



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



ANNUAL REPORT
RAPPORT ANNUEL

2012

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ROYAL ASTRONOMICAL SOCIETY OF CANADA—2013

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Centre Representatives on Council

Belleville:	Don Town	Ottawa:	Rick Wagner
Calgary:	Robyn Foret	Ottawa:	Bill Wagstaff
Calgary:	Roger Nelson	Prince George:	vacant
Charlottetown:	Mike Critchley	Québec:	Pierre Desrosiers
Edmonton:	Mike Noble	Regina:	Peter Hagar
Edmonton:	Luca Vanzella	St. John's:	Richard Newman
Halifax:	Pat Kelly	Sarnia:	Joe Clements
Hamilton:	Roger Hill	Saskatoon:	Rick Huziak
Kingston:	Brian Hunter	Sunshine Coast:	Bill Clark
Kitchener-Waterloo:	Bernd Mueller	Thunder Bay:	Dave Gallant
London:	Craig Levine	Toronto:	Eric Briggs
Mississauga:	Leslie Strike	Toronto:	Rajesh Shukla
C. F. de Montréal:	Patrice Scattolin	Toronto:	Laila Zichmanis
Montréal:	Frank Tomaras	Vancouver:	Doug Montgomery
New Brunswick:	Chris Weadick	Victoria:	Mark Bohlman
Niagara:	vacant	Windsor:	Michael Mastronardi
Okanagan:	Richard Christie	Winnipeg:	Jennifer West

PRESIDENT'S MESSAGE

Introduction

The Executive and the Constitution Committees continue to be occupied by the Society's governance issues and CNCA compliance. Under normal circumstances, the Constitution Committee has little to do, since Society and Centre By-Laws usually change only rarely. However, the last several years of sweeping modifications to the way we operate as demanded by the federal government via the CRA and now the CNCA, have meant that considerable time and effort have had to be put into our governance. We would all probably prefer to be dealing with astronomical pursuits rather than governance issues, but this is our fate for the immediate future.

Society Office

National Office is running smoothly. Renata Koziol is our Office Administrator and Melissa Mascarin our new Marketing Coordinator. The efforts of our staff have significantly contributed to the improvements in our performance.

We have seen an increase of about 137 members over this time last year to now total 4030, and our total sales and membership income of \$307,849 handily exceeded our 2012 budget estimate of \$245,633.

Financial

Detailed in the Treasurer's Report is the good news that our Society's financial affairs have improved slightly, with higher membership and sales revenues than in previous years. This might have been affected by the slow recovery of the economy since the debacle of 2008, but it certainly reflects well on the efforts of the staff of the National Office.

Governance

Our new By-Law is probably in its final version, or very close to it, and is expected to be voted into force at the upcoming Thunder

Bay GA. The new Policy Manual is well along in its development, but it is expected that further input and extra eyes from outside the Executive will still lead to some improvements. It is intended to be a "living document," susceptible to change as circumstances change for the operation of the Society.

Once the new By-Law has been accepted, Centre By-Laws will also have to be changed to take into account new features. Membership types, for example, (previously referred to as "membership classes") are being harmonized, and it is going to be extremely helpful to have everyone use the same terminology for the same sort of membership situation. And, every Centre member will be a voting member of the RASC under one official membership type or another.

Members of the current and past Executive have been visiting as many Centres as possible between now and the GA as a "By-law Road Show" to meet with at least the Centre leadership (but hopefully more people) to give a show and tell about the By-Law process and contents, as well as those of the new Policy Manual. This process has been going reasonably well, with over half of our Centres visited as of this writing, and for all but two non-compliant Centres acceptance has been good.

Publications

After several years of steady decline, improved sales for the *Observer's Handbook* and *Observer's Calendar* are a welcome sight. Progress by Brenda Shaw continues on the next version of *The Beginner's Observing Guide* so that we shall have something ready when the inventory of the current edition runs out in 2014 or 2015. Nicole Mortillaro has been accepted as Associate Editor-in-Chief for our *Journal*, with a view to her taking over the editorship at some future date.

Glenn Hawley
President

SECRETARY'S MESSAGE

My report includes the 2012 Public Speaker Program, which was used to good effect by the participating Centres, as follows:

- Calgary–Dr. P.Z. Myers on “Making Aliens”
- Sunshine–Coast Bill Phillips on “Asteroids 101”
- Saskatoon–Alan Dyer on “To the Ends of the Earth:Tales of the Transit of Venus”
- Regina–Randall Rosenfeld on “Perceiving New Worlds:The Transit of Venus Across the Centuries”
- Hamilton–Terry Dickenson on “The Good Years and the Bad Years of Astronomy”
- Winnipeg–Murray Paulson on “Meteorite Hunting”
- Halifax–Tim Doucette on “Deep-Sky Eye”
- Vancouver–Sara Seager on “Exoplanets”
- Victoria–Ken Tapping on “Recent Developments in Solar Research”

The speakers and their topics are on the Web at www.rasc.ca/psp-speakers-topics

Membership numbers are slowly creeping up, thanks to the efforts of our wonderful Society Office staff.They conduct regular telephone campaigns to recruit new members and encourage lapsed members to re-new.The system works!

We extend our condolences to the families and friends of the following deceased Members who passed away in 2012: Richard Brain (Belleville); Dick Lowndes (Calgary); Richard Vanderberg (Halifax); Karl Moesch (Mississauga); Jose Ordenes (Sarnia); Susan Challenger Bolton, Terence Bowden, E. Clifton Carr, Fred Giles, Wolf Graf, (Prof.) Kimmo Innanen, Tony Sosnkowski, Kim Sprague, (Toronto); Geoffrey Burrett Jones (Victoria); Lindsay Price, Guy Westcott (Winnipeg)

James Edgar
National Secretary

Membership Statistics 2002-2012

Centre	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
Belleville	30	31	37	26	32	35	33	32	29	26	NA
Calgary	336	282	271	300	317	313	278	302	323	321	315
Charlottetown	20	19	25	24	24	22	21	20	19	20	16
Edmonton	229	235	260	257	258	255	241	261	267	271	262
Halifax	153	154	159	155	157	162	152	171	197	214	196
Hamilton	78	61	66	70	76	80	82	91	91	113	114
Kingston	66	66	74	90	98	106	125	128	110	132	145
Kitchener-Waterloo	115	106	115	116	118	104	101	127	127	133	114
London	126	104	118	97	101	104	99	112	115	119	118
Mississauga	132	123	120	127	120	103	53				
C.F de Montréal	18	20	22	24	23	28	32	32	30	40	39
Montréal	110	91	87	103	107	99	105	109	108	121	116
New Brunswick	68	68	66	75	79	88	78	75	70	59	62
Niagara	69	69	71	82	97	104	101	114	123	117	109
Okanagan	106	92	116	103	88	86	85	83	85	92	87
Ottawa	325	328	370	389	410	416	396	447	469	500	480
Prince George	63	69	64	64	79	67	82	75	40	43	42
Québec	20	19	17	17	35	44	40	39	38	38	45
Regina	75	62	62	52	48	55	53	47	53	59	56
St. John's	47	44	45	48	47	52	49	51	44	54	54
Sarnia	11	15	15	19	24	25	27	27	32	26	27
Saskatoon	70	70	72	71	71	78	76	70	67	73	70
Sunshine Coast	32	38	35	32							
Thunder Bay	50	46	46	44	37	41	40	39	41	43	39
Toronto	611	573	554	502	506	610	622	748	841	889	886
Vancouver	226	228	244	251	263	256	238	267	291	313	292
Victoria	163	164	166	185	173	188	177	186	192	200	188
Windsor	90	100	96	96	98	94	89	105	122	125	120
Winnipeg	178	180	168	162	169	157	136	132	140	136	114
Unattached	446	419	434	459	530	561	512	538	591	610	575
Honorary	15	14	11	15	15	14	15	15	14	14	13
Total	4062	3957	3995	4040	4216	4347	4138	4443	4655	4901	4688

Membership by Type

Type	Number	% of Total
Ordinary	3562	88.4
Life	324	8.0
Youth	147	3.6
Honorary	(15)	n/a

Membership by Country

Country	Number	% of Total
Canada	3800	93.5
USA	214	5.3
Other	34	1.0

TREASURER'S MESSAGE

The Society recorded a modest deficit in 2012 of just under \$10,000 on revenues of \$461,800 or -2.1%. Our revenue increased overall by \$8,385 over 2011 as increases in operating and investment income offset a return to historical levels of donations in 2012.

Specifically, our investment portfolio returned to a more profitable state with an income of \$36,204 - an increase of \$33,000 from 2011's poor returns. Membership revenues were also up by \$14,000 as were publications revenues from our *Observer's Handbook* and *Observer's Calendar*. The Society obtained a significant grant of \$14,970 in support of our special Light-Pollution Abatement supplement to the December 2012 *Journal*.

On the expense side, we incurred greater expenses in staffing mostly due to having a full staff complement for the entire year, as well as increases in member service costs due to higher postage costs and travel expenses for our Council. Our committee expenses were higher due to the costs of the aforementioned Light-Pollution Abatement supplement. Services were higher due to one-time legal expenses related to the Governance Renewal Project.

Our 2013 budget is summarized below. Both our Membership and Publications business segments are expected to make a positive contribution in 2013, while our charitable operations will run

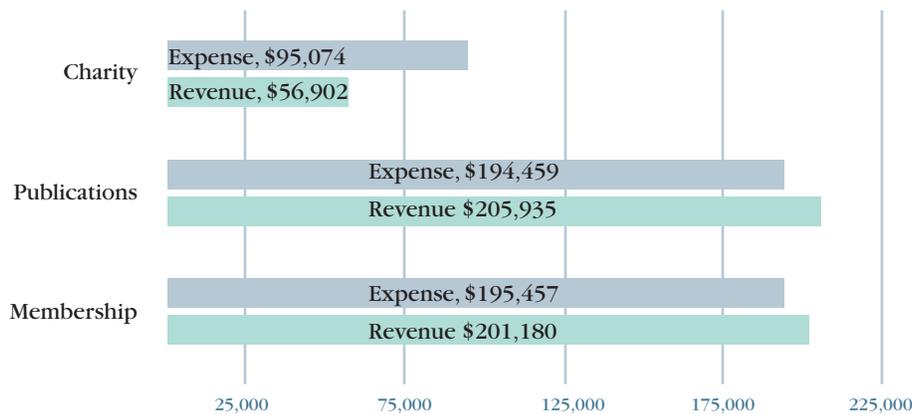
a deficit. As a registered charity, the Society returns its charitable income to the community in the form of charitable goods and services, which are delivered through various Society programs including our publications, speaker's support, education and public outreach (EPO) programs, and other activities. Membership fees account for only 44% of the Society's overall revenue, while publications also contribute 44% and donations about 12%.

Our publications business outperformed expectations in 2012 and the Society expects to see erosion in this business segment over the medium term, which must be offset by new publications and new revenue via expanded delivery channels. Our Publications Committee is actively working on this issue and progress is essential, as the market for our publications continues to change over time.

I would like to acknowledge the assistance of our outgoing Treasurer, Mayer Tchelebon, in an excellent transition as I have undertaken the role of Society Treasurer, and I also wish to acknowledge the contributions of the Finance Committee and Society staff in assisting me with carrying out this responsibility on behalf of the Society.

Denis Grey
Treasurer

Summary of 2013 Operating Budget



AUDITOR'S REPORT

Tinkham & Associates LLP CHARTERED ACCOUNTANTS

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

We have audited the accompanying financial statements of The Royal Astronomical Society of Canada/La Société Royale D'Astronomie Du Canada, which comprise the balance sheet as at 2012 December 31, 2011 December 31, and 2011 January 1, and the statements of revenue and expenditures, changes in net assets and cash flows for the years ended 2012 December 31 and 2011 December 31, 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 2012 December 31, and its financial performance and its cash flows for the year then ended 2012 December 31 and 2011 December 31 in accordance with Canadian generally accepted accounting standards for not-for-profit organizations.

TORONTO, Ontario
2013 March 23

Tinkham & Associates LLP
CHARTERED ACCOUNTANTS
LICENSED PUBLIC ACCOUNTANTS

STATEMENT OF REVENUE AND EXPENDITURE

Year ended December 31	2012	2011
Revenue		
Membership fees	\$ 180,076	\$ 166,432
Publication revenue		
<i>Journal</i>	35,222	35,137
<i>Observer's Handbook</i>	79,741	69,102
<i>Beginner's Observing Guide</i>	6,581	6,549
<i>Observer's Calendar</i>	48,032	39,097
Shipping and Handling	30,816	24,212
Educational Aids	7,076	11,434
Other	1,248	1,250
	208,716	187,681
Miscellaneous income		
Donations	14,821	58,197
Promotional products	3,763	3,513
Other income	18,220	5,491
Grants	-	29,000
	36,804	96,201
Investment Income (net)		
Interest and dividends	35,730	33,042
Gain (loss) on investments	13,312	(20,913)
Investment manager fees	12,838	(9,028)
	36,204	3,101
Total Revenue	461,800	453,415
Expenditures		
Publication costs		
<i>Journal</i>	44,145	41,995
Cost of publications sold	35,499	29,368
<i>Observer's Handbook</i>	334	1,464
<i>Observer's Calendar</i>	-	95
Freight and handling costs	34,395	23,115
	114,373	96,037
Operating costs		
Office salaries and employee benefits	139,625	117,809
Membership services	68,205	61,945
Office expenses	24,769	26,564
Services	46,110	39,282
Committees	26,005	9,289
Travel expenses	23,784	18,800
Cost of promotional items sold	1,584	2,252
Amortization of capital assets	3,124	3,242
Advertising and marketing	6,451	17,122
Occupancy	17,541	16,046
	357,198	312,351
Total Expenditures	471,571	408,388
Excess of revenue over expenditures	\$ (9,771)	\$ 45,027

See accompanying notes to financial statements

STATEMENT OF CASH FLOWS

Year ended December 31	2012	2011
Cash provided (used) by operating activities		
Excess of revenue over expenditures for the year	\$ (9,771)	\$ 45,027
Charges not requiring a current cash payment		
Amortization of capital assets	3,124	3,242
Amortization of life membership fees	(1,785)	(1,879)
	(8,432)	46,390
Changes in non-cash working capital components		
Accounts receivable	(9,890)	18,641
Inventory	19,310	(10,569)
Prepaid Expenses	(2,102)	(1,246)
Accounts payable and accrued liabilities	18,123	(813)
Deferred revenues	(171)	12,300
	16,838	64,703
Cash provided (used) by investing activities		
Purchase of investments (net)	(34,294)	(1,245)
Purchase of capital assets	(1,586)	-
	(35,880)	(1,245)
Increase (decrease) in cash during the year	19,042	63,458
Cash, beginning of year	187,893	124,435
Cash, end of year	168,851	187,893

NOTES TO FINANCIAL STATEMENTS

2012 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 Adoption of new accounting standards

These are the first financial statements prepared in accordance with the CICA Handbook - Part III - Accounting standards for not-for-profit organizations ("Part III"). The Society's first reporting period using Part III is for the year ended 2012 December 31. As a result, the date of transition to Part III is 2011 January 1. The organization presented financial statements under its previous Canadian generally accepted accounting principles ("CGAAP") annually to December 31st of each fiscal year up to and including 2011 December 31.

There were no changes to opening unrestricted net assets or prior year excess of revenue over expenditures as a result of adopting these standards.

3 Significant accounting policies

These financial statements have been prepared by management in accordance with Canadian accounting standards for not-for-profit organizations.

(a) Investments

The Society has elected to value all investments at fair value, which is based on quoted market values.

(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

Capital assets are recorded at cost. 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 7. 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 cost and fair value, is recognized in investment income for the year.

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

(f) Contributed materials and services

The organization is dependant on the voluntary services of many individuals. The value of donated services is not recognized in these financial statements

(g) Use of estimates

The preparation of financial statements in accordance with Canadian accounting standards for not-for-profit organizations requires management to make estimates that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Significant estimates include the impairment of accounts receivable and the useful lives of capital assets. All estimates are reviewed periodically and adjustments are made to the statement of operations as appropriate in the year they become known.

(h) Financial instruments

(i) Measurement

The Society initially measures its financial assets and financial liabilities at fair value. The Society subsequently measures all its financial assets and financial liabilities at amortized cost except for its investments which are measured at fair value. Changes in Fair value are recognized in the excess of revenue over expenditures for the year.

Financial assets measured at amortized cost include cash and accounts receivable. Financial liabilities measured at amortized cost include accounts payable and accrued charges.

(ii) Impairment

At the end of each reporting period, the Society assesses whether there are any indications that a financial asset measured at amortized cost may be impaired. When there is an indication of impairment, the Society determines whether a significant adverse change has occurred during the period in the expected timing or amount of future cash flows from the financial asset and it reduces the carrying amount of the asset to the highest of the following: i) the present value of the cash flows expected to be generated by holding the asset discounted using a current market rate of interest appropriate to the asset; ii) the amount that could be realized by selling the asset at the statement of financial position date; and iii) the amount the Society expects to realize by exercising its rights to any collateral held to secure repayment of the asset net of all costs necessary to exercise those rights. The carrying amount of the asset is reduced directly or through the use of an allowance account. The amount of the reduction is recognized as a bad debt in the statement of revenue and expenditures. When the extent of impairment of a previously written down asset decreases and the decrease can be related to an event occurring after the impairment was recognized, the previously recognized impairment loss is reversed to the extent of the improvement, directly or by adjusting the allowance account. The amount of the reversal is recognized in the statements of revenue and expenditures in the period the reversal occurs.

(iii) Transaction costs

Transaction costs are recognized in the statements of operations in the period incurred, except for financial instruments that will be subsequently measured at amortized cost. Investment management fees associated with the ScotiaMcLeod managed portfolio are expensed as incurred.

4 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. Under the terms of a 2010 court interpretation the income of the Helm Fund is presently being applied in support of on-going public education programs at the DDO site.

Total assets of the fund under administration by the Society at 2012 December 31 are \$138,317 (2011 - \$136,937) and are excluded from the Society's financial statements.

5 Investments

	2012	2011
Managed portfolio at Scotia McLeod		
Fixed income investments	\$ 522,584	\$ 589,683
Canadian equity investments	360,628	368,890
US equity investments	97,512	-
Cash	27,307	14,749
Accrued interest and dividends receivable (net)	1,634	2,049
	\$1,009,665	975,371

The actively managed portfolio with ScotiaMcLeod includes 8 fixed income investments (2011 8 investments) comprised of government and corporate bonds with an average yield to maturities of 3.81% (2011 3.40%), stated interest rates ranging from 2.00% to 5.00% (2011 2.00% to 5.00%), maturing from 2013 June 15 to 2019 April 15 (2011 2012 June 1 to 2019 April 15).

The Canadian equity investments include share and trust units of 30 Canadian entities (2011 32 Canadian entities). The single largest holding is 490 shares of Royal Bank of Canada with a market value of \$29,341 (2011 555 shares of Royal Bank of Canada with a market value of \$28,849).

The U.S. equity investments include share and trust units of 20 entities. The single largest holding is 119 shares of Marathon Pete Corp with a market value of \$7,497 US\$.

The fixed income and equity investments have been recorded at market value based on information provided by ScotiaMcLeod

6. Capital assets

		2012 Accumulated Cost Amortization		2011 Accumulated Cost Amortization
Computer hardware	\$ 8,157	\$ 6,205	\$ 6,571	\$ 5,168
Software	19,330	9,528	19,330	7,595
Office furniture	1,542	484	1,542	330
Library	1	-	1	-
	\$ 29,030	\$ 16,217	\$ 27,444	\$ 13,093
Net book value		\$ 12,813		\$ 14,351

7. Unamortized life membership fees

	2012	2011
Life membership fees as of January 1	\$ 35,706	\$ 37,585
Deduct: Amortization to income	(1,785)	(1,879)
Balance, December 31	\$ 33,921	\$ 35,706

8. 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:

2013	\$ 8,612
2014	\$ 8,612
2015	\$ 1,435
	\$ 18,659

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					2012	2011
	Public Speaker Program Fund	W. Feibelman Fund	Ruth Northcott Fund	P.M. Millman Endowment Fund	Total	Total
Fund balance, January 1	\$ 11,170	\$ 60,488	\$ 98,882	\$ 242,955	\$ 413,195	\$ 366,127
Transferred from Unrestricted net assets:						
Interest	381	2,062	3,371	8,282	14,096	1,116
Donations	3,288	-	1,807	1,115	6,210	48,667
Expenses	(2,459)	-	-	-	(2,459)	(2,415)
	1,210	2,062	5,178	9,397	17,847	47,368
Balance, December 31	\$ 12,380	\$ 62,550	\$ 104,060	\$ 252,352	\$ 431,342	\$ 413,495

10 Financial instruments

The Society is exposed to various risks through its financial instruments. The following analysis provides a measure of the Society's risk exposure and concentrations. The financial instruments and the nature of the risks to which they may be subject are as follows:

Financial instrument	Risks				
	Credit	Liquidity	Currency	Market risk	
				Interest rate	Other price
Cash	X			X	
Accounts receivable	X				
Investments	X	X	X	X	X
Accounts payable and accrued charges		X			

Credit risk

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. The Society is exposed to credit risk through its cash, accounts receivable and investments.

Credit risk related to cash is minimal as funds are fully insured and held by credit worthy parties. Accounts receivable are generally unsecured. The investment policy requires diversification of investments within categories, and sets limits on exposure to individual investments.

Liquidity risk

Liquidity risk is the risk that the Society will not be able to meet a demand for cash or fund its obligations as they come due. The Society meets its liquidity requirements by ensuring adequate cash is maintained and investments are available to be converted to cash if and when required.

Market risk

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk is comprised of currency risk, interest rate risk and other price risk.

Currency risk

Currency risk reflects the risk that the Society's earnings will decline due to the fluctuations in foreign exchange rates. The Society has cash and investments denominated in U.S.\$ totalling \$119,537 converted to Cdn\$ at 2012 December 31. The exchange rate used to convert US\$ assets at 2012 December 31 is \$1 US = \$0.9949 Cdn.

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Society is subject to interest rate risk to the extent of its fixed income investments and cash on deposit with financial institutions that earn interest at market rates. The Society manages its exposure to the interest rate risk of its cash by maximizing the interest income earned on excess funds while maintaining the liquidity necessary to conduct operations on a day to day basis. Fluctuations in market rates of interest on cash do not have a significant impact on the Society's results of operations.

The primary objective of the Society with respect to its fixed income investments is to ensure the security of principal amounts invested, provide for a high degree of liquidity, and achieve a satisfactory investment return.

Other price risk

Other price risk refers to the risk that the fair value of financial instruments or future cash flows associated with the instruments will fluctuate because of changes in market prices (other than those arising from currency risk or interest rate risk), whether those changes are caused by factors specific to the individual instrument or its issuer or factors affecting all similar instruments in the market.

The Society is exposed to other price risk because of its equity investments.

Changes in risk

There have been no changes in the Society's risk exposures from the prior year.

ANNUAL MEETING MINUTES—2012

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

Minutes of the Annual General Meeting held on Sunday, 2012 July 01 at 9:00 MDT at the University of Alberta, Edmonton, Alberta.

WELCOME AND INTRODUCTIONS

The meeting was called to order at 9:00 MDT by the Chair, RASC President Mary Lou Whitehorne, who welcomed members, delegates, and guests to the 2012 Annual General Meeting and thanked the Edmonton Centre for hosting the 2012 General Assembly. This was greeted by a round of applause.

After introducing the Executive Committee, President Whitehorne called the roll of Centres—18 Centres were represented; plus several Unattached Members and guests were present, with approximately 65 in attendance.

1. MINUTES OF THE 2011 ANNUAL MEETING

MOTION AGM1201 Moved by Luca Vanzella, seconded by Colin Haig, that the Minutes of AGM 2011 be adopted as presented in the Annual Report.

MOTION AGM1201 was CARRIED

2. Reports of Officers

President

President (Mary Lou Whitehorne) Mary Lou had nothing further to add, except to say she appreciated all the work done by our staff at National Office. We have accomplished much. Mary Lou thanked all for their support during her tenure for the past two years. This was greeted with a warm round of applause.

1st Vice-President

1st Vice-President (Glenn Hawley) Glenn said he was pleased with the progress made through the last year, especially with the By-Law revision in the past months.

2nd Vice-President

2nd Vice-President (Colin Haig) Colin expressed how much he had learned about the Society in the past while. He thanked the IT team for improvements to the Web site; thanks to the MAP committee for their social media activities lately. He said he had visited several Centres.

Secretary/Recorder

Secretary/Recorder (James Edgar) reported on the activities of the Public Speaker Program, which, since its inception in 2010, has sponsored 8 speakers in 2010 and 2011, plus seven Centres will receive grants this year. A list of speakers and their topics is maintained on the Society's Web site.

James asked those present to stand and pause for a minute of silence to honour those Society members who had died in the previous year, naming: 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); Don Fox, Guy Westcott (Winnipeg).

Treasurer

Treasurer (Mayer Tchelebon) Mayer reported how we have improved our endowment to one million dollars. Financial Statements have been posted on the Internet. Motion to approve the audited financial statements for 2011.

MOTION AGM1202 Moved by Mayer Tchelebon, seconded by

Glenn Hawley, that the audited financial statements be approved as submitted.

MOTION AGM1202 was CARRIED.

Executive Director

Executive Director (Deborah Thompson) Deborah thanked the Centre members for keeping our membership on an even keel. She knows it is the Centres who do so much work in the field to keep our Society vibrant.

3. Reports of Standing Committees

Awards

Awards (Dave Lane) No report.

Constitution (Glenn Hawley)

Glenn repeated the parable he had presented to National Council meeting NC122 about interpreting Latin By-Laws. James Edgar gave a PowerPoint presentation about our progress in By-Law reform, precipitated by the recent Canadian Not-for-profit Corporations Act (CNCA). There was much discussion and explanation.

Education (Ron Macnaughton)

Great work and partnerships from Centres.

Executive (Mary Lou Whitehorne)

No report.

Finance (Mayer Tchelebon)

No report

History (Randall Rosenfeld)

David Levy's Notebooks online and the Transit of Venus were two very important events.

Membership & Promotion (Roland Dechesne)

Social Media (Twitter, Facebook, etc) have dominated MAP activities, with many followers worldwide. More interaction with the membership is expected in the future.

Nominating (Colin Haig)

Honorary Members have been filled out to our maximum complement of 15 with the recent appointment of Dr. Bill Bottke.

Observing (Chris Beckett)

The Committee has distributed 28 observing certificates. Over 10,000 pairs of solar glasses were distributed for the solar eclipse and the Transit of Venus. He praised David Chapman's outreach activities in Cuba, and for his work in improving the Observer's Handbook observing lists.

Publications (Glenn Hawley)

The publications are all well underway for the next year, and the Journal is doing well. Mary Lou asked for people to suggest ways to get involved in electronic publishing. We have to find new and innovating ways to improve our readership.

4. Reports of Special Committees

Green-Laser Pointer (Randall Rosenfeld)

Our approach to Transport Canada has floundered, so we are going to apply for ministerial exemption regarding the astronomical use of green-laser pointers.

Information Technology (Ryan May)

Our Web site renewal was a major undertaking, with more similar activities planned in the future.

Light-Pollution Abatement (Robert Dick)

Our efforts are continuing at a rapid and dynamic pace. We have input from Jasper National Park about lighting in the park that may work toward improving lighting in all parks. Rob asked for assistance from members.

5. Election of Officers

By Acclamation:

President - Glenn Hawley

1st Vice-President - Colin Haig

2nd Vice-President - Chris Gainor

Treasurer - Denis Grey

6. Election of Auditor

MOTION AGM1103

Moved by Mayer Tchelebon, seconded by Doug Hube, that Tinkham, LLP be appointed as Auditor for 2013.

MOTION AGM1103 was CARRIED

7. Other Business**8. Adjournment**

MOTION AGM1104

Moved by Denis Grey, that the meeting adjourn.

MOTION AGM1104 was CARRIED

The meeting adjourned at 11:00 MDT

James Edgar

Recorder

ANNUAL REPORTS FROM THE CENTRES

BELLEVILLE CENTRE

January	11 members present Observing reports; Film: "Why Isn't Pluto a Planet Anymore?"
February	14 members present Observing reports; David Cotterell: "SkySafari Pro" software
March	16 members present Quinte Regional Science Fair, March 31—Belleville Centre presents four awards for best astronomy-themed projects. Late member Bill Broderick's partial meteorite collection on display. President Greg Lisk's visit to H.R. McMillan Space Centre, Vancouver. Observing night: March 23/24
April	13 members present
April 28	Astronomy Day Three members attend NEAF (Northeast Astronomy Forum) in Suffern, NY. Greg Lisk did presentation to local radio club. Mark Coady—"Titanic Skies"
April 20/21	Observing night
May	14 members present; Robert Bates shows his latest astrophotos. Greg Lisk shows photos of trip to NEAF (Northeast Astronomy Forum) Suffern, N.Y.
June	8 members present David Pianosi to visit Yerkes Observatory in Wisconsin. Transit of Venus, June 5 Public observing at Frink Centre, Plainfield.
July	8 members present Bon Echo weekend; Jupiter/Venus close in morning sky for month. Film "Meteor Men Return to Whitecourt"
August	9 members present Richard Brain: "Pluto's Moons"; Starfest, Aug. 16-19 7 members attend.
September	13 members present Observing reports; Starfest reports. 13th annual "Fall 'n Stars" star party—joint RASC Kingston/Belleville activity. 30 persons attend from both Centres.
October	13 members present Observing reports; Dave Cotterell: "Transit of Venus" photos and movie.
November	9 members present Observing reports; Greg Lisk: "Visual Meteor Observing"
December	8 members present Observing reports; Greg Lisk: "Jupiter." Annual club Christmas Dinner—21 present.

Joanne Burns
Secretary

CALGARY CENTRE

Council meetings = 10

General Meetings = 9

Monthly volunteer events at Rothney Astrophysical Observatory (University of Calgary), TELUS Spark Science Centre, Vulcan Space Centre.

Bi-annual events at Fish Creek Park, Blackfoot Crossing interpretive Centre.

Multiple events at Ralph Klein Park, Glenbow Ranch.

Sponsoring Library Telescope Programs at seven rural libraries and two schools.

Telescopes donated by Calgary Centre or Calgary Centre donors to libraries and knowledge transfer to build self-sufficiency along with a "RASC mentor" assigned to each library.

Conventions included Calgary Outdoor Adventure Show, Calgary Comic Expo and Calgary Youth Science Fair.

Approximate total of 12,500 patrons and over 1500 volunteer hours.

2012 Peter Simm Lecture was given by Dr. P.Z. Myers; entitled "Building Aliens."

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.

Public observing was held at the UPEI observatory on the 3rd Saturday of each month when weather permitted. General meetings are held on the 3rd 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.

RASC Charlottetown Centre once again had a very active and successful Astronomy Day. The event was held at the Charlottetown Mall in the main atrium. Displays of member telescopes, photos, Centre and RASC handouts, kids activities were just some of the items provided for the public event. With a good representation from the Centre, we achieved our goal of providing information on the RASC and astronomy in general to the public. A follow up public viewing event also took place in the evening at the University of Prince Edward Island with the UPEI Physics Dept. and the RASC Charlottetown Centre.

We held our annual potluck and BBQ on Saturday, July 21 at Clair Perry's. Not too many attended but a good time was had anyway. Many of the members have been out observing on the weekends.



December 9—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.



Ken, Brian, Jane, Clair

The present executive will be serving another term of office with Clair Perry as President and hopefully we will have another successful year.

December 20—A big Thank You went out to all the volunteers who helped with the Public Observing at the UPEI telescope. Overall the weather was poor, and our first guests with younger children were unable to view any sky objects but did enjoy the tour of the observatory. Later guests were just able to make out a fuzzy Jupiter and its four moons through the hazy clouds. Some of the later guests stayed after their viewing and were treated to some Internet astronomy in the classroom on the fourth floor. We had about 20 guests participating. Thank You to Lisa and Megan from UPEI. Lisa helped arrange all the bookings and campus promotions. Megan helped setup the equipment in the Observatory. Thank You to Walter, Robert, Jane, and Brian who helped our guests feel welcome in the classroom and answered their questions.

Jane Vicary
Secretary

EDMONTON CENTRE

In 2012, The Edmonton Centre held monthly meetings except in July and August, mostly with local speakers. We had monthly club observing nights at Beaver Hills Dark Sky Preserve as weather permitted.

Some highlights of the year:

Apr 27-28 Astronomy Day

The Centre celebrated Astronomy Day with the public under mixed skies. The Friday had to be cancelled due to heavy cloud, but the Saturday was very good with sidewalk astronomy at three locations and with many visitors to TELUS World of Science Observatory.

May 20 Annular Solar Eclipse

Public viewing was held at TELUS World of Science Observatory, under generally favourable skies. Edmontonians got to see a partial eclipse of the Sun, with 56% obscuration. Several Centre members travelled to Arizona and California to see a very memorable annular eclipse.

June 5 Transit of Venus

Public viewing was held at TELUS World of Science Observatory, but the Edmonton area skies were plagued with clouds. Several Centre members made mad dashes around Alberta to catch the transit, while others ventured to the Northwest Territories and Hawaii to see the whole thing.

The BIG event for the Edmonton Centre was the highly successful 2012 General Assembly of the RASC. The Centre welcomed astronomers from across Canada to the 53rd GA, from Thursday, June 28 to Sunday, July 1. Excellent facilities, top-notch speakers, and outstanding summer weather all contributed to a very fine GA. The GA was attended by 111 registered delegates, and took place at the University of Alberta main campus. The principal venue was the Centennial Centre for Interdisciplinary Science (CCIS), while the Lister Centre served as the main accommodation facility and venue for the Sunday program. The Helen Sawyer Hogg Public Lecture was presented by Dame Jocelyn Bell Burnell to a packed house on Saturday evening. Her talk, entitled "Will the world end in 2012? The astronomical evidence," was well received by the audience. The Hogg Lecture was Webcast live, a first for RASC General Assemblies, and was viewed from coast to coast. The featured

tour of the 2012 GA was a chance for delegates to go on a guided tour of the Whitecourt Meteorite Impact Crater led by Dr. Chris Herd to hunt for meteorite specimens. The tour was organized by Murray Paulson, The Town of Whitecourt, Whitecourt County, and Woodlands County.

An article entitled “The 2012 General Assembly—A Look Back” appears in the September 2012 issue of *Stardust* and can be found at: <http://edmontonrasc.com/public/stardust/stardust201209.pdf>

The GA Web site at <http://edmontonrasc.com/2012ga> has complete details of the event, including the program booklet, the group photo, a large gallery of images contributed by many delegates, and the image competition entries.

Jay Lavender
Treasurer



The Halifax Centre of the RASC had a busy and successful year with regular meetings and a variety of outreach events promoting astronomy to the public. The Outreach Committee and many Centre volunteers carried on with the activities 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 at our monthly meetings a series of speakers who gave interesting and informative presentations, which included:

In January we had Dr. Luigi Gallo “Seeing the Universe in X-ray”; February: Blair MacDonald gave us “Imaging Part 1”; March: we had a Member's Night; April: Blair Macdonald returned with “Imaging Part II”; May: Dr. Roy Bishop prepared us for the “Transit Of Venus”; in June we had Patrick Kelly with “Searching for Extra-Solar System Planet”; in September Tim Doucette, the legally blind astronomer, provided us with “DeepSkyEye”; in October Dr. Roy Bishop gave a lecture on “Navigation”; November: we had Dr. Philip Bennet with “What do you really know about the long-period eclipsing binary epsilon Auriga?”; and at the AGM we had a quiz show “Who wants to be a gazer?” All in all, we had a good mix of subjects and captivating speakers.

NOVA Program

Our NOVA (New Observers to Visual Astronomy) Program carried on from 2011 through spring of 2012, with Councillor Sean Dzafovc teaching the sessions in the hour before each monthly meeting. Sean provides a series of lectures/presentations on various aspects of astronomy—all designed for the beginning observer.

Centre Newsletter *Nova Notes*

Nova Notes continued in its regular format throughout 2012, edited by Quinn Smith. It was primarily delivered in an electronic format through the Halifax Centre Web site with paper copies mailed out to those who have subscribed. There were a total of 5 editions compiled in 2012; February, April, June/July, September/October, and December. It is intended to carry on the publishing of *Nova Notes* next year.

Public Outreach

Along with the public observing sessions that have taken place in Halifax, many members have hosted their own observing session within their local communities. Some of our members even participated in the Transit of Venus outreach events in other provinces (clouded out in Nova Scotia).

The Halifax Centre has continued to support the planetarium, and several of our members have given shows throughout the year. According to Stephen Payne, who runs the planetarium, there have been approximately 2,900 visitors this year.

Nova East Star Party, Smileys Provincial Park

This year Nova East, Atlantic Canada's regional star party, was a very special one, not only for its world famous guest speakers, David Levy and Kathryn Gray, but also because it was hurricane free. The success is due to the hard work of the Nova East Organizing Committee, Blair MacDonald, Quinn Smith, Minas Astronomy Group, and the Smileys Provincial Park Staff.

Dark-Sky Preserve Support

The Centre has also supported Kejimikujik National Park and Historic Site which has been a Dark-Sky Preserve since 2010. This summer, members of the Centre helped host a Dark-Sky Weekend, with presentations, talks, observing sessions, and members Dave Chapman and Quinn Smith conducting a Kejimikujik Dark-Sky Preserve Lighting Audit. Parks Canada staff have worked hard to sustain and enhance Kejimikujik National Park Dark-Skies Preserve certification.

Sad Losses

We have suffered the loss of our previous President, Richard Vanderberg. He passed away on the July 27 after a long battle with cancer. Previously, Richard had been the president of the Edmonton Centre, and for the last two years, he had been President of the Halifax Centre. Richard was a quiet and a remarkable man with countless abilities and a wide range of interests. Beside astronomy, he loved music, model railroads, writing, and had taught political studies at numerous universities. Richard accomplished much in his life and had a positive influence on all those he touched. He will be remembered and missed by all of us.

Goals for 2012

The Halifax Centre has committed to carry on many of the public outreach programs provided in 2012. 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

The Hamilton Centre is what we would say, “new and improved,” as of September 2012. 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 2012/13 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 outreach program at Westfield Heritage Village. New this year, we 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.

We successfully launched a NOVA program and Astrophotography 101 courses. In addition to these events, we have worked hard to create AstroCATS, a local Astronomy trade show. 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 joint partnership with Henry’s to teach basic astrophotography throughout the province; a new Web site; and a Facebook presence.

We are in the process of planning our year-end banquet (David Levy as guest speaker).

Our membership has grown since this past September and we are optimistic about the near and distant futures.

Jason Blaine
Secretary

Centre membership seems to have reached a stable number of 66, changing little over the last few years.

The Centre continues to run meetings ten months of the year leaving July and August without.

- January 14 James Silvester (Queen’s/RMC) spoke on: New analysis of stellar magnetic fields, rotational velocities and the distribution of rare elements.
- February 11 Astrophotography: many members participated and all manner of technique was discussed, from very low-end, point and shoot at the eyepiece, to software issues with CCD cameras.
- March 10 Miscellaneous observing-related reports and short slide shows, National Council meeting report from the day’s teleconference, and promotion of several upcoming events, including the Lennox and Addington County dark-sky destination at the

Sheffield Conservation Area and Terry Dickinson’s efforts to assist them in promoting it.

- April 14 Notes from an Executive retreat, Astroday plans, Sheffield Conservation site visit, prospective sites for the Transit of Venus in June.
- May 12 Member Presentations: Comet Video, deep-sky and solar photos.
- June 9 Transit of Venus Reports!
- September 17 Observing reports including Fall’n’Stars activities, more Transit reports!
- October 15 Dr. Jean-Marc Noel (RMC) spoke on: Northern Lights: everything you’ve always wanted to know about aurora.
- November 19 Annual General Meeting and member contributions
- December 17 End-of-Year-Holiday-Celebration Dinner at Aunt Lucy’s Restaurant, 6 p.m.

January to June, the meetings preceded the Kingston Astronomy Outreach Network (KAON) session at Queen’s Observatory. With turnouts of up to 70, there is always a Kingston Centre contingent on hand to help out on the deck with telescopes and binoculars. September marked a meeting-night change to the third Monday of the month, as the combined KAON/meeting night did not yield the expected benefits.

Beyond KAON, more public outreach: many members participated in Earth Hour, Transit of Venus, Astronomy Day, school visits, various community opportunities for solar and stellar observing, Scouts, Guides, and Brownies!

Executive efforts

The Centre benefits greatly from the executive members who are always working away in the background, thinking of new/better ways to do things.

We also had times of minimal effort and maximum enjoyment!

March 29—the Queen’s Cave Lecture: Chris Impy spoke to a full auditorium with a video overflow room on The Search for Life in the Universe.

May’s KAON speaker was Terry Dickinson: The Largest Telescope in the World (Chile).

June 5—members gathered for the Transit of Venus. Some members who do outreach all year, every year, wanted a chance to take their own photos and socialize with friends.

August 17—five Centre members sampled the Elbow Lake Biological Research Station (Queen’s) as a potential observing site.

September 14 to 16—Fall’n’Stars dark-sky camping weekend with Belleville Centre.

This year we acknowledge the contributions of two individuals. After a long hiatus, the Novice and the A. Vibert Douglas awards will be presented to Rose-Marie Burke and Mark Coady, respectively.

With the New Year on the horizon and a new executive chosen, we look forward to another year of making time for astronomy in our busy lives, to share our enthusiasm with the public and each other, to encourage the integration of astronomy and its allied sciences into lives that often devalue science and deny the need in society for critical thought.

Susan Gagnon
President

- We held 11 Stargazing 101 meetings (4th Friday of the month). The July meeting was at a dark site near Waterloo.
- We held 10 monthly meetings (2nd Friday of the month)—most in the Science building at Wilfrid Laurier University
- The executive met ten times—on the Tuesday immediately preceding the monthly meeting
- We held five star parties for our community—in school yards, a local park, *etc.*
- We had two venues for the Transit of Venus—University of Waterloo (2000 in attendance) and in nearby Baden at a privately owned observatory (20 in attendance).
- The astrophotography contest attracted over three dozen submissions, and prizes were awarded for all categories after showing the submissions to our members.
- We held a special star-gazing evening for 30 international students attending the Perimeter Institute at a dark site near Waterloo.
- We continued to develop the dark site at Tilker's farm near Waterloo—laying down slabs in the viewing area, cutting away brush, *etc.*
- We continued to subscribe to a second dark site (Conestoga Lake) near Waterloo, which is attractive to families who wish to combine star gazing with astronomy.
- We combined all the astronomy books available to the Centre in one location, sorted them out by deemed value, and proceeded to sell many to members while donating many others to local institutions (*e.g.* Conestoga College).
- We purchased a solar scope (60mm) and put in an order for a double stack (to be delivered next year) along with several other pieces of equipment. These items will be put at the disposal of the membership for very modest rental fees.
- We visited several local elementary schools and gave presentations about astronomy.
- Several astronomy lectures were given at a local high school.

Gerald Bissett
President

2012 was a very busy year for London Centre. Our presence at Western University has increased greatly under the supervision of Robert Duff, our Higher Education Liaison Director. Non-university public outreach has also remained a priority with Outreach Coordinator David McCarter, keeping members busy with Scouts Canada, schools, and other groups.

London Centre Observatory

In 2012, London Centre finished construction of its observatory, at a dark-sky observing site at the Fingal Wildlife Management Area, owned by the Government of Ontario and managed by the Elgin Stewardship Council (ESC). For several years we, with the aid of the ESC, worked to gain ministry approval to build several structures to facilitate cold-weather observing and to house telescopes that would be the focus of our future outreach efforts.

In 2008/09, we completed construction of a warm-up-room; a small structure with lighting and heat, which gives some refuge on those cold winter nights. In 2012, we completed construction of two observatory buildings, one of which will house equipment for club imaging and the other for mainly visual use. With construction complete, we can now invite clubs and schools to the Fingal site instead of having Centre members travel to them.

Construction on the WUR and Observatory 1 was all done by members. Observatory 2 was installed by SkyShed POD on a foundation built by the members. Observatory 1 has full power and computer hookups to allow remote operation from the WUR, while Observatory 2 will be provided with only power in the short term.

NOVA Course

In the spring of 2012, London Centre offered a modified NOVA course to the public. The course ran one night per week over nine weeks (eight sessions with one week off) at the London Public Library, Masonville Branch. The course basically followed the path that Prince George Centre designed, but the presenters each developed their own teaching aids. Rick Saunders, Bill Gardner, Bob Duff, Dave McCarter, and Peter Jedicke all presented modules. Twelve people signed up for the course, of which nine were new members.

Centre Web site and forums

London Centre expanded its Web site and forums to better serve the membership and the public. Jeff Harrison, our Webmaster, with much help from Craig Levine and Bill Gardner, has been kept busy rolling out new services or tweaking old ones. Our on-line presence is as important as the “in person” experience that we offer, which will keep getting better. The static pages that we served in the past have all been rolled into the new services and we only see the site improving.

Outreach

London Centre participated in 17 public star nights and other outreach events. Twenty-six of our members hosted telescopes for 1006 members of the public. This includes two separate Astronomy Day displays at city shopping malls.

We participated in Western University's Saturday Evening Open House program at the Hume Cronyn Memorial Observatory, assisting at 26 events over the year. Fifteen Centre members attended to assist the grad students host 1008 members of the public.

The Hume Cronyn Memorial Observatory ran five special events during August and September. Twelve Centre members assisted and 284 members of the public attended.

A total of five Centre members participated in the Indigenous Services Mini-University Summer Camp at Western event on August 1.

Ten centre members participated in the Mars Curiosity Rover Landing event, August 5/6.

Four members participated in the Cronyn Observatory International Student Tour on August 27.

Three members assisted with the the Brescia College Frosh Tour of the Cronyn Observatory on September 3.

Two members took part in International Observe the Moon Night (InOMN) on September 22, with an estimated total of 120-130 visitors.

There were 15 Centre members involved in the Venus Transit event held at Western University's Cronyn Observatory and Springett Parking Lot on June 5. There were 2200 members of the public at this Venus Transit event. Centre members also set up at four remote sites (Bayfield, Strathroy, Point Gray, and Rona/London North). Approximately 109 members of the public took part.

Centre members attended a total of 30 Exploring the Stars events at Western, which took place between January and April and involved 1039 visitors (children and adults).

The Centre took part in a total of 15 Exploring the Stars events October through December; 398 visitors (children and adults) attended.

Centre members assisted with Western University's Astronomy 1021 student projects by setting up amateur telescopes outside the dome on the Cronyn Observatory's roof patio. A total of 11 projects took place with 498 students and 4 grad students attending.

Rick Saunders
President

MISSISSAUGA

CENTRE

The year 2012 was another rewarding and busy one for the Mississauga Centre. The core activity of the Centre, as in other years, was the excellent program of speaker nights where an expert, often a professional astronomer, would give a presentation, and member nights where members or invited guests would give brief presentations. Meetings were again held on Friday evenings at the University of Toronto at Mississauga (UTM) thanks to the sponsorship of Dr. John Percy and Dr. Ulrich Krull.

In 2012, there were 9 Speaker Nights as follows:

January 20	Paul Delaney - Things that Go Bump in the Night - The Study of Variable Stars
February 24	Karen Mortfield - Promoting Space Science: Bring on the Aliens!
March 23	Dr. Suresh Sivanandam - Seeing Beyond Red with Cool Technology, How infrared is Changing Astronomy
April 27	Randy Attwood - Observing the Apollo Landing Sites from the Earth and from Lunar Orbit
May 25	Dr. Adrienne Erickcek - The Universe's Growth Spurt
June 22	Dr. Mubdi Rahman - Astronomical Connections
September 21	Paul Delaney - The Hunt for Earth 2: The Promise of New Worlds
October 26	Dr. Phil Stooke - Going to Work on Mars
November 23	Ian McGregor - Mayan Cosmology

A total of 19 presenters spoke at the 12 Member Nights on a large variety of interesting topics. Space topics included Shuttle Atlantis moved to its new home, STS missions, Canadarm, the *Sputnik* program, Neil Armstrong, *Apollo 17* the last mission to the Moon, Mars rover Curiosity, University of Guelph Space Day, the 28th National Space Symposium, and *Voyager* spacecraft approaching the edge of the Solar System. Talks on astronomy and physics discussed star evolution and blue stragglers, the Higgs boson, asteroids, historic perspective on the measurement of the speed of light, aspects of the Transit of Venus, the *Kepler* search for extrasolar planets. Observing and imaging topics dealt with the annular solar eclipse in Arizona in May, Transit of Venus in June, total solar eclipse in November in Australia, the constellation Canis Major, introduction to astrophotography, use of the MallinCam, wide-field astrophotography with the Vixen Polarie, experiences of the first year of astronomy, Starfest, observing the Moon, telescope making, and telescope loan program. There was a talk on development of an astronomy calendar and a continuation of the astronomy in the news by James Beckwith and Tom Alloway, and Randy Attwood's regular updates on happenings in the sky. There was also a tribute to Randy Attwood, founder of the society and Centre, and the asteroid named after him.

The Mississauga Centre is very active in public outreach, especially in partnership with the Earthshine Astronomy and Space Science Organization and the Riverwood Conservancy. Approximately every month, on a Tuesday, at the time of first quarter (so that the Moon can be observed) members of the Mississauga Centre set up telescopes and volunteer at Riverwood. The astronomy nights at Riverwood are advertised by them, by posters in community centres and other locations, in papers, and on electronic social media. As a result, there is a good turnout each time. On July 23 and August 28, there were over 200 people and more than 20 volunteers. People observed the Moon, Jupiter, Saturn, the Pleiades, the ISS, and other objects. On November 22, 17 Girl Guides worked on their astronomy badges. Clearly, the outreach at Riverwood is becoming a huge success.

Our Centre sponsors two prizes at the Riverwood annual fundraising auction.

The Mississauga Centre assisted in the annual Science Rendezvous at UTM held in conjunction with the Health in the City event on May 12. Over 65 people were able to observe the Sun through telescopes with solar filters. This was a rehearsal for the big event, the Transit of Venus on June 5.

The Mississauga Centre, with the co-operation of UTM, which waived parking fees during the event and helped with logistic support, hosted a public observing event for the transit. The event was well advertised in the Mississauga News, on Twitter, and in other media. Centre volunteers had about 15 telescopes set up on a hill outside the South Building, a location now unofficially called "Venus Hill." Over 1000 members of the public came and the entire stock of 1000 solar glasses were given out. Long lines of observers waited for their view at the telescopes until the Sun set behind the trees. The weather co-operated beautifully. A number of people stayed late into the evening for some nighttime observing. The Centre received a great deal of exposure with this event.

Thanks to Terry Hardman, the Centre has printed new, blue book-marks as handouts at events containing information on the Centre as well as the Web address.

On March 31, seven members took part at Erin Mills United Church for the Earth Hour event. Members were present for observing on August 23 with the Oakville Historical Society, at the Deep Sky Wonders event at Terra Cotta Conservation Area October 15, and at the Annual Algonquin Adventure on September 15. Mississauga Centre members were greatly involved with astronomy and

observing for many young people with the Brownie, Beaver, Guide, and Cub groups reaching 100 youth, as well as a large Cub Scout event of another 100 at Glen Haffy Conservation Area on May 26.

There was a large contingent of Mississauga members at the annual Starfest weekend August 16 to 19 in a large area reserved for us thanks to Gord Williams; the weather again co-operated. Members also travelled to Arizona and Japan for the annular eclipse of the Sun on May 20 and locally for the partial eclipse, to many locations for the Transit of Venus on June 5, and to Australia for the total solar eclipse of November 14.

Long-serving President and founder of the Mississauga Astronomical Society, which evolved into the Mississauga Centre, Randy Attwood, stepped down on February 10 and became the first Past President. Leslie Strike assumed role of President and Terry Hardman became Vice-President. Allan Connery took over as Treasurer from Vic Cooper, who moved to the southern skies of New Zealand. Chris Malicki stayed on as Secretary. John Marchese continued on as Membership Secretary, Sheila Stephenson as Editor of the newsletter *Messenger*. James Beckwith as Webmaster, Gerard Foraie co-ordinator of the telescope loan program and merchandise. Andrew Opala, the newest councillor, organized the social media of the Centre. Thanks to the hard work of several council members, the Centre now has a presence on Twitter and Facebook, and is getting a great deal of publicity. In addition to the Mississauga Centre Web site and Yahoo groups, Andrew Opala set up a Mississauga Stargazers group that draws people to Centre events. Finally, the online newsletter *Messenger*, edited by Sheila Stephenson, archives activities of the Centre. This will be the last year for *Messenger* as the Mississauga Council is looking for other electronic media for archiving.

In acknowledgement of Randy's accomplishments and work for the Centre, the Mississauga Centre Council created a new service award, the highest award of the Centre named the Attwood Award. At the March 9 meeting, the award was officially announced, and Randy Attwood was presented with the award as the first recipient. The citation for the award was published in the April *Bulletin* of the RASC, which stated that Randy is "the Founding Father and heart and soul of the Mississauga Centre, promoting public outreach, speaking to the media and recruiting excellent speakers for meetings."

Randy was further honoured by having an asteroid named after him.

Asteroid (260235) Attwood, also known as 2004 RU289, was discovered on 2004 September 12 by Tom Glinos at Jarnac Observatory in Arizona. The Mississauga Centre Council wanted to honour Randy, so a number of council members spoke to Paul and Karen Mortfield, who approached Tom Glinos and the asteroid was named. The asteroid name was officially announced on 2012 July 7 by Paul Mortfield at the David Dunlap Observatory, and it was published in the *Mississauga News*. On August 10, at a meeting of the Mississauga Centre, Tom Glinos and Paul Mortfield discussed the asteroid and its discovery; other members of the Centre spoke about this and other asteroids as well.

Asteroid Attwood thus joins asteroid Mississauga as the second Mississauga-themed asteroid in the sky.

The Mississauga Centre benefits members by giving them publications from the National RASC, the right to borrow telescopes and DVD's, and information on member observing sessions. The Centre continues to support the Mississauga Clear Sky Chart.

We look forward to an exciting year 2013 with two potential great comets.

Chris Malicki
Secretary

CENTRE FRANCOPHONE DE MONTRÉAL

L'année 2012 fut une année de renouvellement. Des nouveaux membres se joignent au conseil d'administration et certaines responsabilités ont changé de mains. Un progrès certain fut réalisé pour les sorties au terrain d'observations. Elles ont été plus nombreuses que par les années précédentes. De Juin à Novembre il y a eut une sortie à St-Valérien à chaque mois et jusqu'à sept instruments s'y sont trouvés. Le site d'observation a été utilisé par plusieurs des membres de façon soutenue. Le terrain a aussi fait l'objet d'entretien avec un émondage autour de la clairière.

Les sorties au parc de l'île de la Visitation ont été aussi un succès. Le transit de Vénus a été la populaire avec 100 personnes qui ce sont déplacé pour venir observer le transit. Plusieurs autres sorties ont aussi vu plus de 20 personnes qui ont observé soit la lune ou une planète.

Une partie de ce succès est attribuable à notre plus grande participation sur les media sociaux tel que facebook ou nous avons maintenant plus de 100 amis qui voient régulièrement les messages que l'on y poste. La liste de courriel est aussi plus utilisé pour échanger par les membres qui y présente leur rapports d'observations et ou on y annonce les sorties au terrain. Le site Web a été mis à jour est certaines conférence sont maintenant annoncé sur le site Web communautaire du Mur Mitoyen.

Plusieurs des tâches administratives ont changé de main et même si tous ont bien collaboré à la transition, chaque tâche qui est maintenant exécuté par quelqu'un de nouveau donne naissance à une période de transition ou le nouveau responsable doit apprendre les tâches. L'informatisation aide les administrateurs mais il reste que nous avons eut quelques difficultés et que nous ajustons encore nos procédures. La petite équipe qui exécute toutes ces tâches mérite tous nos remerciements.

Patrice Scattolin
secrétaire

MONTRÉAL CENTRE

The Montréal Centre's membership stands at 110, and is composed of 99 regular members, 2 (new) youth members and 9 Life members. In addition we have 27 associate members on the roster, many of whom show up at various events.

2012 is a year of accomplishment for the Montréal Centre: we settled down with our new home The Bellevue Observatory in the Morgan Arboretum Conservation Area, a McGill University owned forest/habitat conservation area at the west end of the island of Montréal; we installed our research-grade 14-inch Meade LX-200 Ritchey-Chrétien telescope and associated supporting equipment within our 10-foot Pro-Dome, with which we successfully hosted an observation for Transit of Venus, as well as an official first-light ceremony where we dedicated the telescope as the "Dr. David Levy Telescope," which attracted a lot of media attention throughout Montréal.

As planned, the observatory has become the centre of our outreach and public presentation programs. Alongside of the

Montréal Centre use of the observatory, McGill's Astro Club has come to our observatory and proposed further cooperation with us. More and more visitors of the arboretum are asking about the "white dome," which lead to an increasing number of participants and the amount of donations at our public events—there was even a young gentleman who proposed to his future wife in the dome!

We have also performed several out-reach presentations to the city council of Ste-Anne-de-Bellevue concerning light pollution and our plans to establish an Urban Star Park. We consolidated our online media portals, including our Web site, Facebook, Twitter, and Yahoo discussion group, in order to keep our members more connected and informed of our events & activities.

The Centre's members pursue outreach activities through the year. Divided fairly evenly between school/college viewing activities and public viewing nights/and or lectures. During 2012, 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); Transit of Venus observation at the Morgan Arboretum (about 350 attendees); Geminid Meteor Shower observation at the Morgan Arboretum (about 60 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 lecturer of the year for our "Townsend Memorial Lecture" was Stuart Clark, author of "Sky's Dark Labyrinth."

In addition, once monthly from the end of May until the end of October, we present a public Star Party Night at the Morgan Arboretum 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 2012, 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. We started Clubhouse activity on every Friday night throughout summer and autumn as a regular base for member sharing and connection. Along with our Christmas Party and the Fall BBQ (courtesy of member Chris Novak and his family), the Montréal Centre had another busy year.

Ben Chu Tang
Secretary

The Centre membership currently stands at 68 and the numbers have been stable in the mid and upper 60s for the past few years. This year we have participated in 71 events within our province, reaching approximately 4580 people and distributing 2450 Star Finders and 2000 Moon Gazers' Guides. Our members have been diligent in providing educational outreach opportunities for the public as well as RASC members. Such events as astronomy presentations and observing events for school groups, service clubs, Girl Guides, Cubs, seniors' groups, school classrooms, general public events, various public/private camping weekends, and star parties—these have all been reported to National.

We hold observing events for Earth Day in each of the four cities where we hold meetings. Also, we organize International Astronomy Day (IAD) events at malls and market places and observing at various venues (urban and rural) during International Astronomy Week and on IAD itself. We have partnered with Parks Canada for public events at our four annual astronomy camping weekends, including three that take place at the four Dark-Sky Preserves in our province; partnered in three events at our Urban Sky Park, partnered with a Rothesay school to participate in a large exhibit—Amazatorium—for school children with a focus on activities, sports, and careers; a non-profit Fredericton Science Centre for exhibit and presentations at various schools, focused on careers in science, as well as with Community Colleges and the College of Extended Learning to offer courses on astronomy. All have been popular and successful.

Our education committee will be reviewing books in order to recommend appropriate choices for astronomy reading for both children and adults and also will review "Discover the Universe," a Beyond IYA project.

Our LPA committee has continued in its mandate to support and encourage awareness of light pollution in both urban and rural areas. A happy piece of news was that NB Power will be replacing all streetlights with LED lighting within five years. There has been initial conversation with a Department of Transport representative regarding subdivision and highway lighting. Our LPA logo "Freddy the Frog" is now trademarked. Our LPA chair, Chris Weadick, is working to gather information on light pollution's effect on marsh aquatic life. RASC NB sent a letter to the N.B. government requesting responsible lighting at shale-gas development sites.

We have continued to put out our *Horizon* newsletter & to maintain our Web site. One of our councillors, Angela Davis, posts items of interest to our Twitter account and Facebook.

We have an 8-inch Dobsonian and a Coronado PST as lending telescopes, which are available to both members and aspiring members. We have a lending library of books and DVDs.

Our meetings continue to be held most months, with business meetings every second month and as needed. The meetings alternate among the four larger cities in the province. We do not hold meetings in July and August; this year for the first time, there were none in December. Our meetings consist of: 3-4 talks/presentations, a "Show and Tell, Buy and Sell," where members show the group new astronomy-related equipment and gadgets, as well as getting the opportunity to swap or sell some items. There is also a time for observing reports, what members have been viewing in the day and night skies, as well as time for astro-imagers to showcase their photos. Every meeting starts out with a "What's Up" talk given by our President Curt Nason.

The topics at our meetings this year have been:

- How to Do an Astrocryptic (Curt Nason)
- Scientist Biography—Dr. Jocelyn Bell Burnell (June MacDonald)
- Venus and Venus Transit (Emma MacPhee); Mars (Curt Nason)
- Scientist Biography—Dr. Lawrence Krauss (June MacDonald)
- Naming Comets, Asteroids and Supernovae (Curt Nason)
- Messier Quiz (Curt Nason)
- Making Solar Filters (Ted Dunphy)
- China's Space Program (Ted Dunphy)
- Searching the Internet for Astronomy (Chris Weadick)
- Constellation Quiz (Curt Nason)
- Transit of Venus 2012—Experience in Hawaii (Detlef Rudolf)
- Cosmic Lensing (Ted Dunphy)
- N.B Star Parties in Review (Mike Powell)
- Constellation talks (Curt Nason)
- Astronomy Quiz (Curt Nason)
- Curiosity-Initial Results from the Mars Science Lab—a presentation by Beverly Elliott, an associate with Dr. John Spragg
- Features on the Moon (monthly by Curt Nason)
- Debunking Doomsday (June MacDonald)
- RASC N.B. Astronomy in Review 2012 (Paul Gray)
- Annual Meeting talks: Edmonton GA Experience (Holly Ayles)
- Chemically Peculiar Stars—Dr. Victor Khalack of Université de Moncton
- Preparing the 2013 RASC Calendar (Paul Gray)
- Sketching at the Eyepiece (Ted Dunphy)

June McDonald
2nd Vice-President

NIAGARA CENTRE

The Niagara Centre had a busy year in 2012, filled with observing, public events, regular meetings, and get-togethers. Our membership declined slightly in 2012, going from the low 70s to mid-60s. Our lost members outnumbered several new members.

We had a better than average year for booking guest speakers to our monthly meetings, with a wide variety of talks from our members and guests. A new executive was elected in October to lead the club for the next two years.

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 Chippawa Creek Conservation Area in Wellandport, which also hosts the Centre's observatory. After a few years away, we returned to Stonechurch Vineyards, the site of some of our most popular

past starnights. The combination of wine, telescopes, and informative talks always works well.

The Transit of Venus was observed from St. Catharines, which was lucky to have perfect spring weather and the clearest skies in southern Ontario. A heavily-advertised public event at Michigan Beach attracted nearly 1000 people. A private event for about 25 members at Municipal Beach was also thoroughly enjoyed.

Club members travelled to star parties in Ontario and Pennsylvania. As usual, a large group of about 25 members attended Starfest in August. A few members travelled to Nevada and Australia for the year's solar eclipses.

Wind-turbine developments are springing up in the Niagara Region. We are lobbying the companies behind these projects to use appropriate night lighting on the turbines and the surrounding grounds.

LED lights are also becoming more common on streets. We are contacting city and regional government to express our concerns.

Guest speakers

February	Robert Godwin "Apollo Mission Moon Panoramas"
March	Steven Megannety, Niagara Luminaire Initiative "Niagara Falls Lighting" Colin Haig: "Astronomy in the Atacama Desert" Andy Blanchard: "Astrocasm" Glen Pidsadnick: "Solar Flares With the PST and Mallincam" Philip Downey: "Venus and Jupiter"
April	solar filter workshop
June	the Transit of Venus
September	Bob Lewis "Building the Bobservatory"
October	Biannual General Meeting - elections, Bob Lewis "The Annular Solar Eclipse of May 2012"
November	Dave Gallant: "The Thunder Bay General Assembly" and Ian Shelton: "Pseudoscience and Why the World Won't End in 2012"
December	Brian Pihack: "The World Isn't Going To End"

Philip Downey
Secretary

The Centre's membership spans the length of the Okanagan Valley in British Columbia's southern interior. With members as far south as the U.S. Border at Osoyoos extending north to the Shuswap, it enjoys additional support from members living elsewhere who are either ex-residents of the area, have an interest in astronomy or our Centre's purposes, and have chosen to affiliate with us. Our 2012 membership numbers 106.

Due to geographic size, the Centre has organized itself into three meeting groups, approximating the primary population centres in the valley; Penticton, Kelowna, & Vernon. Each hold monthly meetings (excepting July & August) as well as annually a designated joint meeting of the Centre. At any given monthly meeting, members attend from our different locales, with a concerted effort made by members up and down the valley to attend the three joint meetings. These combined meetings provide an excellent opportunity to better cross-pollinate with those from elsewhere within our Centre who we may not see on as regular a basis.

Our meeting's format is similar to that of other RASC Centres where we devote segments to members' observing sessions, discussions of current and upcoming astronomical events, and one, if not two, presentations on interesting topical subjects delivered by members or specially invited guests.

The Centre provides a wealth of informative communication resources aimed at keeping everyone advised. At the beginning of each month our President, Colleen O'Hare, issues her President's Report, as well the monthly celestial happenings report "What's Up," authored by Dave Gamble, is updated on our Web site. As a follow-up reminder, Dave issues shorter weekly versions provided electronically to keep us on our toes. *Focus*, the Centre's newsletter, publishes mid-month by editor Hugh Pett and contains more information on Centre activities, short stories, interesting items, and periodically updates member counts, recording their progress working toward the various observing certificates (Messier / FNGC / etc.). The Centre also utilizes the AstroOkanagan Google Discussion Group, an email broadcast system that distributes time-sensitive messages of astronomical importance or Centre activities.

Annually we recognize a member for their contribution to the Centre. Our honoree for 2012 Member of the Year is Richard Christie. For years, Richard has been involved in a plethora of club activities; as our National Representative, providing presentations at meetings, outreach activities, volunteer duties on Friday nights at the Okanagan Observatory, organizing college classrooms for our meetings, Chair of the Mt. Kobau Astronomical Society for the past number of years, and as a valuable liaison with the Okanagan Valley's professional astronomer's community.

During the year, the Centre was notified that our member, Colleen O'Hare (current President & Kelowna's Outreach Coordinator), had been selected by RASC's National Awards Committee as the inaugural recipient of the Qilak Award for Astronomy Outreach and Communication. Colleen works tirelessly on outreach, the promotion of our Centre and the Okanagan Observatory, and we collectively feel her devotion to all things astronomical makes her a very deserving recipient of the 2012 Qilak Award.

Outreach Activities

The Centre's Outreach Program is structured similarly to that of our three meeting groups, with a coordinator appointed to lead activities for each. The following illustrates some of the initiatives / accomplishments during 2012.

Penticton Outreach—under the coordination of Al Fishler, a good year was had in the South Okanagan bringing astronomy education and passion to the public.

In May, as part of the Meadowlark Nature Festival, we invited the public to the grounds of the Dominion Radio Astrophysical Observatory (DRAO) near Penticton to enjoy a presentation and night-sky watching. The presentation featured a "Tour of the Universe" by Colleen O'Hare and Guy Mackie. Once darkness fell, our 47 visitors were treated to naked-eye tours of the night sky, as well as views through binoculars and telescopes.

A few short days later, the public was again invited back to the grounds of DRAO, this time to view the partial solar eclipse. Solar Eclipse Shades were distributed to the approximate 120 visitors. Guests enjoyed the Sun through several properly filtered telescopes, but nearing eclipse time the sky clouded over. Nevertheless, the event, at least in the terms of education, was a success.

The June 5 Transit of Venus had a two-pronged approach; at Skaha Lake Park, Chris Purton utilized an interactive 3-D model to describe the evolution of the transit geometry. Wendell Shuster assisted, handed out Solar Eclipse Shades, and had his telescope at the ready, but clouds again stole the show. At Okanagan College—Penticton Campus, Ryan Ransom projected a live feed of the transit as seen from Mauna Kea. About 30 guests attended one or both locations despite the poor weather.

On August 12, we partnered with DRAO to host the Perseid Meteor Shower Event on their observatory grounds. Prior to nightfall, the public could attend presentations, or take part in tours of the facilities. Ryan Ransom gave an interactive presentation to a young audience titled "The Story of a Comet." After nightfall, more than 350 guests laid blankets out on the grass and took in a spectacular show.

Outreach for the year in Penticton wrapped up with the public being invited to celebrate the winter solstice at "Pen Henge" on Munson Mountain, a city park. Pen Henge is a stone array that tracks the position of the setting Sun. The winter solstice is a special event for Pen Henge visitors since it marks the turning point in the Sun's seasonal journey. Clouds spoiled the view at sunset, but members took the opportunity to tell stories about the historical use of similar season-tracking structures by cultures all over the world. Following the sunset, everyone was invited back to the Shatford Centre in Penticton for refreshments and a short presentation by Chris Purton on the celebration of the winter solstice. There were approximately 50 guests taking in one or both venues.

Vernon Outreach coordinated by Raffaele Scotto Lachianca, co-incidentally started and finished the year conducting telescope workshops in conjunction with the Okanagan Science Centre. Approximately 34 members of the public took advantage of these learning opportunities to obtain assistance with the workings of a Christmas present, dust off a somewhat forgotten (back of the closet) telescope, or simply to get a better feel for their instrument.

During the year, astronomical presentations and telescope viewing were provided to local Brownies and Elementary Schools.

Between May and October, the outreach program provided public telescope viewing at the Allan Brooks Nature Centre (ABNC) following a 15-evening event schedule. These events attracted many school groups as well as interested adults.

Kelowna Outreach led by coordinator Colleen O'Hare, handled a large number of events again this year. Total events numbered 115 with over 6200 guests being exposed to astronomy. As an example, there were 26 school events (presentations and/or night observing) hosting 1141 students, family and teachers; 9 clubs, and 191 guests; parks/sidewalk astronomy, 7 evenings hosting 248 guests. Additionally, 59 events we categorized as "other," such as

monthly presentations at the Cancer Rotary Lodge, a number of large community festival events, Senior's Fair, Cancer Relay for Life, NOVA Programs, Kelowna Spring & Fall Wine Festivals, Halloween Spooktacular—collectively accounting for 4016 guests.

The Centre's three Outreach Programs made great use of handout materials supplied by the RASC National Office (Star Finders, Moon Gazers' Guides and Eclipse Glasses).

Okanagan Observatory

The Centre's Observatory is located a short 40-minute drive southeast of Kelowna in the general direction of Big White Mountain Ski Resort. We offer a schedule of free public educational/viewing nights, as well as total availability to members for their personal use.

From a public perspective, we currently operate from spring until very late into the fall, until mountain snow conditions become too much of an obstacle to deal with. Future plans, being dependant on funding for snow removal, will allow operations year round.

Public nights are advertised and begin at dusk with an educational program, usually conducted by Colleen O'Hare and Guy Mackie, in our Sky Theatre. Guests can then tour the darkened night sky assisted by our Night Sky Guides along with plenty of opportunity to take much closer looks utilizing any number of club and member-owned telescopes available that evening. This year our primary club telescope, the Gamble 25" Newtonian reflector (Folded Light Path f/5 Alt/Az DOB mounted on a motorized equatorial platform) was joined by a new partner, the 5.1" Astrophysics Refractor (utilizing a 600E mount, drive & "push-to" capability). Together, these club assets performed yeoman's service treating the public to countless celestial delights. These now permanent stalwarts are always backed up by an additional half dozen member-owned telescopes onsite during any given Friday night.

By season's end, our schedule provided 15 clear-sky Friday nights for hosting the public and in the process attracted 431 visitors. Our guests are always appreciative, many make repeated visits during the season, often bringing out-of-town visitors with them.

Additionally, our Centre's members made good use of the facility, logging many personal nights of observing, sketching, and astrophotography. Due to some very late nights, a number have taken the opportunity to camp on the site.

Financial and equipment donations continue to assist with our ongoing development (site & astronomical resources). During 2012, we experienced an overall equity increase of nearly 25% made possible by very generous donations by members and private sponsors.

The Observatory continues as a work in progress. This past year saw Zoli Boda, Jim Tisdale, and Guy Mackie construct a permanent solid pier for the Astrophysics Refractor. Traffic and parking-lot signage was completed. Interior modifications were made to the Support Building by Hugh Pett and Guy Mackie, improving its functionality.

A relatively new twist at our Observatory is the development of radio astronomy being spearheaded by Hugh Pett. The Okanagan Valley is home to Canada's primary capacity for radio astronomy at DRAO, so to complement, this we are building a radio telescope that will be capable of demonstrating radio astronomy to schools and the public, and will be sufficiently capable to provide a resource for original scientific research. During 2012, the first radio reception experiments produced useful results using an SDR (Software Defined Radio) receiver. A simple RF unit plus a powerful microcomputer displays both radio power and spectrum information. The goal, while possibly four years into the future, is a fully-steerable, dual-antenna interferometer observing the 1420 MHz hydrogen of the Milky Way. In that light, along with Hugh's other

duties being editor of our monthly newsletter *Focus*, he now also publishes, albeit on a less frequent basis, a newsletter titled *Radius*, advising members about this exciting project.

This past May, the Observatory held its First Annual Fund Raising Dinner. Following guidance from dinner chair, Grant Rice, the hard-working committee members put together an excellent evening of astronomers, friends, interesting conversation, a silent auction, and oh yes, a fantastic supper. Our very special speaker for the evening was Dr. Ken Tapping, a friend and astronomer at the NRC Herzberg Institute of Astrophysics, who is based at the Dominion Radio Astrophysical Observatory near Penticton. Proceeds of the dinner and silent auction were used to assist with the annual operating maintenance for the observatory.

Members on the Move

Chasing astro events was a popular pastime for our Centre's members during the year. Below is an acknowledgement of those who travelled in search of the spectacular.

- May's Annular Solar Eclipse, Lund, Nevada (east central Nevada): Alan Whitman, Richard Christie, Jim Failes, & Dennis Krause
- Stateline, Nevada (west central Nevada): Jerry Thompson & Harry Dixon
- Susanville, California (northeastern California): Dave Walley
- Northern California: Sally Kilburg
- June's Transit of Venus
- Tabor, Alberta (southeastern Alberta): Alan Whitman, Richard Christie, Dennis Krause, Dave Walley, Serge Fjetland, & Ken Barron
- Yellowknife, NWT (northern Great Slave Lake): Sally Kilburg
- November's Total Solar Eclipse
- South Pacific Ocean (north of New Zealand): Alan Whitman, Dave Walley, Harry Dixon, & Dave Gamble

And Last But Not Least—members were able to stay at home and observe the August daytime Venus Occultation by the Moon. Successful results were reported from members up and down the valley.

From the perspective of our Centre, it was a very successful 2012 on so many fronts. Everyone is looking forward to what 2013 will bring.

Further information on our Centre can be found at www.ocrasc.ca (including newsletters, picture of the month, image gallery) and on the Okanagan Observatory Web site at www.okanaganobservatory.ca (operations, facilities, future plans, our donors)

Dennis Krause

Secretary

2012 and another exciting year has passed for our Centre. The Council has done a good job to keep the centre on a stable financial footing for the foreseeable future. Our volunteers continue to support the working of the centre and our astronomical outreach mandate with dedication and energy. Some have been with us for decades, while new faces continue to join the ranks every year. The vision of the RASC is to inspire curiosity in all people about the Universe, to share scientific knowledge, and to foster collaboration in astronomical pursuits. If you have ideas along these lines and want to help us bring them to fruition, the RASC executive has a place for you. If you are just interested in visiting and listening to our monthly lectures, or attending our star parties, you are very welcome to continue.

This year we continued our 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. Our youth membership has doubled this year—a good sign for the future. This year Mr. Art Fraser marks his 50th year as a member, Rick Wagner and Lou Cox both hit the 40-year mark, Derek MacLeod made it 30 years, and Stephen Nourse joined the 20-year club.

In support of our outreach mandate, we celebrated International Astronomy Day at the Museum again this year on April 28th. The indoor display was a hit with the visitors and we gave out hundreds of RASC eclipse goggles. We hosted approximately 350 visitors for the evening star party.

On June 5 more than a dozen RASC volunteers supported the Museum to observe a rare Transit of Venus. Club members did a lot of preparatory and outreach work ahead of the event handing out thousands of safety goggles at the event. Brian McCullough had an article published in the Ottawa citizen discussing the upcoming transit of Venus. Although the forecast looked bad, the clouds opened for the entire event, giving the 3000 visitors ideal viewing conditions and memories to last a lifetime. We were also able to broadcast images from the newly refurbished and mostly operational Hugh Pett Observatory with SMARTscope.

We had eight volunteers supporting the NRC Science Fun Fest on October 14 where 1500 visitors visited our booths. We had a meteorite display, three telescopes with mock views of planets, and a welcome/info desk giving away brochures. Many of our members also had articles and photos published in *SkyNews*, including 15-year-old Youth member, Jacob Von Chorus—an impressive achievement at any age. Mr. Von Chorus also won the Greenwich Royal Observatory's 2012 Young Astronomy Photographer of the Year award for an impressive image of the Pleiades.

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. This year Stephen McIntyre took on the role of Outreach Coordinator from Mike Moghadam, while also organizing several public star parties at the Carp Library and one in the east end. Sylvie Létourneau has continued to support school outreach activities through her position as a Museum educator, while Chris Teron organized outreach events at the Museum.

As of October 2012, Ottawa Centre RASC membership stood at 321, including 7 youth members (more than twice last year's total) and 33 lifetime members. This represents a loss of 22 members from last year, and is well down from our peak of over 400 members a few years ago. We also lost 41-year loyal member, George Duey, who

passed away in November of last year. 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 challenge over the coming years will be to provide a Centre that retains value for our loyal members while inspiring interest and excitement in youth.

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 typically approaching or exceeding 120. Paul Klauninger has done a bang-up job as our new Meeting Chair providing our members with an abundance of quality entertainment. The diversity 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, Tim Cole who has helped keep the lights on and the projector running in the back room; and Eric Kujala, our meeting videorecorder. A special thank you goes as well to Art and Anne Fraser, our congenial colleagues who have continued to contribute to our collective caloric contentment with cookies, coffee, and coke after our colloquia. Art continued this year in his long-held role as our membership secretary.

Our Centre Annual Dinner was held on November 16 and was attended by over 60 members and guests. Our speaker this year was Canadian astronomer, Dr. René Racine who spoke to us about extremely large telescopes. 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 Mr. Graham Webster. The award for Best Presentation at a Centre Meeting goes to Nicholas Zuger for his presentation entitled "My Astronomy Beginnings." The *AstroNotes* article of the year award was presented to Estelle Rother for her dedication and skill in capturing the monthly meeting minutes and presenting them to our members. Drew Hodge, as editor of *AstroNotes* has been joined by co-editor Janet Tulloch to resurrect our premier publication in an online version. *AstroNotes* is the means to communicate the news of the Centre to those members who are unable to attend our monthly meetings, and survives solely on the contributions of you the members. Please make an effort to contribute. If you are going to the trouble of putting together a talk, an *AstroNotes* summary would be very useful.

The Fred Lossing Observatory at the Mill of Kintail Conservation Area, a dark site near Almonte continues to be used by members for observing. New director Ron St. Martin has continued to develop the site, with work on the laneway being completed to allow non-SUVs access to the site. SMARTscope, the society's robotic Internet observatory at Shirley's Bay led by director Jim Maxwell was supposed to be a Millennium project for the club, and was built entirely by volunteers with funding from the Hugh Pett family, the Trillium Foundation, and several private donors. Perhaps because it was cutting-edge technology back at the turn of the millennium, it has encountered several technical roadblocks on the way to becoming the reliable tool for public outreach for which it was originally intended. Thanks to the installation of an electronic eyepiece donated by Focus Scientific of Ottawa, the Internet support services of the Canada Communications Research Centre of Ottawa, and the technical assistance of Doug George and the technical team organized by director Jim Maxwell, the observatory system was brought into operation in time to support the June 5 Transit of Venus event. Since then the focus has been on training volunteers in SMARTscope operation to ensure the availability of knowledgeable/experienced operators. Next year our efforts will

focus on training, the acquisition of an improved CCD camera and the ongoing testing of equipment to ensure reliable operation over the long term.

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

On our Web site, being in dire need of an update, Mr. Chuck O'Dale has graciously volunteered to provide his time and energy to support this task, with intermittent support from our past Webmaster Richard McDonald. We also maintain an active Ottawa Centre Facebook page to advertise Centre events.

Al Scott

Past President

PRINCE GEORGE CENTRE

The year's activities started off with the NOVA (New Observers to Visual Astronomy) course. This course, now in its 9th year, has been instrumental in getting people involved in astronomy.

The spring windup barbeque was well attended. Our booth set up at the Canada Day festivities attracted over 600 visitors. Two telescopes were set up for solar viewing. Centre member Keith Egger's Astrophotography presentation in September drew several interested people. His photographs were outstanding. Centre member Bob Nelson's Variable Star presentation in November drew a small group of interested people.

Now in its 3rd year, the Fort Saint James star party included solar viewing during the day. The weather cooperated, and the dark skies provided splendid views of deep-sky objects. The Venus transit was clouded out. Poor weather prevented any viewing of the solar eclipse. The Perseid meteor shower in August signalled the reopening of the observatory for public observing, after the summer maintenance break; 160 guests took in the meteor shower until the wee hours of the morning.

The Centre participated in the Northwood Wellness Day event and gave out information to over 100 Northwood employees. The Centre was also visible in the Pine Centre mall for the fall Active Living Market. Many people visited our booth. Prince George Centre continues to offer tours to Brownie/Girl Guide and Cubs/Scout groups, schools, and church groups. We recently began hosting birthday parties, which has proven to be quite popular.

Glen Harris

Secretary

Q CENTRE DE UÉBEC

Cette année, notre Président M. Steve Lévesque et un membre, M. Marc Leduc, ont soumis un projet de rénovation du télescope de l'observatoire Alphonse Tardif de St-Nérée. Conjointement avec M. Alphonse Tardif, lui-même, et le propriétaire de l'observatoire, le Collège de Lévis, le plan proposé a été accepté.

Avec les modifications apportées au télescope, il est maintenant possible de faire de l'astrophotographie guidée par ordinateur. Félicitations à tous les collaborateurs du projet.

M. Stéphane Dumas continue ses présentations dans les écoles. Cette année environ 300 étudiants du primaire et du secondaire ont profité de ses expériences. Nos soirées conférences et nos activités avec le public sont toujours aussi populaires. Félicitations à tous les bénévoles qui s'impliquent dans nos activités.

Pierre Desrosiers

Trésorier

REGINA CENTRE

With 75 Members Regina Centre continues to grow, showing an increase of 13 individuals over last year's annual report statistics. Although aided by population growth, the public will not transition to member status unless there is value. Twitter was also phased in by a new member, Ferhat Seglam, and has created excellent traction for public events. Recently it was noted that our membership numbers outside the City of Regina approaches 40%. Increased numbers creates challenges that we happily take on.

The Regina Centre continues to deepen its partnerships with the University of Regina, museums, libraries, Grasslands National Park, Regional Parks, MacKenzie Art Gallery and Saskatchewan Science Centre, as well as the Regina Symphony. Working with Saskatoon Centre on the Saskatchewan Summer Star Party also shows great growth with over 300 attendees in 2012. Vance Petriew was on hand showing his comet to the public and also arranged club viewing later in the autumn.

Our Kalium Observatory director Ron Haughey scheduled 23 evenings for public observing with 18 nights going ahead, showing 170 members of the public, schools, & Scouting organizations the wonders of the night sky.

Due to light pollution, the Davin Dark-Sky observing site has seen dwindling numbers as observers favour darker skies elsewhere or visiting dark-sky preserves for multiple day trips.

With great weather dominating Saskatchewan skies this year, we had over 10,000 public views through our telescopes. The reason for such outstanding outreach numbers was a result of large ongoing events, such as, member Mark Walker acting as Astronomer in Residence at Cypress Hills Observatory from May to mid-August. We supplied 2000 Starfinders and 2000 Moon Gazers' Guides for these outreach efforts.

Meetings & Major Events:

Meetings were held the first Friday of each month at the Saskatchewan Science Centre Theatre and feature a main presentation followed by a short break, Centre business, and a "What's Up."

Council meetings were held the following Sunday at Brewsters Pub which, coincidentally, has reduced ale pricing the same evening.

- January 6 DIY night featuring Ron Haughey and his ultra-light 16-inch truss dob, Shane Ludtke's Denver Observing Chair, and a variety of other items presented by members to 28 attendees.
- February 3 Vance Petriew spoke on modifying a 12-inch LX200 to 21 individuals.
- February 11 Annual Awards Dinner held at Brewsters pub with 18 people in attendance.
- March 2 Risa Horowitz and Gail Chin of the University of Regina presented on astrophotography equipment and techniques. Shane Ludtke spoke about Saskatchewan Meteorite "hits." 25 people attended.
- March 30 Meeting moved a week ahead to accommodate holiday. Grasslands National Park staff presented on their park's Dark-Sky Preserve. 20 individuals attended.
- April 28 Astronomy Day Chapters Display. No nighttime astronomy due to cloud, but some solar views were had in the day.
- May 4 Mark Bratton presented a talk titled "Northern Perspective on the Southern Skies." Following Mark's presentation, was a tour with artist John Noestheden, who has created works based on the amateur astronomy community. About 200 people were received at the MacKenzie Art Gallery

Grasslands National Park Star parties were held May 19th to 21, July 20 & 21, and August 4 & 5.

- June 2nd Randall Rosenfeld, RASC Archivist, gave an entertaining presentation on the past history of the Transits of Venus. 20 people attended this talk.
- June 5 Transit of Venus event. More than 600 people attended.
- June 7 Western Development Museum Learning Day , Solar viewing, 400 attendees.
- July 1 Canada Day Solar Observing
- August 16-19 Saskatchewan Summer Star Party (SSSP).
- September 7 Chris Beckett presented on his Kobau Star Party experience, as well as the TOV highlights and 2013 *Observer's Handbook*. 21 individuals attended.
- October 4 Elections. Slate not filled for a variety of positions so postponed to November after nominating committee appointed. 12 members attended.
- November 2 Shane Ludtke presented on astronomical Smart Phone and iPad applications to about 20 individuals. Elections were held for open positions, all were filled.
- November 28 Regina Symphony 400 years of the telescope celebration which included Tafelmusik, Science Centre Planetarium, and our telescope set-up of a Galileo replica and modern 16-inch truss-tube reflector. Members and family were offered discounts on tickets with over three dozen taking advantage of the offer, and many hundreds from the public asking questions and obtaining Starfinders and Moon Gazers' Guides.
- December 7 Martin Beech presented his talk "The History of Alpha Centauri" to 30 individuals.

We look forward to all the celestial sights that 2013 will bring.

Chris Beckett
President

St. John's Centre had a busy, active, but sometimes frustrating year with ten public meetings (September through June), our annual star party, Observe the Moon nights, and Astronomy Day.

Meeting topics were:

- Installation of new Observatory (with 61-cm DFM telescope) at Grenfell Campus of Memorial University of Newfoundland
- Christmas Social with Christmas Star presentation
- Space Weather and Earth's Radiation Belts (Dr. Danny Summers)
- Black Holes, Aspects (Bill Kavanagh)
- Binary Stars (Dr. John Lewis, Chris Stevenson)
- Building a home observatory (Don Carey)
- Portable Planetarium Show (Garry Dymond)
- Venus Transit
- Summer Observing
- Tour of the Houston Space Center (Garry Dymond)
- Presentation of RASC Service Award to Fred Smith

Annual General Meeting

Extensive planning for the Transit of Venus and a valiant travel effort by dedicated members was none the less frustrated by fog. While St. John's had one of the most pleasant summers in many years, nights were often cloudy and several planned observing sessions were cancelled, including a high-profile joint effort with Parks Canada for a camp-out night. There was however some success with several solar-observing sessions as well as very well attended "Observe the Moon" nights, made all the more memorable for the public by the RASC material provided to them. Samples of member photos continue to be added to our Web site. The Centre's annual star party was well attended and we continue to have a close relationship with park wardens at Butterpot Park for this event.

The Centre continues to plan for installation of an observatory in the near future. Discussions continue with Provincial Parks staff regarding location and support.

Efforts have begun in hopes to designate one of our National Parks as a Dark-Sky Preserve, with a member designated as a liaison with Parks Canada to help with the preparations.

Randy Dodge
Secretary

SARNIA CENTRE

Sarnia Centre meets monthly to discuss RASC business and astronomy.

Our club is small, with roughly 12 members on paper, but only 5-6 that appear at meetings. Last year was not the best for us, an experienced long-time member passed away, and our Web site manager moved out of town, so now without a Web site, we have limited publicity. With the small numbers we have, it has placed a damper on things.

Our public outreach has been limited this last year. With so few members available, we have not had critical mass to run anything.

Last fall we did get a number of new folks appear at meetings; hopefully we can keep them and get them to join RASC.

Clearest Skies!

Marty Cogswell
Treasurer

SASKATOON CENTRE

At the end of 2012, the Saskatoon Centre had 70 members.

We held monthly meetings except in July and August, mostly with local speakers. In November we met via Skype with Mike Simmons of Astronomers with Borders. In December we had a Potluck Supper with guest speaker Richard Hydromako, speaking on "Antimatter, antihydrogen, and the ALPHA experiment."

We had monthly club observing nights at the Sleaford observatory as weather permitted.

Some highlights of the year:

March 24	Messier Marathon night Centre event at Sleaford observatory
March 31	Earth Hour sidewalk astronomy at Circle Centre Mall, with the parking lot lights off for an hour
May 12	Tales of the Transit of Venus with Alan Dyer, public presentation, display and viewing at Bethlehem High School
May 12	Astronomy Day at Farmers Market, display and public solar viewing
May 20	Solar eclipse public viewing at Diefenbaker Park
June 5	Transit of Venus public viewing at Diefenbaker Park
August 16-19	Saskatchewan Summer Star Party at Cypress Hills (together with Regina Centre) highest attendance except for GA year
September 22	Open House at Sleaford Observatory

Members are active with public outreach at schools, parks, libraries, scouts and guides and other venues. One member in particular was very active with provincial parks and a Star gazer tourist training evening at Ogema, Saskatchewan.

Tenho Tuomi
Secretary

SUNSHINE COAST CENTRE

The Centre had a very busy year negotiating for land and designing an observatory to be built on property owned by Sechelt Airport. Final approval was granted in December 2012. Funds are on hand for the observatory and grant applications have been submitted to purchase a large telescope. Construction will commence approximately April 2013 and be completed by 2013 July 1.

The Centre celebrated both National Astronomy Days in 2012, attracting 500 visitors and distributing Star Finders and Moon Gazers' Guides.

Although the Transit of Venus was clouded out, we did set up for it and attracted many visitors. Our Star Party in August was also plagued by bad weather, but a crowd of 300 showed up.

Visits were made to Camp Byng and Camp Olave which are the Provincial Scout and Guide Camps.

The RASC National President, Mary Lou Whitehorne, paid us a visit and we had a very informative dinner and meeting.

In total, 15 events were staged by our Centre, and because of some poor weather, visitor numbers were down from last year.

2013 looks to be an exciting year for the Sunshine Coast Centre, with the opening of our observatory and new events such as the Pacific Sea Cavalcade.

Bill Clark
National Representative

THUNDER BAY CENTRE

It has been a year of accomplishments at the Thunder Bay Centre and also one of change and challenges. We have had many accomplishments in the form of project completions, outreach and membership retention. One of the changes is that we are now incorporated as a not-for-profit corporation, and this will provide us with exciting new possibilities. And our Centre has new challenges when we lost a valuable member in Ted Bronson as he moved to Manitoba to be closer to family. Fortunately, he has mentored us well and we will continue to move forward encouraging public interest in astronomy. The following is a brief synopsis of the 2012 year for the Thunder Bay Centre.

First of all, many thanks to:

Ted Bronson for donating new 15/70 Skymaster binoculars, Ed Kucible for donating Web site fee, Patricia Lundy for donating 114-mm Newtonian reflector with equatorial mount, Mike Bodnar for the use of his woodworking shop to build the Dobsonian mount for the telescope build project, and FRP Systems for donating the fibreglass Tube for the 10" Dobsonian Telescope Project.

The Centre met regularly each month except July and August. The presentation topics were:

- Curiosity Science Rover on Mars Part 1—Dave Gallant
- Mounting Configurations For Binoculars—Ted Bronson
- Naked Eye To Deep Sky—Ted Bronson (4 presentations)
- Telescopes and Light Spectrum Part 1—Bruce Miron
- Annual Eclipse—Ted Bronson

- Venus Transit—Ted Bronson
- How to Do Astronomy on the Computer—Ed Baumann
- Cosmic Distance Ladder—Andreas Buchholz
- The Galactic GPS—Rob Kushnerniuk
- The Cosmological Constant—Bruce Miron
- Deep-Sky Observing. How Good Is The Sky Tonight? —Doug Stuart
- Bob and Ted's trips to Arizona and Hawaii to view the Solar Eclipse and the Venus Transit.—Bob McLean

November meeting, instead of talks, we had an astronomical equipment show and tell.

Outreach

The Centre was very active in its outreach. Here is where we brought astronomy to the public:

- "Backyard Astronomy Course—Stargazing for Everyone," Confederation College—Ted Bronson
- Assisted a grade-six class with their astronomy study —Ted Bronson
- In the evening following classes, several members came out with telescopes to show the students the heavens
- Table at Fort William Historical Park (FWHP) Family Day Weekend—Headed by Dave Gallant and Bruce Miron. Several members assisted.
- FWHP Spring Roundup. One of our members, Bruce Miron witnessed an M3-class solar flare on sunspot 1496.
- Venus Transit Public Observing—was a huge hit; 450 solar glasses were given out and over 1000 people came by.
- Quetico Provincial Park August 11-12—Ted Bronson and Dave Gallant set up solar observing for campers on the first day which unfortunately was clouded out. Ted Bronson did a talk in the evening (50 people), then some observing and watching the Perseid Meteor Shower.
- Sleeping Giant Provincial Park. Dave Gallant and Glenn Stronks did talks on consecutive nights. It was well attended each night by about 50 campers each night. The first night offered the best viewing and where six members helped out. There were 4 sets of telescopes and one pair of binoculars; 100 people turned out to observe. Solar observing was also offered during the day on Saturday and Sunday, which was well attended and with plenty of help from the members.
- Public Observing Session at Hillcrest Park in March.
- Monthly astronomy column in the local paper by Ted Bronson.

Newsletters

There have been nine newsletters from January 2012 to December 2012

Accomplishments

Projects

FWHP Dave Thompson Astronomical Observatory. Extensive expertise and time was given by our members, in particular Jous DeSousa, Dave Gallant and Ted Bronson to see the 20" telescope observatory and classroom project to completion. The grand opening is planned to occur in the New Year.

10" Dobsonian build. The Centre removed the mirror from a donated Newtonian telescope and used it to build a Dobsonian telescope. A fibreglass tube was donated from locally operated FRP Systems and the wood working shop space was provided by Mike Bodnar. Work was finalized in December.

Incorporation of the Thunder Bay Centre as a Not-For-Profit Corporation. This will help limit the liability of the Centre's members and also make it easier for the Thunder Bay Centre to work with Fort William Historical Park.



Membership

Achieved 50 members. This is the highest per capita enrollment in the organization.

Observing Certificates

Congratulations to Michael McBride for completing the requirements for the RASC Messier Certificate.

Event Planning

2013 General Assembly. Chair: Dave Gallant. The 2013 GA in Thunder Bay will be following the format of the previous GA's. Speakers are all lined up, along with a night photography workshop. There will be tours of the Fort William Historical Park and the Dave Thompson Astronomical Observatory and also a tour of a nearby impact crater. The committee is now concentrating on the budget estimates, logistics and prizes.

Other

Our annual meeting occurred in October where we elected our new slate of executive. The president's position remained open until November when Brendan Roy accepted the position.

And finally, our last founding member of the Thunder Bay Centre relocated to Manitoba.

Ted Bronson, an original member and tireless worker for our Centre has moved to Stony Mountain, Manitoba, to be closer to family. In 1988, he helped bring the RASC to Thunder Bay. Ted was a HUGE part of our Centre. To give an example of how big a part he played, in 2012, he was Vice-President, he managed the library, membership, programs, and media. He was also deeply involved with our Centre's projects, such as the Centre's 10" Dobsonian Telescope project and planning for the 2013 General Assembly. For the past two years, he provided expertise to the Fort

William Historical Park as they were building the David Thompson Astronomical Observatory.

Ted is a selfless advocator of astronomy and took every opportunity to share his knowledge. He had a monthly astronomy column in the local paper for years, and he contributed regularly to our Centre's newsletter. He also devoted a lot of time doing talks and viewing sessions for the public, schools, community groups, many of the surrounding provincial parks and various other institutions.

An active observer, Ted completed many of the RASC's observing programs and has travelled around the world to experience many solar eclipses and both Venus transits. Ted was also responsible for developing and administering the visual observing program of the Centre.

Ted was an integral part of the Thunder Bay Centre and he is sorely missed. We dearly thank him for all his hard work and devotion he gave to the Centre, and wish him and his wife Mary all the best in their new life.

Andreas Buchholz
Secretary

TORONTO CENTRE

The Toronto Centre participates in astronomy events at several locations around the city. During the reporting period from 2011 October 1 to 2012 September 30, we participated in several Ontario Science Centre star party events:

- Halloween Star Party, October 29
- Earth Hour March 31,
- Music of the Spheres event with Roberta Bondar and Elmer Iseler Singers April 21
- Transit of Venus June 5,
- One World, One Sky August 12

Our regular series of lecture nights at the Science Centre were co-ordinated by our 2nd Vice-President, Paul Delaney from York University:

October 26	Dr. Kat Denning, York U Dept. of Anthropology: Lost and Found in Space
November 23	Prof. Michel Fich, McMaster U. Dept of Physics and Astronomy: Observing the Universe from the High Atacama Desert
January 25	Randy Attwood, SpaceRef Canada, Whither the Space Program?
February 22	Dr. Suresh Sivanandam, Dunlap Institute: The Infrared Universe
March 21	Dr. Nick Law, Dunlap Institute: Extremely Cool Astronomy: Finding Exoplanets in the High Canadian Arctic
April 18	Prof. Patrick Hall, York U: Gas Falling Into Black Holes, A Surprising Discovery
May 23	Prof. Richard Jarrell, York U: Lazarus Effect in Astronomy? The Near-Death of Canadian Meteor Science
September 5	Prof. Michael de Robertis, York U: Why M Dwarfs are So Important

Eleven Recreational Astronomy Nights were scheduled by Paul Markov at the Science Centre, one of which included a "swap-meet." We also provide a monthly solar viewing session at the Science Centre, organized by Shawn Lee on a clear-skies-only basis on the first Saturday of the month.

This year we hosted the ever-popular NOVA Program, "New Observers to Visual Astronomy" at the Science Centre. This series of eight lectures was held on autumn Wednesday evenings by a variety of instructors. This is a free event, which is open to RASC members, Ontario Science Centre members and the public.

On International Astronomy Day on April 28, members attended a special Transit of Venus symposium at the University of Toronto, organized by the new Dunlap Institute for Astronomy & Astrophysics. Dr. John Percy acted as MC, introducing papers from Toronto Centre President Ralph Chou on eye safety and a keynote lecture by Jay Pasachoff, an Honorary Member of the RASC. Both Dr. Pasachoff and Dr. Chou are recognized experts on solar eclipses and like events such as transits. Thanks to the Dunlap Institute and the national RASC for providing us with 1500 Solar Viewing Glasses just for the June 5 event. The Science Centre provided 400 more.

The U of T and the Dunlap Institute hosted many other astronomy events during the year, which featured first-class experts in the field of astronomy. We were also invited to participate in two U of T programs of the Royal Canadian Institute for the Advancement of Science: our traditional joint lecture on February 5 given by Dr. Ray Carlberg, describing the "Startling Discovery of the Accelerating Universe," and the annual Sandford Fleming Medal meeting. On May 12, our volunteers set up the Toronto Centre booth at Science Rendezvous, a St. George Street festival that involved 14 departments from the faculty of arts and science. The Toronto Centre annually sponsors the Toronto Science and Technology Fair held at the U of T Scarborough Campus. This year, Leslie Harvey awarded Nicholas Blake and Felipe Gonzalez, of Marc Garneau Collegiate Institute, the astronomy prize for their project entitled "Planetary Impact."

The Royal Ontario Museum hosted a "Space Weekend" on May 5 and 6, which included a RASC booth from National Office, organized by Executive Director Deborah Thompson. The event was timed to coincide with the "Supermoon," which infected the news media with an astro-virus.

The annual public astronomy education season at the David Dunlap Observatory, operated by the Toronto Centre, also began in the springtime on International Astronomy Day April 28. The 1.88-metre instrument there is the largest optical telescope in Canada. 2012 was the DDO's 78th year, and its 4th under RASC management. More than 3500 enthusiastic visitors attended events, some for Scouts, Guides, and school groups. That brings us to over 14,000 visitors since the Toronto Centre took over operations of the observatory.

In May 2012, the Toronto Centre obtained a long-term lease from Corsica Development Inc. and the lease now includes the Administration Building. The use of this building will allow us to create a Space Science Campus.

Member activities such as First Light, "members only" observing nights, and the Astrophotography Workshop were held again at the DDO.

Our summer series of "Star Talks" began on July 7 and ran over 11 Saturday evenings, with two presentations each evening; 95% of the talks were sold out in advance, often by several weeks. The amazing guest speakers who generously gave their time in support of our programs included: Randy Attwood, Dr. Roberto Abraham, Dr. Rupinder Brar, Paul Delaney, Michael Lennick, Dr. John Percy, Kerry-Ann Lecky Hepburn, Dr. Michael De Robertis, Dr. Michael Reid, Dr. Doug Welch, and Dr. Anne-Marie Weijmans. It was our pleasure to first announce to Randy Attwood the naming of asteroid 260235 as "Attwood" in his honour.

This was our third year of providing opportunities for local high school students to volunteer at the observatory and assist in our summer programs. Several of the students have now graduated and are attending science programs at University.

The observatory played host to three TV production companies this year. In March, the series "XIII" shot several indoor and outdoor sequences. The series "Warehouse 13" returned to the site after their shoot last year. The TV show "Lost Girl" shot many scenes on site in August.

This year we had four wedding proposals take place at the DDO.

In support of these activities, members provided nearly 2000 volunteer hours in delivering our educational programs, in addition to the countless hours provided in maintenance and support of the site.

At our meeting on April 18, Ralph Chou presented the Gold Medal of the RASC to the 2011 recipient from the U of T, Ms. Eve Jihyun Lee. The Toronto Centre awards a Gold Medal annually to the student graduating with a B.Sc. in astronomy or astrophysics with the highest first-class standing from each of U of T and York University. The Toronto Centre has provided the Gold Medal at the U of T since 1986. Prior to this date, the Gold Medal was sponsored by the National RASC for over 60 years.

The Toronto Centre also has a set of awards for our members who have accomplished great achievements. The Ray Thompson Award recognizes the top astronomical image(s) produced by a member, and was presented to Lynn Hilborn.

The Ostrander-Ramsay Award is presented to the member who has written or supported the publication of a significant piece of work or body of work, this year presented to Ian Steer. Ian is the co-author with Dr. Barry Madore of "Galaxies: Brightest and Nearest" in the 2012 *Observer's Handbook*. Ian contributed "New Facts from the First Galaxy Distance Estimates" to JRASC in February 2011, and turned the item into a highlight of last year's Recreational Astronomy Nights.

The Bert Topham Award goes to a member who has made significant contributions to the observing activities of the Centre or carried out observing programs of a significant and well-defined nature, this year presented to Tom Luton. Tom previously won this award in 2007 after completing his Finest NGC Observing Certificate and his Messier Certificate. Tom has recently completed the more challenging Herschel 400 program.

The Andrew Elvins Award is presented to the member who best demonstrates their commitment to advancing knowledge in astronomy to the general public, this year presented to Karen Mortfield.

As an active member, Karen has dedicated many hours over the past four years toward the promotion of the Toronto Centre at the David Dunlap Observatory. She has served as the Centre's Public Affairs Co-ordinator, particularly working as our liaison with the Town of Richmond Hill's Mayor and Councillors.

The H.A. Winearls Award is presented annually to a member who has contributed significantly to the operation or smooth running of a Toronto Centre activity. This award is also known as the President's Award, and it was presented to Blake Nancarrow. Blake is best known to members as our Webmaster. Like CityTV, he seems to be everywhere, offering support and encouragement to everyone who volunteers for the Toronto Centre.

The above five awards were presented at the Annual Open House and Picnic at the Carr Astronomical Observatory on May 26, the traditional beginning of the season at CAO. 2012 was the 15th year of Toronto Centre activities at the 40-plus acre property on top of Blue Mountain, although the anniversary was overshadowed by the passing of our benefactor, Clifton Carr, on 2011 October 27. He is greatly missed.

This year we completed the My Own Dome Lot (MODL) facilities at CAO. Several work-party weekends were held to effect these

improvements and regular site maintenance. These events involved 12 to 20 volunteers each and continue the tradition of safe, efficient site improvement with minimal expense to the Centre.

The committee continues to make good progress towards the goal of making the CAO financially self-sustaining. MODL leases net \$3000 annually to the Toronto Centre. The CAO farmed area is also now being worked by another firm that pays the Centre an estimated \$1400 annually in land lease. Efforts continue towards booking of youth groups and corporate events where program and rental fees net needed funds to operate and maintain the site. The CAO continues its successful relationships with Western University and the U of T.

The observational activities committee is chaired by Stu McNair. There are two monthly observing events planned by this committee other than Science Centre solar observing:

- City Sky Star Parties, held at Bayview Village Park and High Park, and
- Dark-Sky Star Parties, held at Long Sault Conservation Area

Public Education Committee chair Leslie Harvey's activities included not only the usual Guiding, Scouting, school presentations, and special interest groups, but also five star parties, First Light and the NOVA Program. We held 15 separate star parties. We also presented to four special-interest groups with a beginners' observing theme. Committee members also held presentations for 3 schools, 5 Sparks, 15 Brownies, 13 Guides, 2 Pathfinder/Rangers, 2 Beavers, 2 Wolf Cubs, 1 Scout group, and 7 library groups. In the end, the Public Education Committee held 70 presentations and star parties for 2819 children and adults and made \$2,353.

Our public presence on the Internet was extended with the launch of our Facebook page. A new Web site design is in-work, being developed and tested, as we prepare this report. Web-site content is regularly produced by a fantastic team of contributors. The committee applied for and was awarded a grant with a value of \$10,000 a month worth of advertising on Google.

Centre members accomplished many observing achievements this year. On April 28, Denis Grey, Eric Briggs, Tom Luton, Guy Nason, and Patrick McDonald participated in a very successful asteroid occultation, by the minor planet (1030) Vitja, of a dim star in Virgo.

Ralph Chou led an expedition to observe the Transit of Venus at high altitude on Mauna Kea, during which members were treated to a guided tour of the 8.3-metre Gemini North Telescope.

The 15th Annual Algonquin Adventure was enjoyed by 99 attendees, even though the "weather gods" were unkind. This little star party began in 1998 with six friends meeting in Algonquin Park for a weekend of camping and stargazing.

Several members are also reporting estimates to the American Association of Variable Star Observers, such as John Bohdanowicz, Geoff Gaherty, Eric Briggs, Denis Grey, Patrick McDonald, Frank Dempsey, and Andy Beaton.

Eric Briggs had another successful year in hunting for supernovae, scoring the Type-II object 2012ak on February 21, the eve of the 25th anniversary of Supernova 1987A. He also co-discovered the Type 1a supernova 2012dd on Venus Transit day, June 5. These discoveries are also the work of Toronto Centre Past President Jack Newton, and others as part of the Tim Puckett supernova search team.

Brenda Shaw volunteered online as part of the Zooniverse "Ice Hunters" project, searching for faint objects in the Kuiper Belt close to the path of the *New Horizons* Pluto probe, and shared credit (with many others) for one of the objects found.

Lisa McDonald was presented with her completed RASC Explore the Universe observing certificate at our meeting of November 9,

and Tom Luton was presented with his completed Herschel 400 observing certificate on January 25.

Jim Chung and Geoff Gaherty continue to contribute monthly columns to the *Journal* of the RASC, and several other Toronto Centre members have been published there: William Dodd, Joel Parkes, Denis Grey, Lynn Hilborn, Ian Steer, Stef Cancelli, Kerry-Ann Lecky Hepburn, Stuart Heggie, Tom Luton, Paul Mortfield, Serge ThÈberge, and Katrina Ince-Lum.

We thank the new advertisers that have provided financial support for the Toronto Centre *SCOPE* newsletter this year: Khan Scope Centre, KWTelescope, Wayne Parker of SkyShed Pod Max, and Babak Sedehi of Canadian Telescopes.

SkyNews Magazine has included astrophotos taken by Lynn Hilborn, Jim Chung, and Bill Longo.

The Observer's Calendar has included astrophotos taken by Lynn Hilborn, Stef Cancelli, Paul Mortfield, and Stuart Heggie.

The *Observer's Handbook* once again features contributions by Paul Markov, Randy Attwood and Ian Steer, with the front cover provided by Dan Falk from his 2010 July 12 eclipse expedition to Easter Island.

Sky and Telescope magazine has included astrophotos taken by Lynn Hilborn.

There are 498 regular members of the Toronto Centre, 78 life members, 18 youth members, 179 associate members, 26 student associates, and 6 affiliate members for a total of 805, where our total at this time last year was 778.

We lost three members of the Toronto Centre during the reporting period this year—E. Clifton Carr, Tony Sosnkowski, and Wolf Graf.

Eric Briggs
Secretary



2012 was yet another astounding year for the RASC Vancouver Centre.

We partnered with other like-minded organizations within our region, including Metro Vancouver Parks, SFU, UBC, BCIT, the MacMillan Space Centre and two local vendors, Vancouver Telescope and Canadian Telescope to support and promote active learning about astronomy in our community.

We left our longtime home at the Space Centre and successfully informed our membership and invited the public to 12 regular meetings at different locations throughout the year. We sold surplus books, put the rest in storage, and located our loaner telescopes in a storage facility, while still making scopes available to members.

We co-hosted Astronomy Day and many other special events through the year. We re-vitalized our local observing program and this year we did not break our regular meeting schedule for the summer; instead we made an effort to present content to inspire new observers and new members.

Other key initiatives we supported include:

- Supported the fund raising initiative for a public outreach observatory facility at SFU with committing matching funding of an additional \$1000 to bring the total matching up to \$3650 in the name of Martha Ellen Pierce to member

donations towards the observatory project. Between members and our Centre fund matching, we will have contributed over \$7000 toward the observatory;

- Funded \$500 in support of summer outreach program presented to small B.C. communities by Bill Burnyeat;
- Awarded the third Pierce Award, for winners of a B.C. 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;
- Continued maintenance and development of the AOMO (Vancouver Centre's observatory);
- Continued partnership with Metro Vancouver Parks, cooperated with them on several events including Astronomy Day in April;
- Refreshed the *NOVA* Newsletter with several colour pages this year, thanks to sponsorship by Canadian Telescopes;
- Re-vitalized our regular local observing program;
- Initiated regular observing reports;
- Maintained and improved our Web site, including implementing a new way to browse the loaner scopes on the Web and reserve a telescope for members;
- Maintained and grew our Vancouver Astronomy Meetup group to over 1000 members
- Improved our relationship with RASC National;
- Initiated and improved our Twitter and Facebook presence;
- 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):
- Howard Trottier on Global TV, on Mapping the Moon, January 12;
- Metro Vancouver Parks, Pacific Spirit Park Night quest, March 24;
- Scouting Skills March 30, Langley Camp McLean;
- Presentation to Sparks in Coquitlam, April 26;
- Astronomy Day April 28, Space Centre;
- Astronomy events at SFU Open house, May 26;
- Venus Transit, SFU and The Space Centre, June 5;
- Maple Ridge Library, July 21;
- Observing Boundary Bay, July 28;
- Metro Parks all-night Perseid Meteor watch at Aldergrove Lake Park, August 11;
- Metro Parks Stary nights at Deas Island, August 18;
- Mount Kobau Star Party, August;
- Merritt Star Quest, September;
- Observing Boundary Bay, August 25;
- Night at the AOMO, August 31;
- Observing Boundary Bay, September 29;
- Paul Sykes Lecture, Dan Durda, October 22; (Several other observing events were planned but were cancelled due to poor weather)
- Regular lending of telescopes and books to members;

Council met 12 times including one dedicated planning meeting in November. Seven motions were passed in 2012.

Other notables

- January 12 Vancouver Centre monthly
Prof. Ray Jayawardhana, Canada Research Chair in Observational Astrophysics, University of Toronto: Finding meteorites in Antarctica, UBC Hennings Physics Building, Room 201.
- February 9 Vancouver Centre monthly
Dr. Ed Krupp, Griffith Observatory Director: Time's

- Up: 2012 and the Maya Calendar, at the Space Centre.
- March 8 Vancouver Centre monthly
- March 24 Dr. Catherine Johnson, UBC Earth and Ocean Sciences: New Views of Mercury from *MESSENGER*, UBC Hennings.
Night Quest, Pacific Spirit Regional Park Earth Hour
- April 12 Vancouver Centre monthly
- April 28 Larry Reeves, Founder and President of Geocentrix Technologies Ltd., Introduction to the Canadian Satellite Design Challenge. At BCIT.
Astronomy Day
- May 10 Vancouver Centre monthly
Ludovic Warebeke, UBC astronomy, title: New maps of dark matter.
- June 14 Vancouver Centre monthly
Venus Transit
Members' night @ SFU: Ian McLennan and Ed Hanlon, Tales of Two RASCals who caught the annular eclipse and the Transit of Venus
- July 12 Vancouver Centre monthly
BCIT, lecture by Bill Burnyeat, The Summer Stargaze
- August 9 Vancouver Centre monthly
BCIT: Show and Telescope Alan, Diedre, Leigh, Mark, Scott, and member Terry McComas.
Mt. Kobau late July-early August
Deas Island, Metro Parks
Urban Star Quest, mid-August
- September 13 Vancouver Centre monthly
Harvey Richer, UBC, Exploring Ancient Star Clusters with the *Hubble Space Telescope*, UBC Hennings 201
Merritt Star Quest September 8-15.
ILOA Galaxy Forum
- October 11 Vancouver Centre monthly
- October 22 Paul Sykes Lecture
Location TBD: Chris Lewicki, President & Chief Engineer, Planetary Resources, Bellevue, Washington, Planetary Resources: Space Rocks into Space Resources
Dan Durda, Near-Earth Asteroids: Protecting Our Planet From Future Impacts
2012 Council volunteers
Nominations for Council
- November 16 Vancouver Centre monthly Special Date
Special joint RASC/Vancouver Centre public lecture by Dr. Sara Seager, Professor of Planetary Science and Physics at MIT
Nominations for Council
- December 13 AGM, Douglas College, New Westminster Campus, Room 2201 North Building. Short presentation by Ian McLennan on his view of the December 10 total solar eclipse.

Mark Eburne
President

From Astronomy Day to the Transit of Venus to the new works of art created by our talented group of astrophotographers—2012 was a banner year. Speaking of artistic photos, my personal favourite of this year's crop is Charles Banville's Heart and Soul Nebulae which graced the cover of our October *Skynews*. Exquisitely rendered in vivid red tones, the image of this massive pair of star factories should, in my mind, be our group's emblem. For all of the spectacularly successful events that we staged this year, the theme for me that emerged above all others was how that the activity of public outreach day in and day out is unquestionably our glowing red "Heart and Soul." Our spirit of volunteerism has truly become an involuntary impulse. It's an impulse ingrained I suppose either by the pure joy of sharing the wonders of our Universe with others or perhaps more likely from relentless conditioning by others. Nonetheless, it is buried deep in our collective DNA.

In surveying the events of the past year, two small stories from *Skynews* particularly caught my eye that speak to this idea of "Heart and Soul." One is David Lee's incredibly amusing journal of his trip to Cedar City, Utah, to observe the May solar eclipse. In his journal, he recounts the challenges of last-minute travel, poor suitcase packing, and his encounters with other eclipse hunters along the way. A passage in his report where he describes arriving in Cedar City is absolutely marvelous and goes like this: "Public outreach being second nature to me now, I instinctively set up my telescope with a solar filter and spent the afternoon showing the Sun to the local community." Talk about a Galileo moment for the ages! And then there is Jim Hesser's story from late last year where at a conference in China he encountered a 25-year-old Sri Lankan astronomy writer, who acknowledged that when he was a teenager 10 years ago, it was a Canadian who had then corresponded with him on how to set up an astronomical library. When Jim queried him on if it could perhaps have been Sid Sidhu from Victoria Centre, the young man loudly exclaimed "Yes, indeed!" that was the name of the individual who had helped him.

Let's get down to a quick overview of our activities this year for the record and see further how the "Heart and Soul" of our membership works. But first, a big "thank you" to Lauri Roche for two years of tireless service as our president. Wherever you are Lauri, I hope that you are catching up on some well-deserved rest from the frenzied pace of the past two years.

Public Outreach Activities

Numbers don't lie. It was another remarkable public outreach year. Our members were out for 87 events this year at various presentations, public viewing sessions, and community events. In total, our volunteers contributed more than 1100 hours of their time. And (get your pencils ready) - 10,247 Galileo Moments were logged this past year by the Human Hand Clicker.

Astronomy Day provided our first big harvest of clicks for the year. Almost 700 people showed up at University of Victoria on a grey April day to experience a variety of hands-on exhibits and presentations. The afternoon and evening activities were a model of cooperation with the participation of UVic, the Herzberg Institute of Astrophysics (HIA), CU, Pearson College, and students from Science Venture joining our volunteer group. Our evening was highlighted with an auditorium-packed lecture by Bob McDonald, who again proved why he is one of the best science journalists anywhere.

And then came the Transit of Venus that made Astronomy Day look like a warm-up act. It had the folks at Environment Canada wondering why they ever abandoned animal sacrifice as part of

their forecasting tools. The Transit of Venus event proved to be one of the most successful (if not the most successful) outreach efforts ever in our history. It surpassed all previous benchmarks for attendance. Our volunteers were stationed at various locations around Victoria including the Royal B.C. Museum, Mount Tolmie, Cattle Point, UVic, Metchosin, and the Dominion Astrophysical Observatory (DAO) to see more than 2000 members of the public delight in one of the most anticipated sky spectacles ever.

There have been many other notable public outreach activities this past year including our regular school program, provincial parks presentations, the Saanich Fair, Hobby Show, Earth Walk, Strawberry Festival, Buccaneer Days, and events for the City of Victoria Library system. We also purchased a new solar telescope for portable use in schools this year, using proceeds received from our telescope raffle and the sale of surplus telescopes. Our individual members contributed generously in support of the Victoria Symphony Orchestra as part of the Band of Heroes fundraising initiative recognized during this summer's Symphony Splash. But, there is one event that happened this fall deserving special mention and goes straight to the "Heart and Soul" of our group.

Over the past year, Sherry Buttner and the librarian at the William Head Correctional Institute worked diligently through the many administrative approvals needed in order to hold an astronomy outreach session with the residents of William Head. And finally, a few months ago, permission was granted for a group including Sherry and three of our members to hold a presentation and observing session within the grounds of the institution. It proved to be an extremely rewarding session for all involved, especially for a group of very engaged and highly appreciative residents whose spirits soared high into the night sky with the visit.

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 had a remarkable slate of lecturers over the past 12 months, again coordinated by Nelson Walker.

We will be hard pressed to forget many of the memorable moments from our lecture series. One could cite Jim Hesser's fine tribute to his mentor the late Victor Blancoña seminal figure in the practice of modern international astronomy. Others may remember Sarah Sadavoy's infectious enthusiasm as she shared with us her presentation on Milky Way star formation. Or maybe it was Eric Steinbring's highly entertaining "video travelogue" of his chilly adventures to the far reaches of northern Canada in search of future ground-based telescope locations.

For those disposed to more hospitable climates, our Victoria Centre Council meetings are held the first Wednesday of alternate months except for July and August. All of our 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 shop.

The Active Observers Group meets at the Victoria Centre Observatory (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 on the extremely rare occasion having to cancel these sessions. Most importantly, our MIC's primary task is actively observing and reporting on the status of the resident cougar and bear population on the hill.

Victoria Centre Observatory (VCO)

The VCO continues to provide our members with an outstanding facility for observing and imaging sessions. Kudos to our Technical Committee, especially Matt Watson and Dan Posey, for their ingenuity and hard work up on the hill. This year, the tracking mount

on the 14" telescope was fully overhauled to improve long-exposure photography and remote operation capability. And we passed another major technical milestone this year with the successful overhaul of our new VCO bathroom key procedures.

Observing Activities

It was a "best of times" and "worst of times" kind of year for observing activities. A dreadful winter and spring threatened to stretch into the summer until it was banished for two glorious months beginning at the end of July. That is, except for a freak interlude of crappy weather that, of course, coincided with our Star Party weekend.

Our fourth annual Messier Marathon was held at the end of March under variable skies with ten observer participants. Greg Higgs logged approximately 51 objects and, now that they are official, one boson.

Our annual Star Party was held the weekend of August 17 once again at the Metchosin Cricket Field. We had 90 attendees the first evening with decent observing. Nelson Walker and David Lee made well-received presentations on observing strategies and spectroscopy during the Saturday program. And we also learned how the covered outdoor stage at Metchosin makes for great intimate lecture sessions when all else quickly goes to hell.

Other Activities

Skynews, our monthly newsletter, remains an essential source of information for both our membership and this writer's annual report. Over the past few years Malcolm Scrimger has given his "heart and soul" in keeping this publication current and fresh with member-contributed articles, photography, and current astronomy news from around the world. Thank-you Malcolm for a job well done. There are some big shoes to fill here.

Details on all of our club's activities can be found on our Web site, <http://victoria.rasc.ca>, seamlessly maintained and updated by council member Joe Carr. That Joe has typically so little to report at our meetings is a testament to the expert care that oversees our Web site.

Our Light-Pollution Abatement Committee made continued progress this past year in their efforts to promote light-pollution awareness. Much of our effort was focused on influencing the lighting design of the new UVic CARSA sports facility/parkade project. At the recent municipal hearing approving the project, we were pleased to hear that the university has promised to incorporate the Light-Pollution Abatement strategies advocated by our group. Our other major initiative this year has been our mission to designate Cattle Point as an Urban Star Park. Last month, we received unanimous approval by Oak Bay City Council for this concept. We are hopeful in the next few weeks that the Municipality's Parks and Recreation department will clear the way for our formal application to RASC's national LPA Committee.

Lastly, but of no small importance, the RASC General Assembly was held this past July in Edmonton. It was an especially memorable event in that our own Chris Gainor was appointed to National Council. And in other assembly news, our proposal to host the 2014 GA in Victoria was approved. It's an event in which we are going to celebrate the 100-year anniversary of our existence here in Victoria, as well as make a little history of our own. I'm positive that, once again, we'll share with the rest of the country the "heart and soul" of a group with an uncanny ability to reach out to others in the name of this beautiful muse called astronomy.

Mark Bohlman
Secretary

The Windsor Centre is Canada's most southerly member of the RASC located at the extreme southwestern corner of Ontario. Regular monthly meetings are held at the City of Windsor Ojibway Nature Centre. This facility is a convenient meeting place easily accessible with sufficient parking and a relatively dark sky, considering it is inside the city proper. The Nature Centre gives us a good venue and tie-in for our public education mandate. The 2012 year saw 90 active members participate in 9 monthly meetings and various public and internal events.

The Windsor Centre also supports our own observatory in a dark-sky environment out in the east end of Essex County. The Hallam Observatory, named after one of our Centre founders, includes a domed telescope section containing a pier mounted 14" Celestron Schmidt-Cassegrain instrument and attached member-donated 111-mm refractor, all driven by computer control from the attached warm room facility, which is also used as a small meeting room for presentations to guests when skies are not cooperative. The observatory hosts monthly open-house observing sessions, special visitor group viewings, and support for our active astrophotographer members. On the grounds outside the observatory building is a deck used for binocular viewing, open-air lectures and pads for members' portable telescopes. Members have use of the prime instruments in the observatory through a paid annual subscription, after an on-site training program covering equipment usage and site security. We are fortunate having a small group of dedicated members who maintain and repair the facility when needed. Even though our observatory site is located in one of the darkest areas of our county, we are starting to face light-pollution encroachments and are continually challenged to keep these down; as an example, a recent neighbour installed a spotlight piercing our dark sky, and our trying to work out on-site solutions to the problem after the neighbour refused to cooperate.

Windsor Centre members are kept informed via paper and electronic means, including our active monthly newsletter, the Aurora, and through our Web site. The Web site includes links to contact Executive and Council members, monthly LPA reports, an archive of newsletters, and a connection to our active astrophotography group and their image display. Just activated this year is a new Facebook page for members to join and keep in touch about Centre events.

Monthly members' meetings this year have had presenters from both outside and inside the Centre. We are fortunate to have connections with presenters from both sides of the US/Canadian border, such as Dr. Patricia Hanlan of the University of Michigan speaking on Elliptical Galaxies and X-Rays, Dale Partin of the Warren Astronomical Society in Michigan on the History of Cosmic Ray Astronomy, Centre members Dr. Pierre Boulos on Famous Astronomers In History, Steve Pellarin on the *Herschel Space Telescope* and on Weird Variable Stars, and Dr. William Baylis, our President Emeritus of the University of Windsor, on The Mysterious Origin of UHE Cosmic Rays. Other presentations included a FIRST Robotics Innovation Program for Students demonstration as a tie-in to the recent Mars robotic lander, updates on our new Centre Facebook page, a history of the Hallam Observatory, a slide show of recent members' astrophoto work, and finally a presentation by Rick Saunders, President of the London Centre, on the History of the London Centre Fingal Observatory.

Each of our monthly meetings includes a report from our Directors of Observing team. The three members take turns sharing

the workload of bringing us up speed on current astronomical events and points of interest in the upcoming skies, with timely and colourful visual presentations.

Public Education is a mainstay of our activity and mandate. Our Director and members have been called to present to various groups, including school visits to elementary school classes and youth groups.

We are now a participant with local dark-sky site, Point Pelee National Park, on their openings for Dark-Sky Nights offering lecture support and telescope viewing, for example, a lecture on light pollution and astronomy to a campers' group. For an international student event in August, three of our Council members gave presentations, offered workshops, and set up their telescopes for participant viewing.

Activities at the Hallam Observatory included youth groups, an annual Tai-Chi Club night, and of course the monthly Open House public happenings. For the July Open House over 50 people, a cross-section of young and old, showed up to view the night sky.

Two of our members have continued for many years to write monthly columns in the local press promoting astronomy and our Centre.

We continue to connect with local wineries that are pleased to let us work with them to get the public involved in astronomy through social events that double as fund-raising events for our Centre.

Big public events this year included our annual participation in Earth Day at a local park, with members operating a display area, and the night before setting up a member's big telescope there, while at the same time opening up our observatory to host 50 children. The Venus Transit event had our members setting up telescopes in a riverfront park (the City of Windsor is right on the boundary between Canada and the U.S., separated by the Detroit River) handing out our supply of solar glasses from National with hundreds of people attending, as well as at our Hallam Observatory and Point Pelee National Park. That was the highlight of the year. Other events included telescope viewing in a public park of the May 20 partial solar eclipse, displays for a Science Centre Robotics Night with special visitor Canadian astronaut, Marc Garneau, and the University of Windsor Science Rendezvous Day, where members set up telescopes and equipment and presented our story.

Light-Pollution Abatement is an ongoing issue with the RASC. The LPA Director of the Windsor Centre is a dedicated activist in bringing public awareness to the issue. This year he has worked on local LPA issues, including: in the City of Windsor enquired as to adherence of FCO policy at its local airport when unrestricted light sources were installed around a new hangar installation, enquired to a local City Councillor when a new street improvement project was to start as to the lighting type to be implemented. In the county he has been working with a new town planner regarding upholding FCO standards in a new development area while also lobbying the County Council challenging county changes in policy of using non-cutoff light fixtures at rural road intersections that waste light and energy.

On a national level, our director continues communications with the federal Transport Canada Windfarm/Tower Obstruction Group regarding changes favourable for astronomical activity. This is a local concern what with many wind-power generation farms springing up all around our observatory site. Another growing light-pollution issue is being watched around our observatory in the county, as commercial greenhouses expand closer and closer to our dark-sky site. One town planner already supports our concern, thanks to our LPA Director's contact.

Arthur Rae
Secretary

The Winnipeg Centre continues to draw new members and recently exceeded the 170-member mark. We meet monthly on the second Friday of the month at the University of Manitoba, Fort Garry Campus, St. John's College at 92 Dysart Road in the Robert B. Schultz lecture Theatre. Our meetings are well attended and often draw 80 or more members and guests.

Our Centre maintains an observatory at University of Manitoba's Glenlea Research Station, about 15 km south of the City of Winnipeg. There we have a dome that houses a 12-inch Meade LX telescope; plus we have a warm room complete with restroom facilities. A large concrete pad to the south, complete with power posts, allows for the members to setup their own equipment. This site is where we hold our "Member's Observing Night," on the Saturday following our regular meetings. We were fortunate again in 2012 that we had no flooding issues from the Red River!

Our Centre has a pair of Dobsonian telescopes, which are offered free as loaner scopes to members in good standing. Plus, we have a number of scopes, maintained by Councillors, which are used for Public Observing events.

The Winnipeg Centre participates in numerous regular astronomy events; some where we provide viewing opportunities for the General Public. One such event is the "Astronomy Night," held in March for the members of Fort Whyte Alive, a regional conservatory agency. It features our members providing presentations during a Banquet Dinner, followed by an observing session with telescopes outside in the cold. We once again had clear skies, thus challenging the public to come outside to view the Moon, and even photograph it through one of the telescopes with their cell phones or point-and-shoot cameras.

On a regular basis, we also support the Oak Hammock Marsh, a nature centre located 30 km north of the city, for a monthly Astronomy Observing Night.

We participated in the International Astronomy Day festivities by setting up a display outside of a local Chapters book store with solar telescopes available for daytime viewing. We then proceeded to Assiniboine Park, our largest city park, where we set up for an evening observing session. Unfortunately, this year, a solid band of clouds covered over our skies just as things got dark, sending a large group of the public home disappointed.

However, the public would not be disappointed for our next two major events. First, the Annular Solar Eclipse of May 20 (a partial eclipse of 51% obstruction from Winnipeg) allowed our membership to share the event with a crowd over 500 persons. We used an array of over a dozen members' solar scopes to provide views. It allowed us to also advise of the upcoming Venus Transit, to be held a few weeks later.

Well, clear skies graced us once again on June 6, as we participated in displaying the Venus Transit. Over the course of four hours, we shared the event with a crowd conservatively estimated to exceed 2000 people. We even had a couple of prominent members from an east-coast Centre fly-in to enjoy our clear skies for the entire event. With two-dozen telescopes provided by the members, this was the highlight public event of the year. It also served as a reminder that, although the winters in Winnipeg can be very cold, our long, warm summer days, with beautiful deep blue, clear skies are wonderful.

The Winnipeg Centre supports the Manitoba Schools Science Festival by providing judges, plus a prize to the person with the best

astronomically based display. Plus, we attend a Science Teacher's Symposium, where we help to promote the RASC teacher's guide *Skyways*. Our membership will also provide their time and telescopes for requested star-party events, such as Scouts or schools.

For the general membership, we begin our year with a January Pot Luck event; held at a member's home, where the wait for warmer observing weather is buffeted by a chance for members to meet and mingle. With over 40 people attending, it requires members with a sizable space to hold the event.

One of the favourite gatherings we promote for our membership is an annual event called the Spruce Woods Star Party. Organized this year by Silvia Garca, it is held at Spruce Woods Provincial Park, about 200 km west of Winnipeg; in a rural area with very little light pollution. We have a separate campground to ourselves, at the cost of providing the park with a Public Observing night in exchange. This year we moved the member's event to September 13-16, so as not to interfere with those wanting to attend the SSSP in Saskatchewan. Our star party, which was attended by about 50 people, includes a daytime workshop by Ralph Croning, our resident "Meteorite Man," who showed us how to build a meteorite cane. That knowledge was then used as he took a large contingent to the nearby Spirit Sands, a nearby sand dunes area, for an actual meteorite search. Later our member Ron Berard did a solar presentation, followed by a solar observing session. The star party also featured "Gerry's Bino Tour," by Gerry Smerchanski, which is an incredible two-hour, soul-enriching, fact-filled tour of the evening sky. The two main observing nights featured beautiful cloud-free skies, with a brilliant slow-falling sputtering fireball that temporarily turned the night into day on the second evening. One member, Sheila Wiwchar, captured the image, which was displayed in the December 2012 issue of the RASC *Journal*. The final event was an evening event at the nearby Bru Café, at which our resident comedian, Dan Robertson, performed a stand-up comedy routine. The event closes with a morning Pancake Breakfast provided by Ken Metcalf. The SWSP is important to the Winnipeg Centre as it provides not only an observing event but is an important socializing event for the membership.

The Spruce Woods Public Observing Night was held on August 25, featuring a talk by Gail Wise on The Story of Perseus and Andromeda; followed by a tutorial by Stan Runge, teaching the public on how to Photograph the Moon. With almost 100 people attending, the Park Rangers advised us that it is the best attended event at that campground.

Jay Anderson
Treasurer

CENTRE TREASURERS' REPORTS FOR FISCAL YEAR 2012

		Belleville	Calgary	Charlottetown	Edmonton	Halifax	Hamilton	Kingston	Kitchener- Waterloo	London
REVENUE										
Membership	Membership Fees: Centre Fee	874	7,438	439	4,236	2,830	2,793	1,483	2,553	5,362
	Membership Fees: Associate		390			74	65	28		
	Membership Fees: Affiliate									
	Membership Fees: other		2,505				100			
	Centre Newsletter					187				
Donations / Fundraising	Donations		1,316	200		660	647	410	740	2,000
	Fundraising		800	380				172	298	
Sales Revenue	Sale of Observer's Handbooks							10		
	Sale of Observer's Calendars		1,440	60	900	702		455	594	200
	Sale of Beginner's Observing Guides							40		
	Other Publication Sales									
	RASC promotional items		155				54	30		
	Other Sales					169	109	40		
Subscription Revenue	Astronomy / Sky & Telescope		31							
	Other									
Events Revenue	Star Parties	665	2,725		1,225	2,297				
	Annual Dinner		1,530				2,237	455		
	Astronomy Day									
	Other Events					510	845			
General Assembly Revenue	General Assembly				30,552					
Miscellaneous Revenue	Interest and Dividends	4	10		127	163		167		
	Advertising									
	Observatory Site		525							
	Equipment Rentals/Loans		1,223							
	Miscellaneous		100		1,081	1	20	2	2,624	
TOTAL REVENUE		1,543	20,188	1,079	38,121	7,593	6,870	3,292	6,809	7,562
EXPENDITURES										
Sales Expenses	Observer's Handbook			270				53		200
	Beginner's Observing Guide							14		
	Observer's Calendar		995		894	372		325	333	
	Other Publications				375	100				
	Newsletter				705	262		182		
	RASC promo items		1,054		50		195			
	Other					34	382			
Event Expenses	Star Parties	561	1,837		555				70	
	Annual Dinner	230	2,241				2,366	94		
	Astronomy Day								12	
	BIYA									
	Meetings		1,230		670	211	76		687	
	Other Events	530	2,150		54,825	158	440	550	269	242
Travel	General Assembly and Council Meetings						325		629	
Administrative Expenses	Office Administration		321		341	201	573	190	181	
	Equipment and Supplies		1,107		509	237	883			
	Insurance		2,395		812	1,164	486		486	
	General Expenses and Audit		504		3,890	29		310		
	Awards		529	200	219	100			350	
	Donations			81	300	11				
	Advertising		353	50			23			
Miscellaneous Expenses	Observatory and Site Expenses		3,292		3,339	192	2,731	1,509	400	10,465
	Library		221			61				
	Depreciation					1,260				
	Miscellaneous	5	2,020		75	118		5	3,538	
TOTAL EXPENDITURES		1,326	20,249	601	67,559	4,510	8,695	3,232	6,955	10,907
SURPLUS OR DEFICIT ON OPERATIONS		217	-161	478	-29,438	3,083	-1,610	60	-146	-3,345
ASSETS	Current assets	5,363	32,794	2,710	126,126	19,900	10,704	26,233	13,732	20,156
	Capital assets	720	23,472		34,928	14,346	94,737	21,250	7,000	36,674
LIABILITIES			1,738			68				

CENTRE TREASURERS' REPORTS FOR FISCAL YEAR 2012

		Mississauga	C. F. de Montréal	Montréal	New Brunswick	Niagara	Okanagan	Ottawa	Prince George	Québec	Regina
REVENUE											
Membership	Membership Fees: Centre Fee	3,237	1,642	3,410	1,627	1,512	2,185	6,446	1,789	401	2,160
	Membership Fees: Associate	61					75		115		
	Membership Fees: Affiliate										
	Membership Fees: other						485				
	Centre Newsletter										
Donations / Fundraising	Donations	230	516	25		909	3,755	967	5,693		85
	Fundraising				175	213	19,807		10,000		41
Sales Revenue	Sale of Observer's Handbooks										390
	Sale of Observer's Calendars	345			660	168	735	1,743			
	Sale of Beginner's Observing Guides										
	Other Publication Sales			190							
	RASC promotional items	795			39		333				
	Other Sales	909		440	261				490		1,412
Subscription Revenue	Astronomy / Sky & Telescope					195					
	Other										
Events Revenue	Star Parties										5,751
	Annual Dinner							2,856			
	Astronomy Day										
	Other Events						25				937
General Assembly Revenue	General Assembly										
Miscellaneous Revenue	Interest and Dividends		10	477		36	8	309			
	Advertising		105								
	Observatory Site			300				665	559		
	Equipment Rentals/Loans						160	275			
	Miscellaneous		943	6,900		653	897	1,085	369		95
TOTAL REVENUE		5,577	3,216	11,742	2,762	3,686	28,465	14,346	19,015	401	9,934
EXPENDITURES											
Sales Expenses	Observer's Handbook									32	406
	Beginner's Observing Guide										
	Observer's Calendar			389			597	1,465		211	
	Other Publications	420				195					
	Newsletter		295	134		65	16				
	RASC promo items	505					253				
	Other	341			472	259			1,475		
Event Expenses	Star Parties	717			892	133		457			3,067
	Annual Dinner							3,080			
	Astronomy Day				119						
	BIYA				203						
	Meetings	700		128	713	651	95	147			
	Other Events				313		513				219
Travel	General Assembly and Council Meetings				1,066		601				
Administrative Expenses	Office Administration	56	779	187			317	146	301		1,665
	Equipment and Supplies	416	147	349		65		115	531		1,507
	Insurance		622	1,512			486	1,922	2,746	32	983
	General Expenses and Audit			1,100	37	8					1,827
	Awards				152	43		140			
	Donations				50			300			
	Advertising					699		143			
Miscellaneous Expenses	Observatory and Site Expenses		361			680	16,813	2,354	5,306		
	Library			65			27	108		119	
	Depreciation	168				1,237		3,207			
	Miscellaneous	359	1,012	202	57	247		218	3,518	21	
TOTAL EXPENDITURES		3,682	3,216	4,066	4,074	4,282	19,718	13,802	13,877	415	9,674
SURPLUS OR DEFICIT ON OPERATIONS		1,895	0	7,676	-1,312	-596	8,747	544	5,138	-14	260
ASSETS	Current assets	15,316	6,211	75,020		9,113	19,473	44,493	8,179	437	
	Capital assets	543	10,860	37,909		18,674	183,639	12,713	98,640		
LIABILITIES								441	595		

CENTRE TREASURERS' REPORTS FOR FISCAL YEAR 2012

		St. John's	Sarnia	Saskatoon	Sunshine Coast	Thunder Bay	Toronto	Vancouver	Victoria	Windsor	Winnipeg
REVENUE											
Membership	Membership Fees: Centre Fee	1,226	236	2,069	968	1,430	8,592	7,407	3,814	1,887	4,503
	Membership Fees: Associate						677			10	
	Membership Fees: Affiliate						23				
	Membership Fees: other						247			620	
	Centre Newsletter										
Donations / Fundraising	Donations	50		573	1,304		9,350		683	665	
	Fundraising			2,243	252					1,045	
Sales Revenue	Sale of Observer's Handbooks	156					510				
	Sale of Observer's Calendars	570	51		225	900	1,620			380	712
	Sale of Beginner's Observing Guides						890				
	Other Publication Sales			998							
	RASC promotional items						585				
	Other Sales	36					354	1,742	2,478		
Subscription Revenue	Astronomy / Sky & Telescope										
	Other										
Events Revenue	Star Parties			16,658					964		
	Annual Dinner								1,610		
	Astronomy Day										
	Other Events	217					17,080				
General Assembly Revenue	General Assembly										1,881
Miscellaneous Revenue	Interest and Dividends	183	1	479	310	4	209	5,624		1	54
	Advertising			25			300				
	Observatory Site			50			8,300				
	Equipment Rentals/Loans										
	Miscellaneous					105	29,430				
TOTAL REVENUE		2,438	288	23,095	3,059	2,334	78,167	14,773	9,548	4,608	7,150
EXPENDITURES											
Sales Expenses	Observer's Handbook	156									
	Beginner's Observing Guide										
	Observer's Calendar	433	151			675	1,107			276	750
	Other Publications				230		31		130		
	Newsletter					215	2,794		192		1,393
	RASC promo items				39		538				
	Other			983				1,891			4,304
Event Expenses	Star Parties	292		13,732				2,675	840		628
	Annual Dinner						500		1,749		
	Astronomy Day										
	BIYA							1325			
	Meetings	112			982	166	500	980		915	1,434
	Other Events		6	1,860					1,301	50	428
Travel	General Assembly and Council Meetings							1,413	457		
Administrative Expenses	Office Administration			866	114		399	849	482		
	Equipment and Supplies						205			167	
	Insurance	437		1,613	200		5,547	372	500	1,726	572
	General Expenses and Audit					1,519	16,544	363			
	Awards	75					507	500	300		355
	Donations	20				50	200				
	Advertising						250				
Miscellaneous Expenses	Observatory and Site Expenses			1,420	300	652	13,734	1,029	1,359	1,404	
	Library						50	22			
	Depreciation			740			18,794	1,508	1,508		
	Miscellaneous	216				96		886	3,779	47	190
TOTAL EXPENDITURES		1,741	157	21,214	1,865	3,373	61,700	13,813	11,090	4,585	10,054
SURPLUS OR DEFICIT ON OPERATIONS		697	131	1,881	1,194	1,039	16,467	960	-1,541	23	-2,904
ASSETS	Current assets	26,616	1,648	40,038	14,837	5,207	54,723			5,762	12,805
	Capital assets			15,554	6,600		403,966			80,000	1
LIABILITIES							458,689				

OFFICERS AND COUNCILS OF THE CENTRES—2013

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Vice-President: David Cotterell
Treasurer: Garth Penn
Secretary: Joanne Burns
National Representative: Don Town

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Past President: Roland Dechesne
President: Andrew Jones
First Vice-President: Jason Nishiyama
Second Vice-President: Dick Lowndes
Secretary: Robyn Foret
Treasurer: Shannon Creelman
National Representatives: Robyn Foret
Roger Nelson

Other Directors: Victor Barbu
Carole Benoit
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Steve Donaldson
Logan Kameda
Katherine Peterson
Ed Reddy
Doug Thorp

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Vice-President: Clair Perry
Treasurer: Ken Fall
Secretary: Jane Vicary
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President: Ross Sinclair
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Michael Ward

Observing Group Director Larry Wood
Membership Secretary Massimo Torri
New Member Advisor Murray Paulson

Stardust Editor Michael Ward
Web Site Coordinator Luca Vanzella
Library Coordinator Mark Zalcik
Equipment Director Ross Sinclair

Light Pollution Abatement Chair Bruce McCurdy
Telescope Rentals Chris Meerveld
Outreach Coordinator Dave Robinson
SkyScan Liaison Dave Cleary
Dark Sky Preserve Coordinator Sherrilyn Jahrig

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President: Robert Busieres
Vice-President: vacant
Treasurer: Ian Anderson
Secretary: Chris Marriott
National Representative: Pat Kelly
Librarian: Graham Rose
Observing Chair: John Liddard
Nova Notes Editor: Quinn Smith

HAMILTON CENTRE

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Webmaster: Brian Hollander
Observing Co-ordinator: Jim Goetz
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Youth Programs: Adam
Priestap-Suttis

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Webmaster: Rick Saunders

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Equipment Manager: Eldon Rogers

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WebMaster: Chuck O'Dale
AstroNotes Editor: Drew Hodge
Janet Tulloch
FL.O. Director: Ron St Martin
Public Outreach: Mike Moghadam
Hospitality: Art & Anne Fraser
Membership: Art Fraser
Telescope Library: Al Scott

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President: Blair Stunder
Vice President: Robert Nelson
Treasurer: Glen Harris
Secretary: Glenn Harris
National Representative: vacant
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Gilbert Self
James Van Doren

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Vice-Président:
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Représentant national: Pierre Desrosiers
Secrétaire: Stéphane Dumas
Responsable des observations: Steve Lévesque

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Kalium Observatory: Ron Haughey
Davin Dark Site: Dave Barrie
Equipment Director: Alden Foraie
Newsletter Editor: Shane Ludtke
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National Representative: Richard Newman

Webmaster: Craig Peterman
Observing Director: Robert Babb
Equipment Director: Tim Caruk
Librarian: Fred Smith
Membership: Marcellus Redmond

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

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Fundraising Coordinator: Jim Goodridge
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Councillor at-large: Les Dickson

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 Rajesh Shukla
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 Paul Mortfield
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 President: Mark Eburne
 Vice-President: Suzanna Nagy
 Treasurer: Ciara Margon-Fair
 Secretary: Scott McGillivray
 National Representative: Doug Montgomery

Director of Telescopes: Harvey Dueck
 Librarian: William Fearon
 Membership: Rohit Grover
 Events Co-ordinator: Suzanna Nagy
 Education: Bill Burnyeat
 Observatory Chair: Leigh Cummings
 Webmaster: Harvey Dueck
 LPA Chair: Jim Ronback
 Nova Editor: Gordon Farrell
 Observing: Scott McGillivray
 Public Relations: Scott McGillivray
 Howard Trottier
 Barry Shanko
 Merchandise: Kenneth Lui
 At Large: Kenneth Lui

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 2nd Vice-President: Sherry Buttner
 Treasurer: Bruce Lane
 Secretary & Recorder: Deb Crawford
 Librarian: Michael Michaud
 Telescopes: Sid Sidhu
 Past President: Lauri Roche
 National Representative: Mark Bohlman
 Skynews Editor: Diane Bell
 Membership Co-ordinator: Sherry Buttner
 Webmaster: Joe Carr
 Observing Chair: Bill Weir

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 President: Rick Marion
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 2nd Vice-President: Sue Iihola
 Treasurer: Greg Mockler
 Secretary: Matt McCall
 National Representative: Mike Mastronardi

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 President: Andrea Misner
 Vice-President: Brian Renald
 Treasurer: Jay Anderson
 Secretary: Stan Runge
 National Representative: Jennifer West
 Councillors: Brian Stach
 Paul Trudel
 Kris Keller
 Brenden Petracek
 Silvia Graca

2013 AWARD WINNERS

Ken Chilton Prize	not awarded	The Plaskett Medal	Dr. Yasuhiro Hasegawa (McMaster University)
Service Award	Larry McNish (Calgary) Dietmar Kupke (Toronto) Brian McCullough (Ottawa)	Simon Newcomb Award	Alan Whitman (Okanagan)
Chant Medal	(not awarded)	Qilak Award	Robert Duff (London)

2012 CERTIFICATES

MESSIER CERTIFICATE

Victor Barbu (Calgary)
David Jenkins (Kitchener-Waterloo)

Michael McBride (Thunder Bay)
Lynn Wood (Kitchener-Waterloo)

NGC CERTIFICATE

Michael Gatto (Halifax)
George Guest (Alamogordo, N.M., U.S.A.)
Nelson Walker (Victoria)
Lynn Wood (Kitchener-Waterloo)

EXPLORE THE UNIVERSE CERTIFICATE

Kirby Alguire (England)
Marc Arsenaault (New Brunswick)
eladio Miranda Batlle (Havana, Cuba)
Lily Cai (Vancouver)
Anthony Chui (Vancouver)
Melody Hamilton (Halifax)
Mike Hengeveld (Vancouver)
Steven Huang (Vancouver)
David Jenkins (Kitchener-Waterloo)

Robin Mayne (Edmonton)
Elizabeth Mayne (Santa Monica, Ca, U.S.A)
Kirsti Meema (Toronto)
Linda Pulliah (Sudbury)
Norman Rivard (St. Eustache, Québec)
Zeljko Srnic (Toronto)
Pascal Turmel (Vancouver)
Jo VandenDool (Mississauga)
Lynn Wood (Kitchener-Waterloo)

DEEP SKY CHALLENGE

Hughes Lacombe (C.F. de Montréal)

ISABEL WILLIAMSON LUNAR OBSERVING CERTIFICATE

Ted Dunphy (New Brunswick)

PAST AWARD WINNERS

Below is a list of former winners of the Chant Medal, Ken Chilton Prize, Plaskett Medal, Service Award, and Simon Newcomb Award.

For names before 2000, please refer to "Looking Up—A History of the RASC" by Peter Broughton. www.rasc.ca/publications/lookingup/index.shtml

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)
- 2012 Holly Ayles (New Brunswick)

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 Dr. Alexei Razoumov (British Columbia)
- 2001 Dr. Peter Brown (Western)
- 2002 Dr. Edward W. Thommes (Queen's)
- 2003 Dr. Tracy Webb (Toronto)
- 2004 Dr. Jo-Anne C. Brown (Toronto)
- 2005 Dr. Christian Marois (Montréal)
- 2006 Dr. Lauren A. MacArthur (British Columbia)
- 2007 Dr. Frédéric Grandmont (Université Laval)

- 2008 Dr. Adam Muzzin (University of Toronto)
- 2009 Dr. Catherine Lovekin (Saint Mary's University)
- 2010 Dr. Helen Kirk (University of Victoria)
- 2011 Dr. Kaitlin Kratter (University of Toronto)
- 2012 Dr. Pier-Emmanuel Tremblay (Université de Montréal)

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)
- 2012 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)

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)
 2012 Roland Dechesne (Calgary)
 James Edgar (Regina)
 Fred Smith (St. John's)

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)
 2012 Randall Rosenfeld (Unattached)

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. Sara Seager (Canada)
 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
 2010-2012 Mary Lou Whitehorne
 2012- Glenn Hawley

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
 2007-2012 Mayer Tchelebon
 2012- Denis Grey

GENERAL ASSEMBLIES—2000 TO 2016

The following Centres hosted the General Assembly from 2000 to 2012:

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
 2014 Victoria
 2015 Halifax
 2016 Regina