



THE ROYAL
ASTRONOMICAL SOCIETY
OF CANADA

ANNUAL REPORT 1997

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA - 1997

NATIONAL COUNCIL

Honorary President	Dr. Jack L. Locke	
President	Doug George	dgeorge@cyanogen.com
First Vice President	J. Randy Attwood	attwood@istar.ca
Second Vice President	Dr. Robert Garrison	garrison@astro.utoronto.ca
National Secretary	Raymond Auclair	auclair@cyberus.ca
Treasurer	Dr. Rajiv Gupta	gupta@interchange.ubc.ca
Recorder	Peter Jedicke	jedickep@claven.fanshawec.on.ca
Past Presidents	Dr. Doug Hube	dhube@phys.ualberta.ca
	Peter Broughton	ac372@freenet.toronto.on.ca

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Librarian	Andrew Oakes	aioakes@sympatico.ca

RASC Web Site: <http://www.rasc.ca>

1997 COMMITTEES

Astronomy Day Coordinator:	Scott Young	syoung@net1plus.com
Awards:	Dr. Doug Hube	dhube@phys.ualberta.ca
Computer Use:	David Lane	dlane@ap.stmarys.ca
Constitution:	Michael Watson	MSFWatson@SmithLyons.ca
Executive:	Doug George	dgeorge@cyanogen.com
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Membership and Promotion:	Don Hladiuk	hladiukd@cadvision.com
Nominating:	Dr. Doug Hube	dhube@phys.ualberta.ca
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Publications:	J. Randy Attwood	attwood@istar.ca

CENTRE REPRESENTATIVES ON NATIONAL COUNCIL

Calgary Centre	Glen Hawley	Quebec Centre	Serge Bergeron
Calgary Centre	Susan Yeo	Regina Centre	Ray Chomos
Edmonton Centre	Richard Vanderberg	Sarnia Centre	Brendan Fleming
Edmonton Centre	Franklin Loehde	Saskatoon Centre	Gordon Sarty
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	Steven Spinney
Kitchener-Waterloo Centre	Ray Koenig	Toronto Centre	Frederic Troyer
London Centre	Christopher Fleming	Toronto Centre	Michael Nunns
Centre Francophone de Montréal	Patrice Scattolin	Toronto Centre	Bob May
Montreal Centre	Carole Talbot	Vancouver Centre	Dan Collier
Niagara Centre	Charles Fassel	Victoria Centre	Gareth Shearman
Okanagan Centre	Alan Whitman	Windsor Centre	Tim Bennett
Ottawa Centre	Richard Wagner	Winnipeg Centre	Stan Runge
Ottawa Centre	Robert Dick		



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Cover photo by Dave Lane. Comet Hale-Bopp on April 8th, 1997 from the Halifax Centre's St. Croix Observatory (8 minute exposure on Kodak Royal Gold 1000 with 50mm-f2.8 lens).

PRESIDENT'S MESSAGE

Looking back at 1997, astronomy and space science were in the news constantly. The spectacular apparition of Comet Hale-Bopp was perhaps the most widely-viewed astronomical event in history. The momentum continued with the successful Mars pathfinder mission, and many new discoveries kept the public's awareness of space at an all-time high. It was also a very good year for the RASC.

In comparison to the major changes that took place during the previous year, this has been a period of relative stability for the Society. Whenever major changes occur, it takes time to work out all the bugs and reestablish a normal routine. A number of people have been working very hard to do just that.

We have been most fortunate to have the services of Bonnie Bird at the National Office. I have heard many comments from members on the friendly, helpful service she has provided. Her efficient, responsible, and common-sense approach has been greatly appreciated. Thanks to her experience with computers and accounting, we have been able to transfer responsibility for bookkeeping from our accountants to National Office. For myself, I would like to thank Bonnie for all the help she has given me over the past two years.

The Publications Committee has been working tirelessly to further improve the *Journal*. There have been some growing pains, but I think everyone will agree that the product has been excellent. We have also been able to continue bundling *SkyNews/Ciel Info* with the RASC *Journal*. Despite worries about the professional papers, we actually have a better supply of new papers than popular articles. This means we need you — our members — to get to work! The Editors are always keen to receive new popular articles from the membership.

The Society's finances continue to be in very good order. The Society continues to run at a healthy surplus. We are now seeing significant growth in our membership numbers. Thanks to Roy Bishop's hard work, the *Observer's Handbook* continues to bring in a substantial part of our revenue. However, there are some areas where costs will be increasing; for example, the rules for publications mail rates are being changed so that the Society no longer qualifies.

Nevertheless, given our excellent financial position there is no need to increase fees for next year. Our membership is enjoying greater benefits — such as an improved *Journal* and *SkyNews* magazine — despite the fact that regular fees have not changed since 1992. We may not be able to forestall a fee increase forever, but membership in the RASC will always remain an excellent value for the money.

This will be my final submission to the annual report as President, since my term ends at the Victoria General Assembly. This has been a wonderful learning experience for me; but most importantly it has been a chance to meet members from coast to coast. Wherever I have travelled, I have been impressed by the friendliness and hospitality of the members, and the uniqueness of every RASC Centre. This is what I will remember most from my time as President.



Doug George
RASC National President

NATIONAL SECRETARY'S MESSAGE

The traditional role of a National Secretary is to be the communication instrument of the Society. A request is formulated, processed by the Executive or National Council, and handed over to the National Secretary for action.

Questions are received from everywhere in the world. The National Secretary does not know the answers but seeks these from within the organization. The traditional process is a long one, designed (and effective) for an environment where questions are analyzed and answers pondered for a while. In the old days, lengthy delays between the request for information and the formal reply, were deemed normal.

Communications throughout the world, and indeed in the RASC, have evolved rapidly over the last decade. Modern means of communication (and their "democratization") are challenging the tradition. The increasing use of instantaneous communication devices (phone, faxes, e-mail) has created the expectation of instantaneous answers. The RASC Secretariat is bombarded by communications. National Office handled over 6000 messages in 1997. This includes email (received and sent), voice mail, requests for membership, and questions about astronomy.

As always, we hear of people wanting to fulfill an interest in astronomy and turning to us for help, for information. People of all ages, all walks of life and from everywhere on the planet continue to "discover" astronomy; and that is good. But for many of these people, any delays in our replies may mean that their interest will have turned into a passing fancy that has... well, passed.

There are themes that keep recurring in the requests we receive — one could speak of FAQ (Frequently Asked Questions). Sunrise and sunset times, how to name a star, and information for school projects are the most frequent queries. The Secretariat has recognized the need for information and will itself turn to you, the members, for help in collecting answers to these FAQ. Without your help, your National Secretary cannot become as efficient as what a Society such as our really deserves.

MEMBERSHIP INFORMATION FOR 1997

	1997	1996	1995
Calgary	272	246	215
Edmonton	152	138	143
Halifax	135	127	123
Hamilton	45	50	48
Kingston	152	142	63
Kitchener	32	32	29
London	49	45	44
C.F. de Montréal	33	11	7
Montreal	108	103	109
Niagara	60	48	50
Okanagan	35	16	
Ottawa	246	216	223
Quebec	51	47	50
Regina	18	23	15
St. John's	39	35	39
Sarnia	12	13	14
Saskatoon	54	54	58
Thunder Bay	17	20	28
Toronto	687	682	727
Vancouver	233	218	199
Victoria	126	100	125
Windsor	66	52	49
Winnipeg	77	64	69
Unattached	357	365	471
Honorary	15	15	15
Total	3071	2862	2913

Raymond Auclair
National Secretary

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DECEASED MEMBERS IN 1997

Trevor Shirley, Calgary; Bob Adamson, Ottawa; Bob Bishop, Thunder Bay; Frank Shinn, Victoria; Robert Venor, Montreal; Elizabeth Pride, Montreal; Arthur Holmes, Vancouver (1996); Nat Cohen, Halifax (1996); Alex Norman, Halifax.

TREASURER'S REPORT

As shown in the attached audited financial statements, the Society once again (for the eighth consecutive year) enjoyed a surplus. The operating surplus in 1997 was comparable to that in 1996, about \$30,000. This seems surprising, given that significant new expenses occurred in 1997 (*SkyNews* bundling, UTP membership tracking, individual mailing of the *Observer's Handbook* to members) and that *Journal* production costs almost doubled because of the hiring of a production company. The effect of these initiatives was an increase in expenses of approximately \$60,000. However, other reductions in expenses, most notably the reduction in salary expenses as compared with the unusually high expenses in 1996, meant that total expenses increased by only about \$10,000. Total revenue also increased by about the same amount, mostly because of an increase of about \$10,000 in revenue from sales of the *Observer's Handbook*.

We are blessed in this Society to have a fundraiser, our treasured *Observer's Handbook*, that generates more net revenue than membership fees. This pocket book that many members consider the most valuable benefit of membership, also is responsible for the low membership fees that we enjoy. The member of the Society most responsible for its continuing success, editor Roy Bishop, deserves our sincerest gratitude.

On another positive note, membership fee revenue is increasing as our membership rises. Membership in 1997 stood at 3070, about 200 higher than the previous year, and indications are that this figure will also increase substantially in 1998. This increase in membership is likely partly due to the prominent media exposure astronomy has attracted in the last few years, but it is also likely that increased membership benefits and a more thorough membership renewal process are partly responsible.

On a somewhat negative note, the net cost to the Society of the *RASC Journal* increased significantly in 1997. This was due to an increase in production costs, as mentioned above, and a decline in subscription revenue. In 1998, production costs should be somewhat lower, because of the hiring of a new production company. This will likely be offset by increases in postage costs due to a change

in government subsidies. Total *Journal* income should be somewhat higher in 1998, as advertising and page charge revenue is expected to be higher, so the net cost of the *Journal* in 1998 should be somewhat lower than it was in 1997.

The Society has enjoyed excellent financial health over the last decade, and the tremendous changes that have occurred recently have not altered this. With *Observer's Handbook* revenue remaining strong, membership increasing, and net *Journal* cost becoming more under control, our financial outlook remains positive.



Rajiv Gupta
National Treasurer

AUDITORS' REPORT

Tinkham & Associates

CHARTERED ACCOUNTANTS

C. J. Tinkham, C.A., C.M.C.
D. C. Tinkham, B. COMM., C.M.C., F.C.A.
P. J. Brocklesby, B.B.A., C.A.

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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, 1997 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, 1997 and the results of its operations for the year then ended in accordance with generally accepted accounting principles.

TORONTO, Ontario
February 6, 1998

Tinkham & Associates
CHARTERED ACCOUNTANTS

BALANCE SHEET

December 31, 1997

	1997	1996
Assets		
Current assets		
Cash and short term investments	\$ 182676	\$ 108379
Accounts receivable	57368	81131
Prepaid expenses	2188	2142
Accrued interest receivable	11395	9900
	<u>253627</u>	<u>201552</u>
Special purpose funds (Note 1(c))		
Cash	1610	7058
Accrued interest receivable	10993	7014
Investments	264197	258000
	<u>276800</u>	<u>272072</u>
Capital assets		
Office building, furniture, equipment, library (nominal value)	1	1
	<u>\$ 530428</u>	<u>\$ 473625</u>
Liabilities		
Current liabilities		
Payables and accrued charges	\$ 32808	\$ 19680
Deferred revenue		
Membership fees for ensuing years	57521	50157
Journal subscriptions	5703	8639
Unamortized life membership fees (Note 1(b))	38151	31842
	<u>134183</u>	<u>110318</u>
Special purpose funds (Note 1(c))	<u>276800</u>	<u>272072</u>
Members' Equity	119445	91235
	<u>\$ 530428</u>	<u>\$ 473625</u>

On behalf of the Council:



President



Treasurer

See accompanying notes to financial statements.

STATEMENT OF REVENUE AND EXPENDITURE AND EQUITY

December 31, 1997

	1997	1996
Revenue		
Membership fees		
R.A.S.C. Centres	\$ 52950	\$ 47656
Individual members	12611	13089
Life membership: annual appropriation	1592	1676
	<u>67153</u>	<u>62421</u>
Publication revenue		
R.A.S.C. Journal	28373	34070
Observer's Handbook	97751	87486
Beginner's Observing Guide	9433	9425
Observer's Calendar	13810	10213
	<u>149367</u>	<u>141194</u>
Miscellaneous income		
Interest on investment	18884	22727
Rent	12533	13535
Other income	2667	917
	<u>34084</u>	<u>37179</u>
	<u>250604</u>	<u>240794</u>
Expenditures		
Publication costs		
Journal	58161	31074
Annual Report and Bulletin	8355	15292
Publication revitalisation		5882
Distribution costs	9795	9892
Observer's Handbook	22808	20872
Beginner's Observing Guide	593	12060
Observer's Calendar	9425	7708
Operating costs		
Office salaries and employee benefits	28628	58971
Membership tracking	8000	
Handbook distribution to members	5731	
Grants to centres	270	2620
Life membership allotment to centres	3571	(187)
SkyNews bundling	19194	
Office expenses	12682	14516
Advertising	1154	929
Financial services	4683	6677
Insurance	4023	3740
Committees/Promotion	3601	3023
Travel expenses	12154	11131
Building expenses	7693	6509
Provision (recovery) for bad debts	(136)	1
	<u>220385</u>	<u>210710</u>
Excess of revenue over expenditures	30219	30084
Equity, January 1	91235	64654
Less: Transfer to Endowment Fund	(2009)	(3503)
Equity, December 31	<u>\$ 119445</u>	<u>\$ 91235</u>

See accompanying notes to financial statements.

NOTES TO THE FINANCIAL STATEMENTS

Year ended December 31, 1997

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:

Membership 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.

	1997	1996
Life Membership Fees as of January 1	\$ 31842	\$ 32297
Add: Life membership fees received during the year	5669	1221
Interest earned	2232	
Deduct: Amortization	1592	1676
Balance, December 31	\$ 38151	\$ 31842

(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	
	1997	1996	1997	1996
Fund value as of January 1	\$ 223188	\$ 218958	\$ 48884	\$ 45893
Add: Donations		727		
Add: Interest			3979	3233
Add: Inflation adjustment	2009	3503		
Deduct: Expenses			1260	242
Balance, December 31	<u>\$ 225197</u>	<u>\$ 223188</u>	<u>\$ 51603</u>	<u>\$ 48884</u>
Funds, comprised of				
Cash		4188	1610	2870
Accrued interest			10993	7014
Term deposits	<u>225197</u>	<u>219000</u>	<u>39000</u>	<u>39000</u>
	<u>\$ 225197</u>	<u>\$ 223188</u>	<u>\$ 51603</u>	<u>\$ 48884</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.**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 1996 ANNUAL MEETING

Note: Minutes for the 1996 Annual Meeting were omitted in the last report and are here presented:

ROYAL ASTRONOMICAL SOCIETY OF CANADA
Minutes of the Annual Meeting 1996 06 30
General Faculties Boardroom, University Hall
University of Alberta, Edmonton, Alberta

The meeting was called to order at 13h09 mdt by the chair, RASC National President Dr. Hube. Dr. Hube welcomed delegates to the 1996 General Assembly. Dr. Hube called the roll of Centres. Thirteen Centres were represented and there were also several unattached members present. Approximately seventy members were in attendance. Dr. Hube asked that anyone holding proxies or election ballots make these known to the National Secretary, Dr. Brooks. Dr. Hube announced that unassigned proxies had been distributed among persons from various Centres. Dr. Hube asked Dr. Brooks to read the roll of members who were deceased during the calendar year 1995. A moment of silence was observed. Dr. Hube announced that Council had appointed Mr. Henry Lee and Mrs. Ruth Hicks as scrutineers for the election of the 1st Vice-President.

1. APPROVAL OF AGENDA MOTION AM9601

It was moved by Dr. Chou and seconded by Mr. Dick to approve the agenda.
The motion was CARRIED.

2. ADOPTION OF MINUTES OF THE 1995 ANNUAL MEETING MOTION AM9602

It was moved by Mr. Hurley and seconded by Mr. Runge to adopt the minutes of the 1995 Annual Meeting.
The motion was CARRIED.

3. REPORTS

Dr. Hube announced that officers and committees had reported to Council at the meeting held 1996 06 28.

3.1 PRESIDENT

Dr. Hube said that it had been an honour to serve as National President and to meet many members of the Society across Canada and to visit the Centres. Dr. Hube expressed his gratitude for the hospitality he had enjoyed wherever he visited. Dr. Hube thanked all those members who had written to him during his term of office.

Dr. Hube reported on deliberations of the Executive Committee, particularly the upcoming changes at national office after the retirement of the Executive Secretary. Dr. Hube asked Mr. George to describe the draft agreement with University of Toronto Press for handling membership services, which had been approved by Council. Mr. George invited Centres or members to

contact him if any problems arose in the coming months. Mr. George said Centres would still be able to elect new members, and if any person is refused membership, the fees would be refunded. Mr. George said that Centres not represented at this meeting would be informed of the new arrangements. Mr. George said it was hoped that the new arrangements would take effect with the beginning of the 1997 membership year.

Mr. George also reported on the new arrangements for the Society's bi-monthly publication, including plans to hire a Publications Manager. Mr. George described how the content would reflect the interests of the membership. Mr. George said that it was hoped that the publication would be issued on time in the future, and that it was likely that the final two issues of the 1996 volume of the publication would be combined in order to get the publication on schedule for 1997. Mr. George also described the arrangement to provide SkyNews with the Society's publication in 1997, and said that it was possible that members who already had paid subscriptions to SkyNews might have their subscriptions extended if the Society should decide not to continue to provide SkyNews to the members.

3.2 NATIONAL SECRETARY

Dr. Brooks referred to his report, which appeared in the Annual Report.

3.3 TREASURER

Dr. Gupta said that the operations of the Society resulted in a surplus in 1995, and referred to the statements in the Annual Report. Dr. Gupta said that a deficit seemed likely for 1996 and 1997 because of the expense of new initiatives, and that the long-term outlook was uncertain.

MOTION AM9603

It was moved by Dr. Gupta and seconded by Mr. Attwood to adopt the audited financial statement as published in the 1995 Annual Report.

Dr. Gupta explained that investment interest had been higher in 1995 than in the years immediately prior to 1995 because of rearrangements in the Society's investments. Dr. Gupta commented that the deficit in 1996 might be from zero to \$5,000, and for 1997 the deficit might be from zero to \$20,000. Dr. Gupta expressed gratitude to the Executive Secretary for her continuing assistance. A round of applause followed.
The motion was CARRIED.

3.4 NATIONAL RECORDER

There was no report.

3.5 NATIONAL LIBRARIAN

Dr. Brooks reported on behalf of Mr. Macdonald that the library was in good order, and that certain older books had been sent to York University for distribution to third-world countries. Dr. Brooks reported that Mr. Macdonald was working on an update to the Society's library catalogue.

3.6 EDITOR OF THE JOURNAL

Dr. Turner reported that matters related to the Journal were in order. Dr. Hube thanked Dr. Turner for his continuing efforts. A round of applause followed. Mr. Attwood said that he had heard many compliments concerning the quality of recent issues of the Journal.

3.7 EDITOR OF THE BULLETIN

Mr. Kelly reported on the status of the Bulletin. Dr. Hube thanked Mr. Kelly for his continuing efforts. A round of applause followed.

3.8 EDITOR OF THE OBSERVER'S HANDBOOK

Dr. Hube reported on the recommendation from Dr. Bishop that the price of the 1998 Observer's Handbook be increased to \$18.95. Dr. Hube expressed appreciation for Dr. Bishop's continuing efforts. A round of applause followed.

3.9 EDITOR OF THE BEGINNER'S OBSERVING GUIDE

Mr. Enright reported on the success of the second edition and the publication of the third edition. Mr. Enright said that initial response to the third edition was favourable. Dr. Hube thanked Mr. Enright for his continuing efforts. Mr. McCurdy asked if it was possible to permit new members to choose to receive the Beginner's Observing Guide rather than the Observer's Handbook, and Mr. Enright said this matter would be considered. A round of applause followed.

Dr. Hube reported that Mr. Broughton had copies of the book "Looking Up" for purchase during the General Assembly.

3.10 STANDING COMMITTEES

3.10.1 AWARDS COMMITTEE

Mr. Broughton said there was nothing to report.

3.10.2 CONSTITUTION COMMITTEE

Mr. Watson said that the Constitution Committee was anticipating that it would deal with some significant matters in the coming months, as a result of recent initiatives undertaken by Council. Dr. Brooks said that he had been contacted by some members regarding

MOTION AM9511, and Mr. Watson said that the Committee routinely considered whether by-law amendments were as simple as possible, and that Council had determined that no change in the status of the Committee was desirable.

3.10.3 HISTORICAL COMMITTEE

Mr. Broughton reported on developments concerned with co-operation between the Society and the Canadian Astronomical Society (CASCA) on historical matters.

3.10.4 MEMBERSHIP AND PROMOTION COMMITTEE

Mr. Jedicke said that Mr. Hladiuk had prepared a booklet about Comet Hale-Bopp, and that a copy of this booklet was available for each Centre. Mr. Kell reported that he had promotional items available for sale during the General Assembly. Mr. George reported that the form which new members would submit to University of Toronto Press was under development, and there was some discussion about whether requesting additional information on this form would be useful. Mr. George said that each Centre would be permitted to customize the form.

3.10.5 NOMINATING COMMITTEE

Mr. Broughton reported that Mr. Scott Young had accepted the nomination as the new Astronomy Day Co-ordinator. A round of applause followed.

3.10.6 PROPERTY COMMITTEE

Mr. May reported that matters relating to the Society's property had been discussed at the meeting of National Council on 1995 06 30.

3.10.7 PUBLICATION COMMITTEE

Mr. George said there was nothing further to report.

3.10.8 ASTRONOMY DAY CO-ORDINATOR

Mr. Scott Young said there was nothing to report.

3.11 SPECIAL COMMITTEES

3.11.1 COMPUTER USE COMMITTEE

Mr. Lane reported on his work to maintain a current list of email addresses of members of the Society. Mr. Lane reported on the development of RASCList, an email mailing list which currently had about 80 subscribers, and that RASCList was connected to a similar interchange of messages on FIDONet. Dr. Turner pointed out that a world wide web home page had been established for the Journal. Dr. Hube expressed thanks to Mr. Lane for his continuing efforts. A round of applause followed. Mr. Lane acknowledged the continuing support of St. Mary's

MINUTES OF THE 1996 ANNUAL MEETING

University, which had provided the internet connection for RASCLIST and for the national world wide web home pages of the Society.

3.11.2 GENERAL ASSEMBLY GUIDELINES COMMITTEE

Dr. Brooks reported on activities of the Committee.

3.11.3 LIGHT POLLUTION COMMITTEE

Mr. King reported on the membership and activities of the Committee.

3.11.4 LONG-RANGE PLANNING COMMITTEE

Mr. Ceravolo said that there was nothing to report.

3.11.5 PUBLICATIONS REVITALIZATION COMMITTEE

Mr. Lane reviewed the activities of the Committee. Mr. Lane reported that the position of Production Manager of the Society's new publication had been advertised, that a number of applications had been received, and that no decision had been reached. Mr. Lane said that the Committee would not be re-constituted and the responsibility for the new publication would fall upon the Publications Committee. Dr. Turner said that there would continue to be some peer-reviewed papers in the new publication. Dr. Turner said that timeliness will be a priority of the new publication. Mr. Lane reported on the plan to have the date printed on the new publication reflect the actual date of issue.

4. BY-LAW AMENDMENTS

There were no by-law amendments to be considered.

5. ELECTION OF OFFICERS OF THE SOCIETY

Dr. Hube announced that, as announced in the agenda, Mr. George was acclaimed to the office of President. A round of applause followed.

Dr. Hube announced that, as announced in the agenda, Dr. Robert Garrison was acclaimed to the office of 2nd Vice-President.

Dr. Hube announced that, as announced in the agenda, Dr. Brooks was acclaimed to a second term as National Secretary. A round of applause followed. Dr. Hube expressed appreciation for the continuing efforts of Dr. Brooks.

Dr. Hube announced that Mr. Randy Attwood had won the election as the Society's 1st Vice-President. A round of applause followed.

MOTION AM9604

It was moved by Dr. Brooks and second by Mr. Ascroft that, subject to a request for a recount of the ballots, the

ballots be destroyed within 24 hours of the end of the meeting.

The motion was CARRIED.

6. SELECTION OF AUDITOR

MOTION AM9605

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

Dr. Gupta reported that the cost of the annual audit was approximately \$2000 and that the cost of additional ongoing services of the auditors was approximately \$3500. Dr. Hube directed that a letter of appreciation be sent to the auditors for their efforts.

The motion was CARRIED.

7. OTHER BUSINESS

Prof. Kennedy reported on preparation of a historical summary of recent Canadian astronomy for the next General Assembly of the International Astronomical Union, and requested the assistance of Dr. Brooks, Mr. Broughton and Dr. Hube in the preparation of this summary.

Prof. Kennedy requested that the Treasurer contact the heir of Walter Helm, Mr. Joseph Greer, to inform Mr. Greer of activities concerning the Walter Helm Memorial Fund.

Mr. Pow asked about the disposition of MOTION AM9511. Dr. Hube reported that the Executive Committee had determined that the Constitution Committee should continue as a Standing Committee. Dr. Brooks reported that it was felt that use of teleconferencing for Council meetings was too expensive to be effective. Mr. Watson reviewed the provisions of the Constitution regarding the role of Council in relation to the Annual Meeting.

Mr. Martin Connors asked about the recent statistics regarding new life members. Dr. Gupta pointed out that there had been a substantial increase in the fee for life members around 1992, and that the Finance Committee would consider whether any change was required.

Dr. Brooks reported that any Centre which requested a copy of any of the Society's national publications for its library would receive it from the national office. Dr. Brooks explained that automatic distribution of such publications to Centres would not be effective because some Centres do not maintain a library.

Dr. Gupta expressed the opinion that the possible deficit situation of the Society in the immediate future was an exceptional condition, that the Society faces uncertainties in the future, and that the general intent of the Society's operation remained that the Society operate without a deficit.

Dr. Hube congratulated the newly elected officers of the Society and thanked Mr. Ceravolo for his efforts on behalf of the Society. A round of applause followed.
MOTION AM9606

It was moved by Mr. Watson that the meeting adjourn.
The motion was CARRIED at 15h06 mdt.

Respectfully submitted,

Peter Jedicke,
National Recorder.

MINUTES OF THE 1997 ANNUAL MEETING

ROYAL ASTRONOMICAL SOCIETY OF CANADA
Minutes of the Annual Meeting held 1997 06 29
Ellis Hall, Queen's University, Kingston, Ontario

The meeting was called to order at 13h39 edt by the chair, RASC National President Mr. George. Mr. George welcomed delegates to the 1997 General Assembly. Mr. George called the roll of Centres. Nineteen Centres were represented and there were also several unattached members present. Approximately sixty-three members were in attendance.

MOTION AM9701

It was moved by Dr. Hube and seconded by Mr. Loehde to approve the agenda.
The motion was CARRIED.

2. ADOPTION OF MINUTES OF THE 1996 ANNUAL MEETING

MOTION AM9702

It was moved by Ms. Goodman and seconded by Ms. Sabatini to adopt the minutes of the 1996 Annual Meeting.
The motion was CARRIED.

Mr. George asked Mr. Auclair to read the roll of members who were deceased during the calendar year 1996. A moment of silence was observed.

3. REPORTS

3.1 PRESIDENT

Mr. George reported on the activities of Dr. Batten, Honorary President.

3.2 FIRST VICE-PRESIDENT

Mr. Attwood presented an overview of Society membership during the period 1960-1997.

3.3 NATIONAL SECRETARY

Mr. Auclair reported that, in the brief time since his appointment, he had conducted the routine correspondence of the Society. Mr. Auclair described his efforts to co-ordinate handling of requests for information at the national office, and his efforts to implement electronic communication.

3.4 EXECUTIVE SECRETARY

Ms. Bird described the innovations that had taken place at the national office since the 1996 General Assembly; in particular, the toll-free telephone number, the arrangements with the University of Toronto Press, the new computer system, and the revised accounting system. Mr. George thanked Ms. Bird for her efforts in her first year on the job. A round of applause.

3.5 TREASURER

Dr. Gupta reported that the financial state of the Society is good. In particular, the net worth of the Society had doubled in the eleven years previous to 1997. In spite of the impact of new initiatives, it was expected that the Society would show a surplus once again. Dr. Gupta stressed the contribution of sales of the Observer's Handbook to the Society's finances, and commended Dr. Bishop for his continuing efforts. Dr. Gupta reported on the positive impact of the revised accounting system. Mr. Ceravolo and Ms. Sabatini expressed the sentiment that a long-term view of the Society's finances should include an appreciation of the possibility that the Society may not be able to rely indefinitely on revenue from sales of the Observer's Handbook. Mr. George noted that this should be investigated by the Long-Range Planning Committee.

MOTION AM9703

It was moved by Dr. Gupta and seconded by Ms. Moreau to adopt the audited financial statement as published in the 1996 Annual Report.

MINUTES OF THE 1997 ANNUAL MEETING

The motion was CARRIED.

3.6 EDITOR OF THE JOURNAL

Mr. Kelly reported on behalf of Dr. Turner regarding activities related to the Journal.

3.7 EDITOR OF THE OBSERVER'S HANDBOOK

Dr. Bishop reported that sales of the Observer's Handbook had been approximately stable for the previous few years. Dr. Bishop explained the circumstances regarding the delay in distribution of the 1997 Observer's Handbook at the end of 1996, and urged members to submit their renewal information quickly for 1998. Dr. Bishop requested that members submit photographs for consideration as the cover photograph for 1998. Ms. Goodman asked about the cost of bulk mailing, and Dr. Gupta provided the appropriate figures. Mr. Broughton asked if life members would receive Observer's Handbooks promptly this year, and Mr. Attwood explained the procedure for distribution from University of Toronto Press.

3.8 NATIONAL RECORDER

Mr. Jedicke reported that he had endeavoured to encourage electronic preparation and distribution of the minutes of annual meetings and of the meetings of Council.

3.9 NATIONAL LIBRARIAN

There was no report.

3.10 AWARDS COMMITTEE

Dr. Hube said there was nothing to report.

3.11 CONSTITUTION COMMITTEE

Mr. Watson said that the Constitution Committee was anticipating that it would deal with some significant matters in the coming months.

3.12 HISTORICAL COMMITTEE

Mr. Broughton reported on developments concerning co-operation between the Society and the Canadian Astronomical Society (CASCA) on historical matters.

3.13 MEMBERSHIP AND PROMOTION COMMITTEE

Mr. Hladiuk reported on promotional items available from the Society, and on activities in recent months related to Comet Hale-Bopp. Mr. Hladiuk thanked Mr. Ceravolo and Mr. Glenn LeDrew for contributing images for the committee's projects.

3.14 NOMINATING COMMITTEE

Dr. Hube reminded members that elections would take

place in 1998 and that nominations at any time were encouraged.

3.15 PROPERTY COMMITTEE

Mr. May reported that matters relating to the Society's property had been discussed at the meeting of National Council on 1997 06 28.

3.16 PUBLICATION COMMITTEE

Mr. Attwood noted the tremendous work required by the editors of the Society's publications, and added his personal appreciation for their effort. A round of applause followed.

3.17 ASTRONOMY DAY CO-ORDINATOR

Mr. Young reported on activities related to Astronomy Day, and that the official date for the next Astronomy Day would be May 2, 1998.

3.18 LIGHT POLLUTION COMMITTEE

Mr. Broderick reported on activities of the Committee. Mr. Broderick reported that he had been in contact with members of the Canadian Astronomical Society regarding participation with the community of professional astronomers. Mr. Broderick encouraged delegates to the General Assembly to visit the display presented by the committee in Victoria Hall. Mr. Broderick reported that Dr. Tom Bolton, a member of the committee, had been ill, and Mr. George asked Mr. Auclair to communicate the good wishes of the Society to Dr. Bolton.

3.19 COMPUTER USE COMMITTEE

Mr. Lane reported that the domain rasc.ca had been registered. Mr. Lane thanked St. Mary's University for continuing to support the needs of the Society with regards to computer hardware and computer software.

3.20 LONG-RANGE PLANNING COMMITTEE

Mr. Attwood said the committee would continue to investigate the matters mentioned by various members at this meeting.

4. BY-LAW AMENDMENTS

Mr. Watson described the need for changes in By-Law Number One as a result of re-vitalization of the Society's publications. Mr. Watson reviewed the changes as presented in advance of this meeting and suggested that all could be considered together.

MOTION AM9704

It was moved by the Constitution Committee that the changes proposed to By-Law Number One be accepted. The motion was CARRIED by the required majority.

5. ELECTION OF OFFICERS OF THE SOCIETY

Mr. George announced that Mr. Raymond Auclair had been appointed to fill the remainder of the term of National Secretary. Mr. George announced the appointment of Mr. Andrew Oakes as National Librarian. A round of applause followed.

6. SELECTION OF AUDITOR

MOTION AM9705

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

The motion was CARRIED.

7. LIFE MEMBERSHIP FEES

MOTION AM9706

It was moved by the Finance Committee that the formula for life membership fees be reduced from 25 times the annual fee to 20 times the annual fee.

Dr. Gupta announced that it was the intent of Council to offer a rebate to the few life members who had joined during the time that the life membership fees had been set at 25 times the annual fee.

The motion was CARRIED.

Mr. George recognized Mr. Troyer, who had been a member of the Society since 1924. A round of applause followed.

8. OTHER BUSINESS

Dr. Kennedy reported on his experience in having changes made to an article published in the Journal, and asked that the Society's editorial policy be clarified. In particular, Dr. Kennedy suggested that it would be polite for the editors to inform an author of the decision regarding final changes to articles to be published. Mr. George referred this matter to the Publications Committee.

Mr. Broderick suggested that the Society recognize the contribution of Dr. Tom Bolton to the Light Pollution Committee; Mr. George referred this matter to the Awards Committee.

Mr. Broughton suggested that a copy of the group photo taken during the General Assembly be sent to Ms. Rosemary Freeman.

Mr. Watson described trends in attendance at recent General Assemblies, and in particular contrasted the attendance at star parties. Mr. George referred this matter to the Long-Range Planning Committee.

Mr. Oakes mentioned the plight of the University of Toronto's observatory in the southern hemisphere. Mr. Shearman reported that an appeal by the Victoria Centre had recently been helpful in maintaining funding support

for the Dominion Astrophysical Observatory. Dr. Hube expressed the view that letters of support directed at senior politicians from individual members would be more productive. Mr. Ceravolo asked if it would be reasonable to consider an infrastructure to seek and to direct donations within the Society. Mr. George referred this matter to the Long-Range Planning Committee.

MOTION AM9707

It was moved by Mr. May that the meeting adjourn. The motion was CARRIED at 15h26 edt.

Respectfully submitted,
Peter Jedicke,
National Recorder.

ANNUAL REPORTS FROM THE CENTRES

CALGARY CENTRE

Calgary skies cooperated fully during the passing of Hale-Bopp, drawing thousands of excited, curious people to our nightly viewing at the Calgary Science Centre (CSC), Fish Creek Park, and in backyards throughout the City. Reports of enthusiastic Centre members dragging unsuspecting neighbors out into frigid nights to view magnificent Hale-Bopp are not confirmed, but are suspected to be true.

Our swelling membership over 1997 proved that Hale-Bopp served to introduce many amateurs to the wonders of the night, and one of our mandates for '98 is to help keep that new interest alive. Calgary film shops also did a booming business during the passing of H-B as we all tried to capture that perfect image — some came much closer than others, making this year's astrophoto contest a difficult one to judge.

On other fronts, the Calgary Centre continues to provide quality public education through tours at our in-town 'dark' site, the Wilson Coulee Observatory (WCO); Beginner and Advanced Astronomy courses through the Calgary Board of Continuing Education; popular telescope building workshops which kept the intrepid Phil Johnson very busy; free observing Friday evenings on the CSC observing deck; Elementary and Junior High School visits; our 237-STAR phone line; and our annual public star nights, Zoonival and Saturn Night.

Zoonival is a joint event with the Calgary Zoo, held in February when we host up to 5000 interested people who this year tromped through waist high snow drifts to gaze through more than 20 Centre members' scopes and binoculars. Just over 500 people attended Saturn Night, held as always at Fish Creek Park under clear, chilly October skies.

Our Centre is again proud to co-host an Eclipse Tour, this time in Curacao and if past tours are any indication, this one will be a highlight for those fortunate enough to attend. Good luck and safe journey to those hardy eclipse chasers who must brave either white sand beaches, pool-side service, five star accommodations and warm tropical breezes; or a luxury shipboard venue, to view the three minute eclipse. We look forward to hearing grueling accounts, and to drooling over slides upon their return.

Our monthly general meetings welcomed many interesting speakers, including up-to-the-minute accounts of the Mars excursion and first hand reports on the Jupiter project. Our annual spring banquet and summer BBQ were great successes, as was our New Member's night where we host newcomers to the club (and hunt for unsuspecting new volunteers).

1997 saw yet another new project begun at the Calgary Centre. This year we joined with those other denizens of the night that most see as weird, odd, or just

plain strange - bats. We constructed a number of bat houses, including a nursery, and mounted them on secluded trees at our Caroline dark site. Situated on the edge of a productive beaver pond, the site of the Alberta Star Party (ASP) also hosts hordes of mosquitoes and other irritating insects, and we hope that the bat houses will host hordes of bats to nightly consume their fill. And true to Calgary form, this led to another exciting project; the granting of a Conservation Easement for our 50 acre site to protect the beavers, bats, birds, other wildlife, and our dark site for generations of gazers to come. More on this to follow next year.

The 1997 ASP hosted just over 100 astronomers and their families from as far away as Texas. The Caroline skies cooperated for three of the four nights, giving us a break from gazing on the third night to allow for socializing around the fire. The 1997 ASP saw the inception of the Binocular Observing Challenge and many attendees earned the coveted pin. We plan to continue and improve this new tradition for the 1998 ASP which will be held September 16-20. You are all cordially invited to join us and the bats under Caroline's clear inky skies.

On October 19 the Calgary Centre joined Edmonton on a Grazing Occultation Expedition just outside Ponoka Alberta. Fifteen observing stations experienced varying degrees of viewing and recording success during the two minute event. We look forward to seeing the published results of this joint scientific endeavour.

Our Youth Group continues to thrive under the ministrations of the tireless Blair Colborne, as does our Telescope for Lend program under Bob Morgan's dedicated eye. On a more political note, the Calgary Centre plans to revamp our by-laws, reevaluate our committees, update and improve our library, and to become a more active voice on the light pollution front in 1998.

As always, it was our volunteers who made 1997 another successful year; giving endlessly of their time, efforts, equipment and interest to the Calgary Centre and our many activities and projects. Many thanks to all who contributed in 1997. We look forward to another great year and hope that across Canada you all have the same!

Susan F. Yeo, Secretary

EDMONTON CENTRE

Interest in astronomy, cosmology and space science are at a very high level these days for a number of reasons. Not the least of these is the remarkable ongoing efforts of many Edmonton Centre members to share their love of the universe with the public at large. Recent events such as Comet Hale-Bopp, the Mars Pathfinder mission and even the so-called "planetary alignment", have provided

us a broader public platform from which to do this. One result is that membership in the Edmonton Centre is at an unprecedented level.

Certainly the highlight of the year was the fabulous apparition of Comet Hale-Bopp in the spring. This was likely the most observed comet in history, well-placed for northern hemisphere observers for many weeks, and bright enough to see even in light-polluted conditions. Here in Edmonton, where the comet was circumpolar for over six weeks, there were nights when Hale-Bopp was the first object visible in the evening twilight. Edmonton Centre members responded to this event by staging an ambitious and highly successful public comet watch, competently organized by Ed Newcombe and his Public Education Committee. Some 51 members contributed their expertise, equipment and over 1,000 hours of their time to share the comet with the public every clear night for an entire month. Some 30,000 visitors to the grounds of Coronation Park got one or more views of the comet and other celestial delights through members' telescopes and binoculars. There is no doubt that we provided a valuable community service through this effort; the feedback to Edmonton Centre President Bruce McCurdy was universally positive.

In addition to this monumental effort, we managed to maintain momentum throughout another successful year at the Public Observatory, where a further 20,000 or so members of the public looked through the telescopes and talked about science. RASC Edmonton Centre members also made numerous presentations to schools and Scout and Guide groups, as well as one to the general public at a Chapters Book Store.

Another way in which we will be trying to make a positive impact on our community is through the recently established Light Pollution Abatement Committee. Chaired by Howard Gibbins, LPAC currently consists of some eight members with a wide range of talent. Once we have completed the early stages of fact-finding and planning, we anticipate making measured steps in the campaign to increase public awareness in this issue, which has important implications down here on the ground, as well as for us skywatchers.

There were lots of highlights for observers as well, again starting with the Great Comet of 1997, which was a truly wondrous sight from a dark sky location. We were treated to a number of occultations of Aldebaran, most memorably the graze of October 19, when 30 observers from Edmonton, Calgary, and Flagstaff, Arizona, made an expedition to a site near Morningside, Alberta. We were rewarded with clear skies and a spectacular event. Observing Group Chair Larry Wood and his ever expanding constellation of super-hardcore observers, continued to push the envelope of amateur deep sky

viewing. The Alberta Star Party was well-attended with only one night being a complete write-off.

Meetings:

Our regular meetings have moved to a new room at the Edmonton Space & Sciences Centre. The meetings are now held in the Margaret Ziedler Theatre (the planetarium) which not only has sufficient seating for the good turnout at meetings, but is also well equipped for supporting multimedia presentations.

- **January:** "Red Shift" – a collaboration of Bob Drew, Paul Campbell, Steven Bergens and Barry Arnold taking us on a visual astronomy tour through time.
- **February:** Rodger Bailey presented the "Art & Science of Sundial Design".
- **March:** Murray Paulson presented "Mars"
- **The April** (fools) meeting was nearly overrun by clones of our president, Bruce McCurdy. Rick Huziak presented details of the new Saskatchewan Star Party and the proposed upgrade of the Rice Sturm Observatory.
- **May:** Doug George presented "Astrophotography – Electronic & Otherwise..."
- **The June** meeting contained a very special musical presentation. "Music in the Sphere" featured a group of musicians recruited by band leader and bassist Harris Christian, including Donovan Reimer (keyboards), Bruce McCurdy (percussion), Sherrilyn Jahrig (flute) and Bob Jahrig (guitar and lead vocals). The group played a selection of songs with an astronomical theme, punctuated by original poetry by Joanne Osborne and Sherrilyn Jahrig. Special effects and technical support by Frank Florian. Ben Gendre coordinated the slide show which included contributions from himself, Chris Robart, Rob Hughes, Marion Walsh, George Turnbull, Mike Noble, and Murray Paulson.
- **September:** Eric Hebert presented "New Frontiers of Space Science"
- **October:** Brian Skiff presented "Where is the Edge of Deep Sky Astronomy Now?"
- **November:** Triple Shadow Transit on Jupiter. The meeting was deliberately shortened so that the members could observe this rare event. Twenty-two members brought their telescopes in order to provide everyone a chance to see this event.
- **December:** Members' night with presentations from Peter Smith, Alister Ling, Franklin Loehde, Denis Boucher and Bruce McCurdy.

Awards:

- **President's Award for Service to the Centre:** This award was presented to Betty Rankin with honourable mention of Denis Boucher and George Maher.
- **Angus Smith Award for Excellence in Telescope Design:** This award went to Peter Smith.

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- **Observer of the Year Award:** This award went to Denis Boucher. Denis was also awarded both the Messier and Finest NGC certificates this year.
- **George Moores Award for Excellence in Public Education:** This was awarded to the 51 volunteers for the Comet Hale-Bopp event. Ed Newcombe accepted the award on behalf of everyone who participated.
- **Astrophotographer of the Year Award:** This award was presented to Mike Noble.

Bruce McCurdy, President
Terry Nonay, Secretary

HALIFAX CENTRE

Meetings:

- **January:** Steve Short, "Wolf-Rayet Stars"
- **February:** Dr. Doug Johnstone, "The Destruction of Proto-planetary Disks in the Orion Trapezium"
- **March:** Meghan Gray, "The Rainbow Connection: Mapping an Active Galaxy with the Hubble Space telescope"
- **April:** Doug George, "Observing with CCD Cameras."
- **May:** Member's Night, Comet Night and showing of video Comet Odyssey"
- **June:** Dr. Leslie Sage, "Gamma Ray Bursters"
- **September:** Dr. Roy Bishop & Pat Kelly, "Introduction to Cosmology"
- **October:** Members night.
- **November:** Annual Meeting & Mary Lou Whitehorne, "Playground Planets -Mathstronomy for grades 1 - 3"
- **December:** George Fowler, "Tales of Brave Ulysses"

1997 Activities:

It's getting boring, you know — having to report on yet another highly successful year for the Halifax Centre! Will these people ever let up? Of course not! They're having too much fun!

Last year it was Hyakutake. This year it was Hale-Bopp. Bright comets bring out the public, everybody's kids, closet astrophotographers, and all the armchair astronomers in the club. This Hale-Bopp did, and more. We in the Halifax Centre enjoyed this comet fully with plenty of observing at our new observatory and lots of photography. We even observed the comet reflected in the still waters of Panuke Lake that laps against the shore of our observatory grounds. Even more enjoyment came from the stellar sales of comet photos, which have been responsible for raising a substantial portion of the funding used to build the St. Croix Observatory. The Halifax Centre, like E. E. Barnard, has a house built of comets!

But, even though a spectacular naked eye comet with lots of great public observing events is a wonderful thing

for a Centre, it was not THE highlight of the year for Halifax. The highlight was the official opening of the St. Croix Observatory, held on June 21st., the summer solstice. The grand roof roll-off occurred at the moment of Solar Noon at 13:18 ADT on a brilliant sunny day. Ceremony was followed by festivity with a gut-buster Star-B-Q and the cutting (and eating!) of the galactic sized cake. Delicious! In attendance at the grand opening were many Centre members, families and friends, and George Bishop, CEO of the Minas Basin Group, from whom we lease our land. He was presented with a framed photo of the Observatory with Hale-Bopp filling the background sky, as a token of appreciation for the Company's support of our observatory project. The completion of a major project such as this marks a "new era of club-dom" for the Halifax Centre, to quote outgoing President Dave Chapman.

Other successful events were the waterfront boardwalk observing sessions held this summer beside the Maritime Museum of the Atlantic, public Comet Nights held at Saint Mary's University, and Nova East '97 held at Fundy National Park. Good weather, good location, good telescopes and enthusiastic astronomers led to very well received public events and great exposure for the Centre. A number of individual members continue in the grand tradition of volunteering to bring astronomy into their local schools — for this we are truly appreciative. A few members were the recipients of awards this year too: Daryl Dewolfe was presented with the Finest NGC Certificate, Steve Carrigan with his Messier Certificate, and Heather Cameron was awarded the Ken Chilton Prize. As if this were not enough, Roy Bishop had an asteroid (6901) named after him!

Meetings were well attended by members and non-members alike. No wonder — look at the slate of speakers! Ralph Fraser, our highly valued Manager of Hospitality, has again done a superb job of feeding the masses with delectable goodies in 1997. Every Centre should have a Ralph Fraser. And, no, he's not for sale or rent, we are keeping him!

Halifax Centre members also participated in the Winter Star Party, Starfest, Astro Atlantik and the PEI Athena Astronomy Club's Abigweit Autumnal Astronomical Adventure (AAAA eh?). One or two are planning to attend the now traditional northern winter star party, Tuk '97. Some people cannot get enough of observing the stars.

Mary Lou Whitehorne, Secretary

HAMILTON CENTRE

Over the last year, the Hamilton Centre has had three

presidents. Rich Petrone, likely our youngest president in recent memory, had to resign in order to make his annual research trip to Churchill, MB, where he is studying the environment for his Ph.D.

Roger Hill, past president, stepped in for the balance of the term. A new board of directors was inducted at the Annual General Meeting in October. Colin Haig, past editor of the Orbit newsletter was selected as president.

The Hamilton Centre has faced many challenges over the past few years. Efforts by Rich, Roger, and Colin, as well as the general membership has resulted in a total of over 87 members. Financially, it is back on its feet due to cost cutting, fundraising, and increased membership. Maintenance of its observatory had been delayed over the past 5 years due to lack of funds.

Substantial structural repairs are scheduled for the Chilton roll-off roof building. The usefulness of the observing site has been declining over the last 10 years. The site sits on a former Christmas tree farm which has gone wild, resulting in 60' high trees which obscure from 45 degrees altitude to the horizon. A project was initiated 2 years ago to get trees cut. This finally came to fruition in January 1998. Unfortunately, one of the neighbours has complained to various governmental agencies. The Hamilton Centre has the right to remove trees in its current lease, and the Town of Flamborough, and both Conservation Authorities for Hamilton-Wentworth and Halton had been contacted.

Those organizations did not notify the Niagara Escarpment Commission (NEC), nor was the Hamilton Centre informed that it needed to get the Town to get a permit from the NEC. The HRCA forester condoned the planned tree removal on the basis of good forestry management alone.

In conclusion, the NEC has informed us that this cutting was exempt, because we removed less than 10 percent of the total trees existing prior to June 10, 1975. We will be planting new more manageable indigenous trees this spring, and will be revisiting our 99 year lease with the Town to bring it into keeping with current regulations.

Meetings:

Over the last year, we have had a number of excellent speakers at our meetings.

- In **January**, members showed off a number of slides they had taken, as well as new telescopes, and a Dr. Doug Welch presented on variable stars.
- **February** featured Tim Griffis who spoke on the role of Carbon Dioxide in Planetary atmospheres, and data regarding the Greenhouse effect. Later that month, Les Nagy also performed a telescope collimation workshop, where about a dozen members brought out their scopes,

and learned how to collimate and fine tune them.

- Dr. Bruce Collier spoke at our **March** meeting on aurorae and air glow phenomenon, and he demonstrated an aurora in front of the group with some specialty laboratory equipment.
- **March** was also a highlight with many of us observing and photographic comet Hale-Bopp, and the lunar eclipse on the same night, March 23, at the observatory. Dozens of people came out from the general public to view the event.
- The **April** meeting was scheduled with Dr. Dennis Shaw on Is (Was) there Life on Mars, but he was unable to attend until May, so we reviewed the results of comet Hale Bopp observing.
- Our **June** meeting featured RASC president Doug George, and he kindly responded to many of our concerns and questions.
- Various events took place over the summer, including a barbecue and work party to repair facilities.
- **September** saw our first meeting back, and October was our annual meeting and members night. The Saturn Occultation video taken by Roger Hill was a big hit.
- **November** brought us Peter Ceravolo, who spoke on his comet video adventure, and some challenges faced when trying to obtain that many good photos over so many nights in the middle of the desert.
- In **December**, we had our first-ever double-header meeting, with a spectacular multimedia presentation by Mark Kaye on backyard observing, and Dr. JJ Kavelaars, who is one of the co-discoverers of Uranus' two newly detected satellites.

This coming year, we have a Messier Marathon weekend planned starting March 27, and a number of other activities throughout the year. Things are definitely looking up for the Hamilton Centre.

KINGSTON CENTRE

This has been an extraordinary year for Kingston Centre. The following report is a summary of some of the highlights of 1997.

In January some members of the club began to work on a new club telescope. The parts for the telescope were donated to the club by the widow of a fellow astronomer who had begun to grind his own mirror for an eight inch Dobsonian mounted telescope. Upon his passing, his wife, Marion Fitzgerald, generously donated all of the parts to build the telescope. Since the group began meeting its numbers have grown as our 'expert' telescope makers, Doug Angle and Tom Dean, show more of us the fine art of mirror grinding and woodworking. Yes, there are power tools involved in astronomy too! Our new acquisition should be ready by the end of October and

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ready to be signed out by any member wishing to borrow it by November's meeting.

This year also started off with an active GA Committee working very hard to bring the National General Assembly of the Royal Astronomical Society to Kingston Centre. We had an incredible group of speakers from the United States and Canada including our own Judith Irwin, Martin Duncan, Askel Hallin, Terence Dickinson and David Levy as well as Gene and Carolyn Shoemaker. Centre members were extremely friendly and went out of their way to make this GA the best ever. We were very privileged to have Gene Shoemaker share his latest research with us. Two weeks after the GA he was killed in a car accident in Australia where he was working on his theory that an impact crater in the Northern Territories of Australia is far older than what is currently believed. We were all very much saddened by the news and we have lost a superb scientist as well as a special friend.

Following the GA, many members decided to form an observing group since we have not done enough observing together. The purpose of this group is to encourage new stargazers to continue looking up and to help them to learn the art of gazing. It is also hoped that veteran observers will continue to be a part of this group in order to help novices as well as to observe with friends. So far there have been three of these meetings which have been great fun for everyone in spite of unfavourable weather. The observers meet at the homes of various members with dark sky sites around the time of the new moon. All members are welcome whether they bring telescopes, binoculars, or their own two eyes. Interested members should consult the *Regulus* for dates, locations and directions.

The club is also working on public awareness of astronomy through education, publicity of centre meetings and events and Bill Broderick's Light Pollution campaign. A new youth group is about to be formed to include some of our younger members in the fascinating hobby of astronomy. Vic Smida has continued to foster interest in astronomy at the high school where he teaches physics by forming an active astronomy club. He meets with students weekly at lunch hour to discuss various topics of interest to them as well as taking them out to look through his telescope when the weather permits. Dieter Bruekner also continues to bring astronomy to the youth at the school his children attend. He has formed a junior astronomy club which meets in the evenings to learn about the universe. He also enlists members of the RASC Kingston Centre who own telescopes to help him with his evening star parties for the school. Other members have also been active working with local youth groups and other organizations bringing astronomy to the

public. Once again, our Astronomy Day display at Kingston's largest mall was a tremendous success thanks to Cathy Hall who organized it, Christine Kulyk who advertised it, all the members who participated and Comet Hale-Bopp who stimulated public interest in the sky.

Membership has been steadily increasing over the past several months and our numbers continue to climb. It seems that every week I have been sending out new member kits. The kits have been updated to include star charts, a moon map, internet astronomy addresses and many other things of interest to new members. Astronomy is a very diverse field and we have people representing almost every aspect of the science in our club. Our monthly meetings have been reflecting this fact very well. We have had talks about archaeoastronomy, the connection between astrology and astronomy, imaging in astronomy (making models from radio observations), radio astronomy, the dynamics of the sun and terrestrial glaciation, teaching astronomy, and many other interesting topics too numerous to mention.

The year ended with the announcement that our centre has received a special grant from the Government of Ontario to organize a youth group with the purpose of encouraging young people to choose careers in space and related sciences. Work on this group has already begun and is in the planning stages. The group will be for all area youth between the ages of 13 and 24 years and membership in the society is not necessary. This initiative is part of our public service. There is no time like the present to turn the minds of our children to the exploration and conquest of space as we sit on the brink of the millennium.

This year has certainly been a very busy and productive year for the centre. Our members are full of enthusiasm and energy as they carry out the Centre's mission to bring astronomy to the public and to encourage members to pursue their interests. If every centre in the RASC had a year as successful as we have had, then the future certainly looks bright for astronomy in general and the RASC in particular.

Laura Gagne, Secretary

KITCHENER-WATERLOO CENTRE

We had an active year at our Centre, especially with the excitement of comet Hale-Bopp. Many of the membership took astrophotos of the comet from the beginning of March, when it was in the morning sky, to the middle-end of April. Jim Graham captured a photo of the April 10 aurora along with the comet in the northwest evening sky. Many of the members used Kodak Ektachrome P1600

film at either 400, 800 or 1600 speed. A local camera store had out of date stock, and we got it at half price. By the time the comet disappeared, we had bought out all the old stock.

Our meetings have changed to the second Friday of every month at 7:30 PM, and are located in one of the main Math and Physics building lecture halls, rooms 1001 or 1002 at Wilfred-Laurier University. John Beingessener brought our meetings into the multimedia age with powerpoint and html agenda and presentations.

Meetings included updates on current astronomy and space-exploration events, and often included constellation talks and short presentations by members on their current projects or photos. Main speakers included Jeff Collinson on meteorites and meteor collecting, Alan Ward from Sudbury on mirror coating, Ray Koenig on cosmology, and Matt Dance on terraforming Mars. Early in the year, our club had a joint meeting with the Hamilton Amateur Astronomers. Our own Oscar Cole-Arnal gave the main talk on Mercury. Oscar (known to many as Oz) became the ALPO coordinator for Mercury observations last year. The Hamilton group later came to one of our meetings, and among other things listened to Clark MacDonald talk about the CCD camera and observatory that he has built. In January, the club had its annual dinner at Angie's kitchen in St. Agatha, with about 35 members, spouses, and friends in attendance.

In 1997 we made a decision to do needed maintenance on the observatory at Ayr, and to refurbish the club scope, which has been in a state of disrepair for a number of years. By the middle of 1998, we hope to have this 12 1/2 inch telescope operational again. The mirror has been re-aluminized, the shafts are being re-plated and reground, and the drive gears are being recut. We hope the new scope to be used by a large number of the membership, as well as be used for star nights.

For the April 12 Astronomy Day, our club set up an exhibit at Conestoga Mall for the Friday night and Saturday. Weather prevented public viewing on the Friday night. A large number of members participated. Two telescopes, a SCT and a Newtonian, showed the public two different telescope designs, and a view of the other end of the mall. There was considerable public interest, especially in photographs and slides of comet Hale-Bopp, and of the previous year's Hyakutake.

1998 promises to be an exciting year with the formation of small interest groups, including astro-imaging, observing, telescope making, and observatory revitalization.

LONDON CENTRE

The year 1997 for the London Centre was an exciting one

— both as a club, and in the skies. The year itself has passed at an alarming rate and we now enter another New Year. We have had many things to celebrate this year, such as esteemed speakers, record numbers at meetings and in membership, and of course, our 75th Anniversary.

We have also undergone some changes this year — in executive members, where we host our meetings, and the decisions that go along with trying to construct an observatory.

Some of our esteemed speakers were Tom Bopp and David Levy in February. The guest speaker at our Anniversary was Paul Chodas, former Centre member, now professional Astronomer, and throughout the rest of the year a variety of others from our own club, the University and other Centres.

Our 75th Anniversary was a time to remember with 101 in attendance at dinner, and representatives from past presidents and other Centres across Canada.

We have enjoyed two dark sky observing sites in Sharon Creek and Fingal and had record numbers (~200) attending our observation of Hale-Bopp. We also gave Starnights to several local schools, Girl Guide troops, Scout packs, and at some of the local Conservation Area Campgrounds.

One of the changes we endured this year was the change in meeting place. For many years we have enjoyed the Common Room at Masonville mall, but they had the opportunity to rent that room to a paying retailer. Throughout 1997 we had been nurturing an affiliation with the London Regional Children's Museum, also performing starnights, etc. Luckily this affiliation made our finding a new home reasonably simple. This is where we currently enjoy calling home to our meetings and the reciprocal relationship with the Museum can only be described as beneficial.

In trying to construct our observatory we have had to make many decisions, and fill out a lot of paperwork. Some of the decisions we have been trying to make are what kind of observatory will be the most user friendly and do we want a permanent building or a mobile "warm-up" trailer? We are still working on this project, and it still evokes excitement in all members.

This is a quick sample of the London Centres achievements in 1997 and we look forward to an equally successful 1998.

CENTRE FRANCOPHONE DE MONTRÉAL

No report submitted.

MONTREAL CENTRE

It was a very busy year at the Montreal Centre which began

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with some sad news, the deaths of longtime members Francis Albert Stephen and Bob Venor.

George Ascroft scheduled an impressive list of guest lecturers throughout the year. The following is a list; Thomas Eversberg, Dimitri Photiades, Marc Seguin, Sergei Marchenko, Doug George, Nadine Manset, Dr. Anthony Moffat and Dr. Rene Racine. Our yearly springtime Townsend lecture was replaced by a David Levy and Thomas Bopp presentation on comets in particular comet Hale-Bopp. Occasionally, a presentation by a centre member kept everyone coming back for more. Contributors included David Shuman, Mark Bratton and George Ascroft. David Shuman's presentation was on 3D slides taken at the Stellafane amateurs Telescope makers convention. Special glasses where each lens is a polarizing filter (not the usual red and blue) were needed to view the slides.

Late in 1996 a committee was formed to organize activities for the Springtime arrival of comet Hale-Bopp. Chaired by Mark Bratton, the committee members (Phil Lebeouf, David Shuman, Bill Strople and myself) met a few times and organized three public outings (March 29, April 5 and 26) to The Morgan Arboretum to observe the comet. The committee managed to enlist the help of many other members. This is very fortunate because the outings attracted hundreds of interested persons on each of the three evenings.

Bill Strople organized Observers group meetings where several members shared their experiences, offered suggestions, and gave talks on astronomical subjects. Bill also organized several well attended observing outings to the out of town homes of Anne Maskell, Cathy Palmer Lister and David Ross and one outing to a provincial park/bird sanctuary in eastern Ontario.

In the communications department Frank Tomaras has manned the phones, responding to questions and keeping in touch with people who leave messages on the answering machines. Phil Lebeouf continued the expansion and maintenance of the Centre's Web page. Phil's efforts have made the centre visible in cyberspace.

Stew Marshall has worked tirelessly to maintain and upgrade the observatory. Renovating, installing safety lights, etc., is a time consuming job.

Production of our newsletter Skyward, continued without missing a beat thanks the editor Mark Bratton and many talented contributors.

The telescope rental program (RAScope) has seen a very successful year thanks to the advertising efforts of George Wade and the occasional but well timed articles in Skyward by Gary Angers reminding the members of the benefits of renting a telescope or binoculars.

Santiago Lopez, Secretary

NIAGARA CENTRE

The highlight of the year for the Niagara Centre was the opening of a new centre observatory. Completed last fall and located at the Chippawa Creek Conservation Area, the observatory has a unique roll-off roof design and currently houses a Meade DS-16 Newtonian reflector. This project was made possible by very generous donations of building materials from Dennis Maheu and John Nemy. Both Dennis and John, along with a dedicated group of centre members, were able to erect this facility over a weekend. Since its opening, the observatory has become a popular site for members and guests. Plans are being made for the installation of a CCD/computer system. As a condition of locating an observatory on this site, the Niagara Centre will be providing a series of annual observing sessions for campers and other visitors to the Chippawa Creek Conservation Area. An official opening ceremony will take place in 1998.

The monthly meetings of the centre were held in the LaMarsh Room of the main branch of the Niagara Falls Public Library on the fourth Thursday of the month, except for July, August, and December.

The following is a list of the speakers and topics for our general meetings in 1997:

- **January 23**, "Constellations from Whistler, B.C." by John Nemy
- **February 27**, "CCD Electronic Imaging" by George Fazekas, Monroe Community College; reports; slides
- **March 27**, "The Geology of Mars" by Dr. Brian Pihack; reports; slides
- **April 24**, "A Clearer View of the Galactic Neighbourhood" by Dr. Marshall McCall, York University; reports, slides.
- **May 22**, Members' Night: informal talks; reports; Comet Hale-Bopp slides
- **June 26**, "CCD Imagery" by Gene Witkowski, Buffalo Astronomical Association; reports; slides
- **September 25**, "Meteorites" by Jeff Collinson, Kitchener-Waterloo Centre; reports; slides
- **October 23**, Members' Night: astronomy videos; reports; slides
- **November 27**, "The Earth Companion Asteroid 3753 (1986 TO)" by Dr. Paul Wiegert, York University; reports; slides

The Niagara Centre had a busy year organizing presentations for community and school groups. These events consisted of slide presentations and observing sessions. Throughout the year, the centre also conducted public star nights at Guy Road Park in St. Catherines. On March 23, about four hundred people were in attendance

at the park to view Comet Hale-Bopp and a partial lunar eclipse. This event provided an excellent opportunity to promote astronomy and the RASC. An increase in membership resulted after this event. The centre also conducted a star night in September for astronomy students at Brock University, which also was very well attended. As in past years, John Fishleigh informed the local media of our public activities.

The Annual Banquet of the centre was held on April 19 at the Skylon Tower in Niagara Falls, Ont. There was a large turnout to hear our guest speaker, Peter Ceravolo, who spoke about "Adventures with Comets". The highlight of the evening was the showing of Peter's Comet Hyakutake video. Members of nearby RASC centres and western and central New York state clubs were also in attendance.

Now a long-time tradition, groups of Niagara Centre members attended Ontario's summer observing conventions — Starfest near Mount Forest, the Gateway to the Universe in Lisle, and the Huronia Star Party near Alliston. These events feature talks, workshops, swap tables, commercial displays, and of course, observing under very dark skies.

David Saunders, long-time editor of the Niagara Whirlpool, turned over the newsletter to our new editor, John VanOphem. The Whirlpool is now available in PDF format on the Centre's web site as well as at the national site. Members may now download the newsletter themselves or pick up a copy at the monthly meetings.

Looking back, 1997 was a busy and memorable year for the Niagara Centre, and we look forward to new challenges in 1998.

Ron Gasbarini, Secretary

OKANAGAN CENTRE

1997 saw more than a few changes for the Okanagan Centre, starting with a revamped Newsletter in January, followed by the introduction of a Centre Webpage later in the month (<http://www.bcinternet.com/~rasc>). Members in Vernon were treated to a talk by Dr. Bruce Aikenhead (former Director-General of the CSA, Astronaut Program). In March members began meeting in the new Regional Library building in Kelowna. Jim Failes spoke on "Photographing Comets" to a large audience. March was a particularly active month also seeing a standing room only crowd attend a talk on the HST given by Dr. James Hesser, as well as a public observing session featuring views of the March Lunar eclipse, Comet Hale-Bopp and Mars. As with most Centres, Okanagan hosted an Astronomy Day display on April 12th at the Library.

Unfortunately, the planned evening observing session

was clouded out. June saw members lending a hand at the grand opening of a local science centre, answering questions, and providing views through a number of telescopes.

November 10th saw another public observing session, this one was to provide views of the triple shadow transit on Jupiter. Original plans called for members to set up on the grounds of the Kelowna Library building. However, overcast skies prompted a last minute change of venue to the "Purdue Ranch" (an observing site owned by member KellyPurdue), well above the clouds.

The AGM held in November saw a few changes in the Executive. The membership breakdown (as of the AGM held on November 11th, 1997) is as follows:

Regular Members — 42
 Youth — 1
 Associate — 0
 Temporary — 0
 Total Members — 43

OTTAWA CENTRE

The Ottawa Centre membership for 1997 as of Aug. 31/97 was 229 members, consisting of 189 Regular, 7 Junior, and 33 Life Members. This number shows an increase over 1996 membership by 8 people.

At our annual dinner meeting, held November 22, 1996, Dr. Robert Garrison of the University of Toronto was our guest speaker. In celebration of the 25th anniversary of the Helen Sawyer Hogg Telescope, Dr. Garrison's talk was entitled "The Little Telescope that Could, Did, and Goes on Doing." He presented some of the trials and tribulations of running the 60-cm Helen Sawyer Hogg telescope at the University of Toronto's southern observatory in Chile. He stressed the need for a balance of large and small telescopes.

Also at our dinner meeting, the Observer of the Year Award was awarded to Peter Ceravolo for his time lapse photography of Comet Hyakutake. His twelve night sequence of over 600 photographs were combined by Doug George and Jon Buchanan into a unique time-lapse video showing the development of Comet Hyakutake's tail. Robert Dick won the Astronotes Article of the Year award for his article "Thawing the Winter Sky" which appeared in the March 1996 issue of Astronotes.

As usual, the monthly Observer's Group meetings were well attended with a wide variety of topics discussed and superb photos and videos shown. In Jan/97 the location of the Observer's Group meetings changed from Carleton University to the Museum of Science and Technology. This year, photos of Comet Hale-Bopp were very abundant at the meetings.

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The Light Pollution Abatement Committee was busy again this year. Rob Dick, and Terence Dickinson were invited to give a presentation at the "City Lights" conference held in Ottawa on Oct. 11-12, 1996.

Five Ottawa Centre members (Peter Ceravolo, Doug George, Jon Buchanan, Paul Boltwood, and Glenn LeDrew) collaborated in the production of a 45 minute documentary video highlighting two major photographic efforts undertaken in 1996 to capture the development of the tail of Comet Hyakutake. The video shows how the time-lapse astrophotography of Comet Hyakutake by Peter Ceravolo and the CCD imaging of the comet's nucleus done by Paul Boltwood were accomplished and how the team worked together to assemble the time-lapse video.

With the help of Yves Demers and others, the Ottawa Centre's web site has seen vast improvement during 1997. It can be found at "<http://ottawa.rasc.ca>".

A couple of public star nights were organised by Linda and Rolf Meier, at the Township of West Carleton Library facility in the Village of Carp at the "Diefenbunker" site. The annual picnic was once again held at Linda and Rolf Meier's on August 16, and was enjoyed by all those who attended.

Unfortunately one Ottawa Centre member, Bob Adamson, passed away this year. Bob had been coming to the meetings for the past six years or so, and while being severely sight impaired, he still enjoyed the fellowship he found at the monthly meetings, and was able to find pleasure in observing bright objects like the Moon or even Venus.

Ottawa Centre Council held three meetings this year: Oct. 4/96, Feb. 15/97, and June 25/97.

Jane Lund, Secretary

CENTRE DE QUÉBEC

L'année 1997 au Centre de Québec n'a pas été aussi exceptionnelle que l'on aurait pu le croire avec la venue d'une comète comme Hale-Bopp. Un certain essoufflement de ceux qui ont donné plus que généreusement de leur temps pour l'organisation des activités en est peut-être la cause. Il est cependant plus probable que tous les membres aient été fascinés par cette magnifique comète qui a accaparé tous leurs temps libre. Néanmoins 1997 est loin d'avoir été banale.

Le bulletin du club « La Chouette » s'est refait une beauté avec une allure plus professionnelle grâce au travail de notre éditeur Serge Gauthier et de ces nombreux collaborateurs. La première édition du répertoire des membres a vu le jour sous la direction de Marcel Fontaine qui a aussi obtenu de nombreuses

commandites pour le club.

Les soirées-conférences ont été nombreuses, diversifiées et intéressantes comme le démontre la liste suivante :

- **Janvier:** L'habillement hivernal M. Yoland Marcotte
- **Février:** La radioastronomie Mme. Nathalie Robitaille
- **Mars:** La recherche de vie extraterrestre M. Pierre Chasteney
- **Avril:** Présentation de l'« Observer's Handbook Plusieurs membres du Centre
- **Mai:** Annulée
- **Juin:** L'histoire des oculaires astronomiques M. Réal Manseau
- **Septembre:** La construction d'observatoires M. Luc Bellavance
- **Octobre:** Les observatoires du Mauna Kea M. Clément Drolet, Les observatoires du COAMND M. Denis Martel
- **Novembre:** Présentation du logiciel Képler M. Denis Martel
- **Décembre:** Les impacts météoritiques M. Damien Lemay

Toutefois la conférence du 5 novembre 1997 demeurera la plus mémorable de toutes puisqu'elle a été perturbée par un tremblement de terre dont l'épicentre se situait à environ 15 km et qui a atteint une magnitude de 5,2 à l'échelle de Richter.

La deuxième édition du marathon Messier a obtenu un succès mitigé en raison de l'humidité importante en début de soirée suivie plus tard d'un ennuagement complet. Les plus tenaces ont quand même pu observer la comète Hale-Bopp au dessus de l'horizon nord-est.

L'activité organisée lors de la journée internationale de l'astronomie au Domaine de Maizerêts a attiré quelques visiteurs et quelques membres. La faible participation à cet événement est peut être attribuable en partie à l'attrait des « Floralties 1997 » qui se tenaient au même moment au Centre des Congrès de Québec.

Une corvée dans le but de faciliter l'accès au terrain de l'observatoire Alphonse Tardif a été organisée au début juillet. Plusieurs membres ont participé à cette activité qui s'est terminée par un « party » de hot-dog suivi d'une soirée d'observation. Les membres qui le désire peuvent maintenant utiliser leur automobile pour amener leur matériel d'observation sur le site. Les soirées d'observations en 1997 n'ont pas connu le succès des deux années précédentes, mais ce n'est que partie remise.

La traditionnelle « Épluchette de blé d'inde - Soirée d'observation » au Centre d'observations astronomiques des Monts Notre-Dame (COAMND) a eu lieu à la fin août et ceux qui ont eut le courage de s'y rendre ont pu

constater qu'il peut pleuvoir à Québec et que le ciel soit dégagé à St-Luc.

Un comité de lutte à la pollution lumineuse a été créé lors de l'assemblée générale annuelle. Malheureusement ce comité n'a pas encore pris son envol et est entrain de faire le plein d'énergie et d'idées.

La dernière année a mis en évidence une augmentation du nombre de membres réguliers en regard du nombre de membre adjoints. Cette mutation est probablement attribuable au nouveau format du « Journal de la Société royale d'astronomie » et à la distribution du magazine Ciel-Info. Cette modification est un signe évident que les efforts de ceux qui se sont occupés de la revitalisation des publications de la Société royale d'astronomie du Canada ont eu un impact et porteront des fruits dans les années à venir.

Clément Drolet, Secrétaire

REGINA CENTRE

It was a busy year at the Regina Centre in 1997. This spring the highlight was Comet Hale-Bopp in March. Using Fr. Lucian Kemble's telescope at Lumsden, Sask, Al Andrew's took some fantastic pictures of the comet on the night of March 10. One of these pictures was published in the REGINA FREE PRESS on March 19. This comet broke the spell of a long cold prairie winter for most Regina Centre members as most tried their hand at taking pictures.

The centre was glad to host a visit from RASC President Doug George on May 14. He was the guest speaker at our meeting on that occasion. His topic was "Next Generation Astronomical Imaging. The talk was enjoyed by all who could attend the meeting.

We held our annual Summer Star Party on June 7, 1997 at Davin Observatory. Our membership was pleased that SaskTel had generously donated \$250.00, on behalf of our Regina Centre. This donation helped to facilitate the purchase of new equipment which included an eyepiece, Telrad and Barlow lens. The Star Party was started with a barb b-q. After filling up on hotdogs, hamburgers and soft drinks, the observing began at dusk.

Other observing dates at Davin Observatory were held proceeding or following the weekend of the new moon. This year most nights were warm, dry, and most important, had no mosquitoes. Most of these nights you could have found Al Andrews or Al Halyk enjoying the night sky by either taking pictures of deep space objects or looking at them through a telescope. Observing extended well into the late fall thanks to warm clear weather.

On July 4-6th the Saskatoon and Regina Centres hosted the Saskatchewan Summer Star Party at Cypress

Hills Interprovincial Park. It turned out to be a huge success. Many thanks goes out to the members of the Saskatoon Centre and Regina Centre for their hard work. The main benefit were closer links between the two Centre's members and new friends from all over western Canada and northern U.S. have been made. At the Star Party Regina centre members put on a public astronomical night. About 50 attendees were present and took their turns looking through each of the four telescopes set up by Al Andrews, Robert Klein, Al Halyk and Ross Parker. The Cypress Hills Park's naturalist was very pleased with the Regina Centre's efforts on putting on this event for the public.

During the monthly meeting on September 26th Ross Parker gave a demonstration on how to find astronomical information on the internet. Where to download shareware astronomical programs and a short explanation on how to use some of these programs.

At the monthly meeting on October 24th Al Andrews showed slides of the pictures he took this year using the Centre's 10-inch Meade Schmidt-Cassegrain telescope. The highlights were his pictures were of deep space objects.

At the monthly meeting on November 27th Fr. Lucian Kemble showed slides of different atmospheric conditions that he had observed over the years. The slides of the northern lights were most magnificent. Most were amazed by the colors and patterns that were captured on the slides.

The year wound up with the annual Christmas party held at Al Andrew's home.

Ross Parker, Secretary

ST. JOHN'S CENTRE

The St. John's Centre had an interesting year from 1996 to 1997. The Centre continued to carry out an active programme of meetings, public displays, and educational programmes.

Public education included our astronomy course in conjunction with MUN. The course had 13 take part in 1996, and by all accounts went well. The only difficulty was in finding some clear nights in order to have a hands-on session at the telescopes!

Comet Hale-Bopp was the focus of most of our public efforts for the year. Many of our members observed comet Hale-Bopp. The Centre was involved in a number of efforts with small groups such as Boy Scouts and Girl Guides, particularly with the comet in the sky causing added interest. Many members took pictures of the comet, most of which were successful.

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Chris Stevenson in particular managed to get some of his published in SkyNews.

Chris and Phil McCausland appeared on the CBC Crosstalk radio show several times during the year, mostly around the period when comet Hale-Bopp was visible. This was well received by the public and also brought in many people to our Hale-Bopp meeting in March.

The March public meeting began with observing Hale-Bopp outside the Chem/Physics Building for almost an hour — with Centre scopes plus member's own equipment, mostly binoculars. However, clouds moved in and the meeting had to get started at some point! There were many new faces for this special comet meeting. The comet video on Hyakutake by Peter Ceravalo et al was shown. Members discussed their observations, mostly of the comet, and pictures (guided and non-guided) were shown.

Public observing nights at Signal Hill were held in conjunction with the National Park. It was estimated the numbers over the 3 nights (really 1-1/2, due to weather) were in the neighbourhood of about 400-500. The nights went really well and it was fun to see such a large number of people interested in the comet. Members had their hands full dealing with a large number of questions about the comet and line-ups at their scopes.

The Centre had public star-nights with some talks at Butterpot park on August 9th, and at the Star-B-Que on July 25-27 at Terra Nova National Park. We are trying to start something at Butterpot as part of our relationship with the park. Butterpot allows the Centre year-round access to a fairly dark observing site and a nearby building to store the Centre's 12" telescope. It is hoped we can keep this event up from year to year in order to further relations with the park and have an educational night in a nearby location.

One of the humorous high-lights of the year occurred when Garry Dymond showed his greatest discovery to date, the aptly named "Dymond meteor-wrong". Out of curiosity he brought it to provincial geologists who work close by in his building. After a few tests it was concluded that it wasn't very likely to be a meteorite. This meteorite look-alike he intends to use in his talks with outside groups as an example of what a meteorite might look like. He still has his suspicions though as to who might have placed such a likely-looking chunk of rock in front of his house, just where it could be easily found, round about April 1. The latest word is that this chunk of rock may be undergoing some further testing as it is not completely ruled out as a meteorite. Who knows?

Most of the rest of the Centre's activities occurred at our monthly public meetings. In December we had Fred

Smith present a biography of Dora Russell, one of our most well known early members. Phil McCausland also gave an account of the books to be found in the Dora Russell collection. This September we tried a slightly different idea: Brian Payton, Chris Stevenson, and Garry Dymond each gave a mini-talk on astrophotography. All together it added up to a good introduction to the subject for the beginner. Perhaps we could use this format in the future to get more members involved in our monthly meetings.

In May we had a talk by Charles Robertson, a graduate student at MUN. The talk concerned an experimental VR planetarium using a VR headset. Many of our members got an opportunity to try out the virtual planetarium and were impressed with its potential. Our very own President provided some amusing moments as members directed him during some moments of confusion via the simultaneous screen presentation of his point of view within the gameset. In a good-bye to Comet Hale-Bopp many members showed both old and new pictures of the comet. Fred Smith also had pictures of his ice "sea monster" and an otter in St. John's harbour. Gary Dymond very neatly displayed the comet along with superimposed sky charts. With a photocopier he managed to attain an accurate line-up, showing details of all the objects in his comet photos.

Despite the unanticipated low numbers (probably due to an unaccustomed date for the meeting), the best meeting of the year was the visit by the RASC National President, Doug George. The talk was about new methods of imaging astronomical objects for the amateur. It mainly concentrated on the use of electronic CCD imaging. Doug emphasized the type of stable, fine-focus telescope required and also gave a good overview of the basics of how a CCD camera works. With the principles outlined, he went on to explain how images could be taken, and then later processed so as to bring out features that are not immediately apparent, due to noise, seeing, and the imperfections in the instrumentation (including scope and camera). Also mentioned, however, were the uses that the newer high ISO (formerly, ASA) films could be put to. The strengths and weaknesses of both the CCD camera and film were covered.

Phil gave a talk, "The Human Exploration of Mars," to the Centre as preparation for a much shorter talk at the GA later on in the summer. Basically, why is human exploration of Mars desirable, or even, perhaps, necessary? What makes Mars such an attractive object for human exploration, as opposed to other objects? Phil's talk went over well and I understand he did well with it at the GA.

The Centre had its 12" mirror resurfaced. A Telrad for the Star-Gazer Steve was bought and fitted. This is a much better scope for beginners now. This scope turned

out to be a real nice addition to the Centre's equipment. Total cost for these two upgrades was around \$340.

The Executive are trying to create a relationship with the Marine Institute to get some access to the only permanent planetarium in the province. This should be mutually beneficial, as the Institute would like to see the facility in use. This seems to be going places.

Radio astronomy group: A Jupiter scope is finished and an interferometer is well on the way, with mainly final check-out and purchase of antennae required. Chris Stevenson has picked up signals from Jupiter with his own scope using copper tubing, and a consumer short-wave receiver. Not much has been done with the 10-foot permanent dish antenna. We are still considering where the best place to set this up might be and working our way up to dealing with it via smaller projects.

There are over 23 registered for the astronomy course in 1997. We have plans for a follow-up advanced astronomy course in January, already advertised along with the regular course.

The Centre took part in the National Science and Technology Week on October 23rd. The open house at the TSC gym in MUN runs from 10 a.m. to 3 p.m. and usually draws about 6000 kids from the schools, making it the largest event in the Week across the country. Our Centre is glad to make a contribution.

Good luck and clear skies!

David Bourgeois, Secretary

SARNIA CENTRE

For the year of 1997, several plans had been made, but as I had heard from someone awhile back, 'We made plans, and God laughed!'. This year has been quite poor in comparison with those of prior years. The year was started with us having the occasional meeting at a member's home. These were pleasant to say the least, and at times memorable. This continued for the first few months of the year. After this, with no luck in finding a room to hold meetings, other options were considered. One choice was to hold a star party in place of a meeting. A time and place were agreed upon, but the skies were overcast on the day of the party, and it continued for number of days.

As summer approached, we began to plan for this region's Hobbyfest. Sarnia has what is called a Hobbyfest, every August. For one day, from 10 A.M. to 4 in the afternoon, people with various hobbies come out to show the public at large, the many fun and interesting ways to relax and enjoy life. Over 57 different groups showed up, including for the first time, a Star Trek fan club, haha. The next day there was a quarter page in the local

newspaper about them. A good time was had by all who were present at our table.

I am sorry to say that after the summer, we had maybe one or two more meetings, with another try for a star party. Nothing but clouds on the night for the party. We are still in search of a room where we can have regularly scheduled meetings, maybe this year we'll see a turn around.

Until next time, clear skies!

Jim Selinger, Secretary

SASKATOON CENTRE

This has been a very busy and exciting year for the members of the Saskatoon Centre. Sandra Ferguson's Junior and Youth Group Astronomers has been a very successful program and has been growing by leaps and bounds.

The Observers' Group and the astrophotographers have been quite active. The first Saskatchewan Summer Star Party held at the beautiful Cypress Hills provincial park in July was a smashing success with two hundred registrants. Thanks to the many volunteers who worked tirelessly to make this possible.

Our centre together with the physics department at the University of Sask. has acquired three acres of land (an old Heritage school site) from a group in Colonsay, a town approximately fifty kilometers east of Saskatoon where the night sky is extremely dark. With dedicated volunteer help an 11' x 14' warm-up shack was relocated from our old observatory site to our new location and about four hundred feet of trenching was done and electrical cable buried to complete phase one of a multiphase plan for a new observatory at the Colonsay site. In time multiple domes and at least one large roll off shelter will exist at the new site. This will require vigorous fund raising to bring to fruition.

With all of the above activity members still found time to volunteer to help at an excellent display at one of the local malls for Astronomy Day. Also several public starparties were given and several talks were given to special groups and many talks, displays and demonstrations were given throughout the year to school classes.

Saskatoon Centre General Meeting Programs for 1997

- **January 20:** The Volcanoes of Io; Tidal Pumping by Zack Drew; Fighting Light Pollution by Rick Huziak; Astronomy for Kids by Sandy Ferguson.
- **February 17:** Using the Observer's Handbook by Gord Sarty; The Noctilucent Cloud CAN-AM Program by Mark Zalcik (Edmonton); Finding The Sleaford

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Schoolhouse Observatory Site - by Erich Keser

- **March 17:** No program. Sleaford Observatory Business Meeting
- **April 21:** The Hale-Bopp Extravaganza by Bill Hydromako, Brian Friesen, Don MacKinnon, Darrell Chatfield and Gord Sarty; SSSP Visits to the Edmonton and Calgary Centres and the Lethbridge and Medicine Hat Astronomy Clubs by Erich Keser and Rick Huziak
- **May 12:** Using the Observer's Handbook - Jupiter - by Gord Sarty; The Infrared Space Observatory (ISO) by Dr. Garry Davis (Institute of Space and Atmospheric Studies, U of S).
- **June 16:** The Steward Mirror Spinning Laboratory in Arizona - by Winston Quan; The New Generation of Space Telescopes by Les Dickson
- **July 4 - 6:** The Saskatchewan Summer Star Party at Cypress Hills, Hosted jointly by the Saskatoon and Regina Centres. 197 attended!
- **August 10 - 12:** Perseid Meteor Counts – We saw the sharp, new spike!
- **September 15:** The 1997 General Assembly by Ed Kennedy; The 1997 Cypress Hills Star Party by Erich Keser, Darrell Chatfield, Kim Mysyk and Sandy Ferguson; The 1997 Noctilucent Cloud Season in Review by Rick Huziak
- **October 20:** Huziak's Variable Star by Rick Huziak; The Sleaford Observatory Community Open House by Erich Keser
- **November 17:** Meteorites and Impacts by Dr. Mel Stauffer (U of S Geology, MIAC) Construction Activities at the Sleaford Observatory by Darrell Chatfield
- **December 15:** 50 Years of Observing – A Celebration in Slides by Fr. Lucian Kemble (Calgary Center); A Possible Large Scale Impact in Greenland - Strange Science on the Internet - by Rick Huziak

Al Hartridge, Secretary

THUNDER BAY CENTRE

Nineteen-ninety-seven was a great year for insomniacs and camera buffs. Comets ruled the skies and here in T. Bay we had great skies for viewing Hale-Bopp. The comet provided an opportunity for some of us to take incredible pictures, every bit as good as those witnessed in the astronomy magazines. For others, it was frustrating but profitable for Kodak.

The club was privileged to have a guest speaker to talk about the weather and how it affects viewing. We had an astronomy course on the local channel that included half hour films on various astronomical topics and we managed to view a different film at each of the meetings which proved very informative and provided

structure to that part of the meeting.

It was a busy year for workshops and star parties. We have Ted Bronson to thank for his outstanding effort in organizing and hosting these well-attended events. The comet offered a great venue for inviting the public to join in. Ted also conducted a six-week course on astronomy at our local college. It was a beginner's course and received full attendance and rave reviews. The course provided other club members practice talking about various topics in front of an audience and was directly responsible for a substantial increase in membership for the 1998 season. Thank you Ted.

Sadly, on March 6, Bob Bishop passed away. A great loss not only to those who knew him but the community at large, as Bob was active and a vital part of many organizations. Bob's wife Beverley still attends the meetings and provides silent moral leadership and we all love her.

Dave Galley, Secretary

TORONTO CENTRE

Over the past year members of the Toronto Centre have settled into their new home at the Ontario Science Centre. We have certainly put to good use the excellent audio visual and computer display facilities made available to us for our Wednesday evening program of Regular Meeting speakers and Members' Nights presentations.

Meetings:

Our program of Regular Meeting speakers was organized by Ivan Semeniuk and thanks are certainly due for arranging a very interesting and diverse group of speakers. The presentations were:

- **October 27th:** "The Crab Nebula in Motion", by Dr. Michael Bietenholz
- **November 20th:** "Chaos, Comets and the Kuiper Belt", by Dr. Martin Duncan
- **January 22nd:** "Where's Waldo? The Search for the Counterparts of Gamma Ray Bursters", by Dr. Dale A. Frail
- **February 19th:** "A Time for Comets", by David Levy and Tom Bopp
- **March 19th:** "Destroying Proto-Planetary Disks in Orion's Trapezium", by Dr. Douglas Johnstone
- **April 23rd:** "The Unseen Galaxy: Pushing Back the Optical Frontier", by Dr. Ian Shelton
- **May 21st:** "Robots Return to Mars", by Philip Stooke
- **September 25th:** "Earth's Asteroid Companion", by Dr. Kim Innanen.

Chaired by Guy Nason, the Observational Activities Committee organized 11 Members' Nights where 36 presentations were made. Topics included: the tenth anniversary of Comet Halley; lunar crater drawing; solar and lunar eclipses; The McLaughlin Planetarium; computerizing photoelectric photometry; organizing a Messier marathon; Comet Hale-Bopp; the AAVSO; Star Hill Inn; Mars Pathfinder mission; Space Station Mir; and several videos from NASA television.

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.

The Lunar Occultation Team conducted a very chilly but successful expedition to observe and time the grazing occultation of Aldebaran. Twelve members produced the world's first scientifically useful data in the current Aldebaran season. Their results were sent to the International Occultation Timing Association in the U.S.A. and to the International Lunar Occultation Committee in Japan.

The Hobby Show is becoming the Toronto Centre's first major public event in the annual membership year. This event, which was coordinated by Robert Taylor, ran from November 8th to 10th at the International Centre in Mississauga. This was the Centre's second year of participation and our booth was very well received by patrons of the show. This show draws attendees from all over southern Ontario and contacts to many neighbouring Centres were also distributed.

After the "zoo" of activity surrounding Comet Hyakutake last year, this year's Hale-Bopp programming was comparatively low-key since everyone could go out into their backyards and see it almost anytime they wanted to during the winter and spring months.

Our Regular Meeting on February 19th, featured a special presentation by Tom Bopp and David Levy on the topic of their independent discoveries of the comet in which they recounted the exciting and sometimes humorous aspects of that memorable event. The Centre also participated in a special activity in a Hale-Bopp Watch with the Ontario Science Centre at the Kortright Centre for Conservation on April 11th. Unfortunately, that event was clouded out.

Astronomy Day on April 12th, was also clouded out but consisted of a daytime display at the Ontario Science Centre and an evening observatory open house at both the University of Toronto and York University.

More clouds prevented solar observing at the

Astronomy Family Sunday on April 27th at the Royal Ontario Museum. This activity is now becoming the major annual astronomy event at the ROM.

Summer Public Star Nights got a great start this year courtesy of the fortuitous timing (and of course success) of the Mars Pathfinder landing on July 4th. Our first night, that of July 7th, saw upwards of one hundred and fifty people at Humber Bay Park West and up to four hundred at Morningside Park. CFTO News and CITY-TV also aired TV news segments shot at Humber Bay Park West. This was followed by a public Pathfinder lecture at the Ontario Science Centre on July 9th. Our other star night for the public on August 11th occurred on a hazy night and the crowds were much smaller.

The Centre continued to satisfy the astronomy orientation needs of schools and the various youth sections of Scouts Canada and Girl Guides with our group talks and star parties. At least twelve such events were presented by Centre members Randy Attwood, Robert Chapman, John Ginder, Robert May, Tom Quigley and Steven Spinney.

DDO Saturday Nights honour the Toronto Centre's tradition of helping out the staff of the David Dunlap Observatory with their Saturday night public viewing program. Several of our members including John Ginder and Tim Hunter brought out their telescopes on clear nights from April 12th to October 4th, 1997 as well as on a special lecture night on September 18th.

For the past year the Centre's newsletter SCOPE has been very nicely produced under the direction of its editor Mike Cook. Mike has taken SCOPE that leap into an entirely digital format which has streamlined its assembly and production. Over the past year articles have featured members' works on such varied topics as: astronomical poetry; observing reports; star parties; computerized photometry; and cosmology. This past year also marks the first anniversary of the establishment of the Centre's web site which was crafted and is maintained by Mike Cook.

The Thirteenth Annual Awards Banquet was held on Saturday, April 19th, at the Toronto Marriott Eaton Centre Hotel. Following a delicious dinner, guests were treated to an excellent presentation from our guest speaker, Fred Espenak from the NASA/Goddard Space Flight Center. His topic was a favorite for many Toronto Centre members. "Predicting and Chasing Solar Eclipses". Two Toronto Centre awards were also presented.

The 1996 winner of The Andrew Elvins Award for efforts toward the promotion of interest in astronomy and the Society among the general public was Kirsten Vanstone.

The 1996 winner of The Bert Winnearls Award for individuals making significant contributions towards the

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operations of the Centre was Tony Horvatin.

The numerous door prizes were also provided by our guest speaker, Fred Espenak.

As of September 30th, membership of the Toronto Centre included 591 regular, 15 youth, and 81 life members for total of 687. It is with regret that I must report on the death of one of our members, Mr. John D. Vickers of Sarnia, who was a member since 1980.

On an unfortunate note, activity in the Centre's Optical Workshop continues to be on hold as of the closing of the McLaughlin Planetarium. The workshop has since been unavailable to members to work towards their telescopes. The chairman of the optical workshop, Michael Nunns, is searching for a new location to allow the continuation of the workshop's activities as it is felt there is little chance of gaining access to the Planetarium's workshop in the near future.

Our annual open house at the David Dunlap Observatory was held on September 14th. I extend grateful thanks to Dr. Ernest Seaquist, Dr. Tom Bolton and their staff for the kind hospitality shown to us.

On behalf of the Toronto Centre, I would like to thank all those many volunteers whose generosity of their efforts made possible the activities mentioned briefly herein. Thanks also go to Fr. James Casper and St. Joan of Arc Church for allowing Council the use of their meeting room. Thanks must also go to the Ontario Ministry of Natural Resources and Camp Robin Hood for their kind permission to use their grounds for our observing activities. Finally, I extend thanks to Dr. Sid Katz and the Ontario Science Centre for very kindly allowing us to use their facilities.

Tony Horvatin, Secretary

VANCOUVER CENTRE

Another year has come and gone, it does seem hard to believe that time can go that fast. First I must correct an error from last years report that was credited to me when it was actually written by our previous secretary Craig Breckenridge.

This year started with horrible weather in the form of a blizzard, yes a blizzard on the west coast. The bad weather continued until summer clearing, only on the occasional full moon. I have checked my Messier list which shows almost none from the spring section, this winter I have a better feeling about.

On March 24 we had a spectacular night watching Hale-Bopp and a near full eclipse of the moon at the same time. Our Club joined with the Pacific Space Centre in a public event at Jericco Beach. The crowds were incredible, people everywhere. I saw a large group around what I

thought was a telescope, I setup my binoculars on a tripod and attracted my own crowd. I never managed to join up with the rest of our group which was also swamped with curious people.

The Canadian Amateur Research Observatory (CARO) has seen first light. Teething problems common to projects as large as this have prevented full scale operation. With the telescope, computers, CCD, and building ready and tested, full scale operation is awaiting good weather and no moon.

The Club had a long list of very interesting speakers throughout the year starting in January with Jaymie Matthews. His interesting and amusing talk gave an alternate view of several of the recent planetary discoveries around nearby stars.

February's meeting had Tim Davage speaking on the construction of the Gemini Telescope complete with photographs and a Web Site address that had photos of the construction site updated several times daily.

March brought us Dr. Chris Watham of Triumf talking on the construction and operation of the Sudbury Neutrino Observatory. Just the thought of an "observatory" 2000 meters underground was enough to peak my interest.

The April meeting was taken up by members photos and often amusing commentary on the trails and tribulations of photographing the comet Hale-Bopp.

In May Doug George President of the RASC spoke to us on the CCD revolution showing his remarkable photos. It was enough to make me consider the purchase of such equipment.

In June Mark Halpren gave a lecture on the Physics Behind the Big Bang. He showed the launch of a huge balloon from Texas that reached extremely high altitudes. He brought with him an antenna made of composite materials that was unbelievably light, to be used in a satellite for research on the Big Bang.

In July there was a very interesting Planetarium presentation entitled "China Skys" about the ancient Chinese astronomers and their observations going back more than 4000 years.

August was time for another Members night which are always enjoyable as members relate their own experiences. September was another favorite of mine — Lee Johnson's Amateur Hour. These presentations are notable for content that is always of interest to members, as well as Lee's "Turn of a Phrase".

Dr. Craig Falman entertained us in October with a very absorbing talk on Gravitational Lensing. He provided Hubble Space Telescope photos that very clearly showed this phenomena.

Vancouver member Karen Story came to talk to us on Remembrance Day on rather short notice. Her presentation was on personal trips to Egypt and the

Pyramids of Geeza over the last 20 years, and then relating the history of the Pyramids and their connection to astronomy, most notably the connection between the three Pyramids positions and the constellation Orion.

December was the AGM and the wrap up of a very interesting year from Vancouver Centre.

VICTORIA CENTRE

The past year turned out to be an exciting one for the Victoria Centre. A new council had been elected with Bill Almond as president, Sandy Barta as vice-president, Frank Jones as treasurer, David Lee as secretary, David Luttmann and Scott Roberts as newsletter joint editors, Sid Sidhu as librarian and director of telescopes and Gary Shearman remained as national rep.

Around the turn of the year the centre couldn't make up its mind whether we did or didn't want to host the 1998 GA. The truth is, no one wanted to go through the process of organizing a GA through the University of Victoria's monolithic organizational structure. Then, out of the blue, Gary Shearman came up with an idea: why not bypass the university and hold the GA at the smaller Lester B. Pearson College of the Pacific, where just two people would be involved in making decisions. This was the breakthrough we'd been waiting for. The idea was enthusiastically adopted and we formally notified the national council of our decision.

When national had notified us that they accepted our offer we all took a collective gulp and decided that the earlier we got started, the better! By the time June rolled around we had successfully gathered a planning committee to look after the multitude of details that a four-day assembly required.

Most shared the feeling that now that we had committed ourselves we should roll up our sleeves and get busy. No one had to be sweet-talked or coerced into leading a sub-committee, though a few wondered if we were all slightly mad for offering to host the GA, and raving lunatics for attempting it! What gave everyone the biggest scare was the discovery that few of the old-timers, who'd cut their teeth on organizing GAs many moons ago, had offered their services this time around. Instead, they offered reassuring words that they would always be there with advice if their help was needed. Well, that was better than nothing at all and as it turned out they were as good as their word. In fact, Alice Newton, who has been heavily involved in past GAs, and who initially said she couldn't find the time to serve on a committee, later changed her mind and decided to jump aboard, much to everyone's relief! Some on the committee, like myself, had never attended a GA and didn't have the foggiest idea what was involved, while others, who had attended GAs,

spent most of the first couple of meetings patiently explaining what was what. However, the fog soon lifted and we all started to feel confident that we could pull it off.

With myself voted in as planning committee chairman, with nothing more going for me than the fact that I was the centre president, we soon had a committee. Gary Shearman, our national rep., took on the program and speakers sub-committee; Frank Jones, the treasurer, accepted the registration sub-committee; site arrangements went to Don Dundee; hospitality and special events to Alice Newton, and exhibitions and displays to Keith Rawcliffe, Sid Sidhu and David Lee.

Since those shaky early days we entered 1998 with most of the preparatory work wrapped up. The timeline had been completed, speakers had been contacted, tours had been decided on; accommodation, meals, the wine and cheese party and the banquet had all been taken care of – and an article promoting the 1998 GA in Victoria is scheduled to appear in the February issue of *The Journal*. Frank will have the registration papers ready for mailing in January and David will be posting them in the GA's web site around the same time.

The Victoria Centre is looking forward to this wonderful opportunity to extend our friendly west coast hospitality to all members of the RASC next June. See you there!

Here's a quick round-up of other news. Membership is slowly increasing, though we are finding it difficult to hold on to new members. We continued a beginner's observing program, dedicated to new members who know nothing about the night sky and created a liaison team of Sandy Barta and Eric Schandell to give them someone they can be comfortable talking to. Our elementary school telescope loan program stays in the capable hands of Sid Sidhu, who runs it with commendable efficiency, and Jack and Alice Newton invite all the advanced amateurs to their home every third Wednesday for CCD imaging. Members are being encouraged to involve themselves in photography and drawing at the eyepiece and Jack Newton, Bill Almond and Jan Wisniewski are pushing ahead with their CCD imaging.

Bill Almond, President

WINDSOR CENTRE

In 1997 the Windsor Centre had the best year yet in total membership, 72 people! Comet Hale-Bopp put on a great show for us in the Windsor area and helped in the achievement of having a record number of members.

At our last Annual Meeting on November 19th, Susan Sawyer-Beaulieu, David Marchand and Frank

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Shepley received membership certificates for their services in the Centre.

The Centre had a great Astronomy Day display at Devonshire Mall once again on April 12. As well in April, we presented an exhibit at the Earth Day festivities.

We also had a fine observing social at Frank Shepley's place on the 14th of June. At our June membership meeting, John Hurley was given a special award for his many years of service as Treasurer and for other things he'd accomplished for the Centre. He married Peggy Torney (president of the Kingston Centre) on July 5th, after the G. A. and now lives in Sharbot Lake, Ontario. We wish him and Peggy the best!

Susan Sawyer-Beaulieu fulfilled the responsibilities quite well, in her first year as President of our Centre. The Windsor Centre had 9 membership meetings, 4 Council meetings, and 2 socials; one for observing and the other indoors.

Appreciation is expressed to those persons involved with Centre events.

Membership meetings were as follows:

- **January 21:** Dr. William Baylis, Honorary President,

Quantum Theory and Gravity

- **February 18:** Members' Night: Jim Meredith spoke on the Bermuda Triangle and Tim Bennett showed slides of Comet Shoemaker/Levy 9.
- **March 18:** Frank Shepley spoke on Galileo Probe results.
- **April 15:** Steve Pellarin and Frank Shepley, Surfing the Heavens
- **May 20:** Randy Groundwater and Susan Sawyer-Beaulieu, Comets galore
- **June 3:** Doug George, President: RASC talked about CCD and Astrophoto Imaging
- **September 16:** Joady Ulrich, Cosmic Revelations from Hubble
- **October 21:** Members' Observing Night
- **November 18:** Ed Robinson spoke on spectroscopy

C. Joady Ulrich, Secretary

WINNIPEG CENTRE

No report submitted.



1997 General Assembly in Kingston, Ontario. Plan to attend the 1998 General Assembly in Victoria, B.C.!

CENTRE TREASURER'S REPORTS FOR FISCAL YEAR 1997

	Calgary	Edmonton	Halifax	Kingston	Kitchener -Waterloo	London	Montréal	Niagara	Okanagan
REVENUE									
Membership fees - regular	8250	2741	2352	5556	988	689	3012	1207	623
Membership fees - basic surcharge	2000	701		690	100	180	1277		
Membership fees - special surcharge	330			67					
Life membership grants	216	130	432	115		72	187	43	
Donations	2	31	3599	101	370	824	252	726	
Fundraising		44	680			147	360	110	
Educational activities	3575								
Interest and dividends	266	524	74	4		151	4564	2	
Sale of Observer's Handbooks - net	79		123	38		127	-234	-19	
Sale of RASC Calendars - net	435	210	151	201	60	20	-126	89	33
Sale of Beginner's Observing Guides - net	215		201	28		53	-218	-68	
Advertising						150			
General Assembly - including travel grants		360							
Miscellaneous	180	2861	729	3719	30	26	122	75	325
TOTAL REVENUE	15548	7602	8341	10519	1548	2439	9196	2165	981
EXPENDITURES									
Fees remitted to National Office*	4965		702	3834	593		1057	76	540
Library		232					445		
Meetings		354	198	107		4	216	413	10
Newsletter	2489	1581	927	1003		510	1316	656	243
Annual dinner - net	563	144				2126		55	
General assembly - including travel grants									
Equipment and supplies		8184	189	181		66		224	25
Office administration		49	82	69			673		
General expenses and audit	1700	8		55			156	7	12
Educational activities	1540	692	25	490		25			
Insurance	1469		500				1073		
Awards and donations	83	19	20	92			105		
Observatory	767		6427		840		1409		
Miscellaneous	768		660	2892	105	528	10	711	171
TOTAL EXPENDITURES	14344	11263	9730	8723	1538	3341	6460	2142	1001
SURPLUS OR (DEFICIT) ON OPERATIONS	1204	-3661	-1389	1796	10	-902	2736	23	-20
BANK BALANCE FROM PREVIOUS YEAR	19142	38462	14754	1250	1716	5223	4940	1721	201
BANK BALANCE END OF YEAR	20346	34801	13365	3046	1726	4321	7676	1744	181

	Quebec	Regina	St. John's	Sarnia	Saskatoon	Thunder Bay	Toronto	Victoria	Windsor	Winnipeg
REVENUE										
Membership fees - regular	2728	339	753	101	1751	589	21723	3497	966	2652
Membership fees - basic surcharge		92			264					869
Membership fees - special surcharge					25		295	10	14	
Life membership grants				14	58		1915	43	14	14
Donations	90	486			871	50	1562	71	1544	51
Fundraising		516							336	269
Educational activities			634		4284				50	100
Interest and dividends	123	1	52	1	4		1785	92	64	105
Sale of Observer's Handbooks - net		14						42	30	
Sale of RASC Calendars - net		15	110	68	44	4		343	4	76
Sale of Beginner's Observing Guides - net			55					200	95	6
Advertising	190				25		100			
General Assembly - including travel grants			292						103	
Miscellaneous	900		94		148		9839	3319	278	
TOTAL REVENUE	4031	1463	1990	184	7474	643	37219	7574	3527	4142
EXPENDITURES										
Fees remitted to National Office*	962				1072	252	13650	2241		1638
Library	62	120	493					163		
Meetings	185	114	43			30	836		216	97
Newsletter	654				868	7	5599		520	464
Annual dinner - net							2441	1326	144	
General assembly - including travel grants			292					591	103	
Equipment and supplies	79	320	57		311		5779	2273	1038	291
Office administration	625		70	14						
General expenses and audit		10				18	2017	311	221	
Educational activities					3328		530			
Insurance					288					595
Awards and donations									81	
Observatory	448	260	371		50					200
Miscellaneous	1444		164	103	52		7678	2307	241	28
TOTAL EXPENDITURES	4459	824	1490	117	5969	307	38530	9212	2564	3313
SURPLUS OR (DEFICIT) ON OPERATIONS	-428	639	500	67	1505	336	-1311	-1638	963	829
BANK BALANCE FROM PREVIOUS YEAR	500	-848	1338	477	15726	1234	52208	1879	5953	2785
BANK BALANCE END OF YEAR	72	-209	1838	544	17231	1570	50897	241	6916	3614

*Note: For some Centres this fee is remitted to U of T Press - Reports not available at press time: C.F. de Montréal, Hamilton, Ottawa & Vancouver

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Councilor: Blair Colborne

Youth Group Chair: Tom Cameron

Telescopes for Lend: Philip Johnson, Shirley Conway, Don Hladiuk, Gary Billings, John Fearnley

National Council Reps: Glenn Hawley (see President above), Susan Yeo (see Librarian above)

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National Representative: Ted Bronson

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1997 AWARD WINNERS

Service Award

Chant Medal

Ken Chilton Prize

The Plaskett Medal

Toronto Centre Gold Medal

Messier Certificate

(not awarded)

(not awarded)

Heather T. Cameron (Halifax)

Alain Beauchamp

(not awarded)

Dennis Boucher (Edmonton)

Steven Carrigan (Halifax)

Brian McCullough (Ottawa)

Scott Alexander (Saskatoon)

Richard Huziak (Saskatoon)

Gord Sarty (Saskatoon)

Kenneth Davy (Toronto)

Mark Viol (Toronto)

Joe Cambala (Windsor)

NGC Certificate

Dennis Boucher (Edmonton)

Daryl Dewolfe (Halifax)

Cathy Hall (Kingston)

Membership Certificate

Tim Bennett (Windsor, 5 years)

George Ball (Victoria, 25 years)

Heinz Berrys (Unattached, 25 years)

Below is a list of former winners of the Gold Medal, Chant Medal. For names before 1960 please refer to "Looking UP – A History of the RASC" by Peter Broughton available from the National Office.

Gold Medal / Gold Medal of the Toronto Centre

The Gold Medal of the Society was established in 1905 as an encouragement to the study of astronomy. It is awarded to the graduating fourth year University of Toronto Arts & Science student who has both an "A" standing in his or her fourth year and the highest mark in the two full courses and two half courses in astronomy which are contained in the Astronomy specialist program, provided the average is over 80%. If no student satisfies this criteria, the award is not made. In 1988 The Gold Medal of the RASC was replaced by the Gold Medal of the Toronto Centre. The criteria for winning did not change.

1960	C.R. Purton	1961	R.C. Henry	1962	John R. Percy	1963	P.H. Reynolds
1965	A.F.J. Moffat	1966	W.A. Sherwood	1967	R.H. Chambers	1968	P.G. Martin
1970	J. Kormendy	1971	Blake F. Kinahan	1972	M.J. McCutcheon	1976	Chris Rogers
1977	Michael De Robertis	1978	Doug R. Gies	1979	N. Duric	1981	T.C. Box
1982	M.J. Gaspar	1984	Glenn D. Starkman	1985	G.A. Drukier	1987	Man Hoi Lee

Toronto Gold Medal

1988	W. Barry Sloan	1989	Douglas Johnstone	1990	Shauna Sallmen	1991	Ian Walker
1993	Jason Harlow	1995	Jefferey J. Bezzaire	1996	Haryadi Christianto		

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.

1967	R.R. Thompson (Toronto)	1979	Rolf G. Meier (Ottawa)	1980	David Levy (Montreal)	1986	Warren Morrison (Kingston)
1987	Damién Lemay (Quebec)	1988	Chris Spratt (Victoria)	1989	Jack B. Newton (Victoria)	1993	Mary Lou Whitehorne (Halifax)
1995	Paul Boltwood (Ottawa)	1996	David Lane (Halifax)				

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.

1978 Jack Newton (Victoria)	1979 Warren Morrison (Kingston)	1981 C. McCaw (Vancouver)	1983 Chris Spratt (Victoria)
1988 P. Teece (Victoria)	1989 L. Kemble (Calgary)	1990 Doug George (Ottawa)	1995 Paul Gray (Halifax) David Lane (Halifax)
1996 Raymond Thompson (Toronto)	1997 Heather T. Cameron (Halifax)		

The Plaskett Medal

Canada's two national astronomical societies, The Royal Astronomical Society of Canada and the Canadian Astronomical Society have joined together in the sponsorship of a new award for students of astronomy at Canadian universities. The joint RASC/CAS award entitled The Plaskett medal is awarded in recognition of the pivotal role played by John Stanley Plaskett in the establishment of astrophysical research in Canada.

An award is made annually 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.

1988 Dr. R. Gray (Toronto)	1989 Dr. Peter Leonard (Toronto)	1991 Dr. Paul Charbonneau (Montreal)
1992 Dr. Eric Poisson (Alberta)	1993 Dr. Paul Brassard (Montreal)	1994 Dr. Grant Hill (Montreal)
1995 Dr. Michael Richer	1996 Dr. Gordon Squires (Toronto)	1997 Dr. Alain Beauchamp

Service Award

The Service Award was established in 1959 and on recommendations of a special committee of the National Council, this bronze plaque is 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. For a list of award winners before 1980 please refer to the book "Looking UP - A History of the RASC" by Peter Broughton available from the National Office.

1980 S.A. Mott (Ottawa)	1985 J. Cam Fahrmer (Calgary)	David Tindall (Halifax)
1981 L.E. Coallier (Centre d'Astronomie de Montreal)	1986 Randall Brooks (Halifax)	1994 Randy Dodge (St. John's)
A. Covington (Ottawa)	Leo Enright (Kingston)	Gary Dymond (St. John's)
H. Creighton (Toronto)	1987 R. Peter Broughton (Toronto)	Mel Rankin (Edmonton)
Miss I.K. Williamson (Montreal)	Cyril G. Clark (Toronto)*	1995 Ron Gasbarini (Niagara)
1982 D.P. Hube (Edmonton)	1988 Alan H. Batten (Victoria)	Patrick Kelly (Halifax)
G.N. Patterson (Saskatoon)*	Roy L. Bishop (Halifax)	1996 Sidney Lee (Calgary)
1983 C. Aikman (Victoria)	J. Locke (Ottawa)	Robert Venor (Montreal)*
L.A. Higgs (Victoria)	Eric Orr (Hamilton)*	Abbe Alphonse Tardif (Quebec)
1984 L.V. Powis (Hamilton)*	1989 Raymond Auclair (Unattached)	
J.A. Winger (Hamilton)	1990 Mary Grey (Ottawa)*	* - deceased
Peter Jedicke (London)	1991 Don Hladiuk (Calgary)	
H.N.A. Maclean (Niagara)	Ian McGregor (Toronto)	
C. Hallam (Windsor)*	1992 J.M. Frechette (Quebec)	
H. Lee (Windsor)	Michael Watson (Unattached, Canada)	
	1993 Eric Clinton (London)	

Simon Newcomb Award

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

1979 William J. Calnen (Halifax)	1981 Christopher Rutkowski (Winnipeg)	1982 Phil Mozel (Toronto)
1985 Donald F. Trombino (Unattached, United States)	1986 David Chapman (Halifax)	1987 Peter Jedicke (London)
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)
 Dr. Robert Evans (Australia)
 Dr. Stephen W. Hawking (United Kingdom)
 Dr. Patrick Moore (United Kingdom)
 Dr. A.R. Sandage (United States)
 Dr. Anne Underhill (Canada)

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Honorary Presidents of the RASC

1985-1989	Arthur Covington	1989-1993	Dr. Ian Halliday
1993-1997	Dr. Alan Batten	1997-2001	Dr. Jack Locke

Below are lists of former Presidents, Secretaries of the RASC

For names before 1960 please refer to "Looking Up – A History of the RASC" by Peter Broughton available from the National Office

Presidents of the Royal Astronomical Society of Canada

1960-1962	P.M. Millman	1962-1964	R.J. Northcott	1964-1966	K.O. Wright	1966-1968	M.M. Thompson
1968-1970	J.E. Kennedy	1970-1972	H. Simard	1972-1974	J.L. Locke	1974-1976	J.D. Fernie
1976-1978	A.H. Batten	1978-1980	J.R. Percy	1980-1982	I. Halliday	1982-1984	F. Loehde
1984-1986	R.L. Bishop	1986-1988	M. Grey	1988-1990	L.A. Higgs	1990-1992	Damien Lemay
1992-1994	R. Peter Broughton	1994-1996	Doug Hube	1996-1998	Doug George		

Secretaries of the Royal Astronomical Society of Canada

1958-1964	J.E. Kennedy	1964-1971	N. Green	1971-1974	C.E. Hodgson
1974-1977	D.J. Fitzgerald	1978-1980	N. Green	1981-1987	R.P. Broughton
1987-1993	D.A. Tindall	1993-1996	Randall Brooks	1997-	Raymond Auclair

GENERAL ASSEMBLIES – 1990 – 1999

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

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

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