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ANNUAL REPORT  
RAPPORT ANNUEL

2010

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Front Cover Photograph  
The gathering is the speakers who made presentations at the 2010  
General Assembly in Fredericton, New Brunswick  
(missing from photo - Dr. René Doyen).  
Photo courtesy Peter Ceravolo.

# ROYAL ASTRONOMICAL SOCIETY OF CANADA—2011

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**Honorary President:** Dr. Jim Hesser [James.Hesser@nrc-cnrc.gc.ca](mailto:James.Hesser@nrc-cnrc.gc.ca)  
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**Observer's Calendar Editor:** David Lane [dlane@ap.stmarys.ca](mailto:dlane@ap.stmarys.ca)

## 2010 - 2011 Committees

**Awards:** Dave Lane [dlane@ap.stmarys.ca](mailto:dlane@ap.stmarys.ca)  
**Constitution:** Glenn Hawley [glennhawley@shaw.ca](mailto:glennhawley@shaw.ca)  
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**Finance:** Mayer Tchelebon [mayertch@yahoo.com](mailto:mayertch@yahoo.com)  
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**Information Technology:** Ryan May [ryanmay@telus.net](mailto:ryanmay@telus.net)  
**Light-Pollution Abatement:** Robert Dick [rdick@ccs.carleton.ca](mailto:rdick@ccs.carleton.ca)  
**Membership and Promotion:** vacant  
**Nominating:** Colin Haig [astronomer@cogeco.ca](mailto:astronomer@cogeco.ca)  
**Observing:** Chris Beckett [cabeckett@gmail.com](mailto:cabeckett@gmail.com)  
**Publications:** Glenn Hawley [glennhawley@shaw.ca](mailto:glennhawley@shaw.ca)  
**Green-Laser Pointer:** Randall Rosenfeld [rosenfel@chass.utoronto.ca](mailto:rosenfel@chass.utoronto.ca)

## Centre Representatives on Council

Belleville:	Don Town	Ottawa:	Charles O'Dale
Calgary:	Robyn Foret	Prince George:	Robert Nelson
Calgary:	Greg King	Québec:	Pierre Desrosiers
Charlottetown:	Mike Critchley	Regina:	Christopher Beckett
Edmonton:	Mike Noble	St. John's:	Joe English
Edmonton:	Luca Vanzella	Sarnia:	Joe Clements
Halifax:	Jim Dorey	Saskatoon:	Rick Huziak
Hamilton:	Mark Pickett	Sunshine Coast:	Bill Clark
Kingston:	Brian Hunter	Thunder Bay:	Dave Gallant
Kitchener-Waterloo:	Paul Schumacher	Toronto:	Eric Briggs
London:	Craig Levine	Toronto:	Tony Horvatin
Mississauga:	Bob McCall	Toronto:	Rajesh Shukla
C. F. de Montréal:	Hugues Lacombe	Vancouver:	Bruce McDonald
Montréal:	Frank Tomaras	Vancouver:	Mark Eburne
New Brunswick:	Tim Doucette	Victoria:	Chris Gainor
Niagara:	Tracy Schilz	Windsor:	Michael Mastronardi
Okanagan:	Bryan Kelso	Winnipeg:	Mike Stephens
Ottawa:	Robert Dick		

# PRESIDENT'S MESSAGE

This was the year after International Year of Astronomy, and it should come as no surprise to anyone that the energetic, enthusiastic, and dedicated members of the RASC continued with increased public education and outreach activities all through 2010. IYA lives on in the many expanded and enriched programmes carried out by RASC members and Centres throughout Canada. It is impressive and rewarding to see the number of partnerships that have been built and that continue to thrive between the Society, our Centres, and non-RASC organizations, in an astonishingly successful effort to provide relevant and enjoyable outreach opportunities for all Canadians.

The collaborative connections between the RASC, the Canadian Astronomical Society (CASCA) and the Fédération des Astronomes Amateurs de Québec (FAAQ) continued to strengthen, most especially through the Beyond IYA national executive committee. This committee met monthly by teleconference, with representatives from all three organizations. The goal is to keep open lines of communications between all three groups and to share best practices between organizations for the benefit of all three. One major project of the group was to create a joint national EPO award to be given annually to one member of each of the three organizations every year. Watch for this award to be announced later in 2011.

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

This year of 2010 saw a number of significant administrative changes in the RASC. In late June we hired our first Executive Director, Deborah Thompson. The Society has grown in complexity, and functions in an increasingly complicated and fast-paced external environment. It became impossible for volunteer executive members to attend to the many daily demands of running a Society that is simultaneously a membership, publishing, and charitable organization. Full-time professional management staff was urgently needed and is now in place. The last half of 2010 saw many adjustments in how we conduct business. By the end of the year, improved practices and processes were in place and most of the hurdles had been successfully cleared. The National Office and the Society are in good hands with Deborah at the helm.

Early in the year, we also hired a new Membership and Publications Co-ordinator. Irina Mosquera has proved her worth through many valuable contributions to National Office operations.

November saw the departure of Jo Taylor, our National Office Manager. We thank Jo for her many contributions to the Society and wish her well in her new endeavours beyond the RASC.

Two major projects undertaken during the second half of the year were the development of a strategic plan and a marketing communications plan for the Society. This is the first time the RASC has ever engaged in focussed, long-term planning for its future. Planning is critical to good management and governance. It helps ensure that we stay relevant and responsive to the needs of our communities. It contributes to stability and growth, and enables us to monitor progress and assess results. I thank everyone who

participated in the consultation and planning process for this important and forward-looking project.

Other happenings in 2010 include:

- \* Our new Public Speaker Programme was launched. It aims to support our Centres and to encourage knowledge transfer between Centres. There has been good uptake on this new programme and we anticipate a vibrant and successful programme into the future.
- \* The Walter Helm Fund has received interpretation and direction from the Court as to the present and future disposition of annual income from the Fund. There is an agreement in place between the Society that administers the Fund and the Toronto Centre, which will use the annual income from the Fund in its activities at the David Dunlap Observatory building.
- \* The new Investment Management Strategy for the Society has been implemented, with almost all funds having been transferred to the new professionally managed portfolio.
- \* The implementation of the iMIS system has been substantially completed and is working well.
- \* The Toronto Centre has fully opted in to the national membership-handling service. Membership-handling processes are now standardized across the Society.
- \* The introduction of HST in Ontario and British Columbia, and a PST increase in Nova Scotia, resulted in some administrative complications that have since been resolved. It was challenging to incorporate four different tax regimes into our operating systems.
- \* Newly unified promotional materials were developed this year to better promote RASC membership and publications, and were well received. Look for continued improvements in the future as a result of the new marketing and communications plan.

During the last half of the year, I was pleased to be able to visit two centres, one on each end of the country. In October, piggy-backed on a non-RASC trip, I was able to travel to the Prince George Centre and meet with Centre members, visit the impressive Centre observatory, and give a public presentation. In November, I visited the New Brunswick Centre, gave a presentation and enjoyed a lively evening out with Centre members. Visits such as these are wonderful opportunities to get to know Centre members, as well as local issues, challenges, and success stories. As always, I am impressed by the warmth and friendly hospitality of RASC members across Canada. You are awesome!

In conclusion, I thank my executive committee predecessors for the dedicated work done over the years to build this great Society. Thanks to Dave Lane for keeping a neat and tidy presidential desk that I am honoured to inherit. My thanks also go to my executive colleagues, on whom I depend for advice and assistance every day. Also, a big debt of thanks goes to our National Office staff, without which we would be adrift in a large and forbidding ocean. Lastly (but not least!) I commend the generous spirit of our members, Centres, and committees who personify the shining stars through the RASC.

**Mary Lou Whitehorne**  
*President*

# TREASURER'S MESSAGE

We have recorded a surplus of \$20,105 for 2010. While the accompanying audited statements are still stated as they always were, I would like offer a new analysis – a breakdown for each of our three business segments: Memberships, Publications, and Charity.

Memberships lost \$11,596 in 2010, due to a membership fee level that was insufficient to cover the increased payroll from the new Executive Director position, but was brought into line with the \$3 increase approved at the 2010 GA, and which was implemented in the fall. For accounting purposes, it is not reflected until 2011. We do expect Memberships to have a small surplus in 2011 at the current rates, and our stated goal is for self-sufficiency in the future.

Publications recorded a surplus of \$16,355, which is \$5,000 worse than expected. Publication sales dropped across the board, due to the economy, and to alternative online options available at lower cost than our print products. Publications is expected to break even in 2011, as higher payroll costs (due to the annualization of the Executive Director's salary) and lower foreign revenues (due to the higher Canadian dollar) will both impact negatively. We will be taking measures to improve the performance of this division by re-tendering all of our printing costs, with the aim of lowering the cost of production across the board.

To put the above in historical perspective, Publications used to generate much larger surpluses (due to donated content and labour), which would subsidize the much larger Membership losses, arising from far-too-low membership fees. From now on, each will stand on its own, and will be measured separately.

Our Charity segment is funded by government grants, donations, and investment income. It provides educational materials (such as IYA products), speakers for public events, Dark Sky designations for public spaces, awards for excellence in Astronomy, and sponsorships for select public events. In 2010, the division recorded a surplus of \$15,348, due to one-time benefits related to IYA, which brought extra donations. We budget a deficit of \$14,234 for 2011, as donations return to normal levels, and we undertake a second

print run of the popular Star Finders. We are always on the lookout for government grants and/or cost-sharing opportunities. We never include them in the budget, but, to the extent that they materialize, they would improve the financial performance of the division.

Our overhead expenses are allocated to all three segments. In 2010, they benefitted from a substantial decrease in information technology costs, as our new membership system is now substantially implemented. Also, travel costs have declined significantly, partially offsetting the expected increase in payroll costs due to the first six-month experience of the new Executive Director.

We have also taken measures to improve the income from the investment of our endowment. This impacts only the Charity segment, as it is deemed to be the owner of all of our investible assets. As reported previously, these funds have been transferred from various GICs and savings products to the ScotiaMcLeod Managed Portfolio. By the time you read this, all of our funds will be there, and the portfolio will be invested 40 percent in equities and 60 percent in fixed income. As a result, the portfolio will be much more correlated to the stock market than it was previously, resulting in more volatility from year-to-year. We feel that it is a reasonable price to pay for protection from inflation, which was not available to us with the previous portfolio.

Our total investment return for 2010 was 3.4 percent, which still included a majority GICs and savings products, and, by themselves, averaged 1.7 percent per annum.

Looking forward, we now have better tools to measure each of our business activities on their own. By not allowing cross-subsidization, each unit would stand on its own, and we will be able to take remedial action as soon as it is called for. This will allow the RASC to remain on a solid financial footing for years to come.

**Mayer Tchelebon**  
*Treasurer*



# SECRETARY'S MESSAGE

It gives me great pleasure to report on the success of the Public Speaker Programme. There were relatively few events in 2010, but only because the programme began partway through the year; it didn't get into full swing until autumn. The London, Hamilton, Windsor, and Sarnia Centres put the programme to just the use intended by bringing Paul Gray in from New Brunswick to speak at all four Centres. Halifax Centre had a First Nations speaker, Elder Murdena Marshall, to speak on the Mi'kmaq night-sky story "Muin and the Seven Bear Hunters." And Toronto and Mississauga Centres combined forces with the Ontario Science Centre to bring another First Nations speaker, Wilfred Buck of Winnipeg, to speak about First Nations Astronomy. This year, 2011, promises to be a very busy year for the PSP.

In last year's report, I wrote that we had hired Irina Mosquera, Membership and Publications Co-ordinator; Irina has just left on maternity leave. This year, we have more new faces at National Office: Deborah Thompson, Executive Director, Fiona Wilson, Office Administrator, and just recently, we hired a part-time employee to help with improving the Journal readership,

Emily Cornford. Our employees work diligently through each year, fulfilling orders, processing memberships, helping us with administrative chores, and ensuring the Society has a "tidy place" - they are the glue holding the Society together. If you ever have a chance to drop into the office in Toronto, they would be pleased to meet you and give you a short tour (the office isn't very large!).

Finally, we extend our condolences to the families and friends of the following deceased Members who passed away in 2010: Yni Ebberts, William Polomark, Edwin Newcombe (Edmonton); Ralph Fraser, Wayne Edwards-Taylor, David Toth (London); Al Andrews (Regina); Bruce Brandell (Saskatoon); Olga Kuderko, Michel Lerman (Toronto); Maurice Young (Victoria); Russ McLeod (Winnipeg); John K. Prentice, Dr. Audouin Dollfus, Stephen Mitchell, Dr. Jean Petrie, Larry Sumner, John Prentice (Unattached).

**James Edgar**  
Secretary

## Membership Statistics 2000-2010

Centre	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Belleville	37	26	32	35	33	32	29	26	N/A	N/A	N/A
Calgary	271	300	317	313	278	302	323	321	315	315	310
Charlottetown	25	24	24	22	21	20	19	20	16	18	15
Edmonton	260	257	258	255	241	261	267	271	262	249	222
Halifax	159	155	157	162	152	171	197	214	196	186	172
Hamilton	66	70	76	80	82	91	91	113	114	122	109
Kingston	74	90	98	106	125	128	110	132	145	146	152
Kitchener-Waterloo	115	116	118	104	101	127	127	133	114	106	95
London	118	97	101	104	99	112	115	119	118	115	115
Mississauga	120	127	120	103	53						
C.F de Montréal	22	24	23	28	32	32	30	40	39	36	38
Montréal	87	103	107	99	105	109	108	121	116	106	102
New Brunswick	66	75	79	88	78	75	70	59	62	46	29
Niagara	71	82	97	104	101	114	123	117	109	97	91
Okanagan	116	103	88	86	85	83	85	92	87	70	61
Ottawa	370	389	410	416	396	447	469	500	480	457	431
Prince George	64	64	79	67	82	75	40	43	42	25	N/A
Québec	17	17	35	44	40	39	38	38	45	50	63
Regina	62	52	48	55	53	47	53	59	56	47	30
St. John's	45	48	47	52	49	51	44	54	54	45	47
Sarnia	15	19	24	25	27	27	32	26	27	27	31
Saskatoon	72	71	71	78	76	70	67	73	70	73	76
Sunshine Coast	35	32									
Thunder Bay	46	44	37	41	40	39	41	43	39	38	32
Toronto	554	502	506	610	622	748	841	889	886	775	792
Vancouver	244	251	263	256	238	267	291	313	292	294	275
Victoria	166	185	173	188	177	186	192	200	188	200	159
Windsor	96	96	98	94	89	105	122	125	120	107	102
Winnipeg	168	162	169	157	136	132	140	136	114	105	99
Unattached	434	459	530	561	512	538	591	610	575	552	558
Honorary	11	15	15	14	15	15	14	14	13	13	13
<b>Total</b>	<b>3995</b>	<b>4040</b>	<b>4216</b>	<b>4347</b>	<b>4138</b>	<b>4443</b>	<b>4655</b>	<b>4901</b>	<b>4688</b>	<b>4420</b>	<b>4230</b>

### Membership by Type

Type	Number	% of Total
Ordinary	3557	89.3
Life	325	8.2
Youth	99	2.5
Honorary	(11)	n/a

### Membership by Country

Country	Number	% of Total
Canada	3752	94.2
USA	189	4.7
Other	40	1.1

# AUDITOR'S REPORT

## *Tinkham & Associates LLP* CHARTERED ACCOUNTANTS

*D C Tinkham, B Comm, CMC, FCA*  
*Associates*  
*P J Brocklesby, BBA CA*  
*L Link, BBA CA*  
*M Tkachenko, BBA, CA*  
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To the Members of  
THE ROYAL ASTRONOMICAL SOCIETY OF CANADA  
LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA

We have audited the accompanying financial statements of The Royal Astronomical Society of Canada/La Société Royale D'Astronomie Du Canada, which comprise the balance sheet as at December 31, 2010 and the statements of revenue and expenditures, changes in net assets and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

### **Management's Responsibility for the Financial Statements**

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

### **Auditor's Responsibility**

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

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

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

### **Basis for Qualified Opinion**

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

### **Qualified Opinion**

In our opinion, except for the possible effects of the matter described in the Basis for Qualified Opinion paragraph, the financial statements present fairly, in all material respects, the financial position of the Society as at December 31, 2010, and its financial performance and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

TORONTO, Ontario  
March 26, 2011

*Tinkham & Associates LLP*  
*CHARTERED ACCOUNTANTS*  
*LICENSED PUBLIC ACCOUNTANTS*

# BALANCE SHEET

As at December 31	2010	2009
<b>Assets</b>		
Current		
Cash	\$ 124,435	\$ 81,758
Short-term investments (note 4)	601,940	415,277
Accounts receivable	46,599	73,940
Inventory	34,216	21,032
Prepaid expenses	9,639	9,845
	<b>816,829</b>	<b>601,852</b>
Long Term		
Investments (note 4)	372,187	593,756
Capital assets (note 5)	17,593	15,879
	<b>389,780</b>	<b>609,635</b>
	<b>\$1,206,609</b>	<b>\$ 1,211,847</b>
<b>Liabilities</b>		
Current liabilities		
Accounts payable and accrued charges	\$ 34,039	\$ 61,919
Deferred revenue		
Membership fees for ensuing years	99,852	98,601
<i>Journal</i> subscriptions	18,063	14,439
Unamortized life membership fees (note 6)	37,585	39,563
	<b>189,539</b>	<b>214,522</b>
<b>Net Assets</b>		
Unrestricted	650,943	644,841
Internally restricted (note 8)	366,127	352,124
	<b>1,017,070</b>	<b>996,965</b>
	<b>\$1,206,609</b>	<b>\$ 1,211,487</b>
Commitment (note 7)	<i>See accompanying notes to financial statements</i>	

On Behalf of the Board

  
 President

  
 Treasurer

# STATEMENT OF CHANGES IN NET ASSETS

	Internally Restricted (schedule 1)	Unrestricted	2010	2009
Year ended December 31				
Balance, beginning of year	\$ 352,124	\$ 644,841	\$ 996,965	\$ 483,536
Excess of expenditures over revenue for the year		513,429	20,105	\$ 513,429
Transfers (Schedule 1)	(41,047)	41,047	-	-
Balance, end of year	\$ 352,124	\$ 644,841	\$ 1,017,070	\$ 996,965

*See accompanying notes to financial statements*



# STATEMENT OF REVENUE AND EXPENDITURE

Year ended December 31	2010	2009
<b>Revenue</b>		
Membership fees	\$ 172,192	\$ 176,791
Publication revenue		
<i>Journal</i>	36,338	37,290
<i>Observer's Handbook</i>	80,467	97,247
<i>Beginner's Observing Guide</i>	7,187	5,868
<i>Observer's Calendar</i>	41,880	46,815
<i>Skyways</i>	1,506	12,425
Shipping and Handling	24,947	30,704
International Year of Astronomy	1,360	30,646
Other	585	1,017
	194,270	262,012
Miscellaneous income		
Donations	35,494	83,279
Investment Income	32,914	24,667
Promotional products	8,862	8,542
Other income	4,132	178
	81,402	116,666
	447,864	555,469
<b>Expenditures</b>		
Publication costs		
<i>Journal</i>	45,221	47,614
Cost of publications sold	24,500	33,127
<i>Observer's Handbook</i>	453	2,210
<i>Observer's Calendar</i>	2,536	252
Freight and handling costs	24,577	30,283
	97,287	113,486
Operating costs		
Office salaries and employee benefits	103,481	63,631
Membership services	72,876	73,630
Office expenses	36,785	54,864
Services	42,135	37,185
Committees	8,757	14,150
Travel expenses	21,917	16,090
Cost of promotional items sold	3,429	4,911
International Year of Astronomy	7,380	102,812
Amortization of capital assets	3,063	2,841
Advertising and marketing	14,997	6,592
Occupancy	15,672	24,772
	330,472	401,478
	427,759	514,964
	20,105	40,505
Gain on sale of land and building	-	472,924
Excess of revenue over expenditures	\$ 20,105	\$ 513,429

See accompanying notes to financial statements

# STATEMENT OF CASH FLOWS

Year ended December 31	2010	2009
<b>Cash provided (used) by operating activities</b>		
Excess of revenue over expenditures for the year	\$ 20,105	\$ 513,429
Charges not requiring a current cash payment		
Amortization of capital assets	3,063	2,841
Gain on sale of land and building		(472,924)
	<b>23,168</b>	<b>43,346</b>
Changes in non-cash working capital components		
Accounts receivable	27,341	744
Inventory	(13,184)	909
Prepaid Expenses	206	2,883
Accounts payable and accrued liabilities	(27,880)	(32,019)
Deferred revenues	2,897	(26,685)
	<b>12,548</b>	<b>(10,822)</b>
<b>Cash provided (used) by investing activities</b>		
Purchase of investments (net)	34,906	(722,792)
Proceeds on sale of land and building	-	472,924
Purchase of capital assets	(4,777)	(1,977)
	<b>30,129</b>	<b>(251,845)</b>
Increase (decrease) in cash during the year	<b>42,677</b>	<b>(262,667)</b>
<b>Cash, beginning of year</b>	<b>81,758</b>	<b>344,425</b>
<b>Cash, end of year</b>	<b>124,435</b>	<b>81,758</b>

# NOTES TO FINANCIAL STATEMENTS

2010 December 31

## 1. Organization

The Royal Astronomical Society of Canada is a Canadian corporation without share capital and a registered charitable organization, incorporated for the purpose of stimulating interest in and promoting astronomy and related sciences. The organization is not subject to income taxes pursuant to exemptions accorded to registered charities in the income tax legislation.

## 2 Significant accounting policies

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

### (a) Basis of accounting

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

### (b) Inventory

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

### (c) Capital assets

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

Computer hardware - 3 years

Software - 10 years

Office furniture - 10 years

### (d) Membership fees

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

### (e) Revenue recognition

The organization follows the deferral method of accounting for contributions. Unrestricted contributions are recognized as revenue when received or receivable, if the amount to be received can be reasonably estimated and collection is reasonably assured.

### (f) Publications

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

### (g) Contributed materials and services

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

### (h) Financial instruments

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

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

(i) New accounting pronouncements

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

### 3 Helm Fund

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

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

Total assets of the fund under administration by the Society at 2010 December 31 are \$136,457 (2009 - \$172,189) and are excluded from the Society's financial statements.

### 3 Investments

	2010	2009
Managed portfolio at Scotia McLeod		
Fixed income investments	\$ 212,174	\$ -
Equity investments	153,735	-
Cash	6,278	-
Guaranteed investments certificates		
ING Direct, matures 2011 March 5, interest compound at 3.00%	\$ 264,366	\$ 256,180
Bank of Nova Scotia, matures 2011 April 4, 2.15% interest	126,995	126,995
HSBC Bank of Canada, matures 2011 April 4, 2.30% interest	127,135	127,135
Scotia Mortgage Corp, matures 2011 June 9, 2.05% interest	83,444	83,444
Mutual fund investments with Scotia McLeod		
Ivy Canadian Fund	\$ -	\$ 21,353
MacKenzie Cundill Value	-	10,057
Scotia Canadian Dividend	-	22,375
Savings Accounts		
Manulife Investment Savings account	\$ -	\$ 125,202
Altamira High Interest Cash Performer account	-	118,104
Dundee Investment Savings account	-	118,186
	974,127	1,009,031
Less Current portion	601,940	415,277
	\$ 372,187	\$ 593,754

The actively managed portfolio with ScotiaMcLeod includes 9 fixed income investments comprised of government and corporate bonds with an average yield to maturities of 2.53%, stated interest rates ranging from 3.00% to 5.00%, all purchased at a premium, and maturing from 2011 April 13 to 2019 April 15. The equity investments include share and trust units of 32 Canadian entities. The single largest holding is 165 shares of Toronto Dominion Bank with a market value on 2010 December 31 of \$12,251.

The fixed income and equity investments have been recorded at market value at 2010 December 31, based on information provided by ScotiaMcLeod.

## 5. Capital assets

	Total Amount	Minus amortized amount	Total Amount	Minus amortized amount
	2010	2010	2009	2009
Computer hardware	\$ 6,571	\$ 4,014	\$ 4,093	\$ 2,922
Software	19,330	5,661	17,580	3,816
Office furniture	1,542	176	993	50
Library	1	-	1	-
	\$ 27,444	\$ 9,851	\$ 22,667	\$ 6,788
		\$ 17,593		\$ 15,879

## 6. Unamortized life membership fees

	2010	2009
Life membership fees as of January 1	\$ 39,563	\$ 66,405
Deduct: Amounts paid to Centres	-	\$ 24,760
Deduct: Amortization to income	(1,978)	(2,082)
Balance, December 31	\$ 37,585	\$ 39,563

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

## 7. Commitment

The Society has entered into a lease agreement for office premises for a 3 year term commencing 2009 March 1 and ending 2012 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 two fiscal years is as follows:

2011	\$ 7,835
2012	\$ 1,316
	\$ 9,151

## 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					2010	2009
	Public Speaker Programme Fund	W. Feibelman Fund	Ruth Northcott Fund	P. M. Millman Endowment Fund	Total	Total
Fund balance, January 1	\$ 10,026	\$ 17,346	\$ 93,094	\$ 231,658	\$ 352,124	\$ 393,171
Transferred from Unrestricted net assets:						
Interest	331	572	3,070	7,638	11,611	1,103
Donations	1,787	-	1,339	1,410	4,536	3,409
Expenses	(2,144)	-	-	-	(2,144)	(47,003)
	26	572	4,409	9,048	14,003	(44,697)
Balance, December 31	\$ 10,000	\$ 17,918	\$ 97,503	\$ 240,706	\$ 366,127	\$ 352,124



# ANNUAL MEETING MINUTES—2010

## THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

## LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA

Minutes of the Annual Meeting held Sunday, 2010 July 4, at 09:30 ADT in the Wu Auditorium of the University of New Brunswick, Fredericton, NB.

The meeting was called to order at 9:30 ADT by the Chair, RASC President Dave Lane, who welcomed members, delegates, and guests to the 2009 Annual Meeting and thanked the New Brunswick Centre for hosting the 2010 General Assembly. This was greeted by a round of applause.

After introducing the Executive Committee, President Lane called the roll of Centres – 22 Centres were represented; plus several Unattached Members and guests were present, approximately 75 Members in attendance.

### 1. APPROVAL OF THE AGENDA

MOTION AM1001 Moved by Randall Rosenfeld, seconded by Ted Bronson, that the Agenda be approved as presented.

MOTION AM1001 was CARRIED

### 2. MINUTES OF THE 2009 ANNUAL MEETING.

MOTION AM1002 Moved by Brigitte Schaffer, seconded by Richard Christie, that the Minutes of AM 2009 as corrected in the Annual Report 2009, be approved.

MOTION AM1002 was CARRIED

### 3. REPORTS OF OFFICERS

#### President (Dave Lane)

Dave said last year was an amazing year, with all the activities during IYA2009. The final report of the national IYA committee has been published on the Web. He also reported the numerous events and publications that had been distributed. Dave introduced our new Executive Director, and thanked her for joining us on short notice.

#### 1st Vice-President (Mary Lou Whitehorne)

Mary Lou had no report.

#### 2nd Vice-President (Glenn Hawley)

Glenn Hawley had no report.

#### Secretary/Recorder (James Edgar)

James reported on the recent success of the newly formed Public Speaker Programme. He then read out the names of deceased members from 2009, calling for a moment's silence to honour those of our number who passed last year.

#### Treasurer (Mayer Tchelebon)

Mayer commented briefly on his written report, advising that our finances are in very good shape after two deficit years. The Financial Statements are published in the 2009 Annual Report.

MOTION AM1003

Moved by Paul Gray, seconded by Charles Darrow, to approve the Financial Statements as published.

MOTION AM1003 was CARRIED

#### National Office Manager (Jo Taylor)

Jo advised that we have settled into our new offices nicely. Our landlord is very good at repairing things that go wrong. We have actually had people come to the office to do research.

### 4. REPORTS OF STANDING COMMITTEES:

#### Awards (Peter Jedicke)

Peter said that he had nothing further to report other than his report to Council. He made an appeal to members to advise him of any potential candidates for awards.

#### Constitution (Denis Grey)

Denis said that 2009 was an exceptionally good year as we didn't change our By-Laws at all. We did do a review of our By-Laws to examine any changes that might be needed, and a solid document has been drafted to turn over to the incoming committee.

#### Education (Kim Hay)

Kim said IYA2009 kept the Education Committee very busy, and we will be honouring all the members who helped out during the year. This was greeted by a warm round of applause.

#### Executive (Dave Lane)

No further report.

#### Finance (Mayer Tchelebon)

No further report.

#### History (Barry Matthews)

Barry wanted to give a special vote of thanks to Dr. Randall Brooks, who evaluated our antique clock, which has a value of about \$3500. Dave Lane added an appreciation of the work Randall Rosenfeld did evaluating our library, and disposing of the extra books, which have a permanent home in the Museum of Science and Technology in Ottawa.

#### Membership & Promotion (Randall Rosenfeld)

Randall reported on the work being done to renew our brochures and membership materials. He also reported that volunteer recognition was high on his list of things to do.

#### Nominating (Glenn Hawley)

Glenn said that all the critical posts have been filled.

Nominations for election of officers result in the following being named by acclamation:

President – Mary Lou Whitehorne (Halifax)

1st Vice-President – Glenn Hawley (Calgary)

2nd Vice-President – Colin Haig (Hamilton)

Dave Lane added that editors for the Observer's Handbook and the Observer's Calendar will need to be sought out.

#### Observing (Chris Beckett)

Paul Gray reported on Chris Beckett's behalf that the new Finest NGC and Isabel Williamson Lunar Program certificates and pins are now being distributed. He thanks the committee members for their support during his four years on the committee.

#### Publications (Mary Lou Whitehorne)

Mary Lou said that a new editor is required for The Beginner's Observing Guide, as well as the Observer's Handbook. The new promotional materials will be forthcoming. Mary Lou welcomed Deborah Thompson to our team. She also emphasized the great contribution of Jo Taylor, who continues to run the Society at the nuts-and-bolts level. This was greeted by a warm round of applause. Mary Lou also reported that there is a new government regulation coming and that we will be ready for that change.

## 5. REPORTS OF SPECIAL COMMITTEES:

### **Green-Laser Pointer (Randall Rosenfeld)**

Randall reported that the voluntary guidelines are published on the Web. A poster has been devised for download, as well as a national brochure.

### **Information Technology (Ryan May)**

Dave Lane reported for Ryan May that iMIS was handled outside the committee, and he also expects the committee will be more active in the coming year. The Web site will be redesigned over the next while.

### **Light-Pollution Abatement (Robert Dick)**

Chris Weadick reported on Rob Dick's behalf that the committee is focussing on how light impacts wildlife, new Dark-Sky Preserves, and Sky Quality Meters.

## 6. MOTIONS

MOTION AM1004 Moved by Adrien Bordage, seconded by Barry Matthews, that the annual membership fees of the Society be changed as follows:

For members with Canadian postal addresses:

1. Ordinary members - changed to \$70.00; and
2. Youth members - no change.

For members with United States postal addresses (in US dollars):

1. Ordinary members - changed to \$86.00; and
2. Youth members - no change.

For members with postal addresses outside Canada and the United States (in US dollars):

1. Ordinary members - changed to \$115.00; and
2. Youth members - no change.

The current Centre affiliation incentive remains unchanged. These new fees shall become effective at a date determined by the Executive Committee except no earlier than 2010 July 4. MOTION AM1004 was CARRIED

## 7. ELECTION OF AUDITOR

MOTION AM1005

Moved by Colin Haig, seconded by Brigitte Schaffer, that Tinkham and Associates be appointed as Auditor of the RASC.

A discussion ensued about whether we would change our auditor. Mayer Tchelebon advised that we haven't searched for a different auditor, as it would be more costly and with little benefit.

MOTION AM1005 was CARRIED

## 8. OTHER BUSINESS

There was none.

## 9. ADJOURNMENT

MOTION AM0906

It was moved by Denis Grey, seconded by Patrice Scattolin, that the meeting adjourn.

MOTION AM0906 was CARRIED.

The meeting adjourned at 11:05 ADT.

**James Edgar**

*Recorder*

## APPENDIX "A"

Deceased Members — 2009 January 1 to December 31

Lawrence Anderson (Charlottetown)

Leo Enright (Kingston)

Paolo Maffei (Kingston)

Norm Welbanks (Kingston)

Chelva Elankian (Toronto)

James M. McLeod (Winnipeg)

# ANNUAL REPORTS FROM THE CENTRES

## BELLEVILLE CENTRE

### RASC Belleville Meetings 2010

January	20th anniversary of Belleville club (1990-2010) 11 members present Speaker: David Cotterell: "Okie-Tex Star Party September 2009"
February	14 members present Speaker: Larry Hum: "Epsilon Aurigae from Citizen Sky"
March	14 members present Speaker: Greg Lisk: "Observing Mars" Member David Cotterell leaves for 9-day trip to Chile with 13 others Quinte Regional Science Fair, Belleville Centre awarded prizes to astronomy-based theme winners
April	16 members present Speaker: David Cotterell: "Atacama Desert, Chile" trip last month International Astronomy Day, April 24
May	14 members present Speaker: Greg Lisk: "ALMA Observatory, San Pedro de Atacama, Chile" Quinte Mall display: May 22 with public observing later in the evening Video presentation: "Russian Lunokhod Space Program"
June	14 members present Star-BQ - June 18 or June 19 Speaker: David Cotterell: "NEAF - Northeast Astronomy Forum, Suffern, New York" Speaker: Don Town and David Cotterell's trip to Texas Star Party at Prude Ranch near Fort Davis, Texas
July	7 members present Speaker: Greg Lisk: slide show of the club's Star-BQ last month Video: "Into the Universe"
August	10 members present Video: "Into the Universe - Aliens" "Starfest," 7 members attended August 28 - Public observing at provincial park, 5 club members attended
September	11 members present Speaker: Greg Lisk: photos of Starfest; woolly mammoth tusk; stony meteorite; Keicaousaurus fossil September Fall'n'Stars star party, September 17-18-19 - joint Belleville/Kingston event
October	18 members present Photos from Fall'n'Stars star party Video: "How the Universe Works" Observing night - October 8, 9, or 10
November	16 members present Observing night - November 12 Don Town: RASC update, Observing Reports
December	14 members present Club annual Christmas dinner, December 4 Video: "Keck Telescope" Observing night - December 10 or 11

**Joanne Burns**  
*Secretary*

## CALGARY CENTRE

2010 was another very busy year for public outreach by the Calgary Centre as several activities that began in 2009 as part of the International Year of Astronomy were continued and new activities were added.

### Membership

At the end of December, the Centre had about 275 members, slightly down from the same time last year. At our upcoming public events, volunteers will be highlighting Centre activities and the benefits of RASC membership to encourage attendees to join the RASC.

### General Meetings

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

January: Bev Thirsk, sister of Dr. Robert (Bob) Thirsk, a Canadian astronaut who has made several missions into space, gave a talk entitled "Journey to Space—from the perspective of an astronaut's family member." She spoke about witnessing Bob's recent launch from Baikonur Kazakhstan, and his 188 days on the ISS as part of the Expedition 21 crew.

February: Dr. Nic David, Professor Emeritus, University of Calgary, Department of Archeology presented a talk entitled "Dunhuang (P.R.China), the World's Oldest Star Atlas." The atlas consists of a scroll approximately 4 metres long and 25 cm wide and shows about 250 star asterisms separated into the 4 seasons. The scroll is dated at AD 660, and taking into account precession, numerous modern constellations can be identified and their placement is quite accurate.

March: Annual Peter Sim lecture: Kathryn Reese-Taylor, of the University of Calgary, gave a talk entitled "2012: Debunking the Mayan Doomsday Prophecy." Her presentation covered many historical examples of misinterpreting symbols found on ancient artifacts, and pinpointed many specific errors present in the interpretations made by the recent 2012 doomsday proponents.

April: Larry McNish, Past President of the Calgary Centre, gave a talk entitled "The Greatest Unsolved Mysteries in Astrophysics." He presented the latest thinking on 22 issues ranging from the creation of the Universe to dark matter, dark energy, and the theory of everything.

May: Dr. Peter Goetz presented a talk entitled "Nuke the Moon, or Selenology and the Moon." His talk reviewed the early days of the atomic bomb program and a 1950s project that was to send a missile armed with an atomic bomb to the Moon in the hope that lunar particles would be recoverable on Earth.

September: Alan Dyer, Pat Matsella, and Carole Benoit showed pictures and movies from trips they made to the South Pacific to view the July solar eclipse. Although they were mostly clouded out, their stories of the locations and cultural events they witnessed were very interesting.

October: Dr. Alan Hildebrand, of the University of Calgary, and Don Hladiuk gave a presentation on their trip to Australia to view the reentry of the Japanese Hayabusa spacecraft and the recovery of the return capsule. They had an excellent video showing the reentry, and reported that Japanese scientists had recently opened

the capsule and found particles they hoped were from the asteroid Itokawa.

November: The annual election for Calgary Centre Council was conducted, and several short member presentations followed: Steve Donaldson and Andrew Jones reported on their trip to The Amazing Meeting in Las Vegas; Larry McNish showed a movie he had made of comet Hartley passing by the Perseus Double Cluster; Victor Barbu reviewed a recent trip he had made to Costa Rica to see the southern skies; Don Hladiuk showed pictures from the recent balloon launch by the Airdrie Rocket Club, and an all-sky movie he had made showing the Milky Way crossing the sky at the Mt. Kobau Star Party.

### **Public Education**

Calgary Centre continued to provide volunteers to run the telescopes on the observing deck at the TELUS World of Science on most Friday nights. However, this activity had to be curtailed near the end of the year, as they brought in several major exhibitions, which prevented access to the observing deck.

Calgary Centre also supplied volunteers with telescopes for the University of Calgary Rothney Astrophysical Observatory open houses held monthly from January through November, which were well attended by the public. Highlights included excellent views of the Milky Way during a four-day event called Milky Way Nights in August, and a double shadow transit on Jupiter at a special Halloween themed event held in conjunction with local science fiction writers and fans.

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

Two annual public star parties were held at Fish Creek Park within the city, one in April and the other in October. This year, skies were poor for both events but attendees enjoyed the slide shows, light-pollution abatement display, telescope displays, and discussing various astronomy related topics inside the Environmental Learning Centre building.

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

We once again participated in the Mayor's Environmental Expo, setting up our Light-Pollution Abatement display and discussing responsible lighting and general astronomy topics with the many school children who attended the event.

Two very successful events were held at Blackfoot Crossing, a Siksika First Nations interpretive centre to the east of Calgary. Several elders related myths and legends associated with stars and the night sky, and Centre volunteers provided over a dozen telescopes to show visitors several deep-sky objects in excellent dark skies.

Volunteers set up our booth at two new events for us this year. The Outdoor Adventure Show was very well attended, and the attendees were quite interested in our display; we recruited several new members. The Aging and Active Living Show was not as well attended, and the fit with our usual target audience was not as good.

Several members with telescopes participated in a public outreach event in Elkwater, which is located in the Alberta side of the Cypress Hills Dark-Sky Preserve. They spent several nights there on their way to the Saskatchewan Summer Star Party.

RASC volunteers with telescopes also attended several other events in Airdrie, Champion, Vulcan, Camp Gardener, which is run by Scouts Canada, and Kananaskis Country, where an observing event was held for the Grade Six class of Hawkwood School. The most unusual location was the observation deck at the top of the

Calgary Tower in June, where about 75 visitors attending the World Seed Congress had the opportunity to look at Venus and a few other objects in telescopes.

### **Other Activities**

Special events included the Annual Awards Banquet in January, a members' barbeque at the Wilson Coulee Observatory (WCO) in June, New Members Night at the WCO in November, and the annual Turkey Feast event in December.

The Observing Group held monthly meetings at the WCO. For the first time in many years, the sky cooperated and the Messier Marathon event was a success; several members logged 100 objects. However, the fall OctoberQuest event was cloudy this year after several recent successful events.

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

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

The annual Star-B-Q event was held at the Eccles Ranch Observatory site in central Alberta in July. The Alberta Star Party was held in September at a campground by the Red Deer River in Starland County near Drumheller. Despite recent rain and poor forecasts, the sky was mainly clear both nights providing excellent observing under dark skies.

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

To provide a single listing of all astronomy related events in the Calgary area a new Web site, [astronomycalgary.com](http://astronomycalgary.com), was set up for IYA2009. The Calgary Centre, the Telus World of Science, and the Rothney Astrophysical Observatory decided to continue this initiative as it provides a coordinated calendar of events for all three organizations.

**Jack Milliken**  
*Secretary*



# CHARLOTTETOWN

CENTRE

We were busy March and April with meetings and events. First event was Earth Hour, March 27, with the City of Stratford hosting the observing night at Tea Hill Park. Buses were operating for the event and it was clear skies but very, very cold with snow on the ground. Turnout of dedicated observers was about 100 parents and children. All went home after viewing the Moon, Saturn, the Orion Nebula, and Mars.

Our second event was Astronomy Day at the Charlottetown Mall on April 24. It was a sunny, warm day, so the turnout to the mall was not as many as anticipated, but those who attended got lots of hand outs and enjoyed the many pictures of deep-sky events.

The May meeting was also our 1st annual Awards Night. All members of 5 years and over received a certificate of years of service. The Hall of Fame was also introduced and the first two recipients were Barbara Rogers and Earl Wonnacott.

On July 17, solar observing at Cavendish Cove was held. Attending were Mike, Jon, Jane, and Lance. About 25 guests stopped by to have a look at the Sun through our solar scope. Later in the day, we held our annual barbeque at Stanhope Cove Beach, and as usual it was well attended with everyone enjoying themselves. After the barbeque, Mike and a few of us went to Dalvey for public observing. About 20 attended the seminar, which Mike conducted, plus observing with Jane and Mike's telescopes. Saturn, Mars, and the Moon were observed.

August 7 was the annual blueberry festival at Greenwich with public attendance about a handful; club attendees were President, Jon McLean, & Vice-President Mike Critchley

## Night: Clear & Crisp

The night began with an awesome, well thought out presentation by Mike Critchley that was both educational and insightful. After the presentation was completed, the group gathered outside for at least two hours and were entertained with viewing of Jupiter and four of its moons; many of the constellations such as the Big & Little Dipper, Draco, the Sagittarius "Tea Pot," and many more. The evening ended with a viewing of Andromeda and the Milky Way.

Regular meetings were held in September, October, and November; the latter was also our election night for the new executive for 2011.

Fall Astronomy Day was held on October 16 at UPEI. Due to weather, there was not much observing but the evening speakers were great. After the speakers, we held a show-and-tell room where our scopes and astro info were on display with a few hand outs and club info. (It was a great membership-drive evening.)

We wound up the year with our annual Christmas/Year End dinner at Papa Joe's. It was well attended and the food was great. Again this year we held an astro Jeopardy before dinner.

We had two newsletters distributed this year with more coming in the new year.

**Jane Vicary**  
*Secretary*

# EDMONTON

CENTRE

No report submitted

# HALIFAX

CENTRE

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

While this year the Halifax RASC had many successes, it also had a personal loss. Mr. Ralph Fraser, a life member, passed away of cancer at the age of 92. Mr. Fraser will be missed.

## 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. The meetings are held in facilities provided by Saint Mary's University. The Centre's library cart, containing a selection of books on astronomy subjects, is available to members at each meeting except for an interruption in the fall due to a change in storage facilities. The Halifax Centre continued hosting a series of speakers at our monthly meetings who gave interesting and informative presentations, which included:

January - Presentation by Peter Giles "Who Wants to be an Astronaut?" (attendance 57). Peter is a Halifax resident with a Ph.D. in Applied Physics, was selected as one of 16 finalists for the Canadian Space Agency's astronaut recruitment campaign in 2009. Peter spoke about his experiences in the astronaut selection process, and what he learned along the way.

February - Presentations were made by members of the Halifax Centre Executive: (attendance 38)

"Comfort and Convenience in Observing" - Chris Young

"Globular Clusters" - Richard Vanderberg

"Modifications & Tune-up of a 4.5-inch Reflector" - Dave Chapman

"Solar Filters" - Dr. Roy Bishop

March - Presentation - "Stars that Go Bump in the Night" by Arne Henden, Director of the AAVSO, who spoke on stars forming novae, highlighting some of the interesting ones and providing some observing hints (attendance 42).

April - Brief presentations by Halifax Centre members on: (attendance 33)

"Setting Circles, Traditional and Digital" - Tony McGrath

"Polar Alignment" - Blair Macdonald

"iOptron Mini Tower, a New Alt-Azimuth Go-To" - Karl Penny

May - Presentation by Dr. Jack Josefowicz, Chief Technology Officer, LED Roadway Lighting, on the design, use, and benefits of LED lighting including energy conservation, lighting quality as it relates to visual perception and its impact on safety, and security in nighttime lighting of our communities. (attendance 34)



June – Presentation by Ken Donovan on “The Marquis De Chabert and the Establishment of Canada's First Astronomical Observatory at Louisbourg, 1750-1751.” Mr Donovan is a Parks Canada historian at the National Historic Site at Louisbourg and is also a lecturer at Cape Breton University (attendance 43).

September – A presentation of “Muin and the Seven Bear Hunters” a traditional night-sky story of the Mi'kmaq First Nation. This event was sponsored by the RASC Public Speaker Programme. The presentation was made by Elder Murdena Marshall, a spiritual leader of the Mi'kmaq people, assisted by Ms. Prune Harris, M.A., of the Integrative Science Program of Cape Breton University (attendance 92).

October – A presentation by Dr. Roy Bishop to mark the 100th anniversary of the birth of the remarkable astrophysicist and mathematician, Subrahmanyan Chandrasekhar, and Chandrasekhar's most notable work, the astrophysical Chandrasekhar Limit (attendance 44).

November – A presentation by Dave Chapman of the Halifax Centre on “Astronomy Outreach in Cuba: My Adventure” recounting his adventures in Havana, Cuba, 2010, including teaching Cuban youth about telescopes, touring the new Havana Planetarium, and appearing on a Cuban TV science program (attendance 36).

December – Guest Speaker – Mr. Charles O'Riley, formerly the Chief of Tidal Analysis and Prediction (CHS/Atlantic Region) spoke on storms, tides, storm surges, and “The Saxby Gale” of 1869 (attendance 33).

#### **Nova East Star Party, Smileys Provincial Park**

Regrettably, our annual Nova East Star Party was cancelled by the advance weather warnings of Hurricane Earl. The event normally runs for three days, this year planned for September 3, 4 & 5, but because of the closure of Smileys Park by the province for this tropical storm, we were forced to cancel the event on September 1.

#### **NOVA Program**

Our NOVA (New Observers to Visual Astronomy) program carried on from 2009 through spring of 2010. The fall of 2010 saw an increase in attendance to 25 participants with Councillor Sean Dzafovic 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.

#### **Newsletter**

Nova Notes, the newsletter of the Halifax Centre was published for five issues again in 2010; five issues are planned for 2011. The newsletter reports on each monthly meeting, providing a summary of meeting presentations, and including articles of astronomical interest to the membership. This year saw a change from paper to electronic distribution. Paper copies are available on special request. The change to electronic distribution is a significant cost saving for the Halifax Centre, and allows funds to be allocated for other Centre activities.

#### **Public Outreach and Beyond IYA**

Many of the Outreach programs started in 2009 during the International Year of Astronomy continued in 2010.

The Astronomy Nova Scotia Web site ([www.astronomynovas Scotia.com](http://www.astronomynovas Scotia.com)), hosted by SMU Astronomy & Physics, continues to be a great success in announcing all astronomy activities in Nova Scotia to the public.

Supported by the membership, the Halifax Centre has participated in library talks, major displays at malls, sidewalk astronomy outreach programs, many “astronomers in classroom” events, and telescope clinics. In the past year, the Centre has continued to

increase the visibility of astronomy, the importance of responsible lighting, on a person-to-person basis and through the media.

Halifax Centre assisted Parks Canada with their application to have Kejimikujik National Park and National Historic Site declared a Dark-Sky Preserve (DSP). Keji was designated Nova Scotia's first Dark-Sky Preserve in August 2010, after two years of hard work by members of the Halifax Centre and staff at the park. The DSP will ensure an accessible zone will exist in the Park, unspoiled by artificial light and sky glow. There is also a public outreach component with facilities to help park visitors interpret and enjoy the night sky and to learn about the importance of natural skies to the environment. There is a long-range plan to include an observing area within the park, possibly with an enclosed telescope. It is hoped to include native star lore along with scientific information about the sky.

The Halifax planetarium has attracted as many people this year as during IYA2009, and we appreciate the assistance of Dalhousie University staff for their work in keeping this wonderful astronomical asset operating, and to the Centre members who have taken the time to present at the Planetarium and supported its operation.

#### **Goals for 2011**

The Halifax Centre has committed to carry on many of the public outreach programs provided in 2010. The Executive Council, along with the Public Outreach and Education Committee, and the drive and dedication of its members, will continue the sidewalk observing sessions, library talks, mall displays, provide presenters for the planetarium, and maintain the Astronomy Nova Scotia Web site, which provides easy access to all astronomy event information.

**Chris Young**  
*Secretary*

## **HAMILTON** CENTRE

The Hamilton Centre of the RASC had another good year in 2010. We built on some of the things we'd done for the International Year of Astronomy, started converting the Centre's venerable 17.5-inch into a Dobsonian, continued with the semi-annual series of astronomy workshops and lectures in conjunction with the City of Burlington, and offered a number of talks to church groups, historical societies, and others. The Hamilton Centre achieved a lot with relatively few resources.

#### **Meetings:**

- |          |   |
|----------|---|
| January  | Our speaker was the amazing Paul Delaney of York University, who enthralled everyone, talking about Exploring Mars.   |
| February | Laura Thomson, of the University of Western Ontario, who told us about the Centre for Planetary Science and Exploration (CPSX) at the University of Western Ontario   |
| March    | Our speaker was Ralf Gellart, of the University of Guelph, builder of the X-Ray spectrometer on both Mars rovers Spirit and Opportunity, and has a more-advanced one going with the Mars Exploration Rover. |
| April    | Colin Haig talked about his recent trip to the Atacama in Chile   |
| May      | Jerry Wright, of Perceptor, on Cosmology  |
| June     | Members Mark Kaye, Steve Barnes, Glenn Kukkola, and an incredible talk by Kerry-Ann Lecky Hepburn of the Hamilton Amateur Astronomers.  |

# KINGSTON

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## CENTRE

We currently have a total of 85 Society members: 77 Regular members, 1 Youth member, and 7 Life members.

Except for July and August, Regular Meetings were held on the second Friday of each month at 7:30 p.m. in Theatre A or D, Stirling Hall, Queen's University.

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|--------------|---|
| January 8    | Member's Night featuring short presentations by Susan Gagnon, Doug Angle, and Fred Barrett.                 |
| February 12  | Dr. Daryn Lehoux "The Antikythira Mechanism"  |
| March 12     | Member's Night featuring short presentations by Susan Gagnon, Kevin Kell, Leslie Roberts, and Fred Barrett. |
| April 9      | Member's Night featuring short presentations by Leslie Roberts, Bob Hilson, and Kevin Kell.                 |
| May 14       | Fred Barrett "Picture Stacking With Registax"   |
| June 11      | Randy Attwood "The Apollo 11 Landing - and How It Nearly Failed"  |
| September 10 | Terence Dickinson "A Personal Quest for the Finest Stargazing Location in the World"                        |
| October 8    | Member's Night featuring short presentations by Fred Barrett, Ken Kingdon, and Doug Angle.                  |
| November 12  | Annual General Meeting  |
| December 10  | Dr. Rachel Kuzio de Naray "Revealing the Dark Side of Spiral Galaxies"                                      |

The Kingston Centre offered public observing for Astronomy Day. Displays and public observing were offered at the charity event "Relay for Life." Members also gave presentations at several area schools, local clubs, and offered public observing at the Charleston Lake Star Party. As well, a judge and a prize was contributed to the area Science Fair.

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

The Fall 'N' Stars 2010 star party, hosted jointly with the RASC Belleville Centre, was once again a great experience for all who attended.

Work continues on a Remotely Operated Telescope.

**Steve Hart,**  
*Secretary*

# KITCHENER-WATERLOO

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## CENTRE

### Meetings

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

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

September Member's night: Colin Haig at the New Brunswick GA, Gordon Bulger on the summer's total eclipse of the Sun near Tahiti, Bert Rhebergen talked about solar observing, and Gary Colwell on how he took that incredible picture that won SkyNews astrophotography of the year!

October There were two meetings, one for the public and another for members only.  
General meeting: Robert (Bob) Murrow, of Tomato-Sphere.

Annual meeting: Held at the Observatory: reports of the officers; question and answer session, elections.  
November Andy Blanchard on astrophotography and Colin Haig gave two presentations from the RASC; one was on the strategic plan for the RASC for the next decade, and another on Green-Laser Pointers  
Paul Gray visited our observatory from New Brunswick, and gave a good talk, by all accounts.

December Ron Brecher, of the KW Centre, on Astrophotography.

In 2010, the Hamilton Centre continued doing our Sidewalk Astronomy evenings. All but one were clouded/rained out, which really put a damper on things. The permit fees were paid for by the City of Burlington in exchange for the programming we offer at their Discovery Landing facility.

The seminars and workshops we offered with the City of Burlington continued with spring and fall sessions. We had to revamp the content a little as we were unable to source GalileoScopes at a reasonable price. For the spring session, however, we found a source of Celestron Firstscopes, the table-top 3-inch Dobsonians, and these worked very well. For the fall session, we offered a workshop with peoples' own telescopes.

The Sidewalk Astronomy sessions we did with Westfield Pioneer Village look like they will be expanding considerably, with the opportunity to have several nights at their facility, as well as being able to assist them with an exhibit on Victorian amateur scientists. The telescope belonging to our founder, the Reverend Marsh, will be on semi-permanent display there.

For a decade, the Hamilton Centre had been meeting at the Hamilton Steam and Technology Museum, which we had been paying for. Discovery Landing offered their site to us as long as the meetings were open to the public, which was not a problem, as they always had been. So, starting in January 2010, the Centre's monthly meetings were held in Burlington. These were highly successful, although it took us a while to find another gastronomical site for our post-meeting meetings! Far too many places want to have live music on a Thursday night, which is definitely not conducive to conversation.

All in all, it was another busy year for the small, but highly effective board. We moved our meetings to Discovery Landing, put a new meeting structure in place, reached out to the community, not just through sidewalk astronomy, but by offering tailored talks to other community groups. We started refurbishing our 17.5-inch scope, and continued the partnership with the City of Burlington through the workshops, so it is safe to say that the Hamilton Centre is continuing its renaissance.

With grateful thanks to Will Gray, Mark Pickett, Gary Colwell, and Andy Blanchard,

**Roger Hill**  
*President*

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

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

### Functions:

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

### Speakers Nights

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

### Summary of 2010 Activities

During 2010, the Centre held 10 General Membership meetings and 9 Stargazers 101 meetings, with guest speakers' subjects as diverse as: trips to North American and South American observatories; municipal light-pollution abatement efforts in K-W; astrophotography methods and tips; eyepieces and their differences; filtering methods for observing (as opposed to astrophotography); and historical figures in astronomy over the centuries.

We attempted to have public star parties several times, during the year, but each time we were met with bad weather. Our outreach efforts, however, were generally more successful: we held 15 star parties, for schools and Scouting youth, and each one was blessed with clear skies. We also handed out well over 250 RASC Star Finders at these outreach activities.

### Outreach Activities:

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

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

### Observing

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

We have also received permission from a couple who live near Conestoga Lake Conservation Area, to use a part of their farm for dark-sky observing and astrophotography. We are grateful for their contribution to our Centre.

### Phil Lacasse

*Secretary*

Twenty-ten was a fantastic year for London Centre, the year following the Year of Astronomy. Outreach events continued, sometimes at a frenetic pace, and by reaching so many of those interested in astronomy our membership grew by 20 percent. These new members generally have been interested in astronomy for many years, are keen observers, and have discovered that the friendships they make in London Centre can enhance their observing experience.

London Centre has desired an observatory for almost as long as the Centre has existed. Plans have finally firmed up, foundations have been started at the Fingal Wildlife Management Area with the permission of the Elgin Stewardship Council, and, by late this spring, the first of two roll-off-roof structures should be up.

London Centre continues to support the University of Western Ontario's astronomy outreach program Exploring the Stars held three evenings a week at the Cronyn Memorial Observatory. Our Outreach Coordinator, Robert Duff, deserves special mention due to his commitment to attend almost every event through the fall and winter. Many other members also support the summer Saturday evening Cronyn Open Houses.

### Monthly Meetings

London Centre continues to meet at Fanshawe College, in Room B1073, on the third Friday of each month at 7:00 p.m. Our Upcoming Events page at [www.rasc.ca/London](http://www.rasc.ca/London) has the latest information.

January 15 - London Centre Astro-Imagers Bill Gardner, Jon Gunning, Peter Raine, and Gerald Kennedy presented their images, showing raw camera work, described the process of guiding, taking flats and dark frames, image stacking, image processing, the theory and practical side. They just totally amazed their audience. Arthur Oslach and Rick Saunders came prepared to show off their work too, and will get their chance as soon as it can be arranged. In fact, the demand is so high that a separate imaging workshop is being planned on a Saturday in the near future, during full Moon of course!

February 19 - Our Guest of Honour was Steve Pellarin of Windsor Centre. Steve set up and enthusiastically described the building of his massive metal monster 71-cm (28-inch) f3.6 truss reflecting telescope. The telescope uses a precision Kennedy mirror, and tracks the stars and galaxies with a Sidereal Technology drive system. The telescope won accolades at Stellafane and Starfest. Alyssa Gilbert described her interest in preserving the Elginfield Observatory and using it for public outreach and science education. Denis Grey was present to answer questions about the developing business plan.

March 25th - Guest of Honour, David Lane, RASC National President, talked about the development of his backyard observatory, Abbey Ridge Observatory, and how his search for supernovae has evolved into supplying accurate variable-star magnitude data to doctoral candidates for their research. Dave also took pleasure in presenting Bob Duff with his well-deserved Service Award.

April 16 - Colin Haig from Hamilton Centre and our own Dave McCarter described their March trip to Atacama Lodge near San Pedro de Atacama in Chile. During the local tours led by the trip organizer, Steve Barnes, they took pictures of the amazing landscape, volcanoes, geysers, local wildlife, mountain lakes, ancient ruins, and horribly rough salt flats, as well as the wonderfully clear and contrasty southern skies. The pictures of the southern Milky Way, including Alpha and Beta Centaurus, the Southern Cross, the Eta Carinae Nebula, and other unfamiliar clusters and star patterns, taken by both Colin and Dave, were inducement enough to convince others to consider the trip.



May 21 - Bill Gardner and Craig Levine presented tips for beginners, and reminders for experienced observers who have let their observing and recording skills lapse. Other members contributed as well. Dave McCarter gave a detailed description of his recent meeting with Pinery Park officials, and presented their suggestions on how to have a less stressful star party this summer. Dave then presented a model of a plan to build the observatory, and much discussion followed. While more engineering is required, we are getting much closer to starting.

June 18 - Peter Jedicke, having recently returned from a two-week trip to San Pedro de Atacama, talked with passion and enthusiasm about The Southern Globular Clusters. Dave McCarter showed a few easy star hops to famous and easy-to-see summer deep-sky wonders, and John Kulczycki discussed his Pocket Sky Atlas must-see objects in this season's sky.

July 16 - Vice-President Patrick Wehlan gave a presentation of Virtual Moon software. Members gave personal observing reports. Steve Arenburg showed several Web sites that featured either star charts or huge amounts of star information. Members watched a video by Carolyn Porco about the Cassini mission to Saturn. Patrick got people discussing his article for *Polaris* entitled "Technology Dependency." John Kulczycki handed out an Elginfield Observatory fact sheet to those who would take part in the open house, and also gave a presentation for his July Pocket Sky Atlas Challenges.

September 17 - London Centre's first fall monthly meeting featured Guest of Honour Terence Dickinson. Technical glitches with the built-in computer control forced us to relocate the meeting from the fabulously refurbished D1060 to our regular haunt, B1073, and it was standing room only for Terry's amazing talk Seeking the Best Stargazing Location on Earth. Terry answered questions throughout his talk, and after the presentation of upcoming events, a door-prize draw was held. Copies of *The Universe and Beyond* were won by Sarnia Centre member Dick Perkins, Ben Clinton, son of London Centre Life member Eric Clinton, and London Centre member Suzie Chelco. The astronomical discussions continued at nearby Kelsey's until well after closing time.

October 15 - Dr. Sarah Gallagher gave an amazing talk on the black holes found at the centre of most galaxies, quasars, and the development of the jets and extreme winds that help to limit the black hole growth in relation to the size and age of the galaxy. There were many knowledgeable questions from her attentive audience, and some judged it one of the very best talks we have had.

November 19 - New Brunswick amateur astronomer Paul Gray presented his talk titled *Observing Nothing - Tales from Dark Nebulae* in which Paul spoke about the E.E. Bernard dark nebulae. John Kulczycki brought Western's copy of the two-volume *Photographic Atlas of Selected Regions of the Milky Way* by E.E. Bernard, to the amazement of all.

December 17 - We enjoyed a rapid-fire pre-recorded talk by Dr. Bill Bottke "Exploring the Early Bombardment of the Inner Solar System." Certain members, with loads of questions, were frustrated that they could not quiz Dr. Bottke in person. We also had our usual Christmas Celebration. The Celestron First Scope, donated by Antony Chodis at McKittrick's, was won by Steve Imrie, who said he had a young person in mind for it. John Kulczycki donated festive wood bookmarks, which were a hit as well.

## 2010 Outreach Events

January 14 - Dave McCarter visited A.B. Lucas Secondary School and presented a custom program to the first meeting of the Planetary Science Club, which plans to have weekly meetings. There were six students and two faculty members present.

January 23 - Dave McCarter presented an Astronomy Resources show to 26 Scout leaders at Spencer Hall for the London Scouting Oak Tree Conference.

January 25 - Harold Tutt and Dave McCarter gave a new astronomy presentation called "Boundless Interest" to 27 members and guests of the Odd Fellows Lodge in Harrietsville, following an excellent pot-luck dinner. Harold displayed three telescopes, a wide variety of astronomy books, posters, and pamphlets, and answered many questions. Dave and Harold then gave everyone a Star Finder and explained its use. Several copies of Mary Lou's New Telescope and London Centre pamphlets were also given out.

January 27 - John Kulczycki and Dave McCarter visited the 20th London Beaver Colony at Stoneybrook Public School, and provided low- and medium-power views of the Moon in a cold and hazy sky. Following the observing, which was a big hit with the 15 Beavers, 5 parents, and 3 leaders, Dave gave a PowerPoint presentation about the Moon, specifically designed for their age group, and answered many questions.

January 30 - Cronyn Observatory Open House. Completely clear skies encouraged 51 visitors to attend the talk and observing at the January Cronyn Observatory Open House on Saturday evening, despite the bitter cold. Graduate student Amanda Papadimos gave her digital slide presentation, "Planets, Planets, Planets," and distributed Galileo Moment cards, RASC London Centre brochures, as well as several copies of "Become a Sidewalk Astronomer." Dave McCarter operated the big 25.4-cm refractor in the dome, showing visitors views of Mars and the full Moon. The steam plume from the heating plant to the east destroyed the seeing during the early hours, but as Mars and the Moon rose above the white clouds, the seeing improved considerably. Four amateur telescopes were set up on the Observatory's roof patio: London Centre's 25.4-cm Dobsonian, Greg Andres' 20.3-cm Sky-Watcher Dobsonian, and Mike Roffey's 80-mm Sky-Watcher refractor; Paul and Charlene Kerans, not yet London Centre members, impressed visitors with their 30-cm Meade truss-tube Dobsonian. Visitors were able to discern Martian faint dark features and the polar brightening of the north-pole ice cap. We also showed the Moon, although the almost-full disk showed more albedo features than cratered roughness; the Orion Nebula (M42), and the Andromeda Galaxy (M31) were somewhat diminished by the brilliant Moon and city sky glow. Bob Duff, Richard Gibbens, Peter Raine, and Cheri McCracken were also there bringing the total of RASC London Centre presence to seven members.

February 24 - Dave McCarter visited St. Thomas Public Library and gave an illustrated talk *Earth's Moon* to two grade-three classes and a grade-six class, plus five home-schooled students, their teachers and parents for a total of 75 people. Many of the questions were very astute and showed a lot of thought about how our Earth-Moon system works. Everyone received a Star Finder, and ten copies of Mary Lou's New Telescope were given for the best questions. Many thanks to the Library staff who hosted the event.

February 25 - Dave McCarter braved ice-covered roads and strong crosswinds to head down to Springfield Public School, where he was warmly greeted by the principal. Dave set up in the gym to give an astronomy presentation to Miss Buchanan's grade-five and -six class, 20 kids who were having a sleep over. There were some good discussions, a Q&A session, and everyone assembled and learned how to use an IYA2009 Star Finder.

February 26 - Long-time London Centre members were saddened to learn of the passing of London Centre Past President Dr. David Toth, of Spencerville, Ohio, after a year-long illness. Flowers were sent and Joe O'Neil drove down to be a pallbearer.

February 27 - At the Cronyn Observatory Open House, the cloudy skies and mild weather greeted ten visitors. Graduate student Alexander DeSouza gave a PowerPoint presentation. After the presentation he took them up into the dome to show them the big 25.4-cm refractor, and answered a few questions.

March 8 - Dave McCarter presented his new illustrated talk Travelling for Astronomy to 27 people at Novack's Travel Store in downtown London. The presentation was well received and several questions were asked.

March 10 - London Centre members held a Siderius Nuncius Party to celebrate the publication exactly 400 years ago of Siderius Nuncius, or Starry Messenger, in which Galileo described his first telescopic observations during the previous two months of the motions of Jupiter's moons, craters and mountains on the Moon, and stars of the Milky Way.

March 26 - London Centre members attended the 7th Annual Planetary Science & Exploration Public Lecture at which Dr. Lynn Rothschild from NASA Ames talked about life in extreme environments as an example of where we might expect to find extraterrestrial life.

March 27 - Graduate student Emily McCullough gave her presentation, "Stellar Spectra," before 31 visitors to the Cronyn Observatory for the Exploring the Stars Open House. By the end of the evening, we had 52 visitors. Bob Duff set up the 25.4-cm Dobsonian on the observatory roof patio and made ready the refractor in the dome, directing it at the communications tower in south London, as clouds had obscured the sky. Bob gave a brief presentation to the group before Emily arrived upstairs to give her telescope tour. She showed them the communications tower and the nearly full Moon through hazy clouds. Adam Priestap-Suttis and Cheryl Priestap arrived and Adam helped with the 25.4-cm Dobsonian, showing visitors the Moon through hazy clouds. People kept arriving right up until closing time at 9:00 p.m.

March 31 - Members of London Centre attended the Nerenberg Lecture given by Canadian astronaut Steve MacLean, president of the Canadian Space Agency. He spoke with feeling about the role that the space program has had on shaping our world, and the future role for Canadian space technology to shape and improve our lives.

April 3, The Astro-Imaging Workshop held by London Centre at Fanshawe College was a great success, with 12 people, including RASC members from Hamilton and Toronto, in attendance. Rick Saunders and Bill Gardner walked us through the use of SLR and CCD cameras, and the subsequent image processing. Many thanks to Mike Costa and Peter Jedicke for setting it up. Look for good things to be shown at future meetings!

April 8, Science author Dan Falk spoke about his latest book *In Search of Time: Journeys along a Curious Dimension* at Fanshawe College as part of the Fanshawe College Literary Series. The audience of over 100, many of whom were London Centre members, paid close attention and asked many questions, mostly about time travel.

April 19 to 23, To celebrate Astronomy Week, London Centre members Everett Clark, Ramona Coutney, Bob Duff, Bill Gardner, Gary Hinks, Paul Kerans, John Kulczycki, Dave McCarter, Matt Neima, Mike Roffey, Harold Tutt, and Patrick Whelan, set up a total of 14 telescopes and one tripod-mounted 10x50-mm binoculars at Chapters North Bookstore each night, braving cold and blustery winds. The Moon and Saturn were the main views in the brightly lit parking lot. An estimated 317 visitors looked through our telescopes over the 5 nights.

April 23, It was Kids First Day at the Cronyn Observatory, and London Centre members helped out by operating telescopes in the dome, the roof patio, and on the sidewalk. Harold Tutt set up his refractor on the sidewalk, while Paul Kerans, Mike Roffey, and Adam Priestap-Suttis set up on the patio roof. Dave McCarter operated the big refractor in the dome. An estimated 400-plus visitors of all ages enjoyed the views.

April 30, London Centre members Bob Duff and Dave McCarter drove up to Camp Attawandaron, located between the Ausable River Cut and the Pinery Provincial Park, to provide a star night for the Can-Am Scouts Jamboree, co-hosted with Marty Cogswell and Joe Clements of Sarnia Centre. We had moderately clear skies and showed well over 200 scouts and leaders views of Saturn and, a little later on, Mars. The skies were totally clear for a while and M51, M13, M67 and M68, and M81 and M82 were shown at that time. The ISS provided a very high pass about 21:30, plus we had the chance to look at a few deep-sky objects when the skies allowed.

May 1, London Centre celebrated Astronomy Day in front of McKittrick's store at Cherryhill Mall. Members Roman Dubinski, Bob Duff, John Kulczycki, Dave McCarter, Dan Tremblay, Harold Tutt, and Peter Jedicke set up a data projector and lap top with hundreds of amazing images, set up their telescopes, and talked to a great many people interested in learning more about the night sky.

May 3 - Dave McCarter presented his version of Peter Brown's show *Surviving the "Big One"* about the odds of major impacts of asteroids and comets upon the Earth to 27 members of the Woodstock Naturalists at Huron Park High School in Woodstock.

May 15 - Dave McCarter gave two digital slide presentations on stars and constellations and Earth's Moon before 17 children and 5 adults of the 1st Aylmer Cub Pack at Camp Barnabas. Other RASC London Centre members present were Bob Duff, Bill Gardner, Steve Imrie, Harold Tutt, and Neil Whyte. Neil set up his Takahashi FSQ-106ED on the stage beside the screen. Bill and Dave distributed Star Finders and showed the children and leaders how to use them. Despite hazy skies, the children observed the ISS pass at 9:33 p.m. The star night was over by 10:00 with no observing through telescopes due to the hazy sky.

May 19 - Exceptionally clear and mild weather at our Fingal Dark-Sky Site greeted about 60 parents and children of A Different Drum: Homeschoolers of Southwestern Ontario group who came out to view the skies through London Centre members' scopes. Dave McCarter started the night by introducing the Fingal area and providing some history. We asked the children to stay away from the killdeer nest somewhere on the southeast side of the pad, and to watch for but stay away from the fawn hiding in the grass to the west. London members Charles Bonello, Bob Duff, Dave McCarter, Mike Roffey, Matt Neima, and Harold Tutt set up telescopes, and Cheri McCracken and Pete Raine enjoyed all the activity. Newcomer Ryan Fraser brought out a new pair of Celestron 8x56 binoculars to try and they proved fantastic. We looked at Venus, the Moon, Saturn and several moons, tiny Mars, and many deep-sky objects. One young boy quickly got the hang of taking pictures through the telescope and has a number of great shots of the Moon, Venus, and Saturn. After our guests left, several members stayed to observe until 3 a.m.

May 28 - At the Camp Timken Star Party Steve Imrie, Dave McCarter, Matt Neima, Mike Roffey, and Harold Tutt set up telescopes by the cookhouse, and, while listening to a reasonably fair Beatles knock-off band do their gig in the big field, provided excellent views of Saturn, Mars, and other objects like M82 to the 200-plus Scouters.

May 29 - At the Sydenham Area Cuboree held at Camp Sylvan we had a star night for about 120 Cubs and leaders. We were fortunate to enjoy a memorable star night under clear skies. Bob Duff, Dave McCarter, and Harold Tutt, showed them Venus, Saturn, Mars, globular cluster M13, galaxy M51, The Ring Nebula M57, the famous "Double Double" star Epsilon Lyrae, double stars Castor, and Mizar and Alcor in the handle of the Big Dipper. We watched an overflight of the X-37B space plane for a few minutes as it reached 42 degrees high in the southern sky. The star night ended for the Cubs around 11 p.m., and members observed with a leader and Scout for a little while before packing up at 11:20.



June 3 - Many London Centre members went on the Second Biannual Observatory Tour, to visit local amateur observatories. The tour consisted of visiting the Lake Valley Grove Observatory, where Charlie Barbara displayed his meteorite collection, the Kulczycki Observatory, the Hinks Observatory, the Oslach Observatory, the Pictor Observatory, and the Kennedy Observatory. Danielle and Gerald Kennedy hosted the Hickson Star Party, providing excellent hamburgers, hot dogs, and numerous desserts. Heavy rain prevented any observing.

June 11 - Dave McCarter was joined by Colin Haig to be the guest speakers at the Kitchener-Waterloo Centre meeting to give their Chile talks.

June 15 - Dave McCarter was the guest speaker at the Windsor Centre with his Chile talk.

June 16 - Dave McCarter presented his new slide show, The Power of Observation to five Grade 9 classes at Oakridge S.S. in three separate periods, for a total of 130 students.

June 19 - London Centre held this year's Longwoods Conservation Area Astronomy Talk and Star Party. Dave McCarter gave The Power of Observation talk and handed around several meteorites with 26 children, parents, and guests in the Longwoods Interpretive Centre. Bob Duff, Andy Blanchard, Ryan Fraser, Harold Tutt, and Rick Saunders set up their telescopes and provided stunning views of the first-quarter Moon, Mars, Saturn, and deep-sky treasures like M27, M51, M57, and M13. Andy had his 56-cm (22-inch) Obsession Dobsonian that provided truly spectacular views, and observing continued until midnight.

June 20 - This month's Observers Group Meeting was held at Patrick and Bridget Whelan's place, and actual observing occurred, mostly of the Moon and Saturn. Bob Duff really enjoyed using Rukl's Atlas of the Moon to identify certain craters and other features. In the snack department, Cheryl's cheesecake was spectacular and didn't last long. The group also watched the Perimeter Institute welcome to Steven Hawking on TVO, and afterwards a discussion about the nature of black holes left people with lots to cogitate.

June 26 - The star night at Springwater Campground had a mix of clear sky and clouds for London members Tom Czinege, Bob Duff, and Steve Imrie, who set up their telescopes for between 30 and 40 adults and children and showed the campers Saturn, Epsilon Lyrae, M57, Albireo, Mizar and Alcor. A couple of campers brought small refractors. They packed up around 11:15 p.m., after a very satisfactory evening of stargazing.

July 24 - Elginfield Observatory Open House. The weather cleared for a short time before sunset for some open-house observing. Postdoctoral Fellow Alyssa Gilbert coordinated the event; while Nicole Kaiser from Let's Talk Science gave tours of the Observatory; graduate student Teznie Pugh worked in the telescope control room. Drs. Peter Brown and Amelia Wehlauf were also there, assisted by London Centre members Harold Tutt, John Kulczycki, Richard Gibbens, Patrick Whelan, Peter Jedicke, Charlie Barbara, Bill Gardner, Mike Jager, John Rousom, Joe O'Neil, Matt Neima, Mike Roffey, Steve Arenburg, John Dixon, Ryan Fraser, Suzie Chelico, Roman Dubinski, and Bob Duff. Harold Tutt brought his 80-mm Stellarvue refractor, John Kulczycki his 70-mm Stellarvue refractor and 150-mm Meade MTS-SN6 Schmidt-Newtonian, and Matt Neima his 20.3-cm Celestron Schmidt-Cassegrain. People were briefly able to view Venus through these telescopes. Patrick Whelan showed visitors views of prominences on the late-afternoon Sun through his 40-mm Coronado P.S.T. H-alpha solar telescope. Harold Tutt also showed visitors sunspots through his 80-mm Stellarvue refractor with homemade Baader solar filter, and then the Moon for approximately half an hour until the sky became too cloudy. Charlie Barbara set up an extensive display of his large collection of meteorites in a room on the main floor of the observatory, giving

a few samples away to enthusiastic young visitors. Peter Jedicke showed a continuous line of visitors the planet Venus (near half-phase) through the big 1.2-m Ritchie-Chretien telescope in the dome. John Kulczycki showed groups of visitors the aluminizing vacuum chamber used every two years to re-aluminize the 1.2-m primary mirror. Alyssa Gilbert reported an estimated 500 visitors, and that there were many favourable comments from people about how friendly, helpful, and knowledgeable everyone was. Charlie Barbara's meteorite collection was a big hit! The sky clouded over as the evening progressed, although the full Moon was visible occasionally through hazy clouds. In all, the evening was a great success.

July 31 & August 1 - Quai Du Vin Winery Star Nights.

On Saturday evening, London Centre members present included Harold Tutt, Glen Spooner, Arthur Oslach, Steve Imrie, Dave McCarter, Bob Duff, Peter and Dianne Jedicke, Mike and Donna Costa, and Joe O'Neil and son, Kristin. London Centre President Dave McCarter started fielding questions from the audience around 9:00 p.m., then began his digital slide presentation, The Power of Observation, around 9:15. In spite of cloudy skies, there were 22 visitors, plus the owner Rob Quai and his wife, making for a sizeable audience enjoying the presentation. Wine and cheese followed for the astronomers around 11:00 p.m.

On Sunday evening, with the promise of some clear skies, London Centre members set up 17 member telescopes, one Galileoscope and one tripod-mounted binoculars, including, Adam Priestap-Suttis and his mother, Cheryl, with Adam's 20.3-cm Sky-Watcher Dobsonian; John Gunning with his 130-mm Astro-Physics StarFire refractor; Roman Dubinski with his 127-mm Sky-Watcher Maksutov; Mike Roffey with his 80-mm Sky-Watcher refractor; Matt Neima with his 20.3-cm Celestron Schmidt-Cassegrain; Bob Duff with his 20.3-cm Starfinder Newtonian on its Dobsonian mount; Harold Tutt with his 80-mm Stellarvue refractor; Peter and Dianne Jedicke with Peter's Galileoscope; Rick Saunders with his Stellarvue 102 ED refractor; Tom Czinege with his 20.3-cm Celestron Schmidt-Cassegrain; Mike and Donna Costa with Mike's 25.4-cm home-built truss-tube Dobsonian; Everett Clark with his 114-mm Tasco Newtonian; Kelly Manson with his 23.5-cm Celestron Schmidt-Cassegrain and 10x70-mm tripod-mounted binoculars; Glen Spooner with his 32-cm home-built truss-tube Dobsonian; Peter and Cheri Raine with their 90-mm Williams Optics refractor and 25.4-cm Sky-Watcher Dobsonian; Dave Clark with his Clear Skies program on his laptop and his 20.3-cm Celestron Schmidt-Cassegrain; and Mike Jager with his 20.3-cm Sky-Watcher Dobsonian. In addition, Peter Jedicke and Arthur Oslach both had Celestron SkyScout Personal Planetarium for locating sky objects. Patrick Whelan brought his 10x50-mm Vixen binoculars. Other members present included John Dixon, Maria Lavdas, Dave Rubenhagen, Mark Stevens, and Jenny Shaw. Hamilton Centre member Andy Blanchard was also there. Two women who were non-members brought their 60-mm Bushnell refractor, and were assisted with its use. Bob Duff gave them a "Become a Sidewalk Astronomer" booklet, a London Centre brochure and assembled two Star Finders for them.

Shortly after sunset, Venus was spotted in the western sky, and, using it as a stepping stone, members then found Saturn. The audience observed both planets in a still very bright sky. Then London Centre President Dave McCarter gave his digital slide presentation, The Power of Observation, which was well received. Cloudy skies made observing difficult and visitors were able to view only a few objects (mostly in the south) through telescopes. It was not until close to midnight that the skies overhead cleared and members and guests were able to view objects overhead and the waning Moon and Jupiter in the east. Matt Neima got a nice view of Jupiter in his 20.3-cm Celestron Schmidt-Cassegrain. Wine and cheese followed past midnight under starry skies. In all, there were 27 people from London Centre and one member from Hamilton Centre, with an

estimated 120 visitors at the second Quai du Vin Star Night. Our deepest thanks go to all guests and members who turned out to make this event worthwhile despite the clouds, and to Robert Quai for hosting the event at the Quai Du Vin Winery!

August 12-15, About 25 London Centre members attended Starfest to socialize, do astro-imaging, observe, or just keep an eye out for Perseid meteors. Several nights were clear, some were mostly clouded out, and everyone had a fabulous time. Once again, the pot-luck dinner on Friday night was well attended, including RASC members from other Centres who know about this well-kept secret of Starfest.

August 17 - The star night for St. Mary's Public Library at McCully's Hill Farm was cancelled due to cloudy skies. Matt Neima, Bob Duff, and Peter Jedicke, as well as the Summer Reading Program Coordinator for St. Mary's Public Library, attended to speak to any visitors who arrived in spite of the poor weather. Daryl Newcombe of CTV Channel A News showed up and interviewed Peter Jedicke about the future of Elginfield Observatory, videoed against the vivid backdrop of a glorious red sunset.

August 18 - Star night for St. Mary's Public Library held at McCully's Hill Farm. A bright Moon at two days past first quarter dominated the bright clear sky as London Centre members Bob Duff, Adam Priestap-Suttis and his grandfather, David, Gary Hinks, Peter Jedicke, Dave McCarter, new member Luigi Perzia, and Mike Roffey arrived with their telescopes at McCully's Hill Farm. Three St. Mary's Public Library staff members were also there, with the library's 76-mm Newtonian, which Dave McCarter showed how to set up and use. There were about 45 visitors to whom Peter Jedicke gave a sky tour with his green-laser pointer. Visitors enjoyed good views of the Moon, M13, M57, Epsilon Lyrae, Mizar and Alcor, and other deep-sky objects such as M31. Later in the evening, they viewed Jupiter and Uranus rising in the southeast. The visitors were very appreciative and London Centre members continued observing for a while after the visitors left, until around 11:15 p.m., followed by refreshments at Tim Hortons in St. Mary's on the way home.

August 21 - The second Elginfield Open House began under cloudy skies and rain, but eager visitors began arriving at 5 p.m., a full hour early! The event was coordinated by Western Postdoctoral Fellow Alyssa Gilbert from the Department of Earth Sciences, while Physics and Astronomy graduate students Emily McCullough and Amanda Papadimos greeted, assisted and counted visitors. Faculty members present included Drs. Peter Brown, Paul Wiegert, and Pauline Barmby of the Physics & Astronomy Department.

London Centre members assisting with the program included John Kulczycki, who set up his 70-mm Stellarvue refractor, and Adam Priestap-Suttis, who brought his 20.3-cm Sky-Watcher Dobsonian. Patrick Whelan was there with daughter, Bridget. Dave McCarter demonstrated mirror-grinding techniques, while Bridget Whelan and Cheryl Priestap presided over the "astro-trinkets" souvenir table and gave away Star Finders and copies of the book Mary Lou's New Telescope. Charlie Barbara set up his impressive meteorite collection in the observatory kitchen, while others talked about the telescope and vacuum aluminizing chamber for the 1.2-m primary mirror. John Kulczycki and Dave McCarter directed traffic for several hours. Steve Imrie greeted visitors in the dome, while Bob Duff photographed the activities.

Peter Jedicke spent most of the evening demonstrating the big 1.2-m Ritchey-Chretien telescope in the dome, while Alyssa Gilbert worked in the control room slewing the telescope and turning the dome. Towards 11:00 p.m., the sky partially cleared and the dome was opened. However, the telescope was in Coudé mode and time constraints precluded public viewing so late in the evening. Visitors satisfied their curiosity by observing the Moon and M13 through Adam's 20.3-cm Sky-Watcher Dobsonian telescope set up on the

lawn. People continued to arrive right up until midnight. In total, we had about 350 visitors, including several who went home to get other family members. One is tempted to ask "What would our visitor total have been on a clear evening?" Many thanks go to everyone who helped make this a successful open house.

August 24 - Dave McCarter presented his introductory astronomy show, Looking Up, to 20 preschool children and 5 adults at the Arbour Glen Day Nursery on Adelaide St. Many of the children were quite knowledgeable and full of questions. All enjoyed their view through a Gallileoscope of a nearby "it's upside down!" car.

August 26 - Peter Jedicke gave an enthusiastic talk on Canada's Role in Space to about 70 members and guests of the Kiwanis Club of Middlesex-London on Thursday morning. After the presentation, some members shared memories of activities related to Canada's space program, such as one member who had been a school chum of John H. Chapman. Other members said they were pleased to learn the significance of Canada's contributions to the human adventure in outer space.

August 28 - Sarnia Centre members Marie Fisher, Susan Clark, Richard Weatherspoon, Alan Kenyon, Dick and Ernestine Perkins, and Robert Williamson joined London Centre's Dave McCarter for the very successful Petrolia Discovery Park Movie Night and Astronomy event. The official count was "just shy of 100" adults and children who were entertained, educated, and fascinated by their views of the night sky. A special thanks to Charlie Barbara for showing his meteorite collection to some very interested guests. In addition, we had several guests bring out their telescopes, and they were very pleased by the reception and assistance they received. We observed Venus early on and managed to also find tiny Mars, which was demonstrably not as large as the Moon! A great ISS pass at 9:17 p.m. wowed everyone, and, after a short talk by Dave McCarter, we enjoyed a lot of deep-sky objects before the Moon, Jupiter, Uranus, and Neptune became the main targets of the evening.

September 4 - Clouds and cool temperatures didn't keep ten London Centre members away from the Stars and Steaks Star Party at Fingal. Rick Saunders set up his telescope, ready to image if the opportunity arose. Mike and Eva Hanes brought a big barbeque and lots of sausages were cooked. Matt Neima cooked up some great shrimp on a stick, salads, and chicken were put out, and we all had a great time.

September 11 - London Centre members Bob Duff, Steve Imrie, Peter Jedicke, and Dave McCarter provided an Astronomy talk for Orientation week at Western's Perth Hall to several first- and second-year students. Cloud with drizzle prevented observing.

September 18 - The International Observe the Moon Night was held under cloudy skies at the Cronyn Observatory, sponsored by the Centre for Planetary Science and Exploration. About 80 people came out with the hope to see the Moon in several telescopes, including the large Cronyn refractor. Six London Centre members attended, including Bob Duff, Bill Gardner, Richard Gibbens, Peter Jedicke, Dave McCarter, and Dave Rubenhagen.

Graduate student Amanda Papadimos was looking after the various displays in the lecture room, Emily McCullough was giving tours and animated explanations of the various instruments in the observatory dome, and Lora Thomson answered questions with the lunar globe. Undergraduate students were also there helping out, including Diline Subasinghe, Mat Abado, Patrick Cookson, and Neil.

In room 2022 of the Engineering building, a series of slide presentations were given, including Mr. Paul Graham discussing the "Open Luna" initiative (a private venture to send people to the Moon), a presentation on the Aitkin Basin on the Moon by a student, and incredible LRO images of the lunar topography discussed by Dr. Phil Stooke of the Geography Department.



Back in the Cronyn, the Moon photo contest votes from each attendee were counted and announced with great fanfare. The first-prize winner was Dave Rubenhagen with his composite photo of the Moon near first quarter, the second prize went to Dave McCarter for a crescent Moon in twilight, and the third prize winner was Bill Gardner for a lunar-eclipse image.

Amanda Papadimos then began the draw for two door prizes and went through a lot of ballots for people who had not stayed. The book *NightWatch* finally went to Richard Gibbens, and the NASA T-shirt was won by Amanda herself. There was much laughter when she announced that she would keep it. Centre members then went to the Dairy Queen for further discussion.

September 29 – Seventh annual star night for Byron Northview Public School. The coastal weather system put us on the cusp of clear skies. Everything to the northwest (Ursa Major, Boötes, and Hercules) was visible, while thin clouds overhead obscured Lyra and Cygnus. Everything to the southeast was clouded out, including Jupiter. Ryan Fraser, Mike Roffey, and Dave McCarter set up their telescopes and Peter Jedicke helped out. Following Dave's outdoor digital slide presentation, people observed M13, M51, and a few double stars. They saw two Iridium satellites flare to first magnitude, one after another. Ryan Fraser showed a few people M81 and M82 briefly, despite the poor seeing conditions. There were two grade-6 classes for an estimated 40 students, plus about 25 parents. It was a good night in spite of conditions and the teachers were happy. Jupiter made its appearance after 10:00 p.m., after almost everyone had left. There is talk of a star party, minus the slide talk, for April or May with Saturn and the Moon visible.

October 7 – Night 1 of Harvest the Stars Star Party Harold Tutt, Kelly Manson, Ryan Fraser, Gaetan Godin, and Dave McCarter shared views all evening. We paid particular attention to the Double Cluster and Comet 103P Hartley, easily visible in 15x70 binos and Kelly's binoviewer on a Celestron 9.5-inch SCT. With a low-power wide-field eyepiece on Dave's 25-cm Dobsonian (two-degree field of view), all three objects could be seen together. Jupiter was also pretty in Kelly's binoviewer, with the Great Red Spot not looking very red; more a pale yellow/pink.

October 8 – Night 2 of Harvest the Stars Star Party Bob Duff, Richard Henderson, Peter Jedicke, Matt Neima, Dave McCarter, Mike Roffey, Glen Spooner, Harold Tutt, and five guests enjoyed great skies with a single period of thin cloud. Bob Duff observed "Jupiter, Uranus and that infuriatingly faint Comet 103P / Hartley in the Perseus Double-Cluster" just visible with averted vision in Glen's 80-mm scope and a distinct fuzzy glow in Richard's 25.4-cm Dobsonian.

October 9 – Night 3 of Harvest the Stars Star Party Trevor Chandler and guests from Guelph, Richard Henderson, Peter Jedicke, Dave McCarter, Glen Spooner, Mike Roffey, and several new guests enjoyed another clear night of observing.

October 10 – Night 4 of Harvest the Stars Star Party included Dave McCarter, Kelly Manson, Peter Jedicke, newcomers Phil and Paul. The highlight was "Gas Giant Alley," seeing Neptune, Uranus, and Jupiter in moments of excellent seeing,

October 20 – London Centre President Dave McCarter and Sarnia Centre member Charlie Barbara presented a public talk and meteorite display for Coldstream Public Library to 34 library patrons and guests. The Librarian has received many favourable comments, and the number-one question is "Will we do another star night?" Perhaps in the spring, when Saturn is visible.

October 22 – London Centre members Bob Duff, Ryan Fraser, Phil Marusaik, Dave McCarter, Matt Neima, Mike Roffey, and Harold Tutt set up their telescopes for about 100 kids and parents of the London Regional Children's Museum. Shortly after sunset, Dave

spotted Jupiter just above the power lines and all scopes pointed to it to reveal cloud bands, and three moons on one side and one on the other. The full Moon soon cleared the distant trees and was a hit with the young kids, many under five, most probably because they could reach the eyepiece on the Dobsonian telescopes. A brief sky tour was given by Dave, using a green-laser pointer to properly identify various bright named stars. Julie Atkinson, science coordinator with LRCM, learned how to use the Dobsonian telescope, and had fun showing Jupiter and the Moon to the kids. Later she was given pointers on constellation identification.

October 25 – Western faculty, students, and members of London Centre celebrated the 70th birthday of the Cronyn Observatory. Present were Greg Andres and son Abram, Eric Clinton, Bob Duff, Mike Jager, Peter Jedicke, Patrick Whelan, Adam Priestap-Suttis, and Cheryl Priestap. Bob Duff reports that in total there were 28 people present. Amanda Papadimos gave the slide presentation of the history of the observatory and brought the cakes, Dr. Shantanu Basu gave the thank you and closing remarks after Amanda's talk. Also present were Prof. Jim Moorehead, Drs. Phil Stooke, Amelia Wehlau, and Phil McCausland.

October 30 – Cronyn Open House on the campus of University of Western Ontario. Graduate student Sarah Malek made her digital slide presentation *The Future of Our Sun* before a small group of visitors, and Professor Jan Cami showed a few people Jupiter between clouds in the big 25.4-cm refractor before the sky completely clouded out. Bob Duff set up the 25.4-cm Dobsonian on the observatory's roof patio and showed people Jupiter, before it clouded out, and then the weather vane on the Engineering Building. A modest estimate might be about 23 visitors for the open house.

November 27 – Cronyn Open House, At first, clouds completely covered the skies. Graduate student Emily McCullough made her digital slide presentation, "Space Junk," concerning out-of-service satellites and other space debris, and then began a tour of the telescope, showing the 35 visitors the TV-tower light. A sudden clearing allowed viewing Jupiter and its four moons. Bob Duff and Dave McCarter assisted with the big refractor and also set up the 25.4-cm Dobsonian on the observatory's roof patio and showing people Jupiter, Albireo, Vega, the Pleiades (M45), Aldebaran, and the Hyades, the Double Cluster in Perseus, and the Andromeda Galaxy (M31).

December 2 – Bob Duff gave a digital slide presentation, *Astronomy*, to 14 members of the 31st B Cubs, including 11 children (ages 8-10) and 3 adult leaders, at Calvary Church on Ridout St. The presentation included stars and constellations, how to locate Polaris, planets, nebulae, galaxies, and observing with telescopes. Afterwards the Cubs assembled Star Finders and the leaders were given additional Star Finders to take with them.

December 4 – Cherryhill Mall Astronomy Display. London Centre members Bob Duff, Bill Gardner, Peter Jedicke, Dave McCarter, Mike Neima, Rick Saunders, and Harold Tutt answered questions and discussed astronomical topics with about 50 interested visitors next to McKittrick's Photo.

December 9 – Dave McCarter gave his slide presentation, *The Power of Observation*, to 30 students, a student teacher and the classroom teacher in a grade-9 science class at A. B. Lucas Secondary School. Bob Duff was also there and gave the teacher and student teacher a club brochure.

December 11 – At the Cronyn open house, graduate student Alexander DeSouza gave his digital slide presentation to a total of 38 people. Grad student Robin Wing operated the big 25.4-cm refractor in the dome, showing people the crescent Moon, two days prior to first quarter; Dave McCarter and Bob Duff assisted. People also viewed Jupiter and the four Galilean moons through

hazy clouds. We talked to several people interested in astronomy and gave out London Centre brochures, "Become a Sidewalk Astronomer," and "SkyNews." We closed the Observatory at 9:00 p.m. after a successful evening.

December 21 - The skies played hide and seek with the eclipsing Moon until about 3:15 a.m., with the Moon in totality, and then became accommodatingly clear. Many London Centre members had a peek, saw cloud, and went back to bed. A few hardy fans of the Earth's shadow stayed up all night, caught the clearing, and took lots of pictures. The images taken by London Centre's Observer's Chair, Peter Raine, were particularly notable, and saw publication in the London Free Press.

**David McCarter**

## MISSISSAUGA CENTRE

Mississauga is now into its 5th year as a Centre of The Royal Astronomical Society of Canada. Usually, two meetings are held each month on Fridays at the University of Toronto at Mississauga (UTM), thanks to the sponsorship of Dr. John Percy and Dr. Ulrich Krull. Summaries of the meetings are posted in the archives of the Centre Web site. Nine meetings in 2010 were Speakers Nights:

January 29	Dan Falk - Galileo's Italy
February 26	Randy Attwood - Gustav Holst and "The Planets"
March 26	Dave Lane - Variable Star Amateur Research at Abbey Ridge Observatory
May 7	Jason Haynes - Meteorites and Cosmic Impact Events
May 28	Sara Poirier - The History of Astronomy in Canada
June 25	Randy Attwood and Chris Malicki - The July 11, 2010 Solar Eclipse in the Pacific
September 24	Kerry-Ann Lecky Hepburn - Adventures in Astrophotography
October 15	William Buck - Star Stories of the Cree and Ojibway
November 26	Kirsten Vanstone - Feuds Among the Stars or Standing on the Shoulders of Giants

During the 12 Members Nights in 2010, more than 20 Mississauga Centre members spoke on a variety of topics:

- \* James Crombie gave frequent updates on astronomy in the news.
- \* Roy Swanson brought members up-to-date on monthly sky happenings.
- \* Vic Cooper gave several updates about solar activity with reference to Solar Cycle 24.
- \* There were talks about free astronomy software, such as Cartes-du-Ciel, Stellarium, and Virtual Moon Atlas.
- \* There were a number of presentations about the July 11 solar eclipse and the December 21 lunar eclipse.

Other talks included the Burgess Shale formation and astrobiology, the Observer's Handbook, sunsets in Mississauga, the analemma, Lagrange points, spacecraft gravity assists, galactic cirrus clouds, building a telescope pier, videos on the Solar Dynamic Observatory and the Space Shuttle, the Hubble Ultra Deep Field, the Mississauga Library system and astronomy, the constellation Leo, and various star parties, such as Starfest, the Algonquin Adventure, and the

Texas Star Party. There was a presentation about the 2010 General Assembly in New Brunswick, as well as several updates about Earthshine Organization, its sponsorship of observing at Riverwood, and progress toward building a planetarium in the western Greater Toronto Area.

On October 7, there was a special lecture at Mississauga Central Library presented by the Royal Canadian Institute. The speaker was Mike Dixon, on Space Exploration and Technology Transfer: A Role for Canada.

Mississauga Centre members continued to be active at numerous public outreach events during the year. The following events are not inclusive of everything in which Mississauga Centre members participated: The Earthshine Organization by bringing volunteers and telescopes on a number of observing nights at the Riverwood Conservancy. Some of these events were attended by over 100 people especially on August 12, when more than 500 came to see the Perseid meteor shower. Centre members carried out observing nights for Rick Hansen SS on April 22; St. Aloysius School on April 26; at the Oakville Historical Society on August 19; at Earth Hour on March 27 at Erin Mills United Church and in Caledon on a cloudy evening with 80 in attendance; at the February 9 University of Toronto film night, where attendees had an opportunity to look through telescopes; and on November 19 at the City of Mississauga Christmas Tree Lighting Ceremony, where hundreds of members of the public looked through telescopes set up by Centre members. Leslie Strike organized 4 education and observing sessions with Girl Guides, including 2 visits to Riverwood, and an event on January 9 at Mono Mills, as well as an astronomy education evening for 100 scouts at Camp Goodyear north of Orangeville on May 29, and a Scouts Canada event February 3. At the Hobby Show from November 5 to 7, ten Mississauga volunteers helped at the ROM/RASC display.

The year 2010 had better observing weather than 2009, and Centre members took advantage by observing at the Forks of the Credit, organized by William Callahan. There was a large Mississauga Centre contingent at Starfest in August. Members also observed at the Toronto Centre's Carr Observatory, in the parking lot of UTM after meetings, at the Algonquin Adventure in September, at the Huronia Star Party, in the Atacama desert in Chile, and in French Polynesia, where three members successfully viewed a total eclipse of the Sun. With all these opportunities, members were able to perfect their observing and photography skills, as was evident at presentations at meetings and in Messenger, the Mississauga Centre's newsletter. Editor Sheila Stephenson produced two editions of Messenger in 2010. Messenger documented many of these events.

Members had an opportunity to attend a private planetarium show at the Ontario Science Centre on September 8, thanks to Phil Mozel. The Mississauga Centre continued to offer benefits of membership, such as the DVD library, use of Centre telescopes, observing certificates, participation in the Yahoo chat group, and the newly formed Mississauga Centre forum set up and run by Terry Hardman.

Finally, the Centre continued to sponsor the Clear Sky Chart for Mississauga.

**Chris Malicki**  
*Secretary*

### Conferences

Thirty conferences were presented, five by speakers from the Université de Montréal. Eight presentations dealt with the "Sky this month." These presentations were made available on the Web site, as was information on the "Sky this month" for the remaining four months.

### Public events

Six public observing nights were organised. Events were staged regardless of weather, an indoor presentation being offered the public each time. Five events were held at the Parc-nature de l'Île-de-la-Visitation, the other at the Parc-nature de la Pointe-aux-Prairies.

### Meetings of the Executive Committee

Three meetings of the Executive Committee were held.

### CAFTA

The 29th edition of the Concours annuel des fabricants de télescope d'amateurs (CAFTA) was held in summer. This star party is organized jointly with two other clubs and hosts an Amateur Telescope Making contest.

### Astro-Notes

The quarterly publication was issued for distribution to members. Astro-Notes is also available on the Web site; it is made available to the public at public events and through the Maison de l'astronomie.

### St-Valérien

Renovations were made to the chalet at the CFM Observing Ground at St-Valérien. The electric circuit was also upgraded.

### Web site

The Web site was completely revamped. A podcast service was introduced. Several of the conferences were made available through this podcast.

Things have gone smoothly for this fifth year (2010) that the Montréal Centre has been at John Abbott College. The monthly meetings were well attended and we had numerous interesting talks and lectures. The Montréal Centre's equipment storage area has now been sorted out and we are re-activating the Centre's Telescope Rental Program..

The Montréal Centre is currently working with McGill University and the Morgan Arboretum to build a Community Centre Observatory, which, when completed, will hold the Montréal Centre's Meade 14-inch Ritchey-Chretien Telescope.

The Montréal Centre received an open invitation from Vanier College to present talks and lectures at their facilities. Vanier is located closer to the city and its location is very popular, especially with many of our members who use public transportation. The Montréal Centre is now scheduling numerous lectures at Vanier and statistics showed that the talks are very well attended.

The Montréal Centre's Annual Townsend Lecture was held on Thursday, November 18, at the Vanier College. Our Townsend lecturer this year was Jaymie Matthews - "Where will Avatar 2 be set? The real science of real exoplanets."

This was indeed an interesting and informative experience for all the Montréal Centre members attending.

There were 21 members-only observing sessions scheduled in 2010 plus monthly public observing events and 3 presentations to children at the grade-school level. Our Centre also participated in both the Earth Day celebrations and in the Westmount Family Day activities.

Here is a summary of the Montréal Centre's Lectures and Public Events for 2010:

Friday, March 5, 7:30 p.m. - 10:00 p.m.

Where: Vanier College, 821 avenue Sainte-Croix, Montréal

Description: Speaker: David Shuman and Paul Simard

Topic: Astro-imaging with a Webcam

Friday, March 19, 7:30 p.m. - 10:00 p.m.

Where: Vanier College, 821 avenue Sainte-Croix, Montréal

Description: Speaker: Luis Eguren - Astro-Imaging

Topic: - Astro-imaging with a CCD

Earth Hour 2010

Saturday, March 27, 8:30 p.m. - 9:30 p.m.

Where: Westmount Lookout, Summit Circle

Description: Montréal Centre members will be at the Westmount Lookout with their telescopes to show visitors the night sky.

Friday, April 16, 7:30 p.m. - 10:00 p.m.

Where: Vanier College, 281 Ste-Croix Avenue, Ville St-Laurent

Description: Marc Ricard - Astro-Imaging with a DLSR

Friday, May 14, 7:30 p.m. - 10:00 p.m.

Where: Vanier College, 281 Ste-Croix Avenue, Ville St-Laurent)

Description: Luis Eguren, Marc Ricard - Astro-Imaging:

Image Processing

Saturday, May 22, 8 p.m. - Sun, May 23, 12 a.m.

Where: The Morgan Arboretum, Ste-Anne-de-Bellevue

Description: A free public lecture (rain or shine), followed



by an observing session (weather permitting)  
At the Visitor's Centre of the Morgan Arboretum  
Thursday, June 3, 8 p.m. – Friday, June 4, 12 a.m.  
Where: John Abbott College, Lakeshore Drive, Ste-Anne-de-Bellevue  
Description: Dr. Gill Holder, McGill – Dark Matter and Energy. Room P-204

Saturday, June 19, 8 p.m. – Sun, June 20, 12 a.m.  
Where: the Morgan Arboretum, Ste-Anne-de-Bellevue  
Description: A free public lecture (rain or shine), followed by an observing session (weather permitting)  
At the Visitor's Centre of the Morgan Arboretum

Saturday, July 24, 8 p.m. – Sun, July 25, 12am  
Where: The Morgan Arboretum, Ste-Anne-de-Bellevue  
Description: A free public lecture (rain or shine), followed by an observing session (weather permitting)  
At the Visitor's Centre of the Morgan Arboretum

Thursday, August 12, 8 p.m. – Friday, August 13, 12 a.m.  
Where: Morgan Arboretum, Visitor's Centre, Ste-Anne-de-Bellevue  
Description: With the peak time for the annual Perseid meteor shower – the best cosmic fireworks show in the Universe – only days away, there are already reports from keen observers of a few of these cosmic travelers streaking through our atmosphere. Hourly rates are ramping up every day now with about 20 per hour being reported by observers around the world last night, but this will change significantly on Thursday night, August 12, as we plough into the thickest part of the cloud of space debris that causes the shower. Latest reports from experts say we may be in for a great show this year!

Saturday, August 21, 8 p.m. – Sun, August 22, 12 a.m.  
Where: the Morgan Arboretum, Ste-Anne-de-Bellevue  
Description: A free public lecture (rain or shine), followed by an observing session (weather permitting)  
At the Visitor's Centre of the Morgan Arboretum

Friday, September 10, 8 p.m. – 9 p.m.  
Where: Vanier College, 281 Ste-Croix Avenue, Ville St-Laurent)  
Description: Lecture is at 8 p.m. in B-232 Speaker for this lecture is Professor Tracy Webb from McGill Astrophysics.  
Title: A rough guide to the Universe: what we know, how we know it, and what we'd like to find.

Saturday, September 18, 8 p.m. – Sun, September 19, 12 a.m.  
Where: The Morgan Arboretum, Ste-Anne-de-Bellevue  
Description: A free public lecture (rain or shine), followed by an observing session (weather permitting)  
At the Visitor's Centre of the Morgan Arboretum.

Thursday, October 7, 8 p.m. – 10 p.m.  
Where: John Abbott College, Lakeshore Drive, Ste-Anne-de-Bellevue  
Description: C. Champness – Edwin Hubble. Room P-204

Saturday, October 30, 7 p.m. – 11 p.m.  
Where: The Morgan Arboretum, Ste-Anne-de-Bellevue  
Description: The lecture will be entitled “Spooky Skies of Halloween.” Telescope observing will follow the lecture, weather permitting.  
Townsend Lecture 2010

Thursday, November 18, 8 p.m. – 10 p.m.  
Where: Vanier College  
Description: This year's Townsend Lecturer is Jaymie Matthews – “Where will Avatar 2 be set? The real science of real exoplanets”  
Vanier College, 821 Ste-Croix Ave in Ville St. Laurent Room B-223  
The Public is Welcome

Thursday, December 2, 8 p.m. – 10 p.m.  
Where: John Abbott College, Lakeshore Drive, Ste-Anne-de-Bellevue  
Description: Kevin Kemball will present short films from NASA. Public is welcome.

Saturday, December 11: RASC Montréal Centre Christmas Party - Every year Montréal Centre members got together to celebrate the Holiday Season. This year the celebrations were at the Casa Greque restaurant.

### **Frank Tomaras**

*Director of Observational Activities*  
*National Council Representative*

## NEW BRUNSWICK CENTRE

New Brunswick Centre has had a banner year. It has been very busy and rewarding for our Centre, with the pinnacle being our hosting the 2010 GA and celebrating our 10th anniversary as a Centre.

We continue to hold monthly meetings with a business meeting every second month or as necessary, rotating the meeting locations amongst four cities: Saint John, Moncton, Fredericton, and Miramichi. We don't have formal meetings in July or August, although we do get together for observing weekends in the summer. Our monthly meetings consist of a “What's Up,” and two to three other talks/presentations on various topics by members or guest speakers. Peter Jensen, our President, presented at each meeting on “Astronomy News & Views”—news items of interest in the world of astronomy and RASC. At each meeting, time is allotted for sharing observing experiences and a “show and tell” where members get to show any new astronomy gadgets, books, or videos they have. Many members of the group get together for supper after the meeting for a social time.

Our membership is at 67—down very slightly from last year. We have asked some former members why they have not renewed their membership, and were told cost of membership and lack of time were the reasons. We have been discussing ways to make membership more beneficial or “valuable” to people for recruitment and retention. One item for discussion was building a club telescope that can be loaned out to members in good standing.

Our main focus this year was, of course, the GA. It was the event of a lifetime for us to actually have the GA in our home province—what a wonderful way to celebrate our 10th birthday. It was a learning experience in more ways than one—discovering firsthand how much work and planning goes into a GA, meeting members of the RASC family, hearing stellar speakers, and of course enjoying the company in the hospitality suite.

LPA: The NB Centre continues to develop an information package for dusk-to-dawn lighting and working on establishing four Urban Star Parks in the province, one of which will hopefully be located in Saint John. LPA continues to promote the Sky Quality Meter project around New Brunswick. The province now has two Dark-Sky Preserves (DSP) and is working with government and Fundy National park to establish a third DSP in the southeast region of the province. Our committee is also working with local and provincial nature organizations. LPA worked with NB Nature Association to develop an information pamphlet and sample temporary tattoos for use at outreach events. The "Freddy the Frog" tattoos were rolled out for the GA—preliminary testing was extremely successful and there will be follow up to a suggestion of obtaining copyright for "Freddy the Frog" mascot for LPA.

On another note, Hanwell, N.B. (Chris Weadick's stomping ground) will also be hosting an all-sky camera as part of the Atlantic All-Sky Network. There are all-sky cameras in Saint John and Fredericton at the university campuses.

Education: Don Kelly is chair of our Education Committee and a member of the national committee. This has involved our provincial committee in developing policy regarding availability and distribution of Beyond IYA support materials/resources, particularly the Star Finders.

An elementary-school resource designed to support astronomy learning at the grades 4-6 level has been produced by Ted Dunphy. The Education Committee will critique the activity booklet Astro-Fun, and will offer suggestions for improvement. The intention is to field test the booklet with students in a number of New Brunswick classrooms. Pending its reception in the classroom, it is expected the resource will be offered to a children's publisher, e.g. Scholastic Canada.

Mary Lou's New Telescope/Le Nouveau Telescope de Chloe, project continues to receive positive responses. The children's book, written by Don Kelly, N.B. RASC member, and illustrated by Michael McEwing, was actually taken aboard the ISS by Robert Thirsk. A plan has been discussed for a "Youth Outreach" Chair and this will be followed up early in the new year.

We have a library of DVDs and books, which is always being expanded by Ted Dunphy, our library chair.

Our Centre newsletter, Horizon is produced by Paul Gray. Every issue has an astrophotograph taken by one of our members featured on the front page, with articles from various members on deep-sky objects, constellations, astronomy equipment, observing experiences, etc., as well as sketches, photographs, and "Ted's Toons" (astronomical cartoons) by Ted Dunphy.

Under the lead of Don Kelly, an asteroid was named after William Brydone Jack, President of UNB in Fredericton (1861-1885). The observatory (first in Canada) on the UNB campus is named after him. The initial announcement of Brydonejack 79117 was made to RASC membership at our General Assembly banquet, with the official ceremony held in December at UNB.

Astronomy Day 2010—Members from each of the four cities planned their own activities consisting of displays/presentations and/or observing events. On average, we connect with approximately 1300-1500 members of the public in this way. For Earth Day, each area is involved mostly in presentations and observing activities.

## 2010 Meetings:

January: Peter presented on his "Messier Observing Plan" – Messiers by the month, giving a brief biography of Charles Messier and the Messier catalogue, describing how he has organized his plan to observe Messier objects in an orderly fashion through the year. His big tip: Don't let anything distract you.

Curt: "What's Up"; Curt also reviewed final numbers for Galileo moments in N.B. & Canada. N.B. contributed over 3 percent of the approximately 1,900,000 Canadian Galileo moments. Tim gave a talk of the "Colours of the Moon"; Curt gave a handbook talk and lovingly described the "Electromagnetic Spectrum & Astronomy Applications."

February: Peter – Handbook talk; Emma – constellation talk on Monoceros; Ted – talk on apodizing filters and showed his own handmade version; Curt – "What's Up"

March: June gave a brief talk about a Sky & Telescope article she had read on merging galaxies; June gave a brief review of Sagittarius for constellation of the month; Guy gave a presentation on the dangers of solar observing.

April: Curt: "What's Up"; Ted – Messier Talk – M51; Emma – "Doomsday 2012"

May: Peter: "What's Up"; Storm Troopers (group of young astronomers from the Miramichi, and Adam Hayward, their teacher/resource) – Rural Miramichi Galileo Observatory; Peter: Finding the Summer Constellations; Marc: Constellation of the Month; Paul: RASC National Organization & Web site Access

June: Curt: "What's Up"; GA final plans & updates; Don told the group about his time in the Miramichi, when he gave a day-long presentation to a school group there and toured the "Rural Miramichi Galileo Observatory."

July: RASC General Assembly; COW (camping observing weekend); Mt. Carleton DSP observing weekend

## August – post-GA barbeque & review

September: Mike Powell gave a presentation of how he built his roll-off-roof observatory in his backyard; Curt: "What's Up"; Stars and Stuff cancelled; "Rage at the Gage" – amateur rocket launches

October: Curt: "What's Up"; Peter: general astronomy news and views; Ted gave a talk about Perseus, whose story read like a soap opera; June gave a talk on one of her favourite nebulae, the "Heart (& Soul) Nebula."

November: RASC N.B. Annual Meeting – Peter Jensen: RASC News & NC 104 Strategic Plan; Curt: "What's Up"; Mary Lou White-horne: "Celebrate the Stars"; Marc Arsenaault: Web site Revealed; Tim Doucette: "Observing Under Arizona Skies—Kitt Peak & Jarnac Observatories"; Annual Meeting dinner post-conference.

December: no meeting—stormed out!

RASC-N.B. Centre is looking forward to the challenges of 2011.

## June MacDonald

*Secretary*

The Niagara Centre's 2010 was less hectic than the constant activity of the International Year of Astronomy in 2009.

The Niagara Centre was formed in 1958 and joined the RASC in late 1960. In October, we celebrated our 50th year of RASC membership with a banquet. Our guest speaker was Dr. Roberto Abraham, from the University of Toronto. Our monthly meetings in Niagara Falls had an excellent roster of guest speakers.

As usual, we put on many star nights for the public and select groups, with events at public and private parks, schools, campgrounds, conservation areas, and provincial parks. Even when the weather is cloudy, we often give a slideshow and talk indoors or under a pavilion, location permitting. We also provide many events for students, in and out of school hours. One regular event is at A.N. Myer secondary school in Niagara Falls, where there is a small planetarium. We also travel regularly to schools around the Niagara Region and give astronomy presentations to classes during school hours and at night, with parents in attendance. We occasionally give presentations and star nights to Girl Guide and Boy Scout troupes, too. Our classroom and club presentations probably reach 1000 students per year.

Our club's membership declined from 82 to 71 in the past year. This is disheartening, but the most active members of our club continue to give their all, and we have a strong presence at our monthly meetings, members' observing sessions, and public star nights. Many of our members attend summer star parties in Ontario and Pennsylvania.

A new executive was elected in October, which will guide the club for the next two years. Our Treasurer, David Stremlaw, retired after 15 years of holding that position.

**Guest speakers:**

January	Robert Godwin, Apogee Books "Apollo 12 Press Conference"
February	William Sutor, "The Rocket Belt Pilot's Manual"
March	Richard West, "The Neighbourhood of Orion"
April	Philip McCausland, University of Western Ontario, "The Grimsby Meteorite"
June	Kerry-Anne Lecky Hepburn, "Astrophotography"
October	Biannual General Meeting
October	50th anniversary banquet - Dr. Roberto Abraham, University of Toronto, "From Cosmic Dawn to the First Planets: The Rise of Complexity"
November	Marie Schmidt, Brock University, "The Exploration of Mars"
December	Members' Astrophotography night: presentations from Philip Downey, Glen Pidsadnick, David Perry, Bob Lewis, Mark Roberts, and Les Mardzi

**Philip Downey**  
*Secretary*

Monthly meetings were held, with educational speakers, open to members and the public. Our club maintains a collection of telescopes available for youth members free and our members at a cost. We also have a book and video library.

Our club membership has increased to 116 near year-end, with the inclusion of Penticton and the success of our outreach programs.

Member of the Year: Hugh Pett

For service to the club throughout the year including outstanding security, wiring, and communications work at the Okanagan Observatory among many things.

Our Centre By-laws were rewritten to officially include a third city into our Centre structure. Okanagan Centre welcomes Penticton to Vernon and Kelowna as our areas of operation in the Okanagan valley.

Club outreach programs in all three cities host public sidewalk astronomy sessions, as well we provide classroom visits and observing opportunities.

Local service groups have called on us for presentations and we set up at outdoor community events when we can. Well over 4000 guests attended 88 events area wide.

The Centre has organized the New Observers to Visual Astronomy (NOVA) for both adults and children. A very successful program thanks to our outreach coordinators.

Three local RASC members received the National Service Award in 2010:

Congratulations to Bryan Kelso, Guy Mackie, and Jim Tisdale

The Centre now holds three combined meetings in the year, plus monthly meetings in each city. All are open to the public and guest speakers.

**Okanagan Observatory Report:**

We hosted 17 free public nights at Observatory near Big White Ski Resort during 2010.

The Gamble 25-inch telescope is now in operation.

Security system working fine, including 24-hour video monitoring.

This project now has approximately \$150,000 in assets, including two storage buildings, rolling telescope mount, amphitheatre seating for 100 with wheel-chair access, graded level-surface parking, electricity and presentation-grade projector and laptop. Fundraising continues to add enhancements to all our programs including an "at the eyepiece experience" for mobility challenged users for this excellent public facility.

We operate during the spring, summer, and fall seasons, when weather permits.

**Kelowna Speaker List 2010**

January	Constellation of the Month - Guy Mackie - Okanagan Observatory History Main Presentation by Colleen O'Hare, Librarian and Outreach Director - Spectroscopy.
February	Main Presentation Alan Whitman - Future and Past Solar Eclipses
March	Main Presentation Zoli Boda - Large Hadron Collider (LHC)



April	Main Presentation – Special Guest Tom Landecker, DRAO - Reflections on the History of Astronomy.
May	Constellation of the Month – Light-Pollution Abatement Presentation – Chris Purton, LPA Committee Chair. Main Presentation – Steven Mair – Solar System from beginning to end.
June	Main Presentation – Dr. Eric Rosolowsky – UBC Okanagan. Topic was “Gravity.”
September	Main Presentation – Sally Kilburg – 2010 South Seas Total Solar Eclipse
October	Constellation of the Month Colleen O’Hare – Pegasus and a few objects for binoculars and telescopes. Main Presentation – Dr. Richard Christie, Okanagan College. Topic was “Powers of 11.”
November	Constellation of the Month – Robert Dick of Ottawa Centre, the chairman of the RASC national Light-Pollution Abatement Committee Main Presentation – Ken Tapping of Dominion Radio Astronomical Observatory. Topic was: “What is the Sun Up to?”
December	Constellation of the Month Colleen O’Hare – Pegasus Main Presentation – David Counts – SETI

**Penny Nile**  
*Secretary*

## OTTAWA CENTRE

Back in 2009, our Centre joined the world astronomical community in celebrating the International Year of Astronomy (IYA), generating interest in our celestial pursuit by reaching out to the public in a big way. In this past year, 2010, we have endeavoured to keep this momentum going.

The Centre held four public star parties at the Carp Library – a new location that offers excellent viewing conditions – and received positive feedback from many in attendance. On Saturday, April 24, we joined with the Canada Science and Technology Museum, as in previous years, to mark International Astronomy Day, with both indoor and outdoor displays of telescopes and astronomical material, as well as a public star party held on the previous Thursday. On Sunday, October 17, the Ottawa Centre was at full force for the second year in a row at the Science FunFest, held at the Natural Resources Canada building on Booth Street. The event attracted approximately 6000 visitors, many of them young visitors, and the Ottawa Centre was there to provide solar observing, meteorite displays, astronomy-themed art, a digital planetarium, sky images, and many other attractions to excite the public.

For all of these outreach efforts, the Ottawa Centre depends on the dedication and volunteer time of our many members, whose contribution is hereby gratefully acknowledged. The Ottawa Centre wishes to note in particular the immense efforts of our outreach co-ordinator, Mike Moghadam, who has spearheaded our public-oriented activities over the past two years. This coming year the role of outreach co-ordinator will be passing to a new individual, who will benefit greatly from the inertia that Mike has already generated.

The Ottawa Centre has continued this year to be engaged, not just with the public, but also within the RASC organization. The National Office has recently hired a full-time Executive Director

to help develop programmes for the Society. The Ottawa Centre supports this decision as a way for the RASC to explore new areas of activity and to alleviate some of the burden on volunteer organizers at the national level. The Centre also acknowledges the concern from members about rising membership fees, however, and has voiced these concerns with National Council.

As of October 2010, Ottawa Centre membership stood at 384, including 2 Youth and 32 Life members. This is actually down from our membership levels prior to IYA, and in fact has resulted recently in a reduced number of seats on the National Council. Our challenge over the coming years will be to build on our efforts from IYA and the past year to ensure a continuing membership base. It should be noted, however, that the Ottawa Centre still has the second-largest membership in the country, the Toronto Centre being largest.

Our Centre meetings are held on the first Friday of each month at the Canada Science and Technology Museum, occasionally on the second Friday in the event of holiday weekends. The meetings are open to both members and the public, with attendance typically approaching or exceeding 150. We were fortunate this year to welcome Bill Wagstaff as our Meeting Chair, a role that he has performed marvellously. The quality of the presentations given by our members and guests continues to be impressive. Many thanks are due to others who help the meetings happen: Chris Teron, our Secretary and slide-master; Tim Cole and all those who have helped keep the projector running in the back room; and Eric Kujala, our meeting video recorder. A special thank you goes as well to Art and Anne Fraser, who have been satiating our collective caloric needs with a fine selection of snacks and beverages. Art also continued this year in his role as our membership secretary.

Our Centre Annual Dinner was held on November 12, and was attended by over 80 members and guests. Our speaker this year was Dr. Luc Simard from the Herzberg Institute of Astrophysics, who gave a talk entitled “Galaxies Like Grains of Sand,” looking at recent developments in galactic astronomy and the upcoming Thirty Metre Telescope to be built on Mauna Kea in Hawaii, which promises to expand our knowledge in this area even further. Our Vice-President, Al Scott, organized the event, as well as the invitation and transportation for our guest speaker. Eric Kujala graciously volunteered to videotape the event.

This year the “Paul Comision Observer of the Year Award” was awarded at the Annual Dinner Meeting to Sanjeev Sivarulasa. Sanjeev was also the recipient of the award for Astronotes Article of the Year for his two-part article entitled “Portable Astrophotography Under Dark Skies, Parts I and II” in the January and September 2010 editions. A new unofficial award was presented this year for Best Presentation at a Centre Meeting to Simon Hanmer for his presentation entitled “Valles Marineris.” The award criterion will be developed and made official next year.

The Fred Lossing Observatory near Almonte continues to be used by members for observing. A new cabinet has been installed with forms available for the Explore the Universe certificate.

The SMARTscope project at Shirley’s Bay continues and has benefitted from recent site security clearances made available to new team members. Most major technical issues have been resolved, with the dome shutter presenting the biggest challenge this year. Stephen Nourse is building a new mechanism to bring reliability to the shutter. The next major step is to develop a plan of operations, with the eventual goal of making the telescope available to the membership for use.

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

Richard McDonald has continued in his role as manager of our Web site and manager of the Centre mailing lists. The new Centre Web service, initiated in 2008, continues to save our Centre a substantial amount of money. Thanks to Gary Boyle, the Ottawa Centre has also recently created an Ottawa Centre Facebook page.

Our Treasurer, Hans Brouwer, has had another busy year managing our Centre finances and will be providing updates as part of his report.

2010 was an important and busy year for me in my own life, as I became a first-time parent in April. Our Past President, Chuck O'Dale, graciously stepped in to help out with a number of my duties, and I hereby extend my personal thanks to Chuck for his assistance.

As President for these past two years, it has been my privilege to have worked with many of you who have given your time in support of Council, of our Centre, of our Society, and of astronomy itself. I have thoroughly enjoyed serving the Centre in this role for the past two years, and I am grateful to all of you for your dedication.

I will continue to support the Centre to the utmost of my abilities in my new role as Past President, as we welcome in our new President and Council.

Thank you all, and clear skies.

**Paul Harrison**  
*President*

## PRINCE GEORGE CENTRE

Originally developed by a Prince George Centre member in 2005 and now being used by several other RASC Centres, the NOVA (New Observers to Visual Astronomy) course was offered once again. This course is an effective means to involve people in astronomy.

Members of the Prince George Centre recently initiated a partnership with School District 27 (Cariboo-Chilcotin). An all-sky camera system that monitors the sky for meteors and fireballs was installed at Tatla Lake Elementary/Jr. Secondary School. Soon to be added is a camera at Mile 108 Elementary School. These cameras are part of the B.C. Meteor Network, the larger West Coast Fireball Tracking Network, and provide faculty and students with the opportunity to explore non-visual astronomy.

Participation in the Prince George Recreation Market draws many people to the Centre's display. It is always surprising to find that, in spite of our efforts to let the public know of the existence of the observatory, many are not aware of the facility. One of the advertising methods used for the last three years is a 30-second radio spot entitled "Our Night Sky." Broadcast weekly on a local FM station, events occurring in the night sky for that particular week are described. This information is also available on the Centre's Web site.

Viewing opportunities are passed on to Centre members who have opted in via an "observer's email list." These opportunities include occultations, transits, comet viewing, viewing marathons, and general observing.

The Messier Marathon was held in March, as were two Lunar Marathons. Two Lunar Marathons were held in April as well.

When held at one of the shopping malls in Prince George, sidewalk astronomy drew a lot of public interest, but due to the dwindling ranks of volunteers, will be discontinued in 2011.

A well-attended star party was held in the community of Fort Saint James on August 14. The community was very supportive of the event by providing an excellent viewing area, refreshments, and by extinguishing lights.

The Perseid Meteor shower in August always draws a large public crowd, and this year was no exception, with more than 80 visitors attending.

RASC National President Mary Lou Whitehorne visited the Prince George Centre on October 14, delighting all who attended her lecture at the University of Northern British Columbia. Besides joining several Prince George Centre members for dinner prior to the lecture, Mary Lou toured the observatory facilities following her talk at UNBC.

Poor visibility on the night of December 20 did not deter over 40 people from travelling to the observatory to view fleeting glimpses of the lunar eclipse. Streaming video of the eclipse visible in other parts of North America was shown in the classroom.

Looking ahead to 2011, the frequency of observatory Open House evenings will be increased, completion of the 24-inch telescope flip mirror conversion is anticipated, and eight Lunar Marathon events are scheduled, as is another NOVA course.

**Glen Harris**  
*Secretary*

## CENTRE DE QUÉBEC

L'année 2009-2010 fut au ralenti au Centre de Québec.

Plusieurs sorties publiques ont été annulé dû à la météo.

Une visite dans une cabane à sucre a permis à 75 personnes de jeter un coup d'oeil dans nos télescopes. Quelques soirées dans le stationnement du Domaine Maizerets ont permis de rencontrer plus de 50 personnes durant l'année.

Stéphane Dumas a donné plus de 20 présentations dans les écoles de la région de Québec, rencontrant ainsi plus de 500 élèves.

Les nuits à l'observatoire de St-Nérée, dont une porte ouverte pour les voisins, ont été très appréciées.

Toutes nos activités dépendent de nos bénévoles, 90% du travail est fait par 10% des membres. Donc, je prends cette occasion de remercier tous ceux qui ont aidé la réalisation de toutes ces activités.

**Pierre Desrosiers**  
*Trésorier*



The Regina Centre not only had a very active year in 2010 but also celebrated its Centenary. The Centre kicked off the year with a Banquet to celebrate the 100th Anniversary of the club and to end IYA2009. The Banquet was held on February 20, and was attended by both present and past members of the club.

Fund raising this year has been through the sale of Regina Centennial T and Golf shirts, from Vance Petriew's salvaged-goods sales, and from a steak night organized by Shawn Drew. A history book on the Regina club has also been completed this year and is in the process of being edited and printed.

2010 also showed an increase in membership in the Regina Centre, which now stands at 65. The Centre's Web site has undergone some upgrades with the addition of a new Podcast and several additional monthly information sections, such as a Sky This Month and a descriptive what's up? Along with several other informative sections, these are available for public viewing.

The Centre's monthly meetings have been very well attended and the monthly presentations proved to be very popular and appreciated. A great variety of astronomy-related subjects were covered by speakers who appeared either in person or through video-conference means.

Although the weather was not always co-operative, members of the Centre continued to volunteer their time and efforts and provided many public observing sessions throughout the year and in a variety of locations.

Ron Haughey and Len McDonald played hosts at the Centre's observatory, which is open to the public on a bi-weekly basis. Although plagued by adverse weather conditions throughout the year, the observatory was visited by a number of youth groups and public visitors.

The Centre's annual Messier marathon scheduled for the weekend of March 12 had to be cancelled due to the very poor weather.

Following is an outline of events the Regina Centre organized or took part in during 2010.

March 12	Messier marathon cancelled due to bad weather
March 23	at Saskatchewan Science Centre observatory - Vibank Guides.
March 29	At observatory - Cub Scouts.
April 24	Astronomy day at Chapters Book Store in Regina, in-store astronomy display, public solar viewing outside the store. Evening public viewing at the Science Centre.
May 6	McLurge School tour at observatory.
May 14	St. Martins church, public viewing.
May 15	Weyburn Library, public viewing.
May 29	Cathedral Village Fair, solar viewing. Cancelled due to bad weather.
July 1	Canada Day Wascana Park, solar viewing.
July 17	Moose Mountain Park Kenosee Lake, public viewing.
July 17 & 18	Grasslands National Park, presentations and public viewing.
August 7	Buffalo Pound Provincial Park, public viewing.
August 7	Echo Valley Provincial Park, public viewing.
August 9	Pilot Butte Library, public viewing.
August 12-15	Saskatchewan Summer Star Party.
August 18	Lumsden Beach Camp, public viewing.
August 25	Carmicheal Outreach, Lumsden Beach Camp, public viewing.

September 4	Katepwa Beach Social Club, public viewing.
September 11	United Church Lumsden, public viewing, cancelled due to bad weather.
October 3	Beuna Vista, public solar viewing & night viewing.
October 7	Saskatchewan Science Centre/Imax, public evening viewing.
October 14	Pilot Butte Library, public Lunar viewing.
October 15	Cosmopolitian Connections, public viewing.

The Regina Centre was instrumental in having volunteers help out with the organization of Saskatchewan Summer Star Party and also in the arrangement of a mini star party at Grasslands National Park.

The Regina Centre continues with its outreach programmes and public viewing nights, handing out free astronomy magazines and literature to the public. Our Centre members show great enthusiasm in promoting astronomy and encouraging others to try out this fascinating hobby of ours.

Members of the Regina Centre are only too happy to allow others to view the heavens through their scopes and to provide education and information to those who are new to the hobby or are considering taking it up for themselves.

Dave Barrie (Davin Dark-Sky Site Director) and other Centre members continue to maintain and upgrade our dark-sky site at Davin, which is put to good use throughout the summer months.

The Regina Centre's annual Star-B-Q to wind up the summer season was held at Davin on September 18.

2010 proved another busy and fulfilling year for the Regina Centre, and it is hoped that at least some people will gain a greater interest in astronomy through the efforts and enthusiasm shown by our members.

We look forward to another successful year in 2011.

**Peter MacKinnon**  
*Secretary*

St. John's Centre had a busy year despite the record rainfall and seemingly endless cloudy nights. Centre monthly public meetings continue to be popular, featuring speakers, video presentations and social gatherings. A recent news broadcast of our annual Star Party (YouTube: Newfoundland Star Party) has proven to be very popular and continues to attract new visitors to the Centre.

**Meeting summary:**

January	Gimsby Meteor. Speaker: Dr. Phil McCausland, University of Western Ontario
February	Orion: Betelgeuse, the Belt and Beyond Speaker: Dr. Steve Shorlin, Memorial University
March	The Solar System and Beyond Speaker: Dr. Glyn George, Memorial University
April	Video: 400 years of the Telescope
May	Small Meteorite Fragment Bulk Density with Visible Light 3-D Laser Imaging Speakers: Phil McCausland, Claire Samson, Adam DesLaurier, Univ of Western Ontario
June	The Algonquin Radio Observatory Speaker: Dr. Caroline Roberts, President Thoth Technology Inc.
September	A Visit to the Dominion Astrophysical Observatory Speaker: Gary Snow
October	AGM
November	Registax Tutorial Speaker: Chris Stevenson
December	Amateur Radio Astronomy Speaker: Garry Dymond Christmas Social

The St. John's Centre joined Volunteer Canada in 2010 and is now covered by Director's Insurance. Other Centres should investigate similar insurance if they haven't already done so.

Our association with Newspapers in Education (NIE) is currently on hiatus after producing 17 issues. The Centre continues to participate in public outreach through Astronomy Day (Spring and Fall), Earth Day, annual star party at Butter Pot Park, frequent radio shows and interviews, along with special-request observing sessions (Sisters of Mercy Eco Centre, Admiralty House, Observe the Moon Night).

The Centre Web site is constantly being updated with new material; member photos, lecture summaries, and meeting notices.

On a sombre note, we lost a friend and Life Member on August 12, when Dr. K.J. O'Brien passed away in Ottawa.

**Randy Dodge**  
*Secretary*

Report not submitted.

The year began in a somewhat celebratory mood as the executive and club members took a momentary breather from all the activities undertaken in 2009 under the auspices of the IYA. Club members played an integral role in helping more than 1.9 million Canadians to enjoy a "Galileo Moment" of personal astronomical discovery by participating in many of the more than 3500 events held throughout the country the previous year.

In January, club members were invited to tour the Synchrotron (Canadian Light Source) thanks to club member Mark de Jong. Members also got the opportunity to meet Jay Ingram, host of Discovery Channel's Daily Planet, when he gave the keynote address at Spectrum 2010 on January 16. Finally, we presented the RASC Service Award to Rick Huziak, one of our Centre's most active members.

Members took part in a unique project as part of the Earth Hour celebrations on March 27. A local mall turned off all its parking-lot lights and invited us to come and show the public a less light polluted view of the sky from an urban setting. Well over 200 people came out to see views of the Moon, Saturn, and Mars.

On April 23, as part of International Astronomy Day activities, members offered more sidewalk astronomy outside on the lawn in front of a local recreation centre. The following day, they were at the Farmer's Market advertising the weekend of activities and showing startling images of the Sun through various telescopes set up outside. That evening, the telescopes were redeployed at Beaver Creek, 20 kilometres south of the city, where almost 100 people were given a short talk by Centre member Ron Waldron, followed by an evening of viewing.

On June 17, the Centre welcomed our newest "budding" astronomers by holding a New Members' Night at the U of S Observatory. Centre members Richard Huziak and Mike Clancy spoke about choosing telescopes, eyepieces, and binoculars, while Mike spoke about the Explore the Universe Certificate program offered by the RASC.

The summer was highlighted by the 2010 Saskatchewan Summer Star Party, which the Centre co-hosts with Regina Centre every year at Cypress Hills Interprovincial Park. Although rain dampened spirits the first two nights, that was more than made up by a strong daytime program of events and speakers. Clouds broke on Saturday evening to satisfy even the wettest of participants.

Annual elections in October were followed by the annual Sleaford Open House, a chance for the public to come out and view from our dark site, 55 kilometres east of Saskatoon. Skies were clear, prompting near-record attendance again this year.

Members Rick Huziak and Colin Chatfield began renovations to our warm-up shelter, and invited members who could to come out and help. The facility was expanded in size by almost one third.

November saw the Centre's annual fundraiser at a local restaurant, and December's meeting was replaced by a pot-luck supper.

Throughout the year, member Rick Huziak kept us abreast of any developments in reducing light pollution in the province and in the Saskatoon area. Larry Scott kept inviting us for the monthly observing-group sessions at the dark site, and did a great job of clearing grass and snow with the help of members.

**Ron Waldron**  
*Secretary*

## January and February

Due to exceptionally bad weather in these months, there were few viewing nights possible. However, our regular monthly astrophotography meetings were held. See the general notes below for details about these meetings.

## March

Our club co-hosted Earth Hour with the District of Sechelt, a very well-attended event that attracted over 200 visitors. Many of them were children who brought home-made lanterns, which we hung in the nearby trees. Everyone received a prize for their creations.

## April

Dr. Jaymie Matthews, Associate Professor at University of British Columbia, made a presentation entitled The Real Science of Exoplanets to our club and approximately 80 visitors. He is a well-known, charismatic speaker who has made several presentations for us in the past.

Spring Astronomy Day attracted approximately 400 visitors to our club booth at Trail Bay Mall in Sechelt. Outside weather did not lend itself to any viewing, although at our booth inside we gave out many IYA handouts.

## May

Dr. David Helfand, Professor of Astronomy at Columbia University in New York, made a very well-received presentation entitled The Universal Timekeepers: Reconstructing History Atom by Atom to club members and approximately 80 visitors. Dr. Helfand currently holds the position of President of Quest University in Squamish, B.C. He has accepted our invitation for a return visit and presentation to us in 2011.

## June

SCC member Mike Bradley made a presentation, Serendipity in Astronomy or What the !!!! as part of the regular meeting.

## July

For Canada Day on July 1, we erected a booth at the local annual craft fair in Hackett Park, Sechelt. Our booth was not well attended due to a poor location at the site. Parade attendance was approximately 5000 people with only about 150 of them checking into our booth.

Our club was invited to set up at the Halfmoon Bay Country Fair, just north of Sechelt. The fair weather attracted approximately 250 people through our venue. This was our first time at this event and we plan to return next year.

## August

The Sechelt Night Market invited us to be part of this weekly summer event for one early evening. We erected two solar scopes, which attracted about 75 people, who viewed the setting sun.

Our annual Astronomy in the Park is a major event for our club, since each year approximately 800 visitors attend throughout the day. We set up at 3 p.m. with solar scopes and several scopes of varying size, which are in constant use in the evening.

Bill Burnyeat was the highlighted presenter at the park amphitheatre at dusk, before the skies darkened.

## September

We set up our booth with IYA handouts and two solar scopes at the local Botanical Society Fall Festival. Poor weather accounted for

a low turnout, but a number of children got a glimpse of the Sun between the rain showers.

2. Bill Phillips made a presentation on Mars at the regular SCC meeting.

## October

Two club members answered a request for an astronomy presentation to the local French-speaking school, L'Ecole Pacifique. Our members were able to give the talk in French and English, as well as hand out IYA materials. Making this presentation was a significant step forward for our club.

Fall Astronomy Day at Sunnycrest Mall in Gibsons was another major event for us. Although our booth did not attract as many as in spring, we still had about 200 visitors. Late in the afternoon the weather improved, allowing some solar viewing in the parking lot.

The local cable channel company visited our booth and interviewed two club members, who very capably described the various scopes and our club activities. The video clip has since been aired several times on the local cable channel.

Bill Burnyeat was our featured speaker at the regular SCC meeting.

## November

Our club held its annual meeting. A new executive was elected to serve through 2011. Details of the new executive slate may be viewed on the SCC Web site.

## December

We held a members' Appreciation Night with 25 members attending. We watched a 25-minute NASA film entitled "Journey to the Stars" and enjoyed a social hour.

Salutations were in order to Brian Lucas as he becomes the first SCC general member to serve on the National Light-Pollution Abatement Committee.

## General Notes

1. The SCC executive meets 12 times per year.
2. The SCC hosts nine general membership meetings per year.
3. The astrophotography arm of the SCC hosts the Astronomy Cafe program on the third Friday of every month. This event begins at the coffee shop in Davis Bay, just south of Sechelt and when darkness falls, club members set up scopes across the highway at the southwest-facing beach walk. Often, as many as 25 members and visitors attend.
4. Photo albums of SCC events may be viewed at the club Web site at

[www.coastastronomy.ca](http://www.coastastronomy.ca)

**Neil Sandy**  
*Secretary*

# THUNDER BAY

CENTRE

2010 has been a year of changes. A new emphasis is emerging regarding observing. The Centre's Observer's Certificate program has been revamped and divided into two parts: two units for observing and two units for astrophotography. There has been a lot of excitement around the potential site for the club observatory on the site of and in partnership with the Fort William Historical Park.

National President Dave Lane came to Thunder Bay to visit our Centre on March 29. The evening was hosted by Randy McAllister. Dave Lane gave a presentation about his backyard observatory in Nova Scotia and his involvement in amateur astronomy research, including variable-star observing and other research projects. A tour of Randy's observatory followed the presentation.

Much that might have been considered typical in our monthly presentations contained gems in the rough. Doug Stuart's Adventures in Selecting an Observing Site had a wealth of comic undertones...the night (the crickets go quiet)...the rustling in the bush... closer, louder, (with heavy breathing)...until a cow pushes her head out of the brush. It was a dark and starry night.

In a more classic frame of reference, the Centre teamed with the Thunder Bay Symphony, uniting two of man's most fundamental appetites - to know and understand the sky and to follow the Muse. The program entitled Space and Stars was intended as a family concert with our group volunteering a variety of activities for kids, such as crater making and foam rocket launching. The Centre provided a selection of celestial images to attend with the music, and the Centre's Coronado PST Solar Scope treated some of the attendees to a few flares.

The Thunder Bay Centre is kept very well informed through the extraordinary efforts of Bruce Miron, who is the editor of our newsletter The Northern Sky, and those who participate with articles, reviews and summaries not the least of which is the President's Monthly Message.

## Regular Features: 2009-2010

- \* Naked Eye to Deep Sky

## Presentation Topics

- \* TB Centre participation during IYA 2009 - Dave Gallant
- \* Thunder Bay Centre's revised Observer's Certificate Program - Ted Bronson
- \* Astronomical Binoculars - Ed Essex
- \* Adventures in Selecting an Observing Site - Doug Stuart
- \* Thunder Bay Symphony - Space and the Stars - Dave Gallant
- \* The Future of Telescopes - Rob Kushneriuk
- \* Astrophotography Certificates Level I, II - Ed Essex
- \* 365 Days of Astronomy (podcast) - Dave Gallant
- \* How Galileo calculated the height of the mountains of the Moon - Bob McLean
- \* Motion in Space - Dave Gallant
- \* Barn Door Tracker Project - Glenn Stronks
- \* Trip to Italy and the Vatican Observatory - Maureen Nadin
- \* Trip to the Air and Space Museum at the Smithsonian Institute - Dave Gallant
- \* Newly Discovered Observing Location - Andreas Buchholz
- \* Introduction to Telescope Optics - Lionel Catalan
- \* Images of the International Space Station Taken during Fly Bys - Dave Gallant
- \* Home Made All-Sky Camera for Tracking Meteors - Randy McAllister
- \* Beginner's Telescope - A Review of the Celestron Firstscope - Dave Gallant
- 2010 General Assembly - Dave Gallant

## In the Newsletter

- \* Out in the Cold (January). Ray Miller
- \* Basic Observing. Ray Miller
- \* Books for the Backyard Astronomer (February). Ted Bronson
- \* Binocular Highlights and "Star Ware"
- \* A Day in February (March), Ray Miller
- \* Books for the Backyard Astronomer. Ted Bronson
- \* Splendours of the Universe & Digital SLR Astrophotography
- \* Books for the Backyard Astronomer (April), Ted Bronson
- \* The Concise Atlas of the Stars and Norton's 2000.0 Star Atlas
- \* Russian Lunar Rover Found: 37-Year-Old Space Mystery Solved (from Internet article) thanks to Dave Gallant
- \* Books for the Backyard Astronomer (May). Ted Bronson
- \* The Stars and 365 Starry Nights
- \* Cosmic Perspective: SQM Sky Quality Meter - Doug Stuart
- \* Books for the Backyard Astronomer (June). Ted Bronson
- \* Seeing the Deep Sky: Telescopic Astronomy Projects Beyond The Solar System
- \* 2010 RASC GA Report July 1-4 (September)
- \* Cosmic Perspective: SQM Sky Quality Meter Part 2, Doug Stuart

## Public Observing Night

### Hillcrest Park (February 19)

Under ideal weather conditions, approximately 300 people attended this event. A number of Centre members had their telescopes and binoculars available for the public to view the sky. Some of the objects observed that night included Mars, the Moon, the Pleiades, the Orion Nebula, and Saturn. There were many astronomical questions along with many comments of appreciation from the public.

### Hillcrest Park (April 23)

Our second observing session of the year was well attended by an estimated 350 people. The slightly hazy sky did not deter any of the planned observing targets. Again, many members had their equipment available for observing. Objects featured that night were the Moon, Venus, Mars, and Saturn.

### Hillcrest Park (October 15)

The final public observing session was the busiest event. The day started cloudy, but by sunset the sky became mostly clear. An estimated 400 people were present to look through our binoculars and telescopes; many were there before the event was to begin! The featured targets that night included the Moon, Jupiter, and Uranus.

## Summer in the Parks

The Thunder Bay Centre provided astronomy presentations at three of the provincial parks this past summer. The 24th Annual Star Weekend at Quetico Provincial Park ran from August 12 to 14. Kakabeka Falls Provincial Park hosted the 7th Star Night on August 21. The final event was the 17th Star Weekend at the Sleeping Giant Provincial Park.

## Within the Group

At the May meeting, Ted Bronson gave a talk about the telescopes available for loan from the Centre. These are a tremendous resource for the members and are of special utility to those (especially students) who may not have the resources to otherwise acquire or house a scope.

## Congratulations:

Maureen Nadin was awarded 2nd prize in the RASC sponsored astronomical writing competition for IYA 2009. Her essay is entitled "The Square Kilometre Array: Scanning the Skies for Life, where it began, where it exists and what it all means."



Dave Gallant received the Exceptional Service Award from the Thunder Bay Centre in recognition for his energy and efforts in the promotion of amateur astronomy during the International Year of Astronomy project.

**Ian Neely**  
Secretary

# TORONTO

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## CENTRE

2009-2010 was a very active year in which the Toronto Centre contemplated its future as well as its past.

On 2009 November 8, a working group of the Centre met at the David Dunlap Observatory to work towards a strategic plan for Toronto Centre operations in the future. On 2010 January 30, we met again at the University of Toronto. These moments of reflection came after the climax of 2009's International Year of Astronomy, and we continue to promote the Beyond IYA movement.

Among the most visible moments of Beyond IYA were star parties at the Ontario Science Centre. Even before the New Year, our volunteers treated members of the public to telescope viewing at the Halloween Star Party on the Science Centre's Teluscope forecourt on 2009 October 30. We celebrated Earth Hour on 2010 March 27 at the same location. A special thanks to all 43 volunteers who helped out at Earth Hour. On April 24, International Astronomy Day, our public observing program was combined with the Science Centre's invited presentation by Dr. Frank Summers from the Space Telescope Science Institute, providing an inside look into the new Hubble IMAX movie. The Summer Star Party on July 9 was held in the Teluscope under clear skies.

These special events punctuated the normal schedule of our events hosted at the Ontario Science Centre. 2nd Vice-President (retiring) Ivan Semeniuk organized the following lecture meetings:

- October 28 Dr. Avery Broderick, Canadian Institute for Theoretical Astrophysics, "To the Edge and Back: Directly Imaging the Horizon of a Black Hole"
- November 25 Elizabeth Harper Clark, Dept of Astronomy & Astrophysics - U of T, "Hubble, Bubble, Boil and Trouble: Simulating how Stars Blow Apart Nebulae"
- January 27 Dr. Gordon Osinski, UWO, "Meteorite Impacts: The Good, the Bad and the Ugly"
- February 24 Dr. Andrew Youdin, CITA, "Origins of the Earth: Clues from our Solar System and from Distant Worlds"
- Mar 24 Dr. Anne-Marie Weijmans, David Dunlap Institute, "The Quest for Dark Matter"
- May 26 Robert Naeye (*Sky Publishing*, Editor-in-Chief, Sky & Telescope)

Ivan Semeniuk, who was also journalist-in-residence at the DDI, had to step down as 2nd V-P after completing planning of the spring lecture series to take a post as News Editor of *Nature* in Washington, D.C. We wish him well!

The Autumn 2010 series of lectures got off to a great start on September 22 with a presentation from Dr. Elizabeth Griffin, NRC-HIA: "Measuring the Earth's Ozone on Historic Stellar Spectra." These lectures were recorded and added to the Toronto Centre's Fred Troyer library for members thanks to Guy Nason and Tom Luton. A couple of DVDs borrowed by members are now six

months overdue for return, and attempts to contact the borrowers have been unsuccessful.

In parallel with regular lectures, the Observational Activities Committee represented by Paul Markov organized another line-up of what have become known as Recreational Astronomy Nights, also held at the OSC's Imperial Oil Auditorium. Blake Nancarrow, Brenda Shaw, and Eric Briggs took responsibility in turns at these meetings to warm up the audience with "The Sky This Month." Thanks are due to members such as Jim Chung, Frank Dempsey, Bob Dorcas, Dan Falk, Denis Grey, Ed Hitchcock, Katrina Ince-Lum, Ray Khan, Dietmar Kupke, Tom Luton, Patrick Macdonald, Paul Markov, and Guy Nason for presentations about their ongoing observing, research, and education activities such as "The Texas Star Party," "Simple Imaging with a DSI CCD Camera and 80-mm Refractor," "Observing from Australia," "Galileo's Italy," "Review of Orion Starshoot Pro CCD Camera," "The Skywatcher Autostar Mod Dob Job," "Make your own Image Intensifier Eyepiece," "The Elginfield Observatory," "Progress and Setbacks Against Light Pollution," "Epsilon Aurigae: The Mystery Continues," "Observing and Imaging the Sun in H-Alpha," "Lunar Occultation Grazing Video," "Astrophotos from the Carr Observatory and the Winter Star Party" and "The RASC Messier Catalogue Observing Program."

There were twelve Recreational Astronomy nights between 2009 October 1 and 2010 September 30. There was an additional variable-star workshop held at the OSC on February 4. The Centre is grateful to all who presented, and the OAC thanks the Ontario Science Centre and its staff, especially Sara Poirier and Doug Carman, for their assistance and their facilities used by Members' Nights and star parties throughout the year.

Outside of volunteerism at Science Centre star parties and lectures, Katrina Ince-Lum led an active group of observers for monthly public solar observing sessions (SOSs) on Saturday mornings in front of the Science Centre's John Tuzo Wilson monument. Special SOSs were held at the Science Centre daily during International Astronomy Week April 19-24 (835 members of the public visited our observing site during the week).

As in past years, a special meeting was jointly hosted by the Royal Canadian Institute for the Advancement of Science and the RASC Toronto Centre at the University of Toronto's MacLeod Auditorium. On February 28, the same date as the gold medal match of the Vancouver Olympics mens' hockey final, Dr. Allison Sills from McMaster University presented the lecture "Secrets from the Stellar Nursery." Thanks to the RCI for this collaboration in their own ongoing series of science lectures.

Through the latter part of 2009 and the warmer months of 2010, our David Dunlap Observatory committee, led by Paul Mortfield, organized several combined lecture and observing nights. With the co-operation of Metrus Developments, lectures were held in the DDO Admin Building lecture hall, followed by observing through the 74-inch telescope, the largest such instrument in Canada and the largest in the world with a regular public observing program.

Star Talks were as follows:

- October 10 Sara Poirier (Ontario Science Centre)
- June 19 Dr. Roberto Abraham (DAA)
- June 26 Dr. Anne-Marie Weijmans (DDI)
- July 10 Dr. René Breton (DAA)
- July 17 Paul Delaney (York University)
- July 24 Dr. Rupinder Brar (Ontario University Institute for Technology)
- August 7 Elizabeth Harper-Clark
- August 21 Dr. John Percy (DAA)
- August 28 Dr. Chris Matzner (CITA)
- September 18 Dr. Michael de Robertis (York University)
- September 25 Dr. Doug Welch (McMaster University)



Special events at the DDO outside of these lectures included public observing nights, members-only observing, International Astronomy Day on April 24, a 75th-anniversary barbecue and observing party on May 29, a special Northern Lights night at short notice on August 3, a free public night for the Perseid Meteors on August 12 (with more than 2000 visitors!), a breakfast gathering of the vintage Rolls Royce Owners Club, many visits by Guide and Scout troops, two marriage proposals, and continued TV tapings for the Weather Network's weekend astronomy feature and other on-location broadcasting. The DDO anniversary was featured in an article in SkyNews, Canada's astronomy magazine, written by Brenda Shaw and edited by Terence Dickinson. A DDO anniversary feature was recorded for the 365 Days of Astronomy IYA podcast. The DDO stood ready to participate in the international program to observe the LCROSS space probe approach impact on the Moon on 2009 October 9, but in the event, skies were overcast.

The Toronto Centre's "First Light" programme for 22 new members in astronomical observing was hosted by Diane Shukla and Sharmin Chowdhury at the DDO in the autumn of 2010, and more such programs are planned.

Ontario high-school students are able to earn community-service hours by volunteering at the DDO. This season, the student team has racked up more than 170 volunteer hours assisting with our public events. Our Centre volunteers have put in thousands of hours to ensure the DDO remains a vibrant community resource now and in the future. Those volunteers include: Rajesh and Diane Shukla, Michelle Johns, Pat Gallo, Archie de Ridder, Sharmin Chowdhury, Shawn Lee, Sue and Erich Kralik, Van Netoff, Tim Hunter, Dietmar Kupke and Millie Rayakovich, Charles Darrow, Terry Leeder, Eric Briggs and Brenda Shaw, Lucy Winnicki, Gilles and Nicole Gaudet, Caroline Lane, Tom Luton, Les Bluestein, Scott Masterton, Wingko Yung, Tom Glinos, Ed and John Hitchcock, Ralph Chou, Guy Nason, Peter Hiscocks, Stef Cancelli, Jason Toliopoulos, Blake Nancarrow, Stu McNair, Katrina Ince-Lum, Bill Longo, Bryon Czarnik, Neils Walkau, Denis Grey, John Bohdanowicz, and Paul and Karen Mortfield. Toronto Centre can take pride in the work we've done as stewards of the largest optical telescope in Canada.

By the end of 2009, the Greater Toronto Area had contributed greatly to the national goal of recording more than a million Canadians' first looks through telescopes at the sky, visits to observatories, or planetaria, referred to as "Galileo Moments." The national goal was reached in October. Only Calgary, Montréal, and Québec City performed similarly to Toronto, recording more than 100,000 Galileo Moments each. The Toronto Centre must take credit for some of the Toronto result.

The Public Education Committee held three presentations and three different star parties for schools this year. We held nine separate star parties with only two cancellations due to clouds. We also presented to 16 special-interest groups with a beginner's observing theme. Committee members also held presentations for five Brownies, three Guides, two Beavers, three Wolf Cubs, one Scouts group, and a Scouter Conference. Children were given Star Finders to take home and the teachers and leaders were given extras for future projects. We also participated in a Cuboree at Camp Good-year for 200 Wolf Cubs and 50 leaders, where we helped the children assemble planispheres. In the end, the Public Education Committee held 43 presentations and star parties for 3281 children and adults. The Centre also presented a booth at the 30th annual "Ad Astra" science fiction convention April 9-11. The Toronto Centre's 4-inch Stanford Brashear telescope was used by British astronomer Dr. Stuart Clark in a TV special for the National Geographic channel "Storm Worlds: Cosmic Fire."

Before presenting "First Light" at DDO, the more in-depth NOVA program, New Observers to Visual Astronomy, was held as a series of eight lectures held on Wednesday evenings, free and open to

the public at the Science Centre. There were 41 attendees in the October 2009 NOVA session, of which 28 finished the course. Of 62 registrations for the spring 2010 session, 22 people completed the 8-lesson course. All participants were invited to attend the annual Open House and Awards Picnic at the Carr Observatory May 15.

The Public Education Committee would like to thank volunteers Andy Beaton, Eric Briggs, Ralph Chou, Sharmin Chowdhury, Geoff Gaherty, Denis Grey, Costas Harvey, Ed Hitchcock, Tony Horvatin, Katrina Ince-Lum, Isaac Kravec, Dietmar Kupke, Shawn Lee, Scott Masterton, Mickey Milankov, Phil Mozel, Blake Nancarrow, Guy Nason, David Parfett, Brenda Shaw, Diane and Rajesh Shukla, and Francois van Heerden for helping make this a very successful year.

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

At the 2010 Toronto Sci-Tech Fair at Scarborough College, April 9 and 10, the Toronto Centre sponsored The Royal Astronomical Society of Canada Award, which was presented by Treasurer David Parfett to Catherine Lu & Jessie Dong from Agincourt Collegiate Institute for their presentation "Black Holes: The Cosmic Phenomenon."

In January, Guy Nason stepped down as the co-ordinator of the Observational Activities Committee after 20 years, and was succeeded by Stuart McNair. Weather permitting, the OAC coordinated several monthly observing programs, including Dark-Sky Observing Programs at Forks of the Credit Provincial Park and Long Sault Conservation Area; City Observing Sessions at Bayview Village Park and High Park, and the aforementioned Solar Observing Sessions. Toronto Centre observers were active this year: Guy completed the requirements for his Finest NGC Certificate, and observed an occultation of asteroid (66) Maja on August 7. Guy also made a constraining observed miss on an occultation of (371) Bohemia on June 8. On April 14, Eric Briggs participated in his third supernova co-discovery as part of the Puckett Observatory Supernova Search at the same time as another team from Sweden discovered the same object, designated SN 2010bq. The total eclipse of the Sun of July 11 was observed by Dan Falk from Easter Island. Toronto Centre members Paul Mortfield, Geoff Gaherty, Andy Beaton, Patrick McDonald, Eric Briggs, and Jeff Lebold were cited as observers in the 2008-2009 annual report of the American Association of Variable Star Observers.

On 2009 October 11, a meteorite was discovered in Grimsby, Ontario, by faculty of the University of Western Ontario as part of a search initiated after a fireball was recorded on September 25 by several all-sky cameras operated by them, including one such at the Toronto Centre's Carr Astronomical Observatory on top of Blue Mountain. As of December 2009, 12 other fragments of the bolide had been located. The Toronto Centre is thankful to be a part of the Southern Ontario Meteor Network.

In the autumn of 2009 the Toronto Centre acquired a telescope dome from Bob Anderson of Mississauga, that was transported to the Carr Observatory, and is expected to take up a new position on the grounds in future.

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

- \* Jesse Ketchum Award for Astronomical Equipment: to Jim Chung, for several telescope modification projects presented at meetings.
- \* Ostrander-Ramsay Award for Astronomical Writing: to Randall Rosenfeld for his Astronomical Art and Artifact column in the *Journal* of the RASC.

- \* Ray Thompson Award for Astronomical Imaging: to Terry Leeder for astronomical sketching projects, including work for the Isobel Williamson Lunar Certificate, which Terry completed this year.
- \* Bertram J. Topham Award for Observing: to Guy Nason in recognition for his service with the Observational Activities Committee.
- \* Andrew Elvins Award for Promotion of Astronomy: to Francois van Heerden, for his public astronomy education events, which created more than 1000 Galileo Moments at locales such as Algonquin Park.
- \* Bert Winearls Award for Service to the Toronto Centre: to Paul and Karen Mortfield for their co-ordination of the re-activation and other programs at the David Dunlap Observatory.

Ron Macnaughton was also a co-recipient of the National RASC's 2010 Chilton Prize for his work with the International Year of Astronomy designing the Star Finder.

In advance of the Open House and Awards Picnic, a work party was held at the Carr Observatory on May 1 to open the site for the year. Renovations to the library during the spring work weekend included the installation of new shelving donated by National Office, and the removal of the defunct gas fireplace.

During the summer, we concluded the purchase of a strip of land to the west of the CAO that ensures that any future development of properties to the west will not inflict light trespass on us. A micro-work party was held on September 3 to repair water damage to the south wall of the Geoff Brown Observatory there. An Imaging Weekend was held at the CAO on September 11. On the October 1 weekend, the CAO hosted its second annual autumn open house for the Town of Blue Mountains community, on the same weekend as the autumn work party.

Two Astro Expeditions were held this year, one to the 2010 North-east Astronomy Forum and a second to Kennedy Space Center to see the successful Space Shuttle launch of STS-130. Thanks to David Parfett, Phil Chow, and Katrina Ince-Lum for organizing the trips. Several members also ventured east to attend the RASC's annual General Assembly, hosted by the New Brunswick Centre over the Canada Day long weekend.

The following GA papers were presented by members:

- \* David Dunlap Observatory: Back in Business (Ralph Chou)
- \* 25 Years in the Telescope Industry (Ray Khan)
- \* Building a Better Centre (Denis Grey)

A great time was had by all.

Eric Briggs, Sue Kralik, and Leslie Harvey are to be thanked for the continuing high quality of the Toronto Centre's *SCOPE* newsletter, which is completing its 48th volume (there was no Vol. 37.) Thanks are also due to Terry Leeder, *SCOPE*'s outgoing copy editor and Adam Clayson, former editor. The newsletter has been published on time and under budget with excellent coverage of Centre events, and well-written and informative articles supplied by many members. Eric and Brenda Shaw took up editorship of a renewed DDO newsletter, *DDO Doings*, and published four issues in print and on the Web. The June 2010 issue included numerous good wishes for the DDO on its 75th anniversary, from institutions and astronomers such as Sir Patrick Moore, an Honorary Member of the RASC. Guy Nason and Geoff Gaherty, who have both held bylines in the *Journal* of the RASC this year (Carpe Umbram and Through My Eyepiece) are also thanked for their contributions to the RASC in print.

Other Toronto Centre members made contributions to JRASC in 2010: Peter Broughton, Jim Chung, Stuart Heggie, Peter Hiscocks, Kerry-Ann Lecky Hepburn, Paul Mortfield, Phil Mozell, and Joel

Parke. Lynn Hilborn, and Stuart Heggie's astrophotos were published in SkyNews magazine. The 2010 RASC Calendar was published with some astrophotos by Centre members Stef Cancelli, Kerry-Ann Lecky Hepburn, Paul Mortfield, and Stuart Heggie. Randy Attwood, Robert Garrison, and Paul Markov contributed to the 2010 *Observer's Handbook*.

The Centre held the 13th Annual Algonquin Adventure star party from September 9-12. More than 140 members and guests were treated to clear skies and cold temperatures in a gorgeous dark-sky environment. Special thanks to Robert and Lillian Chapman for organizing and hosting this event, which drew attendees from as far away as Japan.

Blake Nancarrow and his Information Technology crew have implemented an online payment and donations mechanism on the Toronto Centre Web site. This extended to supporting the National iMIS system, and starting new ticket procedures at the DDO. Management of Toronto Centre email addresses was taken back from National Office, and a new Web presence provider was selected. The IT committee continues to administer a list on Yahoo groups, which is used by our members, and manage computer equipment at the Carr Observatory. The IT chair would like to thank the following people for their assistance in technology matters for the Centre; a number of them also assist with Web site content: Gilles Gaudet, Charles Darrow, Tony Horvatin, Rajesh Shukla, Jason Toliopoulos, Phil Chow, Paul Markov, and Matthew Fitzgerald. The IT chair would also like to thank the following Web site content editors: John Bohdanowicz, Brenda Shaw, Eric Briggs, Guy Nason, Stu McNair, Leslie Harvey, and Ralph Chou.

The Light-Pollution Abatement Committee, under the stewardship of Peter Hiscocks, held various meetings with the City of Toronto LPA committee working on a light-pollution guideline. On 2009 October 27, Toronto City Council adopted unanimously by a show of hands a two-tiered set of performance standards for sustainable development called the Toronto Green Standard, which includes measures on light pollution. The general objective is to "Reduce nighttime glare and light trespass from the building and the site." This is a hugely positive first step. Substantial credit should go to FLAP (the Fatal Light Awareness Program, who have been spearheading measures to protect birds), Kelly Snow at the City of Toronto Planning Dept., and the City of Toronto LPA committee.

Membership in the Toronto Centre stood at 471 Regular, 80 Life, 7 Youth, 7 Affiliate, 142 Associate, for a total of 707. Of these members, 46 are CAO pass holders, 335 are receiving eScope and 430 are on the Yahoo group.

We lost two members of the Toronto Centre this year - Olga Kuderewko and Michel Lerman. Also, Dr. Leonard Searle, Toronto Centre President in 1959 and 1960, and later director of the Observatories of the Carnegie Institution of Washington, passed away this year. I ask you for a moment of silence to remember our colleagues.

In closing, I wish to also thank Carruthers, Shaw and Partners Architects, and Rod Ends Mechanical Ltd. for the use of their offices for Council meetings; I also wish to thank the Ontario Science Centre for its continued hospitality in providing the facilities and audiovisual support for our meetings and public events.

On behalf of the Council, I thank all members for your continued trust and support of our work.

**Eric Briggs**  
Secretary

2010 was an extraordinarily productive year for Vancouver Centre, with sustained effort devoted to new initiatives and follow-on activities after the International Year of Astronomy (IYA2009). We partnered with other like-minded organizations within our region, including Metro Vancouver Parks, Simon Fraser University (SFU), NRC's Herzberg Institute of Astrophysics, University of British Columbia (UBC), and the Vancouver Telescope Centre in support of amateur astronomy.

During 2010 council passed a variety of business motions most notably in support of the SFU observatory project and our many public outreach activities. These motions do not begin to reflect the huge amount of work that occurs within the various functional areas of council and the operating committees.

Major initiatives this year included (but were not limited to):

- \* Financially supporting the continuation of the SUPERnova YouTube series. These videos are roughly 10 minutes in length, on a variety of astronomical themes, both amateur and scientific. The videos have been produced for the Vancouver Centre by Tyler Gamsby, and are hosted by Eric Dunn. Episodes five and six were produced this year;
- \* Funded Telescopes for the Galileo Moments program at SFU, donating 10 telescopes directly and \$500 towards additional telescopes for families with children attending five workshop and star-party events;
- \* Purchased 1000 Star Finders for SFU and RASC public star events
- \* Supported the fund-raising initiative for a new Teaching Observatory and Science Outreach Centre at SFU, with support up to \$5000 in the name of Martha Ellen Pierce for matching funding to member donations towards the observatory project. Contribution will be made in next fiscal year;
- \* Donated \$500 towards funding the Lawrence Krauss presentation at UBC - July 3;
- \* Donated \$500 in support of summer outreach program presented to small B.C. communities by Bill Burnyeat;
- \* Continuing and revitalized Light-Pollution Abatement (LPA) initiatives, including contact with area municipal councils, BC Hydro, media outlets, resulting in four articles in local newspapers;
- \* Continuing development of the AOMO (Vancouver centre's observatory) including maintaining premises, clearing around the observatory, improved relationship with the research forest, hosting public events, and considerable progress in quantity and quality of imaging;
- \* Continued partnership with Metro Vancouver Parks, and cooperated with them on an August star party at Aldergrove Lake resulting in one of their most successful events this year with 1100 people viewing through telescopes;
- \* Supported ongoing series of events at the Silk Purse Arts Centre in West Vancouver;
- \* Continued publication of the *NOVA* Newsletter;
- \* Maintenance of a Sandia All-Sky Camera at SFU;

In addition to our regular monthly series of public lectures (listed in the table of guest speakers below), major public events this year included (but were not limited to):

- \* TWAN (The World at Night) exhibition at the UBC, January 4-30
- \* TWAN exhibition RASC presenters: Harvey Dueck, David Dodge, Ed Hanlon;
- \* Maple Ridge Library presentation - January 21;
- \* Chinatown Rotary fundraiser silent auction "Night under the stars;"
- \* Eugene Cernan Event (Vancouver Centre sponsored) - March 22;
- \* Night Quest in Pacific Spirit Park, March 27;

- \* "Terrestrial/Celestial" joint nature foray with the Vancouver Mycological Society and the Vancouver Access Gallery, facilitated by U. Guelph Art Professor Diane Borsato, Astronomy, hosted by Centre volunteers at AOMO grounds - Saturday May 8;
- \* The Roundhouse presentation - April 16;
- \* Astronomy Day - in conjunction with SFU Science day, included our Centre annual Paul Sykes memorial lecture. It was an extensive program of talks, displays, and activities, including solar observation for several hundred attendees. Over 1000 attendees mostly young families - September 18;
- \* Silk Purse event - July;
- \* AOMO public event - July 12;
- \* Mount Kobau Star Party - breakfast - August 14;
- \* AOMO public event - August 14;
- \* Perseid Meteor Shower at Aldergrove Lake - August 11, 1100 attending;
- \* Dease Island, Starry Night, 500 attending - August 21;
- \* Merritt Star Party - Members attended - September 4-11;
- \* The Roundhouse presentation on the Moon - September 17;
- \* Space Centre - Science Fair Students - NRC Herzberg event - Observing - October 13;
- \* NRC's Herzberg Institute of Astrophysics event at Richmond Public Library - October 22;
- \* Telescope workshop at the Maple Ridge Library - November 19;
- \* Starry Nights @ SFU with Vancouver Centre - December 4;
- \* Four guest appearances on Global TV by our Vice-President - Professor of Physics at SFU, Dr. Howard Trottier;
- \* Roundhouse Vancouver on-going series of talks and star parties;
- \* Member participation in many SFU astronomy workshops and evening star parties;
- \* Regular North Shore observing events at Ambleside Park;
- \* Numerous Sidewalk Astronomy activities at many community locations;
- \* Regular lending of telescopes to members;

In 2010 we enjoyed the following guest speakers at our regular monthly meetings and the Vancouver Centre Astronomy Day event in September, which included our annual Paul Skyes Memorial Lecture.

January 14	Alan McConnachie - "Galaxy Archaeology in the Nearby Universe"
February 11	Regular meeting suspended due to Olympics
February 11,	Open House at Breckenridge Anderson Astronomical
March 11	Members' Night: Gwen Eadie and Wayne Lyons Eugene Cernan event
April 8	Dr. Mark Halpern (UBC), First results from the Atacama Cosmological Telescope
April 24	Ray Villard, (special event)
May 14	Bob Parry - Rubbermaid Observatory
June 10	Howard Trottier - Home Observatory Scott McGillivray - Russian Space Program
July 8	Movie: JPL produced film "Explorer 1: Beginnings of the space age."
August	Meeting cancelled due to the high density of astronomy events during August.
September 9	Bill Burnyeat - Observing the Moon and B.C. traveling outreach program this summer.
September 18	Vancouver Centre Astronomy Day (special event hosted in conjunction with SFU) International Astronomy Day Celebration: Dr. Jim Whiteway of York University speaking on Mars Phoenix Lander
October 14	John Chapman on "Mining the Solar System"
November 11	Dr. Thomas Kallanger of the MOST science team

**Alan Jones**  
Secretary



As the International Year of Astronomy drew to a close, Victoria Centre could point with pride to its achievements for the year: over 22,000 Galileo Moments recorded at 170 events and engagements, over 2000 hours of volunteer effort, continued work upgrading its observatory, and a whole new format and venue for its annual star party.

There was to be no resting on its laurels, however, as President John McDonald declared war on light pollution. Our project for 2010: An abatement program.

## Honorary President

We are proud that Victoria Centre Council member Jim Hesser, Director of the DAO of the HIA, has been selected as Honorary President of our national body, to serve until 2013. Dr. Hesser is a tireless advocate of public outreach and of bringing the glories of astronomy to the public sphere: he was seen at a recent open house of the Herzberg Institute of Astrophysics, acting as parking-lot attendant, dressed as Galileo, complete with a metre-long telescope, and welcoming all comers.

## Victoria Centre Observatory (VCO)

Upgrades continued at the VCO, with the addition of Hyperstar imaging capability to the 14-inch telescope, and the addition of a video camera to the VCO's arsenal of imaging choices. The 20-inch Dobsonian telescope, now housed in its own addition at the VCO, has been upgraded with new trusses, a hand-made shroud, and a new secondary mirror, all of which will allow us to take full advantage of its large aperture. This large scope can be ready for use literally within minutes of the arrival of an observer. In addition, there is now a 12-inch Dobsonian available for use, courtesy of Charles Banville.

A new procedure has been put in place so that members can schedule private use of the VCO for imaging and observing (subject, of course, to priorities, and the requirements of our hosts at the hill). Additional money has been budgeted for further upgrades and repairs. Thanks to Bruno Quenneville and the Technical Committee for their tireless work. We continue to inch toward our goal of "school friendly" remote operation.

## Regularly Scheduled Meetings and Functions

Our full schedule of regular meetings has continued, with meetings held the second Wednesday of each month except during the summer. The highlight of each meeting is a speaker, usually a professional astronomer, but often something a bit more esoteric, such as an expert in the archaeology of astronomy. Victoria Centre Council meetings are held the first Wednesday of alternate months except for July and August. Members are invited to these meetings. Astronomy Café is held Monday nights, except during the summer months, and gives members a chance to gather, drink coffee, welcome new members, and talk astronomy. Programs and presentations are common. The New Observers Group has continued under the dark skies of the Highlands just outside Victoria. This group meets the fourth Friday of every month for an introduction to the night sky by Sid Sidhu.

The Active Observers Group, meets at the VCO for regularly scheduled observing and imaging sessions. These sessions are hosted by "members-in-charge" (MICs), who have a "code and a key" and are responsible for announcing the sessions, keeping an eye on the weather, opening and closing the grounds and the VCO, and

keeping a head-count. MICs receive training from NRC/CU on fire concerns. There are fifteen MICs.

## Public Outreach and International Year of Astronomy Activities

This year has brought with it a host of outreach activities, and the winding down of the IYA. In December, IYA activities concluded with five nights of night sky viewing at Butchart Gardens, displays and information tables at Mayfair Mall, and events at Alex Goolden Hall, various retirement homes, Cattle Point, and the Royal Theatre.

The Centre's school program remained one of the centrepieces of its outreach. As usual, school visits were scheduled months in advance, and were much in demand. Sid Sidhu, Lauri Roche, and Dave Bennett head up the program. Our Astronomy Day event was held April 24 at Swan Lake Nature Sanctuary in Victoria, thanks to the efforts of Scott Mair. Night sky viewing continued at Cattle Point.

## Observing Activities

Our second annual Messier Marathon was held March 12. The event was preceded by several days of cloudy weather and rain, but we hoped for clear skies. Unfortunately, the half-dozen or so hardy souls that appeared at the VCO for a night of Messier hunting saw only more clouds. There were a few breaks, and it was a lucky observer who found six objects. We hope for better skies next year.

One of the highlights of the year was our tenth annual RASCals Star Party, held in Metchosin. This was a new venue, the club having been driven from the Victoria Fish and Game Club by ever-increasing costs. The District of Metchosin graciously allowed us the use of its municipal grounds in return for free attendance for the public, a deal to which we quickly agreed. The event, held August 13-15, was a great success. Fifty members/observers were present. Public attendance Friday night was 50. Saturday night brought out nearly a 120 from Metchosin and environs. Many guests stayed until nearly 3 a.m.; our largest turnout ever. The Metchosin site is distinguished by its dark sky, nearby eateries, helpful administration, and enthusiastic crowd. It is truly a nearly urban star party, only twenty minutes from downtown Victoria!

The NRC/CU has graciously offered the use of the Plaskett telescope to our group for imaging on selected nights. Several sessions have been held under the watchful eye of Dave Balam, operator of the scope. And lastly, David Lee continues to hope for clear skies for his double-star observing program.

## Other Activities

Our newsletter, *Skynews*, has a new editor, Malcolm Scrimger (thanks to Scott Mair for his excellent stewardship). Malcolm has taken to the task with enthusiasm. The Victoria Centre calendar, featuring images taken by some of our more talented members, is being offered for the second year. Thanks to Dirk Yzenbrandt, David Lee, and Joe Carr for this one.

The club's Light-Pollution Abatement effort is headed up by Mark Bohlman. Meetings of his committee are held monthly. The committee has outlined its long- and short-term goals: 1) to reduce artificial sky glow in the greater Victoria area by a perceptible level over the next five years, 2) to establish the first Dark-Sky Preserve or Urban Star Park in either greater Victoria or the Gulf Islands by the end of 2011, and 3) to recognize and reward the efforts of local area businesses and organizations to reduce artificial sky glow in the Victoria area. The first project of the committee was to accumulate data and establish a base line. Sky quality readings were taken by legions of volunteers and a map was created, giving us a picture of the present situation. Thanks to Sid, David Lee, Mark, and everyone else who helped with the difficult and yet creative endeavour.

National representative Chris Gainor, V-P Lauri Roche, and member Alex Schmid attended a "very successful" 2010 General

Assembly held in Fredericton, NB, in July. The highlight of the meeting was the selection of our own Sid Sidhu as recipient of the new annual President's Award for his work in heading up our IYA and other volunteer efforts.

Details on all of our activities can be found on our still-superb Web site, <http://victoria.rasc.ca>, developed and maintained by council member Joe Carr.

**Nelson Walker**  
*Secretary*

## WINDSOR CENTRE

RASC Windsor Centre averaged about 100 paid up members through 2010. Our usual nine monthly meetings were held at the Maidstone Recreation Centre, where we also have a Christmas Social in December. In June, we have an annual picnic at our observatory near Comber, Ontario.

Meetings featured guest and member speakers. Three members took turns preparing and presenting observers' reports at each meeting. Windsor Centre participated in a Science Rendezvous at the University of Windsor. We also participate in the annual Earth Day, setting up our own booth and displays of astronomical interest and light-pollution abatement.

Our Hallam Observatory near Comber Ontario has a 10-foot diameter Ash Dome housing a 14-inch Celestron telescope installed on a Software Bisque mount. Piggybacked on the Celestron is a member-owned Astro Tech 111-mm refractor. An adjoining 10x20-foot warm room houses the computer, some amenities, such as a microwave oven, and a fair-sized library of astronomy-related books and publications. Outside, a large deck provides room for visiting groups and is perfectly placed to observe meteor showers. There is also a wheelchair accessible relief facility on the site. A local newspaper featured an article under the heading Hallam Observatory, One of our County's Hidden Treasures.

The facility is used year round. Some members pay an additional fee to use the observatory equipment. Once a month the observatory is publicized and opened to the public. It is also used (by appointment) to host groups interested in astronomy. Scouts, Guides, and sometimes school groups are typical. Some members also do public-education talks at schools and libraries. There is also a small informal group interested in astro-imaging. Comet Hartley was a prime target in the fall but proved a disappointment.

Two important observatory projects were completed during 2010. The two telescopes were re-mounted side by side for better access, and a reliable auto-guider added to the system, greatly facilitating both astroimaging and visual observing by virtue of having one or the other telescope more easily accessible. A system to rotate the dome remotely was built and installed, allowing dome rotation from the observer's ladder, ending the need to manually pull the dome opening around to the telescope's field of view.

A new fund-raising event was held, featuring an indoor astronomy presentation, plus observing outdoors, all combined at a small specialized local winery. Wine tasting and an excellent buffet was part of the event.

**David J. Panton**  
*Secretary*

## WINNIPEG CENTRE

Winnipeg Centre begins every meeting with a half-hour "Beginner's Session," led by an experienced member who covers a basic aspect of astronomy. This allows us to cater to the newer members without forcing the "old timers" to sit through the basics over and over again. Topics for the year included basic point-and-shoot astrophotography, collimation, precession, telescope types, eyepieces, and other topics. The Beginner's Session is led by Winnipeg Centre members Gerry Schmerchanski and Brendan Petracek.

Other regular features of monthly meetings include "Constellation of the Month" by Gail Wise, "What's Up" in the sky by Jay Anderson, "What's New" in the world of astronomy and astrophysics by Jennifer West, "Imaging Corner" by Kevin Black, and the "Observe the Universe" program, presented alternately by Lindsay Price and Stan Runge. After the meeting, the bulk of the group adjourns to a local watering hole to continue the conversation well into the night.

### Featured events for 2010 included:

The Centre's Annual General Meeting and a wrap-up of IYA2009 occurred in January. The Centre also hosted our annual Winter Potluck on January 30 hosted by Terra Jentsch.

Dr. Jayanne English of the Department of Physics and Astronomy at the University of Manitoba gave a talk in February on "Exploring the Southern Skies and other sites/sights," highlighting her adventures while on sabbatical in Australia.

The Centre held its first Awards banquet in April to honour the recipients of the Centre's two major awards. The Winnipeg Centre Service Award was presented to Fred Wood, and the Winnipeg Centre Achievement Award was presented to Scott Young.

Former Centre President Chris Rutkowski led a rousing debate on "Astronomers Versus the UFOs" at May's regular meeting.

The Centre's June meeting was replaced by the annual barbecue at Glenlea Astronomical Observatory. Unfortunately, weather forced the relocation of the barbecue to an in-city backyard.

Scott Young's presentation on Meteor Observing at the July meeting was pre-empted by the birth of his second child, so instead the group watched a video presentation and adjourned early for pizza.

The annual Spruce Woods Star Party took place 2010 September 3-6 in Spruce Woods Provincial Park west of Winnipeg. September's regular meeting featured "Haloes, Rainbows, and the Green Flash" by Jay Anderson.

"Astrophotography: How and Why" by Kevin Black was the topic of the October meeting.

In November, we had guest speaker Paula Grieff, a local naturalist at Oak Hammock Marsh Interpretive Centre north of Winnipeg, give a talk on "How Birds Navigate." The Centre also hosted a special lecture by Jane Houston-Jones of NASA's Jet Propulsion Laboratory, who gave a well-received public presentation on the Cassini legacy mission.

Dr. Paul Edmon, a post-doc at the University of Manitoba working for Dr. Samar Safi-Harb, presented "Cosmic Rays: Nature's Large Hadron Collider" at the Centre's December meeting.

Members' Observing Nights occur the Saturday following the regular monthly meeting, and are hosted at the Glenlea Astronom-



ical Observatory by various Centre Council members. The Centre's 12-inch Meade LX200 and 14.5-inch Dobsonian are available alongside members' telescopes.

Winnipeg Centre also presented its first Herschel 400 certificate to Gil Raineault, as well as the Isabel K. Williamson Lunar Observing Certificate to Mike Stephens.

**Jay Anderson**  
*Secretary*

# CENTRE TREASURERS' REPORTS FOR FISCAL YEAR 2010

		Belleville	Calgary	Charlottetown	Edmonton	Halifax	Hamilton	Kingston	Kitchener-Waterloo	London
<b>REVENUE</b>										
Membership	Membership Fees: Centre Fee	1,128	9,716	612	5,408	3,209	2,414	2,835	2,728	3,195
	Membership Fees: Associate		120		105	79	55	15		
	Membership Fees: Affiliate							28		
	Membership Fees: other		220			2,133				
	Life Membership Payout Received									
	Centre Newsletter									
Donations / Fundraising	Donations		1,639	90	205	655		1,748	29	
	Fundraising		2,000				134	155	396	50
Sales Revenue	Sale of Observer's Handbooks		60					100		200
	Sale of Observer's Calendars		1,395	264	1,248	1,400	111	360		300
	Sale of Beginner's Observing Guides					55				
	Other Publication Sales					292				
	RASC Promo Items		150			109	25	420	1,202	
	Other Sales					732		15		
Subscription Revenue	Astronomy / Sky & Telescope		36							
	Other									
Events Revenue	Star Parties	458	2,867			3,211				
	Annual Dinner		1,675							
	IYA Event					1,000				
	Astronomy Day			500						
	Other Events		91			445				
General Assembly Revenue	General Assembly									
Miscellaneous Revenue	Interest and Dividends	2	8	3	170	8		65		
	Advertising		250							
	Observatory Site		104							
	Equipment Rentals/Loans		1,229		30					
	Miscellaneous		76			11		15	60	
<b>TOTAL REVENUE</b>		<b>1,588</b>	<b>21,636</b>	<b>1,469</b>	<b>7,166</b>	<b>13,339</b>	<b>2,739</b>	<b>5,756</b>	<b>4,415</b>	<b>3,745</b>
<b>EXPENDITURES</b>										
Sales Expenses	Observer's Handbook						127	86		200
	Beginner's Observing Guide			72		55				
	Observer's Calendar		995	224	527	867		261	562	300
	Other Publications			267						
	Newsletter		1,300		2,585	1,530		67		245
	RASC promo items		533				30		601	
	Other			30		364				
Event Expenses	Star Parties	382	2,027			3,202		489	116	
	Annual Dinner	192	1,997						690	
	Astronomy Day			216	196	68				
	IYA Event					44				
	Meetings		200		572	670	417		663	50
	Other Events	240	681	127	1,726	777		167		
Travel	General Assembly and Council Meetings								1,001	
Administrative Expenses	Office Administration		195		154	270		115		
	Equipment and Supplies			93		30			46	
	Insurance		2,395			1,113	1,375			
	General Expenses and Audit	2		314		28		215	841	
	Awards		1,054	200	504	10				
	Donations		50		10,969					
	Advertising		150		548					
Miscellaneous Expenses	Observatory and Site Expenses		3,302		19,059	259	1,377		350	375
	Library		181		36	89		95		
	Depreciation		2,263			3,030				
	Miscellaneous	13	273		2,364	120	500	399	970	
<b>TOTAL EXPENDITURES</b>		<b>829</b>	<b>17,996</b>	<b>1,543</b>	<b>39,240</b>	<b>12,526</b>	<b>3,826</b>	<b>1,894</b>	<b>5,840</b>	<b>1,170</b>
<b>SURPLUS OR DEFICIT ON OPERATIONS</b>		<b>759</b>	<b>4,040</b>	<b>-74</b>	<b>-32,074</b>	<b>813</b>	<b>-1,087</b>	<b>3,862</b>	<b>-1,425</b>	<b>2,575</b>
ASSETS	Current assets	4,625	26,816	1,476	147,023	16,909	15,366	25,802	11,604	15,330
	Capital assets	720	26,851	2,500		15,248	94,737	21,250	2,000	46,975
LIABILITIES			1,226		3,065	920				

# CENTRE TREASURERS' REPORTS FOR FISCAL YEAR 2010

		Mississauga	C. F. de Montréal	Montréal	New Brunswick	Niagara	Okanagan	Ottawa	Prince George	Québec	Regina
<b>REVENUE</b>											
Membership	Membership Fees: Centre Fee	4,064	2,148	3,797	1,522	1,691	3,391	8,190	1,630	399	2,645
	Membership Fees: Associate	120				138					
	Membership Fees: Affiliate	23									
	Membership Fees: other	82					535			278	
	Life Membership Payout Received										
	Centre Newsletter							345			
Donations / Fundraising	Donations	483	782	200	1,156	1,160	7,703	482	205		1,344
	Fundraising				829	245	2,712		1,055		1,330
Sales Revenue	Sale of Observer's Handbooks					5	370		688		
	Sale of Observer's Calendars	324		170	140	402		1,990			
	Sale of Beginner's Observing Guides						150				
	Other Publication Sales										
	RASC promo items	180	195		25	17			38		
	Other Sales					60			123		2,069
Subscriptions	Astronomy / Sky & Telescope					304					
	Other										
Events Revenue	Star Parties										3,948
	Annual Dinner					1,620		2,495			
	IYA Event										
	Astronomy Day										
	Other Events								223		5,345
General Assembly Revenue	General Assembly				1,854						
Miscellaneous Revenue	Interest and Dividends		7	222		240	10	68			
	Advertising		578								
	Observatory Site					220		770			
	Equipment Rentals/Loans						165	450			
	Miscellaneous	1,153	43	102		200	17,129	4,096	8,000		460
<b>TOTAL REVENUE</b>		<b>6,429</b>	<b>3,753</b>	<b>4,491</b>	<b>5,526</b>	<b>6,302</b>	<b>32,165</b>	<b>18,886</b>	<b>11,961</b>	<b>677</b>	<b>17,142</b>
<b>EXPENDITURES</b>											
Sales Expenses	Observer's Handbook										
	Beginner's Observing Guide										
	Observer's Calendar	76			787		557	1,828	597	268	
	Other Publications										
	Newsletter		414	42		175	61	3,288			408
	RASC promo items	481			504		78		164		5,241
	Other	129						922			
Event Expenses	Star Parties							297			
	Annual Dinner					1,700		2,820			
	Astronomy Day										
	IYA Event										
	Meetings			627	276	427	23	161			1,136
	Other Events	700									70
Travel	General Assembly and Council Meetings			364			400				
Administrative Expenses	Office Administration	436	1,506	171			1,138	146	628	47	1,705
	Equipment and Supplies		54	145	139	407	2,574				340
	Insurance		541				1,520	3,682	1,678		455
	General Expenses and Audit			382	104	38			549		
	Awards										
	Donations							150	52		
	Advertising				115		438		117		
Miscellaneous Expenses	Observatory and Site Expenses		200			2,644	40,443	712	3,876		368
	Library						64	9,127		102	
	Depreciation	168	252								
	Miscellaneous	113	328	423		809	463		2,994	62	1,111
<b>TOTAL EXPENDITURES</b>		<b>1,950</b>	<b>3,295</b>	<b>2,154</b>	<b>1,925</b>	<b>6,200</b>	<b>47,759</b>	<b>23,133</b>	<b>10,656</b>	<b>478</b>	<b>10,834</b>
<b>SURPLUS OR DEFICIT ON OPERATIONS</b>		<b>4,479</b>	<b>415</b>	<b>2,337</b>	<b>3,601</b>	<b>102</b>	<b>-15,594</b>	<b>-4,247</b>	<b>1,305</b>	<b>199</b>	<b>6,308</b>
ASSETS	Liquid assets	11,208	5,151	95,229	7,427	9,149	9,471	41,066	11,871	1,203	15,473
	Capital assets	336	11,243	28,094		20,873	138,863	24,993	85,280		65,903
LIABILITIES			33			421		1,178			

# CENTRE TREASURERS' REPORTS FOR FISCAL YEAR 2010

		St. John's	Sarnia	Saskatoon	Sunshine Coast	Thunder Bay	Toronto	Vancouver	Victoria	Windsor	Winnipeg
<b>REVENUE</b>											
Membership	Membership Fees: Centre Fee	1,199	342	2,583	787	1,391	9,7475		3,436	2,364	2,131
	Membership Fees: Associate	20	10		10		610		25	10	
	Membership Fees: Affiliate						46				
	Membership Fees: other						5,807			735	
	Life Membership Payout Received	278									
	Centre Newsletter										
Donations / Fundraising	Donations		20	289	219	25	8,765	1,021	179	1,410	200
	Fundraising	20			594	319				1,351	
Sales Revenue	Sale of Observer's Handbooks						254				
	Sale of Observer's Calendars	375	210		209	855	2,733			532	585
	Sale of Beginner's Observing Guides						555	816			
	Other Publication Sales			537					314		
	RASC promo items						1,031				
	Other Sales				296			288	3,010	680	
Subscription Revenue	Astronomy / Sky & Telescope										
	Other						7,419				
Events Revenue	Star Parties			12,259					1,512		1,675
	Annual Dinner			61					1,755		1,225
	IYA Event										
	Astronomy Day							271			
	Other Events	422		632	1,086			89			
General Assembly Revenue	General Assembly										
Miscellaneous Revenue	Interest and Dividends	1	1	417	432	2	415	7,656		1	13
	Advertising			180				25			
	Observatory Site							14,052			
	Equipment Rentals/Loans										
	Miscellaneous					678	15,566	239			916
<b>TOTAL REVENUE</b>		<b>2,315</b>	<b>583</b>	<b>16,958</b>	<b>3,633</b>	<b>3,270</b>	<b>66,998</b>	<b>10,405</b>	<b>10,251</b>	<b>7,082</b>	<b>6,745</b>
<b>EXPENDITURES</b>											
Sales Expenses	Observer's Handbook						781				
	Beginner's Observing Guide										
	Observer's Calendar	261	340		214	575	1,656	637		439	522
	Other Publications						150		249		
	Newsletter					212	2,131	534	44		
	RASC promo items						1,333		275		
	Other			933	317			323	1,198		
Event Expenses	Star Parties	80		10,651			488		1,270		1,000
	Annual Dinner								1,802	89	1,334
	Astronomy Day							1,224	48		
	IYA Event							1,000	174		
	Meetings	147	150				1,410	1,517	159	1,212	622
	Other Events		128	632	100		801	411	225	50	
Travel	General Assembly and Council Meetings			250		200			700		
Administrative Expenses	Office Administration			1,291	216		4,265	301	41		134
	Equipment and Supplies		568				331		67	182	1,725
	Insurance	548		1,105			1,430		500	1,593	1,000
	General Expenses and Audit		4		227	73	3,175		124		44
	Awards						159	1,253	814		45
	Donations										
	Advertising				1,089			4,059		75	
Miscellaneous Expenses	Observatory and Site Expenses			1,158			23,801	287	6,669	1,687	15
	Library						46		261		66
	Depreciation	835		828			18,029	1,842			
	Miscellaneous		60	10	82	500	24	947	59	118	606
<b>TOTAL EXPENDITURES</b>		<b>1,036</b>	<b>1,250</b>	<b>16,858</b>	<b>2,245</b>	<b>1,560</b>	<b>60,010</b>	<b>14,335</b>	<b>14,677</b>	<b>5,445</b>	<b>7,113</b>
<b>SURPLUS OR DEFICIT ON OPERATIONS</b>		<b>1,279</b>	<b>-667</b>	<b>100</b>	<b>1,388</b>	<b>1,710</b>	<b>6,988</b>	<b>-3,930</b>	<b>-4,426</b>	<b>1,637</b>	<b>-368</b>
ASSETS	Current assets	25,704	1,176	38,602	14,350	4,494	40,977	364,277	5,549	6,741	14,737
	Capital assets			17,737	2,115		412,786	15,499	67,850	80,000	80,000
LIABILITIES							13,597	1,213			



# OFFICERS AND COUNCILS OF THE CENTRES—2011

## BELLEVILLE CENTRE

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Trenton ON K8V 6P2  
www.rascbelleville.ca  
webmaster@rascbelleville.ca

President: Greg Lisk  
Vice-President: David Cotterell  
Treasurer: Garth Penn  
Secretary: Joanne Burns  
National Representative: Don Town  
Webmaster: Les Dempsey  
Newsletter Editor: Les Dempsey  
Observing Chair: Greg Lisk  
Events Co-ordinator: Andrew Mason  
Librarian: Antonina Vasilieva

## CALGARY CENTRE

c/o TELUS World of Science Calgary  
PO Box 2100 Station M Location 73  
Calgary AB T2P 2M5  
calgary.rasc.ca

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First Vice-President: Jason Nishiyama  
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National Representatives: Greg King  
Robyn Foret  
Past President: Roland Dechesne  
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Librarian: Carole Benoit  
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Carole Benoit  
Blair Colborne  
Robyn Foret  
Glenn Hawley  
Katherine Peterson  
Doug Thorp  
Financial Scrutineers: Shannon Creelman  
Nic David

## CHARLOTTETOWN CENTRE

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rasc\_charlottetown@xfer.s5.com

President: Brian Gorveatt  
Vice-President: Clair Perry  
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Treasurer: Ken Fall  
National Representative: Michelle Cottreau  
Past President:  
Webmaster: Brian Gorveatt

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President: Sherry Campbell  
Past President: Krista Stefan  
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General Secretary: Donna-Lee May  
Treasurer: Mark MacDonald  
National Representative: Mike Noble  
Luca Vanzella  
Public Education Director: vacant  
Fundraising Coordinator: Franklin Loehde  
Observing Group Director: vacant  
Councillors: Harris Christian  
Sheldon Helbert  
Chris Meerveld  
Internal Comm. Officer: Ross Sinclair  
Observing Group Director: vacant  
Membership Secretary: Massimo Torri  
New Member Advisor: Murray Paulson  
Michael Ward  
Editor: Ross Sinclair  
Web Site Co-ordinator: Wally Anhorn  
Library Co-ordinator: Wally Anhorn  
Ass't Fundraising Co-ord.: Harris Christian  
Equipment Co-ordinator: Ross Sinclair

## HALIFAX CENTRE

PO Box 31011  
Halifax NS B3K 5T9  
(902) 827-5977  
http://halifax.rasc.ca  
halifax@rasc.ca

Honorary President: Dr. Roy Bishop  
President: Richard Vanderberg  
1st Vice-President: Wes Howie  
Secretary: Chris Young  
Treasurer: Ian Anderson  
National Representative: Richard Vanderberg  
Robert Bussieres  
Librarian: John Liddard  
Observing Chair: Quinn Smith  
Nova Notes Editor: Paul Heath  
Councillor: Sean Dzafovic

## HAMILTON CENTRE

c/o Mr. A. Blanchard  
2266 Lakeshore Road West  
Oakville ON L6L G8  
(905) 689-0266 (observatory)  
www.hamiltonrasc.ca  
secretary@hamiltonrasc.ca  
President: Roger Hill  
Treasurer: Gary Colwell

Secretary: Andy Blanchard  
Editor: Mark Pickett  
Webmaster: Will Grey  
National Representative: Mark Pickett

## KINGSTON CENTRE

PO Box 1793  
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www.rasc.ca/kingston  
kingston@rasc.ca

Honorary President: Dr. David Levy  
President: Susan Gagnon  
Vice-President: vacant  
Secretary: Steve Hart  
Treasurer: Kevin Kell  
National Representative: Brian Hunter  
Librarian: David Maguire  
Newsletter Editor: Walter MacDonald  
Past President: Kevin Kell

## KITCHENER-WATERLOO CENTRE

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pclarke0184@rogers.com

President: Steve Holmes  
Past President: Wayne Joslin  
1st Vice-President: Ognian Kabranov  
2nd Vice-President: Marvin Warkentin  
Secretary: Phil Lacasse  
Treasurer: Peter Clarke  
Astronomy Day/Star Party Co-ordinator: Cari Gerow  
Equipment Mgmt & Publications: David Garner  
Membership: Peter Clarke  
National Representative: Paul Schumacher  
Web Site Maintenance: Brian Hollander

## LONDON CENTRE

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www.rasc.ca/London  
www.astro.uwo.ca/~rasc  
dmccarter@sympatico.ca  
pjedicke@fanshawec.on.ca

Honorary President: Peter Jedicke  
President: David McCarter  
Vice-President: Patrick Whelan  
Secretary: Gary Hinks  
Treasurer: Bill Gardner  
National Representative: Craig Levine  
Webmaster: Rick Saunders  
Librarian & Outreach Co-ordinator: Robert Duff  
Observers' Chair: Peter Raine  
ATM Chair: Mike Hanes  
Councillor: David L. Clark

## MISSISSAUGA CENTRE

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2126 Burnhamthorpe Rd W  
Mississauga ON L5L 5V4  
www.mississauga.rasc.ca  
inquiries@mississauga.rasc.ca  
President: Randy Attwood  
Vice-President: Leslie Strike  
Secretary: Chris Malicki  
Treasurer: Vic Cooper  
National Representative: Randy Attwood

## CENTRE FRANCOPHONE DE MONTREAL

CP 206 Station St-Michel  
Montréal QC H2A 3L9  
(514) 201-3889  
www.lasam.ca  
info@lasam.ca  
President: Michel Boucher  
Vice-President: Patrice Scattolin  
Secretary: Serge-Antoine  
Melanson  
Treasurer: Patrice Scattolin  
National Representative: Hugues Lacombe

## MONTREAL CENTRE

PO Box 1155 Station B  
Montréal QC H3B 3K9  
www.rascmontreal.org  
info@rascmontreal.org  
Honorary President: Dr. David Levy  
President: Bettina Forget  
Vice-President: Ron Baran  
Secretary: Kevin Kemball  
Recording Secretary: Richard Latulipe  
Treasurer: Gordon Krip  
Librarian: Lloyd Coffin  
Director of the Observatory: Chris Novak  
Director of Observational Activities:  
Frank Tomaras  
National Representative: Frank Tomaras  
Webmaster: Bettina Forget  
Directors Without Portfolio:  
David Brown  
Richard Latulipe  
Ariele Wagner  
Past President: Andrew Fazekas

## NEW BRUNSWICK CENTRE

c/o Peter Jenson  
70 Ian Street  
Saint John NB E2J 3K7  
www.nb.rasc.ca  
President: Peter Jensen  
1st Vice-President: Curt Nason  
2nd Vice-President: Marc Arsenault  
Secretary: June MacDonald  
Treasurer: Emma MacPhee  
Councillors: James Ayles  
Adrien Bordage  
Ted Dunphy  
Chris Weadick  
Paul Gray  
Tim Doucette  
Paul Gray  
Chris Weadick  
Eldon Rogers  
Ted Dunphy  
Don Kelly  
Past President:  
Web-site Chair  
Newsletter Editor  
Light-Pollution Chair  
Equipment Chair  
Library Chair  
Education Chair

## NIAGARA CENTRE

PO Box 4040  
St Catharines ON L2R 7S3  
www.astronomyniagara.com  
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Vice-President: Stan Sammy  
Secretary: Philip Downey  
Treasurer: Dave Stremmlaw  
National Representative: Tracy Schilz  
Board of Directors: Darlene Marano  
Glen Pidsadnick  
Joyce Sims  
Darlene Sloggett  
Beginner's Workshop Co-ordinator:  
Stan Sammy  
Public Relations: Brian Pihack  
Stan Sammy  
Dark-Skies Chairman: Wayne Liebau  
Librarian: Darlene Sloggett  
Observatory Director: Les Marczi  
Members' Observing Coordinator:  
Mark Roberts  
Public Observing Coordinator:  
Stan Sammy  
Amateur Telescope Makers Group:  
Glen Pidsadnick  
Annual Banquet Ticket Sales:  
Joyce Sims  
CCD Camera Director: Glen Pidsadnick  
Web Site Co-ordinator: Bill Macsween  
Whirlpool Editor: Darlene Marano  
Hospitality: Pat Sammy

## OKANAGAN CENTRE

285 Terai Court  
Kelowna BC V1X 5X6  
www.ocrasc.ca  
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Past President: Alan Whitman  
Vice-President Kelowna: Hugh Pett  
Vice-President Vernon: Jerry Thompson  
Vice-President Penticton: Ryan Ranson  
Secretary: Penny Nile  
Treasurer: Zoli Boda  
Outreach Kelowna: Colleen O'Hare  
Director of Telescopes: Guy Mackie  
Webmaster: Andrew Bennett  
Dave Gamble  
Membership Director: James M. Tisdale  
Directors at Large: Bryan Kelso  
Dennis Krause  
Frank Stariha  
James M. Tisdale

## OTTAWA CENTRE

PO Box 33012  
1363 Woodroffe Ave  
Ottawa ON K2C 3Y9  
(613) 830-3381  
www.ottawa.rasc.ca  
President: Al Scott  
Vice-President: Gary Boyle  
Secretary: Chris Teron  
Treasurer: Hans Brouwer  
Councillors: Yves Demers  
Stephen Nurse  
Carmen Rush  
Meeting Chair: Bill Wagstaff  
Past President: Paul Harrison  
National Representatives: Robert Dick  
Charles O'Dale  
Council Appointed Positions  
Stan Mott Librarian: Estelle Rother  
WebMaster: Richard McDonald  
AstroNotes Editor: Debra Ceravolo  
F.L.O. Director: Byron Black  
SMARTScope Leader: Charles O'Dale  
Light-Pollution Abatement: vacant  
Public Outreach: Mike Moghadam  
Hospitality: Art and Anne Fraser  
Membership: Art Fraser  
Ted Bean Telescope Library: Al Scott

**PRINCE GEORGE CENTRE**

7365 Tedford Rd  
 Prince George BC V2N 6S2  
 (250) 964-3600  
 www.vts.bc.ca/pgrasc  
 pgcentre@yahoo.com

President: Brian Battersby  
 Vice-President: Blair Stunder  
 Secretary: Glen Harris  
 Treasurer: Ken Lovin  
 National Representative: Robert Nelson  
 Past President: Gilbert Self  
 Webmaster: Wayne Sanders  
 Members at Large: Patrick Byrne  
 Hugh Kennedy  
 Robert (Bob) Nelson  
 Trevor Padgett  
 Wayne Sanders  
 Blair Stunder  
 Jim D. Toews  
 Jim Van Doren  
 Doug Wayland

**CENTRE DE QUÉBEC**

2000, boul Montmorency  
 Québec QC G1J 5E7  
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 www.sracquebec.ca  
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Président: Guy Campeau  
 Vice-Président: Stéphane Dumas  
 Trésorier: Pierre Desrosiers  
 Représentant national: Pierre Desrosiers  
 Secrétaire: Stéphane Dumas  
 Responsable des observations: Steve Lévesque

**REGINA CENTRE**

PO Box 20014  
 Regina SK S4P 4J7  
 (306) 751-0128  
 www.astronomyregina.ca  
 info@astronomyregina.ca

President: Shane Ludtke  
 Vice-President: Shawn Drew  
 Secretary: Peter MacKinnon  
 Treasurer: Gerry Hodges  
 National Representative: Chris Beckett  
 Past President: Vance Petriew  
 Webmaster: Shawn Drew  
 Librarian: Ross Parker  
 Kalium Observatory and  
 Millennium Telescope: Darryl Dormuth  
 Davin Deep-Sky Observatory: Dave Barrie  
 Equipment Director: Alden Forai

**ST. JOHN'S CENTRE**

c/o Randy Dodge  
 206 Frecker Dr  
 St John's NL A1E 5H9  
 www.sji.ca/rasc  
 rasc@sji.ca

President: Chris Stevenson  
 Vice-President: Richard Newman  
 Secretary: David Bourgeois  
 Treasurer: Doug Grouchy  
 National Representative: Joe English  
 Past President: Doug Grouchy  
 Webmaster: Craig Peterman  
 Librarian: Fred Smith  
 Observing Director: Robert Babb  
 Equipment Director: David Bourgeois  
 Education Director: vacant  
 Membership Director: Gary Case  
 Park Observatory Liaison: vacant

**SARNIA CENTRE**

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

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

**SASKATOON CENTRE**

PO Box 317 RPO University  
 Saskatoon SK S7N 4J8  
 (306) 857-4707  
 www.usask.ca/psychology/sarty/rasc  
 mclancy@sasktel.net

President: Jeff Swick  
 Vice-President: James Gorkoff  
 Past President: Barb Wright  
 Secretary: Ron Waldron  
 Treasurer: Norma Jensen  
 Newsletter Editor: Tenho Tuomi  
 National Representative: Rick Huziak  
 Councillors:  
 Events Co-ordinator: Patricia Gakis  
 Fundraising Co-ordinator: Colin Chatfield  
 Membership Co-ordinator: Mark de Jong  
 Observing Co-ordinator: Larry Scott  
 Sleaford Observatory Site Co-ordinator:  
 Darrell Chatfield  
 SSSP Co-ordinator: Barb Wright  
 Councillors at large: Lorin Briand  
 Les Dickson  
 Jim Young

Librarian: Darrell Chatfield  
 Photographer/Archivist: George Charpontier  
 Meeting Room Co-ordinator: Graham Hartridge  
 New and Distant Members: Jeff Swick  
 Publications Sales Co-ord: James Gorkoff  
 Webmaster: Gord Sarty

**SUNSHINE COAST CENTRE**

Box 577  
 Sechelt BC V0N 3A0  
 www.coastastronomy.ca  
 scacexec@freelists.org

President: Bill Clark  
 Past President: Debra MacWilliam  
 Vice-President: Bette Chadwick  
 Secretary: Neil Sandy  
 Treasurer (acting): Gary Little  
 National Representative: Bill Clark  
 Director, Membership: Gary Little  
 Director, Equip & Library: Danny Sklazeski  
 Director, Observing: James MacWilliam  
 Directors: Danny Sklazeski  
 Linda Smith  
 David Thompson

**THUNDER BAY CENTRE**

286 Trinity Cres  
 Thunder Bay ON P7C 5V6  
 (807) 475-3406  
 www.tbrasc.org  
 astronomer@tbaytel.net

Executive Positions:  
 President: Bruce Miron  
 Vice-President: Dave Gallant  
 Secretary: Andy Buchholtz  
 Treasurer: Brigitte Schaffer  
 National Representative: Rob Kushneruk  
 Past President: Bob McLean

Appointed Positions:  
 Membership: Ted Bronson  
 Programmes/Media: Ted Bronson  
 Newsletter Editor: Bruce Miron  
 Webmaster: Dave Gallant  
 Librarian: John Bakkelund

## TORONTO CENTRE

c/o Ontario Science Centre  
770 Don Mills Rd  
North York ON M3C 1T3  
(416) 724-7827 [416-724-STAR]  
www.rasc.ca/toronto

Honorary President: Dr. Roberto Abraham  
President: Dr. B. Ralph Chou  
1st Vice-President: Charles Darrow  
2nd Vice-President: Ivan Semeniuk  
Secretary: Eric Briggs  
Treasurer: David Parfett  
Recorder: Rajesh Shukla  
Past President: Guy Nason  
Past President: Tony Horvatin  
Councillors: Geoff Brown  
Sara Poirier  
Brenda Shaw  
Paul Mortfield  
Leslie Harvey  
Tim Hunter  
Dietmar Kupke  
Scott Masterton  
Peter Hiscocks

National Representatives: Charles Darrow  
Tony Horvatin  
David Parfett  
National Alternates: Katrina Ince-Lum  
Dietmar Kupke  
Public Affairs Co-ordinator: Karen Mortfield  
Information Technology: Blake Nancarrow

## VANCOUVER CENTRE

c/o HR Macmillan Space Centre  
1100 Chestnut St  
Vancouver BC V6J 3J9  
http://rasc-vancouver.com

President: Howard Trottier  
Vice-President: TBD  
Past President: Jason Rickerby  
Treasurer: Wayne Lyons  
Secretary: Alan Jones  
National Representative: Mark Eburne  
Director of Telescopes: Steve Coleopy  
Merchandise: Doug Montgomery  
Librarian: William Fearon  
Membership: Gavin McLeod  
*Nova* Editor: Gordon Farrell  
Webmaster: Harvey Dueck

## VICTORIA CENTRE

2093 Byron Street  
Victoria BC V8R 1S8  
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www.victoria.rasc.ca  
treasurer@victoria.rasc.ca

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

## WINDSOR CENTRE

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

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President: Paul Pratt  
1st Vice-President: Peter Bondy  
2nd Vice-President: Sue Iihola  
Secretary: Art Rae  
Treasurer: Greg Mockler  
National Representative: Mike Mastronardi  
Past President: Dr. Pierre Boulos  
Librarian: Rick Marion  
*Aurora* Editor: Steve Mastellotto  
Light-Pollution Abatement Director: Dan Taylor  
Observatory Director: David Panton  
Director of Public Education: Randy

Groundwater  
Webmaster: Steve Mastellotto  
Councillors: Tina Chichkan  
Dave Gabriele  
Randy  
Groundwater  
Steve Mastellotto  
Dave Panton  
Steve Pellarin  
Paul Preney  
Donna Ronconi  
Susan Sawyer-Beaulieu  
Brian Thomas  
Joody Ulrich

Appointed Positions:  
Light-Pollution Abatement: Dan Taylor  
Recording Secretary: Art Rae  
Past President: Dr. Pierre Boulos

## WINNIPEG CENTRE

PO Box 2694  
Winnipeg MB R3C 4B3  
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Vice-President: Stan Runge  
Secretary: Scott Young  
Treasurer: Jay Anderson  
National Representative: Mike Stephens  
Past President: Ron Berard  
Webmaster: Paul Trudel  
Librarian: Fred Wood  
Councillors: Kevin Black  
Ralph Croning  
Ed Rajfur  
Roger Todd  
Gail Wise

Observatory Director: Ray Andrejowich  
Observatory Bookings: Kevin Black  
*Winnecentrics* Editor: Gail Wise  
Gallery Administrator: Ron Berard



# 2011 AWARD WINNERS

**Ken Chilton Prize** (not awarded)

**Service Award**

Robert Dick (Ottawa)

**Chant Medal**

(not awarded)

**The Plaskett Medal**

Kaitlin Kratter  
(Harvard-Smithsonian  
Center for Astrophysics)

**Simon Newcomb Award**

Jay Anderson (Winnipeg)

## 2010 CERTIFICATES

### MESSIER CERTIFICATE

Nelson Walker (Victoria)  
Ralph DeJong (Sarnia)  
Anthony MacDonald (Ottawa)  
Jeff Donaldson (Halifax)

Quinn Smith (Halifax)  
Hughes Lacombe (CF de Montréal)  
Keith Johnstone (Calgary)

### NGC CERTIFICATE

Christopher Novak (Montréal)  
Mark A. Croom (Unattached)  
Charles Banville (Victoria)

### EXPLORE THE UNIVERSE CERTIFICATE

Colette Fortier (New Brunswick)  
Mark A. Croom (Unattached)

### DEEP SKY CHALLENGE

(none issued)

### ISABEL WILLIAMSON LUNAR OBSERVING CERTIFICATE

Ken Backer (Mississauga)

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

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

## PLASKETT MEDAL

The Royal Astronomical Society of Canada and the Canadian Astronomical Society together present an award in recognition of the pivotal role played by John Stanley Plaskett in the establishment of astrophysical research in Canada. The award is made to the graduate from a Canadian university who is judged to have submitted the most outstanding doctoral thesis in astronomy and astrophysics in the preceding

two calendar years. An award need not be made every year.

- 2000 Alexei Razoumov (British Columbia)
- 2001 Peter Brown (Western)
- 2002 Edward W. Thommes (Queen's)
- 2003 Tracy Webb (Toronto)
- 2004 Jo-Anne C. Brown (Toronto)

- 2005 Christian Marois (Montréal)
- 2006 Lauren A. MacArthur (British Columbia)
- 2007 Frédéric Grandmont (Université Laval)
- 2008 Adam Muzzin (University of Toronto)
- 2009 Catherine Lovekin  
(Saint Mary's University)
- 2010 Dr. Helen Kirk (University of Victoria)

## 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)

## 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)

## HONORARY MEMBERS OF THE RASC

Dr. David L. Crawford (United States)	Dr. Jean Meeus (Belgium)	Dr. William Sheehan (United States)
Rev. Robert Evans (Australia)	Dr. Patrick Moore (United Kingdom)	Dr. Carolyn Shoemaker (United States)
Dr. Owen Gingerich (United States)	Dr. Jay Pasachoff (United States)	Dr. R. Brent Tully (United States)
Dr. Stephen W. Hawking (United Kingdom)	Dr. P.J.E. (Jim) Peebles (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.*

<b>Honorary Presidents</b>	<b>Presidents</b>	<b>Secretaries</b>
1997-2001 Jack Locke	1998-2000 Randy Attwood	1999-2005 Kim Hay
2001-2005 Roy Bishop	2000-2002 Robert Garrison	2005-2007 Stan Runge
2005-2010 Robert Garrison	2002-2004 Rajiv Gupta	2007- James Edgar
2010- Dr. James Hesser	2004-2006 Peter Jedicke	<b>Treasurers</b>
	2006-2008 Scott Young	1998-2004 Michael Watson
	2008-2010 Dave Lane	2004-2006 David Clark
	2010- Mary Lou Whitehorne	2006-2007 Alan Whitman
		2007- Mayer Tchelebon

## GENERAL ASSEMBLIES—2000 TO 2012

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

2000 Winnipeg	2006 Ottawa
2001 London	2007 Calgary
2002 Montréal	2008 Toronto, Mississauga and Hamilton
2003 Vancouver	2009 Saskatoon
2004 St. John's	2010 New Brunswick
2005 Okanagan	2011 Winnipeg

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

2012 Edmonton