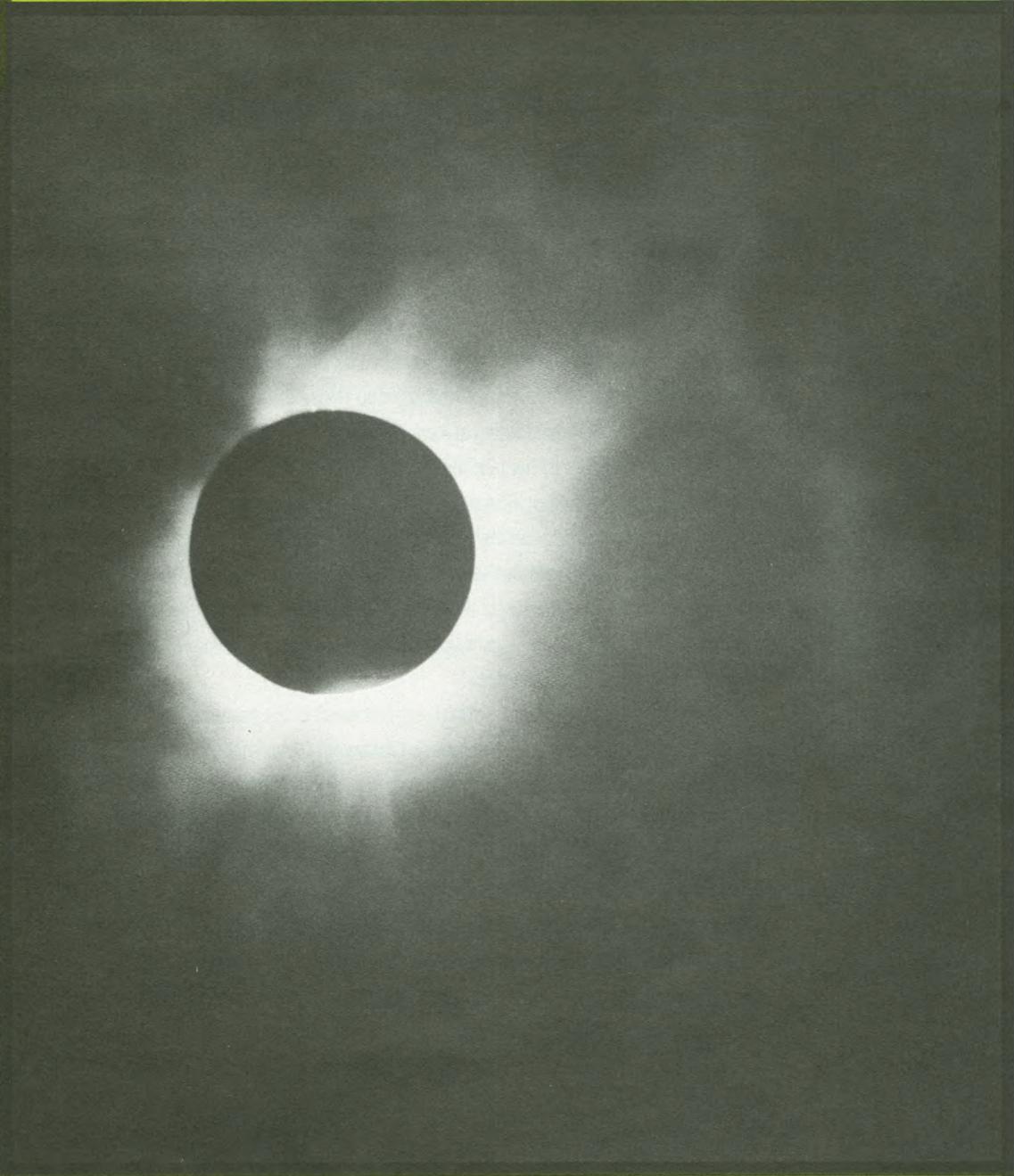




The Royal Astronomical Society of Canada

Annual Report



The total solar eclipse of July 11th. Photograph taken by David J. Lane.

1991

La Société Royale
d'Astronomie du Canada

President's Report

This is my second annual report and it reminds me that the end of my two year term as President of the R.A.S.C. is approaching. If things happen as expected, during my term I will have delivered talks to at least thirteen centres and made one other less official visit. Considering the distances and associated travelling costs, it would be quite difficult to visit all centres. Nonetheless, I am confident that I would have witnessed the same enthusiasm everywhere. Although the state of the economy is depressing, I have seen interesting projects coming to fruition, for example the St. John's Centre which incorporated and acquired a 30 cm telescope and an observing site; and a new C-14 at the Calgary Centre's Wilson Coulee Observatory.

Unfortunately, our membership has been affected by the recession as can be verified in the National Secretary's report. As a countermeasure, at the annual General Assembly in Vancouver, a motion to increase the membership fee was unsuccessful. In order to keep up with the services provided to members, this will have to be revisited again in 1992. In order to take into account the membership view with the aim of providing the best services for the money paid, a membership survey is in preparation. Eventually you will all be invited to complete an extensive questionnaire; please fill it in as completely and seriously as possible for this will provide raw data for the Long Range Planning Committee.

We had a successful General Assembly in Vancouver. The Ruth Northcott Memorial Lecture was delivered by Bjarni Tryggvason, one member of the Canadian astronaut team. He talked about manned space flight, with a particular accent on Canada's participation. This was very well received, as can be judged by the long period of questions which ensued. Two visits are specially worth mentioning, the tour of the MacDonald Dettwiler Company which is renowned for its work in satellite imaging, and the tour of the Tri-University Meson Facility (TRIUMF) with the world's largest cyclotron. Following the banquet on Saturday night the Service Award was presented to Don Hladiuk and Ian McGregor, respectively of the Calgary and Toronto Centres.

The Plaskett Medal went to Paul Charbonneau (Montreal). The Hogg Lecture was delivered by Dr. Kim Innanen, at the occasion of C.A.S.C.A. Annual Meeting at York University in Toronto. Dr. Innanen is a professor of physics and astronomy at that same university and the title of his talk was "The Prediction and Discovery of a Martian Trojan Asteroid".

Encouraged by coordinator Steve Dodson, again this year participation in International Astronomy Day has been good across the country, with many centres paying special attention to the theme "The Stars Belong to Everyone". Many of our members viewed the seven minutes long total solar eclipse of July 11th, thanks to the effort put up by members like Michael Watson who was expedition leader for a chartered flight leaving from Toronto with 165 enthusiastic people. Also, another large group left from Calgary. Although the majority went to Mexico, a number of others went to Hawaii; among the latter there was our Japanese member Osao Shigehisa.

Thanks to the editorship of Leo Enright, the first issue of the manuscript of the "mini-handbook" has been prepared and will be available in 1992 under the title "Beginner's Observing Guide - 1992". This new publication will satisfy the need of beginners who might prefer a publication less elaborate than the veteran Observer's Handbook. I also want to thank the editors of our other publications, Roy Bishop (Observer's Handbook), Jeremy Tatum (Journal) and Patrick Kelly (Bulletin). Speaking of publications, thanks go to our National Secretary, David Tindall, who has produced "The R.A.S.C. Manual" which contains just about everything concerning the operation of the R.A.S.C. and its centres.

The society's public liability insurance has been increased from \$1,000,000 to \$2,000,000. This coverage is more in line with what is required for centre activities in public areas like parks or shopping malls.

One of our members, Mr. David Balam of Victoria, discovered an asteroid which has become the first Canadian-discovered asteroid to be assigned a permanent number. On June 27th, it was officially named Sprattia, in honour of Chris Spratt, one of our most active members, also of Victoria. In the same line of thought, I would like to mention the excellent article "Tracking Asteroids: Why We Do It", by Jeremy Tatum, in *The Planetary Report* for September/October 1991. Our south-of-the-border member David Levy struck again on June 14th with another comet, 1991q. The discovery was made visually using a 16-inch reflector at his home observatory. Although separated by half of Canada, Mary Lou Whitehorne of Halifax and Chris Brown of Winnipeg have collaborated in the study of Be stars; the former providing spectroscopic data and the later photometric data, acquired from their respective locations. The preceding are just but a sample of the interesting work done by R.A.S.C. members.

As a tribute to the first century of our society, Mr. Peter Broughton is preparing an historical book on that subject. He has already collected a remarkable quantity of facts, anecdotes, pictures, etc., which guarantee that it will be a very valuable publication. If you have any material you feel would be of interest, please rush it to Peter. It is not yet too late.

All in all, 1991 has been a productive year and this has been made possible because of the dedication of our members at large, members of the National Council and especially our Executive Secretary, Ms. Rosemary Freeman.

Damien Lemay, President

Once again, I have had the privilege and pleasure of reading the reports from the centres prior to their publication. As usual, they show the vitality of our society across the country and I encourage you to read them for valuable ideas on ways to bring astronomy to members and to the public.

Damien Lemay in his President's Report has made a comprehensive summary of the events of the year and leaves me little to add.

Unfortunately, our membership has declined by 10% this year, presumably as a direct result of the imposition of a 28% increase in membership fees (which had to be imposed as there had not been a change in fees for a number of years). Council is very concerned about this matter and has decided on a policy of moderate annual increases in fees, rather than infrequent large increases. Any fee increase, of course, has to be approved by a General Meeting of the society, it cannot be imposed by council. I urge you to support this proposal, in order to keep the finances of the society in good health.

The membership figures as of 1991-09-30 are compared with those of previous years in the following table:

CENTRES	1991	1990	1989	1988	1987	1986
Calgary	192	213	277	213	242	240
Edmonton	121	130	123	136	115	117
Halifax	160	174	171	138	145	121
Hamilton	86	87	76	86	84	79
Kingston	52	48	38	35	46	44
Kitchener-Waterloo	24	34	30	32	29	19
London	39	48	46	43	46	46
C.F. de Montréal	35	36	38	43	39	44
Montréal	99	116	123	103	111	118
Niagara	61	61	81	64	48	54
Ottawa	258	263	254	228	241	276
Québec	36	70	73	60	74	75
Regina	29	57	-	-	-	-
St. John's	34	30	16	19	22	18
Sarnia	8	8	12	8	11	19
Saskatoon	43	47	42	45	41	48
Thunder Bay	29	31	40	-	-	-
Toronto	921	1038	1022	1052	1035	1123
Vancouver	109	132	167	167	147	116
Victoria	127	127	137	135	143	146
Windsor	46	56	46	49	48	52
Winnipeg	56	70	59	60	61	69
UNATTACHED						
Canada	269	275	306	301	318	298
U.S.A.	291	328	351	306	369	371
Overseas	53	60	58	62	57	57
Honorary	14	14	14	14	13	14
TOTAL	3192	3553	3600	3399	3534	3564

It is my pleasure to thank, once again, our Executive Secretary, Rosemary Freeman, for all the hard work she puts in on our behalf.

I should also like to thank all those, too numerous to mention by name, who have worked on the society's committees during the year. Without this massive volunteer effort the society could not function.

If you have any suggestions about the way the society is run, and in particular about the way I do my job, I would be pleased to hear from you.

David A. Tindall, National Secretary

Secretary's Report

The centre decided this year to send the drive for the C-14 to Byers for an upgrade. In other activities, public star parties at the Calgary Zoo, Fish Creek Park and in Red Deer attracted 5 000 people, while the Alberta Star Party had 100 participants and some 400 were given the tour of our Wilson Coulee Observatory. As in previous years, we maintained our programs of introductory astronomy courses, teacher's workshops and classroom visits. Planning for the upcoming 1992 General Assembly is well in hand and we are looking forward to welcoming our fellow RASCals. Nine general meetings were held in 1991.

Calgary

January 17	The Galileo Mission by Dr. Cliff Anger
February 21	CCD Instruments by Dr. David Fry
March 14	Solar Dynamics by Dr. Alan Clarke
April 18	The Byers C-14 Drive Upgrade by J.T. Himer
May 23	Stonehenge and Avebury by Carol Weis
June 20	A Tour of the Rothney Observatory by Dr. David Fry
September 18	Variable Stars by Bill Wilson
October 17	Solar eclipse reunion and picture show
November 21	Annual elections and several short talks

Glenn Hawley, Secretary

During 1991 local viewing conditions were the worst in many years – the results of poor weather and dust from Mount Pinatubo and other sources. Many deep sky enthusiasts turned their scopes on more discernable objects, particularly the major planets. Several Edmonton Centre members have refined to an art form the practice of sketching at the eyepiece. These include Randy Pakan, whose work was published in the January 1992 issue of *Astronomy* magazine.

Edmonton

The Edmonton Centre had a productive year in many areas of interest to astronomers. The following is a list of speakers who were featured at the well-attended meetings of the centre.

January 14	Jupiter Satellite Transits and Occultations by Dave Clyburn & Murray Paulson
January 25	The Geography of Mars by Dr. B.K. Lucchitta
February 11	Black Holes by Dr. Werner Israel
March 11	Computers and Astronomy by six centre members
April 8	Building a 16" Poncet-mounted Dobsonian Scope by Randy Pakan
May 13	Space Medicine and the Space University by Dr. Kathy McCuaig
June 10	Summer Observing Opportunities by Murray Paulson & Bob Drew
	The July Solar Eclipse by Frank Florian & Murray Paulson
September 9	The Solar Eclipse in Mexico by Vernon Schmid
October 21	Building a 12.5" Ponset-mounted Newtonian by Brad Richens
	Building a 20" Aluminium Dobsonian by Bob Drew
November 11	Astronomy in Iowa by Herb Swartz
December 9	The Observer's Handbook - 1992 A review

In addition to the above talks, each regular meeting was enhanced by excellent reports and presentations by the centre's Observers Group. Headed by Randy Pakan, who was ably assisted by Dave Clyburn, Paul Campbell, Murray Paulson, Alister Ling and others, the group presented drawings, slides, and lucid explanations of currently visible celestial events. Alister Ling prepared several photo-illustrated talks on clouds and other atmospheric phenomena. His efforts with the camera earned him the 1991 "Astrophotographer of the Year" award.

Three outstanding telescopes built by Edmonton Centre members saw first light during 1991: Randy Pakan's 16" hand-tool-crafted, Poncet-mounted Dobsonian, Brad Richens' 12.5" Ponset-mounted Newtonian and Bob Drew's 20" aluminium Dobsonian. Randy Pakan received the coveted "Telescope Maker of the Year" award for his masterpiece at the annual General Meeting on January 13th, 1992. Brad Richens distinguished himself by being the only centre member to earn a Messier certificate in 1991.

The Observers' Group continues to attract new members both to regular centre meetings and to observing sessions. The enthusiasm of the group is contagious. Generous members like Paul Campbell (alias the "Scope Doctor") who is always willing to help a novice with equipment problems, welcome newcomers to the centre and inspire the more timid members to greater

confidence and activity. Members of the group are on the front line in the centre's public education events and special projects.

Among the special projects undertaken by observers of the Edmonton Centre in 1991 was the manning of the Edmonton Space and Science Centre's (E.S.S.C.) public observing deck. (E.S.S.C. cannot afford to hire staff to do the job.) The agreement between the Edmonton Centre and the E.S.S.C. gives R.A.S.C. volunteers access to the observatory and its equipment for their own use. This is in exchange for the R.A.S.C. organizing and providing personnel to operate the observatory for public education throughout the spring, summer and fall, weather permitting. Larry Wood, the volunteer co-ordinator for the project, reported a 90% success rate staffing the observatory during this first trial season. Edmonton Centre's council and the volunteers will determine if this arrangement can become a continuing public service activity of the Edmonton Centre.

The centre participated in many forums for public education in astronomy in 1991. Sylvia Smith and Russ Sampson organized the centre's efforts for Astronomy Day, held on April 19th and 20th. Members ran a children's "astronomical activity table" at the E.S.S.C. on Saturday afternoon. Both evenings saw a large contingent of members offering views of the firmament through their telescopes and binoculars to the many hundreds of visitors to the E.S.S.C. that weekend.

In August, the Edmonton Centre participated in the Alberta Star Party, which was held at the Homestead Campground north of Waterton National Park and hosted this year by the Lethbridge astronomy group. Edmonton's Russ Sampson was in charge of programming, speakers and children's activities. The event was well attended by Edmonton Centre members, as was the Mount Kobau Star Party in British Columbia earlier in the month.

In September the Observers' Group had a very successful initiation to sidewalk astronomy when they conducted a public observing session in Gazebo Park in Edmonton's Strathcona district. It was a warm, clear evening and the scopes attracted 400 to 500 fledgling stargazers from the crowds of passers-by.

Vice-President Sylvia Smith organized the centre's fall display/information booths at the Meadowlark Mall's Education Fair and at the "Hobby Mecca" in the Edmonton Convention Centre. The latter featured the E.C.C.S.'s mobile planetarium, which was very popular. For her enthusiastic dedication and work in the area of public education, Sylvia Smith was honoured with the centre's Presidential Award at our recent annual general meeting.

The centre conducted its major public education effort of the year, Astronomy Workshop '91, on the October 4th-6th weekend. Friday's skies disappointed serious observers, but Saturday's seeing conditions were quite satisfying. More than sixty participants, including many newcomers, attended this third annual astronomical (and gastronomical) retreat weekend, which once again was captained by George Moores and Russ Sampson at Camp Maskapatoon. Major talks were presented by John Myrtle and Don Hladiuk from the Calgary Centre, Edmonton Centre members Dr. Doug Hube and Alister Ling, and guest speaker Stephen James O'Meara from *Sky & Telescope* magazine.

In summary, 1991 was a good year for astronomy in Edmonton. The first centre meeting of the new year was highlighted by the visit of the R.A.S.C.'s National President, Damien Lemay – an auspicious beginning to 1992.

Catherine Breckenridge, General Secretary

1991 witnessed another successful year for the Halifax Centre. The executive, led by our very capable president, Mary Lou Whitehorne, eagerly undertook the many challenges that were presented to us during the year.

In March, our centre was invited to give a presentation at the Halifax 1999 Conference, a conference designed to look at what changes and improvements the citizens of Halifax wanted to see in their city by its 250th anniversary. The centre took the time to express our concerns about light pollution, a topic that concerns astronomers, amateur and professional alike as well as the desire to see a modern planetarium built in the metro area. We were well received by the city managers in attendance.

Astronomy Day was held on April 20th. A good turnout by both members and the public witnessed one of the most successful Astronomy Days to date. This annual event, held this year at Saint Mary's University, provided those attending with static displays, astronomy talks, and tours of the Burke-Gaffney Observatory. I believe that we were able to convince a few skeptics and even sign up a few new centre members.

Our annual banquet was held in May and was well attended by our membership. Attendees were treated to an interesting presentation on CCD imaging, a fine meal and the presentation of our annual "Tom Fool" awards.

On Labour Day we hosted our annual star party, Nova East, at Fundy National Park in New Brunswick. This event is growing in popularity from year to year and we were happy with this year's turnout. The public were treated to several presentations including an observing session, slide presentations and discussions of astronomical topics. This year, for the first time, our centre realized a small profit from the sale of T-shirts at the event. The profit will be invested in next year's star party. I would like to take this opportunity to extend an invitation to members of other centres to attend this event.

The Halifax Centre will be hosting the 1993 General Assembly. At this point, the centre is working feverishly to realize the event in '93. In taking on such a task we did not realize the tremendous amount of planning and work that goes into one of these events. With the dedication and commitment of many of our members we will be, in any event, successful.

1991 was a good year. We can only hope that 1992 will be as challenging and successful. To all other centres – good luck and clear skies in '92.

Wesley M. Howie, Secretary

Halifax

Centre Reports

Hamilton

Once again, under the leadership of John Gauvreau, the Hamilton Centre enjoyed a full year of activities and excitement. The general meetings were always very well attended with a wide range of interesting topics discussed. The dates and speakers for the regular meetings for 1991 are noted below.

January	The Daytime Sky and Meteorology by Alister Ling
February	The 1973 Eclipse Cruise by Cathy Cresswell Double Exposure Experiments by Alister Ling
March	Members Night. Presentations by Paul Turcotte, Garry Woodcock, Clive Gibbons and Bert Rhebergen
April	Satellite Tracking by Ted Molczan
May	Members Night. Cosmo Leon and Bridgit Neilson presented their science fair projects. Eric Golding, Brian Carr and Doug Welch discussed aspects of telescope making.
June	The Planetary Conjunction by Garry Woodcock Astrophotography Techniques by Berd Mueller
September	Eclipse Night with presentations by Clive Gibbons, Roger Hill, Garry Woodcock and Stephen Sheeler.
October	Annual Meeting.
November	Solar Eclipse Trip by Ev Butterworth & Pauline Wright Black Holes by Peter Sutherland
December	Planetary Alignments and slide show of a trip to Algonquin Park by John Gauvreau & Garry Woodcock Astrophotography for Beginners by Eric Golding

The highlight of the summer for many members was, of course, the total solar eclipse with eleven members of the Hamilton Centre joining the R.A.S.C. expedition which was organized by Michael Watson. All members enjoyed the many accounts of this trip during the general meetings following this spectacular experience.

Also during the summer, twenty-five members attended the 10th anniversary of Starfest, where Andreas Gada presented Barry Sherman and Clive Gibbons with certificates in appreciation of their continuing contributions to this weekend star party.

Following a great resurgence of interest, the Amateur Telescope Makers Group was revitalized by Bob Speck and Pauline Wright. Twelve members now meet regularly in Jim Winger's garage for nights of grinding, polishing, testing and interesting conversation. The donation of an evaporator from McMaster University has been gratefully accepted by the centre, just in time for aluminizing the mirrors.

The many telescopes and other equipment in the observatory have been expertly maintained by Barry Sherman and Mike Jefferson, our curator. Mike was also maintenance director this year and changes to the observatory included the planting of fifty cedar trees to block out stray light from oncoming headlights (generously donated by Arthur Oslach), and the installation of a gate to try and deter stray, non-astronomically-minded visitors. Many thanks are due to all the members who helped keep the grounds and buildings in such good order throughout the year.

The public education team, spearheaded by John Gauvreau, hosted more than fifty special groups throughout the year, both at the planetarium in McMaster University and at the observatory. The planetarium has taken delivery of a new Spitz projector which is being installed in the new year and will undoubtedly increase the requests from local groups to take part in this extremely popular programme.

The regular monthly workshops and observers' nights organized by Ev Butterworth were always well attended and included talks on many varied subjects such as photometry, star lore, Perseus, as well as having solar observing sessions and seasonal Messier hunts.

On the fund-raising scene, Eric Golding organized a successful garage sale in May at his home, complete with solar observing to keep the workers happy during lulls in the throngs of customers! Eric also organized a new feature for the general meetings, a swap table.

Finally, congratulations are given to Clive Gibbons, who received the centre's Gordon Craig Award for Literary Achievement, and to Eric Golding who received the Fautley Award for the Advancement of Astronomy.

Pauline Wright, Secretary

The Kingston Centre had a very exciting and busy year with eleven executive meetings, twelve regular meetings, guest speakers, the N.F.C.A.A.A. Conference and many other exciting happenings.

Alister Ling, noted deep sky observer, writer and meteorologist, came by on March 26th, 1991 and enlightened us with a talk and slides on deep sky observing. Alister and his wife Valerie now live in Edmonton, hopefully still enjoying his passion of deep sky observing.

Our Astronomy Day celebrations, which were held at the Kingston Shopping Center on April 20th, included visual displays, hands on displays, books, literature and, of course, lots of telescopes. Our observing session for later that evening was cancelled due to rain.

The Kingston Centre hosted the N.F.C.A.A.A. Conference on May 4th. Leo Enright took the group on a tour of the Holleford Crater, located just outside of Hartington, Ontario. Later that evening, a dinner was held at the Holiday Inn with guest speaker Dr. Martin Duncan. His topic, "Chaos in the Solar System", provided us with another look at the many theories that are present in astronomy. Old friends were reacquainted and new friends were made. A good time was had by all.

The national General Assembly was held May 17th-20th in Vancouver. Several members from Kingston attended.

Leo Enright informed our centre that David Levy had just discovered his twelfth comet on June 4th. A card and letter of congratulations was sent on behalf of everyone at the Kingston Centre. Our one and only "planet party" was held on June 15th at Lemoine Point. This was held due to the coming conjunction of Venus, Jupiter and Mars. As usual, the weather did not fully co-operate, however a few photos were taken of that memorable night. Also, another accessory was purchased for the centre's scope, a Telrad. We now have a finder that works!

Charleston Lake was the location for our meeting on August 16th. This was in conjunction with Terry Dickinson's annual star party at which the Kingston Centre helps out. Many scopes were there and Terry's talk with slides provided much information. Views of Saturn, the Ring Nebula and meteors from the Perseid meteor shower shone brightly in the sky. There were a fair number of people out to observe. It seemed to be a success despite the poor weather earlier in the evening.

Our September 8th meeting was Member's Night. Congratulations and kudos were given to Steve Manders who received his Messier Certificate. His feat was started on August 15th, 1989 and completed May 14th, 1991. Another grand happening to our centre came on September 26th when Damien Lemay, President of the R.A.S.C., came and gave a talk on "Astronomy, Hobby or Science". Many slides were shown of the Sun, his observatories, telescopes and various star fields.

On October 11th, our president, Ian Levstein, presented this year's recipient of the Dr. A. Vibert Douglas Award to Bill Broderick, our newsletter editor. Terry Dickinson also stopped by this evening and donated an autographed copy of his new book, "The Backyard Astronomer's Guide" to the Kingston Centre. Elections for the 1992 executive offices and committees were held and all positions were filled.

Our executive meeting for the December 13th meeting was cancelled due to the centre's Christmas dinner which was held at McGinnis Landing. Our regular meeting went on as usual with Ian Levstein giving a wonderful talk on the music of the spheres, combining music and science. Quite an appropriate topic for this time of year.

This concludes the year at the Kingston Centre so far. Congratulations to our current executive for a job well done, and congratulations for the new executive coming in to serve our Kingston Centre for the coming year.

Kim Hay, Secretary

Kingston

The Kitchener-Waterloo Centre enjoyed another successful year of activities in 1991. The year's meetings contained a wide

variety of topics and speakers, ensuring each session was of interest to those present.

January saw Mike Gore bring his computer to the meeting so he could show some of the pictures he had taken with the CCD camera he had built. Combining this with a short talk on what a CCD camera is, Mike brought many members up to date on what is being done electronically in the world of astronomy.

John Molson was the main speaker at the February meeting, giving a talk on the solar observations that he has been doing. He has been charting solar flux units as broadcast on WWV and monitoring solar flares. This meeting also saw the formation of an observing committee to be run by John Rayburn, John Molson, and Garland Best. They will look after setting up observing nights and be contact people on clear nights.

In March, Peter Daniel spoke on stellar cartography. We were told of the rich history that exists behind star charts and the difficulties that the early cartographers had in pinpointing exact locations for the many stars.

April saw the first half of a two part talk on astronomical viewing. Paul Bigelow and Bernd Mueller spoke on naked eye observing and the use of binoculars. They pointed out the many things that are best seen without a telescope and what to look for when purchasing binoculars.

Kitchener-Waterloo

At the meeting in May, Oscar Cole Arnal spoke of his personal interest in astronomy. He spoke of the joy the hobby has provided him from his youth to its rediscovery in recent years. He described how the keeping of a journal of observations of one's favourite objects could be a source of inspiration. May also saw a few of the club members make a pilgrimage to the David Dunlap Observatory in Toronto.

As in previous years, the last formal meeting before summer was held in the observatory. Jeff Brunton gave the second half of a two part talk on astronomical viewing by speaking on the use of a telescope. As a prop he used his most recently completed telescope, a 6" f/5.5 Newtonian. This was a good lead-in to the summer's activities when viewing sessions were held on the normal meeting nights. In August, many of our members made the trip to Mount Forest to attend Starfest. They were rewarded with excellent talks and some good viewing as well.

In September, Peter Daniel presented a variety of slides and prints consisting of everything from the Full Moon to what he did on his summer vacation. When Peter goes on vacation he seeks out famous observatories around the world and his collection of slides is always fascinating. Ray Koenig also spoke about his trip to Mexico for the July eclipse and the frustration clouds can bring.

In October, the club set up a booth at the Midwestern Ontario Leisure and Hobby Show. As in previous years, the display of telescopes and slides was interesting to those who stopped by. At the October meeting, we were given a report on the status of the club's 12.5" reflector. Work continues to be done on it but there is no set date for its completion.

November saw the return of Mike Gore who showed us the latest work he has done with his CCD camera and the refinements he has made to it. The December meeting saw a variety of topics and slides of things club members had been doing lately. We finished off the year with our annual Christmas dinner and get-together at Ray Koenig's home.

It was a successful year in which we saw the return of old members and the addition of new ones. A special thanks must be given to Paul Bigalow, the editor of *Pulsar*. It takes a lot of time and effort to produce the newsletter and it is appreciated by all. Let us hope for a successful 1992.

Jeff Brunton, Secretary

The London Centre has had a very active and prosperous year, expanding upon programs and activities planned in 1990. One of these involves a long-standing ambition of the centre to construct an observatory. We are presently endeavouring to find a suitable site away from the city lights and various members have been developing drawings of the building that we hope to create. Early in the year we purchased a 16-inch reflector to add to our other two instruments, and this has created extra pressure to find a permanent home for the scopes, a place to use them to full advantage.

London

In the midst of this activity we had to search for a new location for our regular monthly meetings. We found a temporary home in one of the city's libraries and in September we settled into a permanent location in London's fine new police building.

The July 11th solar eclipse was, of course, a very exciting event for R.A.S.C. members everywhere, and some of our own members journeyed to Mexico and Hawaii to see the eclipse in all its glory. They returned with interesting accounts and some great pictures. In the month of August other members attended Starfest and Stellafane, and in November the centre planned what we hoped would be an interesting and informative star night for London's youngsters. Unfortunately the weather was most uncooperative and we had to retreat indoors. However, we were able to entertain a large audience with a fine slide show followed by an impressive display of astronomy equipment brought by several centre members. Peter Jedicke visited the Texas Star Party and Tom Glios attended the Riverside Telescope Makers Convention in California.

During the year we were privileged to hear a number of guest speakers on a variety of subjects, and some of our own members provided extremely interesting programs. The following is a list of these events.

February	Annual meeting. Amateur Astronomy as a Science by Damien Lemay (R.A.S.C. President)
April	Choosing a Telescope by Dr. David Toth
May	Comets and Meteor Showers by Dr. James Jones
June	A Nova Search in M14 Using the H.S.T. by Dr. Amelia Wehlau
July	Meteor Observing by Peter Brown (Edmonton Centre)
September	Solar Eclipse Wrap Up by Dr. David Toth, Eric Clinton, Dale Armstrong, Peter Jedicke and Philip Schmidt
October	The Vancouver G.A. by Bob Duff
November	Dr. David Toth presented a slide show
December	Astronomy for Elementary School Children by Dale Armstrong The Riverside Convention by Tom Glios

All of our programs and activities were well documented by London Centre Editor, Eric Clinton, now completing his fourteenth year in that post. Eric provides each member with a monthly edition of *Astronomy London* and distributes copies to R.A.S.C. centres across the land.

Grant Carscallen, Secretary

Nous avons connu une année assez spéciale avec la retour du Concours Annuel des Fabricants de Télescopes d'Amateurs. Le 2-4 août à St-Adolphe d'Howard, plus de 200 participants et visiteurs se sont présents.

C. F. de Montréal

Comme d'habitude, nous avons été choyés par les conférences données par des professeurs de l'Université de Montréal. M. Gilles Beaudet a eu l'honneur de commencer la série avec un sujet de pointe avec "Les résultats de satellite C.O.B.E. et de leurs implications". Le 5 mars, M. Pierre Lacombe nous parlait des vingt-cinq ans du Planétarium Dow de Montréal; le 2 avril, M. Pierre Bergeron nous parlait des "atmosphères des naines blanches"; le 7 mai, "Les régions centrales de la Galaxie" ont été expliquées en détails par M. François Wesemael et M. Daniel Nadeau à fini la saison avant la fermeture de l'été.

M. Claude Carignan et Serge Demers nous parlaient, une fois les vacances terminées, de la "Matière non-lumineuses" et de "L'évolution dynamique des nuages de Magellan".

Nous avons été présent à la journée internationale de l'astronomie au Planétarium Dow, par la présentation d'un kiosque sur les activités des membres et M. Patrice Gérin-Roze, président, nous représenta au Congrès annuel de l'A.G.A.A.

Le Comité d'observations de la S.A.M. présenta des projets d'observations sur la phase de la planète Vénus, sur Jupiter et Saturne sans oublier des événements spéciaux telle qu'une occultation d'une étoile par un astéroïde.

Pour une vingt-sixième fois nous avons publié notre Annuaire Astronomique, en y ajoutant de nouvelles sections. Quelques membres ont construit des miroirs de télescopes sous l'oeil vigilant des experts dans notre nouvelle salle à optique.

Alain Roussel, secrétaire

1991 was an active year for the Montreal Centre which has a membership of about 115.

The mainstay of our activities is the series of Saturday night talks. Our observatory on the McGill campus was frequently packed during the year when thirteen speakers (eight of them professional astronomers) gave a total of seventeen lectures. Marc Seguin, who gives a popular astronomy course at McGill, spoke to us twice on the themes "Cosmic Coincidences" and "Is the Big Bang Dead?". Dr. Jaymie Matthews, newly arrived in Montreal from U.B.C., also gave us two talks, one on stellar seismology and the other on Doppler imaging of stars. Our members learned a lot from both of these enthusiastic speakers. In August, our centre was very fortunate to have been addressed by Dr. David Crawford, the founder of the International Dark Sky Association. Dr. Crawford amazed the audience with slides demonstrating improved lighting and greatly reduced light pollution using properly designed fixtures.

The Observers Group, which meets once a month under the leadership of Richard Brodtkin, grew in size from twenty-six to forty-eight members during the year. Although ability ranges from beginners to very experienced observers, all members especially enjoyed comparing a 3" refractor, 6" reflector and 4.5" Schmidt-Cassegrain under the planet-filled May sky. Thanks to Louie Bernstein, the Observers Group had a private viewing of the current night sky and the 25th anniversary program at the Dow Planetarium.

A real boon to our growing band of hard-core observers has been the excellent observing site at Parc Sutton under the auspices of Bernard Schirdewahn. With access to this comfortable dark site, three of our members, Gary Angers, Mark Bratton and Bill Strople have completed their Messier lists. At the beginning and end of the year, our members participated in the Pleiades Star Count, organized by the International Deep Sky Association in its effort to map light pollution across North America.

Astronomy Day, in the spring, was a success with our members manning a booth at the Dow Planetarium in conjunction with other astronomy clubs and stores. 1 200 people visited the planetarium. Our open house at the observatory was less well attended, so in June we held another one with 150 people attending. In the fall, we had yet another open house which was very well attended after an effective publicity campaign by Chuck Johnston. In the late summer, Louis Bernstein got us excellent coverage on radio, T.V. and in the *Gazette* which resulted in many enquiries and over twenty new members.

In February the Montreal Centre entered the computer age with the purchase of a computer and printer. We are finding these almost indispensable for keeping membership records and generating membership lists, compiling our publication, *Skyward*, and printing mailing labels. During regular meetings members thoroughly enjoy the astronomical programs, one of which, Dance of the Planets, was generously donated by one of our members.

The Montreal Centre also received a \$1,500 grant from the Special Projects Fund for our video project. The board of directors purchased a video camera, V.C.R. and T.V. monitor which are now being used by a ten member committee led by Mario Caluori to build a library of our best talks, centre events, instructional tapes and astronomical events.

For the second year, our librarian, Gary Angers, has worked wonders with the library. He added sixty-six new volumes as well as many magazines and other publications. Gary has done so with a surprisingly small outlay, using gift certificates from encouraging our members to join the Astronomy Book Club and to subscribe to *Astronomy* magazine. He has also been applying

Montréal

Library of Congress labels to the books and covering them with polyester film supplied by one of our centre's most generous benefactors, Bill Strople. The library area was considerably beautified by our treasurer Suzanne Moreau, who painted the book shelves and made curtains.

At our annual meeting in November, we had the pleasure of recognizing some of our members for long-time service. Robert Venor, our auditor for over fifty years and William A. Warren were given honorary memberships. Mario Caluori, our outgoing president, was presented with the Charles Good Award for outstanding service to the centre.

Carole Talbot, Secretary

All meetings were held in the LaMarsh Room of the Centennial Library in Niagara Falls, Ontario at 19h30 on the fourth Thursday of the month, except in June, July, August and December. The following is a list of the speakers and topics for our regular meetings in 1991.

Niagara

- January 24 Annual Meeting. Reports from officers, election of new directors and planning for the future.
- February 28 **Building an Observatory? Yes.** Also, two videos: "A New Window to the Stars" and "Powers of 10". First of the "Introduction to Astronomy" sessions.
- March 28 Plans for an observatory; Randy Taylor showed his 6" f/8 Dobsonian, built for under \$500; Slides by Hugh MacLean with a commentary on how they were made.
- April 25 Ray Merrick shows the design drawings for the observatory and answers questions; Slides by Greg Saxon.
- May 23 **Life, the Universe and Everything – Assorted Topics from the Space Program** by John van Ophem
- September 26 **The Astronomy Scene in B.C.** by John Nemy (Whistler, B.C.)
The slide show presented at the opening of the observatory was repeated, with commentary by Ray Merrick and Hugh MacLean; Carl Milazzo showed this summer's planetary conjunctions as well as deep sky objects.
- October 24 Carl Milazzo showed some of his best slides, after which the N.A.S.A. video "The Dream is Alive" was shown
- November 28 **Deep Sky Observing Techniques** by Carl Milazzo. Also, the N.A.S.A. video "Spaceflight: The Application of Orbital Mechanics".

In the heat of the summer, some of our members slaved on building an observatory, temporarily standing on Rick de Rosa's farm, and housing the 17.5" telescope. The official opening was on August 18th, with a barbecue and a slide show of the construction.

The Niagara Centre/N.F.C.A.A. Fall Banquet was held at the Skylon again this year, with guest speaker Dr. John Percy who spoke on "Science with a Small Telescope".

This year Dr. John Black's astronomy class at Brock was too large to handle the traditional star night in one evening, so the Niagara Centre supplied telescopes on two evenings in early October.

There have been quite a few clear nights this year, but they did not often coincide with our scheduled members' or public star nights. Astronomy Day was only one of them that didn't.

W. Jutting, Secretary

The Ottawa Centre membership for 1991 was 256 members, consisting of 188 regular, 28 senior, 8 junior and 32 life members. This is a decrease of six from the 1990 total. The regular centre meetings, which were organized by Sandy Ferguson, started in January with a talk by Paul Klauninger of the National Museum of Science and Technology. He spoke on galaxies, describing their evolution, types, the distance scale, galaxy clusters, collisions between galaxies and quasars. The next talk, in February, was given by Dr. Donald Morton of the Herzberg Institute of Astrophysics on "Why Does Canada Need Eight Metre Telescopes". He described how Canadian researchers hope to join forces with international partners to build larger instruments for the purposes of conducting leading-edge research.

Ottawa

In April, Dr. David Sinclair of the Centre for Research in Particle Physics at Carleton University explained what neutrinos are and why they may be of fundamental importance in astrophysics and cosmology. He described the Sudbury Neutrino

Observatory, a project to build a neutrino telescope in Canada. The last centre meeting before summer featured Alan Montgomery who discussed the question "Is the Speed of Light a Constant?".

After the summer break, the centre meetings started up again in September with Damien Lemay giving a talk entitled "Astronomy – A Hobby and a Science". In October we had Ottawa Centre member Steve Dodson from Science North in Sudbury talk about "Adventures of a Stargazer in Northern Ontario".

The year concluded with the annual dinner talk which was held in November. Guests were treated to a talk by Peter Jedicke from Fanshawe College on "Observing the Globular Clusters".

Our long association with the National Research Council was ended for several reasons and the Ottawa Centre was requested to find another location to hold our meetings. It was decided to relocate to Carleton University in February.

There were six successful members' star parties held, up to and including November. Those attending the November star party were treated to what was, for most people there, the most spectacular display of aurora borealis ever seen.

Several meteor shower observing sessions were organized this year by Rolf Meier at his home near Almonte. The Perseid shower was quite successful this year, with a series of nights of observing leading up to the maximum when forty-four meteors per hour were recorded.

A major highlight of the year was the total solar eclipse in Mexico, which several Ottawa members attended. While some experienced partially cloudy skies (caused, ironically, by the eclipse itself) most were apparently quite impressed and enjoyed the event. Of particular interest, Rob Dick has reported some preliminary results from the shadow bands experiment which he and Paul Boltwood designed and built.

This year seemed to herald the era of the CCD at the Ottawa Centre. Hardly a meeting went by without reports on CCD operation, design of CCD cameras or recent imaging results.

At the Indian River Observatory this year, the dome donated by Bob Haughton in 1990 was placed over the 10" telescope mount.

This year, the centre was the recipient of another observatory. This time the donor was Art Fraser. Two teams of volunteers were required to load and unload the trailer at each end of the seventy kilometres trip to Almonte. While the eight foot dome made it in one piece, the base had to be split into two sections for the move.

The number of visits to the observatory, up to the end of October this year, was 232, compared with 306 during the same period last year. Visitors this year included groups from the Ottawa Field Naturalists Association and the Hillcrest High School Astronomy Club. The observatory was also the site for a number of star parties during the year.

The council met twice in 1991: January and September. At the January meeting of council, the following committees were appointed: *Astronomes* Editorial Advisory Board, Dinner, Programme, Observatory, Nominating, Awards, Membership, Activities and Facilities, Library, and Light Pollution.

The centre was saddened by the passing of three of its members: Dr. Peter Millman, Caroline Hicks and Fillmore Park.

Jane Lund, Secretary

Au cours de la dernière année, notre centre s'est afféré à redorer son blason auprès du public. Pour ce faire divers projets ont été réalisés. Je me permettrai donc, ici, d'en résumer les grandes lignes tout en soulignant le nom des personnes membres qui ont contribué à la réalisation de ces projets.

Tout d'abord, dans les nouveautés; un tout nouveau sigle à l'effigie du Centre du Québec réalisé par Caroline St-Onge; un dépliant publicitaire accompagné d'un tout nouveau formulaire d'adhésion réalisé par Alain Daigle avec la participation conjointe de Dan Côté et Jean-François Lallier a eu pour objet le recrutement de nouveaux membres; l'installation d'un service téléphonique doté d'un répondeur pour mieux informer nos membres des activités à venir a été mis sur pied avec la collaboration de Guy Campeau et Alain Daigle; la conception et le développement d'un progiciel pour le nouvel Almanach Graphique 92 réalisé par Patrick Dufour avec la participation conjointe de Dan Côté et de Jean-Marie Fréchette; un tout nouveau bulletin d'information repensé et baptisé "La Chouette", dont le privilège revient en astronomie; enfin, un groupe d'observateurs a vu le jour en début d'année 91. Ce groupe réunit principalement les "mordu(e)s" de l'observation du ciel et se veut ainsi un milieu favorable pour faciliter les échanges entre observateurs.

Comme à chaque année des activités tel que des soirées conférences et d'observations accompagnées de causeries ont eu lieu au premier quartier de Lune de chaque mois au Fomaine de Maizererts.

Conférences mensuelles en 1991:

- | | |
|------------|---|
| 16 Janvier | Le système solaire par Dominique Beauchamp |
| 06 Février | l'Almanach Graphique par Martin Rochette |
| 06 Mars | l'Optique en Astronomie par Jonny Gauvin |
| | Les observations réalisables par l'amateur par Damien Lemay |
| 17 Avril | Logiciels Astromiques par Dan Côté |
| 08 Mai | Technologie des grands miroirs de télescopes par Patrick Dufour |
| 05 Juin | Détecteur électronique appliqué à l'astronomie par Alphonse Tardif |

Québec

Centre Reports

- | | |
|--------------|--|
| 04 September | Sujets multiples portant sur les activités de l'été par groupe des observateurs |
| | Les pluies de météores par Jean-Marie Fréchette |
| 02 Octobre | l'Observation et le dessin des galaxies par Dominique Beauchamp et Gilles Chapdelaine |
| | La construction de son observatoire par Martin Rochette |
| 06 Novembre | Les éclipses de soleil par Damien Lemay |
| | Films sur des éclipses de soleil par Edward Bullman |
| 04 Décembre | Soirée travaux des membres pendent l'année par des observateurs |

Soirées d'observations en 1991:

- | | |
|--------------|---|
| 14 Septembre | Invitation au cherche-étoiles, observation au télescope. |
| 14 Décembre | Observation des étoiles variables avec M. Gilles Chapdelaine. |

De plus d'autres activités à l'extérieure du centre contribuées à agrémenter et en enrichir la connaissance des membres qui y ont participé. Autres activités (avec participants) en 1991:

- | | |
|---------------|---|
| 20 Avril | Journée internationale de l'Astronomie (Groupe des Observateurs) |
| 12-13 Juillet | Festival D'Astronomie du Mont-Mégantic (Dominique Beauchamp, Jonny Gauvin, Thommy Jenkins et Alain Daigle) |
| 03 Août | Congrès Annuel de Fabrication de Télescope Amateur (C.A.F.T.A.) (Martin Rochette et Alain Daigle) |
| 04 Août | Journée familiale des loisirs scientifique au Domaine de Maizerets (Tout les membres du centre) |
| 10-11 Août | Congrès des Astronomes Amateurs de Stellaphane (Denis Martel, Dominique Beauchamp, Denis et Jonny Gauvin, Pierre Lacombe, Patric Dubé et Alain Daigle) |
| 9-11 Août | Perséide de la vallée de la Jacque Cartier (Jean-Marie Fréchette, Patrick Dufour, Dan Côté, Jonny Gauvin, Pierre Lacombe, Patrick Dubé et Alain Daigle) |
| 18-20 Octobre | Congrès de l'A.G.A.A. (Martin Rochette, Marthe Asselin, Jean-François Lallier et Alain Daigle) |

Cette année encore, un cours d'astronomie a été offert aux non-initiés. Ce cours fut donné par l'un de nos membres Guy Campeau, pendant les sessions d'Hivers et d'Automne 91.

Enfin, le Centre de Québec dispose, depuis plusieurs années déjà, de l'observatoire du collège de Lévis situé à St-Nérée-de-Bellechasse. Les membres intéressés par l'observation des phénomènes célestes ont été invités à y participer tous les samedis et dimanches soir de beau temps pendant l'année.

Avant de terminer, il me tient à coeur de signaler, ici, le départ de l'un de nos membres qui fut l'un des pères fondateurs du Centre du Québec au début des années quarantes. En effet, après quelque mois de maladie, M. Albéric Boivin décédait à Québec en août dernier. Le Centre de Québec a alors perdu un grand homme, dont la carrière scientifique a été l'une des plus fécondes au Canada français. Chercheur émérite et professeur à la Faculté des Sciences et Génie de l'Université Laval, ce pionnier s'est fait connaître principalement dans le domaine de l'optique. C'est avec ferveur que nous, les membres de Centre de Québec, lui dédions un dernier hommage pour tout ce qu'il a fait pour l'avancement de la science et pour le bien fait de la communauté!

Alain Daigle, secrétaire

Well here I am writing our second annual report (and my first). January 1991 began with presentations of astrophotography and computer software programs from two of our members. This was the first meeting I attended and I joined the society that evening. In February we were treated to a slide show about Voyager's flyby around Saturn, which was well received. March was a good month for observing. After our general meeting we viewed a film named "Heaven and Hell", then we all went up to the observatory for a couple of hours. In April we were able to watch a couple of videos, "Comet" and "Star Life", but the skies did not co-operate for our usual star hopping. May proved to be a fairly wet month although we did manage to complete some more fences at our dark site observation compound at Davin, Saskatchewan. The regular meeting concluded with a slide presentation on the past construction work at the Davin site and on the Saskatchewan Science Centre's Kalium Observatory.

The summer kicked off with no less than four star parties scheduled among many impromptu outings to the Davin site. Also during this time, Al Andrews, the observatory director, had a meeting with Mr. Hall of the Saskatchewan Science Centre. They discussed how the Kalium Observatory might be improved for the enjoyment of many amateur astronomers, staff members of

Regina

the science centre and the general public. They determined that the 6" Unitron would require considerable work and parts to bring it to a reasonable condition and that it was too large an instrument for the observatory and too large to enjoy! The science centre has agreed to replace the Unitron with a 5" Dobbin telescope, install an exterior entrance and build a platform to compensate for the unusually high walls. We expect this work to be completed in 1993 due to the centre's funding restraints.

We held our executive elections in October. After the meeting we enjoyed a video on the solar eclipse from Baja California. In November we began planning for our new term of office. A short meeting was held in December and Al Andrews hosted a wonderful Christmas party. This draws to a close our brief summary of 1991. We can honestly look back on some really good nights of stargazing and wonder at how fast the year flew by.

Doug Hala, Secretary

The centre continued several programs of individual observation, small group study, public service and publication of the centre's journal "Urania". An example of the Sarnia Centre's community involvement was the "Evening with the Stars" program, held in co-operation with the Recreation Department of the City of Sarnia/Clearwater.

The Sarnia Centre will extend associate memberships to those persons who have encountered the financial hardships which have hit this region so acutely. In the recent civic elections a referendum was held and as a result, the centre's home in the City of Clearwater will revert back to the name of "Sarnia".

Sarnia

1991 was a good year for the Saskatoon Centre. We have forty-two members consisting of thirty-seven regular, one junior and four life members. The Saskatoon Centre held a total of ten executive and general meetings in the observatory and R.M. Bill Health Science Building on the University of Saskatchewan campus. The meetings were held on the third Monday of each month. No meetings were held in July and August. Presentations and lectures were as follows:

Saskatoon

January	The Aurora and Its Effect on the Earth by Vance Petriew
February	A slide presentation by Mike Wesolowski
March	The History of Canadian Astronomy by Ed Kennedy
April	A video presentation, "To Boldly Go"
May	Upcoming Summer Events and Using an Observing Calendar So You Don't Forget Them by Richard Huziak
October	A slide presentation on summer activities by Mike Wesolowski
November	The 10 Metre Keck Telescope and Time Balls by Ed Kennedy
December	Basic Mirror Grinding by Richard Huziak & Gordon Sardy

The Saskatoon Centre's Observers' Group is small but steady, meeting monthly at the centre's dark site.

The summer's activities started with the solar eclipse on July 11th. We had a small but hearty 4% partial eclipse in downtown Saskatoon. Richard Huziak had his solar telescope set up in a downtown sidewalk fair. His presentation drew the attention of shoppers and local media alike. The Saskatoon Centre held its annual public star night on July 19th and 20th. There was a reasonable turnout and excellent viewing for the Variable Cloud Watching Society, however, poor seeing for astronomy!

August 9th and 10th were the dates for the centre's annual Perseid Meteor Shower Watch. The meteor count this year was disappointingly low on these two nights. Four members from the Saskatoon Centre attended the Alberta Star Party.

The Saskatoon Centre has continued this year with its program of lectures to grade school classes. These were provided by Mike Wesolowski and Rick Huziak. As well, mini star nights were held for students at the Salvation Army Camp at Beaver Creek.

The Telescope Committee has been busy this year. A number of mirror blanks are being worked on, including the polishing of the centre's sixteen inch mirror. My final note is on the centre's newsletter, *The Saskatoon Skies* and the collector's edition, *The Saskatoon Lies*. A thanks for the efforts of the editor Jeff Phillips and cartoons by Darrel Wingerak.

Elections gave us a new president, Jim Zeleny, as well as a new secretary, Emilee Searles. All other officers stayed the same.

Astronomy Day, Saturday, April 20th, had quite a few members at Intercity Mall. As in past years we were well received

Thunder Bay

and gained two new members. Two telescopes were at the mall and the evening viewing brought out three, along with approximately 100 viewers. Viewing was good as the sky was clear, although temperatures were just around the freezing mark.

Ted Bronson, our program director, gave a talk and slide show to twenty Girl Guides from the 5th Guide Company of Thunder Bay. It was much enjoyed and he will, no doubt, be asked back next year.

Our General Meeting in May was rescheduled to June in order to coincide with Terry Dickinson's two day stay in Thunder Bay. His talk, to a packed room at a local library, was well received by everyone.

Our annual July star party was held at Sleeping Giant Provincial Park under clear skies. The weather was good for viewing, campers and mosquitos. August saw two star parties, one at Quetico National Park, hosted by Ted Bronson, and the other at Middle Falls Provincial Park hosted by Bob Bishop.

Ted Bronson was one of those lucky people who went to Santiago, Mexico for the solar eclipse in July. We were treated to a slide show and talk about the experience. Bev and Bob Bishop attended Astrofest, south of Chicago, and also had slides and stories for us. Jim Zeleny attended Starfest at Mount Forest and related his experiences as well.

We have been treated to a number of instructional sessions on how to use the Observer's Handbook to locate various items of interest. Jim Zeleny has given us a demonstration on astrophotography and, of course, Bob Bishop has delighted us all with his displays of the "expanding universe" – using a balloon; the "portable planetarium" – two tin cans, a flashlight and a star map; and let us not forget the "stellar heliocentric illustration tissue" – toilet paper!

The year 1991 will best be remembered in the Toronto Centre as the year of the great solar eclipse of July 11th. For many members this event has been anticipated ever since the centre began organizing eclipse expeditions as a regular activity in the 1970's. A group of nineteen members and friends led by Ralph Chou and Jennifer Owen travelled to the Los Cabos area of Baja Mexico, where they met the national R.A.S.C. expedition. They also visited Griffith Observatory, Mt. Wilson Observatory and Palomar Observatory. Many members also participated in the national expedition, of which Randy Attwood of this centre was an organizer. Members of the centre also travelled to sites in Hawaii, Mexico and Central America to observe the eclipse. Fortunately, most, if not all, of the travellers saw it.

Toronto

The Toronto Centre's most visible activity is its public education programme, which in 1990-1991 was co-ordinated by Chairman John Ginder. The 1991 Astronomy "Week" activities began with a display at Fairview Mall from April 11th-13th. Star Night presentations over the following week were mostly rained out, as were the observational activities at the Ontario Science Centre, David Dunlap Observatory, and York University on Astronomy Day, Saturday, April 20th. However, the indoor programmes were very well attended at all locations. Over eighty volunteers from the Toronto Centre, the McLaughlin Planetarium, the Ontario Science Centre, the David Dunlap Observatory of the University of Toronto, and the Petrie Observatory of York University contributed to this year's efforts.

In addition, seven shopping mall displays were held between November 1st, 1990 and June 1st, 1991. These were co-ordinated by Darnley Wright in Metro East, and Bob Taylor in Metro West. Public star nights, each featuring a prominent planet, were held on November 20th, 1990 at Morningside Park (Mars) and on August 6th, 1991 at Morningside and Centennial Parks (Saturn). As in previous years, our members contributed to the public viewing programme on Saturday nights at the David Dunlap Observatory throughout the summer by setting up their telescopes and meeting the public. Toronto Centre members also participated in three Ontario Science Centre observing events; arrangements with the O.S.C. were co-ordinated by John Ginder and Darnley Wright. Nine special group talks were organized for school groups, Wolf Cubs, and other organizations.

On October 27th and 28th, 1990, the Toronto Centre joined with the Canadian Space Society, Students for the Exploration and Development of Space, and The Planetary Society to present the SPACE 1990 conference at the Ontario Science Centre. The conference was attended by 250 delegates. Mary Anne Harrington co-ordinated the Toronto Centre's participation, which included presentations by Terry Dickinson, Paul Fjeld, and Dr. John Percy, as well as solar observing and the centre display.

Dr. Rachel Webster organized an informative and diverse programme of speakers. These were:

October 26th	Chaos and the Stability of the Solar System by Dr. Martin Duncan
November 23rd	Active Galactic Nuclei by Dr. Michael deRobertis
February 22nd	Neutron Stars by Dr. Omer Blaes
March 22nd	Molecules in Space by Dr. Bill Latter
April 26th	Astronomy at the South Pole by Dr. MaryJane Taylor
May 24th	Magnetic Phenomena in the Universe by Dr. John Wang
June 21st	Gravitational Microlensing by Dr. Rachel Webster
September 20th	The Search for Extraterrestrial Life by Dr. John Percy

The Toronto Centre also held two joint meetings with the Royal Canadian Institute. On October 14th, 1990, Dr. David Malin spoke on "Things to See and Do in the Dark", and in February 17th, 1991, Mr. Ian Shelton spoke on "Supernova 1987A: Sifting Through the Ashes".

The Observational Activities Committee organized eleven Members' Nights. A wide range of subjects were discussed by thirty-two members, who gave seventy talks on subjects including the Sun, auroræ and other atmospheric phenomena, variable stars, occultations, Mars, observing methods, and photographic equipment and techniques. Two of the meetings were preceded

by demonstrations in the McLaughlin Planetarium Star Theatre conducted by Phil Mozel and Bruce Waters. Robert Chapman organized twelve Members' Observing Workshops at Morningside Park, and William Gardner organized two Members West Star Parties at Cronin Park in June 1991.

The Annual Open House at David Dunlap Observatory was held on September 14th. We thank Dr. Ernest Seaquist, Director of the observatory, Dr. Tom Bolton, Associate Director, and the staff and students for their hospitality.

Eric Galt and Darnley Wright organized refreshments for all regular and Members' Night meetings.

For the membership year ending on September 30th, 1991 there were 690 regular, 98 senior, 46 youth and 85 life members, for a total of 919. There were also 90 associate members. Membership fell 11.5% compared to the previous year.

It is with regret that we record the deaths of Dr. Gustav Bakos, Eric Galt, Sinclair Hemingway, Gordon G. Myer, R. Vernon Ramsay, William J. Stephenson, and James V. Wright.

The Toronto Centre gratefully acknowledges the donation of a 3.5-inch Questar telescope and tripod by the family of the late Mr. M. Chudleigh, a former member. We have also received donations of two complete refractor telescopes, and an equatorial mount for a large refractor. These instruments will be used in the public education programme. Robert May, Chairman of the Archives and Property Committee is compiling a new catalogue of the centre's equipment. Members who are storing items for the centre are asked to contact Mr. May and confirm that these items have been included in the inventory.

A new project was begun this year. A small working group headed by Otmar Eigler is preparing a photograph album on the history of the Toronto Centre. It will contain a photographic record of centre events, members and documents of archival quality.

Mary Anne Harrington and Paul Fjeld continue to produce and distribute our newsletter SCOPE. They note that more members are submitting reports on observations than ever before. A special "Guide to the Centre" designed by Paul Fjeld was published in the March/April issue. This resource guide for new members has been well received.

Tony Horvatin, Elizabeth Doucette and Otmar Eigler organized this year's picnic, which was held on June 1st at High Park. Breaking tradition, thirty members and family enjoyed a sunny, warm day of games, food and fireside tales. The Toronto Centre thanks Ault Foods Ltd. for donating the drinks and ice cream for this successful day.

In mid-June, the equipment housed in the Toronto Centre's observatory in Schomberg was removed by a small work party. The observatory, opened on August 21st, 1976, had fallen into disuse in recent years. Robert May has diligently kept it in good condition. The observatory building has been sold to the North York Astronomical Association. We thank Mr. and Mrs. Richard Kelsch for making the property available to the centre over the years, and wish the N.Y.A.A. success with their new acquisition.

The Observatory Development Committee under Chairman Randy Attwood continued its efforts towards site selection, design and funding for a new observatory. Several members of the committee are scouting dark sky observing sites as well.

Activities in the optical workshop were co-ordinated by Eric Galt until his unexpected death this summer. Council is contacting participants in the workshop to appoint a new co-ordinator so that operations can resume as soon as possible.

The 7th Annual Awards Banquet was held on April 6th at The Old Mill. The hosts for the evening were Paul Fjeld and Tom Quigley. Our speaker was Professor Barbara Murck of Erindale College, who spoke on "New Perspectives on Planet Earth", comparing geological features on the terrestrial planets. The following awards were presented: the Bert Winnearls Award: Guy Nason; the Andrew Elvins Award: John Ginder; the Bertram J. Topham Award: Robert Chapman; Messier Certificates: David Christmas and Guy Nason

We thank John and Suzanne Kidner of Perceptor/TelescopesTransCanada for their assistance with door prizes.

In 1991 the Gold Medal of the Royal Astronomical Society of Canada, Toronto Centre was presented to Ian Richard Walker at the Members' Night meeting on August 22nd. Mr. Walker, who is now studying for his Ph.D. at the University of California Santa Cruz, enjoyed the evening of solar eclipse reports.

Past President Ian McGregor was nominated by your council for the R.A.S.C. Service Award in recognition of his service to the centre and the society. As Ian was unable to attend the General Assembly, he was presented with the medal at the centre's meeting on 21 June.

The Toronto Centre thanks all the members who contributed to the success of the activities reported. We wish our former 2nd Vice-President Dr. Rachel Webster success in her new position at the University of Melbourne; our loss is truly Australia's gain. Finally, we thank the staff of the McLaughlin Planetarium for their continued hospitality.

1 991 has been a very busy year with council and regular meetings each month. At these, we have had some outstanding speakers (listed below) provided by our speaker co-ordinator Barry Shanko. We attended one planetarium show and a series of special lectures sponsored by the B.C. Space Sciences Society. We had two members' nights, one in August on light pollution, and one in November celebrating our 60th anniversary.

In May we hosted the General Assembly, and in July many members travelled to Mexico and Hawaii for the eclipse of the Sun. Special events: Astronomy Day on April 20th was very well attended. We again assisted at the Fraser River Festival in June and the Celebration of Nature in September. We held two observing weekends at Manning Park, and some went to the Mount Kobau star party. Our 14" telescope is now permanently housed on the site at Aldergrove Lake Park. For 1992 we have printed our first centre calendar with photos by Rajiv Gupta.

Vancouver

We record with sadness the death on December 15th of Norval Clyne, a longtime member and former treasurer, after a battle with cancer at age seventy.

Speakers in 1991:

February	The Gemini Project by Dr. Gordon Walker
March	Annual dinner. C.F.H.T.: The First Ten Years by Dr. Graham Odgers
April	Black Holes by Dr. William Unruh
May	Measuring Cosmic Background Radiation by Dr. Mark Halpern
August	Terry Dickinson
October	The Magellan Mission by Dr. Keith Raney
December	Planning Today for the Astronomy of Tomorrow by Allan Moore

I wish to thank the membership for the opportunity to have served over the past several years. This will be my last official duty as secretary of the centre, a position which I have enjoyed greatly, but which does not currently receive the time and attention it deserves. I look forward to continuing my participation in activities of a less formal nature, and know that the centre will benefit from the ideas, energy and enthusiasm of my successor.

Victoria

The membership has remained fairly constant between 125-150, even though it is somewhat disappointing that our youth membership continues to be low. Our Education Committee has, however, been very much in demand delivering talks to school classes, Cubs, Brownies, etc. It is also wonderful to see so many new faces at the meetings and joining in the various centre activities, including allowing their names to stand for nominations to council. I hope that members will continue to send information on upcoming events and articles to *Skynews* and will keep the treasurer updated on address changes, etc.

Special thanks to Corporal Brian McNair for allowing our group to enjoy the beautiful Pacific Fleet Club facility.

Alice Newton, Secretary

1991 for the Windsor Centre went quite well. The centre hosted an Astronomy Day display at Devonshire Mall on the 20th of April, which included a presentation on astronomy for persons with impaired vision. On the 6th of July a public education session and later, observing time was sponsored by the centre. A speaker exchange was completed with the Toronto Centre. Some members attended the Stellafane, Starfest and Hidden Hollow conventions.

Windsor

Tim Bennett became the centre's first A.T.M. medalist in winning awards at Hidden Hollow for his exemplary equipment. Our National President, Damien Lemay, visited and gave us a talk in January. Four members of the Windsor Centre, Cam Montrose, Joan Bennett, Steve Pellarin and Frank Shepley saw "The Big One", that is the 1991 total solar eclipse in Mexico first hand. Thanks are expressed to the speakers for their talks and other persons who have made contributions to the Windsor Centre during the year. The centre had nine membership meetings, three council meetings and one social which was held in December. Membership meetings were as follows:

January 31	Astronomy as a Hobby and as a Science by Damien Lemay (National President)
February 19	Atomic Spectroscopy in the Service of Astronomy by Dr. Mordechay Schlesinger
March 19	Making Telescopes by Marty Kunz (President, Warren Astronomical Society)
April 16	A Night Under the Stars by Randy Groudwater
May 21	The Making of Tranquillity by Dan Taylor
June 18	Members' Night. Hubble Space Telescope Slides by C. Joady Ulrich Astronomy Program Update by Paul Preney & Peter Tkacz Here Comes the Sun by Susan Sawyer-Beaulieu
September 17	The Great Total Solar Eclipse of July 1991 by Frank Shepley, Joan Bennett & Cam Montrose
October 15	Videotaping Occultations by Guy Nason (Toronto Centre)
November 19	The Solar System as Seen Through New Eyes by Dan Taylor & Steve Pellarin

C. Joady Ulrich, Secretary

This past year has turned out to be a very successful one for the Winnipeg Centre. Our first important event was held at the Forks Open Market on April 20th in celebration of International Astronomy Day. Centre members hosted a public display and information session in the main concourse. Telescopes were also set up on the terrace overlooking the Assiniboine River. Many people lined up to observe sunspots through the scopes. The public were also invited for a public observing session that evening at Assiniboine Park.

Winnipeg

Centre Reports

This same park was the gathering place for over 600 people on a beautiful spring evening in June. All had come to observe first-hand the triple conjunction. Centre members were overwhelmed by the public's response to an invitation aired on several radio stations. One member counted over forty people patiently waiting in line behind him while he set up his telescope!

Another activity featured Bill Krosley leading a group of interested members in a telescope building course. The program produced several Dobsonian reflectors in the 6" to 12" range.

July saw a minor exodus of centre members – all were heading for Mexico. The September monthly meeting began with several very interesting accounts of the July 11th total eclipse.

Our regular meetings were held on the second Friday of each month at Saint Paul's College on the campus of the University of Manitoba. The meeting agendas were as follows:

January	The Acquisition of a Cheap, Good Quality Telescope by Paul Paradis
February	Astronomy Education from Elementary to High School by Chris Rutkowski
March	A Comparison of the Atmospheres of Earth and Mars by Jay Anderson
April	Members Night. Various slide presentations.
May	The Spectroscopy of ϕ Per by Mary Lou Whitehorne (President, Halifax Centre)
September	Travellers' Tales by Dr. Richard Bochonko
October	Indian Medicine Circles of Western Canada by Don Hladiuk (President, Calgary Centre)
November	The Inclination of Vega by Dr. Austin Gulliver
December	A Guided Tour of the Winter Sky by Ian Cameron (Meeting was held at the Lockhart Planetarium)

In closing we wish to thank all centre members who generously volunteered their time and talents to promote astronomy to the general public via such activities as introductory astronomy courses, classroom visits, media interviews, and guided tours of the Glenlea Observatory. A special thank you goes out to Myra Rutkowski, who for several years has been our intrepid editor. She resigned to answer to a new calling. Baby Victoria Claire was born on December 13th during a raging snowstorm.

Gilbert Raineault, Secretary

Quotes

Strepsiades: But why do they look so fixedly on the ground?

Disciple of Socrates: They are seeking for what is below the ground.

Strepsiades: And what is their rump looking at in the heavens?

Disciple: It is studying astronomy on its own account.

Aristophanes
Greek comic dramatist
(448 B.C.? - 380 B.C.)

Sherlock Holmes pointed out that one might see, yet not observe. That's a basic cause of much human failure.

Isaac Asimov
American biochemist/
author

In reality, nothing but atoms and the void.

Democritus of Abdera
Greek philosopher
(460 B.C. - 371 B.C.)

Every great scientific truth goes through three stages: first, people say it conflicts with the Bible; next, they say it has been discovered before; lastly, they say they always believed it.

Jean Louis Agassiz
Swiss geologist
(1807-1873)

The oldest picture book in our possession is the midnight sky.

E. Walter Maunder
English writer (1900)

THE MINUTES OF THE ANNUAL MEETING OF MAY 19th, 1991

The 1991 Annual Meeting of the Royal Astronomical Society of Canada was held on Sunday, May 19th, 1991 at the University of British Columbia, Vancouver in Room 101-2 of the George F. Curtis Building, (Law Building), with the National President, Mr. Damien Lemay presiding. The meeting began at 9:35 hours (P.D.T.). Approximately sixty-five members and observers from twenty of the twenty-two centres and from the unattached membership were in attendance.

1. APPROVAL OF AGENDA

Mr. Damien Lemay welcomed all who were in attendance at the Annual Meeting. He noted that all centres were represented except for two.

AM9101 It was moved by Dr. Hube and seconded by Dr. Tindall that the agenda be approved. The motion was carried.

2. MINUTES OF THE 1990 ANNUAL MEETING

AM9102 It was moved by Dr. Tindall and seconded by Mrs. Grey that the minutes of the 1990 Annual Meeting be adopted as printed in the December 1990 issue of the *Journal*. The motion was carried.

3. REPORTS OF THE COUNCIL, OFFICERS AND COMMITTEES, AND ADOPTION OF THE AUDITED FINANCIAL STATEMENTS

3.1 REPORT OF THE PRESIDENT

Mr. Lemay's report had been published in the Annual Report of 1990. He expressed his pleasure at serving as president of the society and the use of his Comet Levy photograph of 1990 on the cover of the 1990 Annual Report. Mr. Lemay noted that "Comet Hunter", David Levy, had discovered his sixth comet. As a final note to his report, he pointed out that there would be an additional committee for 1991, the Light Pollution Committee whose members will be constituted at the National Council Meeting of May 19th, 1991 following this Annual Meeting.

3.2 REPORT OF THE SECRETARY

Dr. Tindall's report had been circulated in the Annual Report. A minute of silence was observed for those deceased during the past year.

Mr. Lemay thanked Dr. Tindall for his report.

3.3 REPORT OF THE TREASURER

Mr. Miller wished to combine the treasurer's report with the Finance Committee's report as contained in the Annual Report issued April, 1991. He quoted some of the figures from this report and gave reasons for the amounts that differed from the previous year. In addition, Mr. Miller discussed some of the financial statement items for the 1991 year up to the end of April, 1991 with a prediction of a \$5,000 deficit for the year.

Mr. Lemay added another item to the report related to fee increases for members. He stated that this was too important a matter to raise at the Annual Meeting but would defer the matter to a later council meeting when there would be more time for adequate discussions.

Mr. Miller called attention to the auditor's report on the financial statements of the society as reported in the Annual Report, and made the following motion.

AM9103 It was moved by Mr. Miller and seconded by Mr. Spinney that the Financial Statements be adopted as presented in the Annual Report and printed in the Annual Report issued April, 1991.

A point of discussion arose from the motion when Mr. Kelly stated that while there was no item in the financial report covering the publication cost of the Annual Report in the Bulletin in 1990, there would be an approximate expense item of \$8,000 for this coverage in 1991.

The motion was carried. Mr. Lemay thanked the treasurer for his report.

3.4 REPORT OF THE LIBRARIAN

Mr. Lemay, in the absence of the librarian stated that at the previous National Council meeting, the librarian was asked to make a list of those not making exchanges on the *Journal* exchange list. Dr. Tindall now had a list which he circulated at this meeting for any input. Mr. Broughton, of the Publications Committee, asked that the secretary write a letter on behalf of the society to notify those on the "one way" list that the society can no longer send our publications on a gratis basis, but would encourage them to subscribe to our publications.

3.5 REPORTS OF STANDING COMMITTEES

3.5.1 REPORT OF THE AWARDS COMMITTEE

Dr. Tindall reported that there was one submission for the Simon Newcomb Award; no award will be given this year for this category. Mr. Lemay reported that the Plaskett Medal Award would be given to Mr. Paul Charbonneau at the C.A.S.C.A. meeting this year. He also reported that the subject of the proposed Millman Award would be discussed at the National Council meeting following the Annual Meeting.

Mr. Lemay thanked Dr. Tindall for his report.

3.5.2 REPORT OF THE CONSTITUTION COMMITTEE

Mr. Watson reported that the main activity of the committee was focused on centre by-laws lately, a draft copy (Draft #5) of which would be sent to centres. He expressed the hope that by September, 1991 the centres would be able to submit their by-laws for review by the committee. Mr. Watson referred to the amendments to By-Law Number One of the society as printed on the agenda to this Annual Meeting.

Mr. Lemay thanked Mr. Watson for his report.

3.5.3 REPORT OF THE EXECUTIVE COMMITTEE

There was no report from this committee at this time.

3.5.4 REPORT OF THE FINANCE COMMITTEE

Mr. Miller stated that this committee's report was already covered under previous item 3.3 - Report of the Treasurer.

3.5.5 REPORT OF THE LIBRARY COMMITTEE

There was no further report from the Library Committee at this time.

3.5.6 REPORT OF THE NOMINATING COMMITTEE

Mr. Lemay expressed his gratitude for the services rendered by the retiring recorder, Mr. Lee, and by the retiring librarian, Mr. Beattie, to be succeeded by Ms. Mary Anne Harrington and by Ms. Cathy Cresswell respectively. The attendees responded with a round of applause.

3.5.7 REPORT OF THE PROPERTY COMMITTEE

Dr. Tindall read Mr. Beattie's Property Committee report submitted by E-mail on May 15th, 1991. The report showed that repairs were made to vertical blinds and that the society were spared considerable expense with Ms. Freeman's help in maintaining the property at 136 Dupont St. in Toronto, such as library drape cleaning and spring planting in the front and back yards.

Mr. Lemay thanked Dr. Tindall for his presentation.

3.5.8 REPORT OF THE PUBLICATIONS COMMITTEE

Mr. Lemay had no special report from this committee at this time and called upon the editors for their reports.

3.5.8.1 REPORT OF THE EDITOR OF THE JOURNAL

Dr. Tatum reported receiving an N.S.E.R.C. grant of \$10,000 for the first year and \$5,000 for the second year. He expressed appreciation to those who aided him in the application for this grant. Dr. Tatum made numerous requests for articles for the *Journal*. Recently, C.A.S.C.A. members were asked to submit articles for publication. In his continued quest to improve the *Journal*, Dr. Tatum solicited comments from the readership.

Mr. Lemay thanked Dr. Tatum for his report.

3.5.8.2 REPORT OF THE EDITOR OF THE BULLETIN

Mr. Kelly reported that the new format for the **BULLETIN** was now in place. A schedule of proposed advertising rates for the **BULLETIN** was presented along with requirements from prospective advertisers. Mr. Kelly stated that the Annual Report would now be incorporated into the **BULLETIN** and would entail approximately \$7,900 in 1991 for printing that report. He asked for photographs that would be of interest to readers of the **BULLETIN** and articles for the "Across the R.A.S.C." column. Mr. Kelly proposed to include photographs of centre representatives as well as a full photograph of National Council in the **BULLETIN** to provide closer interaction with members at large.

Mr. Lemay thanked Mr. Kelly for his report.

3.5.8.3 REPORT OF THE EDITOR OF THE OBSERVER'S HANDBOOK

Dr. Bishop reported a 9% drop in Handbook sales for the year, due mainly to the economic climate, and secondly perhaps due to an increased Handbook price, \$13.50 for a single issue. In 1992, he stated that the price

would rise by \$1.00, 80¢ of which would account for a 6% increase in inflation, and 20¢ of which would compensate for postal rate increase. The \$14.50 price would still compare favourably with those of the competition - \$15.00 for the B.A.A. Handbook. As a point of information, Dr. Bishop pointed out that the University of Toronto Press had printed the Observer's Handbooks for over seventy-one years, and for the last five years had held the cost of printing to 1¢ per page (1990 cost).

In the discussion, Professor Kennedy noted that the I.A.U. will be holding their meeting in Buenos Aires, Argentina in July and it would be timely to send copies of the Observer's Handbook to that meeting. Dr. Bishop concurred with this idea and would provide necessary copies.

Mr. Lemay thanked Dr. Bishop for his report.

3.5.8.4 REPORT OF THE HISTORICAL COMMITTEE

Dr. Tindall, on behalf of the Historical Committee under the chair of Dr. Brooks, presented his report which recognized Dr. Millman's great contribution during his chairmanship. Dr. Tindall stated that the committee had been charged with investigating means of providing archival storage for the records of the society and would be making proposed recommendations for centres regarding record preservation and storage. He reported that progress had been made in this regard. A final notation in the report, with regret, was the sale of the Prince Edward Island Planetarium, comprising a Spitz A3P projector, sixty seats, and a dome for \$1,500 to a local entrepreneur.

Mr. Lemay thanked Dr. Tindall for his presentation.

3.6 REPORT OF SPECIAL COMMITTEES

3.6.1 REPORT OF THE CENTENNIAL COMMITTEE

Mr. Broughton, on behalf of Dr. Higgs, chairperson of this committee reminded attendees that this committee was an amalgamation of two previous committees, the Centenary Committee and the Centennial Fund Committee at a National Council meeting in 1990. He reported the following amounts contributed to the funds since December 31st, 1990.

Endowment Fund	\$632
Centennial Fund	\$656
Centres Fund	\$205

Mr. Broughton stated that the terms of reference for the Centennial and Endowment Funds have still not been approved by council. The amounts in the funds as of December 31st, 1990 have been printed in the December, 1990 issue of *The Journal* under the 1990 Annual Meeting of the R.A.S.C.

3.6.2 REPORT OF THE COMET HALLEY TIME CAPSULE COMMITTEE

Mr. Watson reported that the Comet Halley Time Capsule had been sealed and was ready for delivery to National Office complete with a photograph of National Council in readiness for the year 2061.

Mr. Lemay thanked Mr. Watson for his report.

3.6.3 REPORT OF THE COMPUTER USE COMMITTEE

Mr. Miller reported that the retired five year old I.B.M. computer would be used as a back up to the recently acquired "386" based computer. Data was now being transferred from the existing computer to the new unit.

Mr. Lemay thanked Mr. Miller for his report.

3.6.4 REPORT OF THE MEMBERSHIP SURVEY COMMITTEE

Mr. Lemay reported that a membership survey questionnaire was circulated at the previous National Council meeting for review and that Mr. Jim Himer, the chairperson of the committee, had asked to be replaced.

3.6.5 REPORT OF LONG RANGE PLANNING (L.R.P.) COMMITTEE

Mr. Lemay stated that pending results of the Membership Survey Committee's work, no definite action would be taken by the L.R.P. Committee at this time.

3.6.6 REPORT OF THE MINI-HANDBOOK COMMITTEE

Mr. Enright reported that progress was under way for "The Beginner's Observing Guide" (Mini-Handbook), and that application had been made to Science Culture Canada for a \$4,700 grant. He stated that it would take one month for a response.

In the discussion, Mr. Broughton inquired whether the committee had investigated the mechanics for the distribution, advertising, and marketing of this publication. Mr. Enright responded that he had corresponded with the Scout movement and was encouraged by the fact that they would assist in marketing plans.

Mr. Lemay thanked Mr. Enright for his report.

3.6.7 REPORT OF THE SEAL COMMITTEE

Mr. Auclair stated he would add to the previously submitted report at the last council meeting by thanking council for the enhanced seal image presentation at that time, and encouraged all to increase the visibility of the image, and to support centres on their sales items bearing the image.

Mr. Lemay thanked Mr. Auclair for his presentation.

3.6.8 REPORT OF THE SOLAR ECLIPSE EXPEDITION 1991 COMMITTEE

Mr. Watson reported that final arrangements had been made with the travel agent, Sunquest Incentive Travel and the new carrier for the Expedition, Lineas Aereas LaTur, S.A. de C.V. A copy of the Charter Transportation Agreement dated May 6th, 1991 was circulated. The trip would be the culmination of two years of activities for the committee.

Mr. Lemay thanked Mr. Watson for his report.

3.6.9 REPORT OF THE SPEAKER EXCHANGE COMMITTEE

Mr. Loehde stated that the concept of a Speakers Exchange Committee was established to aid centres in obtaining speakers for their programs on an exchange basis. To expand the use of this program, the committee had correspondence with ten centres for their input. As a result, Mr. Loehde stated that five recommendations were made by the committee, a list of which were circulated at this meeting. After some discussion of these recommendations, Mr. Loehde made the following motion.

AM9104 It was moved by Mr. Loehde and seconded by Mr. Bishop that the five recommendations made by the Speakers' Exchange Committee and dated May 15th, 1991 be adopted as circulated.

There was much discussion on the implementation of the recommendations, the cost to the society, and the manner of updating the list.

AM9105 It was moved by Dr. Bishop and seconded by Mr. Spinney to amend motion AM9104 by adding to recommendation number 2 the words, "subject to the total amount budgeted for the Speakers' Exchange Program." The amendment was carried.

Dr. Tindall brought up a number of points of discussion to motion AM9104. a) the name "Speakers Exchange" should be changed in as much as there might be no exchange visit made if it became a "one way" speaker visit. b) the \$400/Centre/year and the \$800 accumulated over two years recommendation was not clear in which took precedence. c) the recommended rate of 20¢/kilometre automobile use should be the same as specified for travel to National Council meetings.

Mr. Broughton stated that some clarification was required in the interpretation of some of the proposed recommendations by the committee and the existing travel grant policy. Therefore, he moved to table motion AM9104.

AM9106 It was moved by Mr. Broughton and seconded by Mrs. Grey that motion AM9104 be tabled.

In discussion, Mr. Watson felt this was clearly a matter to be decided by National Council and it was not appropriate for the society to deliberate the matter here. He stated that National Council was to conduct the business affairs of the society except with respect to those matters prescribed by the by-laws of the society, and that was exactly the function for which the centre representatives were elected.

Mr. Lemay asked the chairperson of the committee to write another set of revised recommendations consistent with existing travel grant policies and the society's By-Law Number One to be discussed at the fall National Council meeting.

Mr. Loehde suggested that centres start preparing a list of their speakers and subjects that could be used for exchange and submit to National Council prior to the next fall National Council meeting to save time. Mr. Lemay suggested further that centres submit their speaker list to the editor of the **BULLETIN**, Mr. Kelly. Mr. Lemay thanked Mr. Kelly for accepting these lists.

After the discussions, the motion was carried.

4. BY-LAW AMENDMENTS (ENCLOSED WITH AGENDA 5/19/91)

Mr. Watson gave an account in which amendments and changes to society by-laws might be effected through the council, Consumer and Corporate Affairs Canada, and the society. Then he presented an historical sketch leading to amendments to the society's By-Law Number One. He stated that through the process over the past two years, typographical errors and language inconsistencies were found. Mr. Watson referred to those changes and amendments in the by-law as printed in this meeting's agenda.

AM9107 It was moved by Mr. Watson and seconded by Mr. Auclair that amendments to By-Law Number One of The Royal Astronomical Society of Canada as passed by special resolution of the council and as distributed with the agenda of the Annual

Meeting be adopted by the society.

There ensued a great amount of debate centered around the use of the word "Chairpersons" in amendment 5 to By-Law Number One, ranging from the perceived debasement of the English language to the historical significance of gender specific terms in the English language.

AM9108 It was moved by Mr. Bailey and seconded by Mr. Young that amendment 5 to By-Law Number One of The Royal Astronomical Society of Canada as appearing in the agenda of the Annual Meeting of the society be deleted.

After more discussions on the merits of language and parliamentary procedure related to the amendment, the amending motion AM9108 was defeated. Mr. Lemay now called for a vote to the original motion AM9107. The motion was carried by a two-thirds vote.

5. ELECTION OF AUDITOR

AM9109 It was moved by Mr. Miller and seconded by Mr. Spinney that the present auditor C.J. Tinkham & Associates - Paul Brocklesby be appointed for another year. The motion was carried.

6. OTHER BUSINESS

a) Mr. Miller drew attention to the fact that the London Centre had submitted their financial report. However, several of the expense entries did not conform with the standard official forms of the society and were therefore difficult to assign the precise allocation of expenses. Since financial reports of centres and of the society are printed in a certain prescribed form in the annual report, Mr. Miller strongly encouraged centres to submit their financial statements in the standardized format. Mr. Duff said he would convey this information to the London Centre.

b) Mr. Howell felt that the Ruth Northcott Lectures would generate an interest in the life history of Ruth Northcott herself. He therefore proposed to make the following motion.

AM9110 It was moved by Mr. Howell and seconded by Mr. Dick that a short video tape be prepared on Ruth Northcott's career.

After some discussions on the feasibility and cost to the society for such a project, the motion was defeated.

c) The question of the degree of biodegradability of the plastic envelopes used in The *Journal*, **BULLETIN**, and Observer's Handbook mailings came up at this meeting. The Society was asked to consider eliminating this type of envelope in favour of other types, such as recycled paper as used in our **BULLETIN** publication. Mr. Lemay said this would be referred to the Publications Committee for consideration.

d) Mr. Lemay announced that the next General Assembly of the R.A.S.C. would be held in Calgary, July 1st to 5th, 1992.

7. ADJOURNMENT

AM9111 It was moved by Mr. Spinney and seconded by Mr. Lee that the 1991 Annual Meeting of the society adjourn. The motion was carried.

Adjournment was at 11:45 hours P.D.T.

Respectfully submitted



Henry Lee
Recorder

G.A. Bakos (Toronto)
Mr. S. Bryant (Hamilton)
Mr. Norval Clyne (Vancouver)
Mr. N.P. Elphinstone (Calgary)
Mr. E. Galt (Toronto)
Mr. S. Hemingway (Toronto)
Miss C.B. Hicks (Ottawa)
Mr. J.M. Jouvent (U.S.A.) (1990)
Miss Mary King (Halifax) (1990)
Rev. J. Kline (U.S.A.)
Mr. Gordon Myer (Toronto)
Mr. F. Park (Ottawa) (1990)
Mr. R.V. Ramsay (Toronto)
Dr. Willibald Roehrl (Halifax)
Dr. W.J. Stephenson (Toronto) (1990)
Mr. R.M. Wagner (U.S.A.)
Mr. J.V. Wright (Ottawa) (1990)

Deceased Members

Dr. V.A. Ambartsumian (C.I.S.)
Dr. R. B. Baldwin (United States)
Dr. F. M. Bateson (New Zealand)
Dr. R. Hanbury Brown (Australia)
Dr. A. Dollfus (France)
Dr. Stephen W. Hawking (United Kingdom)
Dr. Helen S. Hogg (Canada)
Dr. W. Iwanowska (Poland)
Dr. J.H. Oort (Netherlands)
Dr. Grote Reber (Australia)
Dr. A.R. Sandage (United States)
Dr. Martin Schwarzschild (United States)
Dr. A. Unsold (Germany)
Prof. H.C. van de Hulst (Netherlands)

Honorary Members

National Council Group Photo



This photo of National Council members was taken at the February 1992 meeting.
Front Row (left to right): Charles Fassel (Niagara), Eric Clinton (London), Jean-Pierre Urbain (C.F. de Montréal), Damien Lemay (President), Don Hladiuk (Calgary), Frank Shepley (Windsor), Brian Beattie (Property Committee)
Second Row: Walter MacDonald (Kingston), Jeremy Tatum (Journal Editor), Karl Miller (Treasurer), Rosemary Freeman (Executive Secretary), Fred Troyer (Toronto), Patrick Kelly (Bulletin Editor), Cathy Cresswell (Librarian), Ian McGregor (Toronto), David Tindall (Secretary), Terry Hicks (Observer)
Third Row: Bob May (Toronto), Guy Nason (Toronto), Michael Daly (Toronto), Mary Anne Harrington (Recorder), Randall Brooks (Historical Committee), Henry Lee (Observer), Doug Hube (2nd Vice-President)
Back Row: Suzanne Moreau (Montreal), Berndt Mueller (Kitchener-Waterloo), Peter Broughton (1st Vice-President), Rob Dick (Ottawa), Paul Comision (Ottawa)
Present but missing from photo: Leo Enright (Beginner's Observing Guide Editor), Grant Dixon (Hamilton), Steve Spinney (Toronto)

Awards

The following awards were presented to society members in 1991:

The Plaskett Medal

Paul Charbonneau (Montreal)

Service Award Medal

Don Hladiuk (Calgary)
Ian McGregor (Toronto)

National

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- E-mail Address • RASC@vela.astro.utoronto.ca
- Honorary President • Ian Halliday, Ph.D., F.R.S.C., Ottawa
- President • Damien Lemay, B.Sc., Québec
- First Vice-President • Peter Broughton, M.Sc., A.R.C.T., Toronto
- Second Vice-President • Doug Hube, Ph.D., Edmonton
- Secretary • David A. Tindall, Ph.D., Halifax
- Treasurer • Karl Miller, A.Sc.T., Toronto
- Recorder • Henry Lee, M.Sc., Windsor/Mary Anne Harrington (R.T.), Toronto
- Librarian • Brian Beattie, B.A., Toronto
Mrs. Cathy L. Cresswell, Ottawa & Hamilton
- Journal Editor • Jeremy Tatum, Ph.D., Victoria
- Observer's Handbook Editor • Roy Bishop, Ph.D., Halifax
- BULLETIN Editor • Patrick Kelly, M.Sc., Halifax
- Beginner's Observing Guide Editor • Leo Enright (Kingston)
- Executive Secretary • Miss Rosemary Freeman
- Past President • Mrs. Mary Grey, B.Sc., (C.E.), Ottawa
- Past President • Lloyd A. Higgs, B.Sc., D. Phil., Penticton

Calgary

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- E-mail Address • rascexec@cuug.ab.ca
- Honorary President • Walter Stillwell, 605-1350 View Crescent, Delta, B.C. V4L 2K3
- President • Ruth Lewis, 712-34th Street N.W., Calgary, Alta. T2N 2X9 (403) 283-0670
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- Starseeker Editors • Rick & Carol Weis, 4612A 17th Avenue N.W., Calgary, Alta. T3B 0P3 (403) 286-4347
- Librarian • Glenn Hawley, 107 Oakfern Road S.W., Calgary, Alta. T2V 4L1 (403) 238-2332
- National Council Representative • Cam Fahrner, 115 Coleridge Road, N.W., Calgary, Alta. T2K 1X5 (403) 289-1539
- Observer Group Director • Robert Loblaw, 268 Sunmount Bay S.E., Calgary, Alta. T2X 2M8 (403) 256-1197
- Observatory Director • Jason Nishiyama, 621-17th Avenue N.W., Calgary, Alta. T2M 0N6 (403) 282-7940
- Past President • Don Hladiuk, 28 Sunmount Rise S.E., Calgary, Alta. T2X 2C4 (403) 256-4480
- Councillors • Cam Farner, Ron Forth, Dennis Goodman, Phil Johnson, Maurice Langpap, Sidney Lee, Terry Miller, Carolyn Sandstrom, Peter Sim

Edmonton

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Centre Councils for 1992

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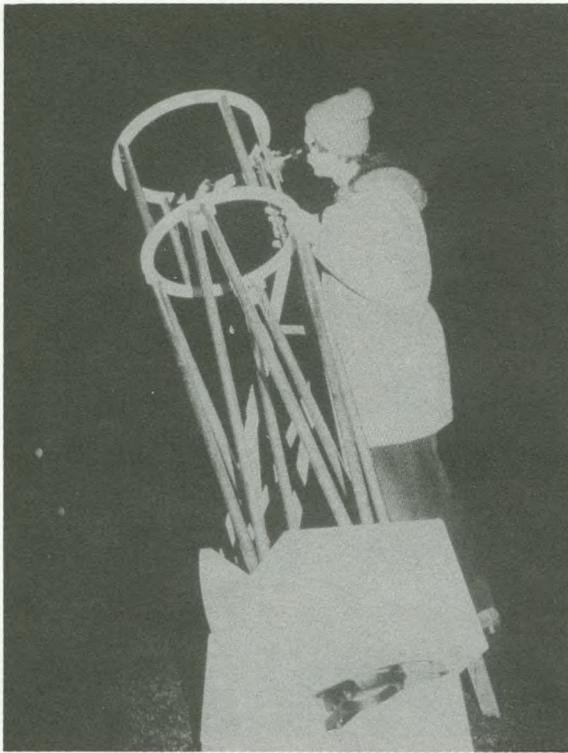
	Calgary	Edmonton	Halifax	Hamilton	Kingston	Kitchener	London	Montréal	Montréal	Niagara	Ottawa
REVENUE											
Membership Fees	\$5,052	\$3,806	\$4,432	\$3,664	\$1,617		\$350	\$3,672	\$1,024	\$1,884	\$6,736
Life Member Grants	\$180	\$100	\$310	\$30	\$80		\$50	\$200	\$20	\$30	\$350
Donations	\$4,415	\$27	\$220	\$3,146	\$51		\$10	\$83	\$20	\$795	\$2,010
Educational Activities	\$1,245	\$341		\$535							
Interest & Dividends	\$852	\$367	\$293	\$147	\$14		\$22	\$4,732	\$35	\$52	\$1,143
Sales Of Handbooks (Net)	\$101		\$76	\$27	\$43		(\$144)	\$119	\$9	\$73	\$45
Advertising			\$20	\$161	\$192					\$50	\$219
G. A. (inc. Travel Grants)	\$165		\$618	\$269	\$275		\$302				
Other Grants					\$923			\$849	\$260	\$565	\$487
Miscellaneous	\$7,456	\$250	\$1,054	\$1,159	\$923		\$119	\$849	\$260	\$565	\$487
Total Revenue	\$19,466	\$4,891	\$7,024	\$9,138	\$3,195		\$710	\$8,151	\$1,368	\$3,449	\$10,990
EXPENDITURES											
Fees to National Office	\$3,266	\$2,078	\$2,787	\$1,541	\$821		\$192	\$1,505	\$614	\$1,130	\$4,042
Library		\$13	\$35					\$733	\$61		
Meetings & Newsletters	\$2,374	\$1,435	\$1,048	\$2,603	\$553		\$438	\$1,769		\$615	\$3,038
Annual Dinner (Net)	\$234		(\$97)				(\$20)			\$224	
G. A. (inc. Travel Grants)	\$512		\$956	\$309	\$275		\$302				
Equipment & Supplies		\$221	\$6	\$162	\$306			\$626		\$95	\$517
Office Administration		\$126	\$380	\$104	\$40			\$3,226	\$360		
General Expense & Audit	\$1,728	\$8	\$2,500				\$111	\$391			
Educational Activities		\$96						\$598	\$129		\$350
Insurance	\$1,028	\$100	\$152	\$421							
Awards & Donations		\$100		\$23	\$67						
Observatory Expenses	\$552			\$1,520	\$170		\$199		\$161	\$2,132	\$673
Miscellaneous	\$3,134	\$45	\$682	\$205	\$844		\$540				
Total Expenditures	\$12,828	\$4,222	\$8,449	\$6,888	\$3,075		\$1,761	\$7,343	\$1,368	\$4,196	\$8,620
Surplus (Deficit)	\$6,638	\$669	(\$1,424)	\$2,250	\$120		(\$1,051)	\$808	\$0	(\$747)	\$2,371
Balance from 1990	\$10,453	\$7,757		\$903						\$2,181	\$18,346
Balance to 1991	\$17,091	\$8,426		\$3,153						\$1,434	\$20,717
Other Assets	\$88,730	\$4,115								\$9,718	\$21,389

No Report Received

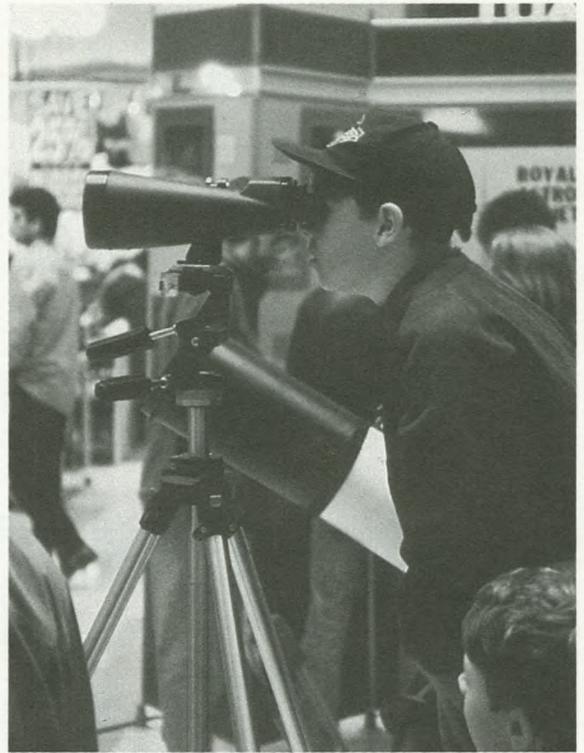
	Québec	Regina	St. John's	Sarnia	Saskatoon	Thunder Bay	Toronto	Vancouver	Victoria	Windsor	Winnipeg
REVENUE											
Membership Fees	\$2,859	\$792	\$1,008	\$265	\$1,172	\$1,017	\$25,202	\$6,122	\$3,549	\$1,384	\$2,600
Life Member Grants	\$20	\$1,354	\$40	\$10	\$40	\$850	\$850	\$160	\$20	\$20	\$452
Donations	\$39	\$9	\$9		\$2,301	\$1,296	\$1,296	\$3,011	\$87	\$224	
Educational Activities	\$400										
Interest & Dividends	\$225	\$98	\$107	\$37	\$377	\$4,347	\$4,347	\$478	\$1,204	\$28	\$159
Sales Of Handbooks (Net)	\$1,655	\$46	\$60		\$14	(\$45)	(\$45)		\$49	\$87	\$76
Advertising						\$819	\$819	\$454			
G. A. (inc. Travel Grants)			\$52		\$118	\$266	\$2,013		\$333		\$279
Other Grants	\$350										
Miscellaneous					\$149	\$295	\$641		\$56	\$13	
Total Revenue	\$5,548	\$2,290	\$1,277	\$312	\$4,171	\$1,578	\$35,123	\$10,225	\$6,418	\$1,756	\$3,566
EXPENDITURES											
Fees remitted to National Office	\$986	\$458	\$605	\$211	\$731	\$557	\$14,993	\$1,781	\$1,831	\$633	\$1,075
Library	\$49							\$348	\$316		
Meetings & Newsletters	\$185	\$237			\$384	\$112	\$7,488	\$3,017	\$1,520	\$498	
Annual Dinner (Net)							\$126	\$51	\$148		
G. A. (inc. Travel Grants)	\$908	\$178	\$52	\$5	\$118	\$265	\$3,513			\$212	\$279
Equipment & Supplies	\$1,004	\$106			\$96		\$4,103	\$158	\$528	\$151	\$1,229
Office Administration	\$128		\$50		\$35		\$500				
General Expense & Audit	\$286				\$260		\$692	\$414			
Educational Activities	\$300						\$400				
Insurance							\$1,000				
Awards & Donations	\$400	\$1,953	\$672		\$34	\$403		\$1,063	\$98		\$150
Observatory Expenses	\$2,191							\$5,805	\$331	\$32	\$1,400
Miscellaneous									\$55		
Total Expenditures	\$6,437	\$2,932	\$1,380	\$216	\$1,658	\$1,338	\$32,815	\$12,637	\$5,969	\$1,726	\$4,134
Surplus (Deficit)	(\$889)	(\$643)	\$103	\$96	\$2,513	\$239	\$2,308	(\$2,412)	\$449	\$30	(\$568)
Balance from 1990	\$3,712	\$4,289		\$639	\$13,779		\$41,138	\$10,985		\$398	
Balance to 1991	\$2,823	\$3,606		\$735	\$15,694		\$43,446	\$8,573		\$428	
Other Assets			\$2,144					\$14,632	\$47,799		

Centre Finances

Centre Activities



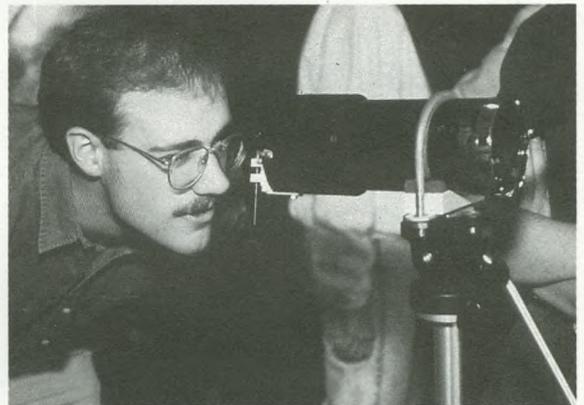
The North York Astronomical Association's 16-inch telescope at Starfest. Seen using it is N.Y.A.A. member Richard McWatters.



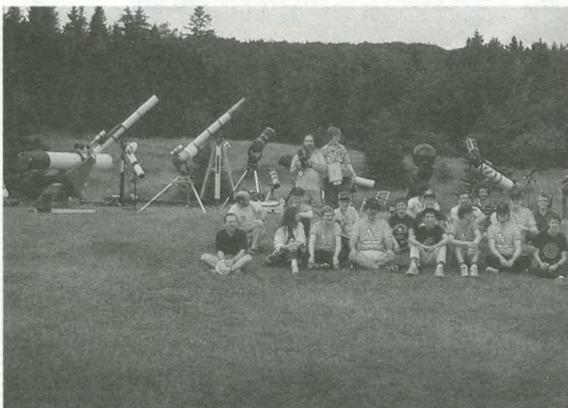
An Astronomy Day participant in Toronto's Fairview Mall checks out the view through a pair of binoculars.



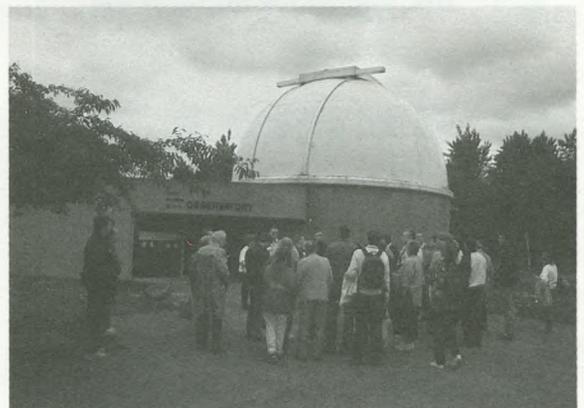
The tent (and part of the crowd) at Starfest. This year marked the event's tenth anniversary.



The Astronomy Day displays at the Ontario Science Centre included a telescope made from magnifying glasses.



NOVA EAST continued to be a popular Maritimes event with another large turnout of amateurs (and telescopes).



This year's General Assembly was held in Vancouver, British Columbia. One of the places visited was the Gordon Southam Observatory.

C. J. Timbham & Associates

Chartered Accountants

C. J. TIMBHAM, C.A., C.M.C.
D.C. TIMBHAM, B.COMM., C.M.C., F.C.A.
P. J. BROCKLESBY, B.B.A., C.A.

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AUDITORS' REPORT

To the Members of

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

We have audited the balance sheet of The Royal Astronomical Society of Canada as at December 31, 1991 and the statements of income and retained earnings for the year then ended. These financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects, the financial position of the company as at December 31, 1991 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles.

C. J. Timbham & Associates

TORONTO, Ontario
February 6, 1992

CHARTERED ACCOUNTANTS

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA
NOTES TO THE FINANCIAL STATEMENTS
DECEMBER 31, 1991

NOTE 1

ACCOUNTING POLICIES

The financial statements of the Society have been prepared in accordance with accounting policies generally followed by similar non-commercial organizations. The significant accounting policies observed in the preparation of these statements are summarized below.

(a) Membership fees:

Members' fees are credited to income for the related membership year. Accordingly, fees received at the end of the year for the ensuing year are included in deferred revenue. Life membership fees are credited to deferred revenue when received. Five percent of the life membership fund is transferred annually to the general account.

(b) Publications:

Subscriptions to the R.A.S.C. Journal are credited to income for the subscription period.

(c) Investments:

Investments are stated at cost. Investment income is recorded on the accrual basis.

(d) Special purpose funds:

The special funds of the Society are classified in accordance with the objectives specified by the donors or in accordance with directives issued by Council. The income of the various funds is recorded on the accrual basis.

(e) Fixed assets:

The office furniture, equipment and the library of the Society are carried in the accounts at a nominal value of \$1. The cost of additions to and replacements of fixed assets are expensed as they are incurred.

National Finances

National Finances

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
 LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA
 BALANCE SHEET
 AS AT DECEMBER 31, 1991

A S S E T S

	1991	1990
CURRENT		
Cash and short term investments	\$ 92,891	\$ 80,906
Accounts receivable	51,003	21,597
Prepaid expenses	2,075	1,430
Accrued interest receivable	<u>12,149</u>	<u>11,637</u>
	158,118	115,570
INVESTMENTS		
Marketable securities - at cost	<u>3,019</u>	<u>3,019</u>
SPECIAL PURPOSE FUNDS (Schedule C)		
Cash and short term deposits (including accrued interest)	80,193	69,658
Marketable securities - at cost	-	4,000
Guaranteed investment certificate	<u>101,600</u>	<u>101,600</u>
	181,793	175,258
CAPITAL ASSETS		
Office building, furniture, equipment, library (nominal value)	<u>1</u>	<u>1</u>
	<u>\$ 342,931</u>	<u>\$ 293,848</u>

Accounting principles - Note 1

On behalf of the Council
 of the Society

D. J. ... President
Paul Miller Treasurer

L I A B I L I T I E S

	1991	1990
CURRENT		
Payables and accrued charges	\$ 56,304	\$ 17,713
Deferred revenue	-	-
- Membership fees for ensuing year	21,372	26,958
- Journal subscriptions	17,741	21,225
- Unappropriated life membership fees (Schedule A)	<u>35,785</u>	<u>37,028</u>
	131,202	102,924
SPECIAL PURPOSE FUNDS (Schedule C)		
	<u>181,793</u>	<u>175,258</u>
E Q U I T Y		
Balance, January 1	15,666	14,998
Add: Excess of revenue over expenditure	<u>14,270</u>	<u>668</u>
	29,936	15,666
Balance, December 31	<u>\$ 342,931</u>	<u>\$ 293,848</u>

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA
STATEMENT OF REVENUE AND EXPENDITURE
FOR THE YEAR ENDED DECEMBER 31, 1991

	1991	1990
REVENUE		
Memberships fees		
- R.A.S.C. Centres	\$ 44,070	\$ 40,668
- Individual members	19,526	12,303
- Life membership: annual appropriation	1,883	1,949
	65,479	54,920
Grants and Donations		
- Government of Canada-annual grant	10,000	2,400
- Miscellaneous donations	125	(308)
	10,125	2,092
Publications		
- R.A.S.C. Journal: subscriptions reprints publishing revenue	25,353 1,740 8,787	20,777 1,985 14,558
- Observer's Handbook	93,073	91,769
	128,953	129,089
Miscellaneous income		
- interest on investment	18,432	22,939
- insignia sales	1,237	885
- rent	12,184	11,648
	31,853	35,472
	236,410	221,573
EXPENDITURE		
Publications (Schedule B)	134,230	134,497
Office salaries and employee benefits	40,914	36,298
Postage and shipping expense	4,889	10,691
General and office expense	4,385	10,257
Stationery, printing and supplies	3,032	1,018
Life membership allotment to Centres	6,183	2,710
General assembly and travel expense	12,113	12,565
Legal and accounting	1,875	1,959
Insignia, medals and awards	566	646
Telephone	572	858
Insurance	2,776	1,665
Library expense	707	494
Office equipment purchases	2,478	550
Bad debts (recovery)	483	(185)
Building expenses	6,937	6,882
	222,140	220,905
EXCESS OF REVENUE OVER EXPENDITURES	\$ 14,270	\$ 668

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA
SCHEDULE A
UNAPPROPRIATED LIFE MEMBERSHIP FEES
FOR THE YEAR ENDED DECEMBER 31, 1991

	1991	1990
BALANCE, January 1	\$ 37,028	\$ 37,977
Add: life membership fees received in the year	640	1,000
Deduct: Appropriation to general account	37,668	38,977
	1,883	1,949
BALANCE, December 31	\$ 35,785	\$ 37,028

SCHEDULE B
PUBLICATION COSTS

R.A.S.C. Journal	\$ 46,920	\$ 52,165
Printing of Journal	21,564	22,614
Printing of Bulletin	1,750	1,750
Editorial assistance	21,147	17,415
Distribution costs	1,220	2,049
Reprints	92,601	95,993
Observer's Handbook		
Printing	35,207	32,129
Distribution costs	3,120	5,262
Advertising	1,338	608
Grants	1,964	505
	41,629	38,504
	\$ 134,230	\$ 134,497

National Finances

National Finances

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
 LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA
 SCHEDULE C
 COMPOSITION OF SPECIAL PURPOSE FUNDS
 AS AT DECEMBER 31, 1991

	RUTH NORTHCOTT FUND	ENDOWMENT FUND	CEN- TENNIAL FUND	SOLAR ECLIPSE FUND	TOTAL
Cash	\$ 12,313	\$ 3,906	\$ 6,864	\$ 8,459	\$ 31,542
Term deposits	28,000	14,000	5,000	-	47,000
G.I.C.	-	101,600	-	-	101,600
Accrued interest	1,651	-	-	-	1,651
	<u>\$ 41,964</u>	<u>\$ 119,506</u>	<u>\$ 11,864</u>	<u>\$ 8,459</u>	<u>\$ 181,793</u>

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Credits

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