



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

ANNUAL REPORT 1998 RAPPORT ANNUEL

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA - 1998

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CENTRE REPRESENTATIVES ON NATIONAL COUNCIL

Calgary Centre	Glen Hawley	Centre de Québec	Jean-Marie Fréchette
Calgary Centre	Roland Dechesne	Regina Centre	Lucian Kemble
Edmonton Centre	ShirLee Adamson	Sarnia Centre	Brendan Fleming
Edmonton Centre	Franklin Loehde	Saskatoon Centre	Sandy Ferguson
Halifax Centre	David Lane	St. John's Centre	Garry Dymond
Hamilton Centre	Mark Kaye	Thunder Bay Centre	Ted Bronson
Kingston Centre	Susan Gagnon	Toronto Centre	Bob May
Kitchener-Waterloo Centre	Ray Koenig	Toronto Centre	Gord Skerratt
London Centre	Christopher Fleming	Toronto Centre	Mary Anne Harrington
Centre Francophone de Montréal	Patrice Scattolin	Toronto Centre	Michael Nunns
Montreal Centre	Carole Talbot	Vancouver Centre	Dan Collier
Niagara Centre	Brian Pihack	Victoria Centre	Bill Almond
Okanagan Centre	Alan Whitman	Windsor Centre	Tim Bennett
Ottawa Centre	John Thompson	Winnipeg Centre	Stan Runge
Ottawa Centre	Robert Dick		



TABLE OF CONTENTS

National Council	Inside Front Cover
President's Message	2
National Secretary's Message	3
Membership Information for 1998	3
Treasurer's Report	4
Auditors' Report	5
Balance Sheet	6
Statement of Revenue, Expenditure and Equity	7
Notes to the Financial Statements	8
Annual Meeting Minutes 1998	10
Annual Reports from the Centres	13
Centre Financial Reports	33
1999 Council Lists	34
1998 Award Winners	46
Centre Addresses	Inside Back Cover

The cover photograph is a 9-hour exposure of the south celestial pole taken by R. F. Garrison from Cerro Las Campanas, Chile in 1973. A meteor track is visible just off centre, and the glow under the pole originates from the Magellanic clouds. In the foreground is the dome for the 60-cm telescope of the University of Toronto Southern Observatory, in the background the dome for the 1-m telescope of the Carnegie Institution of Washington. The original image was obtained with an old Rolleicord twin lens reflex using Kodak Tri-X film, but has since been lost. The illustration presented here has been made from a duplicate negative, and therefore has slightly higher contrast and lower resolution than the original. The Helen Hogg telescope and dome have since been moved to a new site in Argentina, where they will be operated and maintained at no cost to Canada. The University of Toronto is guaranteed 25% of the time available at the new site.

PRESIDENT'S MESSAGE

It is a pleasure for me to address the membership of the Royal Astronomical Society of Canada as its President and report to you the activities of the Society during 1998. At the 1998 General Assembly hosted by the Victoria Centre last June, I took over this position from outgoing President Doug George. The Society is, in my opinion, very strong, and active. As we enter the last year that starts with a '19,' I see nothing but good things for the RASC.

It is hard to believe that 130 years ago, on December 1, 1868, the first meeting of the Toronto Astronomical Club, a forerunner of the RASC, took place. I am sure the seven gentlemen attendees would be pleased to see what that first meeting has spawned.

As you can see from the audited Financial Statements for the Society published in this report, the Society is in good shape. We continue to bring in more than we spend, primarily due to the strength in sales of the *Observer's Handbook*. Our membership numbers are increasing, probably due to a strong renewal rate and our continued exposure in *SkyNews*.

During the last half of 1998, the attention of the Executive and National Council was directed towards a major project. Two years ago, the duties of handling the membership database and retail publication sales were subcontracted to an external company. This experiment did not satisfy all of our expectations, and we decided that we would bring these functions back into the National Office to be handled ourselves.

We expect that the new system, which includes a custom-built computer software package and a computer network, will be in place and operational by April 1. I look forward to the time when we have the new computer system set up and running at the National Office. I think members will see a consistent level of good customer service when it comes to membership renewals and communication. I want the membership to understand that providing this better service comes at a price. We will see increased charges for processing memberships. We are already seeing increased costs in mailing the *Journal* and purchasing *SkyNews/Ciel Info*. Our membership fees have not kept pace with these increasing costs. When you think of what you pay in annual dues and what you receive in return, membership in the RASC is an incredible bargain.

The running of the Society would not be possible if it were not for the many dedicated members who volunteer their time and skills. I would like to recognize and thank those responsible for producing our publications. Over the past two years we have watched the redesigned *Journal* evolve into a fine publication. The Editor of the *Journal*, Dr. David Turner and

his team work many hours on each issue. The Editor of the *Observer's Handbook*, Dr. Roy Bishop, and his 35 contributors continue to produce a first-quality guide which is world famous. Dr. Rajiv Gupta produces the *Observer's Calendar* — a beautiful collection of astrophotos taken by RASC members. The 1999 *Calendar* sold out by January.

In addition, the members of the National Council should be recognized — they are your representatives who attend National Council meetings to help make decisions on the future of the Society. I would like to thank the members of the National Executive who have worked very hard on many important issues during the first few months of their term. Finally, we should thank the members at local centres, who continue to provide members with an interesting program and various observing activities.

The person who is the glue holding the Society together is our Executive Secretary, Bonnie Bird. If you visit the National Office during business hours (and I suggest that you do so if you get a chance), you will see Bonnie answering the phone, sending out emails and handling the odd emergency. Bonnie has put her mark on the Society in the short time she has been with us. I know she will be thrilled when the new computer system is in and the redecorating of the office is complete. On behalf of the Society, I thank Bonnie. To Isaac McGillis, whom we hired last fall to help Bonnie run the new system, welcome.

What is in store for 1999? Once the National Office affairs are in order, I hope to direct the efforts of the Executive and National Council towards issues of an astronomical nature. There are many ways the National Society can help centres to provide more opportunities for new members to learn the ropes. Lately many members have been completing their Messier and New General Catalog observing lists. I would like to see a nation-wide observing program for beginners implemented.

This July the General Assembly in Toronto will be a meeting lasting 7 days with three international organizations participating. The "Partners in Astronomy" meeting will be one you will not want to miss. Please refer to the article in the April *Journal* for more information. I know many members are heading for Europe to see the total solar eclipse in August. I wish all eclipse chasers clear skies, safe observing and sharp camera focus.

Clear skies in '99!



James R. Attwood
President

NATIONAL SECRETARY'S MESSAGE

Many see the Society as the provider of the information we need to enhance the enjoyment of our hobby or our profession. Others see it as a tool to promote interest in astronomy among all the citizens of our country and, when possible, throughout the world. Whatever one's viewpoint, the vigour of the RASC is of prime importance for each one of us. This vigour can be estimated through the size of the membership and the activities generated, whether by individual members or by their Centres.

Any evaluation of the Society's health requires the reading of the centre reports included elsewhere in this publication. The following membership figures offer only a glimpse of the RASC's contribution to astronomy:

MEMBERSHIP INFORMATION FOR 1998

	1998	1997	1996
Calgary	267	272	256
Edmonton	166	152	138
Halifax	164	135	127
Hamilton	65	45	50
Kingston	136	152	142
Kitchener	51	32	32
London	65	49	45
C. F. de Montréal	46	33	11
Montreal	113	108	103
Niagara	72	60	48
Okanagan	40	35	16
Ottawa	298	246	216
Quebec	50	51	47
Regina	31	18	23
St. John's	41	39	35
Sarnia	10	12	13
Saskatoon	75	54	54
Thunder Bay	31	17	20
Toronto	720	687	682
Vancouver	229	233	218
Victoria	144	126	100
Windsor	71	66	52
Winnipeg	97	77	64
Unattached	413	357	365
Honorary	15	15	15
Total	3419	3071	2862

The bottom line is an increase of over 10% from the 3071 total reported for 1997.

What has become apparent during my few years as National Secretary is the attention that astronomy and the RASC is getting around the world. Correspondence with other countries is growing rapidly. The world-wide web is certainly no stranger to this growth. Canada's reputation as a country willing to help others and to nurture local interest could also be the main reason why the RASC gets a lot of correspondence from Latin America, North Africa and Eastern Europe.

The National Executive has allowed the National Secretary to propose up to five special free memberships per year, aimed at promoting interest in astronomy in areas where such interest may be fettered by economic, political or other factors. Although the rules are not yet finalized, they appear to take the following shape: Recipients must be from groups or countries where an interest in astronomy is difficult to realise (e.g., books on astronomy are difficult to obtain). Priority is given to those who can help others (e.g., they have astronomy groups already formed.). A person cannot be a recipient before three years have elapsed since their last special "secretarial" membership.

At the end of 1998, the Secretariat of the RASC (National Secretary and Executive Secretary) has awarded three special memberships to commence in early 1999:

1. BEKAKCHA Mohamed, Cheliff, Algérie. Astronomy club in Cheliff, Algeria
2. M. Aïmouche Mohammed Lamine, Hydra (Algers), Algérie. Club: El Birouni
3. Sr. Luis Olivares Milanés, Prov. Santiago de Cuba, Cuba. Astronomy club in Cuba

Raymond Auclair
National Secretary

DECEASED MEMBERS IN 1998

Margaret Bacon (Niagara Centre); Hugh Brooks (Sarnia Centre); Dr. Vladimir A. Chudoba (Toronto Centre); Frederick B. Clarke (Montreal and Ottawa Centre); Dr. Murray Cunningham (Halifax Centre); Peter Guetter (Niagara Centre); Valia Krotkov (Kingston Centre); Fred Lossing (Ottawa Centre); Willard Lynch (Ottawa Centre); Alex C. Norman (Halifax Centre); Richard Nunn (Victoria Centre); Elizabeth (Betty) Pride (Montreal Centre); Kenneth Selby (Unattached); Charles Ernest Thurgood (Toronto Centre); Thomas Warren (Toronto Centre)

TREASURER'S REPORT

This is my first annual report to the Society as National Treasurer. In the months since I took over the position last July, I have learned a lot about the Society's finances and the operations of the National Office. I have also learned how much I have yet to absorb, and I can now understand why the Treasurer's term of office is three years instead of two years as for the other Executive positions!

In 1998 the Society's operations resulted in a surplus of approximately \$20,000, amounting to about 7% of expenditures. Membership fee income increased by 9.3% over 1997, surpassing \$70,000 for the first time ever. This is attributable to the continuing steady increase in membership that was noted in last year's Treasurer's Report. Rent, investment and other income categories held steady. The fact that total Society revenues increased by 24% between 1997 and 1998 is attributable mainly to greatly increased *Observer's Handbook* sales. Income from the *Handbook* rose more than 31%, from \$98,000 in 1997 to over \$128,000 in 1998. I will have more to say about this below.

On the expense side, the cost of the *Journal* increased substantially, as a result of the settlement of a claim by the electronic prepress company that the Society had used on the *Journal* until 1998, and a publication that has expanded in size and quality. Fortunately, the Society also received what may be a one-time payment of \$15,000 for copyright sales under new Canadian legislation, which largely offset the increased cost of the *Journal*. Expenses for the *Beginner's Observing Guide* jumped \$10,000 as well, due to the fact that a new edition was printed in 1998, the revenues from which the Society will not begin to realize until 1999. *Observer's Handbook* expenses increased by a little over \$10,000, as a result of increased distribution and labour costs. Several other expense items increased over 1997, especially membership handling (which is being brought in-house in 1999), grants to Centres, and Council travel.

Speaking more generally now, I note that the Society has enjoyed surpluses ranging between \$14,000 and \$47,000 for eight successive years now. This has resulted in an increase in the Society's net worth (assets plus special funds) from \$212,000 to \$420,000 between 1991 and the present. Not surprisingly, this has led to discussion as to whether the annual membership fees are set at the right level, whether the Society should be doing something with its asset base other than using it to generate investment income, and so on.

Perhaps the most striking feature of the Society's finances, the full extent of which was not apparent to me until I did some analysis while working on the 1999 budget, is how much the Society depends for its financial health, and its low membership fees, on the *Observer's Handbook*. Year after year

the *Handbook* generates net revenues (that is, sales income in excess of the cost of printing and distribution) of tens of thousands of dollars. Since 1991, the Society's annual surpluses on all operations have amounted, in total, to \$220,000. During that same period, total net income from the *Handbook* has amounted to more than \$520,000 (revenues \$760,000; expenses \$240,000). If, therefore, the Society had not had the financial engine of the *Handbook*, we would have suffered a deficit of \$300,000, or about \$12.50 per member per year, during that period. Clearly, the Society's membership fees are set at a level that is far too low to cover the expenses associated with the Society's programs. Without the *Handbook*, either membership fees would have to be much higher, or the Society would have to reduce its expenses and services dramatically, or both.

It is also noteworthy that, according to an analysis prepared by Rajiv Gupta for the Finance Committee, the marginal cost of services for a new member of the Society actually exceeds the fee income that the Society earns from the member. Stated simply, membership fees are too low to cover the marginal cost of servicing new members. As the Society's membership increases, therefore, it is only the continuing contribution of the *Handbook* that offsets a deficit associated with those new members.

Speaking of Rajiv, I would like to take this opportunity to state to the Society's membership that we are extremely fortunate to have had a Treasurer of his capability and energy for the past several years. Rajiv has been a source of great help and guidance to me in the first few difficult months of my new job, and I have come to admire and appreciate even more than I did his wealth of knowledge of the Society, its finances and its operations. I also wish to recognize the invaluable contribution that Executive Secretary Bonnie Bird makes to the bookkeeping and financial operations of the Society (as well as to everything else). She keeps things running smoothly, and is always able to explain to me why I am doing what I am doing with the finances.

As the Society moves into 1999, we face the challenges of bringing membership handling back into the National Office. This change will result in significant expenses for a new computer system, membership handling software, and incidentals, as a result of which 1999 may well see a significant deficit for the first time in several years. The Society's healthy asset base will allow us to handle this expenditure comfortably, however.



Michael Watson
National Treasurer

AUDITORS' REPORT

Tinkham & Associates

CHARTERED ACCOUNTANTS

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To the Members of
THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA

We have audited the balance sheet of The Royal Astronomical Society of Canada as at December 31, 1998 and the statement of revenue, expenditures, and equity for the year then ended. These financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects, the financial position of the Society as at December 31, 1998 and the results of its operations for the year then ended in accordance with generally accepted accounting principles.

TORONTO, Ontario
February 23, 1999

Tinkham & Associates
CHARTERED ACCOUNTANTS

BALANCE SHEET

December 31, 1998, with comparative figures for December 31, 1997

	1998	1997
Assets		
Current assets		
Cash and short term investments	\$ 257,358	\$ 182,676
Accounts receivable	45,654	57,368
Prepaid expenses	2,188	2,188
Accrued interest receivable	<u>14,157</u>	<u>11,395</u>
	<u>319,357</u>	<u>253,627</u>
Special purpose funds (note 1 (c))		
Cash	1,259	1,610
Accrued interest receivable	5,212	10,993
Investments	<u>275,685</u>	<u>264,197</u>
	<u>282,156</u>	<u>276,800</u>
Capital assets		
Office building, furniture, equipment, library (nominal value)	<u>1</u>	<u>1</u>
	<u>\$ 601,514</u>	<u>\$ 530,428</u>
Liabilities		
Current liabilities		
Payables and accrued charges	\$ 54,583	\$ 32,808
Deferred revenue		
Membership fees for ensuing years	65,284	57,521
Journal subscriptions	20,696	5,703
Unamortized life membership fees (note 1 (b))	<u>41,362</u>	<u>38,151</u>
	<u>181,925</u>	<u>134,183</u>
Special purpose funds (note 1 (c))	<u>282,156</u>	<u>276,800</u>
Members' Equity		
Members' Equity	<u>137,433</u>	<u>119,445</u>
	<u>\$ 601,514</u>	<u>\$ 530,428</u>

On behalf of the Board:



 President



 Treasurer

See accompanying notes to financial statements

STATEMENT OF REVENUE, EXPENDITURE AND EQUITY

December 31, 1998, with comparative figures for December 31, 1997

	1998	1997
Revenue		
Membership fees		
R.A.S.C. Centres	\$ 56,037	\$ 52,950
Individual members	14,240	12,611
Life membership: annual appropriation	1,908	1,592
	<u>72,185</u>	<u>67,153</u>
Publication revenue		
R.A.S.C Journal	50,262	28,373
Observer's Handbook	128,413	97,751
Beginner Observer's Guide	6,634	9,433
Observer's Calendar	15,279	13,810
	<u>200,588</u>	<u>149,36</u>
Miscellaneous income		
Interest on investment	18,828	18,884
Rent	13,751	12,533
Other income	5,656	2,667
	<u>38,235</u>	<u>34,084</u>
	<u>311,008</u>	<u>250,604</u>
Expenditures		
Publication costs		
Journal	65,798	58,161
Annual report	8,249	8,355
Distribution costs	16,154	9,795
Observer's Handbook	33,232	22,808
Beginner Observer's Guide	10,669	593
Observer's Calendar	12,036	9,425
Operating costs		
Office salaries and employee benefits	26,800	28,628
Membership services	13,435	8,000
Handbook distribution to members	6,617	5,731
Grants to centres	3,398	270
Life membership allotment to centres	3,786	3,571
SkyNews bundling	21,835	19,194
Office expenses	13,973	12,682
Advertising	2,079	1,154
Financial services	11,542	4,683
Insurance	4,086	4,023
Committees/Promotion	2,497	3,601
Travel expenses	23,532	12,154
Building	10,600	7,693
Provision (recovery) for bad debts	-	(136)
	<u>290,318</u>	<u>220,385</u>
Excess of revenue over expenditures	20,690	30,219
Equity, January 1	119,445	91,235
Less: Transfer to Endowment Fund	(2,702)	(2,009)
Equity, December 31	<u>\$ 137,433</u>	<u>\$ 119,445</u>

See accompanying notes to financial statements

NOTES TO THE FINANCIAL STATEMENTS

Year ended December 31, 1998

1. Accounting policies

(a) Financial statements

The financial statements have been prepared by management in accordance with generally accepted accounting principles. The preparation of the Royal Astronomical Society of Canada financial statements in conformance with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the balance sheet date and the reported amounts of revenue and expense during the reporting period. Actual results could differ from such estimates.

(b) Membership fees

Members' fees are recognized as revenue for the fiscal year in which the membership primarily falls. Accordingly, fees received for ensuing years are recorded as deferred revenue. Life memberships are credited to deferred revenue when received. Five percent of the life membership fund is transferred at the beginning of each year to membership fees revenue. At the end of each year, the amount of interest earned during the year by the monies in the life membership fund is added to the fund.

	1998	1997
Life membership fees as of January 1	\$ 38,151	\$ 31,842
Add: Life membership fees received in the year	2,828	5,669
Interest earned	2,289	2,232
Deduct: Amortization	<u>1,906</u>	<u>1,592</u>
Balance, December 31	<u>41,362</u>	<u>38,151</u>

(c) Special purpose funds

The special purpose funds of the Society are managed in accordance with directives issued by Council. Income is recorded on the accrual basis.

	P.J. Millman Endowment Fund		Ruth Northcott Fund	
	1998	1997	1998	1997
Fund value as of January 1	\$ 225,197	\$ 223,188	\$ 51,603	\$ 48,884
Add: Donations	600	-	-	-
Add: Interest	-	-	2,734	3,979
Add: Inflation adjustment	2,702	2,009	-	-
Deduct: Expenses	-	-	680	1,260
Balance, December 31	<u>\$ 228,499</u>	<u>\$ 225,197</u>	<u>\$ 53,657</u>	<u>\$ 51,603</u>
Funds, comprised of:				
Cash	\$ -	\$ -	\$ 1,259	\$ 1,610
Accrued interest	-	-	5,212	10,993
Term deposits	<u>228,499</u>	<u>225,197</u>	<u>47,186</u>	<u>39,000</u>
	<u>\$ 228,499</u>	<u>\$ 225,197</u>	<u>\$ 53,657</u>	<u>\$ 51,603</u>

1. Accounting policies (cont.)

(d) Publications:

R.A.S.C. Journal subscription revenues are amortized into income over the subscription period.

(e) Investments:

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

(f) Fixed assets:

The office furniture, equipment and the library of the Society are carried in the accounts at a nominal value. The cost of additions to and replacements of fixed assets are expensed as they are incurred. There were no capital additions in 1998.

2. Organization

The Royal Astronomical Society of Canada is a Canadian corporation without share capital and a registered charitable organization, incorporated for the purpose of stimulating interest in and promoting astronomy and related sciences.

MINUTES OF THE 1998 ANNUAL MEETING

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
Minutes of the Annual Meeting, held 1998 06 21 in the Max Bell Theatre, Lester B. Pearson College, Victoria, British Columbia

The meeting was called to order at 09h09 PDT by the chair, RASC National President Mr. George. Mr. George welcomed delegates to the 1998 General Assembly. Mr. George called the roll of Centres. Eighteen Centres were represented and there were also several unattached members present. Approximately seventy members were in attendance.

1. APPROVAL OF AGENDA

MOTION AM9801

It was moved by Mr. Dick and seconded by Mr. Brodeur to approve the agenda.

The motion was CARRIED.

2. ADOPTION OF MINUTES OF THE 1997 ANNUAL MEETING

MOTION AM9802

It was moved by Mr. Lee and seconded by Mr. Haig to adopt the minutes of the 1997 Annual Meeting.

The motion was CARRIED.

3. REPORTS

3.1 PRESIDENT

Mr. George reported that he had visited most of the Centres and that he had been impressed with the diversity and hospitality he had seen. Mr. George commented on the significant changes, which had taken place in the Society during his term as President. Mr. George thanked Ms. Bird for her continuing efforts at the National Office. Mr. George announced that changes would be needed to the membership administration system.

3.2 FIRST VICE-PRESIDENT

Mr. Attwood explained the status of the membership administration system, which would no longer be handled by the University of Toronto Press. Mr. Attwood commented on the contribution made by the Observer's Handbook and by Dr. Roy Bishop to the healthy state of the Society. Mr. Attwood commented on the relationship between distribution of the Observer's Handbook and the membership administration system. Mr. Attwood presented an overview of membership in the Society from 1960 to 1998. Mr. Attwood pointed out that the inclusion of SkyNews as a benefit of membership had had a positive impact on the membership numbers.

3.3 SECOND VICE-PRESIDENT

Dr. Garrison reported on his activities as Second Vice-President.

3.4 NATIONAL SECRETARY

Mr. Auclair reported on the recent rapid evolution in the duties of the National Secretary, particularly due to the influence of electronic media on communication.

Mr. Auclair read the roll of members who were recently deceased. A moment of silence was observed.

3.5 EXECUTIVE SECRETARY

Ms. Bird gave further details of the operation of National Office, including the use of an accounting package, and that the year-end statements had been sent to the Society's auditor in record time. Ms. Bird commented on the success of the Society's status as a credit card merchant. Ms. Bird reported on matters relating to the Society premises, occupied by the national office and a tenant.

3.6 TREASURER

Dr. Gupta referred to the financial statements for 1997, which were presented in the Annual Report. Dr. Gupta reported that there had once again been a surplus in the operations of the Society. Dr. Gupta reported that a significant factor in the Society's finances had once again been the widespread popularity of the Observer's Handbook. Dr. Gupta thanked Ms. Rosemary Freeman and Ms. Bird for their assistance during his term as Treasurer. A round of applause followed.

MOTION AM9803

It was moved by Dr. Gupta and seconded by Mr. Lane to adopt the audited financial statement as published in the 1997 Annual Report.

The motion was CARRIED.

3.7 NATIONAL RECORDER

There was no report.

3.8 AWARDS COMMITTEE

There was no report.

3.9 CONSTITUTION COMMITTEE

There was no report.

3.10 EXECUTIVE COMMITTEE

There was no report.

3.11 HISTORICAL COMMITTEE

There was no report.

3.12 LIBRARY COMMITTEE

There was no report.

3.13 MEMBERSHIP & PROMOTION COMMITTEE

Mr. Attwood described the purpose, function and recent activities of the Committee, particularly the preparation of advertising, which had appeared and would continue to appear in SkyNews magazine.

3.14 NOMINATING COMMITTEE

There was no report.

3.15 PROPERTY COMMITTEE

Mr. May said Ms. Bird had covered matters relating to the Committee in her report.

3.16 PUBLICATIONS COMMITTEE

Mr. Attwood recognized the efforts of the editorial staff and volunteers who were responsible for the preparation of the Journal. Mr. Attwood described the function and significance of the Annual Report. Mr. Attwood explained that the inclusion of SkyNews magazine had been well received. Mr. Attwood described the success of the Society's other publications.

3.17 EDITOR OF THE JOURNAL

Dr. Turner reported on activities related to the Journal. Dr. Turner reported that a new production company, Redgull Integrated Design, had been engaged by the Society to assist in the preparation of the Journal. Dr. Turner reported on changes that had been introduced by Mr. Brian Segal, of Redgull Integrated Design. Dr. Turner reported that the number of contributions for inclusion in the Journal had increased, and Dr. Turner expressed his gratitude for the efforts represented by those contributions. Dr. Turner thanked Mr. Mike Attas, the proofreader, for his advice and assistance. Dr. Turner encouraged all members to consider joining the list of contributors. Mr. Tony Sosnkowski asked if the technical level of contributions had met Dr. Turner's expectations and Dr. Turner said he had been satisfied with the contributions at various levels. A round of applause followed.

3.18 EDITOR OF THE OBSERVER'S HANDBOOK

Dr. Bishop pointed out that the list of contributors to the Observer's Handbook numbered 36, and Dr. Bishop expressed his thanks for their continuing efforts. Dr. Bishop thanked Ms. Bird for her efforts. A round of applause followed. Dr. Bishop

thanked Dr. Gupta for his efforts. A round of applause followed. Dr. Bishop thanked Mr. Attwood for his efforts. A round of applause followed. Dr. Bishop reported that a recent NASA publication had cited the Observer's Handbook. Dr. Bishop reported that it was anticipated that the 1999 edition of the Observer's Handbook would be ready by 1998 10 01. Dr. Bishop pointed out that the net revenue generated by the Observer's Handbook as presented in the Annual Report represented a subsidy of membership fees of approximately \$25 per member. Dr. Bishop offered for comparison the membership fees charged by the American Association of Variable Star Observers and the Astronomical Society of the Pacific, which were above CDN\$60 per year. Dr. Bishop expressed the view that net revenue should be used for other goals of the Society, such as education and promotion of astronomy, rather than subsidizing membership fees.

Mr. George announced that, according to information published in the 1998 Observer's Handbook, the summer solstice would occur at 10h03 pdt. It being 10h03, the event was recognized.

3.19 OBSERVER'S CALENDAR

Dr. Gupta reported that the printing of the Observer's Calendar had won an award for University of Toronto Press. A round of applause followed. Dr. Gupta announced that the 1999 Observer's Calendar had very recently been printed and would be available from the National Office beginning in July.

3.20 ASTRONOMY DAY CO-ORDINATOR

There was no report.

3.21 COMPUTER USE COMMITTEE

Mr. Lane reported on his activities, relating to the various email mailing lists, relating to the Society's home page on the world-wide web, and relating to the anticipated introduction of access to membership lists via electronic means.

3.22 LIGHT POLLUTION COMMITTEE

Mr. Broderick reported on the initiatives that he considered significant for the Committee. A round of applause followed.

3.23 LONG-RANGE PLANNING COMMITTEE

Mr. Attwood described the purpose and recent activities of the Committee.

3.24 NEW OBSERVING CERTIFICATES COMMITTEE

Mr. Attwood expressed the view that a mechanism was needed to assist new members in their efforts to learn about astronomy. Mr. Attwood reported that the Committee had

MINUTES OF THE 1998 ANNUAL MEETING

considered various mechanisms and that this work would continue.

At 10h25, Mr. George announced that the meeting would break for coffee. The meeting was reconvened at 10h47.

4. ELECTION OF OFFICERS OF THE SOCIETY

Mr. Auclair announced that Mr. Michael Watson had been acclaimed to the office of Treasurer. A round of applause followed.

Mr. Auclair announced that Dr. Rajiv Gupta had been acclaimed to the office of Second Vice-President. A round of applause followed.

Mr. Auclair announced that Dr. Robert Garrison had been acclaimed to the office of First Vice-President. A round of applause followed.

Mr. Auclair announced that Mr. Randy Attwood had been acclaimed to the office of President. A round of applause followed.

Mr. George congratulated the new officers.

5. SELECTION OF AUDITOR

MOTION AM9804

It was moved by Dr. Gupta and seconded by Mr. Haig that C. J. Tinkham and Associates be reappointed as auditors for the Society.

The motion was CARRIED.

6. OTHER BUSINESS

Dr. Turner responded to the request made during the 1997 Annual Meeting by Dr. Kennedy for a clarification of the Society's editorial policy. Dr. Jeremy Tatum (Victoria) expressed the view that the editorial policy should require that authors be shown the final edited version of an article before the article would be published. Mr. Young explained that Dr. Kennedy's concern had arisen out of a situation regarding precisely this point. Dr. Turner explained that time constraints had been a factor in the situation in question.

Dr. Turner reported on proposed changes to the rules of the Simon Newcomb Award. Mr. Keith Janke (Edmonton) asked if articles published in centre newsletters would be eligible for the Simon Newcomb Award under the proposed new rules, and Dr. Turner said such material would be eligible. Dr. Tatum asked if the new rules would result in the same person winning the award over and over, and Dr. Turner said this possibility had been considered and that the conclusion had been that this possibility would present no problem.

Mr. Gary Billings (Calgary) offered some thoughts on the matter of potential increases in membership fees. Mr. Billings

expressed the view that there would be many members who would find higher membership fees to be a serious financial burden, and that an increase in membership fees should be avoided. A round of applause followed. Dr. Bishop agreed that membership fees for youth members should be maintained at an inexpensive level.

Mr. Keser suggested that the Light Pollution Committee address concerns about the influence of the Iridium satellite system on astronomical observing conditions.

Mr. Bert Rhebergen (Hamilton) asked that consideration be given to publishing all past winners of awards in the Annual Report. Mr. Attwood responded that this would increase the size and cost of the Annual Report, and that this information was available in the Society's publication "Looking Up."

Mr. Rhebergen asked if a mechanism was in place to permit members, who do not have access to the world-wide web, to have access to information about the Society. Mr. Keser pointed out that a majority of members do not have access to the world-wide web. Mr. George said that none of the Society's activities involving the world-wide web had restricted more traditional means of distributing information.

MOTION AM9805

It was moved by Dr. Bishop and seconded by Mr. McCausland that gratitude be expressed to Mr. George for his service as President of the Society.

The motion was CARRIED.

A round of applause followed.

Mr. George announced that the next annual meeting would take place at 09h EDT on 1999 07 03 in the Medical Sciences Building at the University of Toronto.

MOTION AM9806

It was moved by Mr. Wagner that the meeting adjourn.

The motion was CARRIED at 11h27 edt.

Respectfully submitted,
Peter Jedicke,
National Recorder.

ANNUAL REPORTS FROM THE CENTRES

CALGARY CENTRE

Meetings:

There were nine general meetings held in 1998.

- **January 15th:** "A Shuttle Launch," by Jeff Zambori, "A Saskatchewan Meteorite Candidate," by Rick Weis, and "Alberta Concerns in Light Pollution," by Bob King.
- **February 19th:** "NASA Training from Gemini to the Shuttle," by Gordon Luce, retired NASA trainer.
- **March 19th:** "The Curaçao Eclipse," with presentations by Ruth Lewis, Glenn Hawley, Susan Cannon, and Don Hladiuk.
- **April 16th:** "Eclipses" by Howard Simkover, visiting Ottawa member, and "An Introduction to Digistar's Night Sky," by Alan Dyer and Sid Lee using the Science Centre's new planetarium projector.
- **May 21st:** "Crater Simulation in Ballistic Flour," by Roland Dechesne and our Youth Group.
- **June 20th:** "Barbecue Night at the Wilson Coulee Observatory."
- **September 17th:** Various member presentations; a review of the Centre's recent activities.
- **October 15th:** "Small Refractors in Astronomy," Roland Dechesne.
- **November 19th:** "Centre Elections and End-of-year Reports," and slides from Alan Dyer, Don Hladiuk, and John Mirtle.

In public education, the Calgary Centre continues to offer its Introductory Astronomy Course through the Department of Continuing Education, as well as Teacher Workshops, classroom visits contacting over 10,000 students, tours of our own Wilson Coulee Observatory and the University of Calgary's Rothney Astrophysical Observatory, Friday public observation evenings, as well as major Public Star Parties during Zoonival, Astronomy Day, and our Fall Saturn Night. Our Youth Group numbered 73 attending the junior, intermediate, and senior level courses. The enthusiasts in the telescope builders' course constructed eight Dobsonians for themselves.

Our Light Pollution Committee maintains our IDA membership but felt unable to give out our corporate Lighting Award this year, since unfortunately no corporations seemed to deserve it. The committee is working with the Municipality of Rocky View, and the towns of Caroline and Canmore to help them devise new, less polluting lighting standards.

The Calgary Centre again organized the Alberta Star Party near Caroline, and ran an extremely successful Eclipse Expedition to the Caribbean island of Curaçao. Our next

eclipse tour (to Turkey in August 1999) is already rapidly filling up.

Our Wilson Coulee Observatory was reshingled, and due to basement flooding, a sump (with a pump of that ilk) was installed. The Caroline observing site had some landscaping work done and an addition made to the utility building. The observatory domes are not yet finished, so no scopes have as yet been installed. The grass is growing in nicely, and by next year it might actually become a lawn.

The Centre received donations of an eight-inch Dobsonian and Celestron Schmidt-Cassegrain, both of which went to the Telescope for Lend program, as well another eight-inch reflector that doesn't yet have a mount.

Membership rose to 292 in 1998, including 73 Youth Members, most of whom enrolled in our youth group classes. Our financial position is stable, with a comfortable cushion for future expenditures. The Calgary Centre continues to be a large and active presence, both internally and publicly. We touch the public through our presence in the Home Show expositions, doing public observing events, through our 237-STAR information line answering machine, and our website, www.syz.com/rasc/. The large number of member volunteers covers a varied and dynamic range of activities as well as providing regular infusions of new blood to the Centre Council. We look forward to continued growth and enthusiasm in 1999.

Much appreciation goes to all our volunteers and particularly our outgoing President Glenn Hawley for his leadership during these past two years.

EDMONTON CENTRE

President Bruce McCurdy and a supportive Council have contributed to the growth of the RASC – Edmonton Centre. Membership continued to expand in 1998, reaching 186 members. Meetings are well attended with typically 90+ members and guests in attendance.

The Edmonton Centre sponsored the George Moores Astronomy Workshop in October, which turned out very well. The workshop featured Russ Sampson as the guest speaker and many other excellent lectures. Held at the St. John's School of Alberta, the site featured dark skies, which allowed some observing too. Many thanks to Paul Campbell, Sharon Tansey, Cathy MacKinnon, ShirLee Adamson and Harris Christian for organizing this workshop.

Meetings:

Our meetings continue to be held in the Margaret Ziedler Star Theatre at the Edmonton Space and Sciences Centre. This

ANNUAL REPORTS FROM THE CENTRES

planetarium is well equipped for multi-media presentations, adding to the many excellent presentations at the general meetings this year.

- **January:** Ben Gendre demonstrated basic astrophotography techniques in his presentation “The Ease of Astrophotography.”
- **February:** Bruce McCurdy provided us with a perspective on volunteering with his presentation of “A Personal History of the Observing Deck.”
- **March:** Brad Richens, Martin Connors, David Prud’homme, Doug Hube, Murray Paulson and Bruce McCurdy related their experience of the recent total eclipse. Arnold Rivera demonstrated his new binocular mount design.
- **April:** Sylvia Smith presented “(Un)identified Funny Objects” – a collection of cartoons with an astronomical theme. Roger Fell showed slides of the new observatory he built to house the rebuilt Angus Smith Telescope.
- **May:** Tanya White — “Shock Quartz from the Dinosaur Killer Impact.” Dr. Earl Milton — “The Way it Was — A History of the Edmonton Centre.”
- **June:** Richard Huziak — “The Joy & Science of Variable Stars.” Mark Zalcik — “Noctilucent Clouds.”
- **September:** Dr. Doug Hube — “Hazards of Astronomical Research.” George Maher — “How I Built a Telescope.”
- **October:** Bill Kunze — “Telescope Making.” Scott Henderson — “Video Astrophotography.” Franklin Loehde — “Noctilucent Clouds.” Mike Noble — “Digital Photography.”
- **November:** Paul Campbell — “Solar Observing.” David Goldingay — “Solar Observing on the Web.” Bruce McCurdy — “The Sun — Seeing the Solar System.” Bob Drew — “32-inch Telescope Project.” Ben Gendre — “Slide show of aurora images and the Andromeda Galaxy.”
- **December:** “Stars of the Arts” Presentation. The combined efforts of Alice Major, Bruce McCurdy, Ben Gendre, Orla Aaquist, Sherrilyn Jahrig, Bob Jahrig and Frank Florian resulted in a delightful combination of images, music and poetry with an astronomical theme. Mike Hoskinson — “Art of Telescope Making.”

Awards:

President’s Award for Service to the Centre: Terry Nonay with honourable mention to George Maher
Angus Smith Award for Excellence in Telescope Design: Roger Fell
Observer of the Year Award: Bruce McCurdy
George Moores Award for Excellence in Public Education: Russ Sampson

Astrophotographer of the Year Award: Ben Gendre

Terry Nonay, Secretary

HALIFAX CENTRE

The past year started with members excited about the upcoming Eclipse on February 26th. Thirteen of the club members and some of their families made the trip to Curaçao to observe this event. Many came back with photos and stories that they shared with the membership in April. An eclipse photo taken by our President, Clint Shannon, had the honour of making the cover of the 1999 Observers Handbook. Well done!

June had a sad note with the passing away of our Honorary President, Dr. Murray Cunningham. He was an active participant at club meetings and could be counted upon to ask searching questions of the speakers.

The annual star party, Nova East, was held at the Fundy National Park in New Brunswick, and once again it was a great success. Plans are in place for next year’s Nova East.

The public viewing sessions on the Halifax waterfront’s boardwalk were planned for the summer, but due to weather, these events were cancelled. We hope for better luck in 1999.

At the beginning of the fall meetings our President announced that Dr. Roy Bishop had accepted the position as the Honorary President of the Halifax Centre.

Many members used the new observatory at St. Croix this year. It continues to be improved to make viewing more enjoyable for everyone. Work started on a large scope with the purchase of a 17.5-inch mirror. The completed telescope will be set up for use by the members at St. Croix.

Several members viewed the Leonid Meteor Shower on November 17th with great success. There was a great show of meteors and fireballs.

Meetings:

The speakers for the year covered many interesting subjects.

- **January:** Dr Rachid Ouyed started with the topic of whether Jupiter was a planet or a star.
- **February:** Steve Campana entertained us with “Astrophotography from a Garage Roof-Top Observatory.”
- **March:** Dr. Michael West gave a talk on galaxy formation.
- **April:** A member’s night shared experiences of the eclipse.
- **May:** Dr. Roy Bishop gave a talk on the “Observer’s Handbook.”
- **June:** We had three talks by members. Mary Lou Whitehorne with “Stellar Story Boxes,” Daryl Dewolfe — “The Ceravolo Maksutov-Newtonian Telescope,” and John

Jarvo's topic was "Roll-off Roof Backyard Observatory."

- **September:** After the summer break, September started the fall session with Dr. David Turner as main speaker and the topic "A Lifetime of Star Clusters."
- **October:** Pat Kelly had the floor with the topic "The Lost Oceans of Venus."
- **November:** Michael Falk spoke about "Astronomical and Numeric Names for the Seven Days of the Week."
- **December:** The year finished with Larry Bogan's talk "Global Positioning Systems."

Mary Fraser, Secretary

HAMILTON CENTRE

1998 provided the Hamilton Centre with the continuing challenges of maintaining its observatory, its equipment and its membership. Colin Haig continued as president to complete the work begun in the previous year.

Membership held steady at around ninety members. A healthy membership level, donations through public education nights and other fundraising activities yielded a maintainable financial situation for the centre.

Much work was planned and performed in maintaining and improving the observatory site, the buildings and the telescopes housed there. Work carried over from the previous mandate was finished and new projects were proposed. Native tree species were planted to replace the overgrown Christmas trees pruned the previous year. A 10-inch reflector was completely refurbished by Mark Kaye. Work was started on the repair of the Marsh Refractor so it could take its place once again in the dome. The site is now much more attractive and usable for observing and educating.

Work also progressed on the observatory at Saltfleet High School, organized by our Education Director, Carmen Martino, with the support of the Hamilton Centre, McMaster University and the Hamilton Amateur Astronomers. To date, over \$40,000 has been raised, and some instruments including a Meade 16-inch LX-200 Schmidt-Cassegrain telescope have been purchased and installed.

December ended the year with a Beginner's Observing Session, organized by our Observing Director, Stephen Barnes. It was a highly successful event, in spite of less than perfect skies. Experienced members brought out telescopes for beginners to look through and ask questions about. Members of the public, hopefully soon to be members, also turned out with questions about telescope purchase and use. Regular and special observing sessions will be held throughout the 1999 season to augment the usual informal gathering of members at

the site on clear evenings.

More maintenance work is planned for 1999, both on the Leslie V. Powis Observatory and the instruments it contains. The Hamilton Centre will also seek to increase membership in the new year through a variety of channels.

Meetings:

- **January:** "Members' Night" with "A UFO detector" by Les Nagy, "Tree Slides" by Colin Haig and Roger Hill and "Barn Door Astrophotography" by Mark Kaye.
- **February:** "Celestial Navigation" by Gord Sloan of the Hamilton 1812 Shipbuilders' Company.
- **March:** Dale Woods of the Town of Flamborough came in to discuss relations between the centre and the town. Eclipse photos were shown of the February total solar eclipse. Members Roger Hill and Bert Rhebergen were congratulated on their nominations for national awards.
- **April:** Reflection on Messier Marathon reports and updates on telescope refurbishing. Carmen Martino presented a talk on the challenges of mounting a 16-inch LX200 at Saltfleet High School's observatory.
- **May:** John Nemy and Carol Legate showed wonderful eclipse photographs and many other astrophotography slides, shown on multiple projectors along with music.
- **June:** "Planetary CCD Imaging" by Brian Colville with his LyNXX CCD camera. Images of Jupiter, Venus, and Mars were shown, including his work done with NASA and the Association of Lunar and Planetary Observers.
- **September:** Randy Attwood, the new RASC president, presented the Service Award to Roger Hill and discussed plans for next year's GA. Photographs of the August 26th Aurora were also shown by Stephen Barnes, including one chosen for the December cover of SkyNews.
- **October:** "The \$500 Observatory," by Roger Hill. Also taking place was the Annual General Meeting including the nominating and acclaiming of the new board of directors.
- **November:** Peter Ceravolo discussed both realistic and fantastic designs for astrographs.
- **December:** Andreas Gada showed us several years' worth of Eclipse photos. Leonid meteor and lunar slides were also shown.

KINGSTON CENTRE

- **January:** Kingston Centre formed a youth group for people between the ages of 13 and 24 years old. A grant was received from the Lennox & Addington, Frontenac, Leeds & Grenville Training Board to allow us to operate for one year, provided that we focus on careers in space and publish a booklet to be distributed to area high schools. Laura

ANNUAL REPORTS FROM THE CENTRES

Gagne and Brenda Shaw chaired the group, and the booklet was written by Laura Gagne and given to our newsletter guru, Kevin Kell for publishing. It will be released to the schools in early 1999. The Centre's regular meeting was cancelled due to Ice Storm '98, which hit the area the Wednesday evening/Thursday morning before the meeting was scheduled. Some of us were without power for 10 days! It was great for fighting the light pollution problem, except that the moon was full and it was cloudy most of the time. Two days after the ice storm, a blizzard struck Kingston so we were also buried in snow. I doubt any of us will ever forget the experience.

- **February:** The first actual meeting of the new youth group was held this month. Laura Gagne talked about how to buy binoculars and telescopes, Brenda Shaw showed slides of objects that could be found with binoculars or modest telescopes, and the group toured the Queen's University Observatory. The meetings of the youth group were held on the last Saturday of each month. The regular centre meeting was held on the second Friday evening as usual. The speaker was National President Doug George who showed us his CCD imagery techniques. His work is absolutely incredible, and he held the centre members spellbound throughout his presentation.
- **March:** Centre Life Member Valia Krotkov passed away. I went to a memorial service held for her on the date of the summer Solstice. After hearing testimonials from friends and family members I deeply regret that I had never had the chance to meet this remarkable woman. Astronomy has lost a dear friend. The speaker for the youth meeting was Dr. Judith Irwin, a radio astronomer from Queen's University. The speaker for the regular centre meeting was Ms. Kendra Angle who showed us her newly constructed telescope. She presented a slide show of her work in progress, as well as showing us the telescope she designed and built herself. The design for her mount was adopted by the Centre's telescope making group for their most recent 8-inch telescope project. Kendra won the gold medal in the local science fair for her efforts. She then went on to win 2nd place in optics in an international competition in Montreal this summer. You can read more about Kendra's telescope in the October Journal.
- **April:** The speaker for the youth group was Christine Marton from the Students for the Exploration and Development of Space. She talked about the future of Canadians in Space. The speaker for the regular centre meeting was Mark Kaye who showed us his life in astronomy. Mark showed us several of the observatories, telescopes and gadgets he has built over his lifetime in the hobby. He has done an incredible amount of work in such a short time span!
- **May:** Astronomy day was held on May 2nd, at Cataraqui Town Centre, Kingston's largest mall. As usual, Cathy Hall did a fabulous job in the planning and execution of this major event. She even managed to convince the mall that we were not the Royal Astrological Society (teeth grinding). The regular meeting was a telescope clinic. Tom Dean, Doug Angle and Mark Kaye helped members with the cleaning, operation and collimation of their telescopes. The speaker for the youth group was Terence Dickinson. He spoke about his career as well as his personal journey in astronomy.
- **June:** The speaker for the youth group was Dr. Martin Duncan; a planetary scientist from Queen's University. The speaker for the regular meeting was Peggy Hurley who talked about Solstice celebrations and other rituals connected with astronomical events. She focused on Stonehenge and other ancient observatories.
- **July:** The centre participated in a fundraising event for the Ontario March of Dimes called "The Sky is the Limit Festival." Hundreds of people stopped by to chat and to look at sunspots, the last quarter moon and Venus. We were sunburnt and tired, but happy to have been able to share the sky with the public. The speaker for the youth group was the editor of the Beginner's Observing Guide; Mr. Leo Enright. There was a field trip to the Holleford Crater. The speaker for the regular meeting was Laura Gagne who talked about Black Holes, Wormholes and the possibility of time travel.
- **August:** The youth group had a "mini starfest" BBQ and fun day with observing in the evening. It was actually clear that night too! The regular meeting was held at the observatory of Mark Kaye and took the form of a very successful BBQ and observing session. He showed us his CCD equipment and gave us a great demonstration until a thunderstorm encouraged us to take the equipment indoors. At the end of the month (August 26th, to be exact) the centre helped Terence Dickinson with his annual public star party held at Charleston Lake. Everything cooperated this year, even the most spectacular aurora ever seen in the area in living memory.

- September:** The youth group spoke to Dr. Jill Tarter in Melbourne Australia via teleconference. She was in the middle of an international conference on the Search for Extraterrestrial Intelligence (SETI), presenting recent developments in project Phoenix, the most ambitious search so far. She is the director of the project. The regular meeting was members' night, when centre members have a chance to show off their projects. Tom Dean showed us two new barn door designs and Frank Hutchins showed us a barn door device he created from old telescope drive controls (you can see it in the astronomy day write-up in the October Journal). Kim Hay gave us a slide tour of the National Radio Astronomy Observatory in Greenbank West Virginia where she spent a recent holiday. Kevin Kell showed us a series of blackmail slides of centre activities at Grass Greek Park (Sky is the Limit Festival) and Starfest.
- October:** The centre held a special public stargazing event on the shores of Lake Ontario. Attendance was poor, but organizers attribute that to the spooky dark shapes that astronomers make in public places. Flashing lights helped alleviate that problem at future sessions. The centre also helped Queen's observatory with their monthly open house (first one held this month). We provided "sidewalk" astronomy, which attracted about 100 passersby. The speaker at the youth meeting was Ms. Denise Sabatini who spoke about archaeoastronomy, especially about Mesoamerican astronomers. The speaker for the regular meeting was Mr. Tim Seitz who talked about the role of comets and meteors in shaping the Earth's climate.
- November:** The elections were held for the regular meeting. The youth group had a field trip to the National Museum of Science and Technology in Ottawa. The centre held another public star night at the Lake and also helped Queen's Observatory with another open house. Attendance improved at both events, most likely due to public anticipation as well as the keen flashing red lights Kevin set up around the telescopes.
- December:** There was no youth group meeting, as it would have been the 26th. The regular meeting was canceled, being replaced by the first annual banquet and awards night. It was a wonderful evening, with guest speaker Joady Ulrich who spoke about how the Hubble Space Telescope has dramatically increased our view of the Universe in which we live. The A. Vibert Douglas Award for service to the centre (or astronomy in general) was given to the organizer of the 1997 GA; Mrs. Peggy Hurley. The Achievement Award for

outstanding work in astronomy was given to Miss Kendra Angle for the construction of her telescope which appeared in the October Journal. Messier Certificates were awarded to Ken Kingdon and David Pianosi. Membership certificates were given to Gerald Schieven (1983), David Stokes and Bill Broderick (1994), and Warren Morrison, Kim Hay, Ruth Hicks, Peggy Hurley, Susan Gagnon, Kevin Kell, Sue Knight-Sorensen, Walter MacDonald, Dieter Brueckner, and Peter Kirk. Honorary President, David Levy, also received an Emmy Award for his recent documentary "Three Minutes to Impact" (Hooray for David!).

Thus ends a year in the life of Kingston Centre.

Laura Gagne, Secretary

KITCHENER-WATERLOO

This year has been a successful one for the K-W RASC. Check our web site for exact meeting times and location, but we generally meet on the second Friday of the month at 7:30 P.M. in the Physics building at Wilfred Laurier University. Club membership has increased this year, partly because of our web site at kw.rasc.com. A number of new members were introduced to the club through this site. Clark MacDonald's CCD blunders page (not present any more) was even mentioned in Sky and Telescope magazine. Speakers for our meetings have included Oscar Cole-Arnal on "Beyond Oohs and Ahs," Mark Kaye from Georgetown on "30 Years of Observing," Dr. Michel Fich on HII regions, Ray Koenig on Basic Astronomy, Jeff Collinson on his tracking platform, various members on their eclipse shots, and others. Representatives from Sienna Software gave a talk on their product "Starry Night."

We organized an astronomy day demonstration on the Friday and Saturday at Connestoga mall. Friday night was cloudy, preventing intended viewing from the parking lot, but considerable interest was generated. Telescopes, mirrors, photographs and magazines were displayed.

We committed money and effort into getting the club's 12.5-inch telescope refurbished, and the observatory site near Ayr fixed up. A latrine was installed, and the main telescope dome was cleaned out. A roll-off roof at the site, owned by a former member was donated to the club with the hope that it could still be used. The roll-off beams were disintegrating, but have been repaired, and are useable. The 12.5-inch telescope for the main dome should be ready by the spring. Thanks to all those who have worked on the telescope and the site, including the corporate donations of time and materials.

ANNUAL REPORTS FROM THE CENTRES

A Mars project is being organized for the coming year in which many of the club members will contribute something in the way of observing, history, book reviews, art, etc. All the contributions hopefully will be put on the web.

Some of the main observing and social activities of the summer remain the various star parties. These include Gateway to the Universe (North Bay), Starfest (Mount Forest), and Huronia. Our club attends these well, and no doubt some will go to the Great Manitou Star Party next year as well.

A number of members observed the Solar eclipse in the Caribbean. Those on the cruise ships tended to get the best skies. A number of beautiful shots were shown at our meetings.

Some members observed the Leonids before and after the peak. The numbers of meteors, while considerably higher than the sporadics were not impressive. Few meteors brighter than magnitude 1 were seen. The meteorite impact at Doon Valley golf course in Kitchener generated a lot of interest, and some members went on a field trip to see if other pieces may have fallen nearby. None were found.

The next year promises to be exciting with a lot of new members. While some have been in astronomy for a while, others are new to the hobby.

LONDON CENTRE

1998 was a good year for the London Centre. Our membership climbed steadily throughout the year and our number of members has just surpassed the 70 mark. One reason for this is due to the hard work of many of our members. These members have spent many Saturday evenings in June, July and August on the front lawn of the Cronan Observatory. These members set up their telescopes and promote Astronomy to the public on the evenings that the observatory is having open houses to the public. The RASC London Centre also did several mall displays in 1998, which has also contributed to the membership and made the Centre known to the public.

Meetings:

The London Centre meets on the third Friday of every month at 7 P.M. The meetings are held at the London Children's Museum, which is located on the bank of the Thames River on Wharncliffe Road in London, Ontario.

- **January:** Meteoroid Stream Modeling by Peter Brown
- **February:** The 51 Pegasisaga by Dr. David Gray
- **March:** Observing the February Total Solar Eclipse in Aruba by Mike Hanes
- **April:** Making Observing Easier by Mark Kaye
- **May:** Predicting and Recreating Celestial Events on the

Computer by Michael Watson

- **June:** London Centre held its Annual Banquet on June 6th. Dr. Ralph Chou spoke on the 1998 eclipse from Curaçao
- **July:** Using Low Cost Security CCD Cameras for Video of the Moon by Roger Hill
- **September:** Mirror Aluminizing and Optical Overcoats by Allen Ward
- **October:** Astronaut John Glen by John Sing
- **November:** High Energy Astronomy by Paul Delaney
- **December:** The Design of the Lunar Module by Randy Attwood

Observing:

London Centre members observe regularly at the Fingal Wildlife Management Area. Fingal is a thirty to forty minute drive southwest of London and provides a good, dark sky for London Centre members. Stars as faint as sixth magnitude can be seen with the naked eye from Fingal. On several occasions we have had close to twenty astronomers at Fingal. On the night of the Perseid Meteor Shower we had reporters from CFPL, the local London Television Station, at Fingal. London Centre has several members working on their Messier List as well as several members working on their finest NGC list from the RASC Handbook. On the early morning of October 20th an extraordinary event occurred at Fingal. Not one, but three London Centre members completed the finest NGC list. These three astronomers were Dave Nopper, Joe Gurney and Chris Fleming. Dave completed his list with NGC1232 at 01:30 A.M. Joe and Chris waited until 4:00 A.M. for NGC 2359, 2440 and 2539 in Puppis to rise high enough to be seen. London Centre hopes to have a small building erected at Fingal in the future to serve as a warm room, as Fingal will remain a prime observing sight for London Centre.

With 1998 being a good year all the members of London Centre are very much looking forward to 1999 and continued good observing at Fingal as well as good guest speakers at our monthly meetings.

CENTRE FRANCOPHONE DE MONTRÉAL

Si on peut dire que les quelques dernières années étaient une période de reconstruction on peut maintenant dire que l'année 1998 fut une année de consolidation. Grâce au travail acharné du précédent conseil, le CF de Montréal a maintenant plusieurs membres assidus et qui participent activement.

Au niveau administratif ce fut une année de transition. Presque tout le conseil s'est renouvelé. Les nouveaux responsables ont appris les rouages administratifs mettant aussi à jour les logiciels de comptabilité et de liste de membres. Ce

ne fut pas sans heurts mais le gros des activités en a pas trop souffert. Le conseil a été assisté de plusieurs directeurs chevronnés, dont l'aide fut précieuse, entre autres le directeur des conférences, l'éditrice de l'AstroNote, et le groupe d'organisateur du CAFTA.

Les activités furent sensiblement les mêmes que les deux années précédentes. Les conférences publiques du mardi sont toujours populaires y incluant les conférences des astronomes professionnels de l'Université de Montréal. Cette année une sortie par mois au terrain d'observation fut planifiée. Plusieurs ont eu lieu mais malheureusement certaines soirées ont été annulées à cause d'un ciel couvert. Nous avons été plus chanceux le 17 novembre pour les Léonides. Avec un ciel découvert un grand nombre de membres sont allés au terrain pour faire de l'observation. C'était malheureusement trop tard pour les Léonides. Nous avons vu plusieurs beaux bolides mais n'avons pas observé la tempête que l'on attendait. Nous avons aussi profité d'un samedi sans nuage en septembre pour faire une soirée d'observation populaire au Vieux Port de Montréal. Plus de 500 personnes on fait la queue aux quatre instruments présents pour observer Jupiter, Saturne et la pleine lune.

Ce fut aussi une année de célébration. Nous avons fêté le 50ème anniversaire du CF de Montréal ainsi que le 30ème anniversaire de la Société d'Astronomie de Montréal. Les célébrations furent somme toute modestes et se sont résumées en trois activités. Deux conférences y furent dédiées. La première de 1998 fut sur une rétrospective historique du CF Montréal et de la SAM par notre archiviste et président François Chevretil. Une des dernières conférences de l'année fut une table ronde avec quelques-uns des anciens présidents qui nous ont raconté des anecdotes sur l'histoire du club. La deuxième activité fut la production d'un numéro hors série de notre revue, l'AstroNote. Reproduisant des articles tirés des numéros passés donnants un aperçu des activités au fil des ans.

Finalement le 50ème anniversaire fut le thème du Concours Annuel des Fabricant de Télescope Amateurs 1998 avec une conférence sur l'histoire de l'astronomie amateur au Québec. Le CAFTA 1998 fut très réussi grâce à une journée chaude pour la baignade et une nuit sans nuage pour l'observation. Il faut aussi souligner la visite de quelques membres du Centre de Kingston dont Kendra Angle qui s'est mérité le deuxième prix de la catégorie optique. Il n'y aura pas d'assemblée générale de la SRAC à Montréal dans un proche avenir. Mais rien ne vous empêche de venir faire un tour dans la région montréalaise et de passer quelques jours au CAFTA 1999. On vous y attend.

MONTREAL CENTRE

The highlight of the 1997-98 membership year was, without a doubt, the 50th anniversary celebration of the RASC's oldest newsletter, Skyward. The event was celebrated on May 16th and we were quite fortunate to have Miss Isabel K. Williamson as guest of honour. Miss Williamson founded Skyward in 1948 and was its Editor for more than 23 years. To commemorate this event the current Editor, Mark Bratton, worked long and hard to put together a very special issue of Skyward, one rich, with the history and heritage of our illustrious newsletter. Speaking of Skyward, Mark Bratton has turned out another nine excellent issues of our newsletter (we still don't know how he accomplishes this feat!). Incidentally, Skyward now sports a new black & white version of the colour masthead, designed by David Shuman for the 50th anniversary issue.

A very rare event occurred at the Annual General Meeting of the members at the end of November '97 as there were two candidates proposed to replace outgoing President Gary Angers, namely; Phil Leboeuf and Mark Bratton. A vote was held and ballots were verified and compiled by two senior members of the Centre, Bert Widdop and Alan Moore. The vote resulted in Mark Bratton becoming the 35th President of the Montreal Centre. Also at that meeting the Charles Good Award was presented to Gary Angers in recognition of his leadership and dedication to the Centre.

Observational Outings:

In addition to presenting the monthly Observers' Group Meetings, Directors Bill Stropole and Marc Ricard organised a good number of observational outings to various locations, including David Ross' tree farm in Waterloo Quebec and Johanne Gamache's farm in St-Chrysotome Quebec.

Donations:

Wonderful news came in the form of a donation by former member Dr. George Fortier, of an observatory class 12.5-inch reflector that won first prize in design at the 1984 Stellafane convention. This 450-pound instrument will become the cornerstone of the Centre's observing site.

The Centre received a timely donation from the estate of another long-time member Mr. Bob Venor. The items received were a testament to Mr Venor's career as an amateur telescope builder. Amongst these were dozens of mirror blanks, finished mirrors, glass tools, grinding powders, and many telescope-making components.

Lectures:

Following the tremendous success of David Shuman's 3D slide presentations on Stellaphane at the close of the 1997-98

ANNUAL REPORTS FROM THE CENTRES

membership year, the unrelenting pace of activities continued at our Centre with in excess of 50 meetings of our members. Centre Director, George Ascroft, once again organised an impressive selection of speakers:

- “The Origin of Comets” by Jane X Luu
- “Searching for Planets” by Dr. René Racine
- “Measuring the Moving Stars with Hipparcos” by Sergey Marchenko
- “3-D presentation of the Mars Pathfinder mission” by David Shuman
- “Mars 60 Years Ago” by Dr. Dimitri Photiades
- “Astronomical Resources on the Internet” by Glen Newton
- “E. E. Barnard and the Dawn of Modern Astronomy” by Mark Bratton
- “Inflation” by Henri-Pierre Veronneau
- “Copernicus” by George Ascroft
- “Getting the Most out of the MOST” by Dr. Anthony Moffat
- “Hyakutake and Hale-Bopp” by Nadine Manset
- “Four Centuries of Selenography” by Mark Bratton
- “Leslie Peltier” by Barbara Silverman

On the Internet:

The Centre’s website, coined our “shingle” in cyberspace, was entirely redesigned by member John Glass during the late spring and the number of visitors to the site had passed the 6000 mark by July! The new look featured images and sketches by our members, online events sponsored by the Centre, as well as an expanding number of links to astronomical resources. The URL was also changed to <http://www.rasc.ca/montreal>.

Special Events:

In October ‘97 the Centre was “invaded” by the grade seven class of Centennial Regional High School. The “invasion,” organised by member George Wade, was quickly calmed as visitors were treated to views of Jupiter and Saturn through the observatory’s C-14, in addition to listening to several prepared talks in the main meeting room.

October also featured a Centre co-sponsored lecture at the Montreal Planetarium. The guest lecturer was non-other than Harvard astronomer, Jane. X. Luu. Her topic: The Origin of Comets.

August ‘98 brought about another Public Night at Cooper Marsh in Lancaster, Ontario. The event was hosted by the Centre and, despite less than co-operative weather, a full-house presentation was given by our Director of Observational Activities, Marc Ricard.

Regarding the Observatory:

The Centre was finally able to obtain a written lease from McGill University, outlining the terms and conditions of our stay in our Observatory on McGill property. The “Ice Storm” notwithstanding, the chimney, which had fallen into serious disrepair, was fixed so that our concrete-grey building now dons a new red brick chimney – actually quite striking! The inside was also repainted. On the downside, it was deemed necessary to restrict access to the dome area in order to help resolve fire-code problems brought about by a call made anonymously to the City of Montreal several years earlier.

We are saddened to report the passing of long-time members, Mrs. Elizabeth (Betty) Pride and Mr. Frederick Clarke.

If 1997-98 is any indication of the direction in which the Centre is headed, the 98-99 membership year, under Mark Bratton’s leadership, certainly promises to break new ground and, along the way, perhaps hold a few surprises. Stay tuned...

Gary Angers, Secretary

NIAGARA CENTRE

The Niagara Centre has had a full year of activity and member participation throughout 1998. We held the official opening of our new Observatory at Chippawa Creek Conservation Area on March 28th. Although the weather was a little wet, the members in attendance made up for it in spirit. The new observatory with its Meade DS-16 (courtesy of Dennis Maheu) has been well used by members throughout the year. A few were lucky enough to be there when the incredible August 26th aurora display took place. Some excellent pictures of the event were taken by Darryl Gent at the observatory site. A complete rebuild of the equatorial mount at the observatory was undertaken by some of the more mechanically skilled members of the Centre. As a result, its tracking and ease of use have been greatly improved. A newly re-coated mirror has also helped.

A highlight for the centre was the awarding of a grant by the RASC National for the Niagara Centre to purchase a CCD camera for the new observatory. Due to the hard work of our National Council Representative, Brian Pihack, the grant application was accepted and a committee was formed to evaluate and recommend a suitable CCD camera for the centre. We hope to have the camera and a computer up and running in the observatory for members’ use by the spring of ‘99.

The Niagara Centre had another busy year of public presentations and star nights. There was a good turnout for our

annual fall public star nights held in Guy Road Park, St. Catharines. We held our annual Brock University star night in September for their astronomy class, with a turnout of over two hundred students. Also, two star nights were held for the campers of Chippawa Creek Conservation Area during the summer months. Two informational mall shows were held in the Niagara region to spread the word and encourage new members, with plenty of public interest.

The Niagara Centre elected a new executive in October. The new officers are listed in the "Officers and Council of the Centres for 1999" section of the annual report. The Niagara Centre moved its mailing address from Niagara Falls to St. Catharines for convenience in mail pickup. For those that correspond with the Niagara Centre, please take note of the address change and make the correction if you haven't already done so. Thanks.

We had a good turnout for Starfest '98 with twelve members making the annual pilgrimage to astronomy central in Mount Forest. A great time was had by all despite the lousy observing conditions the last few nights. Some members also made the trip to North Bay for the Gateway to the Universe star party in Powassan, Ont. Two of our more active members, John and Carol Nemy, took it upon themselves to organize four of their own public star nights throughout the summer at the Stonechurch Winery in Niagara-on-the-Lake. Many of the Centre's members pitched in with their telescopes to make these evenings a success. A large number of people spent an evening under the stars with wineglasses in hand. What a perfect combination!

A few of our members, much to the envy of us all, were lucky enough to travel to Curaçao to view the total eclipse in February. They had an excellent time as expected and presented the results of their trip in a fine display of photographs and commentary at our March general meeting. A trip to Europe to see the next eclipse in August is in the making for those members willing to part with a few pesos. Many are planning to make the trip.

Our Annual Banquet was held April 24th at the Skylon Tower in Niagara Falls. The guest speaker for the evening was Steve Dodson with his "Why We Do The Things We Do" talk. A good time was had by all.

The Niagara Centre has a completely revamped web page due to the hard work of our Editor John VanOphem. Past and present editions of our newsletter, the Niagara Whirlpool, are available for download on the web site as Adobe Acrobat (PDF) files.

The following is a list of the speakers and topics for our general meetings in 1998:

- **January 22nd**: "Astronomical Software" by Charles Fassel
- **February 26th**: "Just Observe!" by Mark Kaye, Hamilton Centre
- **March 26th**: Solar Eclipse Reports by members who viewed the eclipse in Curaçao
- **April 23rd**: "Optical Coatings for Telescopes" by Alan Ward, President, Sudbury Astronomy Club
- **May 28th**: "Canadian Shuttle Astronauts" by Andrew Yee, University of Toronto
- **June 25th**: "Bring a Friend Night," members' night
- **September 24th**: "Summertime Events," members' night
- **October 22nd**: Elections of Niagara Centre Executive
- **November 26th**: "Life on Mars and Life in the Universe" by Barry Digregorio

The Niagara Centre is looking forward to an active year for its members in 1999. The new CCD camera will offer the opportunity for all members to expand their astronomical horizons and learn this new type of imaging for themselves. We are looking forward to the participation and involvement of our members in this new endeavour. Together with our new observatory, we hope to encourage more members to acquire keys to the facility so that they can take advantage of our dark sky site and its equipment. Clear skies to one and all.

John VanderBrugge, Secretary

OKANAGAN CENTRE

The past year was a good year for the Okanagan Centre. The skies were cooperative during the spring, summer and fall months with winter being a 50/50 proposition so close to a large lake, Centre membership rose and activities were numerous and generally well attended. Monthly meetings were very productive in terms of attendance, open forums and quality of presentations.

February and March found members in the Vernon area running an introductory Astronomy course for the general public. The well-attended course is scheduled for a return in '99. The highlight of the year for Okanagan Centre members in Vernon was the move to a new facility, courtesy of the Interior Space and Science Centre. It should be noted that the ISSC is also well on its way to completing the construction of a planetarium. The opening date has yet to be announced. The planetarium will be the only one of its kind between Calgary and Vancouver and as such it is likely to see a lot of use. OC members in Vernon hosted several well-attended public, observing sessions in the spring and fall.

ANNUAL REPORTS FROM THE CENTRES

The Centre was active within the City of Kelowna this year. On May 2nd, International Astronomy Day, the Kelowna gang set up shop in front of the Kelowna Library. Several members brought along their homemade telescopes for display and in the evening they were turned to the moon for the public to enjoy. The library also gave us space to set up a literary/photographic display in one of their front foyer cabinets. In July the Okanagan Centre members participated in Fat Cat Day, an annual event in Kelowna put on for children and their parents. Two telescopes were set up, one to check out “the freckles” on the sun and the other to follow Venus across the sky. Posters from the Canadian Space Agency were handed out and two pins that had been taken into space by Bob Thirsk were drawn for at the event’s grand finale. Fall ‘98 found member Jim Failes appearing monthly on the CBC morning radio show DayBreak. Jim has also been featured on the local TV station CHBC, informing viewers of notable astronomical events.

A number of activities were planned for the year as well. The Messier Marathon was held in March at the Thunder Mountain Raceway (TMR) and was considered to be a success by all that attended. In July the Centre President, Ron Scherer, hosted a BBQ/Viewing Session at his home in Winfield. A number of members also attended the Mount Kobau Star Party, which was held 15-23 August, near Osoyoos, BC. Another star party, the “Not The Mount Kobau Star Party,” was held concurrently and closer to Kelowna for those unable to attend the MKSP. On September 12th Alan Whitman, our National Representative, and his wife Gretchen held a “First Light” ceremony for their “Whirlpool Observatory” which boasts a 16-inch Equatorial mount Newtonian. A viewing session was held at TMR October 22nd and another was planned for December but the weather showed its ugly side and the event had to be cancelled.

Meetings:

- **January:** *Kelowna* – “Observer’s Handbook Overview” by Centre President Ron Scherer
- **February:** *Kelowna* – “Zodiacal Light” by Jim Failes and “Observing Aids” by Peter Christiansen from Sirius Science; *Vernon* – “Our Place in Space” by Bruce Aikenhead, “Powers of Ten” (video)
- **March:** *Kelowna* – “Stellar Types and the H-R Diagram”; *Vernon* – “Lunar Prospector Mission Update” by Bruce Aikenhead, “Supernova 1998S in Ursa Major”
- **April:** *Kelowna* – “Solar Eclipses” by Alan Whitman
- **May:** *Kelowna* – “CCD Imaging” by National President, Doug George; *Vernon* – Interior Space and Science Centre

Open House planning session, “Viewing Experience from the Ground and the Air” by Dave Panten, Windsor RASC, “Comet Odyssey” (video)

- **June:** *Kelowna* – Summer Observing and Star Parties (General Discussion); *Vernon* - Interior Space and Science Centre Open House featuring two presentations in Starlab (an inflatable planetarium) and the video “Powers of Ten”
- **September:** *Kelowna* – Open forum on summer viewing experiences; *Vernon* – A public observing session was planned but was clouded out.
- **October:** *Kelowna* – “Barndoor Trackers” by Ron Scherer
- **November:** *Kelowna* – “Star Charts” by Ron Scherer *et al*; *Vernon* – Tour of the new facilities at the Vernon Science Centre, Open forum on Leonid observations
- **December:** *Kelowna* – “Cold Weather Observing” by Paul Ellard

Centre Development:

The Council held its elections November 10th with Ron Scherer staying on as President, Laird Bowie as Council VP and Alan Whitman as our National Representative. New to the Council are Jim Fisher (Treasurer) and Paul Ellard (Secretary).

Membership has grown from 43 members to 66 members (62 regular, 4 Youth). The Kelowna Centre has recently moved its meeting venue from the Kelowna Library to facilities at the Okanagan University College with assistance from an astronomy professor, Richard Christie, who also works at the Dominion Radio Astrophysical Observatory. There is a possibility that some of his students will join the club and this in turn should also open the door to some very entertaining and informative presentations. Vernon has similar aspirations with the greater exposure that the Interior Space and Science Centre and their planetarium will give them.

OTTAWA CENTRE

The Ottawa Centre membership for 1998 as of August 31st was 305 members, consisting of 272 Regular (including Junior), and 33 Life Members. This number shows an increase over 1997 membership by 76 people (probably the largest one-year jump in membership ever for the Ottawa Centre).

At our annual dinner meeting, held November 14th, 1997, our speaker was Ken Hewitt-White, former Ottawa Centre member back in the 1960’s, and now SkyNews columnist and co-host of the TV show “Cosmic Highway.” Ken delighted his audience with stories from his personal “Top 10 List of Worst Possible Observing Expeditions” over the past three decades. Ken offered an entertaining and comical look at the more ludicrous aspects of one astronomer’s thirty years’ worth of

misadventures. He included stories about finding a Pacific Northern rattle snake making his home next to Ken's telescope, being forced to the safety of the top of a borrowed van to escape a bear while he and his girlfriend were trying to watch the Perseid meteor shower, and fruitless eclipse and comet-chasing expeditions.

Also at our dinner meeting, the Observer of the Year Award was awarded to Paul Comision. Doug Luoma won the AstroNotes Article of the Year award for his article "Genesis of an Amateur Astronomer (Part 2: Comet Halley)" which appeared in the March 1997 issue of AstroNotes.

January saw us all (some to a much greater degree than others) surviving the 'ice storm of the century'. Some members had the view from their observatories greatly improved by Mother Nature's over-enthusiastic pruning of trees. In a rare move, the January Observer's Group meeting was cancelled due to the storm.

The centre helped with the National Museum of Science and Technology's "Marsville" program April 25th and then participated in a very successful Astronomy Day display at the St. Laurent shopping centre May 2nd. Peter Williams organized both events. The public was very receptive and had lots of questions for the members who had volunteered. Mirror grinding was demonstrated and the public were given the opportunity to hold a meteorite.

Linda and Rolf Meier organized several public star nights at the Township of West Carleton Library facility in the Village of Carp at the "Diefenbunker" site. These star nights have generated lots of interest and new members. Another very successful public star party was organized by Peter Williams at Pinhey's Point August 14th. There were 300 people in attendance and 34 telescopes were brought by members to look at the night sky.

The number of members qualified to use our 16-inch telescope is increasing dramatically due to the efforts of Glenn LeDrew. Glenn has taken it upon himself to start holding spring and fall training sessions for those members wishing to use the telescope and many members, particularly new members, are taking him up on his offer.

The annual picnic was once again held at Linda and Rolf Meier's on September 12th, and was enjoyed by all those who attended.

Unfortunately three Ottawa Centre members passed away this year. In April, Fred Clarke, was killed in a car accident at the age of 58. Fred had been an active member of the Montreal Centre for over 20 years before recently moving to Ottawa and becoming a member of the Ottawa Centre. He served for several years on the Montreal Centre's Board of Directors, including two terms as Vice President. He was most interested

in mirror grinding and making telescopes and was part of a team that constructed an observatory with a 16-inch telescope, which served as the Montreal Centre's primary observing site for over a decade.

The Ottawa Centre lost part of its soul when long-time member Fred Lossing passed away peacefully in hospital on May 22nd at the age of 82. Fred was a driving force behind the establishment of the club's Indian River Observatory and the North Mountain site that preceded it. Fred was a key figure in the design and construction of the club's 16-inch telescope. He was also instrumental in the formation of the Observer's Group. For all of this, people will inevitably remember Fred Lossing for their personal contacts with him. He was a warm, caring man of wit and humour, who shared freely of himself. He was for many members of the Ottawa Centre, a source of information and inspiration, and his presence will be sorely missed. The Ottawa Centre declared that the Indian River Observatory is to be named the "Dr. Fred P. Lossing Observatory." The dedication took place on October 24th, 1998.

Long-time member Willard Lynch also passed away July 14th at the age of 82. Although not one to attend the Observer's Group meetings, Willard had been a member for the past 20 years. He was an enthusiastic observer, viewing the skies from an observatory he had built in his back yard.

Ottawa Centre Council held six meetings this year: April 3rd, May 1st, July 8th, September 2nd, October 2nd and November 6th.

There has recently been a great resurgence in the club. Maybe our new location or the successful public star parties are attracting new members. These new members aren't just sitting back, they're becoming Editors and Co-ordinators at the Observer's Group meetings and taking their roles seriously by giving some great talks at a level where other newcomers will feel comfortable. If the attendance at the November Observer's Group meeting, the enthusiasm of the new members, and the continued high level of expertise of the more experienced members are any indication of a vibrant club, then I would have to say that the Ottawa Centre is in very good shape.

In closing my final report as Secretary of the Ottawa Centre I would like to take the opportunity to thank all the current and past members of council I have worked with over the last eight years for their help and guidance. I wish Lee Macdonald success as he takes on the position of Secretary for the Ottawa Centre.

Jane Lund, Secretary

ANNUAL REPORTS FROM THE CENTRES

CENTRE DE QUÉBEC

Au premier coup d'oeil l'année 1998 semble avoir été relativement tranquille au Centre de Québec. Cependant en faisant le bilan de cette année on s'aperçoit qu'il n'en fut rien. Tout d'abord les soirées-conférences ont eu lieu à chaque mois, sauf durant l'été. La liste suivante résume cette saison que Denis Martel et Daniel Tardif nous ont préparée:

- **Janvier:** Soirée travaux des membres (Les membres du Centre)
- **Février :** Le dessin astronomique (Dominique Beauchamp)
- **Mars:** Taille et polissage d'un miroir (Éric Rémy)
- **Avril :** La recherche en astronomie amateur (Gilbert St-Onge)
- **Mai:** L'observatoire à miroir liquide de 6m de l'observatoire IAP-Laval-UBC (Rémi Cabanac)
- **Juin :** Astrophoto et traitement d'images (Dominique Beauchamp)
- **Septembre:** CCD, lune (Luc Bellavance)
- **Octobre:** Le Soleil (Damien Lemay)
- **Novembre:** Les galaxies spirales (Gilbert St-Onge)
- **Décembre:** L'oeil et ses fonctions en astronomie (Pierre-Paul Leblanc)

Le bulletin du club « La Chouette » n'a été publié qu'à deux reprises, mais les membres ont eu droit à un méga numéro «Hiver-Printemps-Été ». On doit à nouveau féliciter le co-éditeur Serge Gauthier et ses nombreux collaborateurs de nous avoir offert ces deux numéros exceptionnels.

En 1998 le club s'est départi du télescope de 250mm acheté en 1994 afin de faire l'acquisition d'un modèle plus compact (150mm F/8), mieux adapté à sa vocation de prêt. La troisième édition du marathon Messier n'a pu avoir lieu en raison de la mauvaise température lors des deux week-ends où auraient pu se tenir cet événement. Toutes les soirées d'observations du samedi soir ont aussi dû être annulées de septembre à décembre en raison du mauvais temps. Ce sont donc des membres en manque de photons qui se sont présentés le 17 novembre au soir pour la soirée des Léonides. Ceux et celles qui étaient présents ont pu observer quelques beaux météores d'un rouge flamboyant suivis d'une traînée d'un vert turquoise phosphorescent. Ce sont cependant les « Taurôdes (Nord) » qui furent les étoiles filantes les plus abondantes. Les membres qui ont eu la sagesse de se lever aux petites heures du matin le 17 novembre sont unanimes à dire que l'édition 1998 des Léonides est la plus belle pluie d'étoiles filantes qu'ils aient eu la chance de voir. Le ciel dans la région de Québec était légèrement couvert par un voile de cirrus mais le nombre exceptionnel de météores de grande brillance a donné droit à

un spectacle de premier ordre.

Les membres du Centre d'observations astronomiques des Monts Notre-Dame (COAMND) ont encore eut une fois de plus la gentillesse d'inviter les membres du Centre à la traditionnelle « Épluchette de blé d'inde - Soirée d'observation ». Cette activité s'est tenue le 22 août et a attiré pas moins de 105 personnes. Le club a aussi organisé un « Party de Hot-dogs » le 12 juillet auquel ont participé une dizaine de membres.

L'activité organisée lors de la journée internationale de l'astronomie au Domaine de Maizerets a attiré entre trente (30) et quarante (40) visiteurs et membres. Plusieurs membres ont aussi fait la promotion de l'astronomie au cours de l'année. Tout d'abord Jean-Marie Fréchette a donné au Mont St-Anne une causerie sur l'astronomie qui fut suivi d'une soirée d'observation. Les quelques membres qui ont participé à cet événement organisé le 6 mars dans le cadre de la semaine de la famille ont permis à une trentaine de personnes d'observer au travers d'un télescope pour la première fois. Cette activité fut reprise le 1^{er} août et a attiré cette fois là une cinquantaine de personnes. Les membres du Centre ont aussi participé à l'activité Science et famille organisée le 30 août au Domaine de Maizerets.

Les membres du Centre de Québec ont aussi participé à diverses activités à caractère astronomique organisées au cours de l'année dans la province. Pour n'en citer que quelques unes, notons: la « Journée des astronomes amateurs au Mont Mégantic », la Conférence d'Hubert Reeves à la salle Albert Rousseau du CEGEP Ste-Foy et le « Colloque sur l'imagerie numérique au Cosmodôme de Laval ». Les membres du Centre ont participé à trois (3) kiosques dans le cadre du Congrès annuel de la Fédération des astronomes amateurs Québécois qui s'est tenu du 18 au 20 septembre à Ste-Marie de Beauce. Il est intéressant de souligner qu'un de ces kiosques intitulé « COAMND-SAREL : 20 ans d'astronomie au sud de Québec » s'est vu décerné le prix du meilleur kiosque.

En résumé, 1998 fut une année encore une fois bien remplie au Centre de Québec.

Clément Drolet, Secrétaire

REGINA CENTRE

Another 365 observing nights have come and gone; some of them were even clear. In June and August the Regina Centre held their barbecue and Star Party at our Davin Deep Space Observing Site. Both events were well attended.

In July our centre teamed up with the Saskatoon Centre to

help with the Saskatchewan Summer Star Party at Cypress Hills Inter-provincial Park. There were about 270 attendees this year. This is a huge increase from the approximate 200 attendees last year. The party showed that we practice a wonderful hobby that gets people together to share their enthusiasm, knowledge, and accomplishments. The weather was great; clear warm nights and very few mosquitos. Thanks to all the volunteers who worked timelessly to make it a great event.

In 1999 the Saskatchewan Summer Star Party will be held in August. This will be a better date because the sun will set earlier and give more hours of dark skies.

In August members planned to meet at Davin for the Perseids shower but the skies were cloudy.

Regular meetings resumed in the fall with talks from the centre members and observatory tours for various Cubs and Guides groups (astronomers in training). The October meeting was short so members could have an observing night at Davin. It was very well attended with reasonably clear skies and a warm night. The year ended with the annual Christmas Party at Al Andrews' house.

On a sad note, our treasurer Glen Gunther had to resign in August because he moved to Saskatoon. Glen was very active in the club and will be missed. We wish him all the best in Saskatoon.

Ron Haughey, Secretary

ST. JOHN'S CENTRE

The St. John's Centre carried out its normal program of activities during the past year. Of the many interesting events over the year, the Leonids had to be the highlight.

Our Leonid activity began with a talk to the Centre and the general public by Garry Dymond in October. Garry described the 1833 Great Shower and noted that estimates on the hourly rate for that shower have been as high as 100,000. Garry showed us a few local newspaper articles from 1866 to 1966 that concerned Newfoundlanders and the Leonids. One man wrote to the Evening Telegram about 1866 to relate how he woke and saw the Great Shower in 1833 because of moving shadows in his room that were cast by the glow of the meteors. He was in Jamaica at the time. Garry spoke of meteor showers in general and what we might expect to see next month. As it turned out November was no "Great Shower," but was just as exciting for those lucky few that got to see the show, which arrived in Newfoundland one day early. On Monday of the Leonid week Jack Cocker, in his easy chair (evidently a smart fellow), observed about 90 bright bolides over three hours.

Chris Stevenson was out the same night and observed many bright bolides. He noted there were hardly any faint ones. Garry Dymond also saw fireballs and got some spectral shots on the same night. On the main night of Tuesday the Centre went out to Butter Pot Provincial Park, which is our group observing site, but except for a couple of really bright meteors with long-lasting trails the show was disappointing — only a normal Leonids. Randy Dodge was at Harbour Main the same night and had a normal shower except one bright meteor just after 1 a.m. and a few other notable ones. Chris saw many fireballs and bolides on Monday night from 2:50 - 4:00 AM. It was 75-80% clear and he counted 121 over 70 minutes. Every meteor was either a fireball or bolide, there were no faint ones to be seen. "Fantastic" was the only word to describe it.

The Newfoundland planetary observing feat of the year occurred this past summer as Garry Dymond observed Jupiter. He noted that current seeing conditions allowed him to spot detail at 450× with his 8-inch (he usually uses 165×) and he could see up to 7 bands, and detail, in the Great Red Spot. There is no word yet on how bright a fog lamp he was using!

Over the year the Centre held talks with Memorial University of Newfoundland in order to gain access to the planetarium at the Marine Institute in St. John's. The result was an arrangement whereby we gained some access to hold public events and Centre activities. In exchange we also provided our expertise and repaired the equipment in the planetarium. After some amusing adventures our intrepid band of fixers got everything back in shape. In particular, they noticed that one plastic gear that was always wearing out cost the Marine Institute over \$1000 because 4 expensive motors containing the gear had to be replaced. We are looking at ways to manufacture this gear ourselves rather than the University buying another motor when the inevitable wear and tear takes its toll.

Finally, this year contained many excellent talks organized by the Centre. The two talks that really stood out were by geologists. Dr. Joe Hodych presented his talk on the geologic similarities and differences amongst the terrestrial planets. The highlight drew on his work in paleo-magnetism in Gros Morne National Park to illustrate the effect of continental drift. His present work would seem to indicate a drift for Newfoundland twice that of India (the currently accepted champion of drift rates). Dr. Rex Gibbons, a recent provincial cabinet minister, did a Master's in Geology here at Memorial University and later went on to the University of California for his Doctorate during the heady days of the Apollo program. Dr. Gibbons attended Caltech when Eugene Shoemaker was on staff, and found him and his wife always to have been an inspiration. Later, he went on to work for NASA in the area of micro-

ANNUAL REPORTS FROM THE CENTRES

meteoroid cratering. We had many other talks over the year: Randy Dodge on viewing eclipses, Jack Cocker on his radio telescope project, Dr. Glyn George on how one could fit a 120m runabout into a 100m spacedock using relativistic effects, and Dr. Jennifer Porter, from the Religious Studies Department at Memorial, on UFO and Pleiadian spirituality.

SARNIA CENTRE

1998 was a slow year down here in Sarnia. A total of two meetings were held, and both of them at the residence of James Selinger.

The first of these involved discussions on Astronomy Day, plans for the Hobbyfest, and a suggestion that we should look into attending Starfest. Jim Townsend made the suggestion, but very little was done between March and the date for Starfest.

Plans for Hobbyfest were laid out and accepted. Four people, perhaps more (depending on whether or not they could get the time) could attend.

The idea for Starfest was tossed around via phone sometime later, but again not much progress was made. Two people, however, did in a matter of a few hours, make and finalize plans to get to Starfest. Richard Lauzon sprung the thought on Jim Selinger at the last moment, and as Sherlock Holmes would say, '...the game was afoot'.

Another meeting was held in late 1998, and a new executive was formed. Richard Weatherston: President; Jose Ordenes: Vice-President; Brendan Fleming: Treasurer; and James Selinger: Secretary.

With fresh blood in the works, and launch of our web site, it is hoped that this year will produce more results than have the past few. Until next time...clear skies!

James Selinger, Secretary

SASKATOON CENTRE

The 1998 year has been another very busy and extremely interesting time for the Saskatoon Centre. The Saskatchewan Summer Star Party was another great success; registration swelled to nearly three hundred people. Thank you to the many volunteers who helped make this possible.

Fundraising has been a big issue this year because of the expense required to develop our new dark site. A very successful raffle and silent auction brought in good revenue and several bingos were worked by members, which also helped the cause. We are still looking for more as much more is needed.

Construction of the Centre's new dark site near the town of Colonsay is now well under way. Our warm up shelter has been enlarged and a deck has been added. The Centre's 10-foot dome has been moved from the old dark site and installed at the new. Work will continue through the coming year.

All the Centre meetings have been well attended and we have had a good variety of speakers, both local and from elsewhere in the country. Our youth group program is growing with enthusiasm under the direction of Sandy Ferguson. Several public star parties have been held this year and there was a fairly good turn out to the Centre display on Astronomy Day. Several members have also been busy giving public and private lectures and star parties in the city and rural area.

Gastronomy nights sponsored by the Centre have also been well attended.

Al Hartridge, Secretary

THUNDER BAY CENTRE

1998 was blessed by phenomenally nice weather. It was a treat because our remote location and warm nights made it very enjoyable to go viewing, even if it didn't get dark until 12:30 am EST. Our club membership grew nicely to 35 including more female members. The participation level was up and we embarked on some special projects. All in all, it was a good year.

In January of 1998 Ed Kucbel established a web site for our club: <http://www.ols.com/bus/rasc/tbrasc.html>. Considering the distances in the north, this is a very good way to promote the club in Northwestern Ontario. Our youngest member, Brendon Roy, came up with and did all the leg work for the design of a RASC Thunder Bay logo. We now sport very stylish RASC sweatshirts with the Sleeping Giant Peninsula, a local landmark, and the Orion Constellation on the front. Bravo Brendon.

In March Ted Bronson, the backbone of our club, presented a six-week beginners astronomy course at Confederation College. It was a big success and brought in new members. I attended the course and can say that Ted put a huge amount of work into it. He deserves much credit and praise. Ted ran an observer's workshop in April and John Bakkelund, our President, invited Steve Dodson from Sudbury to run a mirror-making workshop in May. This was very informative as many of us can only remember Edmund Scientific catalogs on the subject. It is not that hard to do once the process has been seen. In June Ted Bronson, National Representative, went to the Victoria General Assembly and was very impressed. He will be attending future assembly

gatherings on our behalf.

The summer months saw two star parties. I attended one of these and was, once again, grateful to Ted Bronson and Brendon Roy for their abilities to throw one of these things. Ted Bronson came up with certificates of merit, which were given out to Ed Kucbel for generating and maintaining the web site, to Brendon Roy for his contribution to promoting the local club via his sweatshirt campaign, and to Ted Bronson for the two courses he ran, promoting and benefiting the Thunder Bay Centre. We also honoured Ted with a lifetime membership for his many years of contribution to the Thunder Bay Centre. Congratulations Ted, and thank you.

November was Leonid time, spearheaded by our president John Bakkelund, who has become quite an authority on meteors and meteor showers. Although the showers themselves were not too exiting his observing program was instructional in preparing us for the next shower. With the tireless help of Ms Bonnie Bird at the National Office, 1998 was a smooth running year for the Thunder Bay Centre.

Great Viewing,

Dave Galley, Secretary

TORONTO CENTRE

Wow! What a year for the Toronto Centre! There were many high points but also some disappointments to relay to you in this year's annual report.

The year had barely begun when something very exciting landed on our doorstep. The Centre received an offer of donation of a 45-acre parcel of land located on Blue Mountain, near Thornbury. The donor, Centre member E. Clifton Carr, intended that the Centre use the property as a dark sky observing site. To make the site more enticing, an almost new three-bedroom house came with the property! A reconnaissance team toured the property in November and reported their findings to Council. After much discussion and consideration of the benefits and responsibilities of assuming ownership, the Council voted to accept Mr. Carr's very generous donation.

As the locale is agricultural, the site boasts a near, obstruction free horizon in all directions except to the northeast where there rises a small, wooded knoll. This is just as well as the only sizeable town nearby, Collingwood, lies in this direction. The property abuts the Bruce Trail and the locality is protected by the Niagara Escarpment Commission. The house itself is quite spacious and modern and in fact is not entirely complete as some finishing and decorating is still

required. There is also a large storage building on the property. A committee was struck to coordinate and oversee all aspects of the site with co-chairs Ralph Chou and Guy Nason. It was decided to name the facility, the E.C. Carr Astronomical Observatory in honour of Mr. Carr for his making this site available to the Centre. On behalf of the Toronto Centre, I extend our sincere thanks to Mr. Carr as we are very grateful for his kind consideration.

The Thornbury Site Management Committee began its work on the main building in late April, soon after the road to the property was opened. Several work parties installed drywall in the basement rooms, as well as a red light system for night-time operations. By late May, the main building was furnished, and ready for members to use.

The Open House and Centre Awards Ceremony were held on Saturday May 23rd. Over 100 members and friends of the Centre attended on a sunny spring afternoon.

Two Centre awards were presented at the Open House. The 1997 winner of the Andrew Elvins Award for efforts toward the promotion of interest in astronomy and the Society among the general public was Al Paglieri.

The 1997 winner of The Bert Winnearls Award for individuals making significant contributions to the operations of the Centre was E. Clifton Carr.

Following the official opening of the Observatory and a group cookout, members set up their telescopes for our first star party on the site. At the height of this activity, 43 telescopes ranging in aperture size from 70 mm to 43 cm were pointed at the spectacular night sky. Work parties continued through the summer and fall to complete the basement renovations and prepare the site for the winter, when the road is impassable. If the observing experiences of the work party weekends are any indication, then we are doing fine as they were "4 for 4" for fantastic skies!

The property has been surveyed by Geoff Brown, who has prepared drawings for the first observatory structure, and helped guide the Committee through the steps to obtain a development permit from the Niagara Escarpment Commission. In September, Geoff, Ralph Chou, Mary Anne Harrington, and Clifton Carr appeared before the planning meeting of the Town of the Blue Mountains Council to present our plans for the construction of the observatory building. After about an hour of discussion, our proposal was approved, and the Committee is now working on the building permit application. It is hoped that construction can begin next spring. The Centre has two 12-1/2 inch reflectors and a 4-inch refractor, which can be installed at the site as observatories are built over the next few years. There are also two antique brass refractors in storage.

ANNUAL REPORTS FROM THE CENTRES

Our plans for next spring include construction of the first observatory, installation of flooring and ceilings in the basement rooms, completion of the large basement meeting room and completion of the upstairs kitchen. An electronic card access system will be installed on the main entrance to the building, and the alarm system will be extended to the outbuildings. The library will require more shelving and cataloguing of its holdings. In addition, computers are needed for the library and telescope operations.

Members of the Centre have responded generously with donations of cash, furniture, appliances, and construction materials. It is hoped to establish an endowment fund to support the development of new observatory buildings and their continued operation. I extend thanks to the Committee, the participants of the work parties and the many members of the Centre who have given so willingly towards these projects.

It would appear then, that our President, Mary Anne Harrington, has been successful in achieving a goal of many past Toronto Centre presidents in the securing for the Centre of a truly dark sky observatory in the E.C. Carr Astronomical Observatory.

The Toronto Centre's 1998 expedition to observe the total solar eclipse of February 26th was a resounding success. The expedition left Toronto in two groups, on Monday, February 23rd, and Tuesday, February 24th. There were 67 participants, including RASC members from Halifax and Ottawa. Despite some problems with overbooked airline seats on the critical flights between Miami and Curaçao, everyone arrived with their baggage and equipment, ready to observe the eclipse. Although eclipse day arrived with a heavy rainfall, by the time all arrived at the observing site at the northern end of the island, the sky was clearing, and a spectacular eclipse was enjoyed in a cloudless sky.

John Ginder's design made the expedition T-shirt the classiest one on the island, and many members were asked by other eclipse watchers where they could buy one! Thank you, John. Everyone returned home safely, although one member fell ill on the flight home, and 20 members were stranded on Curaçao for several hours, because of the airline's overbooking of seats on the flight to Miami. Once again, Ralph Chou has surpassed himself for superbly handling arrangements for such a large group of eclipse chasers especially in the face of shortcomings on the part of air carriers and others. Thank you, Ralph! Arrangements are being made for an expedition to Romania for next year's eclipse, which will be the last total solar eclipse of the 20th century.

John Percy organized a wonderful program of regular meetings this past year. Thanks are due to the speakers, and to the Ontario Science Centre A-V staff as we continue to enjoy

the OSC facilities. The presentations were:

- **October 22nd**: "Forgotten Globular Clusters: Searching for Gold and Glory in the Milky Way" by Professor William Harris, McMaster University
- **November 19th**: "Next Generation Astronomical Imaging" by Doug George, RASC National President
- **January 21st**: "Per Ardua ad Astra: The Remarkable Achievements of the HIPPARCOS Satellite" by John R. Percy, University of Toronto
- **February 18th**: "A Vision for the Ontario Science Centre" by Dr. Sid Katz, Director: Ontario Science Centre
- **March 18th**: "Dark Matter in Galaxies and the Universe" by Professor Martha P. Haynes, Cornell University
- **April 22nd**: "Galactic Ecology" by Professor Peter G. Martin, Canadian Institute for Theoretical Astrophysics
- **May 20th**: "Extra-Solar Planets" by Professor Norman Murray, Canadian Institute for Theoretical Astrophysics
- **September 30th**: "The Canadian Network for Observational Cosmology" by Professor Ray Carlberg, University of Toronto

Martha Haynes, the speaker on March 18th was the first Helen Sawyer Hogg Distinguished Visitor at the University of Toronto. Many members of the Centre also attended the public lecture on March 9th by Dr. Jill Tarter, on "The Search for Extra-Terrestrial Intelligence."

This was a slower than normal year for public education in the Toronto Centre with work commitments and a smaller volunteer base resulting in fewer events. Despite this, there were still quite a few events organized:

Cosmic Voyage was a new Omnimax film that had its launch at the Ontario Science Centre on the weekend of November 1st and 2nd. Members from the Toronto Centre helped by bringing out telescopes and displays. A follow-up event occurred on January 24th and 25th.

The Hobby Show took place from November 7-9th at the International Centre. Robert Taylor once again coordinated the Toronto Centre's participation where hundreds of show attendees stopped by our booth for a chat and a sampling of the presentations and equipment that were on display. Robert also coordinated the Centre's participation in the Gem and Mineral Show on March 21st and 22nd. Astronomy Family Sunday took place on April 27th at the Royal Ontario Museum. The Toronto Centre set up indoor displays and it was also luckily clear enough for solar observing outdoors. Astronomy Day took place on May 2nd and consisted of a daytime display at the Ontario Science Centre and evening observatory open

houses at the University of Toronto and York University. Summer Public Star Nights took place at Humber Bay Park West and at Morningside Park on June 30th, July 27th and August 31st. School Star Parties were held at Brown Public School on May 30th and Oakville Trafalgar High School on June 8th. DDO Saturday Nights continue the Centre's long-standing tradition of helping out the staff of the David Dunlap Observatory with their Saturday night public viewing program. Several members including Tim Hunter, Don Dwight, John Ginder and Cathy McWatters brought out their telescopes on clear nights from April 18th to October 3rd.

The Centre's annual open house at the David Dunlap Observatory was held on Saturday September 12th. Thanks go to Dr. Ernest Seaquist and Dr. Robert Garrison for their hospitality.

The Observational Activities Committee is responsible for the organization of Members' Nights, City Observing Workshops, Deep Sky Workshops and other observing sessions which are conducted for the benefit of the membership of the Centre, and thanks go to its chair, Guy Nason. When weather permitted, monthly City Observing Workshops were conducted by Martin Bonert (Humber Bay Park West, Etobicoke) and Steven Spinney (Morningside Park, Scarborough); while Robert Chapman organized the Deep Sky sessions at Camp Robin Hood north of Markham, and Ken Davy and Brian Cheaney operated the similar sessions at Forks of the Credit Provincial Park near Caledon Village.

This year, a total of 19 different individuals gave 38 presentations at 11 Members' Nights. Subjects included: comet photography; amateur and professional astronomy in Hungary; lunar crater drawings; the February 1998 total solar eclipse; light-hearted astronomy; the Perseid and Leonid meteor showers; the Huronia Star Party; progress reports on the E. C. Carr Astronomical Observatory; and several videos from NASA Television.

Partly because of El Nino, which caused nearly continuous cloud cover from September through March, and partly because of the opening and operation of the E.C. Carr Astronomical Observatory, the lunar occultation team was dormant this year. Thanks go to all those who helped to produce OAC events over the past year.

I would like to take a moment to thank Brian Cheaney who has been doing just a "stellar" job on a rather daunting portfolio as our Membership Secretary! For the year, membership of the Toronto Centre included: 630 regular, 20 youth and 83 life members for a total of 733. It is with regret that I must report on the death of two of our members, Mr. Charles Ernest Thurgood, a member since 1966, and Mr. Thomas Warren who was a member since 1984. Although

membership in the Centre has been steadily increasing in recent years, there is a concern that too many members fail to renew their membership after two or three years. This has been a common concern in many Centres and indeed in most organizations. The Toronto Centre's size makes it a largely anonymous membership and steps are being taken to address this situation.

The Centre's newsletter has been produced this past year by editors Mike Cook and Richard Anderson, and their assistant, Gord Skerratt. Mary Anne Harrington also had a return stint as editor for one issue. This has resulted in a year of quite varied issues as our newsletter continues to evolve. The Centre looks forward to good things from SCOPE under the leadership of Richard and his assistant editor, Spilios Asimakopoulos. Thanks are certainly due to all of these individuals as producing and distributing a regular newsletter, such as SCOPE, is a sizeable task and worthy of our recognition.

The operation of the Centre's web site has also seen some transition this past year. Mike Kozak has taken over the helm from Mike Cook as web master as the Centre moved its site to a new provider. Thanks go to Mike Cook for operating our site and Durham College for very kindly hosting our site for the past two years. Thanks also go to TVOntario as well as Emerson Segura and Datacom for kindly hosting the Centre's new site. As for Mike Kozak, I would say that it's been a long while since the Centre has witnessed a new member so embrace his role in the Centre with such zeal and enthusiasm. I can only hope that it's catching! Thanks, Mike.

Congratulations go to Mr. Bartosz Pindor who was the winner of the 1998 RASC -Toronto Centre Gold Medal. This award is presented to the highest-ranking student in the undergraduate astronomy programme at the University of Toronto. The Centre extends best wishes to Mr. Pindor who is continuing his studies at Princeton.

Unfortunately, the Centre's Optical Workshop is still without a home. This has forced a halt to all formal telescope - building activities. Our members' desire to build their own equipment is still strong and the committee's chair, Mike Nunns, would be only too happy to hear from anyone who may have a line on a location for the workshop so that he may resume its activities.

I would be remiss if I did not make mention of the truly marvelous effort that John Percy has been making towards preparations for the 1999 General Assembly in Toronto. John has pulled out all the stops towards organizing an absolutely fabulous combined GA and conference with the ASP and AAVSO in the spirit of professional and amateur cooperation. This event should prove to be a truly mind blowing experience!

ANNUAL REPORTS FROM THE CENTRES

As is always the case, none of the activities reported herein would be possible without the many, many Centre volunteers who graciously give of their energies to realize these successes for the good of the Centre and the hobby. On behalf of the Centre, I extend our sincere thanks to all. In a volunteer operated organization such as ours, often this giving comes at the expense of the member's own personal or family life and I would like to express that it is truly appreciated. Of course there are others who quietly contribute to our enjoyment and well being. Thus, thanks go to Camp Robin Hood and the Ontario Ministry of Natural Resources for their permission for us to use their grounds for observing activities. Thanks also go to Fr. John Kiesling and St. Joan of Arc Church for allowing Council the use of their meeting rooms. Last, but not the least, I extend thanks to the Ontario Science Centre for kindly allowing us to use their facilities.

Tony Horvatin, Secretary

VANCOUVER CENTRE

1998 was a year of consolidation for the Vancouver Centre. Our membership continued its steady upward climb and the Centre finances showed a healthy net revenue for the year.

In addition to our regular series of speakers the Vancouver Centre had several other notable events: This year's Astronomy Day was the best attended in recent years thanks to the outstanding efforts of our PR Coordinator, Angela Squires. Our Sidewalk Astronomy event in downtown Vancouver in August was also well attended. The Centre's bi-annual star parties in Manning Park were also well attended. The participants were treated to 4 nights of pristine dark skies at an altitude of 7200ft (July) and 4200ft (September).

The Vancouver Centre continued its successful cooperation with the GVRD Parks Board. Two public events were held — one during the Spring Equinox and another in September. Both events were very well attended by the general public. A third event was held solely to provide orientation for Parks Board staff.

The Centre's Canadian Amateur Research Observatory (CARO) passed a milestone on November 29th. The Director of the UBC Mcnapp Research Forest officially declared the observatory open. CARO has already begun to compile a master list of reference galaxies for its supernova search program. A CARO team is hard at work producing software to fully automate the observatory.

On a personal note, Vancouver's own Gary Seronik is now one of the editors of *Sky and Telescope Magazine*. Giving Gary Seronik something to write about were Vancouver's Gary

Wolanski and Lance Olkovich. They teamed up to produce the worlds lightest 16-inch F5 Dobsonian. Dubbed the "40 pounder", Gary's latest aluminum creation is a wonder to behold. "Check it out!"

Finally our December AGM laid to rest some old ghosts and returned a strong new council to coordinate the Centre's activities for 1999!

Duncan Munro, Secretary

VICTORIA CENTRE

In 1998 the Victoria Centre membership took on many challenges, some new and some old. This was the year that we hosted the General Assembly. Public outreach was a strong focus with the School Telescope Program in the public schools, Saturday night public observing sessions at the Dominion Astrophysical Observatory and our partnership with Pearson College. This was also the year that we said goodbye to two Centre members, dear friends who have definitely left their mark in our history.

By the beginning of 1998 much of the planning for the General Assembly had been done with only a few last minute decisions. Time waits for no one ... and before we realized it we had guests arriving at our doorstep! Our president Bill Almond, with a courageous crew of volunteers put on a great General Assembly. The beautiful surroundings of Pearson College proved to be a wonderful backdrop for all the activities. Thanks to Jean and Helene Godin and all the staff at Pearson College for their part in making the facilities accessible to the event. The lineup of speakers was remarkable. Speakers included the keynote from Canadian astronaut Julie Payette, the Extra Solar Planets presentation from Dr. Geoffrey Marcy, the Helen Sawyer Hogg presentation from Dr. David Crampton, and the Plaskett Medal presentation from Dr. Dean McLaughlin. Excellent paper sessions and displays were also presented. The Awards Ceremony honored many RASC members for their contributions and achievements. Some memorable moments included trying to arrange over a hundred delegates in a group photo; Alice Newton's entertaining slide show which left no member unscathed (we were wondering why Alice was taking pictures of us months before); being bussed to the Pearson College Observatory via the Milky Way (the winding gravel road to the observatory) by Jean Godin. He quite proudly noted that he knows the way so well that he could drive it with his eyes closed! We pleaded with him not to demonstrate! Speaking of driving, one cannot mention GA 98 without talking about the volunteer transportation support. Chuck Filtness and his team made

getting to and from the General Assembly and other tour events as painless as possible. Our thanks also go to Frank Jones for keeping the books straight and making sure all the bills were paid.

For the past three years Sid Sidhu has been operating the School Telescope Program. The program has made telescopes available for loan for each of the three school districts in the Victoria area, Victoria, Saanich and Sooke. In May of each year letters are sent to the principals of each school district to allow them to schedule the use of the telescopes for the following year. Sid assembles the telescopes from materials funded by the Victoria Centre and has also been assisted by George Ball and Colin Wyatt from time to time. The program has been a great success and is an integral part of our public outreach.

From the beginning of April to the end of October there is a faithful group of members that spend their Saturday nights on what we have come to know fondly as “the Hill.” Located on Little Saanich Mountain, The National Research Council / Hertzberg Institute of Astrophysics / Dominion Astrophysical Observatory hosts a Saturday public visitors night during this part of the year. Outside of the Plaskett Telescope Dome, Centre members set up their scopes for public viewing. On any given night there is usually a representative telescope for each popular telescope type. This offers a wonderful opportunity for the public to see what is available in astronomical equipment. The public also enjoys an excellent introduction to objects in the night sky. The first time excitement of new observers when they see objects like Jupiter and Saturn remains one of the best rewards for those who volunteer. The Victoria Centre has gained many new members through this program.

For many years we have enjoyed a partnership with Pearson College, sharing our passion for astronomy with the College’s students. Jack and Alice Newton originated this program many years ago with their own personal contributions. It is Jack’s 25-inch telescope that is housed in the Pearson College Observatory dome. The Centre also donated a 20-inch telescope. Peter Schlatter is our liaison for this program, with Jean Godin representing Pearson College. Peter along with various Centre members have contributed both time and materials to supporting an astronomical site at Pearson for both Centre members and students alike. In 1998 the Centre funded a Hydrogen-Alpha filter to extend the capabilities of the facilities to include solar observing.

In September of 1998 Jack and Alice Newton left Victoria to start a new part of their lives, forming what is now known as the Florida Imaging Center in Chiefland, Florida where they host a bed and breakfast for astroimagers. They will certainly be missed. Jack and Alice hosted the CCD Observer’s Group for many years and generously shared their interest in

astronomy with this Centre. At the General Assembly Jean Godin announced that the telescope that Jack had donated would have a plaque installed naming the telescope the Newton Nomad. At a Centre meeting a service award was also announced called the Newton Ball Service Award honoring the Newtons and long time friend George Ball for their contributions.

The Centre hosts three different special interest groups. In 1998 there was a change in some of the groups. Sandy Barta’s Amateur Telescope Making Group went through a transformation to become Astronomy Café a simple get together for anyone with an interest in amateur astronomy. With the absence of the Newtons, Bill Almond has started a hands-on CCD Observer’s Group where members can learn all about how CCD images are created. Sid Sidhu still hosts a New Observer’s Group for beginners.

Membership at 176 is the highest it has been in the last decade. We look forward to the coming year with the anticipation of clear skies and sharing our interest in astronomy with others.

David Lee, Secretary

WINDSOR CENTRE

1998 was another banner year for our total number of members. We had over 90 people in the Windsor Centre. Some members attended the General Assembly in Victoria and Starfest events. Dan Taylor received the NGC Certificate from our President, Susan Sawyer-Beaulieu. Genuine appreciation is expressed to all persons who have contributed towards the success of our Centre during the year. The Windsor Centre had 9 membership meetings, 3 council meetings and 2 socials, one for observing, and the other one indoors. Membership meetings were as follows:

- **January 10th**: “What’s SNU at the SNO?” by Dr. William Baylis, University of Windsor
- **February 17th**: “Active Galactic Nuclei and Other Interesting Cosma” by Steve Pellarin
- **March 17th**: “Astronomy and Religion” by Rev. Harry Brydon
- **April 21st**: Beginner’s Night — “Using Star Maps” by David Marchand, “Astronomy Babble Simplified” by Frank Shepley, “Using a SLR Camera and a Barn Door Star Tracker” by Steve Pellarin
- **May 19th**: “Three Decades of Observing” by Mark Kaye, Hamilton Centre
- **June 16th**: “Various Telescopes and Building a 14-inch

ANNUAL REPORTS FROM THE CENTRES

Reflector with a Professionally Produced Kit” by Steve Mastellotto

- **September 15th**: “Planetary Observing” by Susan Sawyer-Beaulieu and Randy Groundwater
- **October 20th**: “Mysteries Beyond Our Reach,” Observing Night and Video
- **November 17th**: “Art in the Dark” by Ken Rounq

C. Joady Ulrich, Secretary

WINNIPEG CENTRE

The Winnipeg Centre had another prosperous year in 1998. Both the Centre and its’ membership achieved memorable accomplishments. The result has been steady growth with the membership numbers exceeding 100 for the first time in recent history.

Under the fine direction of Club President Jay Anderson, the Winnipeg Executive and Council members, the Winnipeg Centre continued to adjust and improve the regular monthly meetings. The revised format places an emphasis on ensuring that all members obtain some value in the meetings from the beginning observers to long time members. New members are greeted and provided with Beginner packages, helping to make them feel welcome. As a result, we experience an average participation of about sixty persons per meeting, with numbers slightly lower in the busy summer.

The Telescope Lending Program achieved about a 70% usage factor for the four scopes, satisfactory when considering that many of the previous borrowers had recently completed building their own telescopes late last year.

The membership has been invited to involve themselves in numerous observing programs. The initiation of the Messier Group, lead to a dedicated band of members beginning and completing their list and receiving their Messier Certificates from National. One of the members placed in the dedication to accurately draw all 110 objects on the list, using a form with a 5-inch circle. He averaged an hour spent per object.

Other members participated in several Lunar Occultation and Graze events, often braving the cold and technical difficulties. They achieved good success when the weather participated. Lately the group has tried using video cameras or sensitive surveillance cameras and recording equipment to try to improve the accuracy of the timing of the events.

Some members are participating in a scientific research project on Hubble’s Variable Nebula, in conjunction with the University of Manitoba. We continue to enjoy an excellent association with the University, sharing the use of our observatories.

The Centre also participated in the education of the public, holding numerous Star Parties for the Public, and assisting the local Planetarium. We had a major display at the local “Forks Market” on Astronomy Day, inviting hundreds of people to observe the Sun during the day. The evening event was also well attended, as many people strolling by on the River walkway stopped to “check out the Moon.” The members achieved much satisfaction when many young teenagers stopped by to enjoy the sky and comment that astronomy was actual “Cool.” We also put in a display at the Annual Toy and Hobby Show, gaining several new members as a result.

Winnipeg Centre had a very large contingent this year at the Saskatchewan Summer Star Party in Cyprus Hills Interprovincial Park. The more fortunate had the opportunity to stay and observe for four clear nights, while enjoying the events during the day.

The rebuilding of the Glenlea Observatory, damaged in last year’s major flood, was completed with the remaining repairs completed.

On a final note, the Winnipeg Centre agreed to Host the Year 2000 General Assembly. This will provide us with a challenging task, following the 1999 Toronto G.A. with its multiple Astronomy Groups involved.

Stan Runge, Secretary

CENTRE TREASURERS' REPORTS FOR FISCAL YEAR 1998

	Calgary	Edmonton	Halifax	Kingston	Kitchener- Waterloo	London	Montreal	C. F. de Montréal	Niagara	Okanagan	Ottawa
REVENUE											
Membership fees - regular	8,173	2,384	2,177	1,987	1,780	646	1,364	1,949	1,156	800	12,450
Membership fees - basic surcharge	2,124	651		1,296	150	172	1,880	0		196	293
Membership fees - special surcharge	420			23				0			10
Life membership grants	345	144	432	100		86	202		43		432
Donations	4,462	55	3,177	325	100	114	220	10	659	18	520
Fundraising			137	940		281	1,150		151		
Educational activities	2,079						88				
Interest and dividends	279	730	88	7		209	3,715		4		450
Sale of Observer's Handbooks - net	37		109	21		35	30		-148		
Sale of RASC Calendars - net	426	144	226	239	90	87	-138		-93	25	150
Sale of Beginner's Observing Guides - net	-24		84	475		-169	70		-23		10
Advertising											
General Assembly - including travel grants				1,764				865			
Miscellaneous	5,333	690	1,685	983	105	169	341		7,887		1,012
TOTAL REVENUE	23,654	4,798	8,115	8,160	2,225	1,630	8,834	2,912	9,636	1,039	15,327
EXPENDITURES											
Fees remitted to UTP/National Office*	4,801	523			1,080			1,100	120	160	7,598
Library		849					289	86		25	
Meetings		2,385	279	234		180	540	220	348		
Newsletter	2,770		1,120	921	100	332	1,714	484	416	518	2,218
Annual dinner - net	358	138				-17		129	2,698		359
General assembly - including travel grants							416				
Equipment and supplies		1,749		166		378	129		275		664
Office administration		122	167				725	315	146		
General expenses and audit	3,133			716		90	146		4		
Educational activities	1,020	431	113	34		11	32				383
Insurance	1,469		500				609	247			775
Awards and donations	44	32	81	105		78	23				
Observatory	2,386		2,691		1,060		4,421	193	178		797
Miscellaneous	6,597		2,443	990	20	72	492	1,057	1,136	9	100
TOTAL EXPENDITURES	22,578	6,229	7,394	3,166	2,260	1,124	9,504	3,863	5,321	712	12,894
SURPLUS OR (DEFICIT) ON OPERATIONS	1,076	-1,431	721	4,994	-35	506	-670	-951	4,315	327	2,433
BANK BALANCE FROM PREVIOUS YEAR	20,642	34,800		3,046	1,726	4,321	7,676		1,744	191	35,191
BANK BALANCE END OF YEAR	21,718	33,369		8,040	1,691	4,827	7,006		6,059	518	37,624
REVENUE											
Membership fees - regular	4,038	417	707	91	2,403	478	23,471	3,449	2,062	968	3,344
Membership fees - basic surcharge					277			2,088		28	1,139
Membership fees - special surcharge					15		315		38		
Life membership grants				14	58		3,620	202	331	29	14
Donations	144	63			5,356		7,991		167	617	285
Fundraising		208						483		64	30
Educational activities			668		12,067	852		1,424			
Interest and dividends	76	1	58	1	8		1,497	34	27	1	58
Sale of Observer's Handbooks - net		32			43	4		-114	98	3	
Sale of RASC Calendars - net		181	180	117	144	43		764	347	23	112
Sale of Beginner's Observing Guides - net						7		357	220	22	
Advertising	73				75			15		100	
General Assembly - including travel grants								1,194	29,981	828	
Miscellaneous	1,507	1,812			213	264	7,672	528	6,142	257	
TOTAL REVENUE	5,838	2,714	1,613	223	20,659	1,648	44,566	10,424	39,413	2,940	4,982
EXPENDITURES											
Fees remitted to UTP/National Office*	1,636				1,507	216	14,362	608	38		2,006
Library			98		95			43	409	97	61
Meetings						50		2,377		157	101
Newsletter	928	-41			858	135	2,763	1,553	1,020	521	342
Annual dinner - net									1,002	183	
General assembly - including travel grants						316		286	27,679	828	
Equipment and supplies	1,657		631		101	35		40	573	1,408	
Office administration	665	-70	25		843		6,150	557			
General expenses and audit						25		43	471	244	87
Educational activities			138		7,261	325	1,464	1,186			27
Insurance					288						595
Awards and donations						110		50	375		
Observatory	472	-410					6,629		100	289	340
Miscellaneous	415	-1,616			53	497	15,797	1,578	5,379	23	1
TOTAL EXPENDITURES	5,773	-2,137	892	0	11,006	1,709	47,165	8,321	37,046	3,750	3,560
SURPLUS OR (DEFICIT) ON OPERATIONS	65	577	721	223	9,653	-61	-2,599	2,103	2,367	-810	1,422
BANK BALANCE FROM PREVIOUS YEAR	-428	-209	743	544	17,231	1,520	50,897	11,534	241	6,915	3,614
BANK BALANCE END OF YEAR	-363	368	1,464	767	26,884	1,459	48,298	13,637	2,608	6,105	5,036

Notes:

* For some Centres this is the fee remitted to the University of Toronto Press

** Bank balance includes a correcting adjustment to the previously published amount Report from the Hamilton Centre was not available at press time.

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 John Smith (Winnipeg)

David Pianosi (Kingston)
 Harry Adams (Ottawa)
 Sandy Ferguson (Saskatoon)
 Ken F. Roung (Windsor)
 Richard Turenne (Winnipeg)

Christopher Fleming (London)
 Peter Manson (Ottawa)
 Dale Jeffrey (Saskatoon)
 Alan Sherlock (Winnipeg)

NGC Certificate

Carol Weis (Calgary)
 Douglas Stuart (Thunder Bay)

Alan Whitman (Okanagan)
 Daniel Taylor (Windsor)

Rick Wagner (Ottawa)

Membership Certificate

J. Brian Clarke (Calgary, 25 years)
 Fr. Lucian J. Kemble (Calgary, 25 years)
 Blair Colborne (Calgary, 5 years)
 Philip Johnson (Calgary, 5 years)
 Peter Sim (Calgary, 5 years)

J. Cam Fahrner (Calgary, 25 years)
 Don Hladiuk (Calgary, 25 years)
 Roland G. Dechesne (Calgary, 5 years)
 Robert F. Loblaw (Calgary, 5 years)

Ulrich Haasdyk (Calgary, 25 years)
 Kenneth Pawson (Calgary, 25 years)
 Dennis Goodman (Calgary, 5 years)
 John C. Mirtle (Calgary, 5 years)

Warren Morrison (Kingston, 25 years)
 Kim Hay (Kingston, 5 years)
 Kevin Kell (Kingston, 5 years)
 Walter MacDonald (Kingston, 5 years)

Dieter Brueckner (Kingston, 5 years)
 Ruth Hicks (Kingston, 5 years)
 Peter Kirk (Kingston, 5 years)

Susan Gagnon (Kingston, 5 years)
 Peggy Hurley (Kingston, 5 years)
 Sue Knight-Sorenson (Kingston, 5 years)

Hugh Hunter (Saskatoon, 25 years)
 Jim Patterson (Saskatoon, 25 years)
 Halyna Turley (Saskatoon, 5 years)
 Jim Young (Saskatoon, 5 years)

Ed Kennedy (Saskatoon, 25 years)
 Richard Huziak (Saskatoon, 5 years)
 Mike Williams (Saskatoon, 5 years)

Merlyn Melby (Saskatoon, 25 years)
 Bill Hydromako (Saskatoon, 5 years)

Raymond Auclair (Unattached, 25 years)

Special Lifetime Service Award

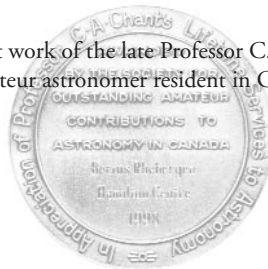
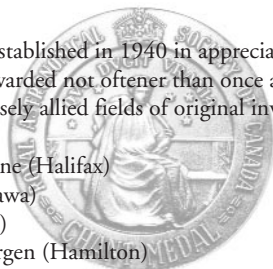
Professor J. E. Kennedy

Below is a list of former winners of the Chant Medal, Ken Chilton Prize, Plaskett Medal, Service Award and Simon Newcomb Award. For names before 1990 please refer to "Looking Up – A History of the RASC" by Peter Broughton, available from the National Office.

Chant Medal

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. The 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 carried out in astronomy and closely allied fields of original investigation.

1993 Mary Lou Whitehorne (Halifax)
 1995 Paul Boltwood (Ottawa)
 1996 David Lane (Halifax)
 1998 Bertus (Bert) Rhebergen (Hamilton)



1998 AWARD WINNERS

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.

- 1990 Doug George (Ottawa)
- 1995 Paul Gray (Halifax), David Lane (Halifax)
- 1996 Raymond Thompson (Toronto)
- 1997 Heather T. Cameron (Halifax)

The Plaskett Medal

The Royal Astronomical Society of Canada and the Canadian Astronomical Society together present an award in recognition of the pivotal role played by John Stanley Plaskett in the establishment of astrophysical research in Canada.

The award is made to the graduate from a Canadian university who is judged to have submitted the most outstanding doctoral thesis in astronomy and astrophysics in the preceding two calendar years. An award need not be made every year.

- | | |
|----------------------------------|---------------------------------|
| 1991 Paul Charbonneau (Montreal) | 1995 Michael Richer (York) |
| 1992 Eric Poisson (Alberta) | 1996 Gordon Squires (Toronto) |
| 1993 Pierre Brassard (Montreal) | 1997 Alain Beauchamp (Montreal) |
| 1994 Grant Hill (Montreal) | 1998 Dean McLaughlin (McMaster) |

Service Award

The Service Award was established in 1959 and takes the form of a bronze medal presented to members who have performed outstanding service to a Centre or to the National Society. Below is a list of recent winners of the Service Award.

- | | |
|------------------------------------|-------------------------------------|
| 1990 Mary Grey (Ottawa)* | |
| 1991 Don Hladiuk (Calgary) | Ian McGregor (Toronto) |
| 1992 Jean-Marie Frechette (Quebec) | Michael Watson (Unattached, Canada) |
| 1993 Eric Clinton (London) | David Tindall (Halifax) |
| 1994 Randy Dodge (St. John's) | Gary Dymond (St. John's) |
| 1995 Ron Gasbarini (Niagara) | Patrick Kelly (Halifax) |
| 1996 Sidney Lee (Calgary) | Robert Venor (Montreal)* |
| 1998 David Lane (Halifax) | Mel Rankin (Edmonton) |
| | Abbe Alphonse Tardif (Quebec) |
| | Sandy Ferguson (Saskatoon) |

* deceased

Simon Newcomb Award

This award was instituted in 1978 to recognize literary ability among non-professional members of the society.

- 1994 Michael S.F. Watson (Unattached, Canada)

HONORARY MEMBERS OF THE RASC

Dr. R. B. Baldwin (United States)
 Dr. R. Hanbury Brown (Australia)
 Dr. A. Dollfus (France)
 Dr. Owen Gingerich (United States)
 Dr. W. Iwanowska (Poland)
 Dr. Grote Reber (Australia)
 Dr. Martin Schwarzschild (United States)
 Prof. H.C. van de Hulst (Netherlands)

Dr. F. M. Bateson (New Zealand)
 Dr. David L. Crawford (United States)
 Rev. Robert Evans (Australia)
 Dr. Stephen W. Hawking (United Kingdom)
 Dr. Patrick Moore (United Kingdom)
 Dr. A.R. Sandage (United States)
 Dr. Anne Underhill (Canada)

PAST ELECTED OFFICERS OF THE RASC

Below are lists of former Presidents, Secretaries and Treasurers of the RASC

For names before 1990 please refer to "Looking Up – A History of the RASC" by Peter Broughton available from the National Office

Honorary Presidents

1989-1993 Ian Halliday
 1993-1997 Alan Batten
 1997-2001 Jack Locke

Secretaries

1987-1993 David Tindall
 1993-1996 Randall Brooks
 1997- Raymond Auclair

Presidents

1990-1992 Damien Lemay
 1992-1994 Peter Broughton
 1994-1996 Doug Hube
 1996-1998 Doug George
 1998-2000 Randy Attwood

Treasurers

1989-1991 Karl Miller
 1992-1994 Terry Hicks
 1994-1998 Rajiv Gupta
 1998- Michael Watson

GENERAL ASSEMBLIES – 1990 — 1999

The following Centres hosted the General Assembly during the 1990s:

1990	Ottawa Centre	1991	Vancouver Centre
1992	Calgary Centre	1993	Halifax Centre
1994	St. John's Centre	1995	Windsor Centre
1996	Edmonton Centre	1997	Kingston Centre
1998	Victoria Centre	1999	Toronto Centre

CENTRE ADDRESSES/ADRESSES DES CENTRES

Calgary

c/o Calgary Science Centre, P. O. Box 2100, Station "M", Loc #73,
Calgary, AB, T2P 2M5
Website: <http://www.syz.com/rasc/>

Edmonton

c/o Edmonton Space & Sciences Centre, 11211 - 142 St.,
Edmonton, AB, T5M 4A1, email: rascedm@worldgate.com
Website: <http://planet10.v-wave.com/rasc/>

Halifax

P. O. Box 31011, Halifax, NS, B3K 5T9, email: halifax@rasc.ca
Website: <http://halifax.rasc.ca>

Hamilton

P. O. Box 1223, Waterdown, ON, LOR 2H0
Website: <http://www.rasc.ca/hamilton>

Kingston

P. O. Box 1793, Kingston, ON, K7L 5J6,
email: rascexec@cliff.path.queensu.ca
Website: <http://www1.kingston.net/~rasc>

Kitchener-Waterloo

c/o J. Brunton, 123 Grand River Street N., Paris, ON, N3L 2M4,
email: bigelow@sympatico.ca
Website: <http://kw.rasc.ca>

London

P. O. Box 842, Station B, London, ON, N6A 4Z3,
email: pjedicke@fanshawec.on.ca
Website: <http://phobos.astro.uwo.ca/~rasc/>

Montreal

P. O. Box 1752, Station B, Montréal, QC, H3B 3L3,
email: rascmtl@altavista.net
Website: <http://www.rasc.ca/montreal>

Centre Francophone de Montréal

C. P. 206, Station St-Michel, Montréal, QC, H2A 3L9,
email: sam@cam.org
Website: <http://www.cam.org/~sam/>

Niagara

P. O. Box 4040, St. Catharines, ON L24 7S3,
email: jvandwil@vaxxine.com, raszniag@vaxxine.com
Website: <http://www.vaxxine.com/raszniag>

Okanagan

P. O. Box 20119 TCM, Kelowna, BC, V1Y 9H2
Website: <http://www.rasc.ca/okanagan>

Ottawa

P. O. Box 33012, 1974 Baseline Road, Nepean, ON, K2C 0E0
Website: <http://ottawa.rasc.ca>

Québec

2000, boul. Montmorency, Québec, QC, G1J 5E7,
email: srac_quebec@hotmail.com
Website: <http://www2.zone.ca/~marcelf/srac.htm>

Regina

P. O. Box 20014, Cornwall Centre, Regina, SK, S4P 4J7
Website: <http://www3.sk.sympatico.ca/kostaw/rasc/>

St. John's

c/o 206 Frecker Drive, St. John's, NF, A1E 5H9,
email: randy@morgan.ucs.mun.ca
Website: <http://www.infonet.st-johns.nf.ca/providers/rasc/>

Sarnia

c/o Alice Lester, P.O. Box 394, Wyoming, ON, N0N 1T0,
email: jselinge@mnsi.net
Website: <http://www.sarnia.com/groups/astro>

Saskatoon

P. O. Box 317, RPO University, Saskatoon, SK, S7N 4J8,
email: keser@duke.usask.ca
Website: <http://maya.usask.ca/~sarty/rasc/rasc.html>

Thunder Bay

c/o 135 Hogarth Street, Thunder Bay, ON, P7A 7H1,
email: dgalley@mail.tbaytel.net
Website: <http://www.olin.com/bus/rasc/tbrasc.html>

Toronto

c/o Ontario Science Centre, 770 Don Mills Road, Don Mills, ON,
M3C 1T3
Website: <http://www.tv.org/rasc/toronto/index.html>

Vancouver

c/o Gordon Southam Observatory, 1100 Chestnut Street, Vancouver,
BC, V6J 3J9
Website: <http://pacific-space-centre.bc.ca/rasc.html>

Victoria

c/o Bill Almond, 354 Benhomer Drive, Victoria, BC, V9C 2C6,
email: aa048@freenet.victoria.bc.ca
Website: <http://victoria.tc.ca/~rasc/>

Windsor

c/o Frank J. Shepley, 344 South Middle Road, R.R. # 2, Maidstone,
ON, NOR 1K0, email: fshepley@wincom.net
Website: <http://www.wincom.net/rasc>

Winnipeg

Room 110, St. Paul's College, 430 Dysart Rd., Winnipeg, MB,
R3T 2M6
Website: <http://www.winnipeg.freenet.mb.ca/rasc/>



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