from across the country easier access to participation in Society meetings and will allow them to assume a more active role in the National organization, the Natural Sciences and Engineering Research Council grant, and the grant from the Province of Ontario. Finally, as anyone dealing with the National Office knows, we owe many thanks to our executive secretary, Rosemary Freeman, who really keeps the gears of the Society oiled and turning in spite of the wrenches some of us may throw in from time to time. The following list of membership figures, as of September, which she has compiled, is an indication of her careful and extensive record-keeping.

	1981	1982
Calgary	81	92
Edmonton	113	105
Halifax	89	82
Hamilton	77	64
Kitchener-Waterloo	41	37
Kingston	38	37
London	57	41
Montreal	75	91
La Societe d'Ast. de Mtl	114	59
Niagara	53	46
Ottawa	237	176
Quebec	113	87
St. John's	9	13
Saskatoon	59	50
Sarnia	25	25
Toronto	702	739
Vancouver	128	108
Victoria	93	121
Windsor	41	41
Winnipeg	62	66
Unattached to Centres:		
Canada	396	390
United States	324	340
Overseas	38	54
Honorary	15	15
	2980	2879

PETER BROUGHTON, *National Secretary*

CALGARY CENTRE

The highlight of the year for the Calgary Centre was the construction of its new observatory and assembly building on the ground of Strathcona-Tweedsmuir School, 14 km south of Calgary. The observatory will be opened officially on January 29, 1983 on the occasion of the 25th anniversary of the founding of the Calgary Centre. It is to be named the Wilson Coulee Observatory. The first sod was turned on August 11, 1982 and construction was completed by the end of October.

The Centre was especially pleased to win awards at the General Assembly in Saskatoon, the first for the best Centre display and the second, the Overall Grand Prize. The former award included a \$100.00 cash gift and the latter, a small Richfield telescope.

The Centre continued with its many activities in furthering popular interest in astronomy in southern Alberta. It held one star night on July 5 at Glenmore Park to coincide with the total lunar eclipse. It continues to hold monthly star nights at the Calgary Centennial Planetarium in support of the latter's public observing sessions. Moreover, it celebrated Astronomy Day with a three-day program of displays, lectures and star viewing at the Planetarium. Two observing sessions were held on top of Plateau Mountain in the eastern Cordillera, and the annual members' barbeque and observing night took place at its observatory site at Strathcona-Tweedsmuir School. To encourage interest in astronomy among younger members, the Youth Department was formed in April, 1982. Its hard core of about six members meets regularly for both laboratory and outdoor studies.

Of general interest was the naming of Walter Stilwell, the first president of the Calgary Centre, as Honorary President of the Centre. J. Himer resigned as president in September and D. Hladiuk agreed to act on his behalf for the remainder of the year. O. Brazell accepted the position of editor of the *Starseeker* with the resignation of L. Machan-Gorham.

Ten general meetings and 20 council meetings were held during the year. Officers and Council of the Calgary Centre wish to express their gratitude on behalf of the membership to the University of Calgary for the use of facilities for its general meetings and to the Calgary Centennial Planetarium for the use of the clubroom for Council meetings.

The program was as follows:

- January 21 Member's Night: D. Hladiuk "Hladiuk's Almanac, 1981";
D. Scarlett "The 1908 Tunguska Event";
J. Himer "The Stellar Magnitude System";
S. Morris "The Rapid Alternating Detection System";
O. Brazell "Aurora in Scotland, 1981".
- February 18 Dr. Bruce Hrivnak, Department of Physics, University of Calgary, "Observation and Light Curve Analysis of Eclipsing Binary Stars".
- March 25 Dr. David Pieri, Jet Propulsion Laboratory, Pasadena, California, "Geomorphology of Martian Valley Networks".
- April 15 S. Krysko, exchange speaker from Edmonton, "The Jupiter Effect".
- May 20 S. Schiller, Department of Physics, University of Calgary, "Quasi-Stellar Objects".
- June 17 O. Aaquist, Calgary Centennial Planetarium, "Celestron Conference, Los Angeles, 1982".
- September 16 Dr. S.R. Sreenivasan, Department of Physics, University of Calgary, "Space Research".
- October 21 Annual visit to the Rothney Astrophysical Observatory, University of Calgary.
Dr. T.A. Clark "A Personal Look at Ballooning over Twenty Years".
- November 18 Dr. R. Stebbins, Department of Sociology, University of Calgary, "Amateurism and the Joys of Serious Leisure".
- December 9 Annual banquet. D. Hladiuk "A Slide Show on Observatories in Southwest U.S.A."

D.K. NORRIS, *Recorder*

EDMONTON CENTRE

The year 1982 has been an active, successful and an exciting one for the members of the Edmonton Centre. The observing sites at Ellerslie, Buck Mountain and the University of Alberta's Devon site have had observing sessions when it was feasible. The 17 and one-half inch Dobsonian telescope was built and completed by a group of members who were nominated to receive the Telescope Makers Award in 1983. This telescope has served observers especially at the Starnights held in the spring. Starnights had a record public attendance.

One highlight of the year was the Centre's 50th Anniversary Banquet which was held in March. The guest speaker for the evening was Clinton Constant of California, U.S.A. Clinton Constant was a founding member of the R.A.S.C. – Edmonton Centre. The title of his interesting and unique talk was, "Astronomer, Chemist and Engineer".

Another highlight this year has been the building of the Edmonton Space Sciences Centre situated on the grounds of Coronation Park. The ground-breaking ceremony was held in the first quarter of this year. So far this building has been ahead of schedule and under budget! The Queen Elizabeth Planetarium staff are anticipating the occupancy of the office facilities in the new centre in the very near future. 1984 has hopefully been set as the year to see its official opening.

Under the very capable leadership of Dr. Douglas Hube, members of the Edmonton Centre have been active in promoting fund raising for the Edmonton Space Sciences Centre. A booth presenting R.A.S.C./E.S.S.C. exhibits including a model of the E.S.S.C. was on display in the Northlands Coliseum during Edmonton's Klondike Days. These exhibits were also set up in various shopping centres throughout Edmonton promoting the star donation campaign by the members of the Edmonton Centre.

In September of this year under the efficient leadership of Franklin Loehde, volunteer Edmonton Centre members assisted in preparing packages for the Donate a Star Program with proceeds to go to the Edmonton Space Sciences Foundation. These packages were distributed to 16,000 classrooms.

Observer's Corner meetings were held each month in the Physics Building at the University of Alberta promoting the mutual hobby of amateur astronomy.

This year Alan Dyer has again done an excellent job of editing the publication *Stardust* which is issued every two months and provides comprehensive coverage of R.A.S.C. activities, astronomical events, and observing reports.

The Edmonton Centre has held six council meetings and ten regular meetings this year. The speakers and the topics they presented at the regular meetings are as follows:

- January 11 Dr. Paul Wesson of the University of Alberta, "Young Galaxies and the Big Bang".
- February 8 Mr. Gregory Bailey, Winnipeg Centre, "The Mysteries of Stonehenge".
- March 8 Mr. John Greer, Saskatoon Centre, "Amateurs in Space".
- April 19 Mr. James Himer, Calgary Centre, "Astrophotography for Amateurs".
- May 10 Mr. Kenneth Hewitt-White, Vancouver Centre, "Thru B.C. by Pub and Telescope".
- June 14 The main program for the evening was a "Members Night".
 1. In regard to the Saskatoon General Assembly, Douglas Hube congratulated Franklin Loehde on his election to the office of National President of the R.A.S.C. Craig Makarowski showed a video tape of some of the activities in Saskatoon and described several of the highlights of that meeting. Franklin Loehde presented Douglas Hube with the Society's Service Award.
 2. Craig Makarowski brought the Centre's Dobsonian telescope to the meeting and described its basic features, how it was constructed, and what modifications are planned for the future.
 3. Alan Dyer presented colour slides showing the current stage in the construction of the Edmonton Space Sciences Centre. He also presented some of his recent astrophotographs.
 4. Dave Belcher presented photographs from the Centre's Starnight in May, and described his recently completed astrograph.
 5. Douglas Hube and Alan Dyer described the June 1 meteor event and some of the reports received and analyses made to date.
 6. Robert Stevens described his 6-inch telescope and the video system which he had

used with it at Starnights. He then described his efforts in building a 1400 MHz hydrogen-line radio receiver.

7. Douglas Hube presented a few slides and described recent developments at the University of Alberta's Devon Observatory.

8. Bryce Heartwell presented a selection of his recent astrophotographs in slide format.

September 13 Observing Night – at the University of Alberta's Devon site.

October 18 Dr. Douglas P. Hube, University of Alberta, "The Highlights of the August – 18th General Assembly of the International Astronomical Union in Patras, Greece".

November 8 Dr. Ian Gough, University of Alberta, "Earthquakes and Plate Tectonics – An Active Planet".

December 13 Mr. Philip Freeman – L5 Society, "Space Exploitation".

At the beginning of 1982, membership in the Edmonton Centre totalled 101, and now in looking forward to 1983 we see a higher membership total and we anticipate another active, successful and exciting year!

YNI EBBERS, *Secretary*

HALIFAX CENTRE

The Halifax Centre continues to be active under the direction of an Executive consisting of both experienced and energetic new members. A sign of the Centre's continuing success and stability is that almost a quarter of the membership are now life members. Despite the fact that many of our members live a substantial distance from Halifax, a large proportion have delivered lectures or participated in our series of lectures and observing sessions at various centres around the province. We hope to continue and expand this type of activity in the coming year as a method of introducing astronomy to those who may not otherwise have an opportunity.

In 1982 our Observing Chairperson, Kathy Oakley, was able to enthuse a greater number of members to attend regular and special observing sessions. Also under her organization, we had very good attendance at our primary public observing sessions on Astronomy Day and for the Perseids. Dr. David Tindall, Vice-President, has carried our *Handbook* sales to a new high thus providing us with an important source of revenue. This has helped us to maintain services without the need for any surtax on fees. Peter Steffin has once again resumed the arduous duties of Editor of *Nova Notes* and members receive a carefully produced, very readable newsletter. Dr. Roy Bishop, of course, continues as Editor of the *Observer's Handbook* making new improvements and useful additions. Also on the national scene, he has been elected First Vice-President. Finally, by way of achievements, Michael Boschat was presented with the Burke-Gaffney Award and Phil Mozel of the Toronto Centre was presented at the GA with the Simon Newcomb Award for a paper entitled "The Woodstock College Observatory". As for the previous 11 years, the Centre must thank the Nova Scotia Museum for supplying us with space and facilities for our meetings and for publishing our newsletter.

The following were the speakers and topics enjoyed by Halifax Centre members in 1982:

January Peter Edwards, "Variable Speed Controls for Telescope Drives".

February Walter Zukauskas, "How Large Are Stars?".

March Randall Brooks, "Why We Survived the Jupiter Effect".

April Dr. Norman Scrimger, "Planetary Nebula".

May Astronomy Day, Movies, Talks, Public Observing; Centre Dinner; Members' slides.

June (at Bridgewater) Wilf Morely, Dr. Bishop, Peter Edwards, R. Brooks, Michael Edwards, W. Zukauskas – Introduction of Observing.

(at Boutillier's Pt.) Observing Session conducted by Dr. Dale Ellis, Dr. D. Tindall, W. Zukauskas.

July (at New Albany) Camping Observing Weekend – Dr. William Holden; 1937–8 Expedition of the American Museum of Natural History to South America.

- August (at Dartmouth) Public observing for Perseids.
 September Cathy (Chaisson) McLeod, Saskatoon GA; P. Edwards, Mirror Testing Techniques;
 W. Zukauskas; The Advantages of Small Telescopes.
 October Dr. Robert Hawkes, "Structure of Meteors".
 November (various locations) Observing of Grazing Occultation of the Moon by Mars.
 Dr. N. Scrimger; "Ask the Astronomer."
 December Dr. R. Bishop, "SS433".

RANDALL C. BROOKS, *Secretary*

HAMILTON CENTRE

The Hamilton Centre continued to be very active in 1982. Our monthly meetings at McMaster University included a main speaker, a talk by one of our members, and various observing reports. An average of 30 members turned out to hear the following lectures:

- January Monthly General Meeting – Annual General Meeting.
 February Dr. Stephan Mochnecki (University of Toronto) "New Ideas About Binary Star Systems".
 March Dr. Tom Bolton (Dunlap Observatory) "Light Pollution and The Astronomer".
 April Dr. Bob McLaren (University of Toronto) "Cepheid Variables and Infra-Red Photometry".
 May Prof. Michael Taylor (University of Guelph) "Alignment of Large Portable Telescopes".
 June President's Night (Brian McKid).
 October Clifford Cunningham (Kitchener-Waterloo Area) "Photometric Observations".
 November Rick Crowe (University of Toronto) "Mira Variable Stars".
 December Geoff Clayton (University of Toronto) "Interstellar Gas".

Our Public Education Program continued with much success. We would like to thank Les Powis, Peter Ashenhurst, Ian Stuart, Grant Dixon, Bert Rhebergen and Barry Sherman for their work in this area. Mike Holmes was active also in visiting campgrounds and entertaining various nature groups.

Peter Ashenhurst's driving force behind our club was recognized when he received the W.A. Fautley award. Congratulations Peter!

The Observing section of our club makes up about 30% of our membership. Once again this group was extremely active both in observing and housekeeping. The Observatory was refurbished and redecorated. There were many improvements made to the trap door and to the shutter system. The dome was repainted and made to look like new. Barry Sherman, with the help of Grant Dixon and Peter Ashenhurst cleaned and repainted the 5 inch Marsh refractor, and a new set of quality eye-pieces was bought for it. Barry also restored a great deal of other equipment.

The Centre held the spring meeting of the N.F.C.A.A.A. after which many of our visitors came up to the observatory. They were so impressed with the set-up that we were honoured by a special recognition award given at the Syracuse Summer Seminar.

The Centre made front-page news on July 6th when the total eclipse of the moon occurred. For the 20 or so of us who were there, the vision of that dark red southerly half-lit moon will remain forever fixed in our mind's eye.

Barry Sherman's astrophotographs published in *Orbit* were such a success we intend to continue with similar works, hopefully 3 times a year.

The Spring Meeting of the N.F.C.A.A.A. was hosted by Hamilton Centre. The main speaker, Mr. Ron Neville, Director of Business Development, Spar Aerospace, gave an extremely interesting talk, and thrilled the audience with movies of the Canadarm in action. One included a breath-taking on-board view of the first two minutes of the Space-Shuttle II lift-off!

Ian Stuart, our librarian, completely re-organised the books with each book catalogued and numbered. Also a locking bookcase was obtained to house early journals and observing handbooks.

The monthly discussion group was revived. Ian Stuart is host and has been showing video-tapes of Carl Sagan's Cosmos series as a basis for discussion. Also on the weekend closest to the full moon a movie night is held out at the observatory.

Hamilton Centre members continued their interaction with other clubs and were present at the Niagara Spring Banquet, London's Diamond Anniversary Dinner, Syracuse Summer Seminar and, of course, the N.F.C.A.A.A. fall meeting at Kitchener-Waterloo.

During 1982, two of our members moved out of the area. Mike Pendleton moved to Winnipeg and Brian McKid to Welland. We wish both luck, and Winnipeg and Niagara Centres will gain from our loss.

January 1982 began the 15th year of continuous publication of *Orbit*, our monthly newsletter, and it continues to do very well. Ian Stuart is now the editor and is assisted by Grant Dixon and Eric Orr.

As a fund-raiser this year we held a Garage Sale, which we are happy to report was a success. We are also extremely grateful for donations we received of cash and telescopic accessories.

ROBIN ALLEN, *Secretary*

KINGSTON CENTRE

1982 has been yet another eventful year for the Kingston Centre and its members. Leo Enright was awarded a Messier certificate and other members are working toward it. Leo has continued to publish a highly praised newsletter, and has, sometimes accompanied by other members, gone to numerous scouts, cubs, camps, etc., to introduce them to astronomy. Three members visited with the Tucson branch of the Kingston Centre, Ruth and Terry Hicks in March, and Gerald Schieven in May, who also spent time observing at the Lowell Observatory in Flagstaff, Arizona. David Levy, in Tucson, remains a major figure in amateur astronomy with his many observing projects, teaching programs, and several books: his recently released guide for the beginning amateur published by the Montreal Centre, a book on Variable Stars to be published soon, and the biography of Dr. Bart Bok, on which David is currently working.

Astronomy Day, May 1, did not go unnoticed, with displays at a Kingston mall and a public star night that evening, both well attended. A display at Clubs Night at Queen's U. in September, resulted in heightened attendance at meetings for several months after.

Short talks by our own members were used to supplement the invited speakers this year. The following is a synopsis of our meetings.

November 27, 1981 Elections, Gerald Schieven on P.D.Q. Messier.

December 1, 1981 Angelika Hackett on Basic Sunspot Observing.

January 8, 1982 Leo Enright, Observatory Building Project.

January 22 David Stokes, Scandinavian Eclipse of 1954.

February 12 Leo Enright, memorable aurorae.

February 26 Gerald Schieven, stellar formation.

March 12 Leo Enright, Comet Bowell.

April 2 Dr. Vibert Douglas, "Astronomy in the Bible".

April 16 Dr. Ian Halliday, "Canadian Contributions to the Field of Meteor Research".

April 30 Terry Hicks, determining latitude.

May 14 Leo Enright, astrophotographs.

May 28 Peter Jedicke, RASC events.

June 11 Members' Night, recent scouts and campground visits.

June 25 Gerald Schieven, recent observing in Arizona.

July 9 Leo Enright and Andrew Skelly, astroslides.

July 23 David Stokes, Arabic Star Names.

August 13 Leo Enright, public group slide show.

August 27 David Levy, "Observing in the shadow of Kitt Peak".

September 10 David Levy, "Astronomical Experiences".

September 24 Leo Enright and Jeff Frett, astroslides.

October 15 Leo Enright, "A Tour of Astrophotography".

October 29 Leo Enright, "Useful Math Formulae for Amateur Astronomers".

November 12 Terry Hicks, "Calculating the Position of the Sun".

In addition were the regular observing reports by all the members.

It is fitting, I believe, to close this report with probably the most memorable quotation from a speaker of ours this year, expounded by David Levy during our 27 August meeting. "The telescope is not a tool; it's a telephone link with the universe".

GERALD SCHIEVEN, *Secretary*

KITCHENER-WATERLOO CENTRE

Many public organizations were introduced to astronomy on several occasions, keeping alive the mandate of the Kitchener-Waterloo Centre.

The Centre's activities included such events as Astronomy Day and the observation of the total lunar eclipse in July and Comet Austin in August.

It is with sadness that we announce the passing away of Mr. Hans Schilter. He was an active supporter of organized astronomy for the past 25 years.

The construction of Pinnacle Observatory was perhaps his finest achievement as it now provides both the Grand Valley Astronomers and the Kitchener-Waterloo Centre with fine observational facilities.

GERALD KENNEDY, *Treasurer*

LONDON CENTRE

The year of 1982 was definitely a year of change for the London Centre. The size and the makeup of the Centre did change. While it is reduced in quantity it probably has increased in quality.

What makes 1982 so special is that the Centre celebrated its Diamond Jubilee. That one evening was unique and will long remain in the memory of those who attended. With representation from 7 other Centres, it almost became a national event.

Steve Sharpe, Tom Steckner, and the rest of the variable star observers are keeping their track record of excellent work.

Eric Clinton, editor and publisher of *Astronomy London*, produces what some consider to be the best newsletter in the land. A hearty thanks for this prodigious work.

In my mind the most noted activity of 1982 involves a group of members who gave their time to teach astronomy. With Dale Armstrong at the helm, George Fenner, Mark Sinkins, Don Kushman, Robert Jedicke and Tom Glinos twice weekly travelled to a Boy Scout camp to teach astronomy. The Outdoor Education Program lasted for almost 2 months. It involved students from grades 4 through 8. In all, well over five hundred were educated and entertained by our group. When the lecture was over they were given a tour of the sky and a look through a telescope. For many it was their first time at an eyepiece.

1982 was a fun year and I'm sure we are looking to 1983 with great expectations.

During the year of 1982 the program of public lectures held at the University of Western Ontario was as follows:

- January 15 Annual Meeting of the London Centre.
- February 19 *Much Ado About Nothing*, Jamie Matthews, London Centre.
- March 19 Annual Dr. H.R. Kingston Memorial Lecture and Diamond Jubilee of the London Centre, *The History of Milky Way Research, 1920-1982*, Dr. Bart Bok, Tucson Arizona.
- April 16 *Micrometeorites*, Darwin Cristy, Buffalo Astronomical Association.
- May 21 *The Surface History of Solar System Objects*, Dr. David Strangway, The University of Toronto.
- June 18 *STS-3*, Jamie Matthews, London Centre.
- July 16 *The Ancient Meteorite Crater at Holleford*, Leo Enright, Kingston Centre.
- August 20 Members' Night.
- September 17 *The Formation of Stars*, Gerald Schieven, Kingston Centre.
- October 15 *The Moons of Jupiter and Saturn*, Dr. John Landstreet, The University of Western Ontario, Astronomy Department.

November 20 *Life in the Universe*, Bill Fyfe, The University of Western Ontario.

December 18 *Speculation of future uses of the Space Shuttle*, Peter Jedicke, London Centre.

TOM GLINOS, *Secretary*

MONTREAL CENTRE

In 1982 the Montreal Centre enjoyed a fairly active year in both observations and publicity. As weather permitted, members ventured out to Cedar Crest (located near Alexandria, Ont.) for deep sky observing. A number of very bright and spectacular aurora were witnessed and expertly photographed by Alister Ling, Enrico Kindl and David Brown from this location. Cedar Crest also played host to ten members on the night of July 5–6 for the total eclipse of the moon. We had a clear sky for this event, but the city of Montreal was pretty well clouded out. No grazing occultations were observed this year but four are planned for 1983. On the night of February 16 three members witnessed the passage of the asteroid Eros by the open cluster NGC 1647 in Taurus. Around 8:00 p.m. they observed a fluctuation of a little more than a magnitude in brightness.

In March, the Centre saw the beginning of a basic astronomy training program. The course was held at the observatory on Wednesday nights for an eight week period. Topics ranged from constellation studies to planets. On March 22 the Montreal Centre was honoured by the presence of the famous Dr. Bart J. Bok, as guest speaker at the Townsend Lecture held at McGill University. Dr. Bok is a foremost authority on our galaxy, and has completed a fifth edition of his book entitled "The Milky Way" which contains new information on the subject.

As summer was coming to a close, an idea was tossed around on producing a book which a rooky astronomer could read and understand with ease. We then approached a person who was skilled in this field. Yes, none other than David H. Levy. David accepted, and work began immediately. The great author had his master-piece completed in a few months. The book is entitled "The Joy of Gazing" and deals with all fields of astronomy from planets to variable stars. We are all very happy to be a part of this fine piece of journalism. Again, many thanks to David for his many hours of work which was put into the project.

Again this year Mr. Jimmy Letourneau has done a splendid job in organizing the NASA films and guest lectures which were held at the Dow Planetarium. A list of the schedule follows:

- January 25 Lecture by Robert Lamontagne on "SS433, Unique Object in Space".
- February 8 NASA film "Space Shuttle-Mission to The Future" and "Space Lab" produced by the European Space Agency.
- February 25 Lecture by Mr. Bill Atkinson, public information officer at the N.R.C. on the "In-flight Operation of the Canada Arm on the Space Shuttle".
- March 8 NASA film "Partnership in Space-Mission Helios".
- March 29 Lecture by Dr. Serge Demers, director of Mont Megantic Observatory who spoke on "Canadian Long Base Array".
- April 12 NASA film "The Age of Space Transport".
- April 26 Lecture by Dr. Francois Waesenmael on "Cataclysmic Variables or Things That go Bump in the Night".
- May 10 NASA film "Space for Women".
- May 31 Lecture by David Nadeau on "Molecular Hydrogen Emission in the Orion Nebula".
- June 14 NASA film "Who is Out There".
- June 28 Lecture by Dr. John Glaspy and his subject was "Modern Detectors at Mont Megantic Observatory". Dr. Glaspy is in charge of instrumentation at the Observatory.

SUMMER BREAK

- October 11 Three films; "Chasing the Eclipse" by the National Film Board, "Space Shuttle-Our Link to the Future" by Martin Marietta Aerospace, and "Modern Space Station" by Boeing Aerospace.

October 25 Lecture by Robert Lamontagne entitled "Expansion on the Universe and/or Why is it Dark at Night".

November 8 Film about the "Road to Mauna Kea".

November 29 Lecture by Dr. Francois Waesenmael on "Sirius B-Rosetta Stone or Oddity".

On April 17th, the first Charles M. Good Award for an outstanding contribution to the Montreal Centre in any particular year was presented to Mr. Jimmy Letourneau for his great work done in the field of publicity in 1980. Later in the year Mrs. Elizabeth Pride received the same award for her great work in the publication of our newsletter - *SKYWARD*.

The Montreal Centre was well represented by about fifteen members at the annual Stellafane convention held in Springfield, Vermont. This event is put on by the Springfield Telescope makers for the purpose of exhibiting various types and sizes of telescopes made by amateur astronomers. Another project which is still underway is the completion of the twenty-inch telescope. This project began in June when it was decided to have the partially-ground primary mirror completed. Since the tool was nowhere to be found, a new one had to be made and grinding had to be brought back to the 120 stage. By December the 105-pound piece of glass was in the polishing stage. The target for completion of the entire telescope is late spring or early summer.

DEBBIE BOYLE, *Secretary*

NIAGARA CENTRE

Nine regular meetings were held as follows;

- January 14 Annual Meeting. Reports, Election of Directors. Dr. John Black (Brock U.), "The Physics of Orbiting Space Station Construction".
- February 11 Slide presentation: Apollo and Shuttle programs, Voyager results, concluded with Deep Sky objects.
- March 11 Ian McGregor (McLaughlin Planetarium), "Archaeo-Astronomy".
- April 16 Spring Banquet at the Skylon, Niagara Falls. Guest Speaker: Terence Dickinson, "Cosmic Update 1982".
- May 13 Rev. Norman Green, "A History of Space Travel".
- September 19 John Hudak (Hamilton Centre), "Radio-Astronomy".
- October 14 Darwin Christy (Buffalo Astr. Ass.), "Micrometeorites".
- November 12 Fall Banquet at the Skylon. Guest Speaker: Ernst Both (Buffalo Museum of Science and Astronomy), "Sun-grazing Comets".
- December 9 Members' Night: Telescopes and accessories displayed and slides, made by members, shown.

All meetings were held in the Niagara Falls Public Library. In the new year we move from our (gradually diminishing) space upstairs to the Lamarsh Room, and to the fourth Thursday of the month as well. (Prospective visitors please note!)

During the summer we had four public Star Nights at John Allen Park in Niagara Falls South, with gradually improving weather and attendance; the dates were May 28, June 25, July 23 and Aug. 27.

The Observers' Group members met (officially) 13 times. Most previously-scheduled meetings were clouded out as usual, and they now meet in impromptu sessions as well, whenever the sky promises to be clear. This works most of the time, but not on Feb. 25, when clouds started moving in at 19:30 after a beautifully clear day.

On Sept. 30, they assisted Dr. John Black in a Star Night for his Astronomy class at Brock U.

A large Display and Star Nights were organised on April 23 and 24, at the Niagara Square Shopping Mall, in cooperation with the Niagara Volunteer Bureau. The inside Display was well attended, the star-gazing outside was somewhat hampered by a stiff wind, but the sky was clear.

W. JUTTING, *Secretary*

OTTAWA CENTRE

Membership In 1982 the Ottawa Centre had 179 members including 32 life members. This compares with 237 members of which 32 were life members in 1981. The reduction resulted in the Centre having only one representative on the National Council.

Public Meetings Since the last Annual Dinner Meeting, the Ottawa Centre sponsored the following events:

- February 16 Speaker, Dr. Sun Kwok, Herzberg Institute of Astrophysics, "What is a Nova?".
- March 10 Speaker, Dr. Paul Feldman, Herzberg Institute of Astrophysics, "The Jupiter (Non-) Effect".
- March 24 A film show, "Beyond the Milky Way".
- May 20 Speaker, Dr. Don Smellie, "The Solar Corona".
- November 26 Speaker, Dr. K.H. Doetsch, National Aeronautical Establishment, "Canadarm, a Canadian Technological Success".
- December 3 Speaker, Professor Preston Cloud, Department of Geological Sciences, University of California, Santa Barbara, "Planetary Evolution: A Terrestrial Perspective".

The Annual Dinner Meeting was held in the Skyline Hotel on November 26. Awards were presented by the Honorary President, Dr. J.L. Locke to the following: Mr. Robin Molson, Mr. Andrew Woodsworth, Mr. Frank Roy; Mr. Peter Ryback and Mr. Robert McCallum received Membership Certificates. Observer of the year award was won by Frank Roy.

General The Council held three meetings during the year. In response to perceived needs, an Activities and Facilities Committee was established to provide Council with ideas for new activities and facilities which would be beneficial to the Centre membership. Quiet Site was reactivated and a Committee established to manage and operate the facilities which are located on Communications Canada property west of the city alongside the Ottawa River.

The Centre's finances were the subject of careful scrutiny throughout the year as it was felt that the increase in postal rates together with the decline in membership might result in a deficit. Fortunately, this did not happen thanks to members' increased efforts to hand deliver mail, a reduction in the Observatory operating costs and other savings. However, to enable the Centre to improve its services to members, on the recommendation of the Activities and Facilities Committee, Council established a Sustaining member category. Those who wish to contribute to the Centre, in addition to their regular or life membership, may do so for \$20.00 and become a Sustaining member. Sustaining membership is deductible for income tax purposes. The Centre's monthly publication *Astronotes* reached its 20th birthday in December. Since December, 1962, no fewer than 200 issues of *Astronotes* have been published and distributed to members.

Observers' Group The Observers' Group had an active year under the guidance of Chairman Rolf Meier. Meetings were held on the first Friday of every month and a number of Star Parties were also organized. Among the highlights of presentations by members were Rolf Meier's description of winter astronomy in Arizona, Jack Horwood's account of receiving distant radio station signals reflected off the ionized trails of Quadrantid meteors, Brian Burke's accounts of expeditions to observe lunar grazes, Rob Dick's regular reports and photographs of solar activity at optical and radio wavelengths and Frank Roy's superb coloured slides of aurora activity and deep sky objects.

Observatory Compared with 1981, the number of visits to the Observatory in 1982 declined by about 25 per cent. The main reason was probably the weather. While in 1981, winter conditions ended in mid-January, in 1982 cold weather and snow continued up to the middle of March. The number of clear nights during the summer was about average but after September cloudy weather seemed to prevail. As a cost saving measure it was decided not to have the road ploughed. Despite the heavy snowfall, access was not too difficult since a snowmobile trail provided a hard surface to within 100 feet of the clubhouse.

During the year minor improvements were carried out to the 40cm Telescope and some major changes were made to the Indian River Radio Interferometer. With respect to the latter, four new high-gain, high-sensitivity pre-amplifiers were built and installed. These replaced the 10 original ones and brought

the instrument back into operation. A new wheel equipped rack was installed in the clubhouse in March to house the electronics, giving a substantial saving in space, easier access and a much neater appearance. However, the radio telescope was soon out of commission again when, late in March, a freak thunderstorm lifted both antennas off their two centre poles. Fortunately, the damage caused was not difficult to repair. To prevent a recurrence, wide U-shaped straps were bolted down, one over the top of each pole.

In spite of these difficulties the Centre's radio telescope had its most successful year since it was first put into operation in October 1978. The system now produces text book like results from the radio sources Cassiopeia A, Cygnus A and the Sun. In addition, other sources including Taurus A, Virgo A and Hercules A show up much better with the new pre-amplifiers installed.

During the year Dave Vincent and Frank Roy began an experimental program in the application of a micro-computer to radio signal processing with the objective of identifying quasars and pulsars. In conducting this program, Ken Tapping provided valuable assistance and support.

Two baseboard-type electric heaters were installed in the Observatory clubhouse. These replace the original heaters which are at least 30 years old. The location of the new heaters on the floor rather than inset into the wall should produce substantial savings in heating costs. One of the heaters will be left on so that it keeps the building at a temperature just above freezing. The second heater is on a one-hour timer so that members can turn it on and bring the building up to the temperature desired while it is in use. The timer will prevent the heaters from being left on high power during the long periods when the clubhouse is not in use.

C.R. MOLSON, *Secretary*

CENTRE DE QUÉBEC

À la fin de l'année 1981-82 le Centre de Québec comptait 109 membres et membres associés, *L'Almanach graphique 1982* a été publié avec l'aide d'une subvention de \$500 de la S.R.A.C. (Ruth Northcott Fund). Nous avons également obtenu de la S.R.A.C. un montant de \$600 couvrant une partie des frais de voyage de nos délégués au congrès de Saskatoon.

Parmi les activités de 1982, il y eut l'adoption de nouveaux statuts et la préparation du congrès conjoint S.R.A.C.-A.G.A.A.-A.A.V.S.O. du 19-23 mai 1983.

CONFÉRENCES

- 20 janvier **Les Quasars: une mise à jour.** Conférencier invité: M. Geoffrey Edwards, B.Sc., étudiant à la maîtrise en astrophysique au département de physique de l'Université Laval.
- 17 février **L'activité solaire.** Conférencier invité: M. Damien Lemay, ingénieur physicien de Québec Téléphone à Rimouski et astronome amateur.
- 17 mars **La Biosphère.** Projection d'un film récent de l'Office national du film.
- 14 avril **Étude des champs de vitesses dans les nébuleuses et les galaxies à l'aide des technique d'interférométrie de Fabry-Pérot.** Conférencier invité: M. Robin Arsenault, B.Sc., étudiant à la maîtrise en astrophysique au département de physique de l'Université Laval.
- 5 mai **Recents développements dans l'étude des phases finales de l'évolution stellaire.** Conférencier invité: M. Gilles Fontaine, Ph.D., professeur associé au département de physique de l'Université de Montréal.
- 15 septembre **La mesure des distances dans l'univers.** Conférencier invité: M. Jean-René Roy, Ph.D., professeur adjoint au département de physique de l'Université Laval.
- 20 octobre **Les Mouvements de la lune et les éclipses.** Conférencier invité: M. Jean-Marie Fréchette, B.Sc., professeur de physique et d'astronomie au CEGEP de Limoilou et astronome amateur.
- 7 décembre **Activités de type solaire dans les étoiles de type RS Cvn.** Conférencier invité: M. Louis Fortier, M.Sc., professeur de physique et d'astronomie au CEGEP de Ste-Foy.

SOIRÉES D'OBSERVATIONS

- 19 mars Observatoire du Collège de Lévis à St-Nérée de Bellechasse. Les conditions d'observations étaient excellentes.
- 30 avril/1 mai Notre Centre a organisé deux soirées populaires dans le cadre de la Semaine des Sciences et de la Journée internationale d'astronomie. La première a eu lieu au campus Notre-Dame de Foy à Cap-Rouge. Les conditions atmosphériques étaient mauvaises. Les personnes présentes ont pu admirer de magnifiques télescopes et les dernières acquisitions de notre bibliothèque, Des films ont été visionnés. La deuxième soirée a eu lieu au Collège de Lévis. Il y a eu observation de la lune, de Mars, Jupiter et Saturne. Les mêmes activités que la veille ont eu lieu.
- 5 juillet Sur la propriété de M. Bouliane à l'Ile d'Orléans, L'éclipse lunaire n'a pu être observée qu'à travers quelques percées de nuages.
- 9 octobre Observatoire du Collège de Lévis à St-Nérée de Bellechasse. Les conditions d'observations étaient excellentes.

Plusieurs autres soirées prévues ont dû être annulées à cause des mauvaises conditions atmosphériques.

ANITA POULIN, *secrétaire*

SARNIA CENTRE

The Sarnia Centre of the Royal Astronomical Society of Canada held nine regular meetings. The months without regular meetings were July, August, and December. There were also two observational meetings. Three issues of the Centre newsletter, *Urania*, were published.

Membership as of the time of this writing is seventeen.

The Sarnia Centre subscribed to *Tonight's Asteroids* and *Comet News Service*. A decision was made to purchase the AAVSO star atlas through *Sky & Telescope*, and the Tirion 2000.0 atlas through the Astronomical Society of the Pacific.

The officers for 1983 were elected by acclamation. They are: Past President, Zdenko Saroch; President and National Council Representative, John Thompson; First Vice-President, James Townsend; Secretary, Mike Marchand; Treasurer, Brendan Fleming; Recorder, Marc Bell; Librarian, Alice Lester; and for the Council, Ment Hus, Rick Cabajsky, and David Allen.

Program 1982

- January 29 General Business Meeting.
- February 26 The speaker was Eric Clinton (London Centre); his topic was amateur astronomy in Arizona.
- March 26 John Thompson spoke on the optics of a Newtonian telescope; Zdenko Saroch spoke on the construction and adjustment of mountings.
- April 30 Field trip ("Star Night") to Newton Park, as regular meeting.
- May 28 A talk on basic and ancient astronomical techniques given by John Thompson.
- June 25 No topic or program discussed as there were too few members present.
- July 5/6 Not a regular meeting – observational session held to watch lunar eclipse.
- September 24 Comet Austin 1982g was discussed; Zdenko Saroch showed photos of same; then John Thompson and Mike Marchand spoke about Stellafane.
- October 29 James Townsend spoke on exobiology; the remainder was varied speculation and discussion of various astronomical subjects.
- November 26 A talk on calendars by Wayne Crowell.
- December 30/1 Not a regular meeting – lunar eclipse observational session.

MARC BELL, *Recorder*

SASKATOON CENTRE

The year 1982 was a very interesting one for the Saskatoon Centre. It started with planning in full swing for the 1982 G.A. and at the same time planning for Astronomy Day. With the two events so close together Astronomy Day planning and execution was used as a dress rehearsal for the upcoming G.A.

The Astronomy Day display at one of the local malls went off well, which showed the planning committee that even the smallest details had been covered. The display consisted of about 16 telescopes, slide presentations, and members willing to discuss various points of astronomy with the public, which was well received.

With Astronomy Day out of the way, planning the final details for the G.A. went back into high gear. The G.A. got under way with members from as far away as Bermuda and Japan. An interesting slide presentation and the song contest occupied the first evening. Saturday started with the paper sessions, including one by our member, Osao Shigehisa from Japan. Awards for the display competition were handed out that evening after the banquet, along with the national awards. Gordon Patterson, then president of the Saskatoon Centre, received the National Service Award for his years of work and devotion to the Centre. A trip to the Western Development Museum, by bus, was enjoyed by all those who managed to make the trip.

With the G.A. over, several members began planning for the total lunar eclipse, and most turned up at the dark site for the event, only to watch the moon disappear in the cloud-bank about half an hour before first contact. Those of us foolish or stubborn enough to wait were treated to two brief glimpses just shortly after totality had ended.

The Public Star Nights held in Diefenbaker Park were a great success, and for the first time in a long time both nights were clear. Well over three hundred people attended.

As the year drew to a close, some of the members planned to observe and photograph the Dec. 30 total lunar eclipse. Once again the skies did not co-operate allowing only a brief glimpse six minutes before totality began.

LILLIA WILCOX, *Secretary*

TORONTO CENTRE

Membership as of 30 June stood at 602 regular, 70 student and 70 life members, and 53 associates, for a total of 795. Of these, 523 reside in the Metropolitan Toronto region, 201 elsewhere in Canada, and 18 abroad. Our membership is at its highest level in 7 years, thanks to the efforts of Membership Secretary Alia Alsharif. Membership renewal invoices have helped to ensure that our membership list is accurate and up-to-date. The members' service desk at the entrance to the meeting room has been a well-received innovation. It is intended to be a place where members' questions can be answered, or referred to the appropriate person. The first edition of the *Directory of Observers*, compiled from questionnaires sent with the renewal notices, has been a great success.

It is with regret that I must record the deaths of 3 of our Life Members:

- Mr. William Connor, a member since 1937, and recipient of the membership Certificate in 1979, in December 1981;
- Mr. A.V. Madge, a member since 1938, in June 1982;
- Mrs. K. Monica Heaton, a member since 1948, in October 1982.

Mrs. Heaton served the Society as a Trustee in 1956, and was a member of Council of Toronto Centre. She received the Membership Certificate in 1970.

Dr. C.T. Bolton organised a well-received series of 8 lecture meetings this year. Topics ranged from historical and contemporary Canadian observatories, to current research in space exploration, stellar evolution and cosmology. We thank Walter MacDonald and Scott Ramsay for their help as projectionists, and Alia Alsharif, P. Mozel, D. Tonge and Eric Galt for preparing refreshments at these meetings.

The Observers' Group meetings have been very well attended this year. Douglas Welch has been a very able Chairman, and it was with great regret that Council recently accepted his resignation due to increasing commitments at home and graduate school. I am sure all members join me in wishing Doug all the best in the future.

'Scope has benefitted greatly from the participation of many members in all phases of production. Major articles were contributed by Brian Beattie, John Hicks, Ulrich Krull, Ian McGregor and Phil Mozel. We are grateful for permission to reprint Terence Dickinson's "Outer Space" column from the *Toronto Star*. Other members assisting Editor Randy Attwood were Betty Robinson (Assistant Editor), Steve Spinney (photographer), and Norah Kiraly (typesetter), as well as Alia Alsharif, Len Chester, Deirdre DeClara, Eric Galt, Larry Herscovitch, Moody Kalbfleisch, Robin Kingsburgh and Bruce Waters.

The Observatory Committee under Richard McWatters has established a keyholder program to enable members to learn how to use the telescopes. John Morriss, John Perkins and Bruce Waters have helped with the technical details of operating the observatory. This year witnessed the installation of the 32-cm (12½-inch) telescope at Schomberg, a project which has been under way for 5 years. Members of the Optical Workshop, led by John Morriss, were responsible for fabrication of the primary mirror and other parts. Robert Burbank, Maritta Ellis and Bob May also contributed to this project.

Over 50 members participated in this year's public education programs. Displays were set up twice at Bayview Village Mall, and once at Bridlewood Mall. Star Night programs were held at three locations, with F. van Heerden, K. Sharp and T. Wujec as speakers. Ian McGregor and Steve Spinney had a small display at the Silver Springs Public School during a science fair in April. Some of the programs were publicised by Carole Giangrande on CBC's Radio Noon show.

Randy Attwood and his production crew can be congratulated for yet another successful season of *Astronomy Toronto* on Rogers Cable TV. Another series of shows is in preparation.

This year's Council has worked hard to manage the Centre's affairs. Two vacant seats were temporarily filled this year by Betty Robinson and Deirdre DeClara. Tonight, as a new Council takes office, two members of the present Council, Harlan Creighton and Rodney Nicholson, retire, and we thank them for their services. In a sense, this is the end of an era, as Mr. Creighton has served continuously on Council since before 1970. Well done, Harlan!

Finally, I note that our President, Ian McGregor, is stepping down after leading this Centre for three years. It has been a period of achievement: a successful eclipse expedition in 1980 to Kenya, establishment of an awards system which will have its first recipients in 1983, a greatly improved publication of which we can all be proud, and a financially healthy organisation active in many areas of public and member education. Ian has shown outstanding leadership during his term in office, and will continue to contribute to the Centre as Past President. Please join me in expressing thanks and appreciation to our President.

B. RALPH CHOU, *Secretary*

VANCOUVER CENTRE

10 Council meetings and 10 regular meetings were held during 1982. Exchange visits were arranged with the Edmonton Centre. The annual dinner was held in February and summer picnic at the observatory site at Art Holmes' place in Langley in June. Star parties are arranged each month, either at Cypress Bowl Provincial Park or at the Langley site. Astronomy Day, May 1, was rainy, but 20 visitors came to view through 2 telescopes outside the Gordon Southam Observatory, and an equal number inside.

The Centre continued to use the facilities of the Vancouver Museum for regular meetings, and through the courtesy of David Hurd, Director of the H.R. McMillan Planetarium, members were invited to attend special presentations of two Planetarium shows. Thanks also to David Dodge, our President, who is Director of the Gordon Southam Observatory, we continued to use the lecture room for all Council meetings, coffee hours, and the observatory for members' observing nights.

The San Francisco Sidewalk Astronomers visited British Columbia in August, and John Dobson gave two special lectures to the general public, August 3 and 4, which were well attended.

The summer lunar eclipse in July was rained out, but the December 30 eclipse (2:58 a.m. totality PST) was watched by over 800 outside and inside the Gordon Southam Observatory. Conditions were perfect.

January 12 Ken Nelson – a visit to Greenwich, Stonehenge and Jodrell Bank; Art Holmes – Geodesic Domes; Leigh Palmer – a Christmas vacation at Kitt Peak.

- February 9 Basil Chiu – sunspot activity; Ken Hewitt-White – a look ahead to the July lunar eclipse.
- February 12 Dinner meeting – Steve Krysko on The Jupiter Effect.
- March 9 Planetarium show – “Cosmic Closeup”. Leigh Palmer explained how to determine the date of Easter, using the Planetarium projector.
- April 13 Dr. Phil Gregory, UBC – Relativistic Jets.
- May 11 Art Holmes – Sidereal Time; Tom Tothill – Celestial Navigation; Basil Chiu – Hematology at Zero G.
- June 8 David Vogt, UBC – The new observatory at UBC, trials and tribulations.
- June 15 Members paid a special visit to this observatory.
- June 19 Annual picnic at Art Holmes’, Langley.
- August 3/4 Special lectures by John Dobson of the San Francisco Sidewalk Astronomers.
- September 14 Reports on summer activities; Jim Bernath – Space Shuttle memorabilia.
- October 12 Planetarium show “The Mystery of SS 433”.
- November 9 Leigh Palmer – Secrets of Novae (a report on further work at Kitt Peak).
- December 14 Annual Election. Dr. Gordon Walker, UBC – Project Starlab.

SALLY BAKER, *Secretary*

VICTORIA CENTRE

The 1981–82 year has been a particularly active and rewarding one for the Victoria Centre. At year’s close, we had a membership list numbering 123 persons, significantly above the 80–100 membership level which has been the norm for most of the Centre’s 69-year history, and certainly higher than it has been for at least the past two decades. We’ve also enjoyed perhaps the most extensive program of lectures at our regular meetings: 14 in all, including the monthly meetings September thru June, and the four lectures during August under the “Summer Evenings Under the Stars” program. These presentations were as follows:

- October 14 Annual meeting and dinner at Holyrood House restaurant, with Jack Newton’s sound & slide presentation “Eclipse over Siberia”.
- November 4 “Moon rocks”, by Paul Paquin.
- December 9 “Facts & fallacies of mirror testing”, by Leo Vanderbyl.
- January 13 “Probing the history of the Magellanic Clouds”, by Linda Stryker.
- February 10 “Astronomical navigation”, by John Clarkson.
- March 10 “Maps of the planets”, by Philip Stooke.
- April 14 “Supermassive stars and their nebulae: a chicken-and-egg problem”, by Philip Massey.
- May 12 Members’ Night, with contributions by Peter Garnham, Alfred Capper, Leo Vanderbyl, Jack Newton, Laura Friis and Tim Lomas.
- June 9 “Riverside telescope makers’ conference, and the Saskatoon General Assembly”, by Jack Newton and Leo Vanderbyl.
- August 4 “Astronomy and the universe”, by Peter Dawson.
- August 11 “Close-up of the Planets”, by Tim Lomas & Philip Stooke.
- August 18 “The sky by telescope”, by Jack Newton.
- August 25 “A visit to the Dominion Astrophysical Observatory”, by Frank Younger.
- September 8 Movie night, with “Apollo moon landing” and “STS-2 postflight press conference: second flight of the space shuttle Columbia.

The Centre held star parties at Beacon Hill Park on May 1, July 5 and July 24, and at the University of Victoria following the August “Summer Evenings” lectures. George Ball and Philip Teece directed the Friday evening public observing sessions during the year with the UVIC telescope.

This year’s RASC Victoria Book Prize, being a copy of the new Tirion Sky Atlas 2000, is being awarded to graduating UVIC student Robert von Rudloff.

The Centre has been granted tax-exempt status (#0620229-29-28) as a charitable organization, effective October 1, 1981. Progress on our mobile 50 cm telescope was complicated by our unsuccessful application for a Lottery Fund Grant, but thanks to the resources left to the Centre by the Evans bequest, and the dedication of Leo Vanderbyl in design and construction, this project is now virtually completed. Thanks also are due to Jes Jessen of the Dominion Astrophysical Observatory for aluminizing the 50 cm mirror for us.

Council met seven times during the year to conduct the Centre's business (on October 21, January 13, February 3, April 20, July 14 and 21, and September 8). The new council was elected by acclamation. Retiring from council are Alfred Capper, Chris Aikman, Roger Williams, Don Dundee, Philip Teece, Roy Belfield, and Dr. Jeremy Tatum. Muriel Enock will be taking over as treasurer, Tim Lomas as secretary, while Brian Whittaker and George Ball interchange places on council as Brian becomes Director of Telescopes. Newly incoming council members are Malcolm Scrimger, sharing the telescope directorship with Brian, Sharon Godkin as recorder, and councillors Russell Robb, Jim Stilburn and Laura Friis.

CHRIS AIKMAN, *Retiring Secretary*

WINDSOR CENTRE

The Windsor Centre held nine regular meetings at St. Clair College. Three council meetings were held during the year. Patrick Langan hosted our very successful Astronomy Day party on May 1st. For our summer observing program, several different locations were established for the July lunar eclipse. A brief resumé of the regular monthly meetings follows:

- January 19 Brian Perry and Steven Pellarin gave a presentation on the Voyager probes to the planet Saturn and its moons. This excellent presentation was enhanced by an overhead projector, slides and a film.
- February 16 Eric Johnson and Steve Pellarin discussed the grossly exaggerated claims by some writers over the "Jupiter Effect". The main feature was given by our President entitled "Sir William Herschel and the Herschel Objects".
- March 16 A film entitled "The Universe", narrated by William Shatner was screened.
- April 20 Dr. Arnold Harpaz from the University of Tel Aviv delivered a presentation entitled "The Foundation of Stellar Evolution". Edward Keith announced that a star is going to bear his name as of March 30, 1982.
- May 18 Our president explained how to look for deep sky objects in the summer sky.
- June 15 Steve Pellarin gave a fascinating talk on the lunar eclipse. Besides the mechanics of lunar eclipses, Steve presented a brief history of eclipses and helped to prepare our members for the July 6th eclipse. Our president showed some slides he had taken of the April 1977 lunar eclipse. Steve screened a film that he had taken with his hand-held movie camera of the last lunar eclipse. Cyril Hallam explained the reasons for the various colours that one may see during a lunar eclipse.
- September 21 Our president showed some slides he had taken at our Astronomy Day outing at Pat Langan's residence. Lynn Staffin discussed the "Philosophy of Science" and its relationship to Astronomy. Our president and Bob Bezeau showed some slides of the July lunar eclipse. Steve Pellarin screened his film of the summer lunar eclipse. Eric Johnson screened a film on the Space Shuttle.
- October 19 Lynn Staffin discussed the science of "Spectroscopy", its fundamentals and how it is related to astronomy; the half hour version of chapter XII "Encyclopaedia Galactica" from Carl Sagan's "Cosmos". A vigorous discussion followed the film.
- November 16 The meeting began with the nomination and election of the officers for 1983. A movie from the National Film Board of Canada which surveyed the Universe, was shown.

LORISON A. DUROCHER, *Secretary*

WINNIPEG CENTRE

This past year brought many interesting rewards and achievements to the Winnipeg Centre; they ranged from new social activities to personal accomplishments.

The Honorary President for the year was Dr. D. Kerr, from the Department of Physics at the University of Winnipeg. As most of our monthly meetings are held at the University, this helped to make stronger ties between University and our Centre.

At our general meeting on October 16th, 1981, presentations were made to Mr. Chris Rutkowski (winner of the 1981 Simon Newcomb Award), for his paper on Lunar Transient Phenomena. Three Centre members, Mr. Tom Cairns, Mr. Del Stevens and Mr. Greg Bailey, received Membership Certificates. At the end of October the Centre held its first very successful Hallowe'en party. We didn't know that this would become an enjoyable yearly event. Many thanks to the social director Miss Brenda Belkin for all her time and effort to make this and other functions possible.

The fall passed quickly, a public star party at the Glenlea observatory complex displayed the stars and planets to fascinated attendees. Five of our hard-core members had worked many hours to make this event a night to remember for the public. November and December monthly meetings flew by and the Christmas season was upon us. On December 19th, Mr. Greg Bailey and his wife hosted the Centre members at the President's Christmas Party.

Into 1982 and it was decided to give our Centre magazine *Winnicentric*s a face-lift. A competition for a new cover design was held, and resident Centre cartoonist Mr. Dave Sine won, with his striking rendition of a black and white cosmos. Also in January, Mr. Guy Westcott and Mr. Chris Rutkowski were invited to the dinner in honour of the crew of Space Shuttle Columbia; the dinner was at the Holiday Inn and was arranged by the Honorable Muriel Smith, Minister of Economic Development and Tourism. At the dinner the two astronauts, Colonel Engle and Captain Truly, were presented with framed originals of "Hosers in Space" a cartoon series depicting the problems on their flight. *Winnicentric*s was the originator of this strip.

In February our exchange speaker, Mr. Bailey, travelled to Edmonton to lecture on Stonehenge, Mr. Alan Dyer returned the favour to Winnipeg in April. March saw the National President, Dr. I. Halliday, visiting the Centre and giving his now-famous lecture on the Canadian Meteor Program.

The May 1st Astronomy Day went down again very well. Members of the Centre put on a very impressive display in the Planetarium's Gallery in central Winnipeg; this was followed by another public star party at the Lyndale Drive Park in downtown Winnipeg.

At the end of May about seven Winnipeg members travelled to Saskatoon for the General Assembly. Members came away with a feeling of friendship and enjoyment. A total of four awards came back to the Winnipeg Centre from this venture; thank you Saskatoon for an excellent G.A.

Throughout the long June-July weekend Mr. Guy Westcott lectured at the outdoor theatre and indoor interpretive centre at Riding Mountain National Park. The public lectures were such a success that the center has been asked to continue this service in future years.

Towards the end of July and into August Mr. Len Gamache and Mr. Guy Westcott travelled around the observatory sites in Western U.S. A most enjoyable stop was made at the Jarnak Observatory to renew an old friendship and learn a lot more about astronomy and telescopes!!

In all it was an enjoyable year for the members of the Winnipeg Centre and events and actions that have happened have stimulated interest and promise for the coming year.

October 1981 The Annual General Meeting of the Winnipeg Centre, election of the officers and councillors. Speaker for the evening was Dr. Per Anderson talking about extra-terrestrial life forms.

November 1981 Mr. Andrew Lawless gave a very enlightening lecture about the birth and life, death cycle of neutron stars.

December 1981 Mr. Guy Westcott presented a lecture entitled "The Comets". Slides were shown of this centuries' comets and their origins were discussed. Mr. Harlan Creighton also talked about his trip to Mount St. Helens.

January 1982 Mr. Ken Pilon and Mr. John Keelan of the N.R.C. and Adga Systems International, gave a slide-accompanied lecture about Space Research in Manitoba.

February 1982 Mr. Tom Cairns, one of the Centre's many armchair astronomers gave a lecture

on what it's like to be an "Armchair Astronomer" and the amount of information that one can pick up in this alternative to cold night astronomy.

- March 1982** Dr. Ian Halliday, National President of the R.A.S.C., visited the Centre and lectured on the Canadian Meteor Program and how the amateur astronomer can help.
- April 1982** Mr. Alan Dyer, our exchange speaker from the Edmonton Centre, gave a visual lecture on his tour of observatories of Arizona.
- May 1982** Mr. Chris Rutkowski gave a short lecture on cosmology, then guest speaker Mr. Roland Shultz gave a talk on the structure of galaxies.
- June 1982** Mr. Len Gamache gave an illustrated visual talk about astrophotography, this was followed by a demonstration of astrophotography equipment by Mr. Guy Westcott.
- September 1982** Mr. Bill Krosney spoke about general observations for the amateur astronomer. This was followed by a slide show of the visit by Centre members to the Jarnak Observatories and the Arizona astronomy circuit.

DAVE SINE, *Secretary*

**THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
OFFICERS AND COUNCIL OF THE CENTRES FOR 1983**

CALGARY CENTRE c/o Calgary Centennial Planetarium, P.O. Box 2100, Calgary, Alta
T2P 2M5

Honorary President — W. Stilwell, first President of the Calgary Centre

Past President — J.T. Himer, 339 Woodside Bay S.W., Calgary, T2W 3K9

President — D. Hladiuk, #2, 204 Sabrina Way, S.W., Calgary, T2W 2N6

Vice President — N. Laffra, PH #3, 620-67 Avenue, S.W., Calgary, T2V 0M2

Secretary — R. Allin, 47 Strathcona Place, S.W., Calgary, T3H 1L4

Treasurer — J. Cam Fahrner, 115 Coleridge Road, N.W., Calgary, T2K 1X5

Recorder — S. Morris, c/o Physics Dept., U of Calgary, Calgary, T2N 1N4

Librarian — R. Dechesne, 3512 Logan Crescent, S.W., Calgary, T3E 5Z5

Observers' Group Chairman — G. Kennedy, 29-330 Canterbury Drive, S.W., Calgary, T2W 1H6

Editor — O. Brazell, 1834 Westmount Boulevard, Calgary, T2N 3G8

Council — E. Bamberry, O. Brazell, B. Clarke, D. Fry, S. Livie, R. Loblaw, A. Lowe, T. Pidgeon,
and C. Savage

National Council Representative — N. Laffra, PH #3, 620-67 Avenue, S.W., Calgary, T2V 0M2

EDMONTON CENTRE c/o Queen Elizabeth Planetarium, 10th floor, CN Tower, 10004-104
Avenue, Edmonton, Alta T5J 0K1

Honorary President — Dr. E.S. Keeping, 8703 Saskatchewan Drive, Edmonton, T6C 2A9

Past President — Dr. Douglas P. Hube, 8950 Windsor Road, Edmonton, T3B 0V5

President — A. Whyte, 9817-88th Avenue, Edmonton, T6E 2R2

Vice-President — R.C. Carson, 10516-45th Street, Edmonton, T6A 1X3

Secretary — Mrs. Y. Ebbers, 5526-145A Avenue, Edmonton, T5A 2S1

Treasurer — M.C. Rankin, 4203-106B Avenue, Edmonton, T6A 1K7

Editor of Stardust — A. Dyer, #1, 10236-123rd Street, Edmonton, T5N 1N4

Observing Co-ordinator — No nominee

Council — G. Fitzner, B. Heartwell, R.W. King, C. Makarowski, K. Ward

National Council Representative — M.C. Rankin, 4203-106B Avenue, Edmonton, T6A 1K7

HALIFAX CENTRE c/o 1747 Summer Street, Halifax, Nova Scotia, B3H 3A6

Honorary President — Dr. W.H. Holden, M.D., FACS, New Albany, Annapolis Co., B0S 1P0

Past President — W. Zukauskas, 6288 Willow Street, Halifax, B3L 1N9

President — Ms. K. Oakley, 3140 Hemlock Avenue, Halifax, B3L 4B6

Vice-President — Dr. D. Tindall, Dept. of Physics, Dalhousie Univ., Halifax, B3H 3J5

Secretary — W. Morely, 34 Elizabeth Street, Bridgewater, B4V 1M2

Treasurer — R.C. Brooks, 71 Woodlawn Road, Dartmouth, B2W 2S2

Librarians — Ms. L. Burgoyne and Ms. J. Wells, c/o Dept. of Astronomy, St. Mary's Univ., Halifax,
B3H 3C3

Editor — P. Steffin, 8 Auburn Drive, Dartmouth, B2W 2S6

Observing Chairperson — C. MacDonald, 12 Wheatstone Heights, Dartmouth, B2Y 4C6

National Council Representative — Ms. C. MacLeod, #2, 6067 Fraser Street, Halifax, B3H 1R8

HAMILTON CENTRE P.O. Box 1223, Waterdown, Ontario L0R 2H0

Honorary President — Rev. N. Green, P.O. Box 1377, Niagara-on-the-Lake, L0S 1J0

Past President — B. Mackid, Erie Street, N., Selkirk, NOA 1P0

President — J. Winger, 160 Renfrew Street, Caledonia, N0A 1A0

Vice-President — E. Orr, 74 Prince George Avenue, Hamilton, L9A 2V9

Secretary — R. Allen, c/o P.O. Box 1223, Waterdown, L0R 2H0

Treasurer — L. Powis, 22 Orchard Drive, Waterdown, L0R 2H0

Librarian/Editor — I. Stuart, #1704-21 Ben Lomond Place, Hamilton, L8V 2T1

Council — R. Hill, J. Kiss, B. Rhebergen, B. Speck
National Council Representative — P.H. Ashenurst, 383 North Shore Blvd., Burlington, L7T 1A9

KINGSTON CENTRE Box 141, Station 'A', Kingston, Ontario K7M 6R1

Honorary President — Dr. A.V. Douglas, 67 Sydenham Street, #402, Kingston, K7L 3H2
Past President — Mrs. A. Hackett, 10820-78 Avenue, #307, Edmonton, T6E 1P8
President — T.D. Hicks, 797 Candover Crescent, Kingston, K7M 4V4
Vice-President — D.H. Levy, Route 7, Box 414, Tucson, Az. 85706 USA
Secretary — G. Schieven, #6B-244 Sir John A. MacDonald Boulevard, Kingston, K7M 5W9
Treasurer — J.R. Hansen, 2 Morden Crescent, Amherstview, K7N 1K2
Librarian — D. Stokes, RR #3, Harrowsmith, K0H 1V0
Editor/Recorder — L. Enright, Box 196 Sharbot Lake, K0H 2P0
National Council Representative — G. Schieven, #6B-244 Sir A. MacDonald Blvd., Kingston, K7M 5W9
(Alternates) — M. McConnell, T. Hicks

KITCHENER-WATERLOO CENTRE

Honorary President — Carl Arndt, 1159 Queen's Boulevard, Kitchener, N2M 1B9
Past President — M. Kaitting, 533 Glen Forrest Blvd., Waterloo, N2L 4H9
President — Dr. R. Koenig, 49 Sorrell Place, Waterloo, N2L 4H2
Vice-President — B. Cameron Reed, Dept. of Physics, U. of Waterloo, N2L 3G1
Secretary — Dave Schwartz, 112 Kingston Crescent, Kitchener, N2B 2T7
Treasurer — G. Kennedy, 112 Westheights Drive, Kitchener, N2N 1J9
Recorder — A. Harnois, 307-75 York Street, Kitchener, N2J 1T5
Librarian — R. Gossen, 92 Pinehurst, Kitchener, N2M 1E4
Editor — R. Robotham, 418 Tamarack Drive, Waterloo, N2L 4G6
National Council Representative — Cameron Reed, Dept. of Physics, Univ. of Waterloo, Waterloo, N2L 3G1
(Alternate) — D. Schwartz

LONDON CENTRE P.O. Box 842, Station 'B', London, Ontario N6A 4Z3

Honorary President — Dr. W. Wehlau, U.W.O. Astronomy Dept., London, N6A 5B8
Past President — Ms. J. Carroll, 185 Gammage Street, London, N5Y 4T4
President — T. Glinos, 599 Chiddington Place, London, N6C 2X3
1st. Vice-President — G. Fenner, 47 Belgrave Avenue, London, N6C 4B3
2nd. Vice-President — T. Fright, 1160 Michael Street, London, N5V 2H1
Executive Secretary — J. Kay, 106 Pauline Crescent, London, N6E 2L3
Treasurer — T. Steckner, 103 Hampton Crescent, London, N6H 2P2
Editor — E. Clinton, #405-583 Mornington Street, London, N5Y 3E9
Librarian — Ms. D. Pospelovsky, 50 Blackacres Boulevard, London, N6G 2G6
Observers' Group Chairman — S. Sharpe, 901 Quinton Road, London, N6H 3A8
ATM Chairman — T. Steckner, 103 Hampton Crescent, London, N6H 2P2
Council — D. Armstrong, R.W. Cornforth, T. Glinos, P. Jedicke, F. Paquet, M. Sinks
National Council Representative — T. Glinos, 599 Chiddington Place, London, N6C 2X3

MONTREAL CENTRE P.O. Box 1752, Station 'B', Montreal, Quebec H3B 3K3

Past President — H.J. Widdop, 5214 Marceau Avenue, Pierrefonds, H8Z 2T9
President — S. Marshall, 35 Marian Avenue, #2B, Montreal, H9S 1A4
Vice-President — C. Garayt, 20 Carre Marier, Dorion, J7V 6V6
Secretary — Mrs. D. Boyle, 8660 Jean Brillon, Apt. 404, LaSalle, H8N 2G4
Treasurer — D. Brown, 2289 Hingston Avenue, Montreal, H4A 2J3
Recorder — A. Ling, 1509 Sherbrooke Street, W., #101, Montreal, H3G 1M1
Librarian — C. Garayt, 20 Carre Marier, Dorion, J7V 6V6

Editor — Mrs. E. Pride, 2283 Canora Road, TMR, Montreal, H3P 2K4
Observations Director — G. Boyle, 8660 Jean Brillon, #404, LaSalle, H8N 2G4
Observatory Director — R. Bhushan, Rm 335, 3915 University Street, Montreal, H3A 2B6
Directory of Publicity — J. Letourneau, 3832 Wilson, NDG, Montreal, H4A 2T8
Council — D. Boyle, G. Boyle, D. Brown, R. Bhushan, C. Garayt, Dr. J. Glaspy, A. Ling, S. Marshall, W. Morton, J. Letourneau, E. Pride, H. Widdop
National Council Representative — Mrs. E. Pride, 2283 Canora Road, TMR, Montreal, H3P 2K4

CENTRE D'ASTRONOMIE DE MONTREAL Casier postal 206, Station St-Michel, Montréal, Québec H2A 3L9

Président — L. Coallier, RR #2, Brôme Ouest, J0E 2P0
Vice-Président — R. Lacroix, 10975 Bellevois, Montréal-Nord H1H 3E1
Secrétaire — J-P Larue, RR #2, Développement Quatre Saisons, Granby J1X 3W3
Secrétaire exécutive — L. Laplante, tel: 253-8200 est 587
Trésorier — P. Bastien, 5850 Souart, #14, Montréal H2S 2E8
Administrateur — H. Palardy, 6009 Pierre Bedard, Montréal, H1M 1K3
Bibliothécaire — B. Blondin, 10639 Esplanade, Montréal H3L 2Y4
Conseillers — R. Auclair, P. Beauchamp, H. Coia, M. Legris, P. Mailloux, M. St-Onge
Représentant au Congrès National —

NIAGARA CENTRE P.O. Box 241, Niagara Falls, Ontario L2E 6T3

Past President — C. Fassel, 22 Murray Street, St. Catharines, L2M 1S4
President — A. Kindy, 6025 Drummond Road, Niagara Falls, L2G 4L9
Vice-President — H. MacLean, 655 Vine Street, St. Catharines, L2M 3V8
Secretary — W. Jutting, 138 South Drive, St. Catharines, L2R 4W2
Treasurer — V. Golding, 6365 Caledonia Drive, Niagara Falls, L2G 5A4
Editor — R. Gasbarini, 4 Springdale Avenue, St. Catharines, L2R 1G5
Observers' Group Chairman — M. Scott, P.O. Box 17, St. Davids, L0S 1P0
Council — C. Fassel, R. Gasbarini, V. Golding, A. Kindy, H. MacLean, M. Scott
National Council Representative — Mrs. D. Fassel, 22 Murray Street, St. Catharines, L2M 1S4
(Alternates) — R. Gasbarini, M. Scott

OTTAWA CENTRE c/ Herzberg Institute of Astrophysics, N.R.C. 100 Sussex Drive, Ottawa, Ontario K1A 0R6

Honorary President — Dr. J.L. Locke, 2150 Braeside Drive, Ottawa K1H 7J5
Past President — K.F. Tapping, 61 Oval Drive, Aylmer, J9H 1V4
President — P. MacKinnon, Quasars Systems Ltd, 275 Slater Street, 10th floor, Ottawa, K1P 5H9
1st. Vice-President — R. Dick, 1375 Prince of Wales Drive, #604, Ottawa, K2C 3J8
2nd. Vice-President — B. Burke, 2201 Riverside Drive, #302, Ottawa, K1H 8K9
Secretary — C.R. Molson, 2029 Garfield Avenue, Ottawa, K2C 0W7
Treasurer — F.P. Brisson, 896 Riddell Avenue, Ottawa, K2A 2W2
Librarian — S.A. Mott, 2049 Honeywell Avenue, Ottawa K2A 0S7
Recorder — A. Fraser, 860 Cahill Drive, Unit 11, Ottawa, K1V 9A3
Editor — R.G. Meier, 4A Arnold Drive, Nepean, K1G 2X8
Councillors — M. Knock, B.L. Matthews, R.G. McCallum, F. Roy, B.E. Stokoe
National Council Representative — P. MacKinnon, Quasars Systems Ltd, 275 Slater Street, 10th floor, Ottawa, K1P 5H9

QUÉBEC CENTRE C.P. 9396, Ste-Foy, Québec G1V 4B5

Président — Dr. R. Dutil, 977 Dauphin, St-Jean Chrysostôme, Co. Lévis, G0S 2T0
Vice-Président — Poste vacant
Secrétaire — Mme A. Poulin, 70, 29^{ième} rue, C.P. 74, St-Rédempteur G0S 3B0
Trésorier — M.P. Bouliane, 718, ave Myrand, app. 2, Ste-Foy G1V 2T9

Secrétaire du Conseil — A. Terreault, 146 Verret, Neufchatel, G2B 1G9
Directeur des Conférences — J-F. Lallier, 1315 de la Colline, app. 401, Ancienne-Lorette, G2E 3H9
Bibliothécaire — G. Caisse, 4589L De la Futaie, Cap-Rouge, G0A 1K0
Directeur des Observations — A. Tardif, 9 rue Mgr Gosselin, Lévis G6V 5K1
Conseillers — C. Shields, P. Darisse, D. Brousseau
Représentant à la S.R.A.C. — D. Lemay, 477 ouest 15^{ème} rue, Rimouski, G5L 5G1
Représentant Suppléant à la S.R.A.C. — A. Tardif

ST. JOHN'S CENTRE

President — Peter Allston, 45 Smithville Cres., St. John's A1B 2V1
Vice-President — Gary Dymond, P.O. Box 34, Portugal Cove, Nfd. A0A 3K0
Secretary — Randy Dodge, 63 Forbes St., St. John's A1E 3L7
Treasurer — Dr. Peter Lockwood, 1A Church Hill, St. John's A1C 3Z7
National Council Representative — Gary Dymond, P.O. Box 34, Portugal Cove, Nfd. A0A 3K0

SARNIA CENTRE c/o Box 1144, Corunna, Ontario N0N 1G0

Past President — Z. Saroch, 371 Cameron Street, Sarnia N7T 4B7
President — J. Thompson, P. Eng., 368 Trudeau Drive, Sarnia N7S 4K7
Vice-President — J. Townsend, BA, B.Ed., Box 1144, Corunna, N0N 1G0
Secretary — M. Marchand, RR #5, Dresden, N0P 1M0
Treasurer — B. Fleming, 203½ Water Street, Sarnia, N7T 5T4
Recorder — M. Bell, 755 Kemsley Drive, Sarnia, N7V 2M3
Librarian — Ms. A. Lester, 1091 Emily Street, Mooretown, N0N 1M0
Council — J.R. Cabajsky, 1364 Giffel Road, Sarnia N7S 3K9
National Council Representative — J. Thompson, P. Eng., 368 Trudeau Drive, Sarnia, N7S 4K7

SASKATOON CENTRE Sub P.O. No. 6, Box 317, Saskatoon, Saskatchewan S7N 0W0

Honorary President — Dr. R. Skinner, 319 Lake Crescent, Saskatoon, S7H 3A1
Past President — G.N. Patterson, 79 Baldwin Crescent, Saskatoon, S7H 3M5
President — M. Wesolowski, 11 Brown Crescent, Saskatoon, S7J 2R9
Vice-President — J.V. Greer, Box 8188, Saskatoon, S7K 6C5
Secretary/Recorder — Ms. L. Wilcox, 2527 Clarence Avenue South, Saskatoon, S7J 1M3
Treasurer — M. Williams, 433 Mowat Crescent, Saskatoon, S7L 4Y4
Librarian — Ms. J. Badger, Box 8393, Saskatoon, S7K 6C7
Editor — J.V. Greer, Box 8188, Saskatoon, S7K 6C5
Council — W. Fernets, T. Fahmi, L. Herrem, R. Huziak, D. Miller, G. Mack, P. Skinner, R. Waldron
National Council Representative — J. Young, 2513 Melrose Avenue, Saskatoon, S7J 2C3

TORONTO CENTRE c/o McLaughlin Planetarium, 100 Queen's Park, Toronto, Ontario M5S 2C6

Honorary President — Dr. D.A. MacRae, 427 Glencairn Avenue, Toronto, M5N 1V4
Past President — I.G. McGregor, #1205-450 Walmer Road, Toronto, M5P 2X8
President — J.R. Attwood, 23 Gresham Road, Toronto, M4S 2Y1
1st Vice-President — Dr. K. Clute, 48 Castle Frank Road, Toronto, M4W 2Z6
2nd Vice-President — Dr. C.T. Bolton, David Dunlap Observatory, Richmond Hill, L4C 4Y6
Secretary — Dr. B.R. Chou, 1 Wilket Road, Willowdale, M2L 1N5
Treasurer — D. McWhirter, 79 Otter Crescent, Toronto, M5N 2W7
Recorder — J.A. Cobban, #1712-350 Seneca Hill Drive, Willowdale, M2J 4S7
Councillors — A. Alsharif, D. DeClara, R. Francis, P. Gunter, J. Morriss, R. McWatters, B. Robinson, N. Russ, S. Spinney,
Honorary Councillor — F.L. Troyer, #1703-2330 Bridletown Circle, Scarborough, M1W 3P6
National Council Representatives — J.R. Attwood, Dr. B.R. Chou, H. Creighton, I.G. McGregor
(Alternates) — Dr. C.T. Bolton, Dr. K. Clute, J.A. Cobban, N. Russ

GOLD MEDAL OF THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

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
1907 – *R.M. Motherwell	1937 – D.A. MacRae	1967 – R.H. Chambers
1909 – *R.K. Young	1940 – W.F.M. Buscombe	1968 – P.G. Martin
1910 – *R.J. McDiarmid	1948 – R.W. Tanner	1970 – J. Kormendy
1911 – R.S. Sheppard	1949 – I. Halliday	1971 – Blake F. Kinahan
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	1981 – T.C. Box
		1982 – M.J. Gaspar

*Deceased

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:

1940 – Bertram J. Topham (Toronto)	1953 – Jean Naubert (Centre d'Astronomie de Montréal)
1941 – H. Boyd Brydon (Victoria)	1955 – *Frank J. DeKinder (Montréal)
1942 – *W.G. Colgrove (London)	1956 – Maurice Drolet (Quebec)
1943 – *Cyril G. Wates (Edmonton)	1959 – Earl Milton (Edmonton)
1945 – Paul-H. Nadeau (Quebec)	1967 – R.R. Thompson (Toronto)
1948 – Isabel K. Williamson (Montreal)	1979 – Rolf G. Meier (Ottawa)
1949 – Frank Sisman (Hamilton)	1980 – David Levy (Kingston)
1950 – *F. Keith Dalton (Toronto)	
1951 – DeLisle Garneau (Centre d'Astronomie de Montréal)	

KEN CHILTON PRIZE

The Chilton Prize was established in 1977 by the National Council of the Society, in remembrance of Ken 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.

Awards have been made to the following:

1978 – J. Newton (Victoria)
1979 – W. Morrison (Kingston)
1981 – C. McCaw (Vancouver)

**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.

- | | |
|---|---|
| 1959 – *E.J.A. Kennedy (Nat. Secretary)
*J.H. Horning (National Treasurer) | 1970 – Norman Green (Hamilton)
J.E. Kennedy (Saskatoon) |
| 1960 – *Charles M. Good (Montreal)
Miss F. Laforest (Montréal)
Frederic L. Troyer (Toronto) | 1971 – *K.B. Meiklejohn (Calgary)
J.N.R. Scatliff (Winnipeg) |
| 1961 – *Robert Peters (Victoria) | 1972 – Vern Ramsay (Toronto)
B.F. Shinn (Winnipeg) |
| 1962 – Jean Asselin (Montréal)
Robert J. Clark (Vancouver)
*Jesse Ketchum (Toronto)
Joseph A. Pearce (Victoria) | 1973 – Fred P. Lossing (Ottawa) |
| 1963 – Edwin E. Bridgen (Montreal)
Miss M. Burland (Ottawa)
A. Vibert Douglas (Kingston) | 1974 – Ian Halliday (Ottawa)
Fred Williams (Victoria) |
| 1964 – *C.S. Beals (Ottawa)
*M.W. Burke-Gaffney, S.J. (Halifax)
W.T. Goddard (Hamilton) | 1975 – D.J. FitzGerald (Toronto) |
| 1965 – *D.C. Bawtenheimer (Windsor)
*John F. Heard (Toronto)
A.M. Crooker (Vancouver)
Ernest S. Keeping (Edmonton)
*W.S. Mallory (Hamilton) | 1976 – F. Loehde (Edmonton)
*Ken Chilton (Hamilton)
R. Belfield (Winnipeg)
Mrs. P. Belfield (Winnipeg) |
| 1966 – P. Lemieux (Montreal)
*S. Litchinsky (Calgary)
W.J. McCallion (Hamilton)
W.A. Warren (Montreal) | 1977 – P. Marmet (Quebec)
J.R. Percy (Toronto)
Mrs. D. Russell (St. John's) |
| 1967 – H.S. Hogg (Toronto)
P.M. Millman (Ottawa)
*R.J. Northcott (Toronto)
*H. Simard (Montreal)
J.F. Wright (Vancouver) | 1978 – Mrs. Marie Fidler Litchinsky
(Calgary & Toronto) |
| 1968 – *D.R.P. Coats (Calgary & Winnipeg)
George Ball (Victoria)
Herbert Fox (Hamilton) | 1979 – R. Noel de Tilly
(Centre d'Astronomie de Montréal)
A.W. Scott (Toronto) |
| | 1980 – S.A. Mott (Ottawa) |
| | 1981 – L.E. Coallier (Centre d'Astro. Montréal)
A. Covington (Ottawa)
H. Creighton (Toronto)
Miss I.K. Williamson (Montreal) |
| | 1982 – D.P. Hube (Edmonton)
G.N. Patterson (Saskatoon) |

*Deceased

**HONORARY MEMBERS OF
THE ROYAL ASTRONOMICAL SOCIETY OF CANADA**

- | | |
|----------------------------------|---------------------------------------|
| Dr. V.A. Ambartsumian (U.S.S.R.) | Dr. A.R. Sandage (U.S.A.) |
| Dr. Bart J. Bok (U.S.A.) | Dr. Martin Schwarzschild (U.S.A.) |
| Dr. R.B. Baldwin (U.S.A.) | Dr. Josif S. Shklovsky (U.S.S.R.) |
| Dr. A. Dollfus (France) | Prof. Bengt G. Strömgren (Denmark) |
| Dr. Leo Goldberg (U.S.A.) | Dr. A. Unsold (Germany) |
| Dr. W. Iwanowska (Poland) | Prof. H.C. van de Hulst (Netherlands) |
| Dr. J.H. Oort (Netherlands) | Dr. R.v.d. R. Woolley (S. Africa) |
| Sir Martin Ryle (England) | |

DECEASED MEMBERS FOR 1982

Dr. G.W. Bell (Hamilton)
Mr. W.G. Connor (Belleville)
Mr. H.B. Fox (Hamilton)
Mr. C.C. Fraser (Ottawa)
Mrs. K.M. Heaton (Toronto)
Dr. C.E. Hemenway (U.S.A.)
Mr. F. Jensen (Edmonton)
Mr. L. Kneil (U.S.A.)
Mr. J. Kramers (Edmonton)
Mr. A.V. Madge (Toronto)
Mr. D. Morrison (Niagara)
Mr. J.G. Ratte (Quebec)
Rev. R.A.E. Ruch (Hamilton)
Mr. H. Saida (Japan)
Mr. H. Schilter (Kitchener)
Mr. H.E. Schlotterhausen (U.S.A.)
Mr. T. Staffin (Windsor)
Mr. J.M. Wimberley (U.S.A.)

CENTRE TREASURERS' REPORTS FOR 1982

	Calgary	Edmonton	Halifax	Hamilton	Kingston	Kitchener Waterloo	London	Montreal	Centre d'Astronomie Montreal	Niagara
REVENUE										
Membership	\$2,942.00	\$2,529.00	\$1,268.00	\$1,164.30	\$447.70	\$ 567.50	\$ 832.00	\$ 1,983.00		\$ 822.50
Life Member Grant	104.00	88.00	136.00	16.00	40.00	-	40.00	144.00		16.00
Donations	-	130.00	-	244.55	-	-	116.00	94.00		60.00
Educational Activities	-	-	-	941.36	-	-	-	-		-
Interest & Dividends	781.56	567.00	124.91	165.71	3.26	4.27	22.50	4,235.97		8.36
Sales of Handbooks (Net)	-	-	567.78	13.00	7.50	5.00	6.00	71.00		18.00
Advertising	-	-	-	-	-	-	-	-		-
General Assembly (incl. Travel grants)	-	-	350.00	122.00	-	-	-	190.00		131.00
National Office Grants	-	551.00	-	-	-	-	-	-		-
Miscellaneous	139.00	65.00	261.64	1,186.03	1.58	491.00	1,183.00	-		535.40
Total Revenue	3,966.56	3,930.00	2,708.33	3,852.95	500.04	1,067.77	2,199.50	6,717.97		1,591.26
EXPENDITURES										
Fees remitted to N.O.	1,635.80	1,253.00	826.00	723.00	253.50	261.30	460.20	870.60		501.00
Library	28.00	-	-	75.00	-	-	-	222.67		-
Meetings & Newsletters	554.85	650.00	452.31	685.15	155.90	176.90	299.72	1,748.21		399.76
Annual Dinner (Net)	117.90	894.00	18.08	941.85	-	-	1,151.37	-		-
General Assembly (incl. Travel grants)	-	-	712.00	122.00	-	-	-	652.65		131.00
Equipment & Supplies	64.50	-	-	317.78	-	475.00	-	88.26		14.05
Office Administration	33.90	560.00	60.80	20.30	1.00	1.60	26.47	383.82		19.22
General Expenses & Audit	33.85	34.00	11.30	-	-	-	18.00	62.85		-
Educational Activities	-	163.00	-	-	-	-	-	215.23		-
Insurance	-	-	-	181.00	-	-	-	505.00		-
Awards & Donations	-	10.00	-	76.00	-	-	33.09	589.39		-
Operating Expense - Observatory	-	43.00	-	418.64	-	184.56	-	941.86		-
Miscellaneous	-	820.00	50.00	260.40	12.00	89.87	55.85	1,203.60		21.40
Total Expenditures	2,468.80	4,427.00	2,130.49	3,821.12	422.40	1,189.23	2,044.70	7,484.16		1,086.43
Surplus or (Deficit) on Operations	1,497.76	(497.00)	577.84	31.83	77.64	(121.46)	154.80	(766.17)		504.83
Balance from 1981	6,903.89	5,570.95	636.16	2,022.42	208.35	357.45	332.00	3,445.17		851.71
Balance to 1983	8,401.65	5,074.00	1,214.00	2,054.25	285.99	235.99	625.28	2,679.00		1,356.54
Other Assets	-	4,792.00	-	-	-	-	1,596.98	30,684.69		-

NOT REPORTED

MORRIS ALTMAN

CHARTERED ACCOUNTANT

344 BLOOR STREET WEST

TORONTO, CANADA

M5S 1W9

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, 1982, and the statements of income and expenditure and deficit for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances, except as noted in the following paragraph.

Sales of the Society's publications and payments of membership fees by individual members are by their nature not susceptible to verification by normal audit procedure. My verification of receipts from these sources was limited to a comparison of recorded receipts with bank deposits.

In my opinion, except for the effect of any adjustments which might have been required had I been able to completely verify publication sales and membership fees, the accompanying financial statements present fairly the financial position of the Society as at December 31, 1982 and the results of its operations for the year then ended, in accordance with the accounting principles set out in note 1 applied on a basis consistent with that of the preceding year.

Morris Altman

Chartered Accountant.

Toronto, Canada,
April 20, 1983.

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

BALANCE SHEET

DECEMBER 31, 1982

(With comparative figures as at December 31, 1981)

	<u>1982</u>	<u>1981</u>
<u>A S S E T S</u>		
Current Assets		
Cash and short-term deposits	\$ 36,904	\$ 44,824
Accounts receivable	16,047	23,728
Loans to R.A.S.C. Centres	375	1,000
Prepaid expenses	<u>1,133</u>	<u>739</u>
	\$ 54,459	\$ 70,291
Investments		
Marketable securities, at cost (Market value: 1982 - \$2,210; 1981 - \$1,920)	3,019	<u>\$ 3,019</u>
Special Purpose Funds (Schedule "C")		
Cash and short-term deposits (including accrued interest)	\$228,809	\$211,385
Marketable securities, at cost (Market value: 1982 - \$66,875; 1981 - \$60,565)	67,373	67,373
Deposit on lease	<u>1,158</u>	<u>1,158</u>
	297,340	<u>\$279,916</u>
Office Furniture, Equipment and Library (nominal value)	<u>1</u>	<u>\$ 1</u>
	<u>\$354,819</u>	<u>\$353,227</u>
<u>LIABILITIES AND DEFICIT</u>		
Current Liabilities		
Accounts payable and accrued charges	\$ 1,888	\$ 12,792
Deferred revenue		
- Membership fees for ensuing year	14,224	14,536
- Journal and Handbook subscriptions	48,626	51,103
- Unappropriated life membership fees (Schedule "A")	<u>20,811</u>	<u>21,037</u>
	\$ 85,549	\$ 99,468
Special Purpose Funds	297,340	<u>\$279,916</u>
TOTAL LIABILITIES	<u>\$382,889</u>	<u>\$379,384</u>
Accumulated Deficit (per statement)	<u>(28,070)</u>	<u>(26,157)</u>
	<u>\$354,819</u>	<u>\$353,227</u>

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

STATEMENT OF INCOME AND EXPENDITURE

FOR YEAR ENDED DECEMBER 31, 1982

(With comparative figures for 1981)

<u>I N C O M E</u>	<u>1982</u>	<u>1981</u>
Membership Fees		
R.A.S.C. Centres	\$ 21,331	\$ 18,106
Individual members	11,297	9,297
Life membership - annual appropriation	<u>1,726</u>	<u>1,651</u>
	\$ 34,354	\$ 29,054
Grants and Donations		
Government of Canada - annual grant	\$ 9,000	\$ 8,000
Province of Ontario - annual grant	-	1,600
Miscellaneous donations (including contribution from Ruth Northcott Memorial Fund in 1982 - note 2)	<u>1,450</u>	<u>810</u>
	10,450	\$ 10,410
Publications		
R.A.S.C. Journal - Subscriptions	\$ 14,176	\$ 14,928
- Reprints	1,179	1,850
- Publishing revenue	10,841	4,513
Observer's Handbook	<u>60,502</u>	<u>55,860</u>
	86,698	\$ 77,151
Miscellaneous Income		
Interest on investments	\$ 838	\$ 1,728
Insignia sales	<u>425</u>	<u>351</u>
	1,263	\$ 2,079
TOTAL INCOME	<u>\$132,765</u>	<u>\$118,694</u>
<u>E X P E N D I T U R E</u>		
Publications (Schedule "B")	\$ 95,228	\$ 80,449
Office salaries and employee benefits	23,625	20,715
Postage and shipping expense	2,390	3,261
General and office expenses	2,689	2,594
Stationery, printing, and supplies	1,279	2,025
Life membership allotment to Centres	2,001	1,792
General assembly and travel expenses	3,369	2,068
Contribution to C. S. Beals Fund	600	-
Advertising and publicity	426	-
Insignia, medals and awards	1,635	833
Telephone	587	469
Insurance	263	273
Library expense	292	1,363
Office equipment purchases	145	1,238
Bad debts	<u>149</u>	<u>175</u>
	134,678	\$117,255
<u>EXCESS OF INCOME OVER EXPENDITURE (EXPENDITURE OVER INCOME)</u>	<u>\$ 1,913</u>	<u>\$ 1,439</u>

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

STATEMENT OF OPERATING DEFICIT

DECEMBER 31, 1982

(With comparative figures for 1981)

	<u>1982</u>	<u>1981</u>
Deficit at beginning of the year	\$ 26,157	\$ 27,596
Excess of expenditure over income (income over expenditure) for the year	<u>1,913</u>	<u>1,439</u>
Deficit at end of the year	<u>\$ 28,070</u>	<u>\$ 26,157</u>

SCHEDULE "A"

UNAPPROPRIATED LIFE MEMBERSHIP FEES

Balance at beginning of the year	\$ 21,037	\$ 16,288
Add: Life membership fees received in the year	<u>1,500</u>	<u>6,400</u>
	\$ 22,537	\$ 22,688
Deduct: Appropriation to general account	<u>1,726</u>	<u>1,651</u>
Balance at end of the year	<u>\$ 20,811</u>	<u>\$ 21,037</u>

SCHEDULE "B"

PUBLICATION COSTS

R.A.S.C. Journal

Printing of Journal	\$ 43,936	\$ 39,233
Printing of National Newsletter	9,187	8,751
Editorial assistance	500	500
Distribution costs	10,180	3,944
Reprints	<u>1,913</u>	<u>1,630</u>
	\$ 65,716	\$ 54,058

Observer's Handbook

Printing	\$ 27,872	\$ 23,654
Distribution costs	840	1,722
Advertising	<u>800</u>	<u>1,015</u>
	<u>29,512</u>	<u>\$ 26,391</u>
	<u>\$ 95,228</u>	<u>\$ 80,449</u>

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

SCHEDULE "C"

ANALYSIS OF SPECIAL FUNDS

DECEMBER 31, 1982

(With comparative figures for 1981)

	<u>1982</u>	<u>1981</u>
<u>BUILDING FUND</u>		
Balance at beginning of the year	\$173,854	\$164,128
Add: Interest earned on investments	<u>21,176</u>	<u>19,221</u>
	\$195,030	\$183,349
Deduct: Rent for the Society's office	<u>10,527</u>	<u>9,495</u>
Balance at end of the year	<u>\$184,503</u>	<u>\$173,854</u>
<u>SPECIAL PROJECTS FUND</u>		
Balance at beginning of the year	\$ 75,423	\$ 41,875
Add: Gift received during the year	-	30,000
Interest earned on investments	<u>6,972</u>	<u>3,548</u>
	\$ 82,395	\$ 75,423
Deduct: Grants to Centres	<u>1,000</u>	<u>-</u>
Balance at end of the year	<u>\$ 81,395</u>	<u>\$ 75,423</u>
<u>RUTH NORTHCOTT MEMORIAL FUND</u>		
Balance at beginning of the year	\$ 18,242	\$ 16,746
Add: Interest earned on investments	<u>2,077</u>	<u>1,996</u>
	\$ 20,319	\$ 18,742
Deduct: Grants to Centres	500	500
Contribution to the Society for the 75th anniversary issue of the Journal	<u>1,000</u>	<u>-</u>
Balance at end of the year	<u>\$ 18,819</u>	<u>\$ 18,242</u>

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

ANALYSIS OF SPECIAL PURPOSE FUNDS
(Continued)

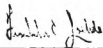
	<u>1982</u>	<u>1981</u>
<u>EDWARD R. PATERSON BEQUEST</u>		
Balance at beginning of the year	\$ 12,397	\$ 11,405
Add: Interest earned on investments	952	992
	<u>\$ 13,349</u>	<u>\$ 12,397</u>
Deduct: Contribution to Centre activities	726	-
	<u>\$ 12,623</u>	<u>\$ 12,397</u>

COMPOSITION OF SPECIAL PURPOSE FUNDS

AS AT DECEMBER 31, 1982

	<u>BUILDING FUND</u>	<u>SPECIAL PROJECTS FUND</u>	<u>RUTH NORTHCOTT FUND</u>	<u>EDWARD R. PATERSON BEQUEST</u>	<u>TOTAL</u>
Cash	\$ 10,976	\$ 11,392	\$ 5,317	\$ 2,221	\$ 29,906
Term deposits	103,121	68,577	9,000	10,000	190,698
Securities (at cost)	63,373	-	4,000	-	67,373
Accrued interest	5,875	1,426	502	402	8,205
Rent deposit	1,158	-	-	-	1,158
	<u>\$184,503</u>	<u>\$ 81,395</u>	<u>\$ 18,819</u>	<u>\$ 12,623</u>	<u>\$297,340</u>
Market value of securities	<u>\$ 66,875</u>	<u>-</u>	<u>\$ 2,885</u>	<u>-</u>	<u>\$ 69,760</u>

THE FINANCIAL STATEMENTS ARE APPROVED
ON BEHALF OF THE COUNCIL OF THE SOCIETY



President

Treasurer

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 1982

1. Accounting Policies

The financial statements of the Society have been prepared in accordance with accounting policies generally followed by similar non-commercial organizations. The significant accounting policies observed in the preparation of these statements are summarized below.

(a) Membership Fees:

Members' fees are credited to income for the related membership year. Accordingly, fees received at the end of the year for the ensuing year are included in deferred revenue. Life membership fees are credited to deferred revenue when received. 5% of the life membership fund is transferred annually to the general account.

(b) Publications:

Subscriptions to the R.A.S.C. Journal are credited to income for the subscription period. Advance sales of the Observer's Handbook, which comes off the press towards the end of the year for use in the ensuing year, are treated as deferred revenue. The cost of printing the Handbook is recorded as an expenditure in the year for which the Handbook is published.

(c) Investments:

Investments are stated at cost. Investment income is recorded on the accrual basis.

(d) Special Purpose Funds:

The special funds of the Society are classified in accordance with the objectives specified by the donors or in accordance with directives issued by Council. The income of the various funds is recorded on the accrual basis.

(e) Fixed Assets:

The office furniture, equipment and the library of the Society are carried in the accounts at a nominal value of \$1. Any new acquisitions are included in expenditure for the year.

2. Grant from Ruth Northcott Memorial Fund

The Society received a grant of \$1,000 from the Ruth Northcott Memorial Fund as a contribution toward the cost of publishing the 75th anniversary edition of the Journal. The grant is included in the sum of \$1,450 shown as donations in the statement of income and expenditure for the year.

3. Lease Obligation

The Society leases its office premises under an agreement expiring in June, 1983, at an annual rental of \$9,480 plus a proportionate share of certain operating costs and increases in realty taxes.

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

NATIONAL OFFICERS AND COUNCIL FOR 1983

Honorary President — Peter M. Millman, B.A., A.M., Ph.D., F.R.S.C., Ottawa

President — Franklin Loehde, B.Sc., B.Ed., Edmonton

1st Vice-President — Roy L. Bishop, Ph.D., Halifax

2nd Vice-President — Mrs. Mary Grey, B.Sc., Ottawa

Secretary — R. Peter Broughton, M.Sc., A.R.C.T., 124 Merton Street, Toronto M4S 2Z2

Treasurer — Mrs. Marie Fidler, 124 Merton Street, Toronto M4S 2Z2

Recorder — Leo Enright, B.A., Kingston

Librarian — Philip Mozel, B.Sc., Oakville

Editor of JOURNAL — Alan H. Batten, D.Sc., Ph.D., F.R.S.C., Victoria

Editor of OBSERVER'S HANDBOOK — Roy L. Bishop, Ph.D., Halifax

Executive Secretary — Miss Rosemary Freeman, 124 Merton Street, Toronto M4S 2Z2

Council — Past Presidents — John R. Percy, Ph.D., Toronto

Ian Halliday, Ph.D., Ottawa

Representatives from Centres —

Calgary: N. Laffra	Centre D'Astronomie	Toronto: R. Attwood
Edmonton: M.R. Rankin	Mtl.: P. Mailloux	Dr. B.R. Chou
Halifax: Mrs. C. MacLeod	Niagara: Mrs. D. Fassel	H. Creighton
Hamilton: P. Ashenurst	Ottawa: P. MacKinnon	I. McGregor
Kingston: G. Schieven	Quebec: D. Lemay	Vancouver: K. Miller
Kit.-Waterloo: C. Reed	St. John's: G. Dymond	Victoria: J. Newton
London: T. Glinos	Saskatoon: J. Young	Windsor: J. Meredith
Montreal: Mrs. E. Pride	Sarnia: J. Thompson	Winnipeg: S. Runge

CENTRE SECRETARIES FOR 1983

CALGARY	R. Allin, c/o Calgary Centennial Planetarium, P.O. Box 2100, Calgary, T2P 2M5
EDMONTON	Mrs. Yni Ebbers, c/o Queen Elizabeth Planet., 10th flr, CN Tower 10004-104 Ave, Edmonton, T5J 0K1
HALIFAX	Wilf Morely, c/o 1747 Summer St., Halifax, B3H 3A6
HAMILTON	R. Allen, P.O. Box 1223, Waterdown, L0R 2H0
KINGSTON	G. Schieven, Box 141, Station A, Kingston, K7M 6R1
KIT.-WATERLOO	Dave Schwartz, 112 Kingston Cres., Kitchener, M2B 2T7
LONDON	J. Kay, P.O. Box 842, Station B, London, N6A 4Z3
MONTREAL	Mrs. D. Boyle, P.O. Box 1752, Station B, Montreal, H3B 3L3
CENTRE D'ASTRONOMIE	J.P. Larrue, Casier postal 206, Station St-Michel, Montreal, H2A 3L9
NIAGARA	W. Jutting, P.O. Box 241, Niagara Falls, L2E 6T3
OTTAWA	C.R. Molson, c/o Herzberg Inst. of Astrophysics, N.R.C., 100 Sussex Dr., Ottawa, K1A 0R6
QUEBEC	Mme A. Poulin, Casier postal 9396, Ste-Foy, G1V 4B5
ST. JOHN'S	R. Dodge, 63 Forbes St., St. John's, A1E 3L7
SASKATOON	Ms. L. Wilcox, Sub. P.O. N° 6, Box 317, Saskatoon, S7N 0W0
SARNIA	M. Marchand, c/o Box 1144, Corunna, N0N 1G0
TORONTO	Dr. B.R. Chou, c/o McLaughlin Planetarium, 100 Queen's Park, Toronto, M5S 2C6
VANCOUVER	Mrs. S. Baker, c/o Gordon Southam Observatory, 1100 Chestnut St., Vancouver, V6J 3J9
VICTORIA	T.A. Lomas, 150 Montreal Street, Victoria, V8V 1X7
WINDSOR	L.A. Durocher, E. Belle River Rd., R #2, Belle River, N0R 1A0
WINNIPEG	S. Runge, c/o P.O. Box 215, St. James P.O. Winnipeg, R3J 3R4
