



ANNUAL REPORT
RAPPORT ANNUEL

2011

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Front Cover Photograph
Ron Berard (Winnipeg)

Edited by James Edgar
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ROYAL ASTRONOMICAL SOCIETY OF CANADA—2012

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Publications:	Glenn Hawley	glennhawley@shaw.ca
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Centre Representatives on Council

Belleville:	Don Town	Ottawa:	vacant
Calgary:	Robyn Foret	Prince George:	Brian Battersby
Calgary:	Greg King	Québec:	Pierre Desrosiers
Charlottetown:	Mike Critchley	Regina:	Christopher Beckett
Edmonton:	Mike Noble	St. John's:	Garry Dymond
Edmonton:	Luca Vanzella	Sarnia:	Joe Clements
Halifax:	Pat Kelly	Saskatoon:	Rick Huziak
Hamilton:	Mark Pickett	Sunshine Coast:	Bill Clark
Kingston:	Brian Hunter	Thunder Bay:	Dave Gallant
Kitchener-Waterloo:	Paul Schumacher	Toronto:	Eric Briggs
London:	Craig Levine	Toronto:	Rajesh Shukla
Mississauga:	Leslie Strike	Toronto:	Laila Zichmanis
C. F. de Montréal:	Hugues Lacombe	Vancouver:	Mark Eburne
Montréal:	Frank Tomaras	Victoria:	Chris Gainor
New Brunswick:	James Ayles	Windsor:	Michael Mastronardi
Niagara:	Tracy Schilz	Winnipeg:	Jennifer West
Okanagan:	Richard Christie		
Ottawa:	Robert Dick		

PRESIDENT'S MESSAGE

RASC Continues to be a Leading Astronomy Organization

To inspire curiosity in all people about the universe, to share scientific knowledge, and to foster collaboration in astronomical pursuits.

This is our vision statement, and the RASC lives up to it in countless ways. I remain completely amazed with the energy, creativity, and drive of our members and Centres, and the many expanded and enriched programs carried out by them throughout Canada and beyond. It is impressive and rewarding to see the number of partnerships that have been built and continue to grow and thrive between and among the Society, our Centres, and non-RASC organizations, in an astonishingly successful effort to provide relevant and enjoyable astronomy outreach opportunities for everyone.

Working Together to Further Our Mission

The Royal Astronomical Society of Canada (RASC) encourages improved understanding of astronomy for all people, through education, outreach, research, publication, enjoyment, partnership, and community.

The collaborative connections between the RASC, the Canadian Astronomical Society (CASCA) and the Fédération des Astronomes Amateurs de Québec (FAAQ) continued to strengthen, most especially through the Beyond IYA national executive committee. This committee is now administering a second three-year joint NSERC PromoScience grant, which purpose is to further develop and deliver the bilingual interactive online educators' seminar program, Discover the Universe / À la découverte de l'Univers. The program is meant to help outdoor interpreters (parks, camps, youth groups, etc.) and teachers to provide interesting and innovative astronomy programs. The initial pilot program was very successful, and we look forward to expanded programming in two languages in the coming years.

One significant new collaboration for the RASC is the establishment, jointly with CASCA and the FAAQ, of the Qilak Award for Astronomy Education and Public Outreach / Prix Qilak pour la communication en astronomie. This new national award is intended to recognize individual Canadian residents, or teams of residents, who have made an outstanding contribution either to the public understanding and appreciation of astronomy in Canada, or to informal astronomy education in Canada. The award is also intended to encourage EPO activities among the members of the sponsoring organizations. Each of the three sponsoring organizations will offer a single award each year.

Qilak is the Inuit word for sky, or celestial sphere. The name was chosen by the BIYA representatives, and approved by the Awards Committees of all three organizations, because it is distinctly Canadian, and spans Canada's entire northern sky.

National Office Changes

Our staff at national office has been hard at work making things better for our members, Centres, partners, and customers. Unfortunately, 2011 saw the resignation of two of our staff: Irina Mosquera (membership and publications clerk), and Fiona Wilson (office administrator). We thank them both for their valuable contributions and wish them well in their new endeavours.

Subsequently we hired Emily Cornford (marketing & sales coordinator) and Renata Koziol (office administrator) into two newly created full-time positions. With the addition of these talented and enthusiastic team members, the Society enjoyed a busy and effi-

cient office that worked smoothly to advance our mission. We now look forward to a period of stability in the office and a renewed effort to continue the work of setting our business affairs in optimal order with improved practice, procedure, and customer service in all aspects of work at the National Office.

Solid Progress on Many Fronts

The following is a short list of Society business matters that transpired throughout the year:

- After the sudden death of Brian Segal, our JRASC designer, in early 2011, the Society issued a Request For Proposals to find a new designer. Of the five submissions, three were serious contenders. The successful bid came from, and a three-year contract has been awarded to, the team of Mike Gatto and Grant Tomchuk of Halifax, Nova Scotia. Michael Gatto is the designer of Skyways/Explorons, our membership and publications brochures, and our ads in SkyNews Magazine.
- The Society also contracted with Dave Lane, to include a special edition of his ECU software with the 2012 Observer's Handbook.
- RASC also "went shopping" for the most cost-effective price to print the 2012 Observer's Handbook. The switch to a new printer resulted in an annual \$4000 saving.
- Our complicated publication price matrix (including shipping, handling, and taxes) and our ordering processes underwent a complete review and restructuring to streamline the purchase process.
- RASC is now on Twitter and Facebook. Other social media opportunities are being investigated as potential communications and recruitment vehicles for the Society.
- RASC participated at the Toronto The Word On The Street event this year. Toronto Centre volunteers stepped up to help out. It was a successful event from the standpoint of raising our profile in the community, but it was not an economic success. We lost several hundred dollars at WOTS.
- RASC has a new fundraising guide, prepared by Executive Director Deborah Thompson. This new guide is provided as part of the Centres and volunteer support program outlined in our new strategic plan. The main purpose of the guide is to help Centres understand their roles in relation to fundraising, and to give volunteers a process for developing fundraising plans.
- Additional insurance coverage was arranged to provide Centres with more insurance options to help them better meet their insurance needs. These extra options are available for an additional fee to the Centres that want or need more coverage.
- RASC developed and produced a new EPO resource, the Moon Gazers' Guide. The first print run included 50,000 English and 30,000 French Moon Gazer Guides. This was a joint project, with costs shared between RASC, CASCA, FAAQ, and the BIYA committee (through its joint NSERC PromoScience grant).
- The Society applied to register the phrases, "Dark-Sky Preserve" and "Urban Star Park," in both English and French, as trademarks of the RASC. This is a two-year process, and if successful, will give us trademark protection for 15 years, at which time we expect the Society will renew the registration.
- The 2012 publications were produced earlier than usual

in 2011, giving us a leg-up on sales opportunities. Staff developed and implemented a new sales and marketing campaign for this year. We hoped to increase sales and reverse the recent trend of declining sales. Unfortunately this did not happen, and sales continued to trend downwards.

- Thanks to a timely and generous donation from an anonymous donor, the Society was able to print 10,000 copies of our green-laser pointer information brochure for distribution to Centres across the country in time for the busy summer star-party season.
- RASC initiated a positive working relationship with Transport Canada with the aim of drafting and instituting a policy regarding GLP use that is consistent across Canada and its several TC jurisdictions.
- We continue to strengthen our positive relationship with Parks Canada through the designation of more Dark-Sky Preserves. Jasper National Park was so designated in 2011, and it is presently the world's largest DSP.

Transitioning to the New CNCA legislation

The Government of Canada brought into force its new Canada Not-for-Profit Corporations Act (CNCA) in October 2011, with a three-year window for all Canadian charities and not-for-profits to transition to and comply with this new legislation. The terms of the new Act will mean substantial changes to the Society's governance documents and structure. During 2011, the Executive Committee spent significant time studying the impact of this new legislation and began planning our transition. A major component of the process will include helping our members and Centres understand the implications of the legislation as they relate to the RASC. We have engaged legal assistance to start what promises to be a lengthy process. We hope to be able to "template" some of the paperwork to assist Centres with their part in the required changes.

Giving Credit Where Credit is Due

It is important to me to acknowledge that the RASC is the beneficiary of many generous people who donate time, energy, expertise, and money to further the objectives of the Society. On behalf of the Society, I thank all those generous donors who support the work of the Society and help make it the success story that it is. Without you and your many contributions we would be greatly diminished.

As I complete my term as president, I extend my deepest appreciation to my colleagues on the Executive Committee. Many thanks go to our wonderful staff for their hard work and high standards: Executive Director Deborah Thompson, Office Manager Renata Koziol, and Marketing and Membership Coordinator Emily Cornford. I also thank our hard-working committee chairs, the dedicated members of National Council, our Centre executive members, and all of our individual members who support and participate in the life of the Society. I ask of everyone that they continue to do everything possible to assist our incoming national President, Calgary Centre's Glenn Hawley, and his executive team as they work to meet new challenges, and to expand and strengthen the RASC into the future.

I will conclude by saying the bedrock upon which the Society foundation firmly stands is you, our member-volunteers. Without you there would be no RASC. We enjoy an unequalled international reputation for quality, expertise, and integrity that has been built by RASC volunteers over our 144-year history. This is no small achievement. Please do carry on, and...

Quo Ducit Urania!

Mary Lou Whitehorne
President

SECRETARY'S MESSAGE

Last year, I wrote that 2011 promised to be a very busy year for the Public Speaker Program, and that was a correct assessment. This is a snapshot of how the applying Centres used the program:

Sunshine Coast—Bill Phillips on “Unravelling the mystery of ‘Sagittarius A’”

Saskatoon—Dr. Aaron Price on “Citizen Science, IYA, and the AAVSO 100 years”

Regina—Alan Dyer on “Astrophotography on the Prairies”

Kingston—Patrice Scattolin on “Space Exploration From the Ground up”

Calgary—Glen Fountain on “New Horizons”

I've established a list of these speakers and their topics for each year, which can be viewed on the Web at www.rasc.ca/psp-speakers-topics-list

You can see below how our membership numbers have slipped slowly away from the high of 2003. “National” doesn't do much to recruit new members—that is a task for Centres and the members on the street at outreach events, star parties, and such. Our new Moon Gazers' Guides are an excellent way to get the newbie started observing as a hobby, honing newfound skills; the Moon is an object you can view easily naked-eye—no equipment necessary. What could be better?

Finally, we extend our condolences to the families and friends of the following deceased Members who passed away in 2011: Bill Broderick (Belleville); Walter Jutting (Niagara); George A. Duey, Dr. G.R. Lindsey (Ottawa); Joe English, Dr. Ken O'Brien, Dr. Peter Lockwood (St. John's); Jim Low (Toronto); June Kirkcaldy (Vancouver); Guy Westcott (Winnipeg).

James Edgar
Secretary

Membership Statistics 2001-2011

Centre	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
Belleville	31	37	26	32	35	33	32	29	26	N/A	N/A
Calgary	282	271	300	317	313	278	302	323	321	315	315
Charlottetown	19	25	24	24	22	21	20	19	20	16	18
Edmonton	235	260	257	258	255	241	261	267	271	262	249
Halifax	154	159	155	157	162	152	171	197	214	196	186
Hamilton	61	66	70	76	80	82	91	91	113	114	122
Kingston	66	74	90	98	106	125	128	110	132	145	146
Kitchener-Waterloo	106	115	116	118	104	101	127	127	133	114	106
London	104	118	97	101	104	99	112	115	119	118	115
Mississauga	123	120	127	120	103	53					
C.F de Montréal	20	22	24	23	28	32	32	30	40	39	36
Montréal	91	87	103	107	99	105	109	108	121	116	106
New Brunswick	68	66	75	79	88	78	75	70	59	62	46
Niagara	69	71	82	97	104	101	114	123	117	109	97
Okanagan	92	116	103	88	86	85	83	85	92	87	70
Ottawa	328	370	389	410	416	396	447	469	500	480	457
Prince George	69	64	64	79	67	82	75	40	43	42	25
Québec	19	17	17	35	44	40	39	38	38	45	50
Regina	62	62	52	48	55	53	47	53	59	56	47
St. John's	44	45	48	47	52	49	51	44	54	54	45
Sarnia	15	15	19	24	25	27	27	32	26	27	27
Saskatoon	70	72	71	71	78	76	70	67	73	70	73
Sunshine Coast	38	35	32								
Thunder Bay	46	46	44	37	41	40	39	41	43	39	38
Toronto	573	554	502	506	610	622	748	841	889	886	775
Vancouver	228	244	251	263	256	238	267	291	313	292	294
Victoria	164	166	185	173	188	177	186	192	200	188	200
Windsor	100	96	96	98	94	89	105	122	125	120	107
Winnipeg	180	168	162	169	157	136	132	140	136	114	105
Unattached	419	434	459	530	561	512	538	591	610	575	552
Honorary	14	11	15	15	14	15	15	14	14	13	13
Total	3957	3995	4040	4216	4347	4138	4443	4655	4901	4688	4420

Membership by Type

Type	Number	% of Total
Ordinary	3487	88.6
Life	349	8.6
Youth	107	2.8
Honorary	(14)	n/a

Membership by Country

Country	Number	% of Total
Canada	3731	94.2
USA	189	4.7
Other	41	1.1

TREASURER'S MESSAGE

We have recorded a surplus of \$45,027 for 2011, compared with \$20,105 for the previous year. On the positive side, we received two separate grants totalling \$29,000 for publications, and one bequest of \$42,500. We have also achieved cost reductions totalling \$35,000 in non-payroll overhead.

On the other hand, the return on investment of our endowment decreased by \$29,000 due to poor equity markets, and that was in addition to slightly lower revenues from memberships and publication sales. Payroll increased by \$14,000, as we moved to a three full-time staff model.

Memberships recorded a surplus of \$1,035 for 2011, compared with a deficit of \$11,596 for the previous year. A decline in overhead (see above) more than made up for the slight decrease in membership revenue. We are continuing to take measures to promote the Society, and to contact expiring members and encouraging them to renew.

Publications made a profit of \$29,951, versus \$16,355 the year before. Excluding the \$29,000 in grants mentioned previously, the division underperformed the previous year, due to lower unit sales, continuing a trend that began several years ago. We have begun to look into online delivery of some of our products, and lower-cost printing options.

Charity recorded a surplus of \$14,043, slightly lower than 2010. The bequest of \$42,500 offset a decline in IYA donations and the \$29,000 drop in investment income.

As stated in last year's message, in an attempt to improve our investment returns, we have liquidated all of our GICs and savings accounts, and migrated to the ScotiaMcLeod Managed Portfolio. We now have approximately \$1 million under management, which, as of 2011 December 31, was invested roughly 60 percent in fixed income (3-5 year Canadian bonds) and 40 percent in Canadian blue chip equities. The return from this portfolio will be highly correlated to the stock market, and will be volatile from year to year. The investment return for 2011 was 0.3 percent, versus 3.4 percent for the previous year.

While, at the end, the pluses outweighed the minuses, we will continue to remain vigilant and take measures to position the RASC for a sustainable future.

Mayer Tchelebon
Treasurer

AUDITOR'S REPORT

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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 accompanying financial statements of The Royal Astronomical Society of Canada/La Société Royale D'Astronomie Du Canada, which comprise the balance sheet as at December 31, 2011 and the statements of revenue and expenditures, changes in net assets and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian generally accepted accounting principles and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our qualified audit opinion.

Basis for Qualified Opinion

In common with many charitable organizations, the Society derives revenue from donations, the completeness of which is not susceptible of satisfactory audit verification. Accordingly, our verification of these revenues was limited to the amounts recorded in the records of the Society and we were not able to determine whether any adjustments might be necessary to donation revenue, excess (deficiency) of revenues over expenditures, assets or unrestricted net assets.

Qualified Opinion

In our opinion, except for the possible effects of the matter described in the Basis for Qualified Opinion paragraph, the financial statements present fairly, in all material respects, the financial position of the Society as at December 31, 2011, and its financial performance and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

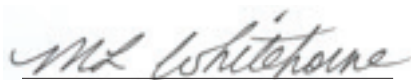
TORONTO, Ontario
April 12, 2012

Tinkham & Associates LLP
CHARTERED ACCOUNTANTS
LICENSED PUBLIC ACCOUNTANTS

BALANCE SHEET

As at December 31	2011	2010
Assets		
Current		
Cash	\$ 187,893	\$ 124,435
Short-term investments (note 4)		601,940
Accounts receivable	27,958	46,599
Inventory	44,785	34,216
Prepaid expenses	10,885	9,639
	271,521	816,829
Long Term		
Investments (note 4)	975,371	372,187
Capital assets (note 5)	14,351	17,593
	898,722	389,780
	\$1,261,243	\$ 1,206,609
Liabilities		
Current liabilities		
Accounts payable and accrued charges	\$ 33,225	\$ 34,039
Deferred revenue		
Membership fees for ensuing years	108,974	99,852
<i>Journal</i> subscriptions	21,241	18,063
Unamortized life membership fees (note 6)	35,706	37,585
	199,146	189,539
Net Assets		
Unrestricted	648,602	650,943
Internally restricted (note 8)	413,495	366,127
	1,062,097	1,017,070
	\$1,261,243	\$ 1,206,609
Commitment (note 7)		<i>See accompanying notes to financial statements</i>

On Behalf of the Board



President



Treasurer

STATEMENT OF CHANGES IN NET ASSETS

Year ended December 31	Internally Restricted (schedule 1)	Unrestricted	2011	2010
Balance, beginning of year	\$ 366,127	\$ 650,943	\$ 1,017,070	\$ 996,965
Excess of expenditures over revenue for the year		45,027	45,027	\$ 20,105
Transfers (Schedule 1)	(41,047)	41,047	-	-
Balance, end of year	\$ 413,495	\$ 648,602	\$ 1,062,097	\$ 1,017,070

See accompanying notes to financial statements

STATEMENT OF REVENUE AND EXPENDITURE

Year ended December 31	2011	2010
Revenue		
Membership fees	\$ 166,432	\$ 172,192
Publication revenue		
<i>Journal</i>	35,137	36,338
<i>Observer's Handbook</i>	69,102	80,467
<i>Beginner's Observing Guide</i>	6,549	7,187
<i>Observer's Calendar</i>	39,097	41,880
Shipping and Handling	24,212	24,947
International Year of Astronomy	-	-
Educational Aids	11,434	1,360
Other	2,151	2,091
	187,682	194,270
Miscellaneous income		
Donations	58,197	35,494
Promotional products	3,513	8,862
Other income	5,491	4,132
Grants	29,000	-
	96,201	48,488
Investment Income (net)		
Interest and dividends	33,043	22,013
Gain (loss) on investments	(20,913)	13,120
Investment manager fees	(9,028)	(2,219)
	3,102	32,914
Total Revenue	453,417	447,864
Expenditures		
Publication costs		
<i>Journal</i>	41,995	45,221
Cost of publications sold	29,369	24,500
<i>Observer's Handbook</i>	1,464	453
<i>Observer's Calendar</i>	95	2,536
Freight and handling costs	23,115	24,577
	96,038	97,287
Operating costs		
Office salaries and employee benefits	117,809	103,481
Membership services	61,945	72,876
Office expenses	26,565	36,785
Services	39,282	42,135
Committees	9,289	8,757
Travel expenses	18,800	21,917
Cost of promotional items sold	2,252	3,429
International Year of Astronomy	-	7,380
Amortization of capital assets	3,242	3,063
Advertising and marketing	17,122	14,997
Occupancy	16,046	15,672
	312,352	330,472
Total Expenditures	408,390	427,759
Excess of revenue over expenditures	\$ 45,027	\$ 20,105

See accompanying notes to financial statements

STATEMENT OF CASH FLOWS

Year ended December 31	2011	2010
Cash provided (used) by operating activities		
Excess of revenue over expenditures for the year	\$ 45,027	\$ 20,105
Charges not requiring a current cash payment		
Amortization of capital assets	3,242	3,063
Amortization of life membership fees	(1,879)	(1,978)
	46,390	21,190
Changes in non-cash working capital components		
Accounts receivable	18,641	27,341
Inventory	(10,569)	(13,184)
Prepaid Expenses	(1,246)	206
Accounts payable and accrued liabilities	(813)	(27,880)
Deferred revenues	12,300	4,897
	64,703	12,548
Cash provided (used) by investing activities		
Purchase of investments (net)	(1,245)	34,906
Purchase of capital assets	-	(4,777)
	(1,245)	30,129
Increase (decrease) in cash during the year	63,458	42,677
Cash, beginning of year	124,435	81,758
Cash, end of year	187,893	124,435

NOTES TO FINANCIAL STATEMENTS

2011 December 31

1. 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. The organization is not subject to income taxes pursuant to exemptions accorded to registered charities in the income tax legislation.

2 Significant accounting policies

These financial statements have been prepared by management in accordance with Canadian generally accepted accounting principles. The preparation of The Royal Astronomical Society of Canada financial statements in conformance with Canadian 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.

(a) Basis of accounting

These financial statements were prepared using the accrual basis of accounting. The accrual basis recognizes revenues as they become available and measurable; expenses are recognized as they are incurred and measurable as a result of receipts of goods or services and the creation of a legal obligation to pay.

(b) Inventory

Inventory is comprised of publications and promotional items for re-sale and is carried at the lower of cost and net realizable value. Cost is determined on an average cost basis.

(c) Capital assets

Amortization has been determined using a straight-line basis over the estimated useful lives as follows:

Computer hardware	- 3 years
Software	- 10 years
Office furniture	- 10 years

(d) Membership fees

Membership fees received in the first half of the year are recognized during the current year. Those received in the second half of the year are recorded as deferred revenue and recognized in the following year. The organization previously offered life memberships to members. Life memberships received in prior years were credited to unamortized life membership fees liability account, as per Note 6. Five percent of the life membership fund is transferred at the beginning of each year to membership fees revenue.

(e) Revenue recognition

The organization follows the deferral method of accounting for contributions. Unrestricted contributions are recognized as revenue when received or receivable, if the amount to be received can be reasonably estimated and collection is reasonably assured. Investment income is recognized on an accrual basis. The unrealized gain or loss on investments, being the difference between book value and fair value, is recognized in investment income for the year.

(f) Publications

RASC *Journal* subscription revenues are amortized into income over the subscription period.

(g) Contributed materials and services

The organization is dependant on the voluntary services of many individuals. Since these services are not normally purchased and because of the difficulty in estimating their fair market value, these services are not recorded in these financial statements

(h) Financial instruments

Financial assets and financial liabilities are initially recognized at fair value and their subsequent measurement is dependent on their classification as described below. Their classification depends on the purpose, for which the financial instruments were acquired or issued, their characteristics and the Society's designation of such instruments. Settlement date accounting is used.

<u>Financial Instrument</u>	<u>Classification</u>
Cash	Held for trading
Investments	Held for trading
Receivables	Loans and receivables
Accounts payable and accrued liabilities	Other liabilities

The Society has elected to use the exemption provided by The Canadian Institute of Chartered Accountants ("CICA") permitting not-for-profit organizations not to apply the following sections of the CICA Handbook: Section 3862, Financial Instruments—Disclosures, and Section 3863, Financial Instruments— Presentation. These sections would otherwise have applied to the financial statements of the Society

for the year ended December 31, 2011. The Society applies the requirements of Section 3861, Financial Instruments—Disclosure and Presentation.

(i) New accounting pronouncements

New accounting standards for non-profit organizations have been issued as Part III of the CICA Handbook—Accounting and are required to be implemented by the Society commencing with the fiscal year ending 2012 December 31. Early adoption is permitted. The Society is currently assessing the impact of the transition to these new standards.

3 Helm Fund

The Society is trustee of an endowment fund created by Mr. Walter J. Helm (a former Royal Astronomical Society of Canada member) who passed away 1960 June 5. In his will he provided a bequest to the Society that was to be used by the Society to support the general purposes of the David Dunlap Observatory (DDO) in Richmond Hill, Ontario. With the sale and closing of the DDO in 2008, the terms of the will were thrown into question.

The Society sought and received the Court's interpretation and direction with respect to the will regarding options for using income from the fund. The Society now has an agreement with Toronto Centre regarding use of Helm Fund income for purposes at the DDO site, as well as discretion and direction for use of the Fund income into the future, separate and apart from the DDO-related interest of the Toronto Centre.

Total assets of the fund under administration by the Society at 2011 December 31 are \$136,937 (2010 - \$136,457) and are excluded from the Society's financial statements.

3 Investments

	2011	2010
Managed portfolio at Scotia McLeod		
Fixed income investments	\$ 589,683	\$ 212,174
Equity investments	368,890	153,735
Cash	14,749	6,278
Accrued interest and dividends receivable (net)	2,049	
Guaranteed investments certificates		
ING Direct, matures 2011 March 5, interest compound at 3.00%	\$ -	\$ 264,366
Bank of Nova Scotia, matures 2011 April 4, 2.15% interest	-	126,995
HSBC Bank of Canada, matures 2011 April 4, 2.30% interest	-	127,135
Scotia Mortgage Corp, matures 2011 June 9, 2.05% interest	-	83,444
	\$ 975,371	\$ 974,127
Less: Current portion	-	\$ 601,940
	\$ 975,371	372,187

The actively managed portfolio with ScotiaMcLeod includes 8 fixed income investments comprised of government and corporate bonds with an average yield to maturities of 3.40%, (2010: 2.53%) stated interest rates ranging from 2.00% to 5.00% (2010: 3.00% to 5.00%), all purchased at a premium, and maturing from 2012 June 1 to 2019 April 15 (2010: 2011 April 13, to 2019 April 15). The equity investments include share and trust units of 32 Canadian entities. The single largest holding is 555 shares of Royal Bank of Canada with a market value on 2011 December 31 of \$28,849 (2010: 165 shares of Toronto Dominion Bank with a market value on 2010 December 31 of \$12,251).

The fixed income and equity investments have been recorded at market value at 2011 December 31, based on information provided by ScotiaMcLeod.

Investment risk management

Risk management relates to the understanding and active management of risks associated with all areas of the Society's activities and the associated operating environment. Investments are primarily exposed to interest rate and market risks. The Society has formal policies and procedures that establish target asset mix. The Society's policies also require diversification of investments within categories, and set limits on exposure to individual investments.

Interest rate risk

The value of fixed income securities will generally rise if interest rates fall and decrease if interest rates rise. Changes in interest rates may also affect the value of equity securities.

Market risk

The value of securities will fluctuate with changes in stock market conditions, which are affected by general economic and market conditions. The value of securities will vary with developments within the specific companies or governments which issue the securities. The Society manages this risk through controls to monitor and limit concentration levels.

5. Capital assets

		2011 Accumulated Cost Amortization		2010 Accumulated Cost Amortization
Computer hardware	\$ 6,571	\$ 5,168	\$ 6,571	\$ 4,014
Software	19,330	7,595	19,330	5,661
Office furniture	1,542	330	1,542	176
Library	1	-	1	-
	\$ 27,444	\$ 13,093	\$ 27,444	\$ 9,851
Net book value		\$ 14,351		\$ 17,593

6. Unamortized life membership fees

	2011	2010
Life membership fees as of January 1	\$ 37,585	\$ 39,563
Deduct: Amortization to income	(1,879)	(1,978)
Balance, December 31	\$ 35,706	\$ 37,585

The organization made a one-time payment in 2009, based on the number of life members attached to each Centre, to encourage the Centres to financially support their life members.

7. Commitment

The Society has extended its existing lease agreement for office premises for an additional 3 year term, ending 2015 February 28 with an option to renew for a further 3 year term. The minimum annual payments required under the lease, excluding an estimate of the proportionate share of property taxes, maintenance and insurance for the premises, in aggregate and for each of the next four fiscal years is as follows:

2012	\$ 8,493
2013	\$ 8,612
2014	\$ 8,612
2015	\$ 1,435
	\$ 27,152

8. Internally restricted net assets

The Society has internally restricted certain funds. The Ruth Northcott Fund was established in 1969 and funds are used for a variety of specified purposes as approved by the National Council. The P.M. Millman Endowment Fund was established for the purpose of providing for the long-term growth of the Society. The National Council segregated a significant donation received from the Estate of the late Walter Feibelman into a separate fund in 2005. The Public Speaker Programme Fund was established in 2009 to encourage Centres to organize and host public talks by speakers from outside their local area about astronomical related topics.

An amount equal to the investment income for the year is transferred to all funds annually on a proportionate basis. All disbursements from these funds must be approved by the National Council, or are administered by trustees, who are appointed by and responsible to National Council.

Schedule 1: Internally Restricted Net Assets					2011	2010
	Public Speaker Program Fund	W. Feibelman Fund	Ruth Northcott Fund	P.M. Millman Endowment Fund	Total	Total
Fund balance, January 1	\$ 10,000	\$ 17,918	\$ 97,503	\$ 240,706	\$ 366,127	\$ 352,124
Transferred from Unrestricted net assets:						
Interest	30	55	297	734	1,116	11,611
Donations	3,555	42,515	1,082	1,515	48,667	4,536
Expenses	(2,415)	-	-	-	(2,415)	(2,144)
	1,170	42,515	1,379	2,249	47,368	14,003
Balance, December 31	\$ 11,170	\$ 60,488	\$ 98,882	\$ 242,955	\$ 413,495	\$ 366,127

ANNUAL MEETING MINUTES—2011

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

Minutes of the Annual Meeting held on Sunday, 2010 July 03 at 9:00 CDT in Room E3-270 EITC at the University of Manitoba, Winnipeg, Manitoba

WELCOME AND INTRODUCTIONS

The meeting was called to order at 9:00 CDT by the Chair, RASC President Mary Lou Whitehorne, who welcomed members, delegates, and guests to the 2011 Annual Meeting and thanked the Winnipeg Centre for hosting the 2011 General Assembly. This was greeted by a round of applause.

After introducing the Executive Committee, President Whitehorne called the roll of Centres – 20 Centres were represented; plus several Unattached Members and guests were present, with approximately 65 Members in attendance.

1. APPROVAL OF AGENDA

MOTION AM1101 Moved by Paul Delaney, seconded by Raymond Auclair, that the Agenda be approved as presented.

MOTION AM1101 was CARRIED

2. MINUTES OF THE 2010 ANNUAL MEETING

MOTION AM1102 Moved by Mike Noble, seconded by Paul Schumacher, that the Minutes of AM 2010 be adopted as presented in the Annual Report.

MOTION AM1102 was CARRIED

3. REPORTS OF OFFICERS

President (Mary Lou Whitehorne)

Mary Lou expressed her thanks for the Executive Committee in their support, which was greeted by a warm round of applause. In response to a question by Robert McCall, she explained that the Helm Fund situation had been clarified and we entered into an agreement with the Toronto Centre to allow them to use the fund proceeds for operation of the David Dunlap Observatory.

1st Vice-President (Glenn Hawley)

Glenn, as chair of the Publications Committee, gave a glowing report about our publications—we are in good position for the coming year. Then, as chair of the Constitution Committee, he outlined the upcoming changes as a result of the new Canadian Not-for-profit Corporations Act (CNCA). Mary Lou expanded on the CNCA implications, advising that a short document had been prepared for distribution to Centres.

2nd Vice-President (Colin Haig)

Colin spoke about his Twitter activities during the GA. He reported that the RASC has a YouTube channel, a Facebook account, and a Twitter account. He went on to thank the Information Technology Committee for improvements to the Web site, which are ongoing. This was greeted by a warm round of applause. Colin announced that the Nominating Committee have acclaimed James Edgar as the National Secretary for another three year term. He also reported that Mayer Tchelebon has indicated he will be stepping down as Treasurer, and that Denis Grey has indicated that he would like to take on the role. Colin announced two new Honorary Members had been appointed at the National Council meeting on Friday. He invited members to help set some guidelines in connection with the way we chose Honorary Members.

Secretary/Recorder (James Edgar)

Mr. Edgar had no report but asked those present to pause for a minute of silence to honour those Society members who had died in the previous year, naming: Yni Ebbers, William Polomark, Edwin Newcombe (Edmonton); Ralph Fraser, Wayne Edwards-Taylor, David Toth (London); Al Andrews (Regina); Bruce Brandell (Saskatoon); Olga Kuderko, Michel Lerman (Toronto); Maurice Young (Victoria); Russ McLeod (Winnipeg); John K. Prentice, Dr. Audouin Dollfus, Stephen Mitchell, Dr. Jean Petrie, Larry Sumner, John Prentice (Unattached).

Treasurer (Mayer Tchelebon)

Financial Statements, Motion to approve the audited financial statements.

MOTION AM1103 Moved by Mayer Tchelebon, seconded by Jim Low, that the audited financial statements be approved as submitted.

MOTION AM1103 was CARRIED.

Executive Director (Deborah Thompson) Deborah added her remarks to those already made. She thanked the staff at National Office for their assistance in making her job appear easy. She also invited any members who may be in the Toronto area to drop into the National Office. In response to questions about membership numbers and demographics, she explained that part of our objectives was to change the numbers, whereby approximately 75 percent of our members are older, greying males. The meeting recessed for coffee from 9:50 until 10:10

4. REPORTS OF STANDING COMMITTEES

Awards (Dave Lane)

In Dave's absence, Mary Lou invited members to suggest members of notes for future awards. Ron Macnaughton also advised that the new award from the BIYA organization will be announced in the fall.

Constitution (Glenn Hawley)

There was nothing further to add.

Education (Ron Macnaughton)

Ron thanked National Council for funding a second print run of Star Finders; he expressed thanks also for our continuing support of the Canada-Wide Science Fair.

Executive (Mary Lou Whitehorne)

There was nothing further to add.

Finance (Mayer Tchelebon)

There was nothing further to add.

History (Randall Rosenfeld)

Randall expressed thanks to his predecessor, Barry Matthews, for all the work he had done while chair. He said that we have a rich history, and it is important that we continue to promote interest in our past life.

Membership & Promotion (vacant)

Roland Dechesne, as acting chair, reported that the MAP Committee is moving rapidly into the social media aspects of the "wired" world. The demographics there are quite different than our Society, so we may be able to attract a different membership base by expanding into that area. He offered assistance to Centres to help them with their individual efforts.

Nominating (Colin Haig)

Colin expressed thanks to Peter Jedicke and Frank Tomaras for their help on the committee. Mary Lou invited members to consider and suggest potential candidates for the position of 2nd Vice-President, which becomes vacant next year at this time.

Observing (Chris Beckett)

Chris reported that the distribution of certificates was going to be done out of National Office; he also spoke about our outreach efforts with the Cuban amateur astronomers, through the efforts of Dave Chapman.

Publications (Glenn Hawley)

There was nothing further to report.

5. REPORTS OF SPECIAL COMMITTEES

Green-Laser Pointer (Randall Rosenfeld)

Randall reported that Bob Grant of Transport Canada will be here to speak to the meeting.

Information Technology (Ryan May)

Ryan reported that he was looking for new committee members to help with the re-make of the Society's Web site, which will be unveiled in the fall.

Light-Pollution Abatement (Robert Dick)

Rob asked for people to help identify parks and places as candidates for Dark-Sky Preserves or Urban Star Parks. He also invited members to apply for Sky Quality Meters for their location, as we have several available for loan. Ron Macnaughton mentioned that the BIYA Committee have a program to train park interpreters in the use of a telescope and explaining the night sky to park visitors.

6. ELECTION OF AUDITOR

MOTION AM1104

Moved by Mayer Tchelebon, seconded by Ryan May, that Tinkham and Associates be appointed as Auditor for 2012.

MOTION AM1104 was CARRIED

7. OTHER BUSINESS

Mary Lou Whitehorne expressed thanks and appreciation to all members for maintaining our reputation for excellence and integrity on all of our dealings in Canada and around the world.

8. ADJOURNMENT

MOTION AM1105

Moved by Ron Macnaughton, seconded by Brian Hunter, that the meeting adjourn.

MOTION AM1105 was CARRIED

The meeting adjourned at 10:50 CDT

James Edgar

National Secretary

ANNUAL REPORTS FROM THE CENTRES

BELLEVILLE CENTRE

January

15 members present
Observing notes
Some members discussing plans to attend NEAF (Northeast Astronomical Forum) in New York State in April; also they will stop in at Hayden Planetarium and the Museum of Natural History in NYC.
Greg Lisk showed his collection of astronomy books that he has found in used book stores: e.g. "Canada Starwatch" and "Times Atlas of the Moon." Greg also showed his latest meteorite purchase, a stony with fusion crust. Viewed episode of "Stephen Hawking's Into The Universe."

February

18 members present
Member Dan Daniels presented a talk on solar observing using a Coronado PST.

March

15 members present
Scheduled observing night—March 11/12
President Greg Lisk showed us some Apollo 12 memorabilia featuring Alan Bean, Charles Conrad, Jr., and Richard F. Gordon, Jr.
Video on meteorite hunters.

April

16 members present
Upcoming Quinte Regional Science Fair—Belleville Centre donates a prize for an astronomy-related project.
Scheduled observing night—April 8/9
Video on life of Neil Armstrong
Six members to take trip to NEAF April 15-18 in Suffern, N.Y.

May

20 members present
Astronomy Day—May 7
Greg Lisk did talk on the trip to NEAF including photos of Hayden Planetarium, NEAF
Scheduled observing night—May 14.

June

15 members present
Robert Bates did talk on backyard astrophotography.
Scheduled observing night—June 10/11

July

13 members present
Guest speaker: Theresa DeCola, 2-time winner of our club's prize for best astronomy-related project in the Quinte Regional Science Fair. Her talk was entitled "Interplanetary Shipping to Mars: Is It Cost-Effective?"
Scheduled observing night—July 22/23

August

13 members present
David Cotterell—his trip to David Levy's Astronomy Retreat in New York State.
Antonina Durham—"Rotary in Space"
Starfest August 25-28—six of our members attended.

September

17 in attendance
Show and Tell—items purchased at Starfest.

Photos taken during Starfest shown.
More astrophotography by Robert Bates.
Fall'n Stars star party—joint Kingston/Belleville held September 23-25.

October

13 present
Long-time member William Broderick passed away October 10.
Photos of Fall'n Stars Star Party held last month.

November

12 present
Observing reports—aurora of Oct. 24.
Near-Earth Asteroid YU55 speeds past us Nov. 8 and 9, 11.2 magnitude.
Observing night—Nov. 18
Greg Lisk—meteorite collection

December

12 members
Fobos-Grunt Russian satellite
Asteroid Vesta
Video—Mars *Curiosity* rover
Christmas Dinner attended by 21 members

Joanne Burns

Secretary

CALGARY CENTRE

2011 was another very active year for public outreach by the Calgary Centre as several new events were added to an already

Membership

At the end of December the Centre had 280 members, about the same as the end of last year. At our upcoming public events, volunteers will be highlighting Centre activities and the benefits of RASC membership to encourage attendees to join the RASC.

General Meetings

General meetings were held on the third Thursday of the month and featured the following main speakers and topics:

January—Dr. Phil Langill of the University of Calgary and director of the Rothney Astrophysical Observatory gave a presentation on Solar Energy and Quantum Tunnelling.

February—Jason Nishiyama gave a talk called "The Cosmic Distance Ladder: How do we know the distance to things in space?"

March—Dr. Jeroen Stil from the University of Calgary gave a talk entitled: "Milk comes from the supermarket—science literacy and perception in the media."

April—The annual Peter Sim lecture was given by Glen Fountain, the project manager of the *New Horizons* mission on its way to Pluto. He gave an excellent talk describing the instruments on the spacecraft and what is planned for the encounter with Pluto. He also showed some images from the flyby of Jupiter, including a movie showing volcanic plumes on the moon Io.

May—Ken From and Doug Thorp gave a presentation entitled

“A Hitchhiker’s Guide to New Mexico Skies.” This was a report on a recent star party held at the Painted Pony Resort in New Mexico, where they had four nights of excellent observing.

September—Dr. Gene Milone, Professor Emeritus at the University of Calgary, gave a talk on advances in photometry tools and techniques that provide more precise and accurate data on stellar properties.

October—Dr. Jeroen Stil of the University of Calgary gave a talk on galaxy evolution. He reviewed galaxy morphology and described how the filamentary structure we see in the Universe today likely developed.

November—The annual election for Calgary Centre Council was conducted and several short member presentations followed: Larry McNish gave a short talk on Algol, the eclipsing binary star, and then described a session where he recorded over 1900 images during the dimming and brightening of the star; David Brown gave a short talk with tips on using and recharging batteries for astronomy and how to optimize battery life; Doug Thorp gave a short talk on his first experiences with imaging using a Webcam; Katherine Peterson gave a short talk on the new Glenbow Ranch Provincial Park, where she is planning to hold a public observing event in March around the Jupiter/Venus conjunction date.

Public Education Calgary Centre continued to provide volunteers to run the telescopes on the observing deck at the TELUS World of Science until the building was closed mid-year. The new TELUS Spark Science Centre opened in October, and RASC volunteers operated telescopes on the first Thursday night of November and December and solar telescopes at several daytime events.

Calgary Centre also supplied volunteers with telescopes for the University of Calgary Rothney Astrophysical Observatory’s monthly open houses. These open houses are well attended by the public, and the Calgary Centre sets up an information table with insight into the RASC, our local programs for public outreach, and our work on light-pollution abatement. Highlights included excellent views of the Milky Way during two four-day periods called Milky Way Nights in July and August, and an excellent turnout of 150 people at 5:30 a.m. for the December 10 total lunar eclipse.

Centre member Don Hladiuk appears on the CBC radio Eye-Opener show the first Tuesday of every month, presenting Sky Highlights for the month.

Two annual public star parties were held at Fish Creek Park within the city, one in April and the other in October. Both were well attended and attendees enjoyed looking through the telescopes, the slide shows, light-pollution abatement display, telescope displays, and discussing various astronomy-related topics inside the Environmental Learning Centre building.

A major new initiative was the launching of a Library Telescope Program for rural libraries in Alberta. Katherine Peterson learned of a program that was developed in New Hampshire, and, after contacting the people there and getting the details, she suggested we try it. Calgary Centre purchased two small telescopes, had them modified, then donated one to the Sheep River Library in Turner Valley and the other to the library in Olds. These telescopes are now available to be checked out like a book by library patrons. Events at which the telescopes were donated were well attended at both libraries, and we gave a few presentations inside and members also set up telescopes outside.

Several groups came out for tours of our Wilson Coulee Observatory, and most nights had skies clear enough to show them a few objects in the C-14 telescope in the dome.

We once again participated in the Mayor’s Environmental Expo in June, setting up our Light-Pollution Abatement display and

discussing responsible lighting and general astronomy topics with the many school children who attend the event.

We also continued supporting the Blackfoot Crossing Historical Park events in the Spring and Fall. Blackfoot Crossing Historical Park is a world-renowned cultural, educational, and entertainment centre built for the promotion and preservation of the Siksika Nation Peoples’ Language, Culture, and Traditions. A joint activity by the Siksika Nation, the TELUS Spark Science Centre, and the RASC Calgary Centre, these events feature Native Albertans presenting their skylene and culture, offering insight into Native traditions and the prominent role the night sky played in their everyday lives. After the indoor presentations held in the world-class interpretive centre, guests were invited to pristine views of the night sky by members of the RASC.

A number of new public outreach events were held this year including two star nights at the new Ralph Klein Park where telescopes were set up on the roof and displays and talks were conducted inside.

Calgary Centre also entered into a formal agreement with Banff National Park. We participated in five astronomy events with the National Parks, providing lectures and nighttime viewing primarily at Banff National Park, and one event at Rocky Mountain House National Park. The RASC Calgary Centre was part of the National Parks’ 100th anniversary celebration; we also offered guidance to the Banff National Park team in acquiring two of their own telescopes to support the ongoing public outreach. Our activity in 2011 sets the stage for the grand re-opening of the Cave and Basin historical site in 2012 — the birthplace of the National Park System in Canada.

RASC volunteers with telescopes also attended several other events in Airdrie, supporting the Airdrie Space Science Club, Vulcan, the home of the Star Trek Centre, and Lake Louise, where we treated a corporate group from 70 countries to a beautiful evening under the stars at spectacular Lake Louise ski hill.

Other Activities

Special events included the Annual Awards Banquet in January and members BBQ at the Wilson Coulee Observatory (WCO) in June.

The Observing Group held monthly meetings at the WCO. The early part of the year had very bad luck with weather, and most meetings were snowed out, including the Messier Marathon attempt. The fall OctoberQuest event was also mostly cloudy this year.

The NOVA group for new observers also held monthly sessions at the WCO and continued to be well attended. Presentation topics included eyepiece designs, aligning finder scopes, planning and logging an observing session, observing Solar System objects, observing deep-sky objects, and tips on hopping around several of the main constellations. Interested non-members are encouraged to attend a meeting or two to see what observational astronomy is all about, and several people who attended as guests subsequently joined the RASC.

The popular Telescopes-for-Rent program available to Centre members continues to be very successful, and a few donated telescopes have been added to the program recently.

The annual Star-B-Q event was held at the Eccles Ranch Observatory site in central Alberta in July. The Alberta Star Party was held in September at a campground by the Red Deer River in Starland County near Drumheller, which enjoyed excellent observing conditions under dark skies for both nights.

The Centre newsletter, The StarSeeker, is now distributed electronically to save production and mailing costs, and was published nine times in the year.

RASC Calgary Centre Council meetings were held in the TELUS World of Science until its closure. Subsequent meetings were held in rented space at the Kirby Centre in downtown Calgary. With the reopening of the new TELUS Spark Science Centre, Calgary Centre Council has resumed its relationship with our Science Centre and, as of December 2011, council meetings will be held at the new facility.

Robyn Foret
Secretary

CHARLOTTETOWN CENTRE



We had a very good year, and hopefully will soon have a couple new members. The executive have been busy all year planning each meeting to be interesting and informative. President Brian Gorveatt presided over all the meetings.

Earth Hour was observed on March 26 at Tea Hill Park in Stratford. On Friday night, we were on Compass with Boomer to promote Earth Hour. City of Stratford was to supply hot chocolate, but due to cloudy weather there was no hot chocolate and park gates were closed. The sky just seemed to open up for us to have a fantastic view of the Orion Nebula. We had about 30 look through Jane's scope and about 80 show up for the event. A nice write up was in the daily paper on Monday giving our club a good review.

Saturday, April 23, a few members were at the Charlottetown Market selling Astronomy Day tickets. We had the solar scope supervised by Mark and it was quite popular with everyone looking at the sunspots. We sold lots of tickets on a pair of binoculars.

Astronomy Day April 30. Handouts and lots of magazines were picked up by passersby. Tickets for binoculars were sold by Barbara and lots of kids filled out the kid draw tickets for a book. Winners: Binoculars - Dan Cox; Books: Explore the Night Sky - Neil MacEwen; Kids draw - Guide to the Galaxy - Tristan Whiten. Everyone was excited with winning.

Friday July 15, BBQ/Pot Luck at V-P Clair Perry's place, where good food, interesting conversations, and fun was had by all the members and their families.

Public observing was held at the UPEI observatory on the third Saturday of each month when weather permitted. General meet-



Ken, Brian, Jane, Clair

ings are held on the third Sunday of each month at the KC Irving Building except July and August.

Club observing is held whenever we can get together with clear skies, which was not much this summer.

December 4—Club Christmas party was held at Papa Joe's, with Jane holding Astro Jeopardy again this year. Fun was had by all and the food was good also.

The present executive will be serving another term of office and hopefully we will have another successful year.

Jane Vicary
Secretary

EDMONTON CENTRE

2011 had been an exciting and very busy year for Edmonton Centre's members. Without our many members who volunteered their personal time and energy, we would not have had such a successful year. We want to thank each and every one of you for your efforts. The GA2012 planning committee has been hard at work with preparations for Edmonton Centre to host this event. In 2011, Edmonton Centre and the Department of Physics at the University of Alberta launched a project called Sky Scan, that originally ran between 2002/2005. This project uses astronomy to excite young students to develop a life-long interest and hopefully a career choice in science. Fifty schools involving over 2300 students are signed up. "Millenium Telescopes" built by Edmonton Centre Members are specifically for use by students and teachers; and FM radio meteor detectors for Grade 9 classes. Funds for such projects come from casinos held and made possible by volunteers. Edmonton Centre holds meetings open to the public on the 2nd Monday of each month (with the exception of July & August.) The meetings are for every level of understanding in astronomy. Edmonton Centre was active with support from Volunteers to the Dark-Sky Preserve in Jasper National Park.

Donna-Lee May
Secretary

The Halifax Centre of the RASC had a busy and successful year with all of its outreach events, comparable to the 2009 IYA and 2010 years in promoting astronomy to the public. The Outreach Committee and many Centre volunteers carried on with the activities and momentum of IYA and worked in partnership with Saint Mary's University, Dalhousie University, the Halifax Discovery Centre, the Minas Astronomy Group, and the Halifax Planetarium in hosting and supporting many programs and activities.

General Meetings

Monthly meetings are held generally on the third Friday of each month, except for the summer months of July and August, providing 10 monthly meetings this year. The Executive meets in the hour prior to the main meeting to discuss Centre business. These meetings are held in facilities provided by Saint Mary's University. The Centre's library cart, which contains a selection of books on astronomy subjects, is available to members at each meeting. The Halifax Centre continued hosting a series of speakers at our monthly meetings, who gave interesting and informative presentations, including:

January 2011—Presentations were made by members of the Halifax Centre: (attendance 19):

"MusicBox EQ camera mount"—Dave Chapman

"New CGE mount"—Blair MacDonald

"New digital camera (Panasonic Lumix GH1 with video capabilities)"—Jim Dorey

"Parallelogram mount"—Chris Young

February 2011—A presentation by Dave Lane on "Amateur Variable Star Research at the Abbey Ridge Observatory." The talk described Dave's backyard observatory which is "tuned" for amateur astronomy research, some of the variable-star observing projects undertaken, and the exciting research that has come from the data collected. Dave briefly described the modest re-start of the ARO supernova search following Kathryn Gray's recent discovery. (attendance 50)

March 2011- Pat Kelly presented "The End of the World as You Know It." The Earth's surface, and life upon it, has changed drastically in the past and yet we take the existence of life on the Earth's surface for granted. Modern astronomers and biologists now have tools that allow them to look far ahead and predict what may be in store for Earth's long-term future. Pat suggested scenarios of how things might end—some with a whimper, and some with a bang. (attendance 51)

April 2011- Presentation by Taro Sato: "Gone with the Wind: What Scarlett O'Hara Has Been Hiding About Galaxies." Based on astronomical data collected by observational facilities around the world, Taro updated us on what we currently know about how galaxies form over the cosmic history and how that relates to what Scarlett O'Hara learned in a hard way decades ago, even before most of us came to existence. (attendance 51)

May 2011- Presentation Paul Heath: "Extrasolar Planets" Paul explained the methods being used to search for extrasolar planets, what we have found so far and where we are looking to find evidence of life. (attendance 34)

June 2011- Presentation by Ian Anderson on—"Who Wants to be a Gazer" Ian Anderson Edition, Ian brought his version of the popular quiz show where Centre members are grilled on astronomical lore and facts to the awe and amusement of the audience. Excellent show! (attendance 27)

September 2011 — "An Astronomical Tour of New Zealand." A well illustrated presentation by Dave XVII Chapman on his travels and experience on his trip down under with night-sky views taken with his music box mount modified for the southern hemisphere. (attendance 35)

October 2011—Presentation by archaeologist Vance Tiede from Yale University: "Stonehenge Wars: The Great Neolithic Computer Controversy" In *Stonehenge Decoded* (1965), Gerald S. Hawkins proposed an elegant astro-archaeological interpretation that Stonehenge was designed to track the Moon to predict eclipse "danger periods." Vance updated our understanding of both Stonehenge's architectural grammar and the prehistory of astronomy by presenting numerical artifacts drawn from Greco-Roman texts, aerial photogrammetry, and field survey in support of Hawkins' luni-solar interpretation. (attendance 100)

November 2011—Kathryn and Paul Gray recounted their experiences as VIP guests at the "The Starmus Festival, Canary Islands." Starmus was a one-of-a-kind astronomical, space exploration, and music festival all rolled into one to celebrate the 50th anniversary of Yuri Gagarin's flight into space. As the youngest discoverer of a stellar nova, Kathryn was invited to take part in Starmus by giving the Official Opening of the event and thus attendance to all festivities and to meet many of the greats of our time in astronomy, science, and space flight. The talk highlighted some of the many experiences Kathryn had, people she met including, Alexi Lenov, Neil Armstrong, Jill Tarter, Richard Dawkins, and Brian May while in Tenerife, Spain as part of Starmus. (attendance 50)

December 2011—Our AGM and "So You Want To Be a Gazer—Ian Anderson 2nd Edition"—A return engagement of the popular quiz show that puts Centre members on the hot seat to answer astronomical related (with a little sci-fi) questions. Great pleasure and pity (and some assistance) are provided by audience. (attendance 38)

Nova East Star Party, Smileys Provincial Park

Tropical storm Irene stayed well away from us this year and the Nova East Star Party was a success. There were 47 registrants and the Friday night, with spectacular views that lasted all night including magnitude-6 skies, bright fireballs and a comet. The keynote speaker and special guest was Dr. James Drummond from the Department of Physics and Atmospheric Science, Dalhousie University. Dr. Drummond spoke on the Canadian role in looking at the atmosphere of Mars with the Mars Atmospheric Trace Molecule Occultation Spectrometer (MATMOS) in 2016. MATMOS will measure many of the chemicals in the atmosphere including a search for methane, which may indicate the presence of life, past or present on Mars. The talks, demonstrations and clinics given on the Saturday were well attended. Dr. Roy Bishop gave a closing talk on the physics behind a rainbow and how it is individually seen in the mind of each viewer. The event was a great success.

NOVA Program

Our NOVA (New Observers to Visual Astronomy) program carried on from 2010 through spring of 2011 with 15 participants. The new program began in the fall of 2011 with 8 participants, with Councillor Sean Dzafovic teaching the sessions in the hour before each monthly meeting. Sean provides a series of lectures and presentations on various aspects of astronomy—all designed for the beginning observer.

Newsletter

Nova Notes, the newsletter of the Halifax Centre published 5 issues again in 2011 and 5 issues are planned for 2012. The newsletter reports on each monthly meeting and provides a summary of meeting presentations and also includes articles of astronom-

ical interest to the membership. The newsletter is published and distributed electronically with paper copies mailed out to those who have subscribed. The change to electronic distribution is a significant cost saving for the Halifax Centre and allows funds to be allocated for other Centre activities.

Public Outreach and Beyond IYA

Through 2011, the Centre has endeavoured to carry on the outreach programs started in IYA2009 and continued in 2010. The Astronomy Nova Scotia Web site (www.astronomynovascotia.com), hosted by SMU Astronomy & Physics, continues to be a great success in announcing all astronomy activities in Nova Scotia to the public. Supported by the membership, the Halifax Centre has participated in 60 events including library talks, sidewalk astronomy outreach programs, many "astronomers in classroom" events, Scout and Guide talks, Discovery Centre talks, and events at Provincial Parks. Based on reported events we have reached over 2,800 members of the public, and enhanced their enjoyment and awareness of the night sky. The Halifax Planetarium has attracted 3,600 visitors this year, up 450 from last year, and we appreciate the assistance of Dalhousie University staff for their work in keeping this wonderful astronomical asset operating. Thanks go to the Centre members who have taken the time to present at the Planetarium and support its operation. In the past year, the Centre has continued to increase the visibility of astronomy, the importance of responsible lighting, on a person to person basis and through the media. The Halifax Centre assisted Parks Canada with their application to have Kejimikujik National Park and National Historic Site declared a Dark-Sky Preserve in 2010. The Halifax Centre continues to maintain a relationship with Keji, and participated in a very successful Dark-Sky weekend in August.

This Dark-Sky weekend event will be repeated this year on the weekend before Nova East.

Goals for 2012

The Halifax Centre has committed to carry on many of the public outreach programs provided in 2011. The Halifax Centre, with the drive and dedication of its members, will continue the sidewalk observing sessions, library talks, provide presenters for the planetarium, and maintain the Astronomy Nova Scotia Web site, which provides easy access to all astronomy event information in Nova Scotia.

Chris Young
Secretary

HAMILTON CENTRE

Centre's Annual Report: The Hamilton Centre is what we would say, "new and improved," as of September 2011. Besides our ongoing mission to foster a love of astronomy and educate both members and the general public, we have set ourselves new goals for this 2011/2012 season. Those goals include a push for new memberships, sprucing up ongoing regular events, and introducing others. We still have our monthly meetings (open to the public) on the first Thursday of each month, where we have great guest speakers along with other entertaining and learning activities. Our Board meetings are held on the second Thursday of each month and all members are invited. We have successfully run a sidewalk astronomy program, both on the Burlington waterfront and at Westfield Heritage Village.

New this year, we have introduced Armchair Astronomy, a night when we gather to discuss and debate topics and issues related to this discipline, as well as Public Night, when anyone can join us at our observatory to learn about everything from observing to telescope use and tricks of the trade. In addition to these events, we had a local swap meet this past fall of 2011, we visited the David Dunlap Observatory in Richmond Hill, and we have planned a trip to the Planetarium at McMaster University in March.

We are also embarking on a Scouts Canada outreach program to help educate young men and women who are members of this organization. In addition to all this we have a brand new Web site and we are on Yahoo Groups and Facebook.

We are also in the process of planning our year-end banquet (Terence Dickinson as guest speaker) and Southern-Western Ontario Swap Meet. Our membership has grown since this past September and we are optimistic about the near and distant futures..

Roger Hill
President

KINGSTON CENTRE

We currently have a total of 76 Society members: 61 Regular members, 1 Youth member, 7 Life members, 5 Associate members and 2 Affiliate members.

For the first half of the year, meetings were held on the second Friday of the month in Stirling Hall, Queen's University. In the fall, we moved to the second Saturday of the month in Ellis Hall, Queen's University. The October meeting was held at the Kingston Public Library, Central Branch.

January 14	Member's Night and 50th Anniversary Celebration.
February 11	Professor Larry Widrow "The Tangled Past of the Andromeda and Triangulum Galaxies"
March 11	"All About Meteorites"
April 8	Larry Hum "Total Solar Eclipse Trip to China in 2008"
September 10	Member's Night featuring short presentations by Brian Hunter and Kevin Kell
October 22	Brian Hunter "Telescope Seminar"
October 22	50th Anniversary Banquet; Patrice Scattolin "Space Exploration From The Ground Up: With Reality And Fiction"
November 12	Annual General Meeting; Doug Angle "New Mexico Skies"
December 10	Member's Night with short presentations by Susan Gagnon, Kim Hay, and Kevin Kell all relating to Variable-Star Observing.

Kingston Centre members gave presentations at several area schools, local clubs, and offered public observing at the Charleston Lake Star Party. As well, a judge and a prize was contributed to the area Science Fair.

Public observing sessions were held at the Queen's University Observatory, in partnership with the Queen's University Physics Department.

The Fall 'N' Stars 2011 star party, hosted jointly with the RASC Belleville Centre, was once again a great experience for all who attended.

Steve Hart
Secretary

KITCHENER-WATERLOO CENTRE

Kitchener-Waterloo Centre has a registered membership of 107 people.

Meetings

General Membership meetings are held monthly, from September to June inclusively, on the 2nd Friday of the month. We meet at Wilfrid Laurier University, in the Science Building, South Lecture Hall, Room 1002. Meetings begin at 7:30 p.m.

As well, we have a separate group within the Centre – Stargazers 101—made up of regular members, who are more interested in the promotion and facilitation of visual observing. They meet once a month as well, at the Laurentian Power Centre (Ottawa and Strassberg Streets, Kitchener), in the Community Room at Zehr's. Meetings begin at 7:00 p.m.

The general public is invited to both of these regular meetings; in order to make use of Centre resources, one must be a member in good standing.

Both meetings feature a guest speaker (whether an outside resource or a member of the Centre), presenting a topic of interest to the members of that meeting. General Centre business is also discussed at both meetings.

The Executive of the Centre meets once a month, on the Tuesday preceding the General Membership meeting.

Functions

We host an Annual Dinner and Awards Celebration—a social evening at a local restaurant, where members and spouses meet to enjoy good food and camaraderie. At this function, we also hand out the awards to the winners of our annual Astrophotography/Astro-ketching Contest.

Speakers' Nights

We don't have a Speakers' Night as such; as mentioned above, we have at least one guest speaker at each of our meetings.

Summary of 2010 Activities

During 2011, K-W Centre held 10 General Membership meetings and 9 Stargazers 101 meetings, with guest speakers' subjects as diverse as: trips to North American and South American observatories; municipal Light-Pollution Abatement efforts in K-W; Astrophotography methods and tips; eyepieces and their differences; filtering methods for observing (as opposed to astrophotography); and historical figures in astronomy over the centuries.

Outreach Activities

We have a well-organized Outreach program, with members specializing in a specific target group: Schools are divided into Public, Separate, and High Schools, and we have a member as a resource for each one; they are visited regularly. We also have a Scouting Outreach specialist, who visits Brownie, Girl Guide, Pathfinder, Cub, Scout, and Venturer Groups, to enable the youth to achieve their various badges and awards.

We also, as a Centre, promote astronomy to the public, via star parties held in conjunction with the year's Astronomy Day, meteor showers, and other astral events. Weather in this area is somewhat difficult to deal with, but we do what we can.

During 2011, the Kitchener-Waterloo Centre's outreach efforts were generally successful: we held 33 star parties: 19 for schools, 6 for Scouting youth, and 8 for the general public; each event was blessed with clear skies. We handed out 506 RASC Star Finders at

these outreach activities.

Observing

K-W Centre has entered into an agreement with the Conestoga Lake Conservation Area, whereby we can use a "day-use only" area within the park as a dark-sky observing site at night. In exchange, we provide star parties and astronomical observing opportunities to the campers registered within the park.

We have also received permission from a couple who live near Conestoga Lake Conservation Area, to use a part of their farm for dark-sky observing and astrophotography. We are, more and more, gravitating to this dark site for our astrophotographic and general observing activities; and we continue to be grateful for this couple's contribution to our Centre.

Phil Lacasse

Secretary

LONDON CENTRE

London Centre has once again had a very active year. We continue to do much public outreach, and grow more excited as our first observatory located at our Fingal Dark-Sky Site nears completion. Our star night and slide presentations totalled 27 events for the year with 37 members and 32 telescopes showing the night sky to over 1400 members of the public. Centre members were also present at Exploring the Stars events held at the Cronyn Observatory on the UWO campus. This included both the summer Saturday evening events, the week-night group events, and also several open-house events. In total, 79 events happened with up to 13 members present serving over 900 people during this time. For the entire year, 40 Centre members participated at 113 events involving more than 4100 people. Special mention once again should go to our star party co-ordinator Robert Duff, and Past President Dave McCarter for their nearly constant attendance at so many of these events.

In late November, the London Centre RASC Forums was set up by its administrators, Jeff Harrison, Craig Levine, and Bill Gardner. Much thanks goes out to this trio of IT wizardry for all their hard work in creating this new way of communicating for our membership. While there have been some minor bugs to work out, and a bit of a learning curve for some, it is proving to be a new and exciting communicating tool for our Centre.

Centre meetings continue to take place on the third Friday of each month, with the exception of August, at Fanshawe College in Rm B1073 at 1900.

January 21—Our monthly meeting was primarily a Members' Night. President Dave McCarter began by going through recent events, and then described notable observing opportunities throughout 2011. One item was the recently discovered Comet Elenin, and Dave Clark used his program Clear Sky to show the orbit and the comet's relationship to earth. Apparently the comet will pass almost exactly between the Sun and Earth, (about 2 degrees above the Sun) and there was speculation about the rather remote possibility of the comet tail passing over Earth. Peter Jedicke talked about Neptune's Birthday, which London Centre will celebrate on July 12, and the orbital dynamics that determined that date.

February 18—At our monthly meeting our Guest of Honour was Dr. John Moores, Department of Earth, Space Science and Engineering, York University, and Department of Physics and

Astronomy, Western. His talk was titled: Worlds Enough and Time: The Golden Age of Planetary Exploration in our Solar System. Dr. Moores reviewed what we knew about the Solar System before the space age started in 1957, and summed up all the missions to the planets and what we now know. He also discussed the missions ongoing, missions about to launch, and those on the drawing board. A wonderful evening.

March 18—At our Monthly Meeting our Guest of Honour was Ph.D. candidate Haley Sapers, from the Geology/ Planetary Science Department at Western. She talked about her research into the existence of bacteria that colonize the glass and shattered rocks that remain after a terrestrial meteor impact. Her talk was detailed and delivered carefully, so that our members understood the science and followed her persuasive discussion.

March 19—Our Annual Banquet: featured Dr. Jaymie Matthews and was held at the Byron Legion. After an enjoyable dinner of roast beef and turkey, Dr. Matthews gave his humorous and fact-filled talk “What the Textbooks Don’t Tell You.” He showed that the History and Science of Astronomy is as much about those who practice the art as it is about the planets, stars, and galaxies. Everyone learned something new, particularly when it came to learning who discovered that the Sun and stars are primarily hydrogen and helium.

April 15—At our monthly meeting, Dr. Peter Brown talked about meteor science and what we can learn about the Solar System from these small samples that fall freely to earth. He described his latest system that is able to track meteorites in flight through a small telescope and showed some totally amazing videos of meteors that break up and fly apart during their high-speed atmospheric entry. This behaviour has never been seen before and goes unexplained.

May 20—At our monthly meeting Raymond Francis spoke about most of the world’s space programs, who is currently mapping the Moon, and in great detail about present and future science at the European Space Agency.

June 17—At our monthly meeting Dave McCarter showed some images taken during the Texas Star Party trip, and Dr. Dale Armstrong talked about Space Weapons and the Popular Imagination, in which he proved to everyone’s satisfaction that science-fiction writers have been driving the space-weapons dreams of the US military, in spite of the technical and scientific difficulties.

July 15—At our monthly meeting Vice-President Patrick Whelan talked Nat. Rep. Craig Levine into being host as Dave was attending a family funeral. Craig got people to talk about who had been observing and what and where, and then recent events and future events were discussed. Pat talked for a bit about the dinner, talk, and star party at Windermere Manor and showed a few pictures of the event. Pat also shared a few pictures from 2010 Starfest and encouraged people to attend this year. Bob Duff talked about the books and the successful Cronyn Saturday observing nights. Craig brought people up to date on progress on the observatory at Fingal and the ongoing work. Also discussed was the planned Celestial Tent Star Night to be held at Fingal in September. Peter Jedicke gave a good talk about Neptune and the history of its discovery. The meeting finished at 21:00 and everyone went to Kelsey’s for more talk and eats.

September 16—At our monthly meeting the club reviewed the summer activities, discussed current astronomical news, and Trillium Grant proposal to further the Public Outreach Activities, and the other will review and prepare material for an astronomy beginners course to be run at possibly several locations throughout London. Evidence for the need of this course is seen daily by the Centre members.

October 21—At our Monthly Meeting our Guest of Honour was Randy Attwood, Managing Editor, SPACE Quarterly Magazine,

who presented his amazing talk The Space Shuttle — 30 years of winging it into space. We also talked about Centre communications and the possible use of forums to unclutter our email.

November 18—Our Annual General Meeting. Our Guest of Honour was Dr. Bill Harris, from McMaster University in Hamilton. He talked about the development and evolution of Globular Clusters, such as M13 and 47Tuc. Annual elections were held and Rick Saunders was elected president by a wide margin. The remaining positions were filled by incumbents

December 16—Our monthly meeting was primarily a members’ night, with several of our members showcasing their equipment. Kelly Manson and Bill Gardner both showed their respective H-alpha solar-observing equipment to those present. Kelly explained how this specialized type of observing equipment works and also showed many of the impressive images he has taken of the Sun. Bill also showed us his observing setup sourced from a different Manufacturer, and talked about his observing sessions. After the Break, our trio of administrators, Jeff Harrison, Craig Levine, and Bill Gardner, helped give many members some much needed help in learning to get the most from the new forums set up in November.

Recorded below is a listing of all activities for London Centre throughout the year.

January 9—Many thanks to Mike Hanes for hosting a Mirror-Making Workshop. Present were Glen Spooner, John Rousom, Mike Roffey, Bill Gardner, and Dave McCarter. Mike had a fine-ground eight-inch mirror, tile tool, and pitch lap with which we practiced fine grinding and mirror polishing. Then we set up the Foucault tester and learned to look at shadows that magnified the surface features. Then we went into Mike’s garage workshop and worked on course grinding techniques with a ceramic tool and blank that Dave brought along. It was a great afternoon and everyone got a lot out of it.

January 19—Dave McCarter and Bob Duff provided an astronomy presentation “Asteroids!” for the Grade 6 class at Tecumseh Public School. The children were particularly attentive and asked great questions. They will be going to the Cronyn Observatory in February, and Bob and Dave will be returning to the classroom later in February for more astronomical fun.

January 29—Cronyn Observatory Open House: The evening began with two guests in attendance, and grad student Emily McCullough distributed several hand-held spectroscopes with which to look at the ceiling lights and streetlights. Then a large crowd of students arrived and joined in the fun as Emily explained how spectroscopy was used to identify the chemical elements in the atmospheres of the Sun and stars. She then launched the digital slide presentation, “Our Messy Solar System.” Afterwards she gave out Star Finder planispheres and RASC London Centre members Dave McCarter and Bob Duff helped everyone assemble their planispheres with tape. Despite the cloudy skies, visitors viewed the communications tower in south London through the 25.4-cm refractor in the dome. A star, probably Capella, appeared briefly between the clouds and then vanished before there was a chance to observe it in the telescope. Bob set up the London Centre’s 25.4-cm Dobsonian for visitors to view the weathervane on the roof of the Engineering building. Dave talked to several of the visitors about: How to use a planisphere, Polaris and the Earth’s precession, the ISS and the Heavens-Above Web site, and other questions. There were 22 visitors for the enjoyable and interesting evening; everybody was gone and the Observatory closed by 21:30.

February 5—The trip up to the David Dunlap Observatory by Dave McCarter and Maria and Michael Lavdas was abandoned due to terrible conditions on the 401 highway, although they got as far as Ingersoll before turning back.

February 10—Grad student Alexander DeSouza greeted 22 students and 12 parents from the Grade 6 at Tecumseh Public School for Exploring the Stars at the Cronyn Observatory on Thursday evening. It was exceptionally clear and cold so Alexander brought them into the dome immediately, where Dave McCarter had Jupiter lined up in the big 25.4-cm refractor, using the Meade 28-mm Ultra-Wide eyepiece for 157 power. On the Observatory's roof patio Greg Andres showed them the first-quarter Moon in his 20.3-cm Sky-Watcher Dobsonian and Bob Duff showed them M42, the Orion Nebula, in the London Centre's 25.4-cm Dobsonian. Bob used his green-laser pointer to identify stars in Orion and other constellations. Returning to the lecture room everybody had a chance to warm up during Alexander's presentation, "Our Messy Solar System," and they asked many questions. Another observing session followed with splendid views of the Moon in the 25.4-cm refractor and 25.4-cm Dobsonian. Greg also showed M31, the Andromeda Galaxy, in his 20.3-cm Dobsonian. The sky remained very clear and everybody enjoyed this exceptional evening despite the bitter cold.

February 23—Dave McCarter and Bob Duff returned for a second visit to the grade-six class at Tecumseh Public School. Dave used the RASC London Centre's digital projector to show the 21 students and their teacher images of Comet Temple 1, target of the Deep Impact space mission and revisited by the Stardust space mission. He then used Stellarium sky-charting software to show them the current evening sky from Fingal, with tours of Jupiter, Saturn, and Uranus, and their moons. The students also viewed the Sun through an open classroom window using Dave's 80-mm refractor fitted with a white-light solar filter. There was a small sunspot visible near the Sun's left edge. Dave had also delivered some back issues of Astronomy magazines to the class a few days previous for use by the students. Dave and Bob were very much impressed by the knowledge and interest displayed by the children. An evening star party was discussed with the teacher with possible dates on the first clear night, April 11—13, when Saturn and the first-quarter Moon would be visible.

March 16—Matt Neima and Rick Saunders went to Camp Sylvan to give a small star party for a group of Cubs who were there for spring break. Approximately 20 Cubs and 4 leaders came to the upper field where we had two telescopes setup. It was increasingly cloudy, but the Cubs did get some views of the Moon, several star clusters, and the Orion nebula. A good time was had by all.

March 26—At the Cronyn Open house we had a cold and clear evening with 50 to 60 interested people who came to hear the talk and observe the sky. Daylight Saving Time meant that it took a long time to get dark, but people listened to a description of the observatory telescope, and asked questions about the amateur telescopes, which were all Dobsonians. Dave McCarter was the first to find Sirius and then the Trapesium in M42 with the club's 25-cm Dob. Paul and Charlene Kerans set up their 32-cm 'scope on the walkway. Mike Roffey also had a 32-cm 'scope on the walkway, and Adam Priestap-Sutis and his mother Cheryl set up his 15-cm Dob on the upstairs patio. Patrick Whelan assisted with the club's 'scope and answered questions. When Saturn appeared between trees to the east, it became the centre of attention. Eventually the Ringed Planet rose high enough for the big refractor in the dome and those who had waited had some great views, which were frequently interrupted by the steam plume from the heating plant.

April 11—Dave McCarter visited Mitchell High School and presented his talk, Asteroids! to Adam Priestap-Suttis's Grade Nine class. Several meteorites and "meteor-wrongs" were passed out for students to examine.

May 5—Classroom visit and Star Night for the Grade 5/6 class at Orchard Park Public School. Dave McCarter spent the afternoon

with 17 interested students, using Stellarium to tour the night sky as if the students were at Fingal. During afternoon recess Dave set up a solar-filter equipped 80-mm refractor, and the students got to see some complex sunspots. After recess, the discussion turned to black holes, asteroids, and meteorites. Students got to hold several small meteorites.

That evening a hazy sky with some clouds did not dampen the spirits of some 40 children and adults, including 17 grade 5-6 students with their teachers and parents. Harold Tutt set up his 80-mm Stellarvue refractor, while Dave McCarter had his 25.4-cm Dobsonian and 80-mm Stellarvue refractor ready. Everett Clark used his 11.4-cm Newtonian reflector, Bob Duff had his 20.3-cm Dobsonian; and Maria Lavdas assisted and enjoyed the views.

Observing began around 20:00. with people viewing the two-day-old crescent Moon through hazy clouds in the west. As the sky darkened, they observed Saturn, Arcturus, double stars Castor, Mizar, and Alcor through various telescopes. It was a fun evening and everyone was gone by 21:45.

May 9—Star Night for Jeff Gallant's grade-6 class at Byron Northview Public School. Thirty five students and 15 parents came to the school playground to view the sky through the telescopes of London Centre members Everett Clark, Bob Duff, Peter Jedicke, Phil Marusaik, Dave McCarter, Mike Roffey, and Harold Tutt. Mr. Gallant also had his classroom telescope out and ready to go. Cloud moved through the area, causing some concern that anything would be seen at all. The almost first-quarter Moon delighted everyone, and when Dave found Saturn in the still-bright sky, the lineup quickly grew behind his telescope. Gasps of joy and shouts of amazement were common and gratifying. As it got darker, the skys mostly cleared and allowed everyone to get as much observing as they wanted. Several people managed to photograph both the Moon and Saturn through various telescopes using their cell phones. What fun!

May 13—Yes, Friday, the 13th, and London Centre members Bob Duff, Dave McCarter, Matt Neima, and Harold Tutt set up telescopes in the playground of the London Regional Children's Museum. Heavy cloud created problems and threatened rain. The hazy Moon was poorly seen for a few minutes, and the young children were shown the tops of trees and nearby posters.

May 14—RASC London Centre Members set up a Mall Display at Cherryhill Village Mall in cooperation with McKittrick's Photo/Video/Astro. Paul Kerans set up his newly acquired Obsession truss-tube Dobsonian with its 56-cm (22-inch) Galaxy Optics mirror. Other members who brought telescopes included Matt Neima, with his 20.3-cm Celestron Schmidt-Cassegrain on its Losmandy mount, and Harold Tutt and John Kulczycki, with their alt-azimuth mounted 80-mm and 70-mm Stellarview refractors, respectively. Bob Duff set up the London Centre's digital slide projector and Bill Gardner got it going to show celestial slides continuously on a screen provided by McKittrick's. Charlie Barbara arrived, and with an extra table provided by the Mall, set up an extensive display of meteorites, which attracted attention. In all, we had an estimated 30 people stopping to chat with members about meteorites and ask questions about telescopes. London Centre members who participated were Charlie Barbara, Roman Dubinski, Bob Duff, Bill Gardner, Peter Jedicke, Paul Kerans, John Kulczycki, Matt Neima, Rick Saunders, Dan Tremblay, and Harold Tutt.

May 16, Dave McCarter visited Medway High School and provided his illustrated talk "Asteroids!" to two grade-nine classes, a total of 50 students. They were also shown and passed around several meteorites and a few "meteor-wrongs" too!

May 25 to June 7, Six London Centre members travelled to the Texas Star Party near Fort Davis and McDonald Observatory.

June 11—Longwoods Astronomy presentation and attempted

star party. Dave McCarter presented a slide show to a small but attentive group of four. London Centre members Pete and Cheri Raine, Paul and Charlene Kerans, Harold Tutt, Bob Duff, Rick Saunders, and Charlie Moher brought their telescopes on the promise of some clear skies, and for short periods the Moon was visible, but the skies did not clear and the event was called by 22:30.

June 14—Star Night at Mitchell Hepburn Public School in St. Thomas. Clear skies with just a few hazy clouds made for an excellent evening of observing for the Grade-6 class, their parents, siblings, and a few neighbours. Harold Tutt set up his 80-mm Stellarview refractor and showed the early arriving visitors views of the setting Sun through his homemade Baader film full-aperture solar filter. Everett Clark set up his Super Polaris mounted 11.4-cm Newtonian reflector while Dave McCarter used his 25.4-cm Dobsonian and Bob Duff used his 20.3-cm Dobsonian. Dave gave an informal twilight talk to about 90 children, parents, and teachers sitting or standing on the grassy school campus, paying particular attention to two 60-mm alt-azimuth refractors, one brought by a student and the other by a parent. As twilight gave way to a starry sky, people lined up in front of telescopes to observe the one-day-prior-to-full Moon rising in the east. Saturn was found before it could be seen by eye and caused a lot of excitement with children and adults alike. Throughout the evening, many people used their smart phones to take pictures of the Moon and Saturn through Dave's and Bob's Dobsonian telescopes. Also viewed were several double stars, including Albireo, Castor, and Cor Caroli. Dave gave a short laser-guided constellation tour and explained that most of the stars of the Little Dipper could not be seen from a light-polluted site. The evening was completed by an excellent pass of the International Space Station, which began at 22:45, and several people were able to make out the shape of the ISS through Dave's telescope as he guided on it with his finder. Many thanks to teacher Kristian Levey for inviting us to Mitchell Hepburn Public School.

June 16—Thursday morning Dave McCarter, Everett Clark and Peter Andre moved all the lumber and other supplies from Dave's car port to the Fingal WUR, and were joined by Mike Hanes, Charlie Moher and John Kulczycki. Everyone helped dig out the three pier holes to a depth of 48 inches, widening the holes so they would take the concrete-forming tubes. A special tool was designed and developed on site to assist with removal of mostly blue clay from the holes. Nine bags of concrete were mixed and poured into the three holes to make a 15-cm thick footing, the rebar cages that were made last fall by Robert Atkinson and Matt Neima were placed into the holes and leveled. Then the pier concrete-forming tubes were placed and sand was used to backfill the holes. After some frustration with ramset nails splitting our footing framing supports, Charlie and Dave drove into town and picked up some Tapcon concrete screws. Mike's and Charlie's hammer drills made quick work of drilling the holes and the screws held the framing in place. Peter and Dave put expanding foam under the framing boards to ensure that concrete does not escape our framing, and it will probably help secure the boards too. Apart from the need for some brushing and vacuuming of the concrete surface between the boards, and some additional backfilling around the pier tubes, we are ready for a concrete truck to visit Fingal. The power inverter sure made life a lot easier by allowing the use of high speed grinders and drills, and the battery voltage didn't drop in any meaningful way.

June 18—Charlie Moher, Tiger Bo, and Dave McCarter were at Fingal to clean the concrete where the footings will be in preparation for putting on the concrete glue. Dave drilled 50-mm holes in the framing and cut lengths of PVC pipe to insert through the concrete footing, which will allow us to eventually run cables for scope and camera power and control from the WUR to both observatories. Charlie used the WUR power inverter to run his corded drill for the wire brushes for concrete cleaning, and Tiger ran the

shop vac to suck up the dust and dirt. Then Charlie did the painting with the concrete-bonding glue.

June 20—Monday morning Dave McCarter and Charlie Moher arrived at Fingal early, and worked to get everything ready for the concrete delivery. John Kulczycki and Rick Saunders arrived a bit later. Dave drove back out to the gate about 10:30 to wait for the Lafarge truck, which arrived at 10:40 and followed Dave into the work site. The Lafarge guy was named Tom, and he was hugely helpful, delivering the fibre mix wherever we needed it. We raked and hoed and troweled and leveled, and pretty soon the three piers and the two footings were done. After everything was washed up and the concrete truck had left, we sat and talked about observatory ideas and watched the concrete cure. Peter Jedicke arrived and took some pictures. Rick is going to add an observatory page so you can see the photos of progress.

June 25—London Centre members provided a star party at Springwater Conservation Area. Paul and Charlene Kerans brought their 56-cm (22-inch) Obsession Ultra-Compact Truss-Tube Dobsonian, and Hamilton Centre member Andy Blanchard set up his nearly identical 56-cm Obsession UC Dobsonian. Harold Tutt had his 80-mm Stellarvue refractor and Bob Duff used his 20.3-cm Dobsonian. There were about 35 adults and children climbing ladders to look through the Obsession telescopes to view Saturn, M13, M57, and M108. Harold showed them Saturn, double stars Mizar/Alcor and Albireo, and Bob provided views of Saturn and M57. Harold called everybody's attention to a bright International Space Station pass at 22:55; the star night ended with clearing starry skies and everybody was packing up by around 23:20. It was a very enjoyable evening and many thanks go to everybody who helped out. It is not often that we have two 22-inch Obsession telescopes for star night!

July 2—Dave McCarter traveled to Pelee Island to provide a star talk and observing opportunity for Explore Pelee. The talk began inside under threat of thunderstorms, and despite a loss of power, the talk was completed with attendees viewing the battery-powered laptop screen, which attracted a wide assortment of bugs. The island power remained off until 4:00 and conditions on the Moonless night were very dark, between distant lightning flashes. Pity about the cloud cover, or it would have been an exceptional observing experience.

July 5—The Windermere Manor Star Party occurred under clear skies. A super buffet dinner was enjoyed by 17 RASC members and family and 85 guests keen on good food and astronomy. After desert, Dave McCarter gave his illustrated talk *Star Gazers* and then invited everyone out to the nine large telescopes assembled in the parking lot. The crescent Moon and Saturn were enjoyed by everyone. Despite nearby parking-lot lights, several deep-sky objects were found, including M13, M27, and M57. M51 might have been found as well, but bright skies made it difficult. The organizers wish to thank Bob Duff, Harold Tutt, Mike Roffey, Kelly Manson, Paul and Charlene Kerans, Everett Clark, John Kulczycki, Patrick Whelan, Adam Priestap-Suttis, Maria Lavdas, Roman Dubinski, and Robert Ellis for their contributions to a very successful night.

July 12—London Centre celebrated in style with a Happy Birthday Neptune party, held at McGinnis Landing. Seventeen members and guests were present.

August 5—Quai du Vin Estate Winery Star Night. London Centre members caught a major break in the weather when the sky cleared before sunset. Members set up their telescopes behind their cars to the south of a large wedding tent on the spacious lawn behind the Quai du Vin Winery building, amidst the vineyards. At the north end of the lawn was Andy Blanchard from Hamilton Centre with his 56-cm Obsession Dobsonian. Mike Roffey had his Celestron XLT150 Newtonian; Dan Tremblay set up his Meade 25.4-cm DS-10 Newtonian; Mike Jager had his 20-cm Sky-Watcher Dobso-

nian; Harold Tutt used his 80-mm Stellarvue Night Hawk refractor; Adam Priestap-Suttis and his mother, Cheryl, had Adam's 20-cm Sky-Watcher Dobsonian; Jon Gunning set up his 15-cm Intes MK-65 Maksutov; Peter and Dianne Jedicke assembled Peter's home-built 40.6-cm truss-tube Dobsonian; Charlie Moher brought his 25.4-cm Sky-Watcher Dobsonian; Patrick Whelan and daughter Bridgette, with Patrick's Meade 25.4-cm LX-D75 Schmidt-Newtonian; Roman Dubinski had his 12.7-cm Sky-Watcher Maksutov; Steve Imrie with his Orion 20.3-cm SkyQuest XT8 Dobsonian; Glen Spooner set up his home-built 30.5-cm truss-tube Dobsonian; and Keith Burr brought his 20-cm Sky-Watcher Dobsonian. Other members included Bob Duff, Maria Lavdas, Everett Clark, Richard Gibbens, Ron Sawyer, former London Centre Presidents Martin Connors (1971-1973) and Peter Andreae (1974-1976), and former member Chris Essex. In addition, there was a visitor who brought an entry level 7.5-cm Go-To reflector, which he was learning to use.

Peter Jedicke listed the event on the NASA Web site as officially part of the global Vesta Fiesta. As twilight deepened around 21:00, Peter made his digital slide presentation on a huge screen, mixing some introductory topics with recent news on Solar System exploration. We estimated nearly 150 visitors in the audience.

The first-quarter Moon and Saturn were pleasing sights in many telescopes early in the evening. Peter directed his 40.6-cm Dobsonian at globular cluster M4 in Scorpius, and then Comet Gerrard (C/2009 P1), just north of M15. Many telescopes trained on the comet, which was probably brightest in Andy Blanchard's 56-cm Obsession. Mike Roffey showed a few visitors Saturn, then spent most of the evening pointed at the Moon, with brief views of globular clusters M22 and M13. Other objects were observed, including Epsilon Lyrae in Harold Tutt's telescope. The sky clouded over just before midnight, and host Rob Quai shared wine and cheese with London Centre members. It was a very enjoyable star night for all concerned.

August 6, the second night of the Quai du Vin Estate Winery Star Night was marred by cloud. A few visitors looked at the first-quarter Moon through the telescopes while conditions permitted. Present were Charlie Moher, Steve Imrie, Harold Tutt, and Peter Jedicke, all with the same telescopes used Friday evening. Richard Gibbens was also there. Our host Rob Quai estimated 35 visitors sat down to hear Peter's talk, which went on for about 90 minutes, since there was no observing to do. The bright star Vega was seen in a small sucker hole once. There were a handful of questions and quite a few of the visitors expressed enthusiasm for our subject.

August 10, Bayfield Star Party. London Centre members Paul Kerans, Steve Arenburg, Mike Costa, and Peter Jedicke arrived at Pioneer Park in Bayfield, Ontario, before sunset for a star night organized by the Pioneer Park Association. There was a beautiful sunset under scattered clouds to begin the evening. Then Peter gave a 30-minute introductory presentation at the back of the park, where the grass volleyball court is. About 40 persons sat on lawn chairs or blankets. As predicted by the Clear Sky Chart, the sky was 90% clear once it got dark. A nearly full Moon then brightened the sky like a ghostly dawn. Paul Kerans set up his 56-cm Dobsonian, Steve had his 20-cm Dobsonian, and Peter and Mike used Peter's 40-cm aperture truss tube Dobsonian to show the guests Saturn, M3, M13, M51, M57, double stars, and M31, as well as the Moon. The guests were enthusiastic, and many of them were quite knowledgeable. The star party was over about 23:00, as clouds rolled back in.

August 25 to 28—Starfest at River Place Campground. About 25 London Centre members enjoyed the friendship, Friday Pot Luck, amazing and amusing talks, observing under mostly clear skies, heavy dew, great swap tables at this year's Starfest.

September 17—The Observers Group Meeting was held at the home of Paul and Charlene Kerans. After lovely snacks, the group did some observing under the dark and clear skies.

September 24—Harvest the Stars Star Party attracted over 37 members, family and guests to the reasonably clear skies at Fingal. A moderately bright Iridium flare started the evening, and the skies fluctuated between hazy, completely clear, moderately cloudy, transparent, oh-oh we're going to lose it, and back to clear. Observing Jupiter was a real treat as the variable haze dimmed the brilliant planet and actually sharpened seeing. One young girl who spent considerable time looking at Jupiter was enthusiastic about the colours and detail she could see in the cloud belts.

We had quite a few guests who enjoyed the night and seeing through various telescopes, and they were fun as they saw various objects like M11, M57, and the Double Cluster for the first time. Thank you to the experienced members who were so willing to share scope time and their enthusiasm. A warm and delicious butternut/pumpkin (I think, please correct me) soup was served and went over very well. Thank you! Others brought Timbits and went out of their way to make sure there were chocolate ones available to those who crave them. Several bright meteors were seen. Comet Gerrard was quite easy to find, sporting a faint fan-shaped tail. Several imagers were hard at work filling their, or another imager's, memory cards. The Warm-Up Room was put to use as the evening got quite chilly.

October 1—For Fall Astronomy Day, London Centre set up a display at Masonville Place in the Centre Court. Paul Kerans showed off his motorized 56-cm Obsession Truss-Tube Dobsonian controlled by a hand-held remote, John Kulczycki set up his 40.6-cm Truss-Tube Dobsonian, Rick Saunders assembled his imaging rig, a 23.5-cm Celestron Schmidt-Cassegrain on GEM mount, Harold Tutt brought his portable 80-mm Stellarvue Refractor on Vixen alt-azimuth mount, Roman Dubinski mounted his 25X100-mm binoculars on a sturdy tripod and Mike Roffey had his Celestron 70-mm binoculars on a tripod. Charlie Barbara laid out a small part of his impressive meteorite collection on a table and immediately attracted a large crowd. As well Dan Tremblay, Bill Gardner, Peter Jedicke, Dave McCarter, and Bob Duff talked to people, answered questions, and handed out 100 assembled StarFinder planispheres. It is estimated that over 450 people directly interacted with the display and London Centre members.

October 3—Windermere Manor Dinner, Star Talk, and Star Gazing. After an awesome buffet dinner, Dave McCarter gave his talk "Humongous Numbers" to 25 people at the dinner and 10 members. After the talk, people went out to the dark parking lot and observed through the member's telescopes set up there. Dave McCarter had his 25.4-cm Dobsonian, Paul Kerans set up his 56-cm Obsession Truss-Tube Dobsonian, Charlene Kerans was using her 30.5-cm Meade LightBridge Dobsonian, Adam Priestap-Suttis had his 20.3-cm Sky-Watcher Dobsonian, Cheryl Priestap used Adam's first scope, a 7.2-cm refractor, Mike Roffey used a 8-cm Celestron Refractor, Peter Jedicke set up his 40.6-cm Truss-Tube Dobsonian, Mike Costa had his 25.4-cm Truss-Tube Dobsonian, Bob Duff showed the sky through his 20.3-cm Dobsonian, and Roman Dubinski used a 12.7-cm Sky-Watcher Maksutov. People viewed the first-quarter Moon, Jupiter with four moons showing, Albireo, M57, the "Double-Double" Epsilon Lyrae, Vega, the Double Cluster, M27, the Dumbell Nebula, and M31.

October 5—Dave McCarter and Bob Duff provided an astronomy talk and Star Party to all 45 Grade 6 students and 35 parents at Byron Northview Public School. The skies cooperated and everyone had fantastic views of the Moon, Jupiter with three moons visible including Calisto directly above the planet, Albireo, M13, M31, and various bright stars. Many families brought their telescopes along and benefited from advice on how to balance and use the German Equatorial Mount. Alex Mochrie (manager at Masonville Mall) brought his telescope and enjoyed the reactions of people seeing Jupiter for the first time.

October 8 afternoon—Dave McCarter set up an astronomy display in the “Your Place in Space” at the London Regional Children’s Museum in celebration of the National Earth Science and Space Week. A Galileoscope survived the extreme handling stress at the hands of young boys, and the virtual meteors of the planetarium program Stellarium displayed what was then happening with the Draconid meteors. Bob Duff joined Dave in mid-afternoon and helped explain astronomical topics primarily to interested parents, while children tested the strength of the ISS and Shuttle displays. One parent reported seeing an amazing fireball two years ago, and Dave identified it as the Grimsby Fall, and showed her the McMaster video and many images of this event. She was thrilled to know that others had also seen it.

October 8 evening—Bob Duff, Dave McCarter and Peter Jedicke attended the International Observe the Moon Night (InOMN) celebrations at the Cronyn Observatory. About 25 guests took part and listened to talks presented by Bjarni Tryggvason, Phil Stooke, and a graduate student. One family brought their 12.7-cm Celestron scope looking for assistance in setting it up, and Dave and Bob helped them understand celestial alignment of their GEM mount, helped find various objects, and lots of valuable observing was done. Everyone enjoyed views of the Moon in the Centre’s 25-cm Dobsonian, and Jupiter was observed through the big 25.4-cm f17 Perkins Elmer refractor. Other objects viewed were M31, M27, double stars Albireo and Epsilon Lyrae, M13, and Vega. The event continued until well after it was scheduled to close due to the clear skies and enthusiasm of the visitors and astronomers.

October 13—Mike Hanes and Dave McCarter assembled and erected three walls for the Fingal observatory.

October 14—Rick Saunders, Mike Hanes, and Dave McCarter assembled and erected the north wall. Mike and Dave also picked up the steel rails upon which the roof of the observatory will roll.

October 15—Mike Hanes, Rick Saunders, Gaetan Godin, Dave McCarter, Peter Jedicke, Mike Costa, Michael Jager, Craig Levine, Robert Atkinson, Patrick Whelan, Adam Priestap, and Dale Armstrong all worked hard in spite of poor weather to sheath the wall framing with plywood, install the rail supports, fabricate and install the roof rails.

October 16—Rick Saunders, Mike Hanes, Dave McCarter, Michael Jager, Craig Levine, Dale Armstrong, John Kulczycki, Robert Atkinson, and Mike Roffey all worked hard to prepare the rolling roof, fabricating the sled rails, roof rafters, lifting rafters into place, and checking and rechecking that it was all done properly.

October 17—Dave McCarter visited the kindergarden at Bonaventure Public School and gave 16 children a short presentation on the Sun, and then everyone went into the playground to view some fabulous sun spots through Dave’s solar-filtered 8-cm refractor.

October 17—Dave McCarter and Bob Duff visited Parkhill Library. Dave began his digital slide presentation Asteroids! before a small group of 17 parents and children shortly after 18:30. Charlie Barbara brought his meteorite collection for display.

Paul and Charlene Kerans set up their 30.5-cm Meade Light-Bridge Dobsonian in the grassy field behind the library. Dave took the group outside to observe the International Space Station (ISS) pass at 19:17, but it was mostly cloudy and the ISS was not seen. Dave completed his talk and answered questions. Some of the visitors and two library staff members came outside to see Paul and Charlene’s telescope but the sky was completely clouded out.

October 22—Our Observer’s Group Meeting was held at the home of Cheryl and Adam Priestap-Suttis in Mitchell. Nine people turned up and enjoyed the special treats, conversation, and hospitality.

October 23—Another work force of John Kulczycki, Rick Saunders, and Dave McCarter carried on work on the observatory, putting in the roof ties and building one gable. The roof is now a much stiffer structure.

October 27—Matthews Hall School CAGIS Group Solar Observing Session. Despite cloudy skies, Western graduate student Emily McCullough, Dave McCarter, and Bob Duff arrived at Matthews Hall School for a solar-observing session. Dave and Emily set up the UWO Physics and Astronomy Department’s 9-cm Coronado Solar Telescope on Dave’s Polaris mount and Dave’s 8-cm Stellarvue refractor with a white-light solar filter. After an introductory talk to 22 girls from the school’s Canadian Association for Girls in Science Group and 3 teachers, they lined up for views through the telescopes. The Sun was a glow in the clouds and invisible in the telescopes. Dave familiarized them with how each telescope worked. In the classroom session that followed, Emily described her work as a doctoral student in astronomy and Dave talked briefly about the refractor and reflector telescopes in the room.

October 29—Cronyn Observatory Open House. A surprising number of visitors showed up at the Cronyn Observatory Open House on Saturday despite mostly cloudy skies. Graduate student Tyler Desjardins began his first slide presentation, *Island Universes: the History of Galaxies*, shortly after 19:00 to an audience of 28 adults and children, which increased to an estimated 65 after his second presentation. Graduate student Robin Wing took charge of the 25.4-cm refractor in the dome and graduate students Hoda Rashedi and Aycha Tammour assisted. RASC London Centre member Phil Marusaik set up his 12.7-c Sky-Watcher Maksutov on the Observatory’s roof balcony, and Dave McCarter set up the London Centre’s 25.4-cm Dobsonian to observe the crescent Moon between clouds in the southwest. Bob Duff and Robin Wing directed the big 25.4-cm refractor towards the Moon, and visitors scaled the ladder for views. Peter Jedicke was also there talking to visitors. When the Moon finally disappeared behind the Engineering Building they directed the big refractor to view the red lights on the communications tower in south London.

November 15th—Matthews Hall School Solar Observing Session. The skies were clearing when Dave McCarter arrived at Matthew Hall School. The CAGIS (Canadian Association for Girls in Science) Group were the first to view the Sun through Dave’s 8-cm Stellarvue refractor fitted with a Baader white-light solar filter. Then it was available to other curious students who kept coming all lunch hour until the bell rang. They all had a good look at the Sun, with several assuming that the disk of light was the telescope’s field of view and wondering where the Sun was. They thought the sunspots were dirt on the lens until Dave explained otherwise. Dave estimated that there were about 80 students in all, 5 teachers and 1 janitor, who looked through his telescope.

November 28—Astronomy Presentation for Strathroy District Collegiate Institute. Dave McCarter visited SDCI to present his slide show “Asteroids!” to Matt Greeson’s grade-nine class.

December 5—Westminster High School Presentation on the Sun. Dave McCarter spent most of the day, from 9:30 to 15:30 giving his digital slide presentation “The Sun” to three Grade 9 classes with science teacher and RASC London Centre member, Jenny Shaw. The 65 students were mostly attentive and Dave enjoyed the day immensely.

December 8—Westminster High School Solar Observing. The day was chilly but mostly clear when Dave McCarter arrived around 22:00 for a solar observing session for Jenny Shaw and her Grade 9 classes. Dave set up his Meade ETX-90 with a glass Thousand Oaks solar filter and his Stellarvue 8-cm refractor with a Baader film white-light solar filter on the south lawn of the school. He was joined around 12 noon by Bob Duff. Throughout the day Jenny

sent out students in groups of 4 or 5 to view and sketch sunspots on circles representing the Sun's disk on their clipboards. They viewed the Sun through thin clouds and occasional patches of clear sky. Dave counted 25 sunspots and some faculae and helped the students identify them. Jenny came out at the end to take pictures of the several students with the telescopes. The observing session was over by 14:30. There were in all 90 grade-9 students, plus 17 other students.

December 10th—Cronyn Observatory Open House. Clear and cold skies greeted visitors to the Cronyn Observatory Open House. Graduate student Meghan McGill gave the presentation The Moon: Phases, Orbit and Rise Times before 40 people. She made her presentation 3 times with a total of about 100 visitors by the end of the evening. In the Observatory dome, graduate students Maryam Tabeshian and Shokoofeh Nourbakhsh took charge of the big 25.4-cm refractor, which was directed at the Moon high in the eastern sky. Bob Duff assisted with the refractor, using the 32-mm Erfle eyepiece, which gave 137 power. Paul and Charlene Kerans set up their 30.5-cm Meade Lightbridge Truss-Tube Dobsonian on the Observatory's roof patio and Dave McCarter used the London Centre's 25.4-cm Dobsonian. London Centre member Dan Tremblay assisted. They showed visitors Jupiter, Betelgeuse, Albireo, the Double Cluster, the Andromeda Galaxy (M31), the Pleiades (M45) and the Orion Nebula (M42). People asked many questions and everybody was gone by around 21:00 after an enjoyable evening of slide presentations and observing under clear skies.

Gary Hinks
Secretary

with notes compiled by David McCarter

MISSISSAUGA CENTRE

The Mississauga Centre had another busy year. We are especially pleased that we have such a high quality of presentations at our Friday meetings. The meetings are divided between Speaker Nights when there is a dedicated person, often a professional astronomer, making a presentation in depth about a given topic, and Members' Nights when members of the Centre or invited guests give shorter talks on specific topics. The meetings are held at the University of Toronto at Mississauga (UTM) thanks to the sponsorship of Dr. John Percy and Dr. Ulrich Krull. Meeting report summaries are posted in the archives section of the Centre website.

In 2011, there were 10 Speaker Nights as follows:

January 21	Dr. John Moores—Worlds Enough and Time: The Golden Age of Planetary Exploration in Our Solar System
February 25	Randy Attwood—Gustav Holst and The Planets Suite
March 25	Mary Helen Armour—Search for Life in the Solar System, Where Could They be Hiding?
April 29	Dr. Brady Johnson, Brian Dernesch—Principles and Requirements for Precision Astroguiding; Considerations for Your First Telescope
May 27	Dr. John Percy—One World, One Sky, the Big Picture
June 10	Dr. Rupinder Brar—The Search for Other Earths
September 23	Dave McCarter—So Many Telescopes! So Little Time!
October 28	Mark Coady—Reclaiming Our Night Skies: Fighting Light Pollution
November 25	Anne-Marie Weijmans—The Quest for Dark Matter

December 9 Randy Attwood—The Space Shuttle—30 years of winging it into space

There were 10 Members' Nights in 2011 where 16 individuals gave talks of various lengths and complexity on a variety of astronomical and space topics. This is a smaller number than the 20 presenters in 2010. Roy Swanson and Randy Attwood gave presentations about the Sky This Month. James Beckwith and Tom Alloway did eight talks about Astronomy in the News. Continuing from previous years, there were constellation talks about Ursa Major and Cygnus. Similarly, talks about free software continued. These were about the imaging software GIMP, the satellite tracking program Orbitron, the Clear Sky Application for iPhone, the use of online sky catalogues, and about finding the best weather forecast for observing. Some members travelled to the Atacama Desert in Chile, to Antarctica, to South Africa, and to New York City, as well as to Florida for the shuttle launches of STS-134 and STS-135, and spoke about their adventures. Videos were shown of shuttle launches and about the NASA alpha magnetic spectrometer. Members also discussed Starfest and the General Assembly in Winnipeg, as well as their observations of the solar eclipse in July 2010 and the lunar eclipse in December 2010. There were talks about Solar Cycle 24, the NICE model of planetary migration, the possible spatial variation in the fine-structure constant alpha, the star that should not exist, the *Apollo* program, GPS and how it works, great science astronomy TV series, the Mississauga Centre astronomy forum, observing over 1100 galaxies. As well, Randy gave a presentation about comets and created one in the lecture room.

Mississauga Centre members were generous with their time participating in many educational and outreach events during the year. Members assisted at the Girl Guide Camp north of Barrie on January 22, where the sky cleared up just in time for the girls to see Orion and Jupiter, and on February 8 and November 22 with Sparks in Milton. Several members went to Alloo Public School in Caledon on March 2, where they assisted at a very successful star party attended by 90 people. Despite bad spring weather, six members went to the Scout Camp Goodyear near Orangeville on May 28, where they gave a presentation to about 30 people. The Oakville Historical Society again held an evening under the stars, where Mississauga members brought telescopes on August 18 to show a number of astronomical objects under a clear sky. On October 15, Mississauga Centre members, together with the Earthshine organization, were invited to assist at the Terra Cotta Star Party. Members brought telescopes on November 3 to St. Francis Xavier High School to help with an astronomy event.

As in the previous year, the Mississauga Centre partnered monthly with the Earthshine Astronomy and Space Science Organization to conduct observing sessions at the Riverwood Conservancy. These sessions were very successful and they give members an opportunity to do city observing and learn to use telescopes in addition to giving the public an astronomy experience. On August 9 and 10, there were 150 people and 10 telescopes. On November 1, there was a clear sky and almost 300 people could observe a great ISS pass, as well as the Moon, Jupiter, and star clusters. In all, over 1,000 people attended the astronomy program at Riverwood. A new partnership program with Riverwood conducts astronomy/space programs for Girl Guides and Scouts. For his efforts at outreach, our President Randy Attwood received the Shirley Daniels Education Award from the Riverwood Conservancy.

In August, the Mississauga Centre had very good representation at the Starfest where at least 20 members shared 2 excellent nights of observing and astronomy talks. President Randy Attwood gave a presentation about the 30-year history of the *Space Shuttle*, and Gary Bennett again spoke about gizmos for astronomy. The Mississauga Centre was represented at the Winnipeg GA in July by Bob McCall.

In April, thanks to the work of our President, asteroid 223950 was formally named “Mississauga,” an event written up in the Mississauga News. The asteroid, magnitude 20 and 3 km in diameter, was discovered in December 2004 by Tom Glinos and David Levy, while using a remote telescope in Arizona on David Levy’s property.

In January, Terry Hardman started The Mississauga Centre forum in order to attract more people other than just members to astronomy and Centre activities in Mississauga. This was to be an alternative to the Yahoo group (run by John Marchese) which is open only to members. The Messenger Newsletter, edited by Sheila Stephenson, was published online in August and November giving members an excellent summary of Centre activities, observations, and astronomy and space news. The Centre Web site (run by Randy Attwood and James Beckwith) kept members up to date with regards to meetings and archived activities. Besides these communication modalities, members benefit from the ability to borrow telescopes and DVD’s, as well as publications from the National Centre RASC. The Centre also supports the Mississauga Clear Sky Chart.

Chris Malicki
Secretary

CENTRE FRANCOPHONE DE MONTRÉAL

Nous avons augmenté notre participation au parc de l’Île-de-la-Visitation cette année. En plus d’y donner nos soirées publiques usuelles nous y avons aussi présenté la conférence mensuelle du ciel du mois. La présence du ciel du mois dans un parc nature nous offre l’opportunité de faire de l’observation après la conférence ce qui n’est pas vraiment possible au centre de loisir St-Mathieu à cause de la pollution lumineuse et de l’horizon qui limite le ciel observable. Ce changement fut positif et a attiré une nouvelle clientèle.

En tout nous avons tenus sept soirées publiques, dont six au parc nature de l’Île-de-la-Visitation et une au parc nature de la Pointe-aux-prairies dans le cadre de l’activité du parc nature « Un parc la nuit ». Malheureusement les conditions météo n’ont pas été favorables à l’observation mais la présentation a été populaire. Le ciel du mois à été présenté huit fois. Les quatre autres mois ont été mis en ligne sur le site web. En tout 23 conférences ont été données dans l’année. Nous avons aussi participé à la 30^{ème} présentation du CAFTA au parc des “les de St-Timothée à Valleyfield. Il y avait un peu moins de participants que par les années passés. La confluence d’une soirée sans lune à probablement attiré les observateurs les plus sérieux vers des cieux encore plus noir.

D’autres rénovations restent à faire au chalet au terrain d’observation. Nous espérons avoir la chance de s’y attaquer durant l’été 2012. Il y a eut peu d’activités organisées au terrain, la météo n’aidant pas surtout au printemps. L’année prochaine s’annonce plus fertile en événements. L’année s’est close avec le traditionnel souper de Noël au buffet la Stanza avec une bonne participation des membres actifs.

Hugues Lacombe
National Council Representative

MONTRÉAL CENTRE

The Montréal Centre’s membership stands at 98, and is composed of 87 regular members and 11 Life members. In addition we have 27 associate members on the roster, many of whom show up at various events.

While we have no “Home” location, we do present lectures at two colleges courtesy of the professors and administration; John Abbott College, Sainte-Anne-de-Bellevue, and Vanier College in Ville-St-Laurent.

Even though we are “Home”-less, 2011 saw the Montréal Centre complete a partnership-agreement with McGill University to build an observatory within the Morgan Arboretum Conservation Area, a McGill University owned forest/habitat conservation area at the west end of the island of Montréal. Fortunately, this is also the darkest area of Montréal Island. A 10-foot Pro-Dome from Technical Innovations was erected before winter set in and is, so far, leak-proof. Early spring will see the installation of a research-grade 14-inch Meade LX-200 Ritchey-Chrétien telescope and associated supporting equipment. Following “first light” and a shake down period, the observatory will become the centre of our outreach and public presentation programs. Alongside of the Montréal Centre use of the observatory, McGill’s astrophysics students will be getting night-sky views as part of their introductory classes; the grad students will be able to book research time on the scope also. Trained arboretum staff will be using the observatory to expand their environmental presentations through out the year—after all, space is part of our environment too!

The Centre’s members pursue outreach activities through the year, divided fairly evenly between school/college viewing activities and general public viewing nights/and or lectures. During 2011, the Centre participated in, or presented 12 outreach events as follows:

- Earth Hour (spring) with the Ville de Westmount (about 600 attendees);
- Stars on the Summit (fall) with the Ville de Westmount (about 350 attendees);
- Astronomy Day (spring—daytime) presentations and viewing outside of a public library (about 150 attendees);
- Astronomy Day (spring—evening) lecture & public viewing at the Morgan Arboretum (about 100 attendees);
- Astronomy Day (fall) Public viewing at the Morgan Arboretum (about 40 attendees);
- “Space Day” with the L.B. Pearson School Board (early summer) presentations and solar views (about 2500 attendees);
- Vanier College (spring and fall) for physics students, 3 sessions, solar and night views (about 100 attendees total);
- Elementary school (1) presentation and solar views for about 120 students;
- Cubs & Scouts 2 viewing nights at out of town retreats (about 75 attendees).

Other functions presented by the Centre were 9 public lectures covering topics from the Future of Space Flight, The Life of Massive Stars, Astrophotography, Light Pollution, The History of Astronomy, and our Keynote Lecture of the year, “The Townsend Memorial Lecture,” titled “Intriguing Herschel Objects,” this year presented by Mark Bratton, Past President Montréal Centre, author of “The Complete Guide to the Herschel Objects—Sir William Herschel’s Star Clusters, Nebulae and Galaxies.”

In addition, once monthly from the end of May until the end of October we present a public viewing night at the Morgan Arbo-

return comprising 8 to 12 telescopes with experienced members to guide those first “Oh! Wow!” moments, then explain them; also on these nights there may be a surprise short lecture (45 min) prior to nightfall.

During 2011 we scheduled 22 group observing events for our members, many of which were cancelled due to weather; but added 4 ad hoc member observing evenings.

Along with our Christmas Party and the Fall BBQ (courtesy of member Chris Novak and his family), the Montréal Centre had another busy year.

Frank Tomaras

*Director of Observational Activities
National Council Representative*

NEW BRUNSWICK CENTRE

We continue to hold monthly meetings with a business meeting every second month, or as necessary, rotating the meeting locations among four cities—Saint John, Moncton, Fredericton, and Miramichi. We do not have formal meetings in July or August, although we do gather for observing weekends in the summer. Our monthly meetings consist of a “What’s Up” as well as two or three other presentations on various topics by members or guest speakers. At each meeting, time is allotted for sharing observing experiences, members’ astrophotography and a “show and tell,” where members get to show any new astronomy gadgets, books, or videos they have. At every meeting we also acknowledge those members who have renewed or any new members. Many members get together for supper after the meeting for a social time.

Our membership is, at 66, approximately the same as last year. The reasons for former members not renewing their membership remain the same—cost of membership and lack of time. We continue to discuss recruitment and retention strategies. The thought is if we pursue outreach activities & events, it may help to solve the problem. It was decided a good idea for a recruitment tool would be to build a telescope that could be used as a benefit of membership: set criteria for a telescope rental program to club members and use it at star parties or public observing events. Adrien Bordage attended a mirror-making seminar in Smyrna, Delaware, and built an 8-inch f/6 Newtonian. This can be rented by the month to anyone who is a member of RASC NB, and it has already been used for public observing.

The executive established a Star Party Committee to organize each of the four star parties held in the province. We hope to advertise each event more widely and partner with the three Dark-Sky Preserves in the province to attract as many members of the public as possible.

A highlight of our year was the establishment of another Dark-Sky Preserve at Fundy National Park, as well as an Urban Star Park at the Irving Nature Park in Saint John, the first in Canada.

We have also established a mentorship program, whereby a volunteer member from each city has agreed to act as a resource person for any new members who have questions, problems or just need information on RASC and RASC N.B. This will help ease their transition into the group and into astronomy.

This year we have been very proud of our youth contingent and their accomplishments. We have been able to support two young

members in astronomy-related pursuits. Holly Ayles created an LPA project in which she took Sky Quality Meter readings in her community and submitted the results in a poster format that won a regional school competition. Holly and a friend then entered a revised poster that won in their age group for the International Statistical Literacy Competition N.B. Division, the Canadian Statistical Association’s National Statistical Literacy Competition, Google Science Fair competition, and the International Statistical Literacy Competition in Ireland. Another youth member we’re proud of is Kathryn Gray, who, as everyone knows, became the youngest person to discover a supernova. Kathryn has received a lot of recognition for her discovery, with the pinnacle being a trip to the Canary Islands where she had the honour of opening the Starmus Festival.

LPA is in the final stages of copyrighting “Freddy the Frog” for our LPA mascot for RASC N.B.; we are awaiting the final confirmation and are allowed to use it as such now. The Web site www.SaveOurSkies.ca, which focuses on educating the public in light pollution, centring especially on automotive dealership concerns, is very successful and will be updated to improve contact with the members, the public, and corporations. The LPA committee will link with the Education committee for contact with the youth component. We have an outreach kit, which will include photos of light-pollution issues, FAQ, and some suggestions for solutions to light pollution. LPA outreach also includes presentations at each of the N.B. city meetings, newsletter articles, special events and astronomy activities, support of Dark-Sky Preserves, and follow-up for more Urban Star Parks in the province, support for the All-Sky Network, international events such as Earth Hour, Globe at Night, *etc.*, ongoing communication with local and provincial governments, as well as N.B. Power re light pollution concerns. New LUX meters are planned to be purchased by National Office and Chris Weadick is facilitating the LUX project. There is ongoing partnership with N.B. Power and they have agreed to give our LPA committee’s recommendations for test sites for the new LED dusk to dawn lights preference. Holly Ayles represented our LPA committee’s concerns in an interview requested by N.B. Power. We are especially proud of our Dark-Sky Preserves and the first Urban Star Park in Canada, and our LPA committee is pursuing the possibility of Urban Star Parks in other N.B. cities – Moncton, Fredericton, & Miramichi.

Our Education Committee has taken on a project to identify, review and recommend astronomy books for children. The committee continues to encourage youth participation in the Sidewalk Astronomy Certification Program and is also reviewing NASA’s curriculum resource “Journey to the Stars” to decide on recommending it to the N.B. Department of Education. Ted Dunphy developed an elementary-level school resource to support astronomy learning in grades 4-6. This will be introduced in a number of classrooms before pursuing a publisher.

We are working toward broadcasting Webinars of our monthly general meetings, as many of our members are unable to attend every month. We hope this will act as both a recruitment and retention tool to keep our members in touch with what is going on in their Centre. Thanks to Angela Davis, we are now on Facebook and Twitter.

This year, largely due to the efforts of Don Kelly, a ceremony was held at UNB Fredericton to celebrate the naming of asteroid 79117 Brydone Jack in honour of William Brydone Jack.

This year, we were fortunate to be the recipient of a 10-inch Newtonian telescope and an EQ6 mount from a donor who was leaving the province. What a windfall!

Our members have been involved in numerous outreach activities/events in each of the communities. We hold four annual star parties each year in each of the DSPs, several each year in the USP, an informal observing weekend at Mactaquac Provincial Park, as

well as events for Earth Hour, International Astronomy Day, & Fall Astronomy Day. Many of our members are invited to give presentations & hold public observing sessions for various group or organizational activities—school groups, community service, and non-profit groups. There were at least 27 registered astronomy events for RASC N.B. in 2011, providing outreach to more than 1750 people.

Monthly Meetings

January—Paul Gray presented the details of how Kathryn discovered her supernova. Curt Nason did a “What’s Up,” an Observer’s Handbook talk on how to use and maintain an observing logbook; Ted Dunphy gave a talk on the “Stars of Cepheus.”

February—The monthly talks/discussions of “What’s Up” by Curt Nason; Daniel LeBlanc gave a talk on “Rocks from Space” – a presentation on meteors, meteorites, and how to hunt for them; Emma MacPhee gave a talk on “Big Stars.”

March—“What’s Up” by Curt Nason; June MacDonald gave a talk on “Living in A Bubble – The Solar Wind and the Heliosphere”; Ted Dunphy gave a presentation on the “*Apollo* Landing Sites.”

April—“What’s Up” by Curt Nason; Paul Gray gave a talk on the “Green Laser Policy – RASC Policy and Transport Canada”; Holly Ayles gave her poster presentation on her light-pollution project, which has won several competitions; Curt Nason gave the group an astronomy quiz with varied results!

May—“What’s Up” by Curt Nason; Emma MacPhee presented a constellation talk on Virgo; Curt Nason presented on behalf of Guy Arnold “The Scale of our Solar System.” In May as well, we held a “Star Fest” weekend with public talks, Presentations, and observing in honour of Kouchibouguac National Park becoming the second DSP in N.B.

June—“What’s Up” by Curt Nason; Gabrielle Roy, a student from one of the Moncton area schools gave a French-language presentation on her school poster project “A Tour of the Universe”; Dr. Francis LeBlanc spoke to the group about the topic of his new book “Introduction to Stellar Astrophysics”; Dr. Ted Gull presented on the *Hubble Telescope*, mentioning briefly his research on Eta Carinae and his involvement with the *HST* missions.

July—No meeting.

August—No meeting. We held our annual COW— “Camping & Observing Weekend”— in Mactaquac Provincial Park. We provide solar and nighttime observing opportunities for the general public, as well as taking some time for our own group observing and have a group “Star BQ.” Also in August, there was the official opening of the USP in Saint John, with Curt Nason presenting the Irving Nature Park representative with a RASC plaque congratulating the company on its contribution to preserving dark skies in an urban setting. Late in August, we held a “Star Fest” weekend at Fundy National Park with observing and a StarBQ for the public.

September—“What’s Up” by Curt Nason; Emma MacPhee showed photographs from our star parties, COW, & USP opening; Eldon & Ernest Rogers gave a presentation on their weekend at “Rage at the Gage” (a weekend when rocket enthusiasts gather to launch their homemade rockets and talk about rocketry), where they launched their own rocket for the first time. Ted Dunphy presented on “White Dwarfs” and used the novel approach of comparing the various types with the seven dwarves of Disney fame.

October—October was our Annual Meeting which was extremely interesting and fun. Our speakers were: Eric Bolden from N.B. Power who spoke about “The Future of Street Lighting in N.B.” and informed the group of N.B. Power’s efforts and plans to bring into use full-cut-off lighting in the province; Dr. Harry Bohnsack, an optometrist, spoke on “The Eye and Night Observing”; Kathryn and Paul Gray gave a presentation of their trip to the Starmus Festival;

Dr. Ted Gull gave a presentation on “Eta Carinae – A Box of Puzzles”; Dave Chapman told the group about his awesome trip– “An Astro Tour of New Zealand/Aotearoa. Dave Lane spoke on “Amateur Variable-Star Research at the Abby Ridge Observatory;” and described to the group the special considerations on building a home observatory and how he pursued his study on variable stars.

November—“What’s Up” and constellation talk on Aries by Curt Nason; Chris Weadick’s talk was a “Light Pollution Primer—Keep It Simple Starman”; Curt Nason ended the meeting with “Setting the Periodic Table.”

December—“What’s Up” by Curt Nason; Dr. Louise Edwards from Mount Allison University gave a talk on “Galaxy Evolution in Cluster Cores and the Gravitational Field in the Centre of Galaxy Clusters”; Charles Doucet gave a presentation on “Fracking and Light Pollution in N.B.” a very hot topic here now. Tim Doucette introduced his plan to create astronomy greeting cards.

All in all, our meetings, events, and activities throughout the year were interesting, stimulating, and fun. We continue to plan and work together to advance astronomy in the province of N.B.

June MacDonald

Secretary



The Niagara Centre had a busy year in 2011, filled with observing, public events, regular meetings, and get-togethers.

Our membership declined slightly in 2011, going from the mid-70s to low-70s. Our lost members outnumbered several new members.

We had one member death. Walter Jutting died at age 92. He joined the Montreal Centre in 1964 and transferred to the Niagara Centre in the late 1990s after moving to this region.

The Niagara Centre continued a strong tradition of public star nights at museums, libraries, schools, and private establishments, as well as city, regional, and provincial parks and campgrounds.

Our audiences included students of all ages and members of the public from the Niagara Region and further away. When the location has electricity and a proper building or pavilion, our public events usually include a slideshow and informative astronomy talk by Brian Pihack. Even when our public star nights are completely cloudy, members of the public who turn up can still hear the talk, meet club members, and see telescopes in person.

Our most commonly used locations are Heartland Forest, a private park and conservation area in Niagara Falls, and the Chip-pawa Creek Conservation Area in Wellandport, which also hosts the Centre’s observatory.

We have begun negotiations with Niagara Parks, the organization that operates all the Niagara Falls tourist attractions along the Niagara River, to have public events on their properties. We have scheduled a few events with them for 2012. These events could expose astronomy to hundreds or even thousands of tourists this year.

Due to the great success of our nights, we are nearing the point where we cannot accept all our invitations for public nights from May to September.

Club members travelled to star parties in Ontario and Pennsylvania. As usual, a large group of about 25 members attended Starfest in August.

We will elect a new executive in October 2012.

Guest speakers

January	Philip Downey "James Street LED Lighting and 10 Years of Membership"
March	Robert Godwin, Apogee Books. "Science Fiction, Space Flight and Energy"
May	Philip Downey "Astronomy in Chile"
September	Alan Ward "Optical Coatings for Telescopes"
October	Richard West "The Dominion Astrophysical Observatory"
November	Brian Pihack "The Last Decade of Niagara Centre events"
December	"Members Astrophotography Night" featuring slide shows from 8 of the club's astrophotographers and their best pictures of 2011

Philip Downey

Secretary

OKANAGAN CENTRE

We now have 107 members.

We have monthly meetings in Kelowna, Penticton, and Vernon, where we have guest speakers and talk about our observing.

Our Observatory has had great success this year, also with the 25-inch telescope up and running and tracking without hardly any difficulties. Between our public outreach at the Observatory, local school and Community events, we have had 110 events and about 7000 guests!

Penny Nile

Secretary

OTTAWA CENTRE

2011 has been another excellent year for our Centre. The Council has made concrete efforts this year to reconnect with our membership, and to accelerate the Ottawa RASC's ongoing program to reach out to the community.

This year we started a new member-recognition program with classy lapel pins for Ottawa members who have received Service Awards, or who have been members of the Ottawa Centre for more than 20 years, as well as Youth Members. You may have noticed that we've also provided a greeting table at our regular meetings to provide a warm welcome to new visitors and help with enticing new members to join our ranks. On a more sombre note, Dr. G. Lindsey, a life-member, passed away this year after 51 years of membership.

On Saturday, May 7, we joined with the Canada Science and Technology Museum, as in previous years, to mark International Astronomy Day, with both indoor and outdoor displays of tele-

scopes and astronomical material. On Sunday, October 16, the Ottawa Centre was at full force for the third year in a row at the Science FunFest, held at the Natural Resources Canada building on Booth Street. The event attracted over 5,000 visitors, many of them young visitors. Eric Lemay led our team of Centre volunteers in providing solar observing, meteorite displays, astronomy-themed art, sky images, and many other attractions to excite the public. The Museum provided an inflatable planetarium for people to observe the wonders of the night sky in the heart of the city during the day. On August 20, our volunteers supported a huge event at the Lumiere Festival in Stanley Park for the first time. Also for the first time, a select few Ottawa Centre members were invited to participate in the Cube Gallery's Nuit Noire exhibition in an effort to bring attention to the art of a dark sky. One of our talented astrophotographers, Sanjeev Sivarulrasa, followed this event up with his own dedicated exhibition at the gallery in the fall. Many of our members also had articles and photos published in SkyNews, including 14-year-old Youth member Jacob Von Chorus—an impressive achievement at any age.

For all of these outreach efforts, the Ottawa Centre depends on the dedication and volunteer time of our many members, whose contribution is hereby gratefully acknowledged. The Ottawa Centre wishes to note, in particular, the immense efforts of our outreach co-ordinator, Mike Moghadam, who has spearheaded our public-oriented activities over the past three years. Over the past year our outreach has touched over 21,000 members of the public, almost four times higher than any other Centre. This year, Mike has been helped by strong support from several new deputies. Sylvie Létourneau has done an excellent job with school outreach. Stephen McIntyre worked hard to organize several public star parties at the Carp Library, although the weather only permitted two in July and September. We saw many new faces at the eyepieces, thanks to the links built by Mike's efforts. Next year we will try a more flexible scheduling approach to deal with the weather.

The Ottawa Centre has continued this year to be engaged, not just with the public, but also within the RASC organization. The National Centre has provided a new Vision Statement for the Society, "To inspire curiosity in all people about the Universe, to share scientific knowledge, and to foster collaboration in astronomical pursuits". The RASC now "encourages improved understanding of astronomy for all people, through education, outreach, research, publication, enjoyment, partnership, and community". After requests from Ottawa Centre, the National Office has developed a new insurance policy for the entire RASC that allows individual Centres to forego separate costly liability policies. As a result of this change, and other cost saving measures implemented under the guidance of treasurer Hans Brouwer, we have put the Centre on a very stable financial footing going forward. Rob Dick, one of our two National Representatives and chair of the National Light-Pollution Abatement Committee, was honoured with a National Service Award this year for his dedication in service to darker skies.

As of September 2011, Ottawa Centre RASC membership stood at 343, including 3 Youth and 34 Life Members. This represents a loss of 40 members from last year, and is well down from our total two years ago during the International Year of Astronomy. Our challenge over the coming years will be to build on our outreach efforts and membership recognition to ensure a continuing membership base. It should be noted, however, that the Ottawa Centre still has the second-largest membership in the country, the Toronto Centre being the largest.

Our Centre meetings are held on the first Friday of each month at the Canada Science and Technology Museum, occasionally on the second Friday in the event of holiday weekends. The meetings are open to both members and the general public, with attendance

PRINCE GEORGE CENTRE

typically approaching or exceeding 150. Bill Wagstaff continued to provide a varied and interesting program in his second year as our Meeting Chair, a role that he will now pass on to Paul Klauninger for next year. The quality of the presentations given by our members and guests continues to be impressive. Many thanks are due to others who help the meetings happen: Chris Teron, our Secretary and slide-master, and all those who have helped keep the projector running in the back room; and Eric Kujala, our meeting video recorder. A special thank you goes as well to Art and Anne Fraser, who have been satiating our collective caloric needs with a fine selection of snacks and beverages. Art also continued this year in his role as our membership secretary.

Our Centre Annual Dinner on November 18 was attended by over 70 members and guests. Our speaker this year was Canada's newest astronaut, Dr. David Saint-Jacques, who spoke to us about his experiences in training and his undersea mission to NEMO. Our Vice-President, Gary Boyle, organized the event, as well as the guest speaker, and provided a fabulous selection of door prizes. Eric Kujala again provided his services as videographer. This year the "Paul Comision Observer of the Year Award" was announced at the Annual Dinner Meeting and goes to Gordon Webster. The award for Best Presentation at a Centre Meeting again goes to Simon Hanmer for his presentation entitled "Martian Oceans." The Astronotes article of the year award was presented to Brian McCullough for his 7-episode science fiction serial "Sailfleet Rubicon."

As part of our prudent price-pruning policy, our premiere perennial publication Astronotes will no longer be printed in paper to preserve the price of postage. Our ever enthusiastic editor, Debra Ceravolo, will be passing the torch to experienced Weblog publisher, Drew Hodge. Thanks Deb!

The Fred Lossing Observatory at the Mill of Kintail Conservation Area, a dark site near Almonte, is now in its 40th year and continues to be used by members for observing. Director Bryan Black has worked hard maintaining the site, and is smoothing the access driveway so people will be able to use the telescope site without the need for a tow truck.

The SMARTScope project at Shirley's Bay is again operational and entering beta testing. Most major technical and safety issues have now been resolved, with Councilor Stephen Nourse having built a new mechanism to bring reliability to the dome shutter. We've benefitted from a re-energized team of new volunteers including Jim Maxwell and Denis Tremblay. The next major step is to develop a plan of operations, with the eventual goal of making the telescope available to the membership for use.

Estelle Rother has continued in her role as manager of the Stan Mott book library. I (Al Scott) have continued in the role of manager of the Ted Bean telescope loan library.

A well-deserved note of thanks goes out to Richard McDonald for his years of service as manager of our Web site and manager of the Centre mailing lists. A warm welcome to Justin Hemmings, who has graciously volunteered to take over from Richard. We also maintain an active Ottawa Centre Facebook page to advertise Centre events.

Our Council is composed of a solid group of dedicated and effective volunteers, and I know we can look forward to another year of positive experiences.

Thank you all, and clear skies.

Al Scott
President

Now in its 7th year, the NOVA (New Observers to Visual Astronomy) course was offered once again. This course is an effective means to involve people in astronomy.

Funded and maintained by the Prince George Centre, the AllSky camera system that monitors the sky for meteors and fireballs was expanded to include the Mile 108 Elementary School. These cameras are part of the B.C. Meteor Network, the larger West Coast Fireball Tracking Network, and provide faculty and students with the opportunity to explore non-visual astronomy.

Due to poor weather, virtually all our viewing events scheduled during January to April were cancelled. Events included Lunar and Messier Marathons, as well as binocular viewing of open clusters.

Our booth set up at the Canada Day festivities attracted over 1200 visitors. Solar viewing was offered between breaks in the cloud cover.

On August 27th, several Centre members attended a star party held in Fort Saint James, a small community located on the shores of Stuart Lake, 160 km from Prince George. Centre members located in "The Fort" were instrumental in organizing the event enjoyed by over 80 local residents. The community was very supportive of the event by providing an excellent viewing area, refreshments, and by extinguishing lights.

The 24-inch telescope's mechanical and electronic apparatus was thoroughly serviced and upgraded during the summer months. The telescope's 24-inch primary and 8-inch secondary mirrors were sent away for recoating and evaluation in August, but miscommunication and several delays resulted in the mirrors not returning until late December. Consequently, our fall viewing period required us to rely more heavily on the Centre's smaller Dobs and members' telescopes during open houses and tours.

Glen Harris
Secretary

Q CENTRE DE QUÉBEC

Le Centre de Québec a donné 10 conférences durant l'année 2010-2011. Les sujets, très variés, ont plu à nos membres. Le sujet le plus abordé fut la photographie astronomique. Une soirée publique, dans une cabane à sucre, a permis à 30 personnes de regarder dans nos télescopes. Quelques soirées dans le stationnement du Domaine Maizerets ont permis de rencontrer 20 personnes. Stéphane Dumas a donné plus de 25 conférences dans les écoles de la région de Québec, rencontrant ainsi plus de 400 élèves. Notre nouveau Président est notre ambassadeur par excellence au Centre de Québec. Les nuits à l'observatoire de St-Nérée ont été très appréciées, mais rare dû à la condition météo.

Nos activités dépendent de nos bénévoles. Donc, je profite cette occasion pour remercier tous ceux qui ont aidé la réalisation de ces activités.

Pierre Desrosiers
Trésorier

REGINA

CENTRE

Membership in the Regina Centre stands at 70.

For 2011 the Regina Centre Council initiated a modification to the normal agenda for monthly meetings by adding a guest presentation. These presentations included teleconferences, guest presenters, and visits by members of other Centres.

Presentations by members of the Centre covered solar observing and characteristics of the Sun, as well as the construction of various observatories.

A dinner was held in February, which gave members an opportunity to socialize in an informal atmosphere and enjoy a meal of their choosing. Vance Petriew gave a presentation on the history of the Society in Regina.

A very successful event, hosted by the Regina Centre, was a visit and presentation on astro-imaging by Alan Dyer. To accommodate the large attendance, the event was held in a lecture theatre at the University of Regina.

In addition to normal “club” business a presentation on what is currently visible in the night sky, better known as “what’s up,” was given.

Public outreach was successful again this year with over 2700 visitors looking through our telescopes.

Major public events were Astronomy Day in May with solar viewing and table displays, Canada Day Solar viewing in Wascana Park, two Star parties in Grasslands National Park with the co-operation of Parks Canada, and of course the Saskatchewan Summer Star Party (SSSP) at Cypress Hills Provincial Park with solar and night viewing public events. The Kalium Observatory, located at the Saskatchewan Science Centre, hosted the public on fourteen nights.

A new venture for the Centre was participation in an event organized by the Western Development Museum in Moose Jaw, where children from a number of schools in southern Saskatchewan are invited to learn about the museum. Members of the Regina Centre set up a solar scope, small telescope, and binoculars for the children to look through and ask questions. Approximately 450 students took part in the event. The museum has asked us to participate again in 2012.

Other public events were held at the Sukanen Ship Museum in Moose Jaw, Moose Mountain Provincial Park, and at Buena Vista Resort Village.

Weather forced the cancellation of several events. Many have asked to be rescheduled.

Len McDonald
Secretary

ST JOHN'S

CENTRE

St. John's Centre had another active year with 10 public meetings (Sept-June), annual star party, Astronomy Day celebrations, several public observing sessions, and an Observe the Moon night.

Meeting topics were

Hands-on Registax (Chris Stevenson)
Amateur Radio Astronomy (Garry Dymond)
Evolution of Globular Clusters in the Milky Way (Adam Royle)
The Moon (Mike Wilkshire)
Galaxies new & old (John Lewis)
Alien Fireballs (Phil McCausland)
Star Formation (Kevin Sooley)
Member Night (various members)
Tribute to Joe English
AGM The St. John's Centre suffered the loss of two cherished members during the year—Joe English, the Centre's National Council Representative, was killed while on the job in a traffic accident in June. Dr. Peter Lockwood, former Centre Treasurer and 40-year member, passed away in December. Both were remembered by tributes at a public meeting.

The Centre made good use of RASC materials throughout the year and distributed items at all public functions—well received by the public.

The Centre is looking forward to an active 2012 with observing sessions, star-party weekend, Transit of Venus event, and other special activities. Planning continues for the construction of a small Centre observatory.

Randy Dodge
Secretary

SARNIA

CENTRE

No report submitted.

SASKATOON

CENTRE

2011 was a fairly active year for our club and its members. A new member's night was held on February 24 at the U of S observatory with several Centre members offering their expertise on a variety of topics to our newest members. On March 26, we participated in the worldwide celebration of Earth Hour by bringing our telescopes to a local mall, where the lights were being turned out for a one-hour period. Although clouds interfered this year, many shoppers were introduced to the club and its activities as we moved our telescopes indoors.

Centre member Ron Waldron made a once-in-a-lifetime trip to South Africa with a portable telescope. While there, he visited S.A.L.T. (South African Large Telescope). Much to his delight that telescope and observatory was, at the time of his visit, the largest telescope in the world!

Astronomy Day activities took place again this year, the weekend of May 6 and 7. Centre members set up their telescopes Friday evening at the Lakewood Civic Centre, Saturday morning and afternoon at the Farmers' Market, and Saturday evening at the Beaver Creek Conservation area. Sky conditions were less than ideal, but the weekend saw many visitors.

On June 25, several members left the city at the invitation of members Gary Stone and Tenho Tuomi to tour their respective astronomy observatories and viewing sites. It was dubbed a Mid-summer Solstice Party and 17 members/guests attended. Later that summer, Tenho held his own open house for his neighbours and surrounding area.

Mike Clancy and Tenho Tuomi organize several Star Parties at Saskatchewan parks. One of note was at Anglin Lake on August 5. Rick Huziak continued his efforts with Dark-Sky Preserves by combining with the Regina Centre and organizing two public star parties at Grasslands National Dark-Sky Preserve on May 28 and July 30. Meanwhile, Rick's wife Kathleen became the second woman in our Centre to complete her Messier list.

The Saskatchewan Summer Star Party was held again at Cypress Hills on August 24 - 28. This year the rain gremlins stayed away and clear skies were enjoyed all five evenings! The prevailing curse that haunted the last two star parties has finally been broken.

Many members, under the leadership and guidance of Darrel Chatfield and Rick Huziak, assisted in extensive renovations of the Sleaford warm-up shelter. The space is now larger (and seems warmer) thanks to their efforts.

Members got together the morning of Saturday, December 10 to watch the lunar eclipse from atop the large hill in Diefenbaker Park. This was followed by a breakfast.

Throughout the year, Larry Scott continued to offer monthly observing sessions at our Sleaford observing site near Colonsay, and Ron Waldron continued to offer outreach by giving Star Talks for school children at Brightwater Environmental camp and other sites near Saskatoon.

Ron Waldron
Secretary

SUNSHINE COAST

CENTRE

Executive Meetings are held on the First Tuesday of every month. General Membership Meetings are held on the 2nd Friday of every Month. Public Outreach "Astro-Cafe" viewing nights are the 3rd Friday of every month.

Membership stayed steady for 2011 at 38 members.

Activities

- January A group of SCC members visited Camp Byng Provincial Scout Camp to assist Scouts with their Astronomy Badge
- February Club Member Adrian Payne delivered a presentation on Space Travel.
- March The club Led the Earth Hour celebrations in Sechelt
- April The club set up a Booth at the Half Moon Bay Spring Carnival. Two club members visited Camp Olave Provincial Guide Camp to work with the girls.
- May Astronomy Day was celebrated at Trail Bay Mall when 250 visitors came through our Booth. Dr. Garth Jones lectured to the members, "Orbit for Dummies."
- June Public Outreach Nights at Davis Bay were very successful.
- July Solar viewing attracted much attention at the Sechelt Night Market.
- August Sunshine Coast Centre Star Party at Porpoise Bay Provincial Park attracted 700 Visitors.
- September Welcome back party for members
- October Astronomy Day was celebrated at Gibsons, B.C., and attracted 300 Visitors
- November Dr. David Helfand delivered a presentation entitled "Dark Matter." 80 members and visitors turned out.
- December Members' Christmas Party

Neil Sandy
Secretary

THUNDER BAY

CENTRE

Assisted in the design and construction of the Dave Thompson Observatory at the Fort William Historical Park. Dave Gallant and Joua De Sousa of our Centre are the main volunteers for this project. So far, the dome has been constructed and the 20-inch telescope installed. The learning centre and control room are nearing completion.

Newsletters

10 newsletters were produced and distributed.

Regular Meetings:

10 regular meetings were held in 2011. All our meetings have been at the Confederation College. We normally have between 15 and 25 people come out to our meetings. There are often new faces.

Presentations: Members conducted at least two presentations each evening.

Guest Speakers

Fort William Historical Park gave a presentation on the explorer

Dave Thompson, after whom the observatory will be named.

Justin O'Hearn: student in Toronto gave Skype Presentation on his VIP pass visit to the Johnson Space Centre.

Observing Certificates

- one Explore the Universe Certificate awarded
- one Lunar Observing Program Certificate awarded.

Public Viewings

- two at Hillcrest Park. Several members came out to volunteer and set up their equipment for the public. At least 500 people came by over the evenings.
- Canadian Cancer Society Relay for Life in June. Members brought scopes out for the all night walk for cancer.

Outreach

Area Parks

- Quetico Park: at least two of our members drove to Quetico Park on a weekend in August to give presentations and had telescopes set up for campers to do viewing.
- Sibley Provincial Park: Two of our members gave talks for the campers and public on a weekend in the summer.
- Fort William Historical Park (FWHP), Celtic Fair Weekend. Two of our members had solar telescopes and an information booth set up during the fair.

Talk to Area Schools

- Ted Bronson gave a talk to at least one area school.

Centre Observing Nights

The Centre decided on formalizing observing sessions for the members and have someone take the lead as the Centre's "Observing Coordinator." Douglas Stuart agreed to take on the responsibility. There were two events conducted. About 6 people attended each evening.

Information Booths

- Winter Carnival FWHP: included a solar telescope set up for solar viewing.
- New Year's Eve at the Fort. Members also brought their scopes for the public. Displayed a meteorite for public to touch.

Presentations to the Public

- March 4, Ted did a presentation at Fort William Historical Park.

2013 General Assembly Thunder Bay planning under way. Dave Gallant is leading the planning committee.

10-inch Dobsonian Telescope Rebuild Project:

The TBay Centre had a 10-inch Newtonian telescope donated to it. It initially came with an equatorial mount. Our Centre wanted a scope that was easily transportable and easy to set up. The original scope was bulky and heavy. The decision was to build one in the Dobsonian design. A fibre-glass sauna tube was donated to the project, as were various other parts and eye pieces. Eight to 10 members have been working on the project. So far, three evenings have been dedicated to the project, and the old scope has been disassembled, the tube has been painted, and measured out for the mirror placements and eyepiece location.

The Centre also has a donated 6-inch Newtonian. The intention is to convert this to a Dobsonian mount.

A member donated a solar-projection scope to the Centre.

In December, the Thunder Bay Centre had 50 members and we were up to 53 members earlier in the year. This was the most members our Centre had since our inception in 1988.

Andreas Buchholz

Secretary

TORONTO CENTRE

In this year, 2010 to 2011, the Toronto Centre continued to put our archives in order as many new opportunities opened up in Technicolor.

On February 5th a working group of the Centre met at the University of Toronto to continue work towards a strategic plan for Toronto Centre operations in the future.

One of the strongest traditions we have is our star parties at the Ontario Science Centre. Even before the New Year, our volunteers treated members of the public to a daytime astronomy program at the One World, One Sky event organized by Prof. John Percy on 2010 October 16, and telescope viewing at the Halloween Star Party on the Science Centre's Teluscape forecourt on October 30 of last year. We celebrated Earth Hour on March 26 at the same location.

A special thanks to all 26 volunteers who helped out with our daily solar observing sessions during Astronomy Week, as well as the Teluscape Star Party on International Astronomy Day May 7, especially our co-ordinator Shawn Lee and Randy Attwood, who presented a lecture about the 50th anniversary of human space exploration. The Summer Star Party on July 8 was held in the Teluscape under clear skies, with the help of 30 volunteers who set up 16 telescopes for public viewing of objects, such as the first-quarter Moon and Saturn in conjunction with Gamma Virginis. Ray Khan helped present a telescope clinic for new scope owners, and Dr. Michael Reid from the University of Toronto presented a guest lecture titled "The Five Hundred Million Sisters of Earth." The day had started off with a bang with the final launch of the *Space Shuttle* that morning.

These special events punctuated the normal schedule of our events hosted at the Ontario Science Centre. These events were organized by our 2nd Vice-President, Paul Delaney from York University:

- Bhairavi Shankar, University of Western Ontario, "Studying the Lunar Farside" (Oct. 27)
- Dr. John Moores, York University, "Worlds Enough and Time: The Golden Age of Planetary Exploration of our Solar System" (Nov. 24)
- Paul Delaney, York University, "Extra-Solar Planets Update from the 217th Meeting of the American Astronomical Society" (Jan. 12)
- Dr. Alireza Rafiee, York University, "Touching Black Holes" (Feb. 9)
- Mary-Helen Armour, York University, "The Search for Life in our Solar System" (Mar. 9)
- Dr. Aaron Price, American Association of Variable Star Observers, "100 Years of Citizen Astronomy through Variable Stars" (Apr. 20)
- Dr. Ralph Pudritz, Origins Institute at McMaster University, "From First Stars to First Life" (May 4)
- The Autumn 2011 series of lectures got off to a great start with Jesse Robertson, York University, "What Your Favourite Galaxy May Be Hiding From You" (Sep. 28)

Lectures were recorded for the Centre's Fred Troyer library for members thanks to Guy Nason, Eric Briggs, and Tom Luton. In parallel with regular lectures, the Observational Activities Committee represented by Paul Markov organized another line-up of what have become known as Recreational Astronomy Nights, also held at the OSC's Imperial Oil Auditorium. Blake Nancarrow, Brenda Shaw, François van Heerden, and Eric Briggs took responsibility in turns at these meetings to warm up the audience with "The Sky This Month."

Thanks are due to members such as Ray Khan, Ed Hitchcock, Andy Beaton, Peter Hiscocks, Hannah Park, Katrina Ince-Lum, Jim Chung, Bryon Czarnik, Patrick McDonald, Ralph Chou, Paul Markov, Serge Théberge, John Bohdanowicz, Stuart McNair, François van Heerden, Ian Steer, Malcolm Park, John Merchant, Frank Dempsey, David Cotterell, Denis Grey, Les Bluestein, Josef Winter, and Dave Kobayashi for presentations about their ongoing observing, research and education activities, such as “Observing the Sun in H-Alpha,” “Touring the Galileo Museum,” “Variable Quasars,” “The SkyAct Light Pollution App,” “The Night Skies Network,” “Astronomy in Hawaii,” “Lunar Eclipse Photos,” “SNOLAB Astrophysics from the Deep,” “My Non-Astronomy Trip to Italy with Astronomical Content,” “Granite Gap Astro-Community in New Mexico,” “Searching for Supernovas and Citizen Science,” “MallinCam Astronomy,” “New Facts from First Galaxy Distance Estimates,” “A Hitch-Hiker’s Guide to Starfest,” “Visits to New Mexico Skies,” “A Visit to Atacama,” “Toronto Clear Skies Climatology,” “The AstroTrac 320AG Equatorial Mount,” “Drawing at the Telescope,” and “An Uncommon View: Earth and Space from 100,000 feet.” The national RASC’s Executive Director, Deborah Thompson, also delivered an RASC National Office Update at the meeting on February 23. There were ten RAMs between 2010 Oct 1 and 2011 September 30, and an additional meeting was cancelled due to snow. There was an additional Stellarium software workshop held at the OSC on March 2 by Blake Nancarrow. The Centre is grateful to all who presented, and the OAC thanks the Ontario Science Centre and its staff, especially Sara Poirier, for their assistance and their facilities used by Members’ Nights and star parties throughout the year.

Outside of volunteerism at Science Centre star parties and lectures, Katrina Ince-Lum and then Shawn Lee led an active group of observers for monthly public solar-observing sessions on Saturday mornings in front of the Science Centre’s John Tuzo Wilson monument. Special SOS’s were held at the Science Centre daily during International Astronomy Week May 2-6 (263 members of the public visited our observing site during the week.) As in past years, a special meeting was jointly hosted by the Royal Canadian Institute for the Advancement of Science and the RASC Toronto Centre at the University of Toronto’s MacLeod Auditorium. On October 24, Prof. Michel Fich from the University of Waterloo presented the lecture “Observing the Birthplaces of the Universe.” Thanks to the RCI for this collaboration in their own ongoing series of science lectures. Through the latter part of 2010 and the warmer months of 2011, our Dunlap Observatory committee led by Paul Mortfield organized several combined lecture and observing nights. With Metrus Development co-operation, lectures were held in the DDO Administration Building, followed by observing through the 74-inch telescope, the largest such instrument in Canada and the largest in the world with regular public observing. Star Talks were as follows:

- Oct. 2—Paul Delaney (York University)
- Oct. 23—Dr. Rupinder Brar (UOIT)
- Jul. 9—Wayne Parker (SkySheds)
- Jul. 16—Randy Attwood
- Jul. 23—Dr. René Breton (McGill)
- Aug. 6—Paul Mortfield
- Aug. 13—Dr. Ann-Marie Weijmans (Dunlap Institute)
- Aug. 20—Dr. Michael de Robertis (York University)
- Aug. 27—Michael Lennick (Foolish Earthling Productions)
- Sep. 10—Dr. John Percy (University of Toronto)

This is how we celebrated our third season managing, operating and maintaining Canada’s largest optical telescope. More than 2,200 enthusiastic visitors attended these public viewing nights, star talks, and members-only observing sessions.

Throughout the year, the DDO committee ran 30 successful public outreach programs for the general public as well as private

programs for scouts, guides, and school groups. The public summer sessions began on 2011 May 7, with a clear evening for International Astronomy Day celebrations at the DDO. There were 11 evenings in the 2011 calendar year, with two presentations each evening, and 75% of the talks sold out in advance.

The success of our “star talk” evenings is also due in part to the new online ticketing system put in place, allowing the public to reserve and purchase tickets in advance via the Web. This system streamlined the ticketing process and allowed ticket payments to go directly to the Centre’s PayPal account. Our thanks go to Centre members Gilles Gaudet, Diane Shukla, Charles Darrow, Rajesh Shukla, Denis Grey, and the Centre’s Finance Committee who made this possible.

This was our second year of providing opportunities for local high-school students to obtain their required community service hours by volunteering at the observatory. Over a dozen students participated in the program, and several continued to volunteer even after they had completed their required hours.

The observatory played host to two film production companies this year. In April, the TV series Warehouse 13 filmed several scenes inside the dome for an episode that aired in September. Another film crew shot scenes inside the dome for a movie to be released next year.

The facility hosted other Toronto Centre activities including the third “First Light” program on September 8, 15, and 22 for new Centre members; 27 adult and 8 youth members attended, and several new members brought their telescopes. The large 1.88-metre telescope provided great views of some night sky objects each evening, including Comet Garradd. We would like to recognize and thank the members who volunteered, contributed, and participated as coaches and mentors, including: Sharmin Chowdhury, Leslie Harvey, Michelle Johns, Steve McKinney, Stu McNair, Paul Mortfield, Diane Shukla, Rajesh Shukla, and François Van Heerden. We would also like to thank Ralph Chou again, for his support and guidance to help organize this program.

The September 17 “Imaging Workshop” was also held at the DDO, hosted by Dietmar Kupke. Presentations were made by Dietmar, Steve McKinney, Tom Zaranek, Richard Sowards, Jim Chung, and Serge Théberge. The annual workshop, previously held at the Carr Observatory, had one of its largest turnouts in recent years. The sky was wonderfully clear that evening and it was exciting to see many members with their astrophotography gear on the lawn collecting imagery, some for the first time.

We purchased a MallinCam Xtreme for streaming live 1.88-metre telescope views out over the Web to schools and educators. We received the camera near the end of this fiscal year; therefore, the program will ramp up in the new year. We’d like to thank Rock Mallin for providing an upgraded class-0 chip camera and his support and assistance to fellow RASC Centres involved in outreach activities. RASC Toronto Centre can take pride in the work we’ve done as stewards of the largest optical telescope in Canada.

This year has been a busy year for Public Education activities, just like all the other years. This included not only the usual Guiding, Scouting, school presentations, and special interest groups, but also star parties, First Light, and the NOVA Program. The Public Education Committee held a variety of presentations this year. We also held eight separate star parties with only five cancellations due to bad weather. We presented to 17 special-interest groups with a beginner’s-observing theme. Committee members also held presentations for 1 Sparks, 10 Brownies, 16 Guides, 7 Wolf Cubs, 2 Scouts groups, and 7 library groups. Most of these were held at their meeting place. Children were given a colour Star Finder to put together and take home, and the teachers and leaders were given a number of different handouts for future reference. This year we

had 40 Galileoscopes donated to us for give-aways to Guiding and Scouting units, (one per unit). Some presenters also chose to hold a star party afterwards, if it was clear. All presentations are customized, depending on the badge requirements or school curriculum. We handed out fliers for our membership and information about our presentations at all these events, as well as all public star parties, which allowed the Toronto Centre to gain exposure and more business and membership. In the end the Public Education Committee held 67 presentations and star parties for 2457 children and adults, and the Centre made \$1,459.00.

The Centre also helped out with the 30th "Ad Astra Convention" at the Crowne Plaza Hotel. Ad Astra was a 3-day event held on the weekend of April 9, which was also Yuri's Night, the Saturday night before the 50th anniversary of the Vostok 1 space flight. Ad Astra was ceremonially opened by His Honour, the Lieutenant-Governor of Ontario, David Onley, who had attended the event as a science reporter in the 1980s.

For those who wanted a more in-depth course than the First Light program we have NOVA, "New Observers to Visual Astronomy," which was held in Studio 2 at the OSC. This series of eight lectures was hosted on Wednesday evenings by a variety of instructors. On nights that the Centre had regular meetings, we invited students to join the RASC meeting after class. This was a free course, which is open to both RASC members, Ontario Science Centre members, and the public. There were 62 students registered, of which 46 attended in October 2010; 24 of these finished the course. The spring session had 59 people registered, and 43 students at the first lesson. By the end of Lesson 8 there were 24 students. We invited all the students from both sessions to join the members at the Open House and Awards Picnic at the CAO in May.

The Toronto Centre sponsored the annual Toronto Science and Technology Fair held at the U. of T. Scarborough Campus. It represents students of all ages from elementary to high school. This year Dr. Ralph Chou awarded David Tang and Yaning Tan, of Marc Garneau Collegiate Institute, the astronomy prize for their project entitled "A Study of Exoplanets."

Overall, the Education Committee held 59 presentations and assisted with 12 star parties to almost 2,500 people, not including the people at the 5 events at the Ontario Science Centre. Thanks go to: John Bohdanowicz, Eric Briggs, Dr. Ralph Chou, Sharmin Chowdhury, Leslie and Costas Harvey, Ed Hitchcock, Tony Horvatin, Katrina Ince-Lum, Isaac Kravec, Dietmar Kupke, Shawn Lee, Scott Masterton, Mickey Milankov, Phil Mozel, Blake Nancarrow, Guy Nason, Brenda Shaw, Diane and Rajesh Shukla, Francois van Heerden, Ian Wheelband, and all the volunteers who helped out at all the various star parties, including Earth Hour, making this a very successful year.

The Toronto Centre would normally award one fourth-year undergraduate with first-class honours from both the University of Toronto and York University's astrophysics programs the Gold Medal of the RASC, a tradition with roots going back to 1906. However, this year, like last year, neither institution produced such a graduate.

There are three ongoing observing sessions held by the Observational Activities Committee:

- City Skies, held at Bayview Village Park and High Park
- Dark Skies, held at Long Sault Conservation Area, and
- Solar Observing, held at the Ontario Science Centre

In addition, Members-only Star Parties are held at the David Dunlap Observatory (DDO). For the three ongoing observing sessions, attendance is monitored in order to track interest and participation levels. Participation at the Members-only star parties was not tracked as consistently and is not reported here.

Of the 12 planned city observing events, 11 were held. Decem-

ber's event was cancelled due to poor weather. Bayview Village Park (BVP) had attendance at all events. High Park (HP) had members present for five events, mostly during the months when the baseball-diamond lights are not on during the evening. Participation at BVP ranged from 6 to 15 members and from 0 to 24 guests and/or passers-by including Seneca students. HP usually attracted 3 or fewer members and a few passers-by. Total participation was 117 members and 80 guests.

Thirteen dark-sky observing sessions were planned; 11 of these were completed. The December and January evenings were cancelled due to poor weather. Long Sault Conservation Area (LSCA) continues to be a very good site for these events, balancing distance from Toronto against dark skies. Participation ranged from 5 to 13 members, with a range of 0 to 7 guests also present. One event saw nine telescopes spread out in the LSCA parking lot and a real star-party atmosphere. Total participation was 67 members and 26 guests. Several members attended for their first time after hearing about these events on the First Light course.

The window for conducting the monthly Solar Observing session at the Ontario Science Centre (OSC) is only 2 hours wide. As a result, the probability of successfully completing events is lower than it is for either the Dark Skies or the City Skies events. This year there were 4 NO GO calls and 8 GOs. Oddly, two of the NO GOs occurred in June and August. Participation ranged from 1 (yeah Shawn) to 8 members, and from 10 (February) to 170 OSC patrons. Total participation was 32 members and 547 guests.

One of the benefits of membership in the Toronto Centre is participation in Members-only star parties at the David Dunlap Observatory (DDO). Twelve such events were planned to take place during the fiscal year. In addition, there were a number of ad hoc events held to take advantage of observation-worthy events. Participation was lower than might be expected. Discussions are underway to determine what might generate more member interest in making use of this unique facility.

Two changes were made within the committee during the reporting period. In each case a member was recruited to be the lead person, or host, for an observing session. John Bohdanowicz is the lead person for the High Park City Skies sessions. John is responsible for ensuring someone is present whenever a member expresses the intention to observe at High Park during the City Skies events.

Katrina Ince-Lum has been the champion for Solar Observing sessions for several years. This year she passed the baton to Shawn Lee. Shawn is now the lead for coordinating the Solar Observing events at the Ontario Science Centre. He has taken an enthusiastic and conscientious approach to his responsibilities. Stu McNair continues to coordinate City Skies events at Bayview Village Park and Dark Skies sessions at Long Sault Conservation Area.

The monthly observing events continue to attract significant member participation. These events also present somewhat limited but effective opportunities for outreach and member recruiting. Several passers-by have subsequently joined the Centre and continue to participate in the observing sessions. Total participation for all 3 programs was 253 members and 653 guests. The year started off with a bang when Katrina Ince-Lum acquired a special recorded greeting from astronaut Bob Thirsk on behalf of the Canadian Space Agency for our annual meeting in November 2010. Individual member accomplishments this year included:

- Guy Nason's accomplishment of the Finest NGC Certificate, Guy's constrained observed miss of an occultation of asteroid (578) Hapelia on November 8, his observation of an occultation of asteroid (11) Parthenope on January 26,
- Bob Chapman's completion of the Astronomical League Planetary Nebula Club list,

- Sharmin Choudhury and Blake Nancarrow's observations of Noctilucent Clouds at the Carr Observatory on the Canada Day weekend,
- And Eric Briggs' co-discovery of supernovae 2011ai and 2011dy with the Puckett Supernova Search.
- Blake and Ian Wheelband also report observing the 16th magnitude quasar HS 1603-3829 with Ian's 20-inch Newtonian telescope from the CAO on July 31. Toronto Centre members such as Geoff Gaherty, Andy Beaton, Patrick McDonald, Eric Briggs, Denis Grey are cited on the Web site of the American Association of Variable Star Observers as having carried out observations this year – apologies to anyone who was left out. Dr. John Percy and Paul Mortfield both continue their roles with the AAVSO as JAAVSO Editor and Solar Section Chair respectively.

At the Annual Open House and Picnic at the Carr Observatory, the following awards were given:

- Ostrander-Ramsay Award for Astronomical Writing: to Blake Nancarrow for his work on the Toronto Centre Web site and the *SCOPE* "Webspotting" column,
- Ray Thompson Award for Astronomical Imaging: to Serge Théberge for his two astrophotos in the 2011 RASC Observer's Calendar, and for his astrophoto prowess in general,
- Bertram J. Topham Award for Observing: to Patrick McDonald in recognition for his accomplishment of more than 10,000 variable-star estimates reported to the AAVSO,
- Andrew Elvins Award for Promotion of Astronomy: to Diane Shukla and Sharmin Choudhury for their public outreach work and for presenting the First Light program for new members,
- Bert Winearls Award for Service to the Toronto Centre: to Charles Darrow for helping to resolve two important issues: the Helm Fund and the Life Membership program, in his capacity as 1st Vice-President,
- Jesse Ketchum Award for Astronomical Equipment: Not awarded this year due to a lack of suitable nominees,
- Mayer Tchelebon was also the recipient of the national RASC President's award for his work as national treasurer at the July 2011 General Assembly in Winnipeg.

The CAO Committee was busy as ever in the past membership year. Main activities focussed on the planning, construction and launching of the My Own Dome Lot project. This important initiative establishes a regular stream of income to the Centre from renting dedicated observing space to members. Three SkyShed POD domes have now been completed, the utilities have been dug and the domes leased, and have begun returning data to their operators.

Work also continued on our efforts to establish the Bob Anderson Observatory as a remotely operated imaging observatory. Major maintenance was completed in several areas site wide, as detailed in the summary below.

- Geoff Brown Observatory roof and south wall serviced
- New audio-visual aids for the clubhouse acquired
- Stargazer lawn mower serviced
- Wireless Internet service improved

Public outreach continued via several events including youth and families, although these efforts were reduced this year due to the extensive development activities during the road access seasons. Additional new users, volunteers and supervisors have come forward and have been welcomed to join the Centre's team at CAO. The site is now better equipped than ever to provide excellent service to our members and the community at large. Our sincere thanks are due to the many volunteers who have contributed over the past membership year and especially the CAO Committee in conducting these activities.

The first Open House of the fiscal year was held after the Autumn Work Party on 2010 October 2. Presentations were given by Tony Horvatin "Introduction to Astronomy" and François van Heerden "Shoestring Astronomy."

As mentioned above, the annual Open House and Awards Picnic was held on May 28, after the Spring Work Party on May 14. Presentations were given by Blake Nancarrow "Webspotting, the Best of the Best," Eric Briggs "Interesting Historical Moments in the RASC" and Tony Horvatin "The Carr Observatory: Past, Present and Future." Seventy-five people attended the OHAP. A number of impromptu work weekends were held during the summer to complete MODL and other improvements. The Autumn Work Party and Public Open House was held over the weekend of 2011 October 1. Other groups served included the 153rd Toronto Scout Troop, on 2010 Nov 5 to 7, and the L.E. Shore Library group in August 2011. The Toronto Centre is a Signatory to the Town of Blue Mountains Sustainability Plan effort, and a Member of the local Chamber of Commerce.

The activities of the CAO Committee were coordinated by Ralph Chou, Tony Horvatin, Charles Darrow, Dietmar Kupke, and Blake Nancarrow.

As of October 2011, the Fred Troyer library collection stands at 670 volumes. New donation guidelines were put into place this year, which are posted on the Web site. This year we organized the book collection. There are now 11 sections organized alphabetically by author's name, except for "The Solar System," which is organized by subject in order from the Sun outwards, then by author's name. The DVD loan program continues to be popular, with 26 titles now available.

Future library projects include:

- The completion of renovations to the library
- Additional shelving, *etc.*
- Removal of metal desk & relocation of filing cabinets
- Possible efforts with the DDO.

At the end of this year, Tom Luton will be stepping down after four years as librarian.

Several members ventured west to attend the RASC's annual General Assembly, hosted by the Winnipeg Centre over the Canada Day long weekend. The following GA papers were presented by members:

- Things that go Bump in the Night: Variable Stars (Paul Delaney)
- Canadian Astronomical Records Digital Archiving (Eric Briggs)

Eric Briggs, Sue Kralik, and Leslie Harvey are to be thanked for the continuing high quality of the Toronto Centre's *SCOPE* newsletter, which is completing its 49th volume. Thanks are also due to all contributors. The newsletter has been published on time and under budget with excellent coverage of Centre events, and well written and informative articles supplied by members.

Jim Chung and Geoff Gaherty, who have both held bylines in the *Journal* of the RASC this year (Cosmic Contemplations and Through My Eyepiece) are also thanked for their print contributions to the RASC.

Stuart Heggie, Lynn Hilborn, Paul Mortfield, Stef Cancelli, Kerry-Ann Lecky Hepburn, Blake Nancarrow, Jim Chung, Adam Evans, Randy Attwood, and Serge Théberge all submitted astrophotos or essays for publication in the *Journal* of the RASC, the *Observer's Calendar* or *SkyNews Magazine* or *Sky & Telescope* that are all of breathtaking quality.

The *Observer's Handbook*, the RASC's essential publication, includes contributions from several Toronto Centre members:

- Voyages in the Solar System by Randy Attwood
- The Brightest Stars by Prof. Robert Garrison
- The Observing Logbook by Paul Markov

- Galaxies: Brightest and Nearest by Ian Steer
- With some proofreading done by Dr. Chris Malicki

The Centre held the 14th Annual Algonquin Adventure star party from September 23-25. 82 members and guests were treated to clear skies and fall colours in a gorgeous dark-sky environment. Special thanks to Robert and Lillian Chapman for organizing and hosting this event.

The Information Technology chair, Blake Nancarrow, would like to recognize the many people who assisted in IT, the Web, and Yahoo matters. In no particular order: Jason Toliopoulos, Rajesh Shukla, Charles Darrow, Gilles Gaudet, Tony Horvatin, Matthew Fitzgerald, Kiron Vaghela, Lora and Phil Chow, Steve McKinney, Dietmar Kupke, Eric Briggs, and Ralph Chou.

A variety of support tasks were performed at the Carr Astronomical Observatory. A new gigabit-speed network was deployed for the MODL users. Attempts were made to boost the WiFi coverage on the grounds with marginal success. Visitors to the Carr Observatory were cautioned of excessive Internet use. Research into a new Internet service provider continued with a meeting with an interested Thornbury company. Information on ownership of the radio equipment was obtained after some four years of inquiry. The MallinCam at the CAO was well used, repaired when broken, and made even easier to use with computer-controlled software. It is hoped that we'll conduct some Night Skies Network broadcasts next year.

The light-pollution abatement committee under the stewardship of Peter Hiscocks held various meetings with the City of Toronto LPA committee working on a light-pollution guideline, since the unanimous approval in 2009 by the Toronto City Council of the Toronto Green Standard. Peter continues to meet with the Toronto City Planning Committee on the "Guideline for Effective Lighting."

Membership in the Toronto Centre stood at 496 regular, 78 life, 12 youth, 5 affiliate, 187 associate, for a total of 778. Of these members, 50 are CAO pass holders, 372 are receiving *eScope* and 378 are on the Yahoo group.

We lost three members of the Toronto Centre during the reporting period this year - Kim Sprague, Kimmo Innanen, and Jim Low. I cannot proceed without also noting that we lost Cliff Carr at the end of October, which came as a shock. We will remember all of the distinguished members we've lost.

In closing, I wish to also thank Rod Ends Mechanical Ltd. And Metrus Development Inc. for the use of their offices and of the DDO Admin Building for Council meetings; I also wish to thank the Ontario Science Centre for its continued hospitality in providing the facilities and audiovisual support for our meetings and public events. On behalf of the Council, I thank all members for your continued trust and support of our work.

Eric Briggs
Secretary

VANCOUVER CENTRE

2011 was a productive year for the RASC Vancouver Centre. We partnered with other like-minded organizations within our region, including Metro Vancouver Parks, Simon Fraser University (SFU), University of British Columbia (UBC), British Columbia Institute of Technology (BCIT), and two local vendors, Vancouver Telescope and Canadian Telescope to support and promote active learning about astronomy in our community. This year emphasized encouraging younger people and families to take an interest in through our outreach programs and with the experimental addition of the "what's up" segment of our evening meetings.

We hosted 12 monthly meeting evening presentations including our AGM and two other major events on Astronomy Day in May and our Annual Paul Sykes lecture in October.

Other key initiatives we supported include:

- Supported the fund raising initiative for a public outreach observatory facility at SFU by committing matching funding of \$2650 in the name of Martha Ellen Pierce to member donations towards the observatory project.
- Funded \$500 in support of summer outreach program presented to small BC communities by Bill Burnyeat
- Awarded the second Pierce Award, for winners of a BC student science fair, in the amount of \$500;
- Improved our promotional materials for our outreach events.
- Continued and revitalized LPA initiatives, including contact with area municipal councils, BC Hydro, media outlets, resulting in articles in local newspapers, and improved awareness in local municipalities.
- Continuing development of the AOMO (Vancouver Centre's observatory)
- Continued partnership with Metro Vancouver Parks, cooperated with them on an several events including Astronomy Day in May;
- Continued publication of the NOVA Newsletter with several colour pages this year thanks to sponsorship by Canadian Telescopes;
- Introduction of a series of "what's up" short introduction segments of our evening programme directed to young people and newcomers to astronomy.
- Nominated David Halliday as honorary member of the Centre.
- Nominated Barry Shanko as honorary member of the Centre.

In addition to our regular monthly series of public lectures (listed below), major public events we hosted or supported this year included (but were not limited to):

- Star party SFU Dec 2
- Telescope workshop Nov 5 Maple Ridge
- Roundhouse Lecture, Vancouver, October 14
- Merritt Star Quest August
- Metro Parks all-night star quest Aug 19 Aldergrove Lake Park
- Metro Parks Starry Nights Deas Island Aug 13
- Mount Kobau Star Party July
- Grimston Park Summerfest July 16
- A series of 12 Planetarium shows at BCIT
- Roundhouse Lecture, Robotic Exploration of our Solar System, Vancouver, April 12
- Metro Vancouver Parks, Night Quest Pacific Spirit Park March 19
- Several other observing events were planned but were cancelled due to poor weather
- Regular lending of telescopes and books to members

We gratefully accepted two telescope donations to our loaner program.

Council met 11 times including one dedicated planning meeting in October.

- January 13 Dr. John Mather, Goddard Space Flight Center, Recipient of the 2006 Nobel Prize: "From the Big Bang to the Nobel Prize and on to the James Webb Space Telescope and the discovery of alien life."
- February 10 Richard Berry, noted ATM and astro-imager, Portland: "The Herschels and Lord Rosse: A pictorial discussion of two pioneering astronomer/telescope builders."
- March 10 (VC monthly)
- Sat. March 19 6:30-9:30 p.m. Sharon Proctor, science and technology writer, Vancouver: "Grouse Mountain Observatory: an early 20th century dream." Night Quest, Pacific Spirit Regional Park, 6:30-9:30 p.m. Lots of kids, bring scopes!
- Sun. April 10 ILOA Galaxy Forum
- April 14 (VC monthly), ILOA Galaxy Forum at the MacMillan Space Centre, with an astrophysics talk by Dr. Levon Pogonian (SFU), and public outreach talk by Dr. Sophie Lavieri (SFU).
- Sat. May 7 Wayne Lyons: "Navigating the Night Sky"
- May 12 (VC monthly), Astronomy Day & Urban Star Quest, with Metro Parks, Aldergrove Lake Regional Park: Astronomy Day runs Noon-11 p.m., Urban Star Quest from 9 p.m. to Sun. 11 a.m. (weather dependent).
Dr. David Helfand (President Quest University, Squamish, and Astronomy & Astrophysics Department, Columbia University): "How Superman Sees the Stars".
- June 9 (VC monthly), Jim Zibin, Postdoctoral Fellow, UBC: "Dark energy or something even crazier?"
- July 14 (VC monthly), Bob Parry, special hour-long What's Up? - "Robots of the Solar System."
- August 11 (VC monthly), Bill Burnyeat, special hour-long What's Up? - "Robots of the Solar System."
- September 8 (VC monthly), David Halliday, President, Dynamic Structures: Presented with Honorary RASC VC membership.
- Oct 1 Paul Sykes at SFU; Jon Lomberg, astronomy artist, Honaunau, Hawaii, "My work with Carl Sagan"
- October 13 (VC monthly), Kaspar von Braun, NASA Exoplanet Science Institute, Caltech: "Transiting: Extrasolar Planets — An introduction and more," held at UBC
- November 10 (VC monthly), Jaymie Matthews, UBC: "A Brief History of (The End Of) Time."
- December 8 Vancouver Centre AGM: 30-minute talk: "2012 solar eclipses: A guided tour with John Nemy"

Alan Jones
Secretary

For our Victoria Centre group, 2011 was one of those years that the weather gods decided to test our perseverance. Be it tent-toppling gale-force winds or unrelenting cloudy skies, our group faced one meteorological challenge after another. Nonetheless, our strong traditions of public outreach and member enthusiasm remained undiminished. In 2011, we recorded 5520 Galileo Moments and logged 775 hours of volunteer time. I think that these numbers prove that IYA2009 is a force that can be sustained over time, and that our club, under the leadership of Lauri Roche, has a commitment to education and awareness about astronomy that is extraordinary.

Public Outreach Activities

2011 proved to be a banner year for our club's public outreach activities. We set up booths and participated in local community events such as the Hobby Show, Earth Walk, Buccaneer Day, the Saanich Strawberry Festival, and the Saanich Fair. Our Saanich Fair participation was particularly successful with approximately 2000 visitors to our set-up. We also made numerous presentations and conducted night-sky viewing with community groups such as the Beavers, Girl Guides, McGill University Alumni, and several seniors' residences.

Our members made four night-sky presentations in B.C. Parks across southern Vancouver Island this summer. These were held at Goldstream, Miracle Beach, and two locations in Parksville. These events were extremely successful with one event hosting 180 very enthusiastic people. Our group's relationship with B.C. Parks is very strong and we have discussed a potential telescope donation to one of the parks.

Our Centre's school program remained one of the centerpieces of its outreach. Sid Sidhu, Lauri Roche, and Dave Bennett head up this program, which is always in high demand. We got off to a much publicized start last December with an event hosting Canadian astronaut Dr. Robert Thirsk, co-sponsored with the Royal British Columbia Museum, IMAX Theatre, and the Centre of the Universe. Framed copies of the children's book "Mary Lou's New Telescope," taken into space on the May 2009 ISS mission were presented by Dr. Thirsk on behalf of the Canadian Space Agency to our own Dr. Jim Hesser in recognition of the national IYA effort and the RASC's central role in its tremendous success. After this presentation to a nearly full audience of school children, Dr. Thirsk engaged his young audience in a captivating question-and-answer session.

This year, Sid Sidhu initiated a strategy to purchase two new solar telescopes for portable use in schools and at the Victoria Centre Observatory (VCO) as part of our Public Outreach Program. This strategy involves the sale of surplus telescopes that our Centre has accumulated over the years to fund the purchase of these two new solar telescopes.

Regularly Scheduled Meetings and Functions

Our full schedule of regular meetings has continued this past year, with general meetings held the second Wednesday of each month except during the summer. We have had a remarkable slate of lecturers over the past twelve months coordinated by our First Vice-President, Nelson Walker. This year's program began in December with a fine lecture by Dr. Andy Woodworth, who provided an update on the progress of the ALMA Radio Observatory in the Chilean high desert. We were pleased to see the exciting results of this international effort in which several of our members and HIA colleagues are playing important roles. Another highlight

this year was provided in February, when David Helfand of Quest University in Squamish kept us on the edge of our seats with his provocative arguments for the presence of intelligent civilizations in the universe. In his lecture, he challenged us as to whether our own species yet qualifies as intelligent life in the cosmic sense. We hope to have Dr. Helfand back again soon to remind him that the Victoria Centre membership is indeed located at the "Centre of the Universe."

Victoria Centre Council meetings are held the first Wednesday of alternate months except for July and August. Members are invited to these meetings. Astronomy Café is held Monday nights, except during the summer months, and gives members a chance to welcome new members and talk astronomy in a casual informal setting. The New Observers Group meets the fourth Friday of every month for an introduction to the night sky.

The Active Observers Group, meets at the VCO for regularly scheduled observing and imaging sessions. These sessions are hosted by "members-in-charge" (MICs), and among other important duties, are responsible for announcing the sessions and cancelling the sessions.

Victoria Centre Observatory (VCO)

The VCO continues to provide our members with a first-class facility for observing and imaging sessions. Several facility upgrade and repair projects are nearing completion or have been completed this past year. These have included a surge-protection system and improvements to software, wiring, power supply, and switching systems. Thanks to Bruno Quenneville, John MacDonald, and the Technical Committee for their tireless work on the hill. With the installation of a new video camera this year, the VCO continues to make improvements toward our eventual goal of a "school and member friendly" remote operation.

Observing Activities

Our third annual Messier Marathon was held April 2. Originally scheduled for two nights, a handful of determined observers hurried up to the VCO on the second night when the rains finally abated and a brief clearing opportunity presented itself. Many galaxies were seen, along with the familiar globular clusters and planetary nebulae of our northern skies.

In addition to Nelson Walker's leadership with the Messier Observing Program, David Lee has complemented our observing efforts with his Lunar Certificate workshops and Spectroscopy activities.

In late December 2010, our club hosted lunar-eclipse public viewing at Cattle Point in Oak Bay. Over 70 enthusiastic members of the public attended, despite threatening weather. Two local TV stations were on hand to provide coverage of the event and our president, Lauri Roche, provided an interview, which was later televised on the local news.

Our second annual RASCals/Metchosin Star Party was held July 29-31 on the Metchosin Municipal Field. Some 30 of our members were there, along with several local resident campers, who were inspired by the great viewing at last year's tremendously successful event. Unfortunately, this year's star party was characterized by high winds, clouds, and cold. Great viewing was had by a few brave souls on the first night of the star party, and some good solar observing was made during the day on Saturday before the weather finally intervened for good. We hope to return next year to a warmer and somewhat calmer environment.

We have scheduled a number of public events this year at the Fairfield Community Centre including a star party on September 26. We had an excellent member turnout for the star party despite the weather that dampened public attendance.

The NRC/CU has continued to provide the use of the Plaskett telescope to our group for imaging on selected nights. Several sessions have been scheduled this past year under the guidance of Dave Balam, operator of the scope. Save for an early spring session, Mother Nature, once again, has generally been uncooperative. Our ever optimistic Second Vice-President, Sherry Buttner, continues to work with Dave to schedule future member viewing sessions.

Other Activities

Skynews, our monthly newsletter, remains a great source of local, national, and general information for our membership. Malcolm Scrimger, our editor, has done a yeoman's job in keeping this publication current and fresh with member-contributed articles and astrophotography, as well as current astronomy news from around the world.

Details on all of our club's activities can be found on our Web site, <http://victoria.rasc.ca>, developed and maintained by council member, Joe Carr. Joe has made numerous upgrades and additions to the Web site this year to make it even more user-friendly and informative.

The club's Light-Pollution Abatement Committee made good progress this past year. 2011 saw the inauguration of our first annual "Firefly Awards" recognizing and rewarding the efforts of local area businesses and organizations in reducing sky glow in the Victoria area. At our awards ceremony in June, we made presentations to the City of Saanich, the Seaspan Company, as well as a local community group and professional lighting designer for excellence in sports field, commercial building and residential lighting. In addition, we made presentations to various municipal and community advisory groups over the course of the year to promote light-pollution abatement. Our light-pollution map of Sky Quality Meter readings released in February has been incorporated into a poster, and has received good exposure at several national conferences over this past year thanks to the efforts of many of our members. We hope to update this survey in the next several months with new data.

Five members of the Victoria Centre attended the RASC General Assembly held this past July in Winnipeg. Attendees included Jim Hesser, John MacDonald, Jim Stillburn, Jennifer Tigner, and our National Representative, Chris Gainor. Those attending the General Assembly enjoyed many top-flight presentations and events with a strong emphasis on astronomy and a lighter focus on business issues. Our members learned in the coming months that the national RASC will need to re-write their constitution to meet changes required under the new Canada Not-for-Profit Corporations Act that comes into effect later this year. This legislation will mean that Victoria Centre will have to rewrite its own By-Laws once the new national Constitution is in place. And, of course, it means that our Centre's lowly "Job Jar" will rise once again!

Mark Bohlman
Secretary

WINDSOR

CENTRE

The Windsor Centre sustained a membership of approximately 100 members in 2011. Our nine monthly meetings were held at a new venue this year in the just completed City of Windsor Ojibway Nature Centre. This is a good link with both our and the Nature Centre's mandate of educating the public in our respective fields. We are pleased to now be connected thus. The facility is now more accessible than our previous meeting place that was outside of Windsor in the county.

The Windsor Centre also maintains an observatory out in Essex County in the darkest-sky-possible area near the town of Comber. The observatory is equipped with a permanently pier-mounted 14-inch Celestron instrument, with an attached 111-mm refractor for guiding with the connected computer and tracking/guiding software in the connected warm room. The warm room is large enough to make guests comfortable while visiting the site and provide viewing space for small group lectures with the newly installed data projection facility, also connected to the observatory computer. Outside the observatory building is a deck for binocular viewing, and on the ground are pads for members to set up their own portable telescopes. Members have access to the main telescopes all year long through a paid annual subscribership, after a training exercise to operate and maintain the instruments and also keep the security of the complex. Fortunately, a group of members is active in the maintenance and improvement of the telescopes, building, and grounds of the Hallam Observatory and Lee Telescope named after two of our founding members.

Programs at monthly meetings included a mix of local presenters and visiting experts in their field. This year, guest speakers presented topics covering Earth's Magnetic Field, Gravitation Waves, and the World of John Philiponos. Presenters came from our city University of Windsor and from The Warren Astrophysical Society of Michigan in the United States. Local Windsor Centre members gave presentations on a diverse number of topics including: The Design and Construction of a Parallel Binocular Mount, Star Evolution Sequence, Taking a Stroll Through the Exoplanet Zoo, 40 Years of Telescope Building, Hallam Wind Turbines (concerns of new wind turbines being built nearby our observatory), Fall Viewing Objects in Binoculars, Image Calibration for Astrophotos, Light Box Construction for the Hallam 111-mm Refractor, and Photo Work Done using the Hallam Observatory Instruments. Three members comprising our Directorship of Observing took turns at each meeting presenting a monthly report of upcoming astronomical events to watch for, and items of interest in the public space news.

In 2011, the Windsor Centre Web site was improved with the addition of a user-group photo gallery for the members participating in astrophotography. It has drawn a lot of interest, while at the same time illustrating the work of our photo-taking members. Our Web manager has also set up a link email system through which all of the Astrophotographic group can share information among themselves, including photo processing techniques, fixes, and equipment setups and details out at the observatory. This has been a most helpful learning tool to all plugged into it.

Public connection is a big part of the Windsor Centre and this year was no exception. With our own observatory we have monthly public Open House nights where people can come out and view through our instruments and receive sky talks. This year we have also instituted special nights just for our members. In addition, tours are available through our Directorate of Public Education for organizations such as Scouts and Guides, to seniors'

groups and any organizations interested in learning more about the night sky. This year, two church groups and a Tai Chi class visited the observatory — the latter group performing their routines right on the observatory lawn with sky observing after. Other initiatives this year have included the Director presenting a morning lecture to 50 enthusiastic grade-nine high school students as part of their astronomy unit in science curriculum and an information night at Point Pelee National Park, our new dark-sky preserve. Annually, the Windsor Centre members participate in the full-weekend annual Earth Day/Astronomy Day celebrations in Windsor and the Science Rendezvous at the University of Windsor, with solar telescope demonstrations, introductions to amateur astronomy, and handouts of astronomical interest. As a tie in to a fundraiser this year, the Centre educational group lectured and set up telescopes for interested guests at a wine tasting for a local winery.

The Windsor Centre has an active Light-Pollution Abatement Director. The 2011 Director addressed local construction projects near our Observatory that were light polluting our dark site. Through letters and meetings with town planners, we were able to have lighting amended at the sites with full-cutoff fixtures to lessen the effect of spill light on our telescopes. Similar communications with the builders of the commercial wind farms all around our observatory have helped maintain our dark sky. Forward looking by our LPA Directorate has kept them in contact with a major road build in the Windsor area that will create a super highway to the US, so that they abide by the cut-off lighting mandate they already agreed to. And work with our new Point Pelee National Park Dark-Sky Preserve providers has helped them in reviewing their needs. Our director has also written a light-pollution paper for the Toronto Atmospheric Fund's energy and light-pollution initiative.

Arthur Rae

Secretary

WINNIPEG

CENTRE

The Winnipeg Centre has exceeded the 150 member mark and continues to draw new members. We meet monthly on the second Friday of the month at the University of Manitoba, Fort Garry College, St John's Collage at 92 Dysart Road in the Robert B. Schultz lecture Theatre. The meetings are well attended and often draw 80 or more members and guests.

The club still maintains an observatory at Glenlea Research Station, about 15 km south of the City of Winnipeg. There we have a dome that houses a 12-inch Meade LX scope, plus we have a warm room complete with restroom facilities. The large pad to the south of the structures has power poles to allow for the members to run their own equipment. The site is also where we hold our "Members' Observing Nights" which are held on the Saturday following our regular club meeting. We have a number of lender scopes, which include a Celestron C8, a 6-inch Dobsonian, and a Coronado PST.

Our major event of the 2011 year was hosting the General Assembly meeting at the University of Manitoba, Fort Garry Campus. Held from June 30 to July 3, it was an opportunity for use to celebrate the Winnipeg Centre's 100th Anniversary of joining the RASC. The 118 people at the GA attended the regular events, such as the National Council Barbeque, National Council meetings, General Assembly meeting, Paper Sessions, Wine and Cheese evening, GA Barbeque (complete with 100th Anniversary Cake) and the windup Banquet.

The Ruth Northcott Lecture was well attended, where Dr. Christine Wilson from McMaster University provided a public lecture titled “Beyond the Visible Universe: Dark Clouds, Galaxy Collisions, and the Origins of Stars.”

Other keynote speakers included Dr. Samar Safi-Harb from the University of Manitoba, who presented her talk “Viewing the Universe and Supernova Remnants through X-ray Eyes” at the closing banquet; Alan Dyer, one of Canada’s premier astronomy writers and Associate Editor of *SkyNews*, presenting “Top Tips For Terrific Pix—How to get Great Astrophotos with Your DSLR Camera” opened the morning portion of the paper sessions; Paul Delaney, Senior Instructor at York University, led off the afternoon paper session with his talk called “Things That Go Bump in the Night: the Study of Variable Stars.”

The Winnipeg Centre also runs an annual event called the Spruce Woods Star Party, at Spruce Woods Provincial Park, about 200 km west of Winnipeg. We have a separate campground to ourselves, at the cost of providing the park with a Public Observing night in exchange. The star party, held from August 25 to 28 with about 40 attendees, featured Gerry’s Bino Tour, by Gerry Smerchanski, who led a near two-hour tour of the skies. Plus we had a workshop that included the Winnipeg Centre Centennial by Jay Anderson; Astronomical Sketching by Scott Young; Widefield Astrophotography and Nightscape Tutorial by Ron Berard. The final evening has a Banquet

at nearby Bru Cafe, and a morning Pancake Breakfast provided by Ken Metcalf.

Another event is “Astronomy Night” held in March for the members of Fort Whyte Alive, located in Winnipeg. Winnipeg RASC members provide presentations during a banquet dinner, followed by an observing session at telescopes outside in the cold.

The Winnipeg Centre also supported the Manitoba Schools Science Festival by providing a prize to the person with the best astronomical-based display.

Plus we attended a Science Teacher’s Symposium, where we helped to promote the RASC teacher’s guide, *Skyways*.

We had a full-day display at the Manitoba Museum, where we promoted Astronomy Day. Unfortunately the evening session was cancelled due to totally cloudy skies.

On a regular basis our members support the Oak Hammock Marsh, a nature centre 30 km north of the city, for a monthly Astronomy Observing night.

In addition, members of the Winnipeg Centre brought out telescopes to Assiniboine Park, the largest park in the city, to allow the general population to “take a peak through a telescope,” viewing mainly the planets and the moon.

Jay Anderson
Secretary

CENTRE TREASURERS' REPORTS FOR FISCAL YEAR 2011

		Belleville	Calgary	Charlottetown	Edmonton	Halifax	Hamilton	Kingston	Kitchener- Waterloo	London
REVENUE										
Membership	Membership Fees: Centre Fee		7,983	407	7,762	2,612	2,713	1,683	2,471	2,301
	Membership Fees: Associate		265			79		97		
	Membership Fees: Affiliate									
	Membership Fees: other	1,007								
	Life Membership Payout Received									
	Centre Newsletter					135				
Donations / Fundraising	Donations		2,460			551		381	1,044	
	Fundraising			1,068	74,268		334	65	367	
Sales Revenue	Sale of Observer's Handbooks						69	50		186
	Sale of Observer's Calendars		1,210	320	336		50	340	386	385
	Sale of Beginner's Observing Guides		135							
	Other Publication Sales									
	RASC Promo Items									
	Other Sales		345			616		20		
Subscription Revenue	Astronomy / Sky & Telescope									
	Other		10							
Events Revenue	Star Parties	101	3,541		739	651		1,555		
	Annual Dinner		1,951					75	27	357
	IYA Event									
	Astronomy Day									
	Other Events					870	559			
General Assembly Revenue	General Assembly									
Miscellaneous Revenue	Interest and Dividends	3				77		65		
	Advertising									
	Observatory Site		1,423							
	Equipment Rentals/Loans								125	
	Miscellaneous		386			11	63	15	1,865	
TOTAL REVENUE		1,111	19,709	1,805	83,105	5,602	3,788	4,331	6,285	3,229
EXPENDITURES										
Sales Expenses	Observer's Handbook						215	35		186
	Beginner's Observing Guide									
	Observer's Calendar		955	270	1,010			224	526	385
	Other Publications				144					
	Newsletter				933	207		45		161
	RASC promo items								162	
	Other		2,406		2,084					
Event Expenses	Star Parties		1,950		4,542			998		
	Annual Dinner	190	2,558		419			1,000	763	357
	Astronomy Day			100					184	
	IYA Event									
	Meetings		1,663		124	241	300	143	310	
	Other Events	569	320		2,536	1,384	520			
Travel	General Assembly and Council Meetings			604		195				
Administrative Expenses	Office Administration		3,644		144	679	56	553		
	Equipment and Supplies			154	34,930	7			337	
	Insurance					1,138	1,506			
	General Expenses and Audit					28		198		
	Awards			200	1,311			75		
	Donations		2,118		21,000	595				600
	Advertising						23			
Miscellaneous Expenses	Observatory and Site Expenses		3,321		489	181	3,389	70	1,762	
	Library					92				
	Depreciation					1,021				
	Miscellaneous	11	144		1,074	130		620	428	
TOTAL EXPENDITURES		770	19,079	1,328	70,740	5,898	6,009	3,961	4,472	1,689
SURPLUS OR DEFICIT ON OPERATIONS		341	630	477	12,365	-296	-2,221	370	1,813	1,540
ASSETS	Current assets	5,027	31,956	2,195	155,676	16,477	13,662	26,173	13,766	28,317
	Capital assets	720	24,863		34,928	14,658	94,737	21,250	5,000	36,674
LIABILITIES			2,223			102				

CENTRE TREASURERS' REPORTS FOR FISCAL YEAR 2011

		Mississauga	C. F. de Montréal	Montréal	New Brunswick	Niagara	Okanagan	Ottawa	Prince George	Québec	Regina
REVENUE											
Membership	Membership Fees: Centre Fee	2,706	2,742	2,667	973	1,645	2,066	6,400	1,750	601	2,561
	Membership Fees: Associate	85				51	50		150		
	Membership Fees: Affiliate	23									
	Membership Fees: other	41					385		340		
	Life Membership Payout Received										
	Centre Newsletter										
Donations / Fundraising	Donations	530	796	355		836	10,328	529	3,836		100
	Fundraising					256	2,578		10,000		120
Sales Revenue	Sale of Observer's Handbooks						15				
	Sale of Observer's Calendars	192			1,110	192	738	2,070	567	184	
	Sale of Beginner's Observing Guides										
	Other Publication Sales			387		15					
	RASC promo items				98		129				
	Other Sales	55				48			316		3,420
Subscriptions	Astronomy / Sky & Telescope										
	Other										
Events Revenue	Star Parties										448
	Annual Dinner					90		3,200			
	IYA Event										
	Astronomy Day										
	Other Events		149								937
General Assembly Revenue	General Assembly										
Miscellaneous Revenue	Interest and Dividends		5	582		6	10	231			
	Advertising		557								
	Observatory Site							700	669		
	Equipment Rentals/Loans						380	215			
	Miscellaneous	758	36			13	2,320	35			561
TOTAL REVENUE		4,390	4,285	3,991	2,181	3,152	18,999	13,380	17,628	785	8,147
EXPENDITURES											
Sales Expenses	Observer's Handbook						36	194			
	Beginner's Observing Guide					44					
	Observer's Calendar	202			545	528	585	1,626	603	184	
	Other Publications										
	Newsletter		417			72	69	648			
	RASC promo items	59			31		358				
	Other								95		2,429
Event Expenses	Star Parties				206	141		1,068			195
	Annual Dinner							4,237			
	Astronomy Day										
	IYA Event										
	Meetings			170	227	447		230		172	
	Other Events	800									1,609
Travel	General Assembly and Council Meetings			224	670						
Administrative Expenses	Office Administration	698	1,700	600		288	910	135	553	223	1,583
	Equipment and Supplies		41				1,259	211	3,431		16
	Insurance		574				1,520	1,379	459		461
	General Expenses and Audit			171	53	10			90	32	649
	Awards							705			
	Donations				500	157		150			
	Advertising				13	46			144		
Miscellaneous Expenses	Observatory and Site Expenses		141			1,062	12,325	2,758	2,950		459
	Library			10	51					159	
	Depreciation	168	252	579		1,464		9,073			
	Miscellaneous	43	440	72	1,535	532	82	1,508	2,079	499	102
TOTAL EXPENDITURES		1,970	3,565	1,826	3,831	4,791	17,144	23,922	10,404	1,269	7,503
SURPLUS OR DEFICIT ON OPERATIONS		2,420	720	2,165	1,650	-1,639	-1,855	-10,542	7,224	-484	644
ASSETS	Liquid assets	13,796	6,356	93,853	5,777	8,473	11,587	40,242	10,993	334	10,897
	Capital assets	168	10,860			19,861	165,906	15,920	90,408	499	71,161
LIABILITIES			263					1,923			160

CENTRE TREASURERS' REPORTS FOR FISCAL YEAR 2011

		St. John's	Sarnia	Saskatoon	Sunshine Coast	Thunder Bay	Toronto	Vancouver	Victoria	Windsor	Winnipeg
REVENUE											
Membership	Membership Fees: Centre Fee	1,101		2,371	975	1,172	10,385	4591	3,436	2,119	5,589
	Membership Fees: Associate						620		50	20	
	Membership Fees: Affiliate						51				
	Membership Fees: other						194	453		420	
	Life Membership Payout Received										
	Centre Newsletter										
Donations / Fundraising	Donations	50		457	261	290	19,462	595		947	170
	Fundraising			415	206	182				718	
Sales Revenue	Sale of Observer's Handbooks	156						2,699			
	Sale of Observer's Calendars	540			118	895				336	765
	Sale of Beginner's Observing Guides										
	Other Publication Sales			1,138							
	RASC promo items						300				
	Other Sales						3,338	1,162	610		
Subscription Revenue	Astronomy / Sky & Telescope										
	Other										
Events Revenue	Star Parties			12,005					850		1,825
	Annual Dinner								1,795		
	IYA Event										
	Astronomy Day										
	Other Events	225									
General Assembly Revenue	General Assembly										1,267
Miscellaneous Revenue	Interest and Dividends	146		525		4	292	6,493		1	12
	Advertising			323							
	I/Observatory Site						21,911				
	Equipment Rentals/Loans										
	Miscellaneous					678	12,622	239			
TOTAL REVENUE		2,218		17,234	1,560	2,543	69,175	16,232	6,741	4,561	9,628
EXPENDITURES											
Sales Expenses	Observer's Handbook	156					2000	2,813			
	Beginner's Observing Guide						115				
	Observer's Calendar	445			134	675	1,400			394	878
	Other Publications	36					450				
	Newsletter					145	2,527	295	201		1,465
	RASC promo items				87		1,150	523			
	Other							85	588		
Event Expenses	Star Parties	101		11,273					1,143		1,973
	Annual Dinner								1,968		
	Astronomy Day								38		
	IYA Event										
	Meetings	124			880		650	1,297	27	1,363	222
	Other Events			1,218	366	156		2,757	223	50	175
Travel	General Assembly and Council Meetings					300	600	353	543		
Administrative Expenses	Office Administration			829		115	7,370	311	69		
	Equipment and Supplies					96	1,859	505		277	1,682
	Insurance	548		1,116			5,000	20	500	1,655	1,017
	General Expenses and Audit	10			170		25,868	135			174
	Awards	75					723	55	395		300
	Donations	25						2,420			
	Advertising							218	105		
Miscellaneous Expenses	Observatory and Site Expenses	450		1,842			11,028	408	705	1,778	
	Library						100		285		77
	Depreciation			807				1,508			
	Miscellaneous	56		2242	50	100		306	250	47	137
TOTAL EXPENDITURES		2,026		19,327	1,687	1,587	60,840	14,009	7,040	5,564	8,100
SURPLUS OR DEFICIT ON OPERATIONS		192		-2,093	127	1,032	8,335	2,223	-299	-1,003	1,528
ASSETS	Current assets	26,058		39,020	14,565		40,989	366,844	5,186	6,350	15,712
	Capital assets			16,546	2,115		407,007	12,091	131,477	80,000	1
LIABILITIES				1,853			148,027	5,222			

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EDMONTON CENTRE

c/o TELUS World of Science
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www.edmontonrasc.com

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Luca Vanzella

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HAMILTON CENTRE

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kingston@rasc.ca

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Scouts/Girl Guides Outreach Co-ordinator: Phil Lacasse
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LONDON CENTRE

PO Box 842 Station B
London ON N6A 4Z3
www.rasc.ca/London
www.astro.uwo.ca/~rasc

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MISSISSAUGA CENTRE

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Past President: Randy Attwood
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Secretary: Chris Malicki
National Representative: Leslie Strike
Directors: Allan Connery
James Beckwith
Gerrard Foraie
John Marchese
Sheila Stephenson

CENTRE FRANCOPHONE DE MONTRÉAL

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President: Patrice Scattolin
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Secretary-Treasurer: Pascal Francoeur
National Representative: Hugues Lacombe

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Richard Latulipe
Mark Milas
Gary Smith

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2nd Vice-President: Marc Arsenault
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LPA Chair: Chris Weadick
Star Party Committee Chair:
Adrien Bordage
Newsletter Editor: Paul Gray
Webmaster: Marc Arsenault
Councillors: Guy Arnold
Paul Grey
Emma MacPhee
Chris Weadick

Librarian: Ted Dunphy
Equipment Manager: Eldon Rogers

NIAGARA CENTRE

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stansam@niagara.com

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President: Stan Sammy
Vice-President: Brian Pihack
Treasurer: Robert Lewis
Secretary: Philip Downey
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Darlene Marano
Glen Pidsadnick
David Perry
Mark Roberts

OKANAGAN CENTRE

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OTTAWA CENTRE

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President: Al Scott
Vice-President: Gary Boyle
Treasurer: Hans Brouwer
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Meeting Chair: Bill Wagstaff
Councillors: Yves Demers
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Carmen Rush
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Librarian: Estelle Rother
WebMaster: Justin Hemmings
AstroNotes Editor: Drew Dodge
F.L.O. Director: Bryan Black
Public Outreach: Mike Moghadam
Hospitality: Art & Anne Fraser
Membership: Art Fraser
Telescope Library: Al Scott

PRINCE GEORGE CENTRE

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www.vts.bc.ca/pgrasc
rascpg@telus.net

Past President: Brian Battersby
President: Blair Stunder
Vice President: Robert Nelson
Treasurer: Gil Self
Secretary: Glenn Harris
National Representative: Brian Battersby
Other Directors: Doug Wayland

CENTRE DE QUÉBEC

2000, boul Montmorency
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Président: Stéphane Dumas
Vice-Président: Steve Levesque
Trésorier: Pierre Desrosiers
Représentant national: Pierre Desrosiers
Secrétaire: vacant
Responsable des observations: Steve Lévesque

REGINA CENTRE

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President: Shane Ludtke
Vice-President: Shawn Drew
Treasurer: Gerry Hodges
Secretary: Leonard McDonald
National Representative: Chris Beckett
Past President: Alden Foraie

Councillor: Rob Sheppard
Councillor & Librarian: Ross Parker
Councillor: Mike O'Brien
Webmaster: Shawn Drew
Kalium Observatory: Ron Haughey
Davin Dark Site: Dave Barrie
Equipment Director: Alden Foraie

ST. JOHN'S CENTRE

c/o Randy Dodge
206 Frecker Dr
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info@stjohnsrasc.ca

Past President: Chris Stevenson
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Secretary: Randy Dodge
National Representative: Garry Dymond

Webmaster: Craig Peterman
Observing Director: Robert Babb
Equipment Director: David Bourgeois
Librarian: Fred Smith

SARNIA CENTRE

c/o Marty Cogswell
6723 Pheasant Lane
RR1 Camlachie ON N0N 1E0
web.me.com/richardweatherston/Sarnia_RASC/Welcome.html

President: Ralph De Jong
Vice-President: Randi Mathieu
Secretary: Martin Cogswell
Treasurer: John (Marty) Webster
National Representative: Joe Clements

SASKATOON CENTRE

PO Box 317 RPO University
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skstars@shaw.ca

Past President: Barb Wright
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Vice-President: James Gorkoff
Treasurer: Norma Jensen
Secretary: Ron Waldron
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Other Directors: Colin Chatfield
Darrell Chatfield
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Past President: Debra MacWilliam
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National Representative: Bill Clark

Other Directors: Mike Bradley
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Adrien Payne
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THUNDER BAY CENTRE

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 thunderbayastronomer@gmail.com

Past President: Bob McLean
 President: Bruce Miron
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TORONTO CENTRE

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 Treasurer: Steve Coleopy
 Secretary: Alan Jones
 National Representative: Mark Eburne

Director of Telescopes: Steve Coleopy
 Librarian: William Fearon
 Membership: Ciara Morgan-Feir
 Rohit Grover

Events Co-ordinator: Suzanna Nagy
 Education: Bill Burnyeat
 Observatory Chair: Leigh Cummings
 Webmaster: Harvey Dueck
 LPA Chair: Mark Eburne
Nova Editor: Gordon Farrell
 Observing: Oleg Mazurenko
 Public Relations: Scott McGillivary
 Speakers: Barry Shanko
 Merchandise: Diedre Sportack
 At Large: Jim Ronback
 Deputy IT: Steve Meighan
 Jonathan Neufeld
 Deputy Education: Ciara Morgan-Feir
 Rohit Grover

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 1st Vice-President: Nelson Walker
 2nd Vice-President: Sherry Buttner
 Treasurer: Li-Ann Skibo
 Secretary & Recorder: Mark Bohlman
 Librarian: Michael Michaud
 Telescopes, LPA: Sid Sidhu
 Past President: John McDonald
 National Representative: Chris Gainor
Skynews Editor: Malcolm Scrimger
 Membership Co-ordinator: Chris Saunderson
 Webmaster: Joe Carr

WINDSOR CENTRE

c/o Greg Mockler
 1508 Greenwood Road
 Kingsville ON N9V 2V7
www.rascwindsor.net

Honorary President: Dr. William Baylis
 Past President: Dr. Pierre Boulos
 President: Paul Pratt
 1st Vice-President: Brian Thomas
 2nd Vice-President: Sue Iihola
 Treasurer: Greg Mockler
 Secretary: Art Rae
 National Representative: Mike Mastronardi

WINNIPEG CENTRE

PO Box 2694
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www.winnipeg.rasc.ca
 ras1@winnipeg.rasc.ca

President: Kris Keller
 Vice-President: Andrea Misner
 Treasurer: Jay Anderson
 Secretary: Stan Runge
 National Representative: Jennifer West
 Councillors: Rodrigo Chamorro
 Ralph Croning
 Brian Renald
 Brian Stach
 Paul Trudel

2012 AWARD WINNERS

Ken Chilton Prize	Holly Ayles (New Brunswick)	Chant Medal	(not awarded)
Service Award	Roland Dechesne (Calgary) James Edgar (Regina) Fred Smith (St. John's)	The Plaskett Medal	Pier-Emmanuel Tremblay (Université de Montréal)
		Simon Newcomb Award	Randall Rosenfeld (Unattached)

QILAK AWARD/LE PRIX QILAK

This award is jointly administered by CASCA, the FAAQ, and the RASC, instituted to acknowledge excellence in astronomy outreach and communication. One prize can be awarded annually in each of the three founding societies.

2012 Colleen O'Hare (Okanagan)

2011 CERTIFICATES

MESSIER CERTIFICATE

Rose Marie Baum (Lethbridge, AB) George Guest (Alamogordo, NM, USA)
Tim Crozier (Burks Falls, ON) Kathleen Houston (Saskatoon)

NGC CERTIFICATE

Tim Crozier (Burks Falls, ON)
Hughes Lacombe (C.F. de Montréal)
Don Van Akker (Victoria)
Elizabeth Van Akker (Victoria)

EXPLORE THE UNIVERSE CERTIFICATE

Micah Aalders (Victoria) Pamela Norton (Victoria)
Jerry Deveau (Halifax) Judy Sterner (Calgary)
David Mayer (Klingman, AZ, USA)

DEEP SKY CHALLENGE

(none issued)

ISABEL WILLIAMSON LUNAR OBSERVING CERTIFICATE

Tom Cameron (Calgary) Tenho Tuomi (Saskatoon)
George Guest (Alamogordo, NM, USA)

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.

- 2001 Richard Huziak (Saskatoon)
- 2002 Dr. Roy Bishop (Halifax)
- 2006 Ed Majden (Victoria)
- 2009 Dr. Geoff Gaherty (Toronto)

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 recently.

- 2001 Michael Boschat (Halifax)
- 2002 Vance Petriew (Regina)
- 2003 Doug George (Ottawa)
- Peter Ceravolo (Ottawa)
- Paul Boltwood (Ottawa)
- Jon Buchanan (Ottawa)
- Glenn LeDrew (Ottawa)

- 2005 Attila Danko (Ottawa)
- 2008 Eric Briggs (Toronto)
- Debra Ceravolo (Ottawa)
- Peter Ceravolo (Ottawa)
- Lou Cox (Ottawa)
- Steve Gauthier (London)
- Doug George (Ottawa)
- Paul Gray (New Brunswick)
- Walter MacDonald (Kingston)
- Jack Newton (Victoria)
- Ajai Sehgal (Ottawa)
- Jennifer Tigner (Victoria)
- Dave Toth (London)
- 2009 Brian Battersby (Prince George)

- 2010 Brian Battersby (Prince George)
- Lise Charlebois (Unattached)
- Ted Dunphy (New Brunswick)
- Paul Gray (New Brunswick)
- Kim Hay (Kingston)
- Marc Keelan-Bishop (Belleville)
- Don Kelly (New Brunswick)
- Rémi Lacasse (Unattached)
- Dave Lane (Halifax)
- Damien Lemay (Québec)
- Ron Macnaughton (Toronto)
- Chris Weadick (New Brunswick)
- Jennifer West (Winnipeg)

PLASKETT MEDAL

The Royal Astronomical Society of Canada and the Canadian Astronomical Society together present an award in recognition of the pivotal role played by John Stanley Plaskett in the establishment of astrophysical research in Canada. The award is made to the graduate from a Canadian university who is judged to have submitted the most outstanding doctoral thesis in astronomy and astrophysics in the preceding two calendar years. An award need not be made every year.

- 2000 Alexei Razoumov (British Columbia)
- 2001 Peter Brown (Western)
- 2002 Edward W. Thommes (Queen's)
- 2003 Tracy Webb (Toronto)
- 2004 Jo-Anne C. Brown (Toronto)
- 2005 Christian Marois (Montréal)
- 2006 Lauren A. MacArthur (British Columbia)

- 2007 Frédéric Grandmont (Université Laval)
- 2008 Adam Muzzin (University of Toronto)
- 2009 Catherine Lovekin
(Saint Mary's University)
- 2010 Dr. Helen Kirk (University of Victoria)
- 2011 Dr. Kaitlin Kratter (University of Toronto)

PRESIDENT'S AWARD

Established in 2008, this award is to be given at the President's discretion, usually once a year, to a member who has made an important contribution to the Society, and to be presented by the President either at the General Assembly or during a visit by the President to the home Centre of the recipient.

- 2010 Sid Sidhu (Victoria);
- 2011 Mayer Tchelebon (Toronto)

SERVICE AWARD

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

2000 Phil Johnson (Calgary)
 2001 John Rousom (London)
 David G. Turner (Halifax)
 2002 (Not awarded)
 2003 David McCarter (London)
 2004 David Clark (London)
 Jim Failes (Okanagan)
 Art Fraser (Ottawa)

Guy Nason (Toronto)
 Stan Runge (Winnipeg)
 2005 J. Randy Attwood (Toronto)
 Dr. Robert Garrison (Toronto)
 2006 Ted Bronson (Thunder Bay)
 Mark Kaye (Hamilton)
 Kevin Kell (Kingston)
 2007 Dr. Rajiv Gupta (Vancouver)
 Bruce McCurdy (Edmonton)
 2008 Dennis Grey (Toronto)
 Leslie Harvey (Toronto)
 Tony Horvatin (Toronto)
 2009 Clint Shannon (Halifax)
 Robert Duff (London)

Kim Hay (Kingston)
 Richard Huziak (Saskatoon)
 Walter MacDonald (Kingston)
 Al Seaman (Ottawa)
 Patrice Scattolin (C.F. de Montréal)
 Alan Whitman (Okanagan)
 2010 Guy Mackie (Okanagan)
 Bryan Kelso (Okanagan)
 Jim Tisdale (Okanagan)
 Barry Matthews (Ottawa)
 Curt Nason (New Brunswick)
 2011 Robert Dick (Ottawa)

SIMON NEWCOMB AWARD

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

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

1999 Terence Dickinson (Toronto)
 2001 Dan Falk (Toronto)
 2002 Dr. David Levy (Kingston)
 2003 Alister Ling (Edmonton)
 2004 Mary Lou Whitehorne (Halifax)

2006 Dr. Warren Finlay (Edmonton)
 2007 Alan Dyer (Unattached, Canada)
 2008 Gary Seronik (Victoria)
 2009 James Edgar (Regina)
 2011 Jay Anderson (Winnipeg)

HONORARY MEMBERS OF THE RASC

Dr. Oscar Álvarez-Pomares (Cuba)
 Dr. David L. Crawford (United States)
 Rev. Robert Evans (Australia)
 Dra. Julieta Fierro (Mexico)
 Prof. Andrew Fraknoi (United States)

Dr. Owen Gingerich (United States)
 Dr. Stephen W. Hawking (United Kingdom)
 Dr. Jean Meeus (Belgium)
 Sir Patrick Moore (United Kingdom)
 Dr. Jay Pasachoff (United States)

Dr. P.J.E. (Jim) Peebles (United States)
 Dr. William Sheehan (United States)
 Dr. Carolyn Shoemaker (United States)
 Dr. R. Brent Tully (United States)

PAST ELECTED OFFICERS OF THE RASC

Below are lists of former Honorary Presidents, Presidents, Secretaries, and Treasurers of the RASC. For names before 1990, please refer to "Looking Up—A History of the RASC" by Peter Broughton.

Honorary Presidents

1997-2001 Jack Locke
 2001-2005 Roy Bishop
 2005-2010 Robert Garrison
 2010- Dr. James Hesser

Presidents

1998-2000 Randy Attwood
 2000-2002 Robert Garrison
 2002-2004 Rajiv Gupta
 2004-2006 Peter Jedicke
 2006-2008 Scott Young
 2008-2010 Dave Lane
 2010- Mary Lou Whitehorne

Secretaries

1999-2005 Kim Hay
 2005-2007 Stan Runge
 2007- James Edgar

Treasurers

1998-2004 Michael Watson
 2004-2006 David Clark
 2006-2007 Alan Whitman
 2007- Mayer Tchelebon

GENERAL ASSEMBLIES—2000 TO 2012

The following Centres hosted the General Assembly from 2000 to 2010:

2000 Winnipeg
 2001 London
 2002 Montréal
 2003 Vancouver
 2004 St. John's
 2005 Okanagan

2006 Ottawa
 2007 Calgary
 2008 Toronto, Mississauga and Hamilton
 2009 Saskatoon
 2010 New Brunswick
 2011 Winnipeg
 2012 Edmonton

The following Centres will host the General Assembly in the future:

2013 Thunder Bay