



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



ANNUAL REPORT
RAPPORT ANNUEL

2016

TABLE OF CONTENTS

President’s Message	4
Executive Director’s Report	4
Secretary’s Message	5
Treasurer’s Message	7
Auditor’s Report	8
Annual Meeting Minutes—2016	16
Annual Reports from the Centres	20
Centre Treasurers’ Reports for Fiscal Year 2016	41
Officers and Councils of the Centres—2017	44
2017 Award Winners	47
2016 Certificates	47
Past Award Winners	48

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ROYAL ASTRONOMICAL SOCIETY OF CANADA—2017

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Centre Representatives on National Council

Belleville:	Don Town	Prince George:	Brian Battersby
Calgary:	Arun Rau	Québec:	Pierre Desrosiers
Edmonton:	Alastair Ling	Regina:	Peter Hagar
Halifax:	Patrick Kelly	St. John's:	Marcellus Redmond
Hamilton:	David Surette	Sarnia:	Alan Kenyon
Kingston:	Rhett Mackend	Saskatoon:	Bob Sheppard
Kitchener-Waterloo:	Dave Kinjal	Sunshine Coast:	Mike Bradley
London:	Peter Jedicke	Thunder Bay:	Mitchell Bagden
Mississauga:	Leslie Strike	Toronto:	Laila Zichmanis
C. F. de Montréal:	Patrice Scattolin	Vancouver:	Kenneth Lui
Montréal:	Frank Tomaras	Victoria:	Lauri Roche
New Brunswick:	Adrien Bordage	Windsor:	Michael Mastronardi
Niagara:	Janice Low	Winnipeg:	Dennis Lyons
Okanagan:	Richard Christie	Yukon:	Anthony Gucciardo
Ottawa:	Brian McCullough	Unattached:	Randall Rosenfeld

PRESIDENT'S MESSAGE

I have to look twice at the calendar sometimes. That it has been a year since I took on the role of President of this wonderful organization amazes me. It's felt like it's gone by in an instant. It has been a very busy 12 months, and I hope that with the passage of a little more time and with reflection I'll be able to look back and appreciate just what an amazing time it has been. It has truly been an honor to serve the society and its membership.

This year saw the RASC family grow by one Centre, when the Yukon Astronomy Club officially joined the organization as our newest and northern-most centre. They are a very active, vibrant, and innovative collection of RASCals and I have no doubt that they will inject a lot of energy into our Society. We are now hovering around the 5,000-member mark in a period where there have been no "great comets" to stir the public's imagination and spur new membership. This speaks well of our Centres and their tireless public outreach programmes, and our staff's efforts at membership retention. The addition of a new centre only bodes well for the future.

A major focus for the Board and our Executive Director this past year has been the crafting of a strategic plan that will carry us forward for the next 5 years or more in an actionable, measurable, and accountable fashion. We took a considered approach to this planning process, taking care to get input from our many stakeholders, and contracting outside expertise with deep experience

with the not-for-profit sector to ensure that all critical areas were rigorously examined. Value to members, centres, the public, and the scientific community via outreach, and financial sustainability are among the key objective areas. For the latter item, we constituted the RASC's first Fundraising Committee, which will oversee a number of initiatives in support of our strategic plan.

Past President James Edgar was the force behind an initiative to invite His Excellency the Right Honourable David Johnston, C.C., C.M.M., C.O.M., C.D., Governor General of Canada, to be Patron of the Royal Astronomical Society. His Excellency informed us very late in 2015 that he is pleased to accept our invitation. James was too humble to mention this in his report last year!

Our Executive Director Randy Attwood and his staff at our Toronto headquarters, Renata and Julia, must be mentioned for their hard work, diligence, and ability to juggle a great many tasks for both the Society and *SkyNews*. They are on the front line of all interactions with our membership, our vendors, and suppliers, not to mention their everyday work which is so critical for the running of the RASC and its services to centres and the membership. A sincere thanks to all of them from me for making my role that much easier.

Craig Levine
President

EXECUTIVE DIRECTOR'S REPORT

2016 was another great year for the Society. Across the country, centres continued to run busy programs of lectures, introducing new members to the night sky, public outreach and education and expanded programs of observing and astrophotography.

We are looking forward to three major events in 2017. The Ottawa General Assembly during the Canada Day weekend will coincide with the Canada 150th Birthday celebrations. The Ottawa Centre promises a great time for all—it will be special to be on Parliament Hill the evening of July 1 for the fireworks!

The RASC's contribution to the birthday celebrations will be to hold the first ever National Star Party. On Saturday July 29th, RASC centres, astronomy organizations affiliated with the Fédération des Astronomes Amateurs du Québec (FAAQ) along with other various Canadian astronomy clubs will run public star parties on the same night—coast to coast.

Finally, we all look forward to the August 21 total solar eclipse. The Society has purchased 25,000 solar viewers for centres to distribute at their partial eclipse observing sessions. This will be a very popular event and no doubt be all over the regular and social media. Good luck and clear skies to everyone observing the event, whether you are travelling to the path of totality or viewing the partial phases from home.

We are looking forward to celebrating the Society's 150th anniversary in 2018. A working group is well into planning various activities to mark the occasion. More about these plans will be announced at the General Assembly and in the *Journal*.

We continued to build the RASC/*SkyNews* brand in 2016. An important addition was that every member received a four page RASC National Newsletter in their copy of *SkyNews*. This newsletter contains important information on RASC activities and announcements from the Board of Directors and various committees. A big thank you to Editor Dave Garner and the contributors for helping to make this happen.

Our Board of Directors are a hard working group, committed to overseeing Society business and laying out a future path for the RASC. This year they developed a new Strategic Plan which will be used to develop key areas within the Society. I want to thank the Board for making this possible.

The RASC is made up of centres and its members. Without the dedication of the hundreds of the members who volunteer their time and skills, there would be no Society. I am glad to see that most centres have awards program to recognize these contributions.

I want to especially recognize our hard working staff in the Society Office. Renata Koziol and Julia Neeser are professional and dedicated to their work. It is a pleasure to work with them day to day as they attend to the astronomical number of bits and pieces that all fit together to make a smooth-running RASC.

Randy Attwood
Executive Director

SECRETARY'S MESSAGE

I've produced agendas and recorded minutes for 20 board meetings (14 in 2016) since I took office. I've also recorded minutes for the Publications Committee and the Fundraising Committee (I am a member of both committees), and B.C. Centres meetings I've attended. I've travelled twice to Calgary to participate in Strategic Planning Sessions. I've monitored and recorded many Board e mail exchanges and votes. I also served on a Board review panel for a harassment policy matter.

I've strived to keep the Society's e-mail lists up to date but this involves some chasing after information from Centres. I am hoping that recent updates to the Society's computer system will allow Centres to update their own lists to reflect the current membership of their executive boards.

The Public Speakers Fund is finally being used to capacity, although there have been some funds taken from it in recent years to subsidize General Assemblies and I've convinced the Board to stop that practice as it is not what the PSP is intended for. I've got administrator status on the Society's web site and have been adding speakers to the Speakers Directory.

I have been assisting Executive Director Randy Attwood in writing a Centres Manual and commend James Edgar and Colin Haig for their many additions and edits to this document. I have written a first draft of a Volunteers Manual and an On-Boarding Manual for the National Board and have solicited feedback from other Board members before producing a final draft. I am hoping that all three documents will be available for distribution to Centres at the 2017 General Assembly. These will be "living documents" that Centres can add their own ideas and comments to.

I've chaired two meetings of B.C. Centres since taking office, the second meeting including the new Yukon Centre. This regional discussion has proved a useful forum for exchanging ideas and fostering support.

I flew to Whitehorse in September 2016 to assist the Yukon Centre in planning their observatory, communicating with local government and utility providers regarding light abatement, educating the public regarding light pollution, and educating elementary school youth in astronomy.

At the same time, I served as President of the Sunshine Coast Centre, hosted a third season of the Night Lights astronomy program for Coast Cable TV, appeared in APTN's Coyote Science show for First Nation Kids, wrote and hosted the 15 minute BravoFactual documentary Starry Nights, and published Building a Small Observatory for the RASC.

I've been busy!

Charles Ennis
National Secretary

We extend our condolences to the families and friends of the following members who passed away (and any others not here mentioned): Jane Wrigley, Barbara Kalthoff, Dave Selinger, Matt Neima, Mary Henderson, Rolf Meier, Weldon Hannaford and Jean Davis.

Note: The complete Annual Report is available on-line at:
www.rasc.ca/annual-report-2016-extended

Should you encounter any problems with logging in, read this page:
www.rasc.ca/login-assistance

The extended version includes the following:
2016 Annual General Meeting Minutes
2016 Annual Reports from Centres
2017 Award Winners
2017 Centre Addresses and Executives
2017 National Council

Membership Statistics 2006-2016

Centre	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Belleville	28	33	28	31	30	31	37	26	32	35	33
Calgary	421	460	434	381	336	282	271	300	317	313	278
Charlottetown	0	0	7	13	20	19	25	24	24	22	21
Edmonton	302	294	274	277	229	235	260	257	258	255	241
Halifax	164	172	170	169	153	154	159	155	157	162	152
Hamilton	111	116	109	103	78	61	66	70	76	80	82
Kingston	67	65	72	75	66	66	74	90	98	106	125
Kitchener-Waterloo	114	126	130	109	115	106	115	116	118	104	101
London	119	124	129	110	126	104	118	97	101	104	99
Mississauga	170	179	188	168	132	123	120	127	120	103	53
C.F de Montréal	20	17	18	16	18	20	22	24	23	28	32
Montréal	135	126	117	109	110	91	87	103	107	99	105
New Brunswick	91	88	77	66	68	68	66	75	79	88	78
Niagara	88	78	73	62	69	69	71	82	97	104	101
Okanagan	133	122	124	115	106	92	116	103	88	86	85
Ottawa	358	361	343	319	325	328	370	389	410	416	396
Prince George	99	76	57	66	63	69	64	64	79	67	82
Québec	15	15	18	16	20	20	17	17	35	44	40
Regina	88	111	94	80	75	62	62	52	48	55	53
St. John's	61	58	57	58	47	44	45	48	47	52	49
Sarnia	15	14	20	12	11	15	15	19	24	25	27
Saskatoon	83	75	73	68	70	70	72	71	71	78	76
Sunshine Coast	65	69	50	43	32	38	35	32			
Thunder Bay	46	49	45	51	50	46	46	44	37	41	40
Toronto	860	904	869	782	611	573	554	502	506	610	622
Vancouver	236	254	217	198	226	228	244	251	263	256	238
Victoria	235	216	202	176	163	164	166	185	173	188	177
Windsor	106	107	96	84	90	100	96	96	98	94	89
Winnipeg	214	228	221	210	178	180	168	162	169	157	136
Yukon	44										
Unattached	413	429	431	428	446	435	434	459	530	561	512
Honorary	15	15	15	15	15	15	15	15	15	14	15
	4916	4981	4760	4410	4077	3908	4010	4055	4216	4347	4138

Membership by Type

Type	Number	% of Total
Ordinary	3732	76.3
Family	698	14.3
Life	295	6.1
Youth	149	3.0
Honorary	(15)	n/a

Membership by Country

Country	Number	% of Total
Canada	4676	95.6
USA	181	3.7
Other	32	.7

TREASURER'S MESSAGE

Briefly, I was appointed Treasurer on January 24, 2017, after Susan Yeo stepped down from the position. We thank her for her service. Fortunately, the excellent support of RASC staff allowed the RASC Finance Committee and Treasurer to be more involved in the annual planning and year end functions, than in day-to-day operations. This made the transition less challenging than it might have been without the support of office staff.

The Finance Committee met in Calgary in mid-March, following one of the Strategic Planning Meetings. We reviewed comments and draft financials from the Auditor, Tinkham & Associates, LLP. After discussing key points, these were approved by the committee and forwarded to the Board for final approval. The Board approved the draft financials, and Tinkham & Associates provided the final 2016 year-end financials for the Society the week of May 16th, 2017, and they are attached to this report.

Results of Audit

The Auditor's cover letter highlighted several items of interest, and I encourage you to review this and contact me with any questions. The main highlight is that the Society is in a good financial state, realizing a significant improvement in our bottom line. The 2016 financial year had a net surplus of \$64,291, versus a loss of (\$47,087) in 2015. This net result is a result of reduced expense, new revenue sources, and respectable performance of our investments. The Treasurer would like to express his thanks to the members of the Finance Committee and prior treasurer Denis Grey for assisting in the transition and keeping us on track.

Our investments managed by ScotiaMcLeod performed very well, and the Auditor has some valid concerns regarding *SkyNews*. Although the Board feels strongly that the SkyNews Inc. investment is aligned with our mission, the Auditor has outlined areas of potential concern. Cost recovery from SkyNews for staff time, office space, and related items contributed to the RASC's results. Our new publications including the *Small Observatories* and *Explore the Universe Guide* as well as resale of *NightWatch* and the 2017 Eclipse Guide also contributed significantly to this positive financial outcome.

The Auditor also identified an error that was made and remediated. As you may know, editors of our major publications may receive an honorarium for their work. Unfortunately, staff inadvertently sent an honorarium to one of the editors who is currently serving as Past President on the Board of the Society. This money was returned to the Society. Directors of not-for-profit corporations may not receive compensation, under current legislation. The Finance committee and Board will need to develop and adopt a formal policy to prevent this sort of error in the future.

Several of the RASC committees requested budget, and did not spend as much as requested. Our staff, volunteers, and committees are usually frugal, negotiating discounts and using volunteer time. Upon analysis, the reduced expenditure may also be due to some committees achieving less than planned. For the future, we may wish to consider re-budgeting part way through the year, or following up with committees to ensure their goals are being achieved.

As a member of the Society, you approve the selection of Auditor and pay a fair portion of their services, including the audit and Annual Report to membership. This year, we feel the Auditor provided good value, and guidance, and a helpful report. We will propose that the Society continue to use Tinkham & Associates LLC.

Other Items

The Walter Helm Endowment Fund disbursed \$2031.27 under the terms of the Agreement to the Toronto Centre for the operations of the David Dunlap Observatory. It is expected that this will be the final year, and so the Trustees (David Lane, Halifax Centre; Mary Lou Whitehorne, Halifax Centre; Colin Haig, Hamilton Centre) will need to identify a new beneficiary in 2017 that meets the Fund's terms.

The Canada Revenue Agency T3 filing for The Walter Helm Endowment Fund was slightly late, due to circumstances beyond my control. No taxes were due. The CRA T3010 annual filing for RASC was completed with assistance Tinkham & Associates.

The 2017 Budget is under revision again, due to changing priorities resulting from the new Strategic Plan. We are projecting a modest loss this year, unless new fundraising programs and investment performance continues to improve.

Donations, Fees, and New Sources of Revenue

Member Fees cover related services and publications, however they do not support important programs such as the Public Speaker Program, Light Pollution Abatement, or other charitable activities. As member fees do not automatically support the fight for dark nights, or help us bring speakers to Centres who may be less able to do so, please donate today to support the work of the Society. Our new renewal process makes this much easier today.

A new Fundraising Committee started in 2016, and we hope this initiative will yield results in the latter half of 2017. Donations were up slightly in 2016 (a total of \$23,489), however this does not go very far - we can't accomplish a lot without more financial support. If you haven't done so in 2017, please make a donation, and encourage those you know to do so.

Each year, our Society endeavours to keep member costs low and provide good service. Costs continue to rise, and it may become necessary for a modest fee increase in the future. We also think that a "premium membership" may be appealing to some members, receiving additional benefits at a higher fee, allowing the society to keep regular membership fees close to today's levels. We are seeing this at many other member-supported organizations, and likely it will be a topic of further discussion.

Closing Comments

The Society's financial operations are supported by the very talented Renata Koziol at the Society Office. We want to express our support and thanks to staff, including Renata specifically. It has been a lot of work to get up to speed, and to learn the necessary skills and tasks. Our results speak volumes about the good work done by the staff and volunteers in our Society.

Best regards,

Colin Haig
RASC Treasurer

AUDITOR'S REPORT

Tinkham & Associates LLP CHARTERED ACCOUNTANTS

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

We have audited the accompanying financial statements of The Royal Astronomical Society of Canada/La Société Royale D'Astronomie Du Canada, which comprise the balance sheet as at December 31, 2016 and the statements of revenue and expenses, 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 accounting standards for not-for-profit organizations 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 of revenues over expenses for the year, 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, 2016 and the results of its operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

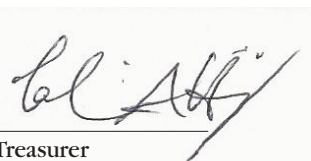
TORONTO, Ontario
April 5, 2017

Tinkham & Associates LLP
CHARTERED ACCOUNTANTS
LICENSED PUBLIC ACCOUNTANTS

BALANCE SHEET

As at December 31	2016	2015
Assets		
Current		
Cash	\$ 116,894	\$ 110,600
Accounts receivable	25,136	38,913
Receivable from SkyNews Inc. (note 5)	5,982	5,983
Inventory	31,168	26,218
Prepaid expenses	19,521	10,172
	198,701	191,886
Long Term		
Investments (note 4)	877,646	828,414
Investment in SkyNews Inc. (note 5)	212,555	211,500
Capital assets (note 6)		
Tangible assets	5,026	5,138
Intangible assets	34,379	37,425
	\$ 1,328,307	\$ 1,274,363
Liabilities		
Current liabilities		
Accounts payable and accrued charges	\$ 30,055	\$ 25,541
Deferred revenue		
Membership fees for ensuing years	121,181	126,248
Journal subscriptions	14,694	21,838
Unamortized life membership fees (note 7)	23,852	26,502
	189,782	200,129
Net Assets		
Unrestricted	601,999	564,148
Internally restricted (note 9)	536,526	510,086
	1,138,525	1,074,234
	1,328,307	1,274,363
Commitment (note 8)	<i>See accompanying notes to financial statements</i>	
On Behalf of the Board		


 President


 Treasurer

STATEMENT OF CHANGES IN NET ASSETS

Year ended December 31	Internally Restricted (note 9)	Unrestricted	2016	2015
Balance, beginning of year	\$ 510,086	\$ 564,148	\$ 1,074,234	\$ 1,121,321
Excess of expenditures over revenue for the year	-	(64,291)	64,291	(47,087)
Transfers (note 9)	26,440	(26,440)	-	-
Balance, end of year	\$ 536,526	\$ 601,999	\$ 1,138,525	\$ 1,074,234

See accompanying notes to financial statements

STATEMENT OF REVENUE AND EXPENDITURE

Year ended December 31	2016	2015
Revenue		
Membership fee revenue	\$ 211,842	\$ 199,452
Publication revenue		
<i>Observer's Handbook</i>	117,836	102,810
<i>Journal</i>	39,133	38,554
<i>Observer's Calendar</i>	38,706	35,473
Shipping and Handling	32,376	30,220
Educational Aids	4,420	3,212
Other Publications	17,273	3,068
	249,744	214,337
Miscellaneous income		
Donations	23,489	19,854
Other income	8,992	9,749
Promotional products	7,881	4,262
<i>SkyNews</i> (note 5)	1,055	-
	41,417	33,865
Investment Income (net)		
Gain (loss) on investments	49,877	3,021
Interest and dividends	21,017	24,592
Investment manager fees	(10,313)	(12,529)
	60,581	15,084
Total Revenue	563,584	462,738
Expenditures		
Publication costs		
<i>Journal</i>	46,856	55,216
Freight and handling costs	37,280	30,860
Cost of publications sold	32,623	25,649
<i>Observer's Handbook</i>	4,772	5,642
	121,531	117,367
Operating costs		
Office salaries and employee benefits	171,439	163,872
Membership services	85,014	71,536
Services	36,386	49,675
Travel expenses	29,677	37,258
Office expenses	37,746	30,834
Committees	15,738	26,354
Occupancy	26,500	17,818
Amortization of capital assets	17,539	14,691
Advertising and marketing	8,514	8,798
Strategic Planning	6,150	-
Cost of promotional items sold	4,773	3,392
Recovery of office salaries and rent (note 5)	(61,714)	(31,770)
	377,762	392,458
Total Expenditures	499,293	509,825
Excess of revenue over expenses (expenses over revenue) for the year	\$ 64,291	\$ (47,087)

See accompanying notes to financial statements

STATEMENT OF CASH FLOWS

Year ended December 31	2015	2015
Cash provided (used) by operating activities		
Excess of revenue over expenditures for the year	\$ 64,291	\$ (47,087)
Charges not requiring a current cash payment		
Amortization of capital assets	17,539	14,691
Amortization of life membership fees	(2,650)	(3,073)
Income of SkyNews Inc.	(1,055)	-
	78,125	(35,046)
Changes in non-cash working capital components		
Accounts receivable and receivable from SkyNews Inc.	13,778	(4,875)
Inventory	(4,950)	(6,743)
Prepaid Expenses	(9,349)	143
Accounts payable and accrued liabilities	4,514	(7,646)
Deferred revenues	(12,211)	10,155
	69,907	(44,012)
Cash provided (used) by investing activities		
Investments (net)	(49,232)	262,566
Investment in SkyNews Inc. (net)	-	(211,500)
Purchase of capital assets	(14,381)	(18,569)
	(63,613)	32,497
Increase (decrease) in cash during the year	6,294	(11,515)
Cash, beginning of year	\$ 110,600	\$ 122,115
Cash, end of year	\$ 116,894	\$ 110,600

NOTES TO FINANCIAL STATEMENTS

1. Organization

The Royal Astronomical Society of Canada (“the Society”) 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 accounting standards for not-for-profit organizations.

(a) Cash

Cash includes cash on hand and deposits in financial institutions.

(b) Investments

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

(c) Investment in SkyNews Inc.

The Society purchased 100% of the shares of SkyNews Inc., a profit oriented entity, and accordingly controls the corporation. The Society has elected to account for the investment using the equity method.

The Society purchased SkyNews Inc., a private corporation, on June 29, 2015 to further the Society’s mission. SkyNews Inc. publishes a highly regarded magazine which provides an excellent source of educational information on astronomy and allied sciences to the public. This aligns with the mandate of the Society.

(d) 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.

(e) Capital assets

Capital assets are recorded at cost. Cost comprises the purchase price and any directly attributable cost of preparing the asset for intended use.

A capital asset is tested for impairment whenever events or changes in circumstances indicate that its carrying amount may not be recoverable. An impairment loss is recognized in the statement of revenue and expenses when the carrying amount of the asset exceeds the sum of the undiscounted cash flows resulting from its use and eventual disposition. The impairment loss is measured as the amount by which the carrying amount of the capital asset exceeds its fair value. An impairment loss is not reversed if the fair value of the capital asset subsequently increases. As at December 31, 2015, no such impairment exists.

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

Tangible assets:	Computer hardware	3 years
	Office furniture	10 years
Intangible assets:	Software	5-10 years
	Website development	3 years, 1/2 in year of acquisition

(f) Revenue recognition

(i) Membership fees

Membership fees received in the first half of the year are recognized during the current year. Those received in the second half of the year are recorded as deferred revenue and recognized in the following year. The organization previously offered life memberships to members. Life memberships received in prior years were credited to unamortized life membership fees liability account, as per Note 7. The unamortized life membership fees are being recognized as revenue evenly over 10 years to 2025.

(ii) Contributions

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.

(iii) Investment Income

Investment income is recognized on an accrual basis. The unrealized gain or loss on investments, being the difference between cost and fair value, is recognized in investment income for the year.

(iv) Subscriptions and publications

Journal subscription revenues are amortized into income over the subscription period. Publications are recognized as revenue when shipped.

(g) Contributed services

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

(h) Management estimates

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

(i) Financial instruments

(i) Measurement

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

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

(ii) Impairment

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

(iii) Transaction costs

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

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 to support the general purposes of the David Dunlap Observatory (DDO) in Richmond Hill, Ontario. Under the terms of a 2010 court interpretation, the income of the Helm Fund is presently being applied in support of on-going public education programs at the DDO site.

4. Investments

As at December 31	2015	2015
Managed portfolio at Scotia McLeod		
Fixed income investments	\$ 414,672	\$ 390,600
Canadian equity investments	276,076	222,695
US equity investments	119,679	116,656
Cash	67,219	98,463
Accrued interest and dividends receivable (net)	-	-
	\$ 877,646	\$ 828,414

The actively managed portfolio with ScotiaMcLeod includes 13 fixed income investments (2015—13 investments) comprised of government and corporate bonds with stated interest rates ranging from 1.51% to 3.80% (2015 - 1.75% to 5.53%), maturing from June 15, 2017 to March 15, 2022 (2015 - June 1, 2016 to December 6, 2024).

The Canadian equity investments include share and trust units of 26 Canadian entities (2015—26 Canadian entities). The single largest holding is 429 shares of Toronto Dominion Bank with a market value of \$21,408 (2015—402 shares of Toronto-Dominion Bank with a

market value of \$21,804).

The U.S. equity investments include share and trust units of 33 entities (2015—31 entities). The single largest holding is 88 shares of Citigroup Inc. with a market value of \$5,230 US\$ (2015—50 shares of CVS Health Corporation with a market value of \$4,889 US\$)

The fixed income and equity investments have been recorded at market value based on information provided by Scotia Wealth Management (ScotiaMcLeod).

5. Investment in SkyNews Inc.

The Society purchased 100% of the common shares of SkyNews Inc. on June 26, 2015. The fiscal year end of SkyNews Inc. is March 31, accordingly, the net income for the period from the date of purchase to March 31, 2016 has been recognized in the financial statements of the Society in 2016. The following summary is taken from the unaudited financial statements of SkyNews Inc.

As at	March 31, 2016	June 29, 2015
Total assets	\$ 146,854	\$ 126,804
Total liabilities	244,189	225,194
Total deficit	(97,345)	(98,390)
		Period Ended March 31 2016
Total revenue		\$ 351,717
Total cost of sales		306,333
Total expenses		44,329
Net income for the period		\$ 1,055

The Society has recognized cost recoveries totalling \$61,714 (2015 - \$31,770) for office salaries and rent charged to SkyNews Inc. Included in membership services expense is \$45,153 (2015 - \$45,223) for purchases of *SkyNews Magazine* in the year which is distributed to Society members as part of their membership subscription. The Society also expensed \$5,353 (2015 - \$2,235) in advertising and marketing for advertisements in *SkyNews Magazine* and purchased inventory totalling \$Nil (2015 - \$3,388) from SkyNews Inc. These transactions were made in the normal course of operations and have been measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

6. Capital assets

		2016 Accumulated Cost Amortization		2015 Accumulated Cost Amortization
Tangible Assets				
Computer hardware	\$ 15,729	\$ 12,070	\$ 14,212	\$ 9,671
Office furniture	2,629	1,263	1,542	946
Library	1	-	1	-
	\$ 18,359	\$ 13,333	\$ 15,755	\$ 10,617
Net book value		\$ 5,026		\$ 5,138
Intangible assets				
Software	74,118	\$ 45,622	62,341	\$ 34,721
Website development	11,766	5,883	11,766	1,961
	74,107	\$ 51,505	74,107	\$ 36,682
Net book value		\$ 34,379		\$ 37,425

7. Unamortized life membership fees

	2016	2015
Life membership fees as of January 1	\$ 25,502	\$ 29,152
Deduct: Amortization to income	(2,650)	(2,650)
Balance, December 31	\$ 23,852	\$ 26,502

8. Commitment

The Society has extended its existing lease agreement for office premises extending to 2019 March 31. The minimum annual payments required under the lease, excluding an estimate of the proportionate share of property taxes, maintenance and insurance for the premises, for fiscal 2017: \$14,411, 2018: \$15,388 and 2019: \$3,908. Property tax, maintenance and insurance in addition to the base rent is estimated at \$11,000 for 2017.

9. 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 Board of Directors related to public education and outreach. The P.M. Millman Endowment Fund was established in 1990 for the purpose of providing for the long-term growth of the Society. The Sustaining Membership 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 Board of Directors.

Schedule 1: Internally Restricted Net Assets				2016	2015
	Sustaining Membership Fund	Ruth Northcott Fund	P. M. Millman Endowment Fund	Total	Total
Fund balance, January 1	\$ 11,894	\$ 204,641	\$ 293,551	\$ 510,086	\$ 499,336
Transferred from Unrestricted net assets:					
Interest	671	11,541	16,555	28,767	6,717
Donations	1,674	2,451	230	4,355	9,769
Expenses	(6,682)	-	-	(6,682)	(5,736)
	(4,337)	13,992	16,785	26,440	10,750
Balance, December 31	\$ 7,557	\$ 218,633	\$ 310,336	\$ 536,526	\$ 510,086

10. Financial instruments

The Society is exposed to various risks through its financial instruments. The following analysis provides a measure of the Society's risk exposure and concentrations.

Credit risk

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. The Society is exposed to credit risk through its cash, accounts receivable and investments. Credit risk related to cash is minimal as funds are fully insured and held by credit-worthy parties. Accounts receivable are generally unsecured. The investment policy requires diversification of investments within categories, and sets limits on exposure to individual investments.

Liquidity risk

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

Market risk

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

Currency risk

Currency risk reflects the risk that the Society's earnings will decline due to the fluctuations in foreign exchange rates. The Society has cash and investments denominated in U.S.\$ totalling \$139,254 at December 31, 2016 (2015 - \$141,090). The exchange rate used to convert US\$ assets at December 31, 2016 is \$1 US = \$1.3427 Cdn. (2014 - \$1.3840 Cdn).

Interest rate risk

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

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

Other price risk

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

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

Changes in risk

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

ANNUAL MEETING MINUTES—2016

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

Minutes of the Annual General Meeting

Held Sunday, 2016 may 22 at 9:00 EDT, at Fanshawe College, London, Ontario

Board Members Attendance

James Edgar, Chris Gainor, Robyn Foret, Denis Grey, Charles Ennis, Heather Laird, Randy Boddam, Randy Atwood, Craig Levine, Susan Yeo, Colin Haig.

1. Call to Order

Chair James Edgar called the call to order at 9:02 hrs.

2. Previous Minutes

MOTION AGM16-1 Moved by McCulloch, seconded by Chris Gainor, to approve the minutes as previously distributed. No discussion. Motion AGM 16-1 was CARRIED.

3. Reports of Officers

President (James Edgar)

James Edgar welcomed the new Board and introduced them to the attendees, pointing out that he remained on the Board as a director, which had never happened before. James reported on his travels and visits to RASC Centres.

1st Vice-President (Chris Gainor)

Chris Gainor presented the 1st Vice-President's report: Chris spoke of the new B.C. Societies Legislation, which means Centres must update their By-Laws by November 2016. Chris reported that the Halifax Centre is also working on their By-Laws. Chris said we are still waiting for Ontario to proclaim their new societies act: this was passed four years ago and still appears to be two years away from proclamation. With regards to the publications committee: Chris reported that the usual publications are going through transitions and spoke about recent changes in editors and staff. Chris announced that an RASC newsletter would be inserted into the next edition of *SkyNews*. Finally, Chris reported that the Explore the Universe Guide would be coming out soon to replace the Beginner's Observing Guide.

Dave Chapman asked how Explore the Universe guide would be made available. Will it be for sale through usual outlets? Chris confirmed that the Publications Committee is not planning at this time to do an e-book and that the Observing Committee will update the certificate program.

James Edgar reported that a new NOVA program is being developed, which is based on the Explore the Universe Guide.

2nd Vice-President (Robyn Foret)

Robyn Foret presented the 2nd Vice-President's report: Robyn reported the formation of a working group for the Strategic Plan to make it actionable. Robyn reported that the Nominating Committee almost had an election, having four candidates for three positions. However, Karen Finstad stepped down due to family circumstances, so the election of directors was settled by acclamation. Robyn expressed his hope that in the future more members would step forward to serve on the national Board. Robyn made a "shout out" to all members to spread the word for people to put their names forward as candidates early.

Lauri Roche asked how many positions came available on the Board each year? Robyn replied that three Board positions came

open each year. Lauri asked what Director's positions would be open. Robyn described the process of electing Directors, who then held an election for officers of the Board.

National Secretary (Charles Ennis)

Charles Ennis presented a National Secretary's report, Karen Finstad having filed a report previously. Charles focused on the Public Speaker Program and how it was under-utilized, encouraging members to use this program to bring speakers in to their Centres.

Treasurer (Denis Grey)

Denis Gray presented the Treasurer's report, and reported that he would remain chair of the IT Committee. Denis said that part of the Annual Report is the Financial Report, and the Auditor's involvement. Denis said that the Treasurer reports to the auditor, and then Auditor reports back to the Treasurer. Last year, the Society had deficit of about \$50,000 (10% of revenues), primarily due to a drop in the Society's investment portfolio. Denis pointed out that this was a key change: although membership numbers were up and the Observer's Handbook sales up due to the U.S. dollar, the Observer's Calendar revenues were down due to not receiving the customary order from *Sky & Telescope*. One additional cost was a special edition of the *Journal* last year.

Denis reported that the biggest change last year was the acquisition of SkyNews, which cost about \$200,000. This gave the Society control over the magazine, and from a non-profit perspective this was like investing in a stock. Denis reported that the Society's investment portfolio was smaller, and that as an investment, SkyNews was not easily liquidated. However, overhead costs for the Society are now partially covered by SkyNews, such as wages for the Executive Director and staff. Denis described the relationship between SkyNews and the Society as a "strategic partnership," making it easier to work with SkyNews.

Denis spoke of the necessity to split operations into three parts: charitable, publications, and membership services. Regarding the budget for coming year, Denis expected the Society to make some surplus on membership due to the transfer to the SkyNews model, and anticipated no fee increases for the next 3-4 years. Denis expected publications to generate a small surplus, due to an aggressive plan to improve sales, the plan to deliver the Society's calendar sooner.

Denis expects a deficit in charitable funds. Denis directed members to his annual report for more details. Denis spoke of the Society's internally restricted funds as well as unrestricted funds, which form part of normal operating capital. Denis said that the changes in assets reflect general inflows and outflows. There were no questions from the floor.

MOTION AGM16-2

Moved by Denis Grey, seconded by Stan Taylor, to adopt the annual financial statements as presented for 2015.

David Lane asked: Due to our deficit in the current year, are we likely to have a deficit this year? Denis responded that he felt much better about this year, due to the slack created by SkyNews efficiency. Denis speculated that a \$10,000 deficit was possible, and considered this a "break-even budget." Denis said that if there were no surprises, the Society should do well. Denis said that he'd lowballed the investment income, and said that "as long as stocks were down" we should be okay. Denis said that changes in investment-pool income affected us last year.

Brian asked why no there had been no rate increase? Denis replied that reduced overhead by sharing costs with SkyNews had

made a difference, with membership paying 40% of office administration costs rather than 60%. Society office staff were effectively working “part time” for the Society and part time for SkyNews by this staff-sharing arrangement.

A member asked: “What is the projected cost for that?” Denis replied that you could find the figures in the notes of the annual financial report, citing the cost recovery to be \$31,770.

A member asked: “Will that cover other expenses like an investment advisor?” Denis replied that we already have a financial advisor, Scotia McLeod in Halifax. Our Society pays an aggressive fee with a non-profit discount, based on the percentage of assets under management. Denis pointed out that one change with SkyNews was our assets under management were down 20%, so we pay less for management fees.

Colin Haig added that there are between 2 - 4 reviews every year, and that our financial advisors are not managing fixed assets, just managing investments. Colin pointed out that the stock market has been volatile, and that the Society paid just on investments held in equities.

Denis invited Brian to engage with the Finance Committee.

Katrina asked why there had been an increase in *Observer's Handbook* income? Denis attributed this to U.S. sales with a strong U.S. dollar. Denis described this as a “One-time bonus year,” with unit sales stable but the dollar change helping.

Chair James Edgar called the question on Motion AGM 16-2. No further discussion.

Motion AGM 16-2 was CARRIED at 9:39 hours.

MOTION AGM16-3

Moved by Denis Grey seconded by Susan Yeo that our auditor be reappointed.

MOTION AGM16-3 was CARRIED.

Executive Director (Randy Attwood)

Randy Attwood presented a report on the National Office. Randy opened by saying that Denis Grey had done an excellent job, which was appreciated very much.

Randy said “Until you dig deep you don’t realize the amount of work involved,” and he thanked Renata Koziol for the amount of work she does. Randy directed members to his previously submitted written report. To Randy, the highlight was the acquisition of SkyNews, which he viewed as positive. Randy announced that the final part of this transition was now underway. Randy stated: “You own part of SkyNews, I encourage you to support it.” He encouraged members to purchase gift subscriptions and to support SkyNews advertisers. “Without advertisers,” Randy said, “It would disappear quickly.”

Randy pointed out that, for the first time in history, our Society had over 5000 members, up 1000 in 4 years. Randy reported that we lose 100 members/month. “We are treading water with membership,” Randy said. Randy reported that last year we gained 850 members but lost 770.

Randy reported that we had printed 500 extra copies of the *Observer's Handbook* and sold out. Randy reported that the office always sent out samples of the *Handbook* to institutions that could become subscribers. Income from the *Observer's Handbook* last year was boosted by the U.S. exchange.

Randy promoted fundraising activity, saying that fundraising would become one of the most important committees. Randy reported that in the past the Society had been rescued by bequests, which wiped out deficits, or by years when the stock market did well. Randy said that the Society must have an active fundraising committee to support the Society’s activities, pointing out that there were programs we could implement if we had the funds. Randy spoke of an updated strategic plan and financial strategic plan. Randy also spoke of the National Newsletter returning as an insert in *SkyNews*, its purpose to provide members with important infor-

mation in written form, as not everyone opens the online *Journal*. Randy hoped this newsletter would make people aware of special programs, and announced that the newsletter would appear in the next issue of *SkyNews*.

Randy reported that the recent Subaru advertising campaign had a big impact.

Randy also stated that he believed that RASC activities concerning the recent Mercury transit demonstrated the strength of our Society, resulting in the first space day on Parliament Hill.

Randy spoke about the Society’s upcoming 150th anniversary in 2018, saying that a working group would be discussing this project this weekend, with Randall Rosenfeld as chair. Randy described their work on a 150th anniversary logo, and showed the attendees a prototype of that logo. Randy said that we have two years to prepare and asked the attendees to present suggestions to Randall that day. Finally, Randy thanked the Board for their work, with a special acknowledgement to office staff.

A member asked: “Why are people leaving? Are we doing exit surveys?” Randy replied that the Society does: every month we have a grace period, and office staff call to remind members of memberships coming due. Randy reported that a lot of members are forgetting to rejoin, and that the implementation of new software will allow automatic renewals, sending an email to renew two months in advance. Randy said that most who drop off are first year. Reasons for this could be financial, that they didn’t get what they expected, that they couldn’t make meetings, etc. Randy described members spread across twenty-nine Centres, each with varying programs. Randy said that Centres must develop programs to train newbies, which takes a special effort. Randy spoke of the need to have a working group to survey delinquent members and entice them with a prize.

A member asked: “How much do we get in donations annually? Is it about \$50,000?” Randy reported that donations average about \$20,000 annually. Randy said that when members renew, they have the ability to donate to various Society funds. Randy said that right now donations are passive, some more-so than others, and that we do not just need donations to run our organization, we need donations to fund special projects. Randy expressed our intention to identify specific projects to capture the interest of members and motivate charitable donations.

A member asked: “How did the Subaru thing come to be?” Randy reported that Subaru approached the RASC to see if their advertisement and website were correct. Subaru is now a diamond sponsor of the RASC, donating \$3000/year. Randy hoped that Subaru would advertise in *SkyNews*.

A member asked: “Would Subaru be able to support a star party?” Randy said that hopefully this advertising campaign would extend to support of such projects and would attract other big-name sponsors.

A member asked: “Did you say that the 150th logo will be made into a crest which can be distributed?” Randy said yes, but the price had yet to be established.

James Edgar pointed out that life members could contribute to the Sustaining Member Fund (which is the source of Public Speaker Program funds), or to support the Special Programs Project (Northcott Fund).

3. Reports of Permanent Committees

Awards

James Edgar reported that there were no members of the Awards Committee in attendance to report but that they had filed a report for members to review.

Education and Public Outreach

Andrea Misner presented a report for the Education Committee: Andrea said that the only thing to add to their report was the addition of Jennifer West to their committee.

James Edgar pointed out that the Education Committee was responsible for the new Nova program.

Colin Haig asked: “How do you know how well we are doing with education?” Andrea replied that their program was so integrated with everything else like outreach, that it was hard to know, and that this was partly due to how many teachers were involved.

Robyn Foret spoke as Board Liaison of the Education Committee: Robyn said that there had been more teacher education conferences than ever due to the work of Lauri Roche. Robyn spoke of how RASC Centres were involved in the Canada-Wide Science Fair. Robyn suspected that the Society will identify other ways to serve the public. He added that the Moon Gazers and Star Finders program was doing well.

David Lane commented that the Society collects statistics about outreach events, and said that we should report on those numbers quarterly, perhaps in a box or sidebar in the newsletter.

Finance (Denis Grey, Chair)

Denis Grey reported on the Finance Committee, saying that the Finance Committee had been reconstituted. Denis invited Susan Yeo to talk about that, and said that there had been a review of the investment portfolio and procedures..

History (Randall Rosenfeld, Chair)

Randall Rosenfeld reported on the History Committee. Randall thanked members of his committee for their hard work. Randall told the attendees: “All activity you do is part of the story of astronomy in Canada, and matters, and becomes history. Keep it up and don’t throw anything out. If you need archival advice, or if you have questions, contact us.”

Information Technology (Craig Levine, Chair)

Craig Levine reported on the IT Committee, which he described as the “Whirring fans and blinking lights committee.” Craig said that they were looking at the migration into cloud databases, finalizing it now. Craig said that David Lane was involved in this work. The conversion of the Society’s website to Drupal 7 is now complete, having been completed by an outside contractor last year. The Society is now migrating its cell-phone system to get more services. Craig described the IT Committee goal as providing service to Centres and members. Craig described his committee has having spent a lot of time navel gazing due to government regulations. This year the IT Committee hopes to install membership software in the background that will facilitate a single sign-on and better and easier payment systems. Craig estimated \$10,000 for this long-overdue project, which would make our website easier to access with cell phone, etc. It would also make sure we have CASL compliance.

Craig also described the mail list migration into cloud. Craig expressed his concern about Centre webmasters retiring, leaving Centres in jeopardy. Craig spoke of the need for data collection. Future projects include: refreshing the Society’s website to transform it from an “ordering website.” Craig described the current website as containing “Too much word soup legacy info”. Craig said our website must excite visitors, and must make their visit painless. Craig spoke of the need to support all our constituencies. “We have got to grow up,” Craig said.

A member asked: “How does Drupal training work for members with minimal tech skills?” Craig said that the IT Committee was working on that now, and would roll out training as quickly as possible.

A member asked if it was possible to set up the website for higher priority Google search. Craig described this as a good question. Craig said that he couldn’t personally answer that question, that he needed to consult with others. Randy Attwood said that SkyNews knew how to do it now after consulting, and could advise the IT Committee. Denis Grey pointed out that an “astronomy Canada” search on Google currently yields the RASC first and

SkyNews second. Craig pointed out that the Society needs people to write and renew content, as well as people to contribute content. Craig said the key is contributions. “Tech is fine, we can make it look gorgeous,” Craig said, “But we need content.”

A member asked: “Have you thought about astronomy advertising?” Craig replied that the Society is already doing that, and cited the sponsorship program. The member asked about advertising for local websites? Craig replied that “whatever you want is under your control.”

A member asked: “Does the RASC have a tech team? Craig responded that we do have people with appropriate skill sets, but that volunteer time is precious. “To be more agile we invest in resources like we did last year to bring in the skill sets we need,” Craig explained, “If you have such skill sets contact us.”

Craig said that he hoped that when we revamped the webpage that membership renewal would be updated, especially to encourage and simplify donations. Craig Levine asked Denis Grey if Drupal would help this process? Denis replied that what was needed was not Drupal related. Craig said that he believed an iMIS update would be required to accommodate this goal, and added that the website needs to be drastically improved in this regard. Jim Hesser pointed out that one way to think about it is that the website is the Society’s largest publication. Jim asked if it would be possible for the Publishing Committee and the IT Committee to work together?

Craig Levine said that this view was correct and a good point, and that he hadn’t thought about it like that. Craig thought that the Membership Committee should also be a part of this, and that there were any number of stakeholders, as it all circles back to the Strategic Plan.

Light-Pollution Abatement (Robert Dick, Chair)

Chair James Edgar advised that a representative of the Light-Pollution Abatement Committee (Robert Dick) was not in attendance but that they had submitted a report. James pointed out that Robert has been active in reviewing the *Guide to Outdoor Lighting* (GOL).

Membership & Development (Roland Dechesne, Chair)

Chair James Edgar advised that Roland Dechesne of the Membership and Development Committee was not in attendance but that a report had been submitted. James reported that Roland has been busy working with the potential new Centre in Red Deer.

Nominating (Chris Gainor, Chair)

Robyn Foret, representing the Nominating Committee said he’d already spoken to this earlier in the meeting.

Observing (Alan Whitman, Chair)

David Chapman, Deputy Chair of the Observing Committee made their report: David Chapman reports they’ve created a new Explore the Moon Certificate Program, which they will try to roll out this year. David described it as “Isobel Williamson Light” and reported that it has been field tested. Regarding membership retention, Chapman said that the Society does tremendous outreach, but that beginners don’t fit into that—that we need to give beginners something to do. David suggested using the Explore the Universe Guide to get new members started, and said that it should be available at discount or free to new members.

Astroimaging Committee (Tenho Tuomi, Chair)

Chair James Edgar said that there was no one in attendance to represent the new Astroimaging Committee: This is Tenho Tuomi’s new group, which will be putting out a new certificate program.

Fundraising Committee (Heather Laird, Chair)

Heather Laird of the Fundraising Committee referred to their report, which had been submitted. Heather told the attendees of drafting a gift acceptance policy with the assistance of RASC

member Ryan Fraser. Heather said that we want to adhere to law and the CRA, which will protect us, and that we expected the policy to be on line by July. Heather said that her committee was waiting for the upcoming September meeting to begin action on a Strategic Plan. Heather explained that members of the Fundraising Committee had been spending the last few months educating themselves to do this properly. Heather called for suggestions from the membership.

Dave Chapman reported that at a recent AAVSO meeting, he learned that they held a fundraising event every year, with a keynote speaker. He reported that AAVSO national board members donate every year.

Charles Ennis added that the Public Speaker Program could be used to help set up such a fundraising event.

A member asked about the recent discussions about funding a remote observatory? James Edgar replied that no committee had been set up for this, and that the Society was still investigating it.

4. Roll Call for Centres:

Dave Chapman pointed out that we had not yet had a roll call for Centres. James Edgar then conducted a roll call. Representatives from the following Centres were present: Bellville, Calgary,

Edmonton, Halifax, Hamilton, Kingston, Kitchener-Waterloo, London, Mississauga, Centre francophone de Montréal, Montréal, New Brunswick, Niagara, Okanagan, Ottawa, Regina, St. Johns, Sunshine Coast, Thunder Bay, Toronto, Vancouver, Victoria, Windsor, Winnipeg, Unattached. Not present: Prince George, Quebec, Sarnia, Yukon.

5. Other Business:

Eric Kujala reported another successful year in Ottawa webcasting astronomical events. Eric reported that his Centre also did their first remote webcast for the Mercury Transit, with another coming up for the Mars close approach. Eric asked that Centres seriously consider making webcasting more widespread, pointing out that we have great content. Eric said his Centre would help other Centres in technical matters involving webcasting.

James Edgar listed members who had passed away in the last year and asked for a moment of silence.

6. Adjournment

James Edgar adjourned the meeting at 10:55 hours EDT.

Charles Ennis

National Secretary

ANNUAL REPORTS FROM THE CENTRES

BELLEVILLE CENTRE

January	Greg Lisk—Astronomy news from last month Randy Boddam—"The Search For Life, Part 1" (astrobiology)
February	Greg Lisk—Astronomical events from last month Film: "How the Universe Works" Scheduled observing night: Feb. 12/13
March	Greg Lisk—news from last month. Dave Cotterell—double-shadow transit on Jupiter
March 7	Don Town and David Cotterell— "Florida Winter Star Party" photos "Gravitational Waves" presentation Greg Lisk—Discovery program on the James Webb Telescope Bob Bates—video
April	Randy Boddam will make arrangements with Presque Isle Provincial Park for the club to do public solar observing this summer. Greg Lisk—astronomy news from last month Randy Boddam—"The Search for Life, Part 2" David Billo—"What's Visible in the Sky"; observing night April 8/9; daylight occultation of Aldebaran
May 9	"Transit of Mercury"—telescopes set up downtown Belleville for or public viewing of transit in progress.
May 19-23	RASC General Assembly, London, ON (Several mem- bers attend) Greg Lisk "Famous Astronomers in History" "Mercury Facts"
May 14	Astronomy Day
June	Greg Lisk Astronomical events from last month Meeting adjourned early for public observing at Zwick's Park, Belleville
July 9	Star-BQ held at Presque Isle Provincial Park
August	No regular meeting due to dates coinciding with Starfest Several members attend Starfest 2016 Club solar observing for the public at Presque Isle Provincial Park every 2nd Saturday all summer.
Sept 9-11	"Fall'n'Stars 2016 Star Party"—joint RASC Belleville/ Kingston star party held every September since 2000 Speakers: Hank Bartlett, Rick Wagner and Greg Lisk
October	Observing night - October 21 for Orionids Observing night - October 28 or 29 Bob Bates—shows latest astrophotos Video: "How Elon Musk's SpaceX Will Make Interplanetary Civilization a Reality"
November	Greg Lisk—last month's astronomy news and notes Leonids meteor shower - Nov. 17/18 November Evening Sky Map—What's up? Video—"7 Scary Space Events" Greg Lisk shows off his meteor collection
December	President Greg Lisk contender to teach 10-week daytime astronomy credit course at Loyalist College, Belleville Don Town—club business Observing night—December sky charts and sched- uled observing night December 23

Dec 3 Annual club Christmas Dinner
Antonina Vasileva-Durham—"Tunguska Event of 1908"

Joanne Burns
Secretary

CALGARY CENTRE

Calgary Centre's Public Outreach efforts hosted over 50 public events, some over multiple evenings, with 10,349 members of the public attending.

Centre Members also continued to show support to our communities of interest, the University of Calgary (Rothney Astrophysical Observatory Public Nights), Alberta Provincial Parks, the Town of Vulcan & the Vulcan Trek Centre, and the Banff and Waterton National Parks. Events were held in various locations around the City of Calgary and in neighboring towns and communities around Calgary.

Member's events throughout the year included the Annual Members Banquet, the Member's Bar-B-Q, the Alberta Star-B-Q (at the Eccles Ranch Observatory, near Caroline Alberta), the Alberta Star Party (at Starland Campground, near Morrin, AB), regularly scheduled General Meetings, NOVA, Observing Group and Youth Group at our Wilson Coulee Observatory south of Calgary.

Special mention too to Ken and Bev From, owners of All-Star Telescope for their support of the Calgary Centre, the hosting of events for Members from their site at Didsbury, Alberta and for their generous sponsorship.

Membership

At the end of December, the Centre had 424 members, showing a slight decline in membership, mostly attributed to the current economic situation in Southern Alberta. At our public events volunteers highlight Centre activities and the benefits of RASC membership to encourage attendees to join the RASC. Our Social Media campaign continues to attract grow and likely help to sustain awareness to the public concerning our activities in the Calgary Centre and support the membership level we currently maintain. Our Youth Group helps with the addition of new Youth Members and their families. Active programs promoting events with Meetup.com encourages the interested public to attend our events, usually augmenting attendance significantly and supporting healthy membership sustenance. A Calgary Centre Facebook page also promotes events but encourage participation of members in sharing their astronomical areas of interest and astronomical events. Many members submit their work through this site, increasing awareness of astronomical events to the community. Twitter and YouTube are also used to disseminate astronomical information to the community.

General Meetings

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

January	Dr. Phil Langill—"Stump the Astronomer" Member presentations by Larry McNish, and Roland Dechesne regarding recent astronomical announcements of a vapour trail that made the evening news in Calgary and Solar Eclipse Planning for 2017.
February	Chris Ratzlaff—"Chasing Aurora"
March 17th	(Peter Sim #1) Randall Rosenfeld—"Music of the Spheres: Astronomers as Musicians, and Musicians as Astronomers." Randall also provided a live musical performance as part of the presentation. Member presentations by Larry McNish—Mega Star Charts
March 18th	(Peter Sim #2) Dr. Robert Thirsk—"What Has Space Brought Us?" Talk held on the Friday evening.
April	Dr. Nic David—"Spera Solida Magna - A Mediaeval Astronomical Mystery" Member presentations by Larry McNish & Don Hladiuk, Roger Nelson regarding the Centre do more to support astronomical science projects by its members
May	Dr. Erin Walton—"Hypervelocity Impact Events: An Example from the Western Canada Sedimentary Basin"; Member presentations by Alan Dyer, Larry McNish & Don Hladiuk
September	Alan Dyer—Nightscapes, how to take great astro-photos without spending a lot of money, just time!
October	Heather Laird—"Canadian Women in Astronomy"
November	Elections & Member presentations: Don Hladiuk—SLS Space Launch System; Doug Thorp—visit to Mauna Kea; Greg King—Telescope for Rent; Jack Milliken—Infinity2; Nic David—Herschel and Friends. We also announced that we would be proposing to host the 2018 GA.

Public Education

Calgary Centre continued to provide volunteers with telescopes for the University of Calgary Rothney Astrophysical Observatory's monthly open houses. These open houses are well attended by the public and the Calgary Centre sets up an information table with insight into the RASC, our local programs for public outreach and our work on light pollution abatement. Highlights included excellent views of the Milky Way during two three-night public observing sessions called Milky Way Nights in July and August.

Astronomy Programs with Parks Canada and Alberta Provincial Parks continued with numerous events held in Banff National Park, Waterton National Park, Glenbow Ranch Provincial Park and Fish Creek Provincial Park to name a few.

RASC volunteers with telescopes also attended several other events in Airdrie, supporting the Airdrie Space Science Club and Vulcan, the home of the Star Trek Centre

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

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

The Calgary Outdoor Adventure Show and Calgary Comic and Entertainment Expo proved to be busy venues for the Centre's booth and event organizers in Banff have discovered the entertainment value of bringing RASC volunteers to corporate events in the picturesque town in the Rockies. The latter offered a new venue for public outreach as well as an opportunity to bolster the Centre's coffers with much appreciated honoraria.

Other venues included: Ambrose University College, Olds Library, All-Star Telescope, Mount Royal University, Hawkwood School, Harley Davidson, Kerry Woods Adventure Nature Centre Red Deer, Cross Conservation, Glenbow Ranch Provincial Park, Bar U Ranch, Alberta Science Council Annual Conference, Brewster Sulphur Mountain.

Other Activities

Transit of Mercury

Special events included the Annual Awards Banquet in January and member's BBQ at the Wilson Coulee Observatory (WCO) in June, the Star-B-Q in July and the Alberta Star Party in September.

The Club's Wilson Coulee Observatory hosts monthly Observer's Group meetings, NOVA group sessions and the Youth Group meetings.

Social Media has proved to be a significant addition to the Centre's outreach portfolio (shout out to Roland Dechesne) with over 16,000 recorded views-hits-followers-etc.

The popular Telescopes-for-Rent program available to Centre members continues to be very successful.

The Centre newsletter, the StarSeeker, is distributed electronically 9 times in the year.

RASC Calgary Centre Council meetings were held at the University of Calgary

Roger Nelson
Secretary

EDMONTON CENTRE

Public Outreach

In 2016, RASC Edmonton Center continued to bring astronomy to the public through a variety of venues and events. What follows are some of the highlights.

For the Mercury transit of May 9 RASC members set up solar telescopes in front of the RASC observatory in Coronation Park. Around 40 people dropped by as the Sun rose with the transit in progress for a view. By the time, the Sun moved into the view of the observatory telescopes clouds rolled in blocking the view. At the same time two members set up scopes downtown in Churchill Square where dozens of early risers likewise viewed the transit.

For Astronomy Day, May 14, an information booth inside the Telus World of Science was set up with members meeting the public, answering questions and presenting videos. Outside a telescope clinic was put on. The RASC observatory was open for extended hours. Sidewalk astronomy was conducted at three locations around Edmonton. Altogether several hundred people experienced were exposed to our passion.

Canada Day in Strathcona County has been an annual outreach event for a number of years. Fortunately, the weather has always cooperated and several hundred people have viewed the Sun through member's solar telescopes at this event.

Perseids in Pyjamas at the Devonian Botanical Gardens just west of Edmonton has been an annual event for a few years. Talks on meteorites, as well as telescope viewing, are a feature of this family event. Several dozen members of the public participated this year.

- Dark Matters is a science themed adult event held periodically in the Telus World of Science. RASC members attended a few of these last year, with our display booth and opening the RASC Observatory as weather permitted. Several hundred people attend these events.

Science Camp at the Strathcona Wilderness Center. This is an annual summer outreach where our members do a presentation before 50 young people and conduct a telescope session weather permitting.

Visits to schools and youth groups. Our members visited many schools, scout and guide groups to do astronomy themed presentations, solar viewing, and nighttime sessions. Many hundred young people have enjoyed these outreach events put on by our members.

Annual Beaverhills Dark Sky Preserve Event. (Milky Way Days) In terms of volunteer hours, this is our major outreach event. It has been a part of our calendar of events every Labour Day weekend since 2006. Saturday at Miquelon Lake Provincial Park and Sunday at Elk Island National Park RASC Edmonton has been heavily involved here since the declaration of this Dark Sky Preserve. In 2016, weather was not cooperative however; our display was visited by many people and heard our featured speaker.

Jasper Dark Sky Festival. As in past years, RASC Edmonton members took the four-hour drive down Highway 16 and conducted three viewing sessions in 26 hours, two dark sky and one Solar. Weather was not an issue for the most part and well over one thousand people stopped by for views through member telescopes.

As this is my final report as Public Education Director, I would like to state, that I cannot adequately thank our members who share their enthusiasm, knowledge energy time and equipment with the public. We could not “enhance understanding of and inspire curiosity about the Universe” without them.

—Geoff Robertson

Sky Scan

The RASC Edmonton Centre is a major partner in the Sky Scan Science Outreach program, along with the Department of Physics at the University of Alberta, and the Alberta Science Network. The Sky Scan Science Outreach program uses the universal appeal of astronomy to provide an inclusive and accessible learning program that inspires youth to a life-long interest and career choices in Science. We conduct engaging, astronomically motivated learning activities in Grade 6 and 9 classrooms, as well as at the University of Alberta (U of A) Observatory, using inquiry based practices that meet (and exceed) the goals of the Alberta Education curriculum. Our main focus is on Edmonton-area schools, but we do drive out to schools that are up to one hour away. All programming is free of charge in order to keep the learning accessible to all. Funding for this comes from Edmonton RASC, the University of Alberta, and in-kind donations of time from the Alberta Science Network.

Since our programming is tied to the school year, we report our numbers for September 2015 - June 2016.

Our main programs are:

(1) Astronomer in the Classroom - An astronomer (with a BSc or MSc in astrophysics) visits a school to lead astronomy-related activities and answer astronomy questions from the children. In 2015/16 academic year we visited 130 classrooms at 60 schools, reaching 3430 students.

(2) Class visits to the U of Alberta Observatory - Classes can visit the observatory at the U of Alberta to look through the telescopes either during the daytime or evening. If the sky is cloudy there are activities involving meteorites instead. In 2015/16 there were 31 field trips to the Observatory with a total of 825 students.

In addition, we held a teacher's workshop in November 2016 for teachers of Grade 6 Sky Science. We had 20 very enthusiastic teachers participate in this workshop.

—Sharon Morsink

RASC Observatory

As part of its public service mandate, the Royal Astronomical Society of Canada, Edmonton Centre provided volunteers to man the RASC Observatory situated at the TELUS World of Science, in west-central Edmonton.

The observatory consists of a roll-off roof-observatory, housing six telescopes provided by the Edmonton Centre of the RASC to bring the night sky to the people of Edmonton and surrounding area. One of the telescopes is a five inch Lunt with double etalon, dedicated to solar viewing. Two other scopes are equipped with white-light filters for optional solar viewing.

In 2016, 905 hours of volunteer time were donated to the running of the observatory, almost all from RASC members. In that time, about 10,000 people visited the site and enjoyed the views of the sky through our telescopes.

The observatory is open year-round except for a period from the middle of December to the middle of January. In the rest of the year, the RASCO is open Friday evening, Saturday afternoon and evening and Sunday afternoon and evening. In addition, during July and August, the observatory is open seven days and evenings a week except for holidays.

RASC Edmonton has a continuing program to maintain and upgrade the equipment in the observatory.

—Kent Martens

Chairman, Observatory Planning Committee

Black Nugget Lake Observatory

Aimed at furthering our mission for astronomy outreach and education, Edmonton Centre has embarked on a project to build a 32" telescope to be housed at a dark sky location near Edmonton - the Black Nugget Lake Observatory (BNLO). Working with Beaver County, we plan to establish a program around the telescope that will offer the best views of heavens in Alberta while promoting astronomy education. Albertans will be connected with nature in the broadest sense, with awe inspiring views of the Universe. Students will learn about the Universe through teacher-led events organized with nearby school districts.

This project was made possible by the confluence of four important factors. First, thanks to an extremely generous donation by former Edmonton Centre member Bob Drew, we now own the optical components for the telescope. Second, an enthusiastic and energetic committee, including Roman Unyk who has the knowledge, skills and tools to construct the telescope, has come together to execute the project. Third, the Centre has a long-term lease on a parcel of land that will house the eventual observatory. Finally, the Centre has the funds to construct the telescope and expects to secure the funds for the eventual observatory.

Construction of the telescope, a folded Newtonian design, is underway with expected completion by the end of 2017. We plan to build the observatory the following year with completion by autumn 2018, in time for the Northern Prairie Star Party and the 150th anniversary of the RASC.

—Luca Vanzella

The Queen Elizabeth II Planetarium

The Queen Elizabeth II Planetarium, Canada's first public planetarium, opened in 1960 to commemorate the Royal Visit of Queen Elizabeth II in July of 1959. The facility was the result of a proposal

put before Edmonton City Council by the Royal Astronomical Society of Canada, Edmonton Centre.

The dramatic round glass and gold building, with its signature silver-domed roof and transparent glass walls, was designed by the official City of Edmonton architects, R.F. Duke and W. Tefler, to look like a flying saucer hovering above the ground on a raised pedestal. Outside, the building was finished with fieldstone and gold anodized aluminum. Inside, there were terrazzo floors, red marble walls, doors padded with red leather, and elegant multicoloured hardwood.

Reaching its peak of 33,500 visitors in 1967, the Planetarium was closed on December 31, 1983 after the opening of the nearby Edmonton Space and Science Centre (now TELUS World of Science). After sitting for years vacant and neglected in Coronation Park, the stars finally aligned for the QEP, as the City of Edmonton designated the Planetarium as a municipal historic resource. The City and TELUS World of Science Edmonton have reached an agreement to restore the iconic building.

A \$6-million renewal and restoration project will support the preservation of this architectural icon and renew the building's identity and purpose. One portion of the building will become park washrooms accessible to the public during park hours. The other part of the building will be leased to TELUS World of Science Edmonton to support their public programs and events. Design was completed in 2016 and construction is due to begin late spring 2017, with an opening set for summer 2018.

Through a long-standing partnership with TELUS World of Science Edmonton, the RASC Edmonton Centre will also host events and programs at the Planetarium. The Centre is developing a weekly program designed to increase public awareness of astronomy as an enjoyable hobby and as an important scientific endeavor.

—Luca Vanzella

2016 Northern Prairie Star Party (NPSP)

The 13th annual Northern Prairie Star Party was held at the Black Nugget Lake campground southeast of Tofield, from Sept 27 to Oct 2, with a total of 47 attendees. For those who came out earlier in the week, there were two nights of reasonably good viewing; but Friday and Saturday were rained out completely.

Nevertheless, we had an enthusiastic crowd out for the Saturday talks. Luca Vanzella (Edmonton Centre RASC President) gave us a very interesting talk on his thorough study of carbon stars. Jay Anderson focused on the upcoming August 21, 2017 total solar eclipse traversing the northern U.S. and the probability of clear skies at various locations along the eclipse path. Dr. David Levy gave an inspiring presentation on his life as a successful comet hunter, with a highlight of his career being the co-discovery of Comet Shoemaker-Levy 9 that collided with Jupiter in July 1994.

A big thank you goes out to our presenters, Rick Bramm for designing the popular t-shirt commemorating LIGO's first direct observation of gravitational waves on September 14, 2015, and many others who helped with the event. We distributed lots of door prizes donated by All-Star Telescope from Didsbury, Edmonton Centre RASC, Mark Zalcik, Kent Martens, Luca Vanzella, Alicja Borowski, Bob Lawrence, LUNT Solar Systems and Starizona.

Mark your calendars for next year's Northern Prairie Star Party September 19 to 24, 2017.

Susan and Rick Bramm
Coordinators

HALIFAX CENTRE

The Halifax Centre of the RASC had a busy and successful year with regular meetings and a variety of Outreach events promoting astronomy to the public. The Outreach Committee and many Centre volunteers carried out activities and worked in

partnership with Saint Mary's University (SMU), Dalhousie University, the Minas Astronomy Group, and the Halifax Planetarium to host and support many programs and activities.

General Meetings

Monthly meetings were held generally on the third Friday of each month, except for the summer months of July and August, providing 9 monthly meetings plus two special presentations. The Executive met in the hour prior to the main meeting to discuss Centre business. These meetings were held in facilities provided by SMU.

The Centre's library cart, containing a diverse selection of books on astronomy subjects, was available to members at each meeting. The Library has received a substantial refresh this year after several years of acquiring few titles. Council gave an allowance of \$600.00 towards the purchase of new books. A selection was made to cover a variety of interests including Observing, Binocular Observing, Astrophotography, a Lunar Atlas, Constellation History, Cultural Astronomy, Comet Hunting and Sketching, a total of 21 books were purchased as well as 2 DVDs on Astrophotography. This was further supplemented by donations of 8 additional current books from member's bookshelves.

The Meetings opened with a welcome to guests and visitors followed by announcements, with Centre business and "What's Up?" by Centre members followed by the evening's main presentation. Refreshments and discussion follow the formal meeting.

The Halifax Centre continued hosting a series of speakers at each monthly meeting who gave interesting and informative presentations. Meeting attendance varied from approximately 30 into the 60s, depending on weather conditions. Presentations included:

- | | |
|--------------|---|
| January 15 | Dave Lane presented the Great American Eclipse! |
| February 19 | Dave Lane spoke about the renewal of SMU's Burke-Gaffney Observatory (BGO) and its new social media interface. |
| March 18 | This was a Members' Night where Halifax Centre members provided some insight into varying astronomical interests. Paul Gray provided information about the upcoming summer star parties in the Maritime region. Mark Robertson provided information about using an iOptron Smartphone adapter. Jerry Black provided insights on his experiences as a novice to time lapse photography. Dave Chapman presented the transit of Mercury. |
| April 15 | Two members presented at this meeting: Paul Evans about a Lunar Eclipse Time Lapse, and David Griffith about portable telescopes. |
| May 13 | Dr. Luigi Gallo presented on the Hitomi X-Ray Observatory. |
| June 17 | We hosted our annual members' BBQ at our observatory site in St. Croix; however, the weather was uncooperative for a night of observation. |
| September 16 | Dr. Roy Bishop presented A Matter of Some Gravity, providing context and information on the recent gravitational wave discoveries. |
| October 21 | The Members' Meeting was replaced by the |

MacLennan Lecture given by Nobel Laureate Dr. Art MacDonald.

November 3 Dr. David Levy presented his life as a comet hunter

November 18 Members' Meeting featured members' presentations. John Read presented California Dreamin' at the Mount Diablo Astronomical Society & the NASA Night Sky Network. David Chapman described his visit to the Celestial Ceiling in Beverley, Yorkshire, England. Paul Gray described how to build an observatory from a personal perspective.

December 9 Our Annual General Meeting (AGM) was held. Patrick Kelly spoke to us about an unexpected miniature solar system he found while visiting Iceland earlier in the year. Judy Black gave a special presentation regarding proposed revisions to the Centre's Objectives and to the Bylaw #1.

Halifax Centre Objectives & Bylaw #1

The Council's Bylaw Review Committee (Judy Black, Paul Gray, Chris Young, Pat Kelly, Dave Lane, Dave Chapman, Sean Dazafovic) worked over nine months to revise the Objectives and Bylaw #1 because:

- The currently enacted Halifax Centre Bylaw #1 (1995) had not been reviewed for numerous years and, when resubmitted in January 2016, it was not approved by Nova Scotia Registry of Joint Stock Companies (RJSC) as it did not meet current content requirements;
- RASC revised its Bylaw #1 (2013) & developed their Policy Manual (2015 that provided guidance on what should be bylaw versus policy; and
- Revisions needed to reflect updated RASC structure and bylaw, and to propose new structure and policies for Halifax Centre.

In special resolutions, both the revised objectives and Bylaw #1 were approved unanimously at the December AGM.

Halifax Centre Observatory

The Centre has a dark sky observing site approximately 40 minutes from Halifax. The St. Croix Observatory (SCO) has a roll-off roof, warm room & WR facilities. The Centre has a 16" Go-To Skywatcher Dob which is very popular. There are regular observing nights each month with "weather permitting" gatherings arranged ad hoc on the Centre's web list.

Halifax Centre Newsletter - NOVA NOTES

Tony Schellinck continued in his role as Editor and produced five editions in 2016, with a range of 8 to 20 pages per issue, 68 pages in total. Three of them were themed: A Year in the Life of the RASC Halifax Centre, Astrophotography for Everyone!, and Making Summer Memories with special contributions on each of these themes by RASC members. It was delivered in an electronic format through the Halifax Centre web site with notifications emailed to our List and a few paper copies mailed out on a subscription basis. Between 15 and 18 copies were printed each issue. The Newsletter contained articles, photos, astrophotos, poetry, members' meeting write-ups provided by Centre members. Publication will carry on through 2017.

There were seven regular contributors to *Nova Notes* in 2016:

- Lunatic Ramblings by Dave Chapman
- Starlight and Semiconductors by Art Cole
- The Universe's Symphony of Sound by Matt Paine
- Member Profile by Tony Schellinck
- Book Reviews by Tony McGrath
- Food for the Soul by Paul Heath
- Members' Meeting Reports provided Jim Millar and Chris Young

These were not the only members who submitted articles to *Nova Notes*. Special articles were written by Michael Boschat, Quinn Smith, Sherman Williams, Dave Chapman, Jerry Black, David Lane, Keith Walker, and David Griffith. Several other RASC Members agreed to have their photographs printed on the front page of the issues: Michael Boschat, Barry Burgess, Blair MacDonald and David Chapman.

2016 Issue	Cover Photo	Content
January/February	Young Moon, less than 24 hours after new moon (David Chapman)	THEME: A Year in the Life of the RASC Halifax Centre (contained full reports given at the AGM, post-Nova East
March/April	The Horse Head Nebula RA 5:41:00 Dec -2:27:00 at SCO (Blair MacDonald)	12 pages covering numerous topics
May/June	A bird's eye view of the Burke-Gaffney Observatory with its Planewave 24-inch telescope looking skyward (Burke-Gaffney Observatory)	THEME: Astrophotography for Everyone!
September/October	Sandstone arches on Fundy shore at Medford, NS (Barry Burgess)	THEME: Making Summer Memories 16 pages
November/December	The Moon Tonight, Nov 11, 2016 (Michael Boschat)	8 pages covering numerous topics

Public Outreach

Along with the public observing sessions that took place in Halifax, many members hosted their own observing session within their local communities.

The Halifax Centre continued to support the Halifax Planetarium and several of our members (Quinn Smith, Chris Young, Pat Kelly and Tony Schellinck) gave 30 presentations throughout the year to about 800. Classroom and library talks continued largely through the work of Past President Paul Heath.

The Halifax Centre also had booths promoting astronomy at special public events including Saltsclapes, the Atlantic Photo Supply sidewalk star party, and Hal-Con (Atlantic Canada's premier sci-fi and gaming convention).

Throughout the year, there were approximately 2,300 attending pre-arranged formal presentations; informal outreach was not tracked.

30th Nova East Star Party, Smiley's Provincial Park

This year Nova East, Atlantic Canada's regional star party was a success and had an excellent guest speaker, our very own Dr. Roy Bishop, who provided the highlights of his experiences over the past 70 years of observing. Other speakers included Melody Hamilton, Tony McGrath, Dave Lane, Chris Becket, Dave Chapman, Paul Evans, Jerry Black, Sherman Williams, Paul Heath and Tony Schellinck.

Chris Young, Roy Bishop, Paul Heath, Melody Hamilton, Irene Moore, Paul Gray, Jim Millar, Judy Black, Dave Chapman and Michael Gatto comprised the Nova East organizing committee. This star

party is open to the public and shares the view with a field of telescopes and provides public talks for all ages.

Brian Giffin of Atlantic Photo Supply donated the winning prize of a framed photo of the winning entry. Congratulations to Jeff Donaldson for his winning submission of M108. The main prize (a fully automated Celestron Sky Prodigy 6 telescope) was donated by Celestron and Brian Giffin of Atlantic Photo Supply. The main door prize was won by Wilfrid Maillet.

After the presentations and door prizes, a convoy of cars headed to a nearby location (organized by Roy Bishop) to observe the close conjunction of Venus and Jupiter in the evening sky. The weather co-operated and those watching saw both planets sink below the horizon just after sunset, first Jupiter and then Venus. And as a special treat for those watching, Venus presented a "green flash" as it set in the west. As Roy Bishop often says, "Good fortune favours the prepared."

Dark Sky Preserve Support & Dark Sky Week-Ends at Kejimikujik

Halifax Centre again supported Kejimikujik National Park and Historic Site which has been a Dark Sky Preserve since 2010. Parks Canada has worked hard to sustain and enhance Kejimikujik National Park in maintaining its Dark-Skies Preserve certification.

This summer, Dave Chapman of the Centre facilitated the Dark Sky Weekend with a special presentation on Friday evening by Chris Young to about 300 in attendance, followed by Tim Doucette's talk on Saturday evening about his Dark Sky Eye observatory to 125. There was a field full of telescopes, binoculars, cameras and RASCals (Tony Schellinck, Martin Hellmich, Karl Penney, Wayne Mansfield, John McPhee, Chris Young, Paul Heath, Judy & Jerry Black, Andy Hasler & daughters, Jerry Deveau, and Mark Dryden).

Near the ice cream booth, there were 3-hour drop-in sessions both days by Centre members and Parks Canada staff that attracted low numbers but resulted in genuine, in-depth interactions. Paul Heath conducted some family programs and there were several spontaneous ones during the drop-ins.

Halifax Centre Awards

Both the Burke Gaffney Award and the Murray Cunningham Award for Astrophotography were retired as of March 18, 2016. The rationale for discontinuance was that neither had been exercised for at least 10 years, astrophotography awards continue to be a part of Nova East, and a RASC astroimaging certificate was now available to members.

Members Recognized in 2016 Awards

- Fellowship Award—Patrick Kelly
- Service Award—Paul Gray
- Simon Newcomb Award—Martin Hellmich & Halley Davies

Members Recognized in 2016—Program Certificates

- Astroimaging Certificate—Bruce Hamilton
- Explore the Universe—Mary Lou Whitehorne
- Explore the Moon—Paul Evans (binocular & telescope), Melody Hamilton (telescope), Jim Millar (telescope)
- Messier Objects—Tony Schellinck

Goals for 2017

For the coming year the Halifax Centre has committed to carry on many of the public outreach programs provided in 2016. The Halifax Centre, with the drive and dedication of its members, will continue the sidewalk observing sessions, library talks, provide presenters for the Halifax planetarium, support Kejimikujik National Park, maintain the Halifax Centre and Astronomy Nova Scotia websites which provide easy access to all astronomy event information in Nova Scotia. The Centre is also looking to develop a

Board Manual that would include position descriptions for all positions on the Council. It is planned that as of the 2017 AGM, the 2017 Bylaw #1 will be enforced by the Centre.

Respectfully Submitted

Judy Black

Secretary

HAMILTON CENTRE

The Centre hosts regular monthly meetings the first Thursday each month October to June. The meeting format is typically a combination of Centre business along with featured talk. Topic Highlights for September - June:

- Bert Rhebergen—The Original Computerized Computer; A 1980 vintage scientific calculator
- Dave McCarter—Shares his adventure Tenerife, Canary Islands (STARMUS) and LaPalma
- Paul Delaney—"The state of our understanding about the Milky Way Galaxy, past present and future".
- Dr. Chris Talpas—Radio Astronomy
- Dr. Niayesh Afshordi—"What Banged and Why?"
- Dr. Parshati Patel—"The Tale of Disks Around Massive Stars"
- Michael Watson—"Photographing a Solar Eclipse"

Other Activities

NOVA Program—(New Observers to Visual Astronomy)

An 8-part course held at our club observatory. The course combines classroom activities with time under the stars. Bar far, the best way for new astronomers to get started in this wonderful hobby. Thank you to Roger Hill for making this program a smashing success.

Public Outreach

Member Ed Mizzi gets the award for "the hardest working man in astronomy". A close second place goes to members Bob Prociuk and Roger Hill.

RASC Hamilton Centre ran over 35 different outreach events:

- Public Schools—Ed Mizzi and Bob Prociuk ran 8 separate events
- Science Literacy Week / Public Libraries
- Scouts—Badges & Stars
- Royal Botanical Gardens, Luna and Moonlight Events—RASC Hamilton Centre were the "star" performers.
- The Hamilton Centre in partnership with Westfield Heritage Village hosts public observing nights at the Village using vintage telescopes, owned by the Centre and on permanent display there, and all of this while dressed in period costumes.

Our Centre continues to focus our energies on expanding our public outreach program. In 2016 we added 3 new portable telescopes, and a MallinCam with large-screen monitor, dedicated to usage for outreach programs. We plan to add a 60mm Ha Solar scope to complement our daytime outreach program.

We also added new equipment to our telescope loaner program which offers our members a selection of 8" Dobsonian, 8" computerized, and several small refractors. Telescopes can be borrowed for 1-2 week periods.

In addition to our main outreach program, our Centre regularly holds observing events at our club observatory which houses a 14-inch Celestron Edge SCT and a 16-inch Ritchey Chretien reflecting telescope.

Orbit Newsletter, edited by Roger Hill, is published monthly in electronic format and is available for download at the Centre website. It contains photos and articles submitted by members as well as a calendar of upcoming events.

Chris Talpis
Secretary

KINGSTON

CENTRE

The RASC-Kingston Centre holds their meetings on the second Thursday of each month except July and August. Before each meeting members are invited to join us at the Sports Tap and Grill for dinner before we head over to the Queen's University Ellis Hall Room 324 to begin our Centre meetings.

January—Malcom Park had a presentation on astrophotography. Volunteers to help run the program committee were requested.

February—Michael Earl from RMC gave us a talk on the Adventures with the VE3RMC Amateur Radio Station. Micheal was the designer and operator of the CASTOR remote satellite station. Rick Wagner spoke on his observatory update.

March—Member presentations, Rick Wagner experiences with the RASC Observing Certificate programs. Richard Weigand finished the Isabell Williamson Lunar program, after starting it in 2014. His binder with his notes, observations and photographs was handed over to President Greg Latiak and Treasurer Susan Gagnon to be checked over for completeness. Then the submission form would be sent off to the Societies Observing Committee.

The Centre also purchased a Celestron C6 single arm telescope for the use at the KAON sessions. This is housed at the observatory for members to use on KAON nights without having to bring their own equipment. The Fitzgerald was taken away to be refurbished.

Since our room was being used by Queen's for exams, we had a Dine and Gaze night at a local cemetery. Permission was obtained to observe in an undeveloped area and with clear skies over 20 members observed Mars, Jupiter and a very high pass if the ISS.

The Frontenac, Lennox & Addington Science Fair (FLASH) was held on April 13- April 1st at McArthur Hall, Queen's University, and the 2016 year's winner of the Leo Enright Prize was Finn Ferrall. Kingston Centre member Bruce Elliot was the judge at the event along with Paul Winkler. Finn who attends Calvin Park Public School won the prize for his project on Quantum Interference. Finn states in in letter he is enjoying the book "A Beginners Observing Guide" and will be putting the money away for a Raspberry PI. He is looking forward to the 2017 FLASH in which he wants to create a more complicated project.

Here is one way we are helping the youth of our Community. The last words in his letter were "I'm definitely going to explore the new world that I'm starting to be opened up to, all in all Thank You very much."

On May 7th Science Rendezvous was at the K-Rock centre and RASC-Kingston Centre volunteers helped with RMC with Solar, Planetary and Daytime Star sidewalk astronomy. There was over 3000 that went to the Science Rendezvous in 2016.

May 9th was the transit of Mercury across the sun. The Centre did not hold an event to mark this, but many members had telescopes setup at home. The day started clear but by third contact had clouded over, and it cleared enough to see fourth contact.

We were back at Queen's University in Ellis 324 with a presentation by Matt Schultz PhD candidate who discussed The Secret World of Spectropolarimetry—How we measure and map the magnetic fields of stars. Rick Wagner was the NC Rep at the General Assembly held in London Ontario May 19-23rd, 2016

June—Our last meeting before the summer break, had members tell us of their adventures at the General Assembly and other observing adventures over the last month.

July and August the Centre closes down for summer activities which included Star night at local dark sky preserves, and various Star Parties.

September was member's night with presentations by Hank Bartlett discussing their trip to Ireland, and the astronomical features throughout the country. Malcolm Park & Brian Hunter talked about their trip to Chilies. Many "ooo"s and "awe"s were expressed at the presentation. Malcolm presented the Astro part and Brian, the travel log.

The 17th annual Fall N Stars was the weekend of Sept 9-11th at Thomasburg and there were more than thirty people in attendance.

In September the Centre was contacted by Past President Denise Sabatini as she donated Leo Enright's C-14 and accessories to the Kingston Centre. There were also boxes of other various papers and handbooks. Several members of the Centre went up to the Sharbot Lake area to help remove the telescope and move it from the location. Before this, a BBQ was held at the home of John & Peggy Hurley. Thank you all for helping with this great addition to the Centre, and thank you Denise for the wonderful donation to the Kingston Centre.

October—Brain McCullough from the Ottawa Centre gave us a presentation on Astronomical Snap Sketches. We all partook in quick solar and lunar sketches. Brian also talked on the upcoming GA in Ottawa in 2017 which will also include celebrations of Canada's 150 year birthday celebrations at Parliament Hill with fireworks.

November, of course, is our annual meeting and election night. We have several positions open. Our current President Greg Latiak has stepped down and this position will need to be filled. Other positions open for election are Secretary, Vice president, Editor, Librarian, and National Council Representative. After our annual meeting, we generally have member's presentations.

December will be wrapped up by our Annual Christmas dinner. This year being held at The Rustic Spud.

This year we had seven KAON sessions. Nathalie Oulette started the year off as Observatory Coordinator but handed the reins over to Matthew Chequers, so she could finish her PhD thesis and defence.

The Centre Executive held four Executive meetings this for Centre business.

Our Editor put out five spectacular Editions of the Regulus this Calendar year.

Last but not least: We the Executive and on behalf of the Centre Members want to thank Greg Latiak for serving as the Centre's President. Thank you for your leadership and insight. Thank you to all our volunteers for any of the Centre events you may have been a part of and Thank you to all current and future Executive and Board members for your dedication in making the Kingston Centre your Centre.

Respectfully

Kim Hay
Secretary

KITCHENER-WATERLOO CENTRE

- January 8 General Meeting held, 29 members and guests in attendance. Light Pollution discussion and letter writing campaign underway. Presentation by David Garner on Asteroids.
- February 12 General Meeting held, 25 members and guests in attendance. Rick Burke gave a presentation on Fusion, Gravity waves and Innovative (as in weird) space drives. Discussion on Astrocats and possibility of hosting in future. Also discussed Hamilton RASC proposal for future Planetarium. Volunteers identified to attend future planning meetings. What's Up presented by Serge Mammoliti.
- March 11 General meeting held, 28 in attendance. Clark Muir gave a presentation on a late 18th century New Brunswick temporary Observatory. Dated back from 1897 in St. Andrews N.B. Voting on the KW RASC astrophotography contest took place.
- April 8 General meeting; Guest speaker was Steven Peterson a visiting cosmologist from Australia who was doing collaborative work at the Perimeter Institute. Discussion of latest astronomy news included the successful landing of a SpaceX rocket.
- May 13 General meeting held, 28 members in attendance. Brian Hollander did a presentation on the recent Transit of Mercury. David Garner gave us an update on Drake's equation. "Life in the Universe from Frank Drake to Today".
- June 10 General meeting held, 26 in attendance. David Garner presented his talk; "How to Find the Centre of the Milky Way Galaxy". Steve Holmes discussed the Lucknow group remote observatory and shared some of their images.
- July 20 The Perimeter Institute's students in ISSYP (International Summer School for Young Physicists) were guests at Waterloo Park for a star party.
- July 22 Summer star party was held at Conestogo Lake campground (part of 101 meeting).
- August 26 Summer star party held at Conestogo Lake campground (part of 101 meeting).
- September 9 General meeting held. Jim Goetz presented his visit to several astronomical sites and observatories throughout New Zealand. Attendees shared their summer observing, photographic and other related astronomical projects.
- October 14 General meeting held. Steve Holmes discussed the details of the Lucknow Observatory Group. Rick Burke presented his talk; "Current Mars Colonization Plans"
- November 11 General meeting held. Voting took place to elect new Board of Directors. Updates on latest astronomical news and other club business was discussed.
- December 9 General meeting held. New Board of Directors were introduced.

Leonard Kuehner presented his talk "Exoplanets and Astrobiology".

The KW RASC 101 meetings were held monthly and were chaired by Mike Renner. Speakers included Alan Ward demonstrating the design of his 6" refractor; on September 23. Steve Dodson (aka Stargazer Steve) was guest speaker on November 18.

Sergio Mammoliti presented regularly (both general and 101) his monthly "What's Up" throughout the year.

Other activities included several star parties for public outreach.



Conestogo Lake Summer Star Party

LONDON CENTRE

We have had monthly meetings except for August. We started meeting back at Cronyn Observatory On Western University campus. Members continue to use our own observatories outside of London. We had another busy year with outreach. We continued helping with public nights and special events at Cronyn. Also we had multi star nights with various groups. This year our Annual Banquet was held at Brescia College. We had 22 people in attendance and our guest of honor was Dr. Chris Gainor (Society vice president and member of Victoria Centre). He gave a talk on History of the Hubble Telescope. Our membership is approx 102 regular, 11 youth and 9 life for a total of 122.

Thanks,

Everett
London Centre Secretary

MISSISSAUGA CENTRE

The Mississauga Centre turned 10 years old on May 19, 2016. Thanks to the sponsorship of Dr. John Percy and Dr. Ulrich Krull the Centre has the use of a lecture room approximately every second Friday evening at the University of Toronto at Mississauga (UTM) for its Speaker nights when an expert gives a lecture on astronomy or a related subject, and for its Potpourri nights when various members of the Centre have the opportunity to give presentations on astronomy related topics. An important benefit of membership is the opportunity to give such talks.

In 2016 there were 8 Speaker nights and 12 Potpourri nights. Nineteen members gave presentations at the Potpourri nights. As usual, there were talks on a wide variety of subjects.

There were astrophotography presentations about the Astrophotography contest, photography with camera, lens and tripod, photography using an equatorial tracking platform, videos on astrophotography and on solar imaging. Equipment reviews featured the GOTO tracking mount, the member-built case for the solar scope, budget do-it-yourself, and smartphone and tablet astronomy apps as well as the Mississauga RASC telescope loan program. Members showed images from the transit of Mercury, the total solar eclipse in March, aurora, Starfest, and a "one in a million sky photo," and Izima Kaoru's "One Sun" images. Didactic talks described Cepheid variables, measuring the shape of the Earth two centuries ago, the James Webb telescope, the ICE Cube neutrino experiment in Antarctica, and Planet IX. Members travelled to various places and spoke about their astronomical adventures such as the USSR Space Flight Exhibit in London, the Incan skies in Peru, the Indonesia solar eclipse, a visit to the Udvar-Hazy Center in Washington, astronomy visiting in Paris, and aurora observing in Iceland. There were observing reports on the Mercury transit in May, and Starfest, as well as presentations on observing variable stars, the night sky, and enjoying the sky both day and night.

There was a preview for the solar eclipse in August 2017, a cosmic ray demonstration, the annual auction on April 15 organized by Simon Cloughton, reports on the National Council and meeting, the London GA and Astrocats, the RASC strategic plan, and the need for a strategic plan and more outreach.

The Mississauga Centre again had an active observing and outreach program. We partner with the Riverwood Conservancy and with the Earthshine organization to hold observing nights during the warmer months, usually on Tuesdays. In addition, there are dedicated observing nights at Riverwood for centre Members which included astrophotography, imaging Saturn, a workshop for Newbies and other activities. At one of the public sessions on June 15 over 200 people showed up as well as a film crew, and the public observed the Moon, and three planets. On August 10, about 350 people attended when Centre volunteers operated 7 or 8 scopes. More volunteers would have been welcome to handle the big crowd. There are plans for the Centre to buy a megaphone, provide easy identification for floating volunteers and organize specific targets for telescopes. Four astronomy classes were held at Riverwood. The September 8 class had over 20 attendees. A dozen stayed for an extra hour to look through the Centre's scope operated by Allan Connery. The Celebration Movie night was a bust due to cloud and rain but our faithful president, Jo was there to represent us.

As in previous years, the Mississauga Centre had an excellent showing at Starfest August 5 to 7, the largest star party in Canada, with over 20 members enjoying the excellent talks and two clear nights of wonderful observing. Thank you to John Marchese for advertising and organizing the Mississauga Starfest experience.

A special observing day was held during the daytime on May 9 for the transit of Mercury where a score of members observed the transit of Mercury under a beautiful clear sky and showed it to 200 visitors including 20 elementary students at Riverwood. The Centre's LUNT solar scope came in handy on this occasion. On a couple of occasions, Jo VandenDool also organized darker sky observing for members at Forks of the Credit including a successful session where people imaged Saturn. The Centre purchased a new tracking mount that can support up to 30 pounds for members to use. In addition, the Centre has a number of telescopes that members are free to borrow.

The Centre executive, under the guidance of former president Leslie Strike, set-up an awards committee to recognize those

members who have contributed to various aspects of the club. Four new awards were established and presented for the first time at the annual picnic held on June 18. Donald Funston received the Public Outreach Award, Gord Williams received the Special Project Award for his work building accessories for the LUNT scope, Jo VandenDool received the Observing Award, and John Marchese received the Centre Award. Citations are available in Messenger, the Centre newsletter. In addition, the club's prestigious Attwood Award for special contribution to the Centre was awarded at the General Meeting, for the second ever recipient, to Leslie Strike, the club's second President.

As mentioned, the Centre held its second annual picnic/barbeque on June 18. This event was organized by a number of people but special mention should be made of Simon and Victoria Cloughton for all their work and effort. Fifty people attended a very enjoyable day under a clear sky where a number of telescopes including the Centre's hydrogen-alpha solar scope were set up to observe the Sun. Betty Robinson provided a birthday cake for the Centre's 10th birthday and new awards were handed out.

Chris Malicki,
Secretary;

CENTRE FRANCOPHONE M^{DE} MONTRÉAL

No report received.

M^{DE} MONTRÉAL CENTRE

No report received.

NEW BRUNSWICK CENTRE

At the end of 2016 the NB Centre membership stood at 93, an increase of 4 over the year. There were 15 new members and a transfer into the Centre, 11 people did not renew and, sadly, long-time member Eldon Rogers passed away.

We normally hold nine Centre meetings in a year, with venues rotating among Fredericton, Moncton and Saint John. Attendance averages 15-20 members and guests. In 2016 we held eight meetings and the mean attendance was 24 (range 11-60), with the highest attendance being for the Annual Meeting in Moncton which featured talks by David Levy and Randy Attwood. The January meeting was cancelled due to inclement weather.

Meetings consist of a What's Up talk, observing and imaging reports, Show & Tell/Buy & Sell, and presentations by members and guests. Guest presentations in the year included:

- The Great American Eclipse by RASC member Paul Gray
- Astrophotography and Asteroid Data Hunting for the Environmental STEM Project by Moncton High School students Shaylen Platt and Massimo Platteau
- My 37 Years in Astronomy by RASC NB member and NASA retiree Ted Gull
- Amateur Astronomy Today: A Status Report by RASC Executive Director Randy Attwood
- A Nightwatchman's Journey: My Life as a Comet Hunter by RASC member David Levy

Member presentations included topics on the Kennedy Space Centre, building the Moncton High School Observatory, Planet 9, the Griffith Observatory, advanced Hotech collimation for SCTs, the search for the Chicxulub Crater, the New Horizons mission, the Kepler Telescope, the Juno mission, autumn constellations, fireballs, astronomy education for youth, and a delightful astronomy quiz.

Public outreach is a focal point of Centre activities and in 2016 we reported 219 events that involved 9498 people. In addition, 2099 Star Finders, 2377 Moon Gazer's Guides and 514 Getting Started in Astronomy guides were distributed. Approximately 43% of the events were night or day observing, 34% were visits to schools or youth groups, 14% were presentations to various groups, 5% were STEM-related exhibitions, and most of the rest were planetarium shows. The events involved at least 988 volunteer hours by Centre members. Among the events were presentations and observing at five provincial or federal parks, including our three Dark Sky Preserves, our Urban Star Park, and three municipal parks. Event approvals were obtained from Transport Canada for green laser pointer use at the star parties.

Four Council/Centre meetings and the Annual Meeting were held in the year to conduct Centre business. Centre plans for 2017 include continuing support for the three DSPs and the USP through star parties and observing sessions, support of Moncton High School's observatory program, maintaining an aggressive outreach program, and increasing and maintaining Centre membership.

NIAGARA CENTRE

The Niagara Centre had a good year in 2016. Our year was filled with observing, public events, regular meetings and get-togethers.

Our membership grew this year, going from the high 70s to the low 80s. We have had slow but steady increases in our club membership in the past few years and are always happy to see new faces at our meetings.

Our club produced its second calendar, with all the photos taken by our own members. We printed 50 and sold all of them quite easily. We were very happy with the quality of submissions and the resulting calendar. Many members bought multiple copies and gave them to others as gifts.

The Niagara Centre continued a strong tradition of public star nights and daytime talks at museums, libraries, schools, other recreational clubs and private establishments, as well as city, regional and provincial parks and campgrounds. Our audiences included students of all ages and members of the public from the Niagara Region and further away. When the location has electricity and a proper building or pavilion, our public events usually include a slideshow and informative astronomy talk by Brian Pihack. Even

when our public star nights are completely cloudy, members of the public who turn up can still hear the talk, meet club members and see telescopes in person.

Our most commonly used locations are Heartland Forest, a handicapped-accessible park and conservation area in Niagara Falls, Firemen's Park in Niagara Falls, and the Chippawa Creek Conservation Area in Wellandport, which also hosts the Centre's observatory. We are always looking for new locations and venues.

The Transit of Mercury was observed from Firemen's Park in May. We had a beautiful, slightly cool, mostly clear spring day. One American couple drove overnight all the way from Indiana to escape clouds there and enjoy the clear skies with us.

Club members travelled to star parties in Ontario and Pennsylvania. Close to 20 members attended Starfest in August. We also had two field trips for shows at the McMaster University planetarium. At least a dozen members are planning to see totality in the USA in August 2017.

One of our members, Greg Taylor, won the Grand Prize in the *SkyNews* 2016 Astrophotography contest. His picture of the Orion Nebula was deemed best overall. Robert Lewis, our Treasurer, was awarded the first RASC Solar System Astrophotography certificate of the new award program.

White LED lights are continuing to appear in the Niagara Region, including our two biggest cities, St. Catharines and Niagara Falls, which have taken advantage of subsidized retrofit programs. Although some lights are full cutoff design, many are too bright and are the wrong colour. We continue to lobby city and regional government to not use these models.

A new executive was elected in October 2016 to lead the club for the next two years. Jeanette Goemans is the first woman to serve as President of the Niagara Centre.

OKANAGAN CENTRE

General

The Okanagan Centre continues to have meeting groups in each of the three population centres of Penticton, Kelowna and Vernon. The movement of members between these groups is encouraged and offers the possibility of attending up to twenty-two meetings per year in addition to the AGM and the Annual Fund Raising Dinner. The Centre operates the Okanagan Observatory, forty kilometers south-east of Kelowna, near Big White Ski Resort. Our membership in December 2016 was one hundred and thirty-four, an increase of eleven from the previous year.

Noteworthy

Member, Alan Whitman, was honoured by the International Astronomical Union by having an asteroid named after him, Asteroid (21330) Alanwhitman.

Member, Hugh Pett, the driving force behind the Okanagan Observatory's radio astronomy project was the recipient of the Royal Astronomical Society of Canada's National Service Award.

Meeting Groups and Outreach Activities

Penticton Meeting Group

Monthly meetings are held at the Penticton campus of Okanagan College, from September through June. The meetings have one or more speakers, mostly from within the Centre.

Penticton Outreach

Penticton celebrates the Solstices and Equinoxes with the public each year at the “Pen-Henge” installation on Munson Mountain in Penticton. Additionally, they have a presence at several community events in the City, as well as collaborating with the Dominion Radio Astrophysical Observatory in some of their public events. No attendance figures are available for 2016.

Vernon Meeting Group

Monthly meetings are held at the Vernon Science Centre, from September through June. As well as regular presentations from Centre members, the Vernon group has a regular program aimed at novices to help demystify equipment, techniques, etc. In 2016 the group began preliminary work on an “Analemma Sun Dial” project which is expected to be completed and installed at the Allan Brooks Nature Centre, in Vernon. Member, John Kerr, created and chairs the Centre’s Light Pollution Abatement Committee. John has been extremely active in light pollution abatement in Vernon. There are committee members in each of the meeting groups and there have been consultations with municipal councils already.

Vernon Outreach

- 2016 was a very busy year for the Vernon Group.
- Jan 9 Okanagan Science Centre (OSC) Telescope Workshop with 6 members present and 26 attendees.
 - April 30 - 31 Vernon Boat Show at the Vernon Yacht Club - Two-day event with 3 members present and hundreds of attendees.
 - May 8 - 21 Astronomy Display at the Okanagan Regional Library Vernon Branch.
 - May 14 Astronomy Day at the OSC with 11 members present and 32 attendees.
 - May 19 Bearisto Elementary School Presentations, Mme Baturin's Grade 4 class of 23 with 3 members present.
 - September 10 Allan Brooks Nature Centre (ABNC) with 9 members present and 36 attendees. We were clouded out however had 3 presentations (Astrophotography, light pollution & what to look for in the Autumn sky) which were well received and gained a positive response from public and ABNC staff.
 - Oct 1 Vancouver Science Centre's Community Science Celebration - Here there were 5 members present and hundreds of attendees.
 - Dec 17 Pre-Christmas OSC Telescope Workshop with 4 members present and 22 attended.

There was a total of 125 volunteer hours.

Kelowna Meeting Group

Monthly meetings are held at the Kelowna campus of Okanagan College, from September through June. The Centre’s business meetings, including the Annual General Meeting, were held in Kelowna once again and were attended by members from the other meeting groups. Presentations on a variety of topics were given by members.

Kelowna Outreach

Lead by coordinator, Colleen O’Hare, the Kelowna group handled many events throughout the year. Total events numbered 83 with an excess of 3,600 guests being exposed to astronomy education and observing of the night sky wonders. This year it included the usual array of school events, monthly visits to the Cancer Rotary Lodge, 7 large community family events including Canada Day and various Children’s Festivals. Also on the agenda were kids’ camps/

groups, adult groups, and Spring & Fall Wine Festivals to highlight a few. For the third year now our members have traveled to Mount Revelstoke National Park to assist the park service with an “Evening Under the Stars”. Members gave our “Tour of the Universe” presentation to tourists and park staff followed by telescope viewing at the top of Mt. Revelstoke. We also continued the astronomy presentations for Science Literacy Week collaborating with the Okanagan Regional Library, visiting 15 libraries during the year with over 700 guests. Each Friday night, weather permitting, the Centre hosts a public night at the Okanagan Observatory that is usually staffed by the Kelowna group. Once each month, weather permitting, we have a “Mobility Bus” service that allows wheelchair bound individuals and those that have difficulty driving at night to visit the Observatory. That, in conjunction with our articulating eyepiece allows some people that would never be able to look through a telescope, that opportunity.

Final numbers for Kelowna outreach are as follows:

· Volunteers	73
· Event Hours	804
· Events	83
· Guests	3686
· Okanagan Observatory Events	8
· Observatory Guests	409
·	(Best turnouts were 167 and 70 guests)

We hosted the Mobility Bus twice for a total of fifteen guests.

There were 22 “no goes”, reflecting poor weather conditions at the Observatory.

The 804 event hours are further broken down to:

· Event	342
· Travel	270
· Prep	94
· Set-up	98

Okanagan Observatory

The weather was not kind to the Okanagan Observatory in 2016. Twenty-two of our regular Friday night outreach events had to be cancelled due to overcast. Despite the weather, we still had more than four hundred guests.

The radio astronomy project is proceeding and has already generated some data, to Hugh Pett’s delight. Two dishes are in place, with a mobile third in the planning.

In August we had the pleasure of hosting National Secretary, and Sunshine Coast Centre President, Charles Ennis. Charles was here with a crew filming “Starry Night” for BravoFact. Happily, his visit coincided with a planned overnight trip to the Observatory by fourteen members of the Vernon group, and some of them were included in the filming.

Annual Fundraising Dinner

The fifth annual Okanagan Centre Fundraising Dinner and Member Social, was held on May 28th at the Kelowna Curling Club. Our speaker was Sean Dougherty, Director of the Dominion Radio Astrophysical Observatory (DRAO) near Penticton. His topic was Canada’s role in radio astronomy and included the work being done at DRAO on C.H.I.M.E., the Canadian Hydrogen Intensity Mapping Experiment.

As is our custom, we also announced the Okanagan Centre’s member of the year. This year it was Vernon Vice President, Jerry Thompson.

Olaf Lutz
Secretary

Here we are again at the AGM. It seems hard to believe that another year has passed. But it has been an eventful and productive year. Last year I encouraged you to step forward and volunteer to help guide your Centre and I am pleased to see that many of you have. Martha Farkas took the initiative and organized a couple of fundraisers for the FLO. Kelly Jordan has stepped forward to join Council as our new meeting chair. Jim Sofia and Gerry Shewan have put their names forward to serve on Council. As well, Gerry has been working with Paul Klauninger on the Smartscope project. Stuart Glenn stepped forward to take on the monumental task of building a new website for us. Janet Tulloch came forward with a Canada 150 project, an astro-art exhibit that will run in July next year. Mike Moghadam stepped forward and volunteered to be Vice President. And look at the number of people who have come out tonight with displays for our Astronomy Science Fair organized by the tireless Mike Moghadam.

Again this year we have had a very successful series of star parties organized by Mike Garvie. Attendance continues to be quite high, continuing to run in the 300 plus range. I think we only missed one planned event this year due to weather. And we have 73 new members. Art Fraser, our membership director, is always there to make sure that each of those new members gets their membership card and a welcome letter. He and Anne continue to make sure that we always have refreshments at our monthly meetings.

In May, we had an amazing success with our Transit of Mercury Event held on Parliament Hill. In addition to Minister of Science, Kirsty Duncan, and Minister of Transport, Marc Garneau, we shared our telescopes with an estimated 2500 people. Our event, and several of our members, were highlighted on both the local and the National news

Our SmartScope project has moved forward this year. Really, it has. If it seems that this project has been going on forever, that is only because it has. In August, Jim Maxwell stepped down as SmartScope director after five years in that position. He worked very hard to move things forward. He brought the scope to its current operational status and had virtually all of the systems fully functional. Thanks to his efforts, he and his team were able to broadcast the Transit of Mercury.

In September, Council decide that it was time to pull the plug on this project and move the equipment to where it could be used by the membership but Paul Klauninger stepped forward insisting that we were being premature. He feels that he can get SmartScope fully operational as a remotely accessible system as mandated. Council has given him an opportunity to make that happen, but he will need your help. We will know by next summer at the latest if this is going to be or if we will be re-purposing the equipment.

The 18" Starmaster that was donated last year by Mike Wirth has been received. The mirror has been recoated and the necessary repairs have been done to the mirror box of the telescope. It is now ready to go and will be installed at the FLO early next year. Another recent donation of a Meade 14" LX200 will also be installed in the spring. The older Celestron 14" we had earmarked for the FLO will be sold off to help cover some of the costs of the new observatory.

Every month Eric and Eunice Kujala record our meeting, broadcast it live, load it to YouTube, and file a DVD with our library. They also record each Annual Dinner Meeting. This year Eric released a wonderful recording of an interview with Paul Comision that I know he has been working on for quite awhile. We are lucky to have Eric and Eunice with us.

Estelle Rother has been our librarian for as long as I have been involved with Ottawa Centre. Every month she has a new book to recommend. Al Scott continues to look after our telescope loan library. Recent donations to our telescope library have lead to Al's silent auction of some of the older telescopes. As well as his web building duties, Stu Glenn is our magazine subscription co-ordinator. Karen Finstad is hereby forgiven for her continued nagging of Council members in consideration of the results she produces in our monthly AstroNotes. Karen and her assistant editor Janet Tulloch are doing a wonderful job.

Oscar Echeverri is our Treasurer extraordinaire He looks after all our financial duties. Earlier this year he set us up with the Square credit card reader which many of you used to purchase calendars or Annual Dinner tickets. On top of this he also regularly shares his stunning astro-images.

Tim Cole did a great job organizing our Annual Dinner a couple of weeks ago. Our guest speaker was Dr. Gordon Osinski from Western University. If you weren't there, you missed a wonderful evening.

I would like to thank Brian McCullough and Rob Dick for serving as our National Council Representatives. As well I want to thank all those on council for all your hard work over the past year. You are the ones who keep this group running and worth belonging to. We all owe you our thanks.

I would like to extend a special thank you to Yves Demers. Yves has been a fixture on Council for many years. He has decided to step aside when we had new people step forward this year. I'm not sure how we will be able to adjourn Council meetings without you, Yves.

We have also had some major losses. Rolf Meier, Weldon Hannaford, Jane Wrigley, Al Seaman and Mary Henderson all passed away this year. They are, and will continue to be, missed.

The one thing I haven't mentioned yet is the 2017 General Assembly. Brian McCullough and Tim Cole have put an enormous amount of work into the GA. They have assembled an impressive selection of speakers and organized a weekend of events that promise to keep everyone, local or not, entertained and informed. Despite some difficult challenges thrown in their path, this promises to be the best RASC GA held in 2017.

To all the people I have mentioned, I want to extend my sincere thank you for all the effort, time and commitment you have put into what you have done for our Ottawa Centre. You are the people who make this the most vibrant Centre in the country.

On a more personal note, this is my final address as President. I want to thank all the people who have made these past two years the wonderful experience it has been. Rob (Dick), thank you for convincing me to take this on but I didn't get to delegate as much as you said I would. Brian (McCullough), thank you for your constant support and wise council and for taking on the GA. What the hell were you thinking! Mike (Moghadam), working with you has been an absolute pleasure. I look forward to our next project. Chris (Teron), what can I say about Chris? Thank you for always being there to listen to anything I brought forward and gently guiding me in the right direction. Thank you for always have the answer on questions of procedure or policy. Thank you for all that you do. You are the glue that holds everything together. Last, but not least, thank you for the cookies! Working with all of you has been a privilege.

Clear skies,

Gordon Webster
President

PRINCE GEORGE

CENTRE

No report received.

QUÉBEC

CENTRE DE

La majorité des activités de la SRAC, centre de Québec sont des conférences données une fois par mois. Au total, 10 conférences sont données de septembre à juin auprès des membres et quelques personnes non-membres. Les sujets des conférences sont très variés, de l'observation à la théorie plus poussée, en passant par l'astrophotographie.

Quelques sorties d'observation pour les membres ont eu lieu durant l'année mais la température n'a pas été très coopérative.

Nous avons fait quelques activités pour le public, comme l'observation du soleil, de la lune ou l'observation de planètes rapprochées.

Nous tentons de recruter des membres avec des activités du public mais cela est très difficile. Nous avons de moins en moins de membres à chaque année et nous avons de la difficulté à élire que 3 membres dans le conseil d'administration.

Daniel Tardif
secrétaire

REGINA

CENTRE

Reflecting on the past year brings back some good memories of activities and accomplishments made by members of the Regina Centre. We were blessed by a mild winter which allowed some great opportunities for members to do some winter observing in mild temperatures. The shadow transits across Jupiter were admired by some members during the warm spring nights.

Our volunteer events ramped up in the spring and continued on through the fall with members volunteering to make these events a success. For International Astronomy Day, the Centre set up a display table in Chapters while the telescopes were set up in three other locations for public viewing. The evening skies turned out to be exceptional so magnifications of the moon of 300x - 500x were stunning and definitely a crowd pleaser.

Once June rolled around, the weather patterns changed and we ended up with lots of clouds and rain for most of the summer months. Approximately 70% of our planned public events over the summer ended up being canceled due to weather. The ones we did put on were well attended. Of course, the weather also made it challenging for members to do observing but nevertheless, our dark site out of the city was used by many members. Astrophotography within the Centre picked up this year with many members snapping some great photos and publishing them in our local newsletter which is put together by Shane Ludtke.

A special thank you goes out to Ron Haughey and Len McDonald who continue to open the Kalium Observatory to the general public a couple times a month. The number of visitors to the Kalium Observatory are up in 2016 compared to 2015. They also spend many nights a year giving tours to special interest groups and to the Science Centre camp-in events. Also, a big thank you goes out to the Regina Centre council members who collectively contributed over 1000 volunteer hours to the Centre.

In the late fall, we were fortunate to have a very interesting guest speaker, Jason Cosford, who gave us a very interesting, geomorphological tour of the solar system. We also had one member, Darnell Ogrodnick, complete his RASC Finest NGC list so we're very proud of his accomplishments. The Regina Centre celebrated the end of the year with a friendly Christmas dining experience.

2016 was a great year for the Regina Centre promoting astronomy and the allied sciences. 2017 is going to be another fun-filled year of sharing astronomy with others so buckle up and enjoy the ride!

Clear Skies,

Vance Petriew
President

ST JOHN'S

CENTRE

St. John's Centre continues to have an active year with 10 public meetings balanced with two Annual Star Parties, Astronomy Day, Science Literacy at the Mall, public observing sessions and special events (lunar eclipse, transit of Mercury). Our Internet presence via Webpage, Twitter and Facebook is returning a renewed interest

in Astronomy and enhanced public awareness due to the diligent efforts of the Executive Member responsible (Observing Chair). A few members continue to advance efforts in Astrophotography with tremendous results.

We have been encouraging members to present 'short-talks' for topics of interest that aren't full lectures and have less formality and so are easier for members to prepare and present. These have been well-received.

Our membership year runs from October's Annual General Meeting through September with no planned public meetings during July and August.

Meeting highlights were

- | | |
|----------|--|
| October | Annual General Meeting and Election of Officers.
Review of September Lunar Eclipse activities. Report on Science Literacy Day activities and public outreach observing sessions. |
| November | Lecture—Neutrinos, Chris Stevenson & Mike Morrow of Memorial University's Physics department.
Observing report with new images. Christmas gift suggestions including RASC Calendar.
Presentation—Our centre was privileged to be presented with a gift of a 12 inch Dobsonium telescope with software and accessories in memory of the late Dr. Steven Norris. |
| December | Short-talk—Member Dave Newbury provided a short-talk on progress of his Observatory construction. Examples of recent imaging efforts showed the rewards of his efforts.
Equipment—a Telrad finder was donated to the cen- |

tre for use with the Norris scope.
 Social—RASC calendars were offered for sale and the audience was invited to partake in a festive celebration.

January 50th Anniversary as an RASC centre!
 Short-talk—member Dave Newbury presented an illustrated short talk on the image processing techniques and software he's using.
 Anniversary—To celebrate our 50th year as an RASC centre, the audience was invited to partake in a cake-cutting and social.

February Lecture—Dr. Phil McCausland: Fireballs, Falls and Fails. Phil's lecture centered around the Tagish Lake Meteor event and his participation. Also an overview of the Planetary Society website and MIAC reporting mechanisms.
 Membership Certificate—Although a 'little' late, Phil McCausland was presented with his 25-year member certificate!

March Lecture—Nikolay Damyanov: Transit of Mercury May 2016 and Centre plans to hold a public observing session. Nikolay gave a detailed review of the rarity and visual impressiveness of the Transit, including transit mechanics and transit timing. As part of Astronomy week, this event will be given extensive media coverage.
 Short-talk—Member Chris Stevenson: Vis-NR Spectroscopy from suburban St. John's

April Lecture Tom Field: Backyard Spectroscopy. A WebEx remote session live from Seattle, delayed by a week due to a late-season snowstorm (50 cm). Tom gave a thorough background on spectroscopy and its astronomical importance. His many examples led the audience on a history of spectroscopy and to present-day amateur use with a simple star analyzer, camera adapter and his software. We were grateful to the speaker's ability to accommodate our delayed meeting.
 Short-talk—member Dave Newbury took advantage of clear skies to show members a live observing session from his backyard observatory and sample imaging.

May Lecture—Dr. Joe Hodych: Lac Manicougan Crater. Dr. Hodych's lecture reviewed the meteor time-line relating to the K-T boundary and the part that Zircons play in refining the estimated dates for past major meteorite impacts.
 Short-talk—Nikolay Damyanov, observing chair, reviewed the hugely successful public outreach event of the Transit of Mercury. We were blessed with a warm, calm day for the duration of the event with large crowds and extensive Tv and social media coverage. Additionally a report of Astronomy Day activities was presented.

June Short-talk—Marcellus Redmond, Dave Newbury and Robert Babb: RASC GA 2016. Extensive coverage of the London GA and Astrocats show.
 Reminder of the the RASC 150th in 2018.
 Short-talk—Dave Newbury, equipment director, outlined the new webpage-driven Centre equipment inventory and loan procedure. A much appreciated effort.
 Short-talk—Summer events: Butterpot Park, TerraNova national Park star parties, Signal Hill Observe the Moon and Learn to Camp sessions.

September Lecture: Emily McCullough: Atmospheric LIDAR in

the High Arctic. Although resident in St. John's, Emily conducts research with a LIDAR at Eureka, NU in the high Arctic, above 80 degrees North. Her research is part of the Canadian Network for the Detection of Atmospheric Change, candac.ca Featuring extensive slides and a background in the science involved, the lecture was well received.
 A review of summer activities was held-over for the October meeting.

Thank-you for having read this far ! We are a small centre, but blessed with enormous talent and energy among the executive and membership. We are able to capitalize on planned events when the weather cooperates due to efforts of the executive as shown by the enormously successful Transit of Mercury. Event coordinators were able to achieve personal observing goals at the Transit event as well as participate in the very busy public activities as bus-loads arrived and TV media buzzed around looking for sound-bites.

We look forward to more events where we can show the public the true nature of the RASC. We appreciate the efforts

of the National Office to support our centre and the National Society for its Publications and continued efforts. Here's to another 50 years!!

SARNIA CENTRE

We carry about 17 members.

We meet monthly for 10 months of the year. (we take a break in the summer)

We take turns making presentations and sometimes have guest presenters come in for our meetings.

We have a social gathering at least once a year at someone's house.

We participate in national astronomy day by setting up at a local park and inviting the public to come and view.

Many of our members attend Starfest.

In the summer we participate in the City of Sarnia's Hobbyfest. An event for the public to come out and learn about many of the different hobby groups that operate in Sarnia.

We assist local groups who would like a presentation on stargazing such as nature groups and scouting groups.

We have members that go into classrooms when requested to present programs on space.

Various members get together to go camping and stargazing throughout the summer.

Various members get together on clear evenings to observe.

A few of our members participate in astrophotography.

We maintain a website and a facebook page.

For small numbers, we keep busy.

SASKATOON

CENTRE

2016 was a busy year for the Saskatoon Centre, with activities involving public events and public outreach at the Sleaford Observatory and the Saskatchewan Summer Star Party which was co-organized with the Regina Centre.

James Edgar, current President of the RASC, came to visit Saskatoon on March 20 and gave a talk to the Centre at the general meeting the evening of March 21. His talk, Synthesis of Elements in Stars, was well received by the 20 or so members in attendance.

The Saskatoon Centre organized several public events over the year. The Centre hosted a Dark Sky Weekend April 8th and 9th. A public talk at the Lakewood Civic Centre library auditorium, followed by side walk observing night from 8:45 to 10:00 pm near the library entrance. Then Saturday a table display at the Farmer's Market from 8 am to 2 pm and had a few solar scopes out to observe the Sun and Venus. In May members set up a Public Star Night with the Meewasin Valley in the North East Swale nature preserve the evening of May 25. Setup and viewing to 11:30 pm. Some members including Rick Huziak attended Grasslands East Star Party on May 27/28, about 30 people were there.

About 160 people attended the Old Man on his Back Nocturnal Preserve signing on June 18 with people from the Eastend Astro Club, Saskatoon and Regina Centres, and the Nature Conservancy of Canada. Our Centres contributed to the donation of an 8" Dobsonian. A plow wind flattened the meeting tent.



Fantastic photo of the binocular star tour, given by Ron Waldron with assistance from Jack Milliken (Edmonton Centre). Phot by Alan Dyer

August 3-7 held the 20th (!) Saskatchewan Summer Star Party at the Cypress Hills Interprovincial Park Dark Sky Preserve. Our attendance was over 300 over the three main days of the event. We recognized this anniversary with the following:

- Awarded those people who have attended all 20 SSSPs with a special 20-year pin and certificate.
- Presented Certificates of Appreciation and 20-year pins to those CHIPP staff members, Resort staff members, and the past President of the Friends of Cypress Hills Park for their support.
- Les Dickson gave a presentation Friday evening about the last 20 years highlighting the origins of the star party as successor to the star parties held by Regina Centre. Our invited guests for this year were:
- Candace Savage gave the "Under Living Skies Public Lecture" titled "These Hills Are Home to a Thousand Stories"

- Jay Anderson gave the "Fr. Lucien Kemble Memorial Lecture" titled "Chasing the dragon that ate the Sun—hints from four decades of eclipse chasing?"
- Kenton Lysak gave a Saturday afternoon presentation titled "Is It Really Darkest Before the Dawn: A look at light pollution in the city of Saskatoon and its effects on local wildlife"
- Ron Waldron gave an Observing Clinic, a binocular star walk
- Larry McNish gave an Observing Clinic, a beginners guide to astrophotography
- Jennifer Petriew and Kim Kulak organized the Children's program Saturday morning
- Alan Dyer gave an afternoon workshop on Photoshop for Astronomy ... from Raw to Rave!

Other speakers and guests included: Melody Nagel-Hisey (CHIPP Park Naturalist), Joan Hodgins, James Edgar (RASC Past-President), Alan Macklem and Clarence Briand

On September 24th the last of our public events was the Open House at the Sleaford Observatory co-operated by the Physics and Engineering Physics Department of the University of Saskatchewan. The old dome observatory was torn down and removed, leaving the pier and mount for a 6 inch Celestron.

October had elections for several positions and November held elections for two remaining offices VP and Pres, to fill several positions that were temporarily filled for varied amounts of time.

December found us having a nice Pot Luck dinner with a variety of holiday eats and desserts, and an after dinner drink at Alexander's restaurant.

Executive and General meetings were held each month except July, August and December.

SUNSHINE COAST

CENTRE

Next year, in April, our Centre will celebrate a decade of affiliation with the RASC.

We are no longer the newest centre of the RASC: The Yukon Astronomical Society joined the RASC in May of this year. Nor are we the smallest. With 75 members, we're a mid sized Centre now. The percentage of female members in the RASC is 18% now, which is 10% behind the percentage of females in STEM sciences nationally. I am pleased to report that the percentage of females in our Centre is now 25%, so we are setting the example for the rest of the RASC to follow.

Last year we logged over 2200 hours of volunteer work at outreach events.

We planned more member events last year, emphasizing the use of our 2-year-old observatory by our members. We've added a 10 inch Meade LX 90 to the observatory, donated by the family of our departed member Nairn Robertson. We've put a memorial plaque on that telescope, which is for the use of youth visiting the observatory.

Last year we revived our light abatement efforts with presentations to community organizations. This year our light abatement committee has been lobbying the District of Sechelt to get it registered as a Dark Sky Community recognized by the International Dark Sky Association in the coming months.

We replaced our web site in July 2014 with a Wordpress site that allowed us to track activity. By the end of 2014 we had 4,626 views of our web site from 1,385 visitors. In 2015, 3,765 visitors made 12,102 views. So far this year we've had 8,534 views from 2,693 visitors from 66 countries and territories. That's 25,262 visits from 8,113 people. Several youth organizations have complimented us on our web site.

Our speaker's program started in our early days has evolved into at least 8 nationally recognized experts doing presentations at our meetings every year. We still lead all the other RASC Centres in use of the national Public Speakers Program.

This last year was the first year we utilized an operational budget. We took a serious look at new ways to raise funds and approved our first gift acceptance policy. This policy will ensure that donations fit into our operational plan. Our Secretary initiated a successful fundraising scheme: Reloadable IGA cards. These cards have been distributed both to members and to people attending our monthly talks. We get 4% of any purchases people make with these cards. The income from the first quarter was \$381, and this is after the initial \$100 for the cards was deducted. If the use of these cards stays at this level, this means that we'll get nearly \$2000 a year from this initiative.

This year we entered into a partnership with the Sechelt branch of the Rotary Club which is called Friends of Rotary. Our Centre paid for a single membership which gives us the right to have a representative attend the Sechelt Rotary Club meetings. This gives us a voice in their organization and in turn they commit to raising funds to support our Centre, specifically to raise funds for our observatory expansion.

Our Night Lights TV program for Coast Cable is in the process of taping its third season. Last fall the Bravo Network released our 15 minute Bravo FACTUAL documentary, Starry Nights. Bravo received 92 applications and approved 9: We were one of those approved. The Coyote Science episodes that the Aboriginal People's Television Network asked us to assist them in creating are now on the air. We've been asked to resubmit our application for an astronomy series to Telus OPTIK.

Because our Centre is located in a community where the First Nation Sechelt Band has a high profile and unique position, we initiated an outreach initiative to explore whether the local elders had any recollection of native star lore. Unfortunately, they had no recollection, but even this negative result may be useful, if it stimulates an awareness that the question even exists.

This year was the first time in 12 years that our Centre didn't do an Astronomy in the Park event in Porpoise Bay Provincial Park. As I previously pointed out, we did not want to pay the excessive fee that Parks BC wanted for us to stage that event. Instead we held our first Starlight Coast Star Party at our observatory along with an astronomy poster contest for youth. This is a major change, since we're switching from a captive audience of campers to drawing an audience of enthusiasts and curiosity seekers. Our first Starlight Coast Star Party attracted 85 people, which is the largest attendance at an observatory event all year.

Regards and Clear Skies,

Brian Lucas
Secretary SCC RASC

In 2016, the Thunder Bay Centre was pleased to enjoy its first full year of meetings held at the David Thompson Astronomical Observatory at Fort William Historical Park. Our partnership with the Park has continued to grow and we are excited to increase our collaborations with them in the years to come.

Our general meetings are held on the second Tuesday of each month, excluding July and August, providing 10 monthly meetings for the year. Attendance was between 16-24 members and guests per meeting.

As of the end of December 2016, the Thunder Bay Centre had 47 members.

Our Annual General Meeting was held in October. Additions to our Centre Executive Committee included: Doug Stuart-Vice President, Tracy Irvine-Secretary and Mitchell Bagdon-National Representative.

Special Events

- May 9 Thunder Bay Centre members met at Hillcrest Park to observe the transit of Mercury.
- October 14-15 Alan Dyer gave an evening presentation and a one-day workshop on Astrophotography, both open to the public. Both events were well attended.
- December 10 The Thunder Bay Centre's Christmas Party was held at the home of member Barney DeSousa. Great food and conversation was had by all.

Outreach Events

- February 2016 Science In The City hosted by Science North Thunder Bay Centre had a display and telescopes set up to show children and parents the wonders of the night sky.
- August 2016 Junior Rangers at Kakabeka Falls Provincial Park President Brendon Roy gave a presentation to a group of Junior Rangers on astronomy in relation to Earth stewardship. As the evening progressed, an ever-increasing number of campers from the Park joined the session, making it a very well attended event.

Quetico Provincial Park

Unfortunately, the majority of this weekend was cloudy and rainy resulting in low attendance by campers and poor observing conditions. The one highlight of the weekend was a brief afternoon clearing allowing Centre members and campers to view the Sun. This afternoon observing session garnered much interest and allowed campers to ask a variety of solar system related questions.

September 2016—Sleeping Giant Provincial Park

Our largest outreach event of the year is always at Sleeping Giant Provincial Park on Labour Day Weekend. This year the Thunder Bay Centre provided three talks and a total of five observing sessions over the course of the weekend, two solar observing sessions and three night-sky observing sessions. All were well attended by the campers of the Park. A special treat for two of the three nights was a spectacular display of the Aurora Borealis.

October 2016—Public Observing Session

Led by member Dave Gallant, the Thunder Bay Centre held an early morning observing session at Hillcrest Park. It was quite chilly but over 45 members of the public braved the cold to view the various planets that were visible.

November 2016—Sea Cadets at The Slovak Legion

The Sea Cadets held an overnight activity on Remembrance Day and asked the Thunder Bay Centre to provide a presentation. President Brendon Roy gave a talk entitled “Introduction to Astronomy” that sparked much interest and discussion among the cadets. Following the presentation, there was an opportunity for the cadets to do some observing in the parking lot with the two member telescopes that were set up.

Galactic Contributions

At the end of 2015, the IAU announced the winners of their worldwide NameExoWorlds Contest and the Thunder Bay Centre’s submission was one of 19 winners. We chose to name 14 Andromedae and its planet 14 Andromedae b, which can be found in the constellation Andromeda. Our submissions were ‘Veritas’ for the star and ‘Spes’ for the planet; Latin for ‘truth’ and ‘hope’, respectively. Unfortunately, ‘Veritas’ was already taken by an asteroid that is important in the study of the solar system, so the IAU used the ablative forms of each word, namely ‘Veritate’ meaning “where there is truth” and ‘Spe’ meaning “where there is hope”. Congratulations and many thanks to Maureen Nadin and the naming committee for their successful efforts!



Meetings

The last year saw us meeting in several different locations in Toronto. For our Recreational Astronomy nights, we were at:

- Northern District Library, 40 Orchard View Boulevard, Room 224. (Oct. 14, Dec. 9)
- North York Memorial Community Hall, 5110 Yonge Street, Burgundy Room A (Nov. 11, Jan. 27, Mar. 30, Apr. 27,
- York University, Petrie Science and Engineering Building, Room 317, (Feb. 24)
- Starting in May, we were able to reach a new agreement with the Ontario Science Centre, and we returned to our old home, hopefully for another twenty years.
- Ontario Science Centre, Studio 2. (May 25, June 22, July 20, Aug. 17, Sep. 14)
- For our Speaker's Nights, we were at:
- North York Civic Centre, 5100 Yonge Street, Council Chambers. (Oct 28, Nov 25, Feb 10, Mar 9)
- North York Memorial Community Hall, 5110 Yonge Street, Burgundy Room A (Jan 13, Apr 13
- Ontario Science Centre, Studio 2. (May 11, Sep 28)

City Star Parties

Weather conditions were better than average this past year, with City Star Parties being held at Bayview Village Park in 9 of the 12 months, just missing December, February and March.

Dark sky Star Parties

We were successful in holding 9 events, all of which were well attended. The fewest number of members participating was 5 in February, which is pretty good for a February event even before considering that we were totally clouded out with the first complete bust forecast in a long, long time. Several events saw member participation exceed 15, which makes for a really enjoyable evening under the stars.

Education and Public Outreach

NOVA

Three six-class sessions of NOVA (New Observers to Visual Astronomy) were delivered. NOVA at York U began on October 6. NOVA at the DDO began on November 5. NOVA at the Fort York Public Library was conducted in February and March 2016.

First Light

This program is run with the purpose of introducing new members to RASC-TC. It is a three-evening program that was held at the David Dunlap Observatory with guest speakers. During one of the evenings, new members got a tour of the Observatory with its 74" telescope and the opportunity to view through the telescope, weather permitting. Finally, the program allows new members to meet other members, both new and old in an informal setting.

Two series were put on in the previous year, one in November and one in May.

RASC-TC Durham Outreach

The RASC-TC Durham Outreach group has been busy in the east end of the GTA. 12 different talks were given to various groups of Scouts, Cubs, Brownies and Sparks.

Our first 2016 Millennium Square public observing sessions were held in collaboration with Durham Skies Inc of Pickering, ON. These public stargazing events are held once per month over the summer and early fall time period. A total of 2200 people showed up on 4 separate events on Jun 10, Jul 15, Aug 12, Sep 9

Ontario Science Centre Activities

Shawn Lee conducted week-long solar observing during Astronomy Week at the OSC. Nearly 600 people in total took part. As well there were monthly solar observing events. Nine Solar observing sessions were held this year, with only the months of December, January and September being cancelled due to weather. Shawn Lee and his solar observing team conducted a well attended Transit of Mercury event in collaboration with the OSC.

Two star parties were also held at the Ontario Science Centre, on May 14 and July 15.

Awards

The below six awards were announced at the Awards and Volunteer Appreciation BBQ at the David Dunlap Observatory on August 21:

- Ray Thompson Award for Astrophotography: Stephen McKinney
- Ostrander-Ramsay Award for Astronomical Writing: Sue Kralik
- Jesse Ketchum Award for Construction: Allard Schipper
- Andrew Elvins Award for Public Outreach: Ian Wheelband
- Bertram Topham Award for Observing: The Telescope Loan Program: Marc Teitelbaum, George Slavinski and Peter Richards
- H.A. Winearls Award for Service (The President's Award): Geoff Gaherty
- The 2016 Gold Medal of The Royal Astronomical Society of Canada, Toronto Centre was presented to Richard Bloch from York University

Carr Astronomical Observatory

Two work parties were held at the CAO, on the weekend of Oct 17th-18th and May 27th to May 29th. A Beginner's Astro Imaging Workshop Weekend was held on June 24-26. The CAO Star-B-Que Report took place on Saturday, July 16, 2016.

David Dunlap Observatory

Toronto Centre Astrophotography Club

The first meeting of the Toronto Centre Astrophotography Club meeting took place on Saturday December 12th at the David Dunlap Observatory. The new club is for all members interested in astrophotography, regardless of whether you are a beginner looking to get started or a seasoned expert looking to improve your skills.

Family Nights

A total of twelve Family Nights were held at the DDO in October, June, July and August with nearly 1000 visitors to the DDO.

Special Programs

We hosted Astronauts Kids STEM day on May 14—approx. 300 attendees. Included live chat with Astronaut Tim Peake from the International Space Station. We also hosted International Astronomy Day Open House on the evening of May 14—under overcast skies we had over 100 attendees.

This year was also a painful one for the DDO. Promises that were made to the Toronto Centre regarding the ownership of the David Dunlap Observatory were broken, and the facility that would have been ours will now be owned by the Town of Richmond Hill. The Toronto Centre will continue to try to work with the Town of Richmond Hill, and we hope that we will be able to come to an arrangement that allows us to continue to do the outreach that the Toronto Centre members have been famous for.

In Memory

We have lost a few friends along the way. Four centre members have passed on this year: Dr. Thomas Clarke, Dr. Geoff Gaherty, Edna Harvey, and Dr. Scharley May Horne. As well, we have lost RASC members such as Rolf Meier and Andrea Clark.

VANCOUVER CENTRE

In 2016, we have continued to deliver on our mission to advance education in astronomy and allied sciences by providing presentations, workshops, seminars, and outreach programs in British Columbia in general and the Vancouver area in particular. We hosted 12 major public, 19 free public astronomy observing events, and were major contributors toward 21 other free public events. Our largest events of the year were the Astronomy Day (in conjunction with Science Rendezvous at Simon Fraser University), which saw 500 visitors, and the Perseid meteor shower and observing at Aldergrove Regional Park (with Metro Parks), which saw 1,000 visitors.

In 2016, we have taken a more active role in our partnership with Simon Fraser University in coordinating usage of the Trottier Observatory. Following a period of training on the operations of the telescope, RASC Vancouver members can assist at public observing events as well as do their own research and/or astrophotography. In turn, RASC Vancouver has supported SFU in the Starry Nights public outreach program. RASC Vancouver created and distributed 6 issues of our free astronomy newsletter NOVA in 2016. They were published bi-monthly with an exclusive NOVA for Astronomy Day on May 7.

Several RASC Vancouver members have made television and radio appearances, including Scott McGillivray's regular educa-

tional astronomy segment on Global Television, "Space Talk with Scott", as well as appearances by Howard Trottier, Suzanna Nagy and Kyle Dally in various media outlets.

RASC Vancouver Membership went down slightly in 2016: we have 231 members this year compared to 241 in 2015.

Regular RASC Programming – 12 events

January 14	Dr. Catherine Johnson (UBC)—Mars InSight mission
January 16	Dr. Ed Krupp (Griffiths Observatory)—Plutonic Relationships
February 11	Dr. Phil Stooke (UWO)—Exploring the Moon and telling the tale
March 10	Dr. Levon Pogolian (SFU)—From Static to Expanding to Accelerating: The past 100 years and the next 20
April 14	Dr. Kiyoshi Masui (UBC)—Fast Radio Bursts: Flashes from Outside the Galaxy
May 7	Dr. Ray Villard (NASA) - for Astronomy Day and Science Rendezvous at SFU—2 lectures on Hubble's 25-Year Space Odyssey
June 9	Dr. Moritz Heimpel (UofA)—Dynamics of Jupiter and Saturn: Bands, Spots, and Dynamos
July 14	Dr. Stanley Greenspoon—What's new in the search for exoplanets and extraterrestrial life
August 13	Various speakers—Perseid Meteor Shower @ Aldergrove Regional Park
September 8	Michele Kunimoto (UBC)—A history of planet-hunting - and how you can be a part of it
October 13	Dr. Douglas Scott (UBC)—ALMA: The Atacama Large Millimeter/ Submillimeter Array
November 10	Dr. Catherine Johnson (UBC)—NASA's OSIRIS-REX Asteroid Sample Return Mission

19 Public Observing Events

January 14	Observing at SFU
January 16	Observing at SFU
February 18	Scott Creek Middle School
March 5	Girl Guide Astronomy Camp in Maple Ridge
March 19	Observing at Pacific Spirit Park (with Metro Parks)
March 31	Sidewalk Astronomy at Spanish Banks
April 1	Starry Nights* at SFU
April 8	Observing at Royal Heights Elementary in Surrey
April 30	Observing at Kanaka Creek Park, Maple Ridge
May 7	Astronomy Day at SFU with Solar Observing
May 9	Mercury transit observing at 200 Granville
May 25	Observing at Pleasantside Elementary School
July 1	Canada Day solar observing in Maple Ridge
July 23	Solar observing in Campbell Valley Regional Park
August 13	Perseid meteor shower and observing at Aldergrove Lake Park (with Metro Parks)
August 20	"Starry Night" event at Deas Island (with Metro Parks)
August 27	Merritt Star Quest
October 1	Observing at Boundary Bay Park
December 16	Starry Nights at the Trottier Observatory

* "Starry Nights" are family oriented astronomy evenings organized by Simon Fraser University and assisted by RASC volunteers

RASC partnerships at 21 other free public events

January 19	High School Days at Science World
January 29	Goldstone Park Elementary
February 16	High School Days at Science World
February 18	Girl Guides presentation @ Scott Creek Middle School
March 5	Girl Guide Astronomy Camp in Maple Ridge
March 19	Night Quest at Pacific Spirit Park

April 8	Royal Heights Elementary in Surrey
April 22	Girl Guides at Camp Kanaka
April 22	Science World SWEET
April 30	Volunteer Appreciation event
May 7	Astronomy Day at SFU
May 25	Science Fair at Pleasantville Elementary School
June 3	Cub Scout Camp at Coyote Camp, Langley
June 15	Templeton Secondary "STEM Appreciation Night"
July 1	Canada Day at Maple Ridge
August 13	Perseid meteor shower and observing at Aldergrove Regional Park (with Metro Parks)
August 20	Starry Night with Metro Parks, Deas Island Regional Park
October 1	Boundary Bay Parks Association
October 8	Night of Astronomy @Science World
October 21	Science Bash at Richmond Public Library
November 5	ParkFest (Metro Parks)

VICTORIA

CENTRE

Summary

Both membership and the activity level of the Victoria Centre continued to increase in 2016, with membership reaching a peak of 234 members. The Centre led the organization and public outreach of the Summer Star Parties at the Dominion Astrophysical Observatory, held on most Saturdays. Monthly member meetings included seminars given mostly by University of Victoria and Herzberg astronomers, while the Centre's weekly Astro Café meetings increased further in popularity with more organized programming. The Active Observers' Group made good use of the Victoria Centre Observatory despite less than favourable weather.

Public Outreach Summary

Public outreach activities (not including DAO Summer Star Parties or Astronomy Day) included:

· Total Galileo Moments	8,199
· RASC members participating	28
· Number of member outings:	90

Outings included presentation and/or observing sessions at: elementary and middle schools; cub, scout and guide groups; International Astronomy Day, the Saanich Fair, the Hobby Show at the Westshore Town Centre Mall, community solar viewings, and the Cattle Point Urban Star Park. RASC members also judged and awarded book prizes at the Vancouver Island Regional Science Fair. While the school program was conducted under the continuing leadership of Sid Sidhu, the general public activities were organized on a more ad hoc basis since our public outreach coordinator position remained empty.

Annual Meetings and Functions

International Astronomy Day

Nelson Walker led the organization of April 25 daytime activities included solar observing, astronomical presentations, kid's activities and an ask-the-astronomer table, held at the Royal British Columbia Museum, attracting 626 attendees.

Saanich Fall Fair

1,450 attendees visited the Centre's booth at the 149th Saanich Fall Fair over the Labour Day weekend.

The bulk of the tickets for the Centre's telescope raffle fundraiser were sold here by 16 member volunteers over three days.

Dominion Astrophysical Observatory (DAO) Summer Star Parties

14 DAO Summer Star Parties were held, with a total of 2,415 public attendees.

Activities included presentations were provided by RASC members and local professional astronomers, usually two per night; tours of the Plaskett telescope with trained members serving as assistant telescope operators; planetarium shows, and members' telescope astronomy.

The Lieutenant-Governor of British Columbia, The Honourable Judith Guichon, attended the August 13 star party.

The Centre was supported by the RASC's Special Projects Program in getting two tablets to support activities in the DAO's Centre of the Universe museum.

Partnership with the Friends of the DAO, a nonprofit society aiming to increase public access; and with the National Research Council's Herzberg Astronomy and Astrophysics program.

A ticketing system on EventBrite was implemented for public attendance in 2016, to facilitate crowd and vehicle control. Tickets remained free, but the Centre observed that some tickets were scalped for profit by persons unknown.

Some 1,400 volunteer hours, leading to increasing Council concern over volunteer burn-out and displacement of other public outreach activities.

Vancouver Island Regional Science Fair

Three members judged at the Vancouver Island Regional Science Fair held at the University of Victoria on April 10, awarding two astronomical prizes comprising subscriptions to the national *Skynews*, to Ines Khouider for her project "Light Pollution: What's the Solution?" and Nathan Harlan "Cosmic Ballistics: Trebuchets in Space!"

Periodic Meetings and Functions

Astronomy Café—Held weekly on Mondays from September through May at the Fairfield Community Centre. John McDonald, Chris Purse and Reg Dunkley hosted.

Meetings began with sharing of observations and astrophotography of members, and often continued with discussions on topics of interest. Many meetings had planned presentations, including this year some oriented toward beginning observers, and including commercial and home-built astronomical equipment presentations.

A gear sale and swap was held.

Attendance was way up, with one night boasting 32 attendees, rivalling that of some of the monthly general meetings.

A proposal to upgrade the 21" display monitor to a large UHD TV was initiated.

General Meetings

Seven monthly general meetings with great speakers, usually provided by the Herzberg Astronomy and Astrophysics program or the University of Victoria, with attendance at 35-72.

Meetings were livestreamed so that they could be watched from home by those who could not be physically present at the meetings, and these recordings are available on our web site for viewing anytime.

Centre Council Meetings

Seven Council meetings were held, all but one in the Fourth Floor Lounge of the Elliott Building at the University of Victoria on the first Wednesday of most second months, to discuss centre and national RASC business.

Council meetings are open to all members. Council comprised some 20 members with executive, committee head, or liaison positions. The chairs of the Public Outreach and Media Relations Committees remained vacant during 2016.

Council has formed a By-Laws Committee to modernize our by-laws and make sure they are consistent with new provincial societies legislation. There proposed amendments will be brought to the membership for approval in 2017

John Aldag, newly-elected Member of Parliament for Cloverdale-Langley City, attended in January to discuss funding opportunities for the Centre of the Universe and the possibility of a centenary plaque for the Dominion Astrophysical Observatory.

Skynews

Skynews, the Victoria Centre's newsletter published 10 times per year, was edited again this year by Reg Dunkley.

Skynews keeps the membership up-to-date on news and upcoming activities and features astrophotography by our members.

Contributions of short articles from members are always welcome. Several contributions were longer articles of two or more pages on a variety of astronomical topics.

Website

The RASC Centre public website (victoria.rasc.ca), maintained by webmaster Joe Carr, was migrated to use Wordpress for contributions mostly from Victoria Centre Council members.

Web and email infrastructure is provided by Matt Watson,

Observing Activities

Active Observers Group

The Active Observers Group continues at our Victoria Centre Observatory (VCO) on Observatory Hill in Saanich pursuant to a land use agreement with the National Research Council's Herzberg Astronomy and Astrophysics program.

Observing sessions are presided over by Members-in-Charge (MICs) on Saturday nights, subject to weather-related viewing notifications.

All members on the Active Observers List are welcome to attend. After years of diligent work towards obtaining wireless internet service on the Hill for the VCO, the Herzberg Astronomy and Astrophysics program, provided access which first tested by the Technical Committee in December.

Victoria Centre Observatory (VCO)

The Victoria Centre Observatory underwent a computer upgrade in 2016.

The Technical Committee led by Matt Watson, began development of a proposal to replace the primary telescope at the VCO in 2017.

Urban Star Park—Cattle Point

Public star parties were scheduled on Fridays closest to the first quarter phase of the moon from September through March by Bruce Lane, but poor weather precluded all of them in 2016.

Cattle Point is one of only two Urban Star Parks in Canada where artificial lighting is strictly controlled and the public is educated about the benefits of reducing light pollution.

Messier Marathon

Each spring, weather permitting, Victoria Centre holds an Annual all-night Messier Marathon at the Victoria Centre Observatory and its environs.

In 2016, the annual Messier Marathon was scheduled for March 12, but the weather did not cooperate.

RASCals/Metchosin Star Party for 2016

This annual event, held this year from August 26 to 28, had a respectable turnout of 73,

Unusually warm and wonderful weather the first night was followed by very windy and cold weather the second.

We had three excellent speakers, and draws for numerous door prizes provided mainly by local businesses, and donations-in-lieu of attendance fees reached \$690.

UVic's 32-inch Telescope

With cooperation of the University of Victoria's Department of Physics and Astronomy, John McDonald and Sherry Butler operated the 32-inch telescope of the University of Victoria Observatory monthly, weather permitting, from October to May on the second Friday of each month. This observational opportunity was available to all RASC members

Planning for August 21, 2017 Total Solar Eclipse

A group of interested Centre members exchanged information on how and where to see the eclipse.

Leslie Welsh
Secretary



Windsor has consisted of a membership average of about 90-100 people during 2015. Monthly meetings for members and visitors are held at the Ojibway Park Nature Centre in Windsor's far west side. Various main talks presented at meetings this year have included Live in the Solar System, Exoplanet Discoveries,

Searching for Extraterrestrial Intelligence, Principle of Mediocrity and the Anthropic Principle, and finally the Drake and Seager Equations, to name a few. People have found it easy to find out about our centre online through our primary local website: www.rascwindsor.com, and also via Facebook. Our well-detailed newsletter can be viewed online and printed copies are given out at meetings.

The Windsor Centre manages its own observatory far outside the city within the municipality of Lakeshore. Named after one of Windsor Centre's founding members, Hallam Observatory consists of a 12-foot high dome with a warm-up room connected to it, including an observation deck attached on the outside. Within the dome is our pier-mounted Celestron 14 Schmidt-Cassegrain telescope, with an Astrotech 111 refractor mounted onto it with a CCD camera used for auto-guiding, all of which is operated via a Windsor centre warm room PC. Public Open House evenings are held once each month, with members able to receive their own key to access the site following training on use of dome and equipment and paying an annual fee.

There have been a few booked group visits to the observatory over the past year, such as one by nearly 30 students from a private high school, a church group, and a small group of various friends and colleagues of Windsor Centre members. On multiple occasions we have hosted 180+ guests, reaching our capacity to safely and effectively host public open night events.

Point Pelee National Park remains open for the public until midnight once a month during Dark-Sky Night events, where visitors are welcome to bring their own telescopes and equipment to utilize this southern Dark Sky Preserve. Every two months Windsor members are always on hand with their own astronomical equipment to provide views of the splendors of the night.

WINNIPEG CENTRE

The Winnipeg Centre continues to actively draw new members and recently surpassed the 200 member mark. Our regular meetings are held on the second Friday of the month at the University of Manitoba, Fort Garry Campus, St. John's College at 92 Dysart Road in the Robert B. Schultz lecture Theatre. The meetings are formatted into two halves, separated by a coffee break. In the first half, we have a beginners session, announcements and some regular short presentations such as "What's Up", a review of upcoming astronomical events, and "What's New", a presentation on the latest astronomical discoveries presented in layman's terms. We will also have sessions on new "Astronomy Apps". In the second half we have our Keynote Speaker. Our close association with the University of Manitoba ends us into have many presentation based on the faculties latest research projects. The meetings are well attended and often draw 80 or more members and guests.

The Winnipeg Centre continues to support the St John's College by providing monies for a scholarship award for one student.

Our Centre maintains an observatory at University of Manitoba's Glenlea Research Station, about 15 km south of the City of Winnipeg. There we have a dome which houses a 12 inch Meade LX telescope; plus we have a warm room complete with restroom facilities. A large concrete pad to the south, complete with power posts, allows for the members to setup their own equipment. This site is where we hold our "Member's Observing Night", on the Saturday following our regular meetings. Our Observatory Director Bryan Stach has been actively upgrading and maintaining the building. There are some concerns with the encroachment of light pollution, leading to ongoing debate on possible future relocation. In 2016, we again had no issues flooding from the Red River!

We have an active "free" loaner telescope program, with three dobsonian telescopes and solar or PST scope. We generally lend them out for period of more than a month. We felt this was necessary, particularly with the unfavourable weather we sometimes experience. Plus we have a number of other scopes which are maintained by our Councillors, which are used for Public Observing events.

The Winnipeg Centre participates in numerous regular astronomy events; some where we provide viewing opportunities for the General Public. One such event is the "Astronomy Night", held in March for the members of Fort Whyte Alive, a regional conservatory agency. It features our members providing presentations during a Banquet Dinner, followed by an observing session with telescopes outside in the cold. We unfortunately did not have clear skies for the post-dinner observing event.

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

The Centre has partnered up to support the University of Manitoba with their "Open House" program. Held on the first

Thursday of the month during the scholastic year, it welcomes University students to come to the University Planetarium for a presentation. It is followed by the opening of the Ewen Campus Observatory, with supporting telescopes provided by RASC members, when weather permits.

We participated in the 2016 International Astronomy Day festivities by setting up a daytime display inside of a local "Chapter's" book store, and few solar telescopes setup for viewing outside its doors. We normally then proceeded to Assiniboine Park, our largest city park, where we setup for an evening observing session, but due to the weather it was cancelled.

The Winnipeg Centre also supports the Manitoba Schools Science Festival by providing Judges, plus a cash prize to the person with the best astronomically-based display. Plus we attend a Science Teacher's Symposium, where we help to promote the RASC teacher's Guide Skyways. Our membership will also provide their time and telescopes for requested star party events, such as scouts or schools.

One of the favourite events we promote for our membership is an annual event called the Spruce Woods Star Party. Organized again by Silvia Garca, it is held at Spruce Woods Provincial Park, about 200 km west of Winnipeg; in a rural area with very little light pollution. We have a separate campground provided to ourselves, at the cost of providing the park with a Public Observing night in exchange. In 2016, we moved the member's event to September 1 to September 4.

The star party also featured the well-respected "Gerry's Bino Tour", by Gerry Smerchanski, which is always welcome and attended by the majority of the 60 campers. We did have some success observing. The last evening features a Banquet dinner in the nearby town of Glenboro. The event closed with a holiday Sunday morning breakfast. The SWSP event is very important to the Winnipeg Centre, as it provides not only an observing event but is an important socializing event for the membership.

In exchange for the free and exclusive use of the "Winter Camping area" for the SWSP, the Winnipeg Centre provided members for the Spruce Woods Public Observing Night, held two weekends earlier. We provide speakers for evening's event, followed by an observing session.

Finally, on the business side, the Winnipeg adjusted its Financial Year to extend to December (previously it ended in September). Starting in 2016, the Financial year will match the Calendar year, followed by our Elections and the Business meeting in January.

The Winnipeg Council voted to change our newsletter, *Winnicentric's* delivery method from a paper copy to an Electronic copy only which is emailed to all members.

YUKON CENTRE

It has been a great pleasure for me to have served as President of the Yukon Astronomical Society, now RASC: Yukon Centre, and to represent all the membership as the Yukon National Council Representative for of the RASC! I feel I was able to benefit from the tremendous efforts of our Board members: Catheryne Lord and Viktor Zsohar. Their worked allowed us to set a new course for the Society, and to move forward on many new and exciting projects and partnerships. Our accountant, Jennifer Murtagh, was instrumental in keeping the Society on the straight and narrow.

2015-2016 saw the Society move into leadership roles with regards to Light Pollution and Astronomy education in the Yukon. Our Society was involved in a number of national efforts; such as the Natural Sciences and Engineering Research Council of Canada Science Odyssey Program (a.k.a Mercury Transit Outreach), and the Westar Lectureship series. In addition to contributing to the joint national efforts, we have produced what we hope will be a very useful guide for those developing public awareness campaigns around Light Pollution and Light Abatement in the Yukon. Thank you Gerry Whitley for those excellent aerial night photos of Whitehorse, they gave the Society a perspective not often seen with regards to light pollution.

Along with our partners at the RASC National, our Centre continues to represent the Yukon both nationally and internationally. The Society has been covered by all the major newspapers, magazines, and radio in the Yukon. We have also participated in several outreach events with the Royal Canadian Air Cadets, the Scouts, the Yukon Family Literacy Centre (thank you Erin and Paulo), and several summer camp programs in Whitehorse. Our Guest Speaker Program was incredible, hosting many distinguished scientists and representatives!

The RASC:Yukon Centre continues to work closely with various government departments to promote Astronomy in the North, and convey the concerns of our members to all the political parties. There is still work to be done in the areas of Tourism and Economic Development, but our new observatory, the first public astronomical observatory in the North located at Takhini Hot Springs, will be the catalyst!

The greatest focus for us this year has been the development of our in-reach programs, both in teaching sessions and observation sessions. We wanted to vary the program, as much as possible, so that it would offer members a diversity and a meaningful experience. The survey we recently put out, clearly demonstrates that we have succeeded in this regard. Bravo to the teaching team for a job well done!

Of course, none of this could have possible without the volunteer help, and incredible support from, the following members that have significantly contributed to the Society's success: Thomas Jacquin, Christa Van Laerhoven, Sandra Peacock, and Forest Pearson. Also, we had the observatory project: Thank you to Scott, Lorne, Craig, Maurice. There are some businesses/corporations/institutions I wish to thank for having given us either free services, or support: the RASC, Yukon Regional Economic Development, the City of Whitehorse, ATCO Yukon Electric, Takhini Hot Springs and Hot Pools, Quantum Machine Works Ltd., Yukon Engineering Services Inc., and especially the Yukon College!



Anthony Gucciardo - Yukon Centre outreach

I have been very pleased to see our communications outreach expand from roughly 20 recipients on Facebook to 200 recipients, and on Twitter, with 98 followers from all parts of the globe. Catheryne Lord and Thomas Jacquin put together our electronic platform so that our Society now communicates very efficiently internally, and with the world. So much so, that even the RASC National has taken notice, and is looking to emulate us!

Our newsletter, *The Pulsar*, has not taken off yet, but we hope to see it become a reality in 2017, with contributions from the membership.

Again, I want to acknowledge the directors: Catheryne Lord and Viktor Zsohar. I have appreciated their council and resiliency through all of the transition and reorganization, always keeping a positive outlook and high energy. I also need to thank all of the members that volunteered their time to support our various initiatives. In 2017, committees will become the heart of our Society, reacting to all Society activity while leading us into new frontiers.

As for my role leading the Board of Directors, this has been an easy task, given the professionalism and dedication of each director. With contributions by all, we have begun to establish our own Society's policies and goals. We are reviewing our role on the national scene, and our relationships with all of the other organizations operating in the Yukon. To the members, thank you all for the support you have given me this year as President, and I look forward to working with you next year, in what ever capacity that may be.

Yours Aye,

Anthony Gucciardo, RN, CD
President

CENTRE TREASURERS' REPORTS FOR FISCAL YEAR 2016

		Belleville	Calgary	Edmonton	Halifax	Hamilton	Kingston	Kitchener-Waterloo	London	Mississauga
REVENUE										
Membership	Membership Fees: Centre Fee	792	10,045	6,165	2,901	3,298	1,247	2420	2,443	3,412
	Membership Fees: Affiliate						23			
	Membership Fees: other									
	Centre Newsletter				289					
Donations / Fundraising	Donations		2,548	1,590	1,000		1,014	500		
	Fundraising							571		
Sales Revenue	Sale of Observer's Handbooks						35			
	Sale of Observer's Calendars		1,750	2,990	1,275	220	740	375	388	375
	Other Publication Sales	5	943				36			
	RASC promotional items	222	1,045				17	50		
	Other Sales		100				21	60		951
Subscription Revenue	Astronomy / Sky & Telescope									
	Other									
Events Revenue	Star Parties	691	1,460	1,370	1,815		76			
	Annual Dinner		2,320					1200		
	Astronomy Day									
	Meetings									
	Other Events					19,534				
General Assembly Revenue	General Assembly								57,061	
Miscellaneous Revenue	Interest and Dividends	2	4		80					
	Advertising		2,954							
	Observatory Site		726							
	Equipment Rentals/Loans		2,954	500				240		
	Public Services, events, outreach									
	Miscellaneous		1,241	523						
TOTAL REVENUE		1,712	25,136	13,138	7,361	23,052	3,407	5,416	59,892	4,738
EXPENDITURES										
Sales Expenses	RASC Publications		1,533	2,368	1,176	327	683	321	388	345
	Other Publications		93				73			112
	Newsletter				309		124		152	
	RASC promo items	249	479				139			162
	Other		370							132
Event Expenses	Star Parties	615	1,476	13,367						
	Annual Dinner	405	3,315	590				1,641		609
	Astronomy Day			268						
	BIYA		373			396				
	Meetings		1,480	357	245	4,731	368	282	55,534	800
	Other Events	63	2,192	925	1,416	30	1,174			
Travel	General Assembly and Council Meetings		1,742	394	180					
Administrative Expenses	Office Administration		582	157	484	345	367	67		247
	Equipment and Supplies		2,160	1,633	442		11	90		150
	Insurance		2,939		1,231	1,547	486	486		486
	General Expenses and Audit	2		100	54					
	Awards		813	18,731		88	51			576
	Donations		500	1,105	204					
	Advertising		3,837	3,577				1,959		
Miscellaneous Expenses	Observatory and Site Expenses		3,029	805	636	5,271		50		780
	Equipment & Supplies/Library		100	4,664		205				
	Depreciation				587	896				1,096
	Miscellaneous	14		7,001	106	7,249				163
TOTAL EXPENDITURES		1,348	31,047	56,046	7,070	21,084	3,477	4,897	56,074	5,658
SURPLUS OR DEFICIT ON OPERATIONS		364	-5,911	-42,909	291	1,968	-71	519	3,818	-920
ASSETS	Current assets	6,339	17,491	78,969	20,745	27,967	28,121	15,720	14,590	16,913
	Capital assets	720	28,332	100,000	14,346	104,178		3,000	32,261	
	Total assets		45,823	179,969	35,091	132,145	28,121	18,720	46,851	
LIABILITIES	Current liabilities		1,759		230	0				
	Long-term liabilities					0				
EQUITY	Net Equity		44,064	178,969	34,861		28,121	18,720	46,851	
TOTAL LIABILITIES AND EQUITY				178,969		132,145			46,851	

CENTRE TREASURERS' REPORTS FOR FISCAL YEAR 2016

		C. F. de Montréal	New Brunswick	Niagara	Okanagan	Ottawa	Prince George	Québec	Regina	St. John's
REVENUE										
Membership	Membership Fees: Centre Fee	4,124	1,646	1,615	2,580	6,931	1,894	477	1,382	1,404
	Membership Fees: Affiliate									
	Membership Fees: other				555	875	720			
	Centre Newsletter									
Donations / Fundraising	Donations	565	324	244	12,865	1,054	2,174		100	
	Fundraising	100	506	202	13,100	50	12,000		9,822	
Sales Revenue	Sale of Observer's Handbooks									61
	Sale of Observer's Calendars	380	1,010	105	800	1,851	120	120	975	1,005
	Other Publication Sales			15	352					60
	RASC promotional items			34	352					
	Other Sales			878	231					
Subscription Revenue	Astronomy / Sky & Telescope									
	Other									
Events Revenue	Star Parties									
	Annual Dinner				5,620	2,880				
	Astronomy Day									
	Other Events			135			1,742			
General Assembly Revenue	General Assembly									
Miscellaneous Revenue	Interest and Dividends	1,685		139	15	638				
	Advertising									
	Observatory Site			30						
	Equipment Rentals/Loans				366	678				
	Public services, events, outreach						909		11	
	Miscellaneous	50	120	160	820		162			
TOTAL REVENUE		6,904	3,606	3,557	37,304	16,366	19,721	597	12,290	2,724
EXPENDITURES										
Sales Expenses	RASC Publications	264			546	2,566	855			
	Other Publications								243	
	Newsletter				9					
	RASC promo items		841					201	48	
	Other			764	214		664		443	
Event Expenses	Star Parties		472	113					2,688	
	Annual Dinner		1,713		2,680	3,183				
	Astronomy Day		412							15
	BIYA									
	Meetings		150	808	23	2,194			125	
	Other Events	131	67	300	645	1,023				
Travel	General Assembly and Council Meetings		208		177					
Administrative Expenses	Office Administration		192	22	320	162	68		61	
	Equipment and Supplies		75	460	1,052	31	696		252	
	Insurance	1,643			486	2,022	1,220			
	General Expenses and Audit		145	10			188		1,165	
	Awards				125	306				
	Donations			50						
	Advertising			70				5		
Miscellaneous Expenses	Observatory and Site Expenses	1,243		284	25,624	1,237	12,326		2,555	
	Equipment & Supplies/Library		100		55			34		68
	Depreciation			938		1,693				
	Miscellaneous					132	1,815	228	956	189
TOTAL EXPENDITURES		3,281	4,375	3,819	31,956	14,729	17,837	463	8,636	2,380
SURPLUS OR DEFICIT ON OPERATIONS		3,623	-769	-262	5,348		1,884	134	3,654	344
ASSETS	Current assets	79,043		8,995	274,884	52,421	1,336		15,715	26,344
	Capital assets	24,485		15,730		11,675	117,899			
	Total assets	103,528		24,725		64,096	119,235			26,344
LIABILITIES	Current liabilities									
	Long-term liabilities					1,464	552			
EQUITY	Net Equity	103,528		24,725		62,632	119,787		15,715	26,344
TOTAL LIABILITIES AND EQUITY		103,528		24,725		62,632	119,235		15,715	

CENTRE TREASURERS' REPORTS FOR FISCAL YEAR 2016

		Sarnia	Saskatoon	Sunshine Coast	Thunder Bay	Toronto	Vancouver	Victoria	Windsor	Winnipeg	Yukon
REVENUE											
Membership	Membership Fees: Centre Fee	265	2,548		1,170	17,874	5,518	4,255	2,691	4,458	2,396
	Membership Fees: Affiliate								700		3,476
	Membership Fees: other										
	Centre Newsletter					200					
Donations / Fundraising	Donations		245			16,906	277	300	1,643		75
	Fundraising		210					980	549		
Sales Revenue	Sale of Observer's Handbooks					400	153				
	Sale of Observer's Calendars	150			400	2,000	1,933	675	739	908	
	Other Publication Sales					200					
	RASC promotional items					2,117	588				
	Other Sales					1,669		597			
Subscription Revenue	Astronomy / Sky & Telescope										
	Other										
Events Revenue	Star Parties		18,420					690			
	Annual Dinner							1,855			
	Astronomy Day										
	Other Events					1,800					
General Assembly Revenue	General Assembly										
Miscellaneous Revenue	Interest and Dividends		254			14	5,793	11		28	
	Advertising						200				
	Observatory Site					28,437					
	Equipment Rentals/Loans					22,555					
	Public Services, events, outreach					4,804	1,478				
	Miscellaneous					10,273	253				
	Helm Fund										
TOTAL REVENUE		415	22,248	4,166	1,578	109,249	15,943	9,363	6,322	5,394	5,947
EXPENDITURES											
Sales Expenses	RASC Publications	150			262	200		510	500	722	
	Other Publications					100					
	Newsletter					5,000	622	210	200		
	RASC promo items				44	2,111	5,397			20	
	Other		501			1,500		501			
Event Expenses	Star Parties		17,825					134			
	Annual Dinner							2,685	62		
	Astronomy Day							1,059	319		150
	BIYA										
	Meetings						2,661	546	994	300	575
	Other Events		245				538	942		1,820	275
Travel	General Assembly and Council Meetings					500					1,300
Administrative Expenses	Office Administration		885			15,000	457	50	2		273
	Equipment and Supplies					25,000	135	101			300
	Insurance		1,376			4,500	486	500	1,942	644	875
	General Expenses and Audit				85	6,116	600			48	
	Awards					200	1,000	552		550	
	Donations		1,339								
	Advertising						262				
Miscellaneous Expenses	Observatory and Site Expenses		1,296			20,000	521	1,065	3,670	106	4,088
	Equipment & Supplies/Library					100	815	68		56	200
	Depreciation		1,339				727				
	Miscellaneous				84	809	2,174	494		283	5,653
TOTAL EXPENDITURES		150	23,468	6,454	475	81,136	17,454	8,667	7,170	4,549	15,390
SURPLUS OR DEFICIT ON OPERATIONS		265	1,220	2,288	1,104	28,113	1,511	696	-848	845	-9,443
ASSETS	Current assets	2,316	17,165	16,170	11,084	129,604	24,179	10,582	4,536	18,016	1,071
	Capital assets		25,453	29,866		353,548	351,775	43,820	80,000		17,800
	Total assets	2,316		46,036	11,084						18,871
LIABILITIES	Current liabilities					6,956	965	54,402			
	Long-term liabilities										
Equity	Net Equity	2,316			11,084		374,989	54,402	84,536		18,871
TOTAL LIABILITIES AND EQUITY				46,036	11,084		375,954	54,402	84,536		18,871

OFFICERS AND COUNCILS OF THE CENTRES—2017

BELLEVILLE CENTRE

c/o Greg Lisk
11 Robert Drive
Trenton ON K8V 6P2
www.rascbelleville.ca
greg-lisk@sympatico.ca

President: Steve Donaldson
Treasurer: Garth Penn
Secretary: Joanne Burns
National Representative: Don Town

CALGARY CENTRE

PO Box 20282
250, 300 5th Ave SW
Calgary AB T2P 4J3
roger@thebluegrid.com

Honorary President: Jennifer Howse
Past President: Jason Nishiyama
President: Steve Donaldson
Secretary: Roger Nelson
Treasurer: Greg Bridger
National Representatives: Heather Laird
Roger Nelson
Susan Yeo

EDMONTON CENTRE

788, 10301-104 Street
Edmonton AB T5J 1B9
executive@edmontonrasc.com
www.edmontonrasc.com

Honorary President: Dr. Douglas Hube
President: Sharon Morsink
Past President: Luca Vanzella
Treasurer: Jay Lavender
Secretary: Kent Martens

HALIFAX CENTRE

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

Honorary President: Dr. Roy Bishop
President: Paul Gray
First Vice-President: Paul Heath
Second Vice-President: Ian Anderson
Treasurer: Jim Millar
Secretary: Chris Young
National Representative: Pat Kelly

HAMILTON CENTRE

PO Box 969
Watertown ON L0R 2H0
(905) 689-0266 (observatory)
www.hamiltonrasc.ca
emizzi@cogeco.ca

Honorary President: Roger Hill
Past President: Andy Blanchard
President: Edward Mizzi
Vice-President: Mark Pickett
Treasurer: Bill Leggitt
Secretary: David Surette
National Representative: Mark Pickett

KINGSTON CENTRE

76 Colebrook Road
RR#1
Yarker ON K0K 3N0
www.rasc.ca/kingston
kingston@rasc.ca

Honorary President: Dr. David Levy
President: Rick Wagner
Past President: Susan Gagnon
Vice-President: Greg Latiak
Treasurer: Kevin Kell
Secretary: Steve Hart
Directors: David Maguire
Walter MacDonald

KITCHENER-WATERLOO CENTRE

133 Weber Street North, Suite #3-127
Waterloo ON N2J 3G9
(519) 763-0184
kw.rasc.ca
secretary@kw.rasc.ca

Honorary President: David Garner
President: Leonard Kuehner
Past President: Gerald Bissett
Vice-President: Bill Blackport
Vice-President: Andrew Hill
Treasurer: Steve Holmes
Secretary: Jim Goetz
National Representative: Terry Torra

LONDON CENTRE

PO Box 842 Station B
London ON N6A 4Z3
www.rasc.ca/London
info@rasclondon.ca

Honorary President: Peter Jedicke
President: Rick Saunders
Past President: David McCarter
Vice-President: Patrick Whelan
Treasurer: Bill Gardner
Secretary: Everett Clark
National Representative: Peter Jedicke

MISSISSAUGA CENTRE

PO Box 98011
2126 Burnhamthorpe Rd W
Mississauga ON L5L 5V4
www.mississauga.rasc.ca
general@mississauga.rasc.ca

Past President: Randy Attwood
President: Jo Vanden Dool
Vice-President: Andrew Opala
Treasurer: Allan Connery
Secretary: Chris Malicki
National Representative: Leslie Strike

CENTRE FRANCOPHONE DE MONTRÉAL

CP 206 Station St-Michel
Montréal QC H2A 3L9
(514) 201-3889
www.lasam.ca
scattol@videotron.ca

President: Patrice Scattolin
Vice-President: Guy Langevin
Secretary-Treasurer: Pascal Francoeur
National Representative: Patrice Scattolin

MONTRÉAL CENTRE

PO Box 39061
Montréal QC H3B 0B2
www.rascmontreal.org
info@rascmontreal.org

Honorary President: Dr. David Levy
Past President: Ron Barron
President: Morrie Portnoff
Vice-President: Ron Barron
Treasurer: Ben Chu Tang
Secretary: Detlev Schmalhaus
National Representative: Frank Tomaras
Directors: Lloyd Coffin
Chantal Féquière
Richard Latulipe
Gary Smith

NEW BRUNSWICK CENTRE

26 Wilson Road
Riverview NB E1B 2V
www.nb.rasc.ca
president@nb.rasc.ca

Past President: Curt Nason
President: June MacDonald
1st Vice-President: Marc Arsenaault
2nd Vice-President: Adrien Bordage
Treasurer: Emma MacPhee
Secretary: Curt Nason
National Representative: Chris Weadick

NIAGARA CENTRE

c/o Dr. Brian Pihack
4245 Portage Road
Niagara Falls ON L2E 6A2
www.astronomyniagara.com
tcrbarnes@hotmail.com

Past President: Brian Pihack
President: Tim Barnes
Vice-President: Darlene Marano
Treasurer: Robert Lewis
Secretary: Philip Downey
National Representative: Janice Low

OKANAGAN CENTRE

4448 Gallaghers Forest South
Kelowna BC V1W 4X3
www.ocrasc.ca
davidplayer@telus.net

Past President David Player
President: Olaf Lutz

Secretary/Treasurer:
Dennis Krause

OTTAWA CENTRE

PO Box 33012
1363 Woodroffe Ave
Ottawa ON K2C 3Y9
www.ottawa.rasc.ca
garyboyle@explornet.ca

Past President Gary Boyle
President: Tim Cole
Treasurer: Oscar Echeverri
Secretary: Chris Teron
National Representative: Rick Wagner
Bill Wagstaff

PRINCE GEORGE CENTRE

7365 Tedford Rd
Prince George BC V2N 6S2
(250) 964-3600
www.vts.bc.ca/pgrasc
blair.s@shaw.ca

Past President: Gilbert Self
President: Blair Stunder
Vice President: Robert Nelson
Treasurer: Glen Harris
Secretary: Glen Harris

CENTRE DE QUÉBEC

2000, boul Montmorency
Québec QC G1J 5E7
www.sracquebec.ca
levesqs@videotron.ca

Président: Steve Lévesque
Vice-Président: Daniel Tardif
Trésorier: Pierre Desrosiers
Représentant national: Pierre Desrosiers
Secrétaire: Daniel Tardif

REGINA CENTRE

PO Box 20014
Regina SK S4P 4J7
(306) 751-0128
regina.rasc.ca

President: Vance Petriew
Treasurer: Shane Maitland
Secretary: Vance Petriew
National Representative: Peter Hagar
Past President: Chris Beckett

ST. JOHN'S CENTRE

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

Past President: Richard Newman
President: Doug Grouchy
Vice-President: Garry Dymond
Treasurer: Doug Grouchy
Secretary: Randy Dodge
National Representative: Marcellus Redmond
Webmaster: Craig Peterman
Observing Director: Robert Babb
Librarian: Fred Smith
Membership: Marcellus Redmond

SARNIA CENTRE

6723 Pheasant Lane
RR#1 Camlachie ON N0N 1E0
akenyon@bell.net

President: Martin Cogswell
Vice-President: Stefan Jackson
Secretary: Martin Cogswell
Treasurer: Martin Cogswell
Vice Treasurer: Ralph DeJong
Newsletter Editor: Ron Waldron

SASKATOON CENTRE

PO Box 317 RPO University
Saskatoon SK S7N 4J8
(306) 857-4707
www.usask.ca/rasc
skstars@shaw.ca

Past President: Jim Goodridge
President: Tim May
Vice-President: vacant
Treasurer: Norma Jensen
Secretary: Tenho Tuomi
Membership Coordinator: Mark de Jong
Observing Coordinator: Larry Scott
Sleaford Site Coordinator: Darrell Chatfield
Councillor at-large: Les Dickson

SUNSHINE COAST CENTRE

5902 Skookumchuk Road
Sechelt BC V0N 3A4
www.coastastronomy.ca
info@coastastronomy.ca

Past President: Michael Bradley
President: Charles Ennis
Vice-President: Adrian Payne
Treasurer: vacant
Secretary: Bruce Fryer
National Representative: Charles Ennis
Other Directors: Gene Hogan
Scott Harlow

THUNDER BAY CENTRE

2225 Granite Road
Thunder Bay ON P7G 1M9
www.tbrasc.org
novationheart@hotmail.com

Past President: Bruce Miron
President: Brendon Roy
Treasurer: Brigitte Schaffer
Secretary: Andreas Buchholz
National Representative: Ken Kaus

TORONTO CENTRE

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

Honorary President: Dr. Roberto Abraham
President: Ralph Chou
Vice-President: Peter Hiscocks
Vice-President: Paul Delaney
Treasurer: Alexander Masterton
Secretary: Tom Luton

VANCOUVER CENTRE

2302 West Fourth Avenue
 PO Box 19115
 Vancouver BC V6K 4R8
<http://rasc-vancouver.com>
president.rascvancouver@gmail.com

Honourary President: Dr. John MacDonald
 President: Suzanna Nagy
 Treasurer: Bruce Hutchison
 Secretary: Scott McGillivray
 National Representative: Doug Montgomery

VICTORIA CENTRE

c/o Sherry Buttner, President
 1092 Brookview Drive
 Mechosin BC V9C 3X6
www.victoria.rasc.ca
president@victoria.rasc.ca

Past President: Nelson Walker
 President: Sherry Buttner
 1st Vice-President: Joe Carr
 2nd Vice-President: Chris Purse
 Treasurer: Bruce Lane
 Secretary & Recorder: Joy Fisher
 Librarian: Michael Michaud
 Telescopes: Sid Sidhu
 National Representative: Lauri Roche
Skynews Editor: Malcolm Scrimger
 Membership Co-ordinator: Chris Purse
 Webmaster: Joe Carr
 Observing Chair: Michel Michaud
 Jim Stillburn

WINDSOR CENTRE

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

Honorary President: Dr. William Baylis
 Past President: Rick Marion
 President: Randolph Groundwater
 1st Vice-President: Mike Mastronardi
 2nd Vice-President: Rick Marion
 Treasurer: Greg Mockler
 Secretary: Steven Pellarin
 National Representative: Mike Mastronardi

WINNIPEG CENTRE

PO Box 2694
 Winnipeg MB R3C 4B3
www.winnipeg.rasc.ca
ras1@winnipeg.rasc.ca

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

YUKON CENTRE

President: Viktor Zsohsar
 Treasurer: Chris Lomas
 Secretary: Zarina Patoy

2017 AWARD WINNERS

Ken Chilton Prize	not awarded	Fellowship Award	not awarded
Service Award	Eric Briggs (Toronto) Simon Hanmer (Ottawa) Katrina Ince-Lum (Toronto) Michael Moghadam (Ottawa) Charles O'Dale (Ottawa) Brian Pihack (Niagara) Betty Robinson (Mississauga) Randall Rosenfeld (Unattached) Stan Sammy (Niagara) Gerry Smerchanski (Winnipeg) Don Town (Belleville)	Chant Medal	not awarded
		The Plaskett Medal	Dr. Fereshteh Rajabi
		Simon Newcomb Award	Ivan Semeniuk (Toronto)
		Qilak Award	Paul Heath (Halifax) (RASC) Pierre Chastenay (Montréal) (CASCA) Club d'Astronomie de Saurel (FAAQ)

2016 CERTIFICATES

ASTROIMAGING

Mervin W. Graf (Osoyoos) Wide Field	Robert Lewis (Niagara) Solar System
Bruce Hamilton (Halifax) Wide Field	Luca Vanzella (Edmonton) Wide Field
W. Ken Jackson (Vancouver) Wide Field	

DEEP-SKY CHALLENGE OBSERVING PROGRAM

none awarded

EXPLORE THE MOON

none awarded

EXPLORE THE UNIVERSE

Anonymous (Ottawa)	Deann Hunt (Prince George)
Eric Beresford (Toronto)	Dave McKenzie (Prince George)
Adriana Billings (Prince George)	John Peddle (St. John's)
Jean-Bruno Desrosiers (Sherbrooke, Québec)	Jason Todoroff (Melancthon, Ontario)
Rod DeVries (Medicine Hat)	Mary Lou Whitehorne (Halifax)

FINEST NGC

Darnell Ogradnick (Regina)	Ted Wang (Taiwan)
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ISABEL WILLIAMSON LUNAR OBSERVING PROGRAM

Norma Jensen (Saskatoon)	Richard Weigand (Kingston)
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MESSIER OBJECTS

Luc Boulard (Garson, ON)	Norma Jensen (Saskatoon)
Emile Cormier (New Brunswick)	Tony Schellinck (Halifax)
Alan Duffy (Saskatoon)	Jo Vandendool (Mississauga)

PAST AWARD WINNERS

Below is a list of former winners of the Society Awards.

For names before 2000, please refer to "Looking Up—A History of the RASC" by Peter Broughton. www.rasc.ca/sites/default/files/LookingUp-300-text.pdf

For names after 2000, go to the RASC website <https://www.rasc.ca/rasc-awards>"

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)
- 2008 Dr. Geoff Gaherty (Toronto)

FELLOWSHIP AWARD

Developed jointly by the Awards and Nominating Committees, and approved by the RASC Board of Directors in November 2013, the award of Fellow of the RASC (FRASC) is created to acknowledge the work of long-serving members. It recognizes those outstanding members who have made extraordinary contributions to the Society over the long term, much of which service has been rendered at the national level.

- 2014 Randy Attwood (Mississauga)
Dr. Roy Bishop (Halifax)
Peter Broughton (Toronto)
Dr. James Hesser (Victoria)
- 2015 Robert Dick (Ottawa)
Dave Lane (Halifax)
Dr. John Percy (Toronto)
Mary Lou Whitehorne (Halifax)
- 2016 Jay Anderson (Winnipeg)
Alan Batten (Victoria)
Doug Hube (Edmonton)
Franklin Loehde (Edmonton)
Patrick Kelly (Halifax)

KEN CHILTON PRIZE

The Chilton Prize was established in 1977 by the National Council of the Society in remembrance of Ken E. Chilton, an active member of the Hamilton Centre. The prize is awarded annually to an amateur astronomer resident in Canada in recognition of a significant piece of astronomical work carried out or published recently.

- 2008 Eric Briggs (Toronto)
Debra Ceravolo (Ottawa)
Peter Ceravolo (Ottawa)
Lou Cox (Ottawa)
Steve Gauthier (London)
- Doug George (Ottawa)
Paul Gray (New Brunswick)
Walter MacDonald (Kingston)
Jack Newton (Victoria)
Ajai Sehgal (Ottawa)
Jennifer Tigner (Victoria)
Dave Toth (London)
- 2009 Brian Battersby (Prince George)
- 2010 Brian Battersby (Prince George)
Lise Charlebois (Unattached)
Ted Dunphy (New Brunswick)
Paul Gray (New Brunswick)
- Kim Hay (Kingston)
Marc Keelan-Bishop (Belleville)
Don Kelly (New Brunswick)
Rémi Lacasse (Unattached)
Dave Lane (Halifax)
Damien Lemay (Québec)
Ron Macnaughton (Toronto)
Chris Weadick (New Brunswick)
Jennifer West (Winnipeg)
- 2012 Holly Ayles (New Brunswick)
- 2013 Kathryn Gray (Halifax)
Nathan Gray (Halifax)

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.

- 2006 Dr. Lauren A. MacArthur (British Columbia)
- 2007 Dr. Frédéric Grandmont (Université Laval)
- 2008 Dr. Adam Muzzin (University of Toronto)
- 2009 Dr. Catherine Lovekin (Saint Mary's University)
- 2010 Dr. Helen Kirk (University of Victoria)
- 2011 Dr. Kaitlin Kratter (University of Toronto)
- 2012 Dr. Pier-Emmanuel Tremblay (Université de Montréal)
- 2013 Dr. Yasuhiro Hasegawa (McMaster University)
- 2014 Dr. Andrew Pon (University of Victoria)
- 2015 Dr. Anne Archibald (McGill University)
- 2016 Dr. Jonathan Gagné (Université de Montréal)

PRESIDENT'S AWARD

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

- 2010 Sid Sidhu (Victoria);
- 2011 Mayer Tchelebon (Toronto)
- 2012 Randall Rosenfeld (Unattached)
- 2013 Dave Lane (Halifax)
- 2014 Robert Dick (Ottawa)
- 2015 Walter MacDonald (Kingston)
- 2016 Terence Dickenson (Toronto)

QILAK AWARD/LE PRIX QILAK

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

- 2012 Colleen O'Hare (Okanagan)
- 2013 Robert Duff (London)
- 2014 Dr. Howard Trottier (Vancouver)
- 2015 Toronto Centre DDO Volunteers (Toronto)
- 2016 Doug Cunningham (Toronto)

SERVICE AWARD

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

- 2006 Ted Bronson (Thunder Bay)
- Mark Kaye (Hamilton)
- Kevin Kell (Kingston)
- 2007 Dr. Rajiv Gupta (Vancouver)
- Bruce McCurdy (Edmonton)
- 2008 Dennis Grey (Toronto)
- Leslie Harvey (Toronto)
- Tony Horvatin (Toronto)
- 2009 Clint Shannon (Halifax)
- Robert Duff (London)
- Kim Hay (Kingston)
- Richard Huziak (Saskatoon)
- Walter MacDonald (Kingston)
- Al Seaman (Ottawa)
- Patrice Scattolin (C.F. de Montréal)
- Alan Whitman (Okanagan)
- 2010 Guy Mackie (Okanagan)
- Bryan Kelso (Okanagan)
- Jim Tisdale (Okanagan)
- Barry Matthews (Ottawa)
- Curt Nason (New Brunswick)
- 2011 Robert Dick (Ottawa)
- 2012 Roland Dechesne (Calgary)
- James Edgar (Regina)
- Fred Smith (St. John's)
- 2013 Larry McNish (Calgary)
- Dietmar Kupke (Toronto)
- Brian McCullough (Ottawa)
- 2014 Jay Anderson (Winnipeg)
- Dave Gamble (Okanagan)
- Susan Gagnon (Kingston)
- Dr. James Hesser (Victoria)
- 2015 David M.F. Chapman (Halifax)
- Colin Haig (Hamilton)
- Chris Malicki (Mississauga)
- 2016 Andy Blanchard (Hamilton)
- Gary Bennett (Hamilton)
- Paul Gray (Halifax)
- Hugh Pett (Okanagan)
- Chris Teron (Ottawa)

SIMON NEWCOMB AWARD

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

- 1994 Michael S.F. Watson (Unattached, Canada)
- 1999 Terence Dickinson (Toronto)
- 2001 Dan Falk (Toronto)
- 2002 Dr. David Levy (Kingston)
- 2003 Alister Ling (Edmonton)
- 2004 Mary Lou Whitehorne (Halifax)
- 2006 Dr. Warren Finlay (Edmonton)
- 2007 Alan Dyer (Unattached, Canada)
- 2008 Gary Seronik (Victoria)
- 2009 James Edgar (Regina)
- 2011 Jay Anderson (Winnipeg)
- 2012 Randall Rosenfeld (Unattached)
- 2013 Alan Whitman (Okanagan)
- 2016 Martin Hellmich & Halley Davies (Halifax)

HONORARY MEMBERS OF THE RASC

Dr. Oscar Álvarez-Pomares (Cuba)	Prof. Andrew Fraknoi (United States)	Dr. P.J.E. (Jim) Peebles (United States)
Dr. William Bottke (United States)	Dr. Owen Gingerich (United States)	Dr. Sara Seager (Canada)
Dr. David L. Crawford (United States)	Dr. Stephen W. Hawking (United Kingdom)	Dr. William Sheehan (United States)
Rev. Robert Evans (Australia)	Dr. Jean Meeus (Belgium)	Dr. Carolyn Shoemaker (United States)
Dra. Julieta Fierro (Mexico)	Dr. Jay Pasachoff (United States)	Dr. R. Brent Tully (United States)

PAST ELECTED OFFICERS OF THE RASC

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

Honorary Presidents

1997-2001	Jack Locke
2001-2005	Roy Bishop
2005-2010	Robert Garrison
2010-2013	Dr. James Hesser
2013-2017	Dr. John Percy

Presidents

1998-2000	Randy Attwood
2000-2002	Dr. Robert Garrison
2002-2004	Dr. Rajiv Gupta
2004-2006	Peter Jedicke
2006-2008	Scott Young
2008-2010	Dave Lane
2010-2012	Mary Lou Whitehorne
2012-2014	Glenn Hawley
2014-2016	James Edgar
2016-2017	Craig Levine

Secretaries

1999-2005	Kim Hay
2005-2007	Stan Runge
2007-2014	James Edgar
2014-2016	Dr. Karen Finstad

Treasurers

1998-2004	Michael Watson
2004-2006	David Clark
2006-2007	Alan Whitman
2007-2012	Mayer Tchelebon
2012-2016	Denis Grey
2017	Colin Haig

GENERAL ASSEMBLIES—2001 TO 2018

The following Centres hosted the General Assembly from 2001 to 2016:

2001	London
2002	Montréal
2003	Vancouver
2004	St. John's
2005	Okanagan
2006	Ottawa
2007	Calgary
2008	Toronto, Mississauga and Hamilton

2009	Saskatoon
2010	New Brunswick
2011	Winnipeg
2012	Edmonton
2013	Thunder Bay
2014	Victoria
2015	Halifax
2016	London
2017	Ottawa

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

2018	Calgary
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