

NATIONAL NEWSLETTER

October, 1981

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Recipients of the Society's awards following the presentation at the annual banquet are (left to right): Peter Jedicke, London; Jack Newton and George Ball, Victoria; David Levy, Kingston; Cathy Drake, Toronto; Jim Bernath, Vancouver; Craig McCaw, Vancouver; Harlan Creighton, Toronto.
(Photo by B. R. Chou)

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October, 1981

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Centre and local items, including Centre newsletter should be sent to the Regional News Editor. With the above exception, please submit all material and communications to:

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Deadline is six weeks prior to month of issue

Victoria was the One in June of '81

**by Muriel Enock
Victoria Centre**

Victoria was fine for the 1981 General Assembly! After three months of record-breaking rainfall, clear skies blessed us here for most of the three days. St John's was represented together with almost every other centre, participants evidently enjoying the whole show: "best ever" we were told.

The Planetarium Association had its meetings immediately following ours, so there were planetarians from New York to Texas to Edmonton too, many of them RASC members. Then there was the member from the British Columbia interior, an observer who lost his sight some years ago, who has developed a new 'sense', radio, and was seeking other RASCers with ham radios (call sign VE7 ERQ for those interested).

The first day was sunny and warm so that registrants were able to explore the University of Victoria campus, from its new residences and academic buildings to its preserved old forest area and superb rhododendron gardens.

At the traditional wine-and-cheese party on Friday evening, the visitors met Victoria members, and old friendships and associations across the country were renewed. We had a great chance to get close to one another as the lounge was rather small! Later, we retired to the Elliott Building (the home of Astronomy at U. Vic) for an informal showing of slides and discussions of members' current projects. In recent years, a song contest has happened on this first evening, and this year the prize was won by those old hands, Peter Jedicke and David Levy, with an astrophysical treatise called "Neutron Star". I hear that all those old friendships were still being renewed well into the night at informal meetings in the residence.

On Saturday we had the paper sessions. Among the historical instruments introduced by Thomas Clarke of the McLaughlin Planetarium, we were interested to see a pedometer of the 18th century, when they certainly walked more than we do now. David Levy illustrated how careful and persistent he had to become to observe the Orion nebular variables. Donovan Fallows gave an excellent slide tour of Britain's observatories from Stonehenge to Herstmonceux. Ken Hewitt-White's van, which we later inspected outside, had been adapted to accommodate 12½ and 8-inch telescopes and living quarters for the summer park teaching crew. Paul Moffat described inexpensive sensing equipment which compared well with professional charge-coupled devices. There were *oohs* and *aahs* when Jack Newton's Messier slides were shown to illustrate the capability of his latest cold camera, built with George Ball. Serious considerations against larger earthbound telescopes were put forward by Peter Jedicke. Tom Tothill's Astroscan motorized drive was vigorously applauded.

We thought of Ralph Chou's paper on solar eye injuries when we trooped outside to face the camera in the bright sunshine, but this first colour group photograph showed only the general happiness among us.

On Saturday evening, the Annual Banquet and Northcott Memorial Lecture took place in the East-West Lounge, a most appropriate venue for our countrywide crowning event. There were more diners than originally expected, but the Students' Union fitted us all in and provided an extremely good meal – a banquet indeed – accompanied by British Columbia's best wines. At the conclusion, display contest awards and RASC National awards were presented. Edmonton had the best centre display, on features of the sky, while George Ball earned an individual display award for silicon rubber moulds to facilitate the making of pitchlaps. Other display competition winners were Jack Newton (Victoria Centre). Cathy Drake (Toronto Centre) and Jim Bernath (Vancouver Centre). Harlan Creighton of Toronto Centre received the Service Award Medal. Craig McCaw of Vancouver Centre was awarded the Ken Chilton Prize. It was announced that Christopher Rutkowski of Winnipeg Centre had won the Simon Newcomb Award.

The Northcott Lecturer was Dr. James Hesser, an astronomer at the Dominion Astrophysical Observatory, Victoria. After outlining the history of globular cluster research, he shared with us his theories in his talk "Below the Tip: New Controversies in Globular Cluster Star Research". Dr. Hesser particularly acknowledged his debt to the senior researcher in the field, Dr. Helen Hogg, who was attending the Assembly from the David Dunlap Observatory.

After the Banquet and Lecture, several people visited the private observatories on Vander Byl Hill.

On Sunday morning, two double-decker 'London' buses took delegates to Victoria's Inner Harbour where, apart from boat and plane activity in the harbour, several museums were close by, the Provincial Museum being one of Canada's best. Across the street were the elegant Legislative Buildings surrounded by lawns and gardens which contain a vast number of plants representative of British Columbia's past and present flora. And there were the parks: Thunderbird Park with its Indian carvings, and Beacon Hill Park with everything, including Mile Zero West of the Trans-Canada Highway. No doubt many of the other tourist attractions were visited by the RASC members as well.

After lunch, the Annual Meeting was held on campus. (Note: The minutes of this meeting appear in the *Journal*.) The meeting of the new National Council followed.

That evening, the buses took us out to the DAO for a chicken picnic. Clouds had rolled in from the Pacific, but the rain held off and some ate on the grounds while the remainder used the library and the lunchroom. Then the younger members tried for a human pyramid on the observatory lawn; fifteen were successful, which I believe equals the record. A short walk downhill led to the optical shop, where a staff member showed the equipment involved in making and testing the minors for the Canada-France-Hawaii telescope, equipment which is currently refurbishing the 48-inch (sorry, 1.2 m) Schmidt-Cassegrain. A longer climb uphill led to the 1.85 m telescope, where Chris Aikman gave a detailed introduction to the instruments, although unfortunately the weather was too cloudy for observing.

Monday was tour day for the visitors, some taking the minibus for a Gulf Islands ferry cruise and others heading out on a double-decker again, either to Butchart Gardens or to the Institute

of Ocean Sciences/Pacific Geoscience Centre. Butchart's is a fabulous series of gardens of different types established in a worked-out limestone quarry.

Those of us touring the federal scientific establishments at Patricia Bay were shown just a little of the extensive work being done on water environmental monitoring for British Columbia; underwater pingos in the Arctic; resource geology in the 200-mile (320 km) offshore waters; and earthquakes in the St Lawrence valley, the Arctic and on the west coast of Canada. Scientists also test sea-current measuring equipment, study atmospheric influence on the seas and sedimentary and floor-building changes, and chart our waters.

This last weekend of June turned out to be a good choice for a General Assembly in Victoria, and many delegates stayed on for summer holidays. Throughout the gathering, however, Saskatoon members bombarded us with reminders that the next GA is in that city from 20-24 May, inviting us to "Join the Saskatoon Crew for Centennial '82!"

Astronomy Day 1981

International Astronomy Day was observed on Saturday May 9, 1981 by many centres of the Society. Here is a brief summary of reports received by press time (early August).

Edmonton Centre presented Starnight '81 in co-operation with the Queen Elizabeth Planetarium. Displays and telescopes were on hand, and despite the cloudy skies, about 700 people visited the exhibit. Since 1974 Edmonton Centre has held eight Starnights, of which only two have been clouded out.

Saskatoon Centre set up a display at the Lawson Heights Mall. Exhibits included 18 telescopes, maps, books, a radio telescope, posters, slide shows and a mirror grinding demonstration. About one thousand shoppers visited the display. Saskatoon Centre members noted a great deal of interest, especially in the mirror grinding stand. There are plans to construct a permanent display which could be moved to schools, shopping malls, and parks for future programmes.

Kitchener-Waterloo Centre had a display at the Conestoga Mall just north of Waterloo. Many shoppers stopped at the display on Friday evening and Saturday. Because of the great public interest, the shopping mall's management has invited the Centre to return for more exhibits.

Niagara Centre and Brock University jointly organized an exhibit on Saturday evening at the University's main campus in St. Catharines, Ontario. This was followed by an observing session for the public on the roof of one of the buildings on campus.

Toronto Centre mounted a display at the Bayview Village Shopping Centre on both Friday and Saturday. Difficulties were encountered in arranging for a mall exhibit - one shopping centre in Scarborough required that all displays be covered with fire-resistant paint and be made of fireproof material! The exhibit included the Society's permanent display (which was first shown at the IAU meeting in Montreal), as well as the Centre's own displays and telescopes (an antique 4-inch Brashear refractor and a 3½-inch Questar). The display attracted a great deal of favorable comment, as did those of other R.A.S.C. Centres. Toronto Centre has been invited to mount future exhibits by the mall management.

Kingston Centre enjoyed similar success with its display at Frontenac Shopping Mall, where astrophotographs, posters, a science fair project on stellar spectroscopy and telescopes were shown. There was also a public starnight at the MacDonald Park which lasted until midnight. Despite the partly cloudy skies, there were long lineups at the telescopes to observe the moon, Jupiter and Saturn. The increased public awareness of the Kingston Centre's activities has resulted in a number of new members and increased attendance at Centre meetings.

St. John's Centre set up a display at Village Mall, the second largest mall in St. John's, and held a star party at Pippy Park. The Mayor of St. John's issued a proclamation declaring May 9 as Astronomy Day in St. John's. This resulted in a great deal of media attention. The well attended display consisted of telescopes, photographs, posters, a mirror grinding demonstra-

tion and movie and slide shows on astronomy and space exploration. The star party at Pippy Park, run by Garry Dymond and park officers, featured a 3-inch refractor, 6-inch reflector and Celestron 8. The success of St. John's Centre's first Astronomy Day programme has sparked plans for a repeat performance next year.

The Revisionist's Corner

Courtesy of *The David Dunlap Doings* which is published by the Department of Astronomy of the University of Toronto, we present some of the "annual harvest of howlers, culled from exams and term papers, quoted out of context (usually it howls too) and with no regard to credit lines or respect for the stressful conditions under which the items were formulated."

Definition of Population II: the possibility of life on other planets.

"Canada now is in coercion with France and Hawaii with the recent completion of the CFHT."

"Radioactive (sic) decay involves eroding of rocks by measuring the light years of the rock. If the rock shows a light year of $\frac{1}{2}$ than we know it has decayed $\frac{1}{4}$ light year. If it shows $\frac{1}{4}$ we know it has decayed $\frac{1}{8}$. This cannot be determined if the rock is in a state of ionization."

"Sunspots are low depressions on the sun's surface ... A depression will appear as a shade on the sun's surface called umbra, while the walls of the depression are less dark and called penumbra. It has been found that those spots will "wink" on the average every eight hours. That is spots are created and annihilated in such a life span."

Reprinted by courtesy of the Editor,
The David Dunlap Doings

IAPPP Symposium

by Clifford Cunningham
Kitchener-Waterloo Centre

A three-day symposium devoted to photometry was held at the Dayton Museum of Natural History, Dayton, Ohio from June 10 to 12. The gathering, organized by the International Amateur and Professional Photoelectric Photometrists, was chaired by Russell Genet and Dr. Douglas Hall of Vanderbilt University. Opening remarks were made by Museum Director E. J. Koestner and by James Reist, President of the Miami Valley Astronomical Society. A course in photometry was offered on the first day. The fifteen participants examined many practical aspects of the subject in depth. The symposium itself attracted about thirty participants. The first session dealt with photoelectric observatories. Among those described were a portable set-up using a Celestron 14 by J. J. Stelzer, the Dance Hill Observatory operated by Murray Kaitting and the author, and a professional facility in Poland.

The afternoon session was devoted to observations and analysis of variable stars, particularly the RS CVn stars. These are binary stars, and it is thought that at least one component of such a system exhibits very large starspots which cause the variability.

On the evening of June 11, a picnic was held at the home of Russell Genet, on whose property is located the Fairborn Observatory. Guests were able to view his 8-inch telescope equipped for photometry, and a soon-to-be-completed 16-inch instrument.

The second day of the symposium was marked by a series of debates on the merits of photon counting vs DC amplification, tubes vs photodiodes, and whether these should be cooled or uncooled. Dr. R. K. Honeycutt, in closing the session with a look to the future, indicated that

much effort over the next decade will be devoted to combatting the effects of increasing light pollution.

The keynote speaker at the evening banquet was Dr. F. B. Wood, author of *Photoelectric Astronomy for Amateurs*. He spoke on the early days of photometry in the 1930's and 1940's, when only a dozen people were in the field.

The annual Apollo Rendezvous and Telescope Fair was held on June 13. On display at the Museum was a wide variety of telescopes including a 17½-inch Dobsonian. Papers sessions in the morning and afternoon included a talk by Dr. Hall on photometry for the amateur astronomer. Other papers discussed the Space Shuttle and astrophotography. The evening speaker was Dr. W. A. Hiltner, co-discoverer of interstellar polarization, who described the astronomy programme of the University of Michigan and its facilities on Kitt Peak.

Nominations for RASC Officers, 1982–83

The By-Laws of the Society provide for a Nominating Committee composed of the three surviving immediate Past Presidents, whose duty it is to prepare a slate of candidates for the offices of the Society.

Next year, we must elect the following officers specifically: President, 1st Vice-President, 2nd Vice-President, National Librarian and Recorder. Normally, there is a progression through the following offices: the 2nd Vice-President becomes 1st Vice-President; the 1st Vice-President becomes President. However, this progression is not dictated by the Constitution, and alternative nominations may be made for any of these offices.

If any member wishes to make suggestions in this regard, he should contact the Committee Chairman, Dr. J. R. Percy, Department of Astronomy, University of Toronto, Toronto, Ontario, M5S 1A7, *as soon as possible*, (preferably by Nov. 15).

The By-Laws provide that "any five members of the Society, in good standing, may nominate additional candidates for any vacant office, provided that such nomination, accompanied by a letter of acceptance from the nominee shall be received by the National Secretary of the Society, not less than sixty days before the date of the annual meeting".

It would be appreciated if any such nominations, (together with a short biography of the candidate) were submitted no later than *February 15th, 1982* in order to allow for the printing and mailing of ballots.

Full details pertaining to nominations are outlined in By-Law 1, Article 11(a), as published in the JOURNAL, June 1969, pages 155–168.

Awards of the RASC for 1982–83

As outlined in the Annual Report of the Society for 1978, page 31 ff, awards may from time to time be conferred upon members in recognition of meritorious service or achievement. Recommendation for such awards should in most cases be made through the Council of the local Centre. Members at large may submit recommendations, if they so wish, to the National Office for consideration of the National Council. Centre Councils will, of course, submit recommendations as they see fit, to National Council for final approval.

CHANT MEDAL

The Chant Medal of the Society was established in 1940 in appreciation of the great work of the late Professor C. A. Chant in furthering the interests of astronomy in Canada. This medal is awarded, not oftener than once a year, to an amateur astronomer resident in Canada on the basis of the value of the work which he has carried out in astronomy and closely allied fields of original investigation. Nominations (including citations) should reach the National Office by *December 31*.

SERVICE AWARD MEDAL

The Service Award was established in 1959 and, on recommendation of a special committee of the National Council, this small bronze plaque is presented to members who have performed outstanding service to a Centre or to the National Society. Nominations should reach the National Office by December 31.

KEN CHILTON PRIZE

The Chilton Prize was established in 1977 by the National Council of the Society, in remembrance of K. E. Chilton, an active member of the Hamilton Centre. The Prize is awarded annually to an amateur astronomer resident in Canada, in recognition of a significant piece of astronomical work carried out or published during the year. Nominations should reach the National Office by December 31.

SIMON NEWCOMB AWARD

The Simon Newcomb Award was established on recommendation of the Halifax Centre, in 1978. Full details are given in the *National Newsletter* for August 1978, Vol. 72, No. 4, but subject to the following additional criteria adopted by National Council in May, 1979:

Articles should not contain the author's name within the paper in order to maintain the impartial nature of the judging process. Articles must be received by the Awards Committee of the RASC between January 1 and March 31.

Members of Centres must first submit their entries to their Centre Executive who will choose those entries they wish to represent their Centre. It is the responsibility of the Executive of the Centre to ensure the entries are received by the deadline above.

Unattached Members will submit their entries directly to the Awards Committee.

Nominations for all of the above should be sent to:

Awards Committee, RASC
124 Merton Street
Toronto, Ontario
M4S 2Z2

Report of National Council Meeting 26 June 1981

by Harlan Creighton
National Recorder

The Society's National Council met during the General Assembly to deal with a wide range of items affecting your Society. Following are some of the highlights of the Council's meeting. Further information may be obtained from the minutes, available from your Centre's president or National Council representative, or from the National Office.

The number of Centres that have decided to seek incorporation under the laws of their respective provinces continues to increase. Such Centres must submit the draft of their constitution and by-laws to National Council for approval. In each case, the Society's solicitor, Miss Donna Haley, Q.C., reviews the draft before the matter is dealt with by National Council. At the June meeting, approval was given to Calgary, Halifax, Niagara and Victoria Centres, (approval to the latter being conditional to Victoria's acceptance of Miss Haley's recommendations).

Speaking of by-laws, all Centres are required to supply the National Office with a copy of their current constitution and by-laws. It would be appreciated if the following Centres would forward these documents to the National Office as soon as possible: Edmonton, Hamilton, Kingston, La Societe d'Astronomie de Montreal, St. John's, Saskatoon, Vancouver, Windsor, and Winnipeg.

Efforts to establish a new centre at Sarnia, Ontario are well underway, with the proponents presently considering changes to their constitution and by-laws as recommended by Miss Haley.

Your Society received a letter from Winnipeg Centre requesting emergency funding of about \$1000 to effect urgent repairs to the roof of that centre's observatory. In response, an interest-free loan of up to \$1000 was granted, with the provision that the action would be reconsidered at the September council meeting pending receipt of a complete report of the damage, and the repairs completed.

Dr. Halliday reported that Revenue Canada was hoping to finalize soon regulations that would allow importation of serious amateur telescopes and accessories duty exempt. Further information may be obtained from Ms. Kate Humpage, Revenue Canada, Customs and Excise, Customs Tariff Division, Connaught Bldg., 6th Floor, Mackenzie Avenue, Ottawa, Ontario, K1A 0L5. Refer to Tariff items 46200-1 and 46203-1. As soon as the regulations are finalized a notice will appear in the *National Newsletter*.

Publications continue to play an important role in the Society's activities. Dr. Bishop, Editor of *The Observer's Handbook*, outlined a number of new features that will appear in the 1982 issue. *Newsletter* editor, Dr. Ralph Chou, noted that an attempt was being made to increase the French language content and the number of announcements. The *Journal's* editor, Dr. A. Batten, reported that plans for the Anniversary Issue in December were well underway, and noted that henceforth the *Journal* will be mailed in a clear plastic wrapper. As well, Council approved an increase in page charges from \$35 to \$40, effective with the February 1982 issue. Page charges have remained at \$35 per page since 1977 and will henceforth be subject to annual review by Council.

Your Council decided to make a donation to the C. S. Beals Memorial Fund being established by the Canadian Astronomical Society in honour of the late C. S. Beals, a former Dominion Astronomer and National President of the Society. The fund will be used to assist Canadian astronomers to attend international meetings.

Mrs. E. R. Pride of Montreal Centre reported on plans to establish a Charles M. Good Award, in honour of the late long-time member of that Centre. Although details have yet to be finalized, the Award will honour a member who advances the activities of amateur astronomy in a major way.

A suggestion that Council meet more frequently outside Toronto to make it easier for Centres outside Ontario to participate was discussed at length, but no conclusion was reached.

Finally, all members will join with me in expressing appreciation to the two national officers who retired at the Annual Meeting. Dr. Helen Hogg, Honorary President, and Rev. Norman Green have both rendered outstanding service to the Society in many ways over the years. All of us have benefitted from their efforts. By the way, both have been members for over fifty years.

Chaos at DDO

by Dr. Donald MacRae

The fire in the Sandford Fleming Building, a fire-trap if there ever was one, may have triggered it, but more than likely it was some Queen's Park genius who came up with a keen idea – a way of spending some of the provincial treasury without being guilty of improving the lot of universities or raising the level of post-secondary education in Ontario. By installing sprinklers.

So apparently, the word went out: Sprinklers to be installed everywhere, and brook no opposition. "No opposition" seems to have been construed by the troops as "no compromising, no concessions, no consideration for the occupants or for their work, their dead-lines, or their commitments; go strictly by the book".

Don Fernie and Tom Bolton were not unaware of the threat, having seen some mild activity at Hart House a year or so ago. They fought some preliminary skirmishes manfully but who can prevail against the collective will of 215 Huron St.? On a fine spring day in April the invaders arrived and occupied the hill.

Destruction reigns. Each of the offices now has holes in the walls and ceiling – the large ones as many as 14 – and there are great lengths of 4-inch diameter black pipe coursing the length of the building. Plaster dust covers everything. Most heart-rending is the Library where huge sections of the bookshelves have been torn out, decorative overlays, gold paint and all. The floors everywhere are scraped and marred beyond easy repair. Little piles of grit and debris fill the corners. The pipe-threading machine grinds away in the furnace room and a trail of oil and grease leads out and up to every floor.

We are now in our fourth week of what – so far as we can determine – will be a three-month ordeal. The noise, the pounding, the drilling, the grinding are all about us. Trucks of the contractors litter the lawn at the back – for a while they even parked on the volleyball court! One of the problems is that there are three (currently) different sub-contractors: the sprinkler people, the electrical people, and the concrete sawers & drillers, and all are totally uncoordinated. Moreover there is no evidence of planning ahead, no notice given of which room will be struck next – one day the PDS room was occupied with only 2 hours notice, not the requested 2 days. At long intervals a car of deputy superintendents arrives from far-off downtown; they look around, examine the blue-prints, and silently depart.

There are promises that reconstruction will take place, but will it be to the standards of style, beauty and taste that marked the Observatory as something quite special? Even if attempted, can it, will it, be effective?

Rumor has it that the large glass transoms over the doorways to the hall will be bricked up. This is to prevent a conflagration from spreading from one room, to the hall, and on to another room – a fire-storm. Never mind if there are sprinklers on both sides of every transom. Go by the book. The halls, now dark tunnels, can be lit by electricity even when the lawns and fields outside are at their sunniest. And we will be left with those shiny little spiders looking down at us from the ceiling, surely doomed never to fulfill their function. One can only estimate the cost, but it must be close to \$200,000. Let us bow our heads while facing Queen's Park, and weep.

As one of our graduate students remarked, "The Administration Building at the Observatory sure was a fire trap – I had nightmares about being caught inside the hallway surrounded by all that burning marble!"

– reprinted from *The David Dunlap Doings* May 31, 1981

ASTRON '82

ASTRON '82, an Exhibition-Congress of astronomy, astrophysics and astronautics, will be held at the Exhibition Centre of Novogro, Milan, Italy on March 4 to 7, 1982. The event is being organised in co-operation with the Museo della Scienza e della Tecnica of Milan, the Civico Planetario and the Societa Astrofili of Milan. More information on the programme can be obtained from the organizing agency, COMIS Lombardia, by writing to:

COMIS Lombardia
Via Boccaccio 7
20123 Milano, Italy

PAY DUE RESPECT

Members are once again reminded that the annual membership fees are payable on 1 October 1981 for the 1982 membership year: Fees are \$20.00 for regular members, \$12.50 for youth and \$300.00 for life membership. Memberships not renewed by 15 January 1982 will be removed from the mailing list for publications, so please send your dues to your Centre Treasurer as soon as possible. Don't miss your 1982 *Observer's Handbook*, or any issues of the *Journal* or *National Newsletter*!

Secretary's Report

by **J. Tapping**
Ottawa Centre

This report reached the N.O. too late for inclusion the Annual Report for 1980. It is therefore presented in these pages.

The Editor

The following public lecture meetings were held during 1980:

- December 11, 1979: A film show: "The Radio Sky", "To the Edge of the Universe", and "The Radio View of the Universe"
- January 24, 1980: Dr. P. M. Millman, National Research Council: "The Herschel Dynasty"
- February 4, 1980: Dr. T. A. Clarke, University of Calgary: "Taking the Sun's Temperature"
- March 13, 1980: Dr. A. E. Douglas, National Research Council: "Astronomy and Molecules"
- April 23, 1980: Dr. P. A. Feldman, National Research Council: "The Vela Supernova: The 'Once and Future Star' of the Sumerians?"
- September 23, 1980: A film show: "Powers of Ten", "Relativistic Time Dilation", "Our Changing Perceptions of the Universe", "Spaceborne"
- November 21, 1980: N. W. Broten, National Research Council

The Ottawa Centre was well represented at the June General Assembly in Halifax. The Centre entered six of the seven categories and won five awards. Rolf Meier discovered another comet in the latter part of the year, named Comet Meier 1980Q, making this the third year in succession that a new comet has been discovered by him. The Observer's Group held well-attended meetings every month, and sponsored several public star nights which attracted between ten to thirty members of the public. The large radio telescope at the Indian River Observatory was used all year to monitor several radio sources, with one member starting to map out the Milky Way as a project.

Abstracts of Papers Presented at the 1981 General Assembly

An Observatory Building Project by Leo Enright, Sharbot Lake, Ontario. A member of the Kingston Centre shows how, over a number of years, a small but carefully planned observatory was constructed at a dark-skies site.

The Orion Nebular Variable Stars: A Symphony of Delicacy and Brilliance by David H. Levy, Tucson, Arizona. Considers the results and the observing procedure of a five-season program of watching twenty young variable stars in the M42 region. As seasons went on, the methods of observing became more standardized, and as a result the data acquired greater levels of reliability. Some unusual findings are reported.

The Effect of Astronomical Influence on Geological Events by Richard Linkletter, Bremerton, Washington. Covers material gleaned from reports by expert geologists regarding correlation of gravitational influence of solar system objects on the earth, including earth tides and geologic events, with a note on the behaviour of Mount St Helens.

Eye Injuries following the Solar Eclipse of February 1979 by Bernt Ralph Chou, University of Waterloo, Ontario. The analysis of a survey of eclipse-related eye injuries following the solar eclipse of February 1979 is presented. Specific target populations for future advisory campaigns are identified. The presentation of instructions for safe eclipse watching, and compliance with these instructions, appear to be significant factors in preventing eclipse retinopathy.

A Small Collection of Antique Instruments at the McLaughlin Planetarium by Thomas R. Clarke, McLaughlin Planetarium, Toronto. The McLaughlin Planetarium possesses a collection of about 30 European instruments many of which are of the 17th and 18th century and of astronomical interest. Descriptions and identifications were originally prepared by Henry King but few items have been documented outside the Royal Ontario Museum. The collection will be briefly documented and illustrated, with the intent that its existence be more widely known and that it might encourage the identification and preservation of similar items of Canadian significance. Of particular interest are 14 sundials of various types, a 53 mm brass achromatic refractor by Peter Dollond and a 76 mm brass Gregorian also by Dollond.

An Account of the 6-inch Cooke Refractor in Toronto by Brian Beattie, Scarborough, Ontario. This paper traces the history of the 6-inch Cooke refractor presently housed at the David Dunlap Observatory. This instrument, now almost 100 years old, had a central role in the growth of astronomy in Canada. The paper outlines its various uses by the Meteorological Service, the RASC and the University of Toronto.

Cleveland Abbe and Otto Struve by Alan H. Batten, Dominion Astrophysical Observatory, Victoria. Cleveland Abbe, a nineteenth-century American astronomer and meteorologist, spent two years (1865 and 1866) at Pulkovo Observatory in Russia under the direction of the first Otto Struve (1819–1905). A friendship developed between the two men, and letters from Struve to Abbe are now preserved in the Library of Congress in Washington, DC. Abbe also wrote many letters home while he was in Pulkovo and these, too, have been preserved. Extracts from the letters help to recreate the personalities of the men and life at Pulkovo.

Astronomical Installations in Britain – Ancient and Modern by Donovan H. Fallows, Ladysmith, BC. A short illustrated presentation regarding the installations in Britain from the period of Stonehenge to Greenwich and Herstmonceux. There is a short aside to the astronomical clock in York Minster, which is a memorial to the fliers of World War II, and there are glimpses of the country around the various sites.

Some Activities in Communicating Astronomy at the McLaughlin Planetarium by Thomas R. Clarke, McLaughlin Planetarium, Toronto. In recent years astronomers and planetarians have become more involved in taking astronomy out of their institutions and into the community in a variety of ways. Over the past twelve months the staff at the McLaughlin Planetarium has been involved in a number of new initiatives in communicating astronomy including: International Planetarium Week, General Interest Courses in Astronomy, Public Lectures, School Broadsheets, Circulating Displays. This report will briefly describe and evaluate these activities.

Transporting a 12½ -inch Newtonian Telescope by Ken Hewitt-White, Vancouver, BC. Work for the McMillan Planetarium requires the easy transport and quick setting up of 12½-inch Newtonian optics. Slides depict the unique telescope configuration in the rear of the van, an arrangement that does not interfere with other interior use of the vehicle. Truck and telescope will be available for inspection throughout the weekend.

Driving Ball-Mount Telescopes by Tom Tothill, Vancouver, BC. The demonstration, on an Astroscan telescope with speeded-up motions for clarity, will show how a ball-mount can be driven about any chosen axis by instant adjustments of the drive mechanism. The telescope can have the usual equatorial drive, can be swept up and down in declination while holding in right ascension, can be instantly converted to altazimuth mode, can sweep up and down in altitude while moving in azimuth, and can be driven about any other axis, including the tube axis. The mechanism is remarkably simple to construct and operate and will be explained.

Solid-State Imagery for the Amateur by Paul Moffat, Winnipeg. Recent articles on the use of CCD image systems at the larger observatories have appeared and were discussed at the General Assembly in Halifax (1980). These sensors are far beyond the reach of amateurs in cost: the sensors of 100 x 100 array size are in excess of \$4000 US. But there also exists a family of LINEAR sensors that are just as sensitive and far cheaper. A full sensing system can be built that will interface with most hobbyist computers for less than the cost of a Celestron 8, and yield images superior to the current CCD arrays.

A Cold Camera for Astrophotography by Jack Newton, Victoria. The paper will describe the construction and design of an inexpensive plastic cold camera, and follow its evolution from the optical-plug variety through the vacuum to its final dry-gas model.

Dimensions of Asteroids 216 Kleopatra and 48 Doris from Occultation Timings by Chris Aikman, Dominion Astrophysical Observatory, Victoria. The occultation of a star by asteroid Kleopatra on October 10, 1980, was timed at a number of locations along the shadow path from Edmonton, Alberta, to Goldendale, Washington. These timings yield chord lengths of the shadow projected onto the planes of the sky from each location which indicate the asteroid cross-section to be approximately an ellipse of dimensions 93 x 125 km. The occultation by Doris on March 19, 1981, was observed at Burnaby and Langley, BC, and at Pullman, Washington. Although the data are insufficient to define the asteroid's shape, its diameter in one direction must be at least 196 km, which represents a substantial increase over its previously accepted diameter of 149 km.

July's Partial Eclipse of the Moon by Ian McGregor, McLaughlin Planetarium, Toronto. On the evening of July 16/17, observers in North and South America will be treated to a partial lunar eclipse. The paper will discuss the circumstances of the eclipse and suggest observations which can be made of this event.

Editing a Centre Newsletter by Glenn Graham, Halifax. A ten-minute slide show on the trials and tribulations of being an editor of a newsletter; after which copies of 'Nova Notes' will be distributed to all present.

Economic Considerations for the Future of Optical Astronomy by Peter Jedicke, London, Ontario. There are compelling scientific reasons why attempts to build ground-based optical telescopes should be abandoned in favour of future investments in space and a wider distribution of telescopes with apertures of 2 or 3 metres. Despite this, a number of proposals for such larger telescopes are being promoted. Although these proposals may attract much attention over the coming decade, the astronomical community should realize that waiting for the advent of larger apertures in space is the best policy in the long run.