



## R E G U L U S

THE NEWSLETTER OF THE  
ROYAL ASTRONOMICAL SOCIETY OF CANADA - KINGSTON CENTRE

MARCH, APRIL, 1986

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### NOTICE REGARDING FUTURE MEETING DATES AND LOCATIONS

OUR MEETINGS OF FEB. 28, MAR. 14, APR. 11 AND 25 WILL BE IN MACINTOSH-CORRY, ROOM C-206.

UNLESS THERE IS NOTICE OTHERWISE, ALL FUTURE MEETINGS WILL BE IN MACINTOSH-CORRY, ROOM C-206.

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### LOOKING BACK ON TWENTY-FIVE YEARS OF ACTIVITY

As we all know by now, this is the year our Kingston Centre celebrates its twenty-fifth anniversary. Thanks to the work of Dr. A. Vibert Douglas, the Kingston Centre was formed in 1961 as the sixteenth Centre of the Society. Because of her work and that of a number of others, the Centre has flourished since that time and become one of the very active Centres of the Society.

To remind us of the historic events relating to our organization's establishment, our newsletter in its last issue reprinted two documents from the year 1961, documents obtained from the Society's archives. The first one was the report of the organizational meeting held in January 1961 to explore the possibility of setting up a Centre; with it was the letter subsequently sent to the National Office to report on that meeting.

Your editor hopes that readers enjoy this series of articles, and again wants to say that if there are any members of the Society in any other parts of the country who were members of the Kingston Centre at the time of its founding in 1961, he hopes that they will contact us to share with us any memories they may have of that time.

### "REPLY OF THE SOCIETY PRESIDENT TO THE REPORT OF THE JANUARY 1961 ORGANIZATIONAL MEETING HELD IN KINGSTON

Toronto, Ont.,  
Feb. 1, 1961.

Professor A. Vibert Douglas,  
Queen's University,  
Kingston, Ontario

Dear Professor Douglas:

On behalf of the National Council of the Royal Astronomical Society of Canada, may I express to you our appreciation for the interest in the Society which you have aroused in the Kingston area. We were very pleased to hear that a new Centre of our Society is in the process of being formed at Kingston and we welcome this extension of the Society's operations.

I assume that when you proceed further with your organization you will be writing a formal letter to the National Council requesting authorization for the Kingston Centre as per Article 7 of the Constitution of our Society. Although there is no minimum number of members mentioned in our Constitution, in connection with the formation of a new centre, the current practice has been to require approximately 25 paid-up members as an indication of a group with something more than a transient interest in the subject. I feel sure that the new Kingston Centre will develop into one of our strong and virile groups, particularly in view of the forward looking

program in both radio and optical astronomy at Queen's University.

May I add to the above my own personal congratulations and expressions of best wishes to your group at Kingston.

Very sincerely yours,  
(Signed) Peter M. Millman  
President

The group continued to hold meetings, and the next correspondence is the text of a letter of March 10, 1961 sent by Dr. Douglas to Mrs. Marie Fidler, Executive Secretary of the R.A.S.C.:

"Dear Mrs. Fidler:

I have to report the fifth meeting of the Kingston Centre.

A simplified constitution on the lines of the Ottawa constitution will come up for approval at the next meeting on March 23.

Officers of the Kingston Centre were elected as follows:

Hon. Pres.: Dr. A. V. Douglas  
Pres.: A. K. F. Turner  
V.P.: M. R. Edwards  
Sec.-Treas.: F. M. Taylor  
Address: C% Queen's University

A new member paid #3.00 and I request a Handbook for him - R. Flynn Marr, Leonard Hall, Queen's University, Kingston.

Sincerely yours,  
(Signed) A. Vibert Douglas"

The reply to the above letter is from the National Secretary of the Society:

Toronto, Ontario,  
23 March, 1961.

Dr. A. Vibert Douglas,  
Queen's University,  
Kingston, Ontario.

Dear Dr. Douglas:

Thank you for your letter of March 10. I regret that with the Annual Meeting on March 17-18 it has not been possible to reply at an earlier date.

The National Council approved, at the meeting on March 18, the election to membership of the twenty applicants whose names you have submitted. This progress must be very encouraging.

With reference to the matter of fees, the National Office cannot refund to you a portion of the fees collected from these individuals until your group in Kingston is given the official status of a Centre.

I suggest that either you or Mr. Turner, acting on behalf of your group, submit an application for this status, as required by our Constitution, to the June meeting of National Council (see page 4 of the enclosed Constitution).

We have at the moment fifteen active Centres of the Society and the formation of the sixteenth Centre at Kingston would mark a wonderful step forward in 1961.

With best personal regards,

Yours sincerely,  
J. E. Kennedy,  
National Secretary

In our next issue we will reprint the formal request for Centre status submitted by Dr. Douglas, its acknowledgement by the National Secretary, and his confirmation following the June 1961 meeting of National Council that Centre status had been granted.

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THE CITATION FOR THE AWARDING  
OF THE CHANT MEDAL TO  
MR. WARREN MORRISON OF THE KINGSTON CENTRE

[**EDITOR'S NOTE:** I am extremely pleased to report that one of our members, Mr. Warren Morrison, has been awarded our Society's very prestigious Chant Medal, which is given for original and significant achievements in amateur astronomy. In the forty-six years since its institution, this medal has been awarded only sixteen times, the last time, also to one of our members, David Levy, who received it on the occasion of the 1980 General Assembly. It should be pointed out that only once before has the Chant Medal been awarded consecutively to two members of the same Centre. Readers of past issues of this newsletter may recall some of Warren's discoveries being mentioned and may recall also reading some of the correspondence he has maintained with these pages.

To Warren, we say we are very proud of your achievements and we heartily congratulate you on receiving this award. This citation was prepared by Dr. John Percy, Past-President of the R.A.S.C. and was read by the President, Dr. Roy Bishop at the National Council meeting on January 25, 1986. Your editor was most pleased to second the motion.]

"In the report of the Awards Committee for 1978-1979, there is a long discussion by the chairman, who was then Dr. Allen Batten, as to whether Mr. Warren Morrison should receive the Chant Medal at that time. He had just discovered Nova Cygni 1978, a major contribution to astronomy. In the end it was decided to award him the Chilton Prize instead. Since then he has continued to make important contributions to astronomical research, particularly in the study of variable stars. The most recent A.A.V.S.O. reports in print indicate that he has made the following numbers of estimates:

for 1979 - 80:	2946
for 1980 - 81:	3362
for 1981 - 82:	3663
for 1982 - 83:	3854

These figures put him in the top few A.A.V.S.O. observers world-wide. Furthermore, I recently discussed his work with Dr. Janet Mattei, director of the A.A.V.S.O., and her technical assistant, Elizabeth Boggan. They told me that his work was of excellent quality. A few months ago, Warren discovered the latest outburst of the recurrent nova, RS Ophiuchi. This was reported in the I.A.U. Telegram System. Warren is also serving as a Coordinator in the International Halley Watch.

All in all, he would be an excellent candidate for this award, and I am pleased to nominate him for it."

(Signed)  
(Dr.) John Percy  
(Professor of Astronomy, U. of Toronto)  
(Past-President of the R.A.S.C.)  
(Second Vice-President of the AAVSO.)

Motion 86114 was seconded by Leo Enright

The motion was carried unanimously. (from National Council Meeting, Jan. 1986.)

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CITATION FOR DAVID STOKES,  
1986 WINNER OF THE KINGSTON CENTRE'S  
DR. A. VIBERT DOUGLAS AWARD

[**EDITOR'S NOTE:** The following is the text of the citation which was read on the occasion of the first presentation of our Centre's new award, the Dr. A. Vibert Douglas Award, which was presented by our National President, Dr. Roy Bishop at our twenty-fifth anniversary celebrations. The winner, as most of our readers know, was our hard-working president, David Stokes.]

"All the members of the Kingston Centre are aware of the fact that Mr. David M. Stokes has provided excellent leadership as president of the R. A. S. C. - Kingston Centre over the past two year. He is the type of amateur astronomer who quietly thinks about methods of improving our meetings and the ways we do things as a group and then sets about the task of carrying out those plans all the while doing the job in an effective and unassuming way.

He is a person who is always eager to share his special interests in astronomy. Over the past two years he has assisted the staff of a camp site in organizing its plans for building an observatory. He has himself observed the sky in many different countries through which he has travelled, and on several occasions has sent back correspondence about what it was like to observe the stars in some of the very distant regions of the globe.

Most of all in recent years he has used his computer to do many kinds of calculations involving astronomy and spherical mathematics. His special interests are the calculations of orbits of solar system objects, and in this area he has done some amazing work which rates with the best in the country. Many times he has shown his eagerness to share his computer knowledge and resources to help other members of the Centre and the Society.

His special interest in Astronomy Day and all the Centre's activities has meant that he has given up a great deal of his own free time to assist the group. As well as being president for two years, he has for a number of years been our Centre's librarian.

The members of the Kingston Centre, therefore, are proud to have David Stokes as our president and think he is a most worthy first recipient of the Dr. A. Vibert Douglas Award.

Congratulations, David! Your hard work, service, and dedication to the Centre are appreciated."

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INTERNATIONAL ASTRONOMY DAY - SATURDAY, APRIL 19, 1986

This year, with the celebration of its tenth anniversary in Canada, **International Astronomy Day** has come of age. With the current heightened interest in astronomy, it could not happen at a better time. 1986, the year of Halley's Comet and several other important astronomical events, presents us with a glorious opportunity to mark this event in a better way than ever before. As in the past ten years, thousands of amateur and professional astronomers will be using the day to share with the public their interest in the fascinating science of astronomy; and, as announced previously in the **National Newsletter** and in the **Observer's Handbook** on page 25, the date this year is **Saturday, April 19**. All Centres of our Society are again being urged to have their members join with astronomers around the world in marking this special occasion. In fact, at the National Council meeting in January a motion approved an information package on Astronomy Day which urged continuance of "the fine traditions established over the past decade" and efforts to make this one "the best one ever held."

We need hardly be reminded that astronomy is the most ancient of the sciences, that for millennia it has been natural for men to stand in awe of the mystery of the cosmos, and that in the present century there has been an enormous outburst of interest in many aspects of astronomy.

Since its inception over a decade ago, International Astronomy Day has grown bigger and better each year with more and more Centres becoming involved each year. At the same time more and more countries around the world have joined in making it a truly international event. Three countries that have just been added to the growing list are Sweden, Argentina, and the Philipines. In North America, in 1984, seven astronomical organizations joined in sponsoring the event and issuing a news release for the occasion; last year, in 1985, the number of such organizations on this continent had risen to twelve. In many places an Astronomy Weekend was held. In Britain, an Astronomy Week was held in 1985.

With Halley's Comet still in our skies in mid-April, there is an obvious reason for the continued popular interest in astronomy which over the past year has been

much higher than usual.

Many Centres of our Society will surely take advantage of this fact to present correct and realistic information about comets and other celestial objects viewed by the astronomer, as well as information about light pollution and other topics.

In recent years many kinds of activities have been undertaken by Centres, both large and small. If those efforts can provide any indication about 1986, there will be many new ventures attempted, along with the ones that have always been successful in "Taking Astronomy To The People", for that is the aim of this enterprise. Activities and events are chosen according to the facilities, resources, expertise, and particular interests of the local group of astronomers. During the thy, many Centres will be organizing displays at one or more shopping malls, hosting "open houses" at observatories and planetaria, and organizing public solar observing sessions where, weather permitting, people will safely observe the solar disk. For some Centres, mall displays have become very extensive -- covering current topics in astronomy such as Halley's Comet and Voyager's discoveries at Uranus, exhibits of equipment and observing projects, presentations of information that teachers could use in astronomy courses, exhibits of astronomical art or stamps, presentations of astronomy via games (such as a popular astronomical version of Trivial Pursuit), and demonstrations of relevant computer programs. Most important of all the displays are accompanied by the astronomers themselves who can, or at least try to, answer the many questions about their equipment, projects, or the latest astronomical discovery.

In planning their displays, all Centres are being urged to consider some form of presentation on the two main themes being stressed this year:

- (1) Halley's Comet: See It Before It's Gone,  
and
- (2) Light Pollution: A Very Serious Problem.

As in the past, weather permitting, many Centres will organize a public star night which may be held at a park or other observing site which does not have too much light pollution. Again this year many Centres will have a public star night after displays, that is on the night of April 19-20. Before such an event is held, Centre members should decide whether they wish to have alternative arrangements in the event of bad weather; in that case, some groups may wish to have an observing session the following night, and such plans should be made known in the announcement of the events planned.

In the early evening the moon, slightly past first quarter and close to the bright star, Regulus, will be the favorite target as many members of the public have their first glimpse of lunar craters. Then many of the instruments will turn to Halley's Comet, 56 degrees away (from the moon and in the constellation Hydra) and predicted to be between third and fifth magnitude. Its apparent positions that evening will be as follows: R.A.: 12h 5.8m; Dec.:  $-33^{\circ} 00'$ , that is, about two degrees northeast of the star Beta Hydrae, or eight degrees south of the star Alpha Corvi. Once again it is possible that many people will be able to catch a glimpse of this fabled object for the very first time.

Because Halley's Comet will be the object most eagerly requested as an observing target, organizers who hope to show it that night are well advised to practise locating the comet several nights before Astronomy Day because the bright moonlight that night may make it more difficult to locate than expected. During those previous nights it will have moved up considerably from its very southerly location to become an object in the evening sky; even so Halley's Comet will still be low in the southern sky from all parts of southern Canada. The comet will rise in the southeast between 19:00 and 20:30 local time and will be highest in the southern sky at about 22:00 hours local time. We can appreciate the importance of having a good southern horizon when we realize that at the time when it is highest in the south at 22:00 hours, it is only 10 to 12 degrees above the horizon for observers at our latitude. A good southern horizon is, therefore, an absolute necessity. The comet will set in the southwest about 2 hours after midnight; the moon will still be in the sky for at least another hour; because it is so much farther south, the comet sets before the moon.

For those who wish to view the planets, this is an excellent evening. Venus in a

slight crescent phase may be seen in the constellation Taurus in the west after sunset. For those who can linger at the observing site for most or all of the night, the rewards may be very worthwhile. Two interesting planets will appear in the southeast (in the constellation Ophiuchus) rising about 22:00 hours local time: Saturn is a perennial favorite at public observing sessions and its rings are now favorably presented to us (in fact; only one year from their maximum earthward exposure) and not far from it in the same constellation is Uranus, the planet about which we have recently learned so much because of the Voyager spacecraft. For those who will remain a while longer the rewards will increase: Mars, now in Sagittarius, rises shortly after midnight and is unusually bright presenting a hint of its even greater brilliancy this summer as it approaches a close opposition in the month of July. Very close to Mars (and just west of it in Sagittarius) will be will be Neptune which may be easily found even before moonset by those who have been following these two planets over the past two weeks when they have been less than one and a half degrees apart. For the serious observers who bring along medium or large telescopes, it is not inconceivable that even Pluto, now in the constellation Virgo, will be seen by a few after moonset for that planet is less than a week away from opposition and this month is the most favorable in the whole year for seeing it. Those who have been following it and have identified it over the previous two weeks when the sky was moonless may be able to locate it again in the morning hours after moonset. Among the brighter minor planets, Ceres and Pallas are too close to the moon to be readily seen, but Juno and Vesta, now in Ophiuchus and Aquarius respectively, may be pointed out by those who have seen them recently, as they view the major planets in those areas of the sky. For deep sky observers the hours after moonset will present the numerous galaxies, clusters and famous double stars that are spring and summer favorites of all seasoned observers. Their list, of course, includes hundreds of objects in and near the summer Milky Way.

If the weather permits, there are dozens of objects to be seen and enjoyed, and these are only a few of them.

As mentioned, the two major themes this year are:

HALLEY'S COMET: SEE IT BEFORE IT'S GONE,  
and  
LIGHT POLLUTION: A VERY SERIOUS PROBLEM.

We should have at our displays members who are well versed in the pertinent information about these two topics, and we should obtain a supply of "handout" materials on these two topics. The four Halley's Comet Bulletins prepared for our Society by Dr. Halliday and Mrs. Grey are excellent and strongly recommended. Various materials are available on the problem of light pollution. One of them is the **Dark Skies For Comet Halley Journal** and other materials are available from Mr. Daniel Kahraman of the London Centre. Our members are urged to prepare materials appropriate to the kinds of light pollution that are threats in their areas and hindrances at their observing sites.

As in the past, careful preparation will be the key to a successful Astronomy Day. There are many things to think about in the various planning stages deciding on the sites and facilities to be used, the displays to be mounted, the kinds of equipment to be exhibited, the times for the observing sessions, and so on. We certainly hope to have enough "handout" information available about the R.A.S.C. and the benefits of membership in the Society and the Centre. Sales of the Observer's Handbook will definitely be promoted; this standard international guide for observers can be useful for anyone interested in astronomy, and perhaps we have not promoted it enough in the past. In the past our Centre has acquired more new members on this occasion than at any other time of the year. Accordingly, it is most important to have sufficient "written information" available for prospective members. Introductory materials need not be lengthy but we should at least be sure that they give information about upcoming meetings including the topics of some of the talks, hints about some future activities of the Centre, and a phone number of a member who may be contacted if there are questions.

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FOR YOUR COMPENDIUM OF ESOTERIC FACTS

After asking about one of the noons of Uranus in our last issue, we now ask if you know an interesting fact about Deimos, the very tiny moon of Mars. Did you know that this satellite is so small and the force of gravity so weak on its surface that an athlete could easily launch himself into space by running along the surface and jumping. Indeed it is true, for the escape velocity on Deimos is only about seven miles per hour.

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REPORTS AND OTHER ITEMS

1. The past two months have had their share of cloudy nights but there were a few interesting observations made. A number of our members saw a very large and interesting auroral display on the night of February 8-9; your editor also saw a good display on the night of February 11-12. Because of the extremely good transparency on the night of February 3-4, the Zodiacal Light was remarkably good and easily photographed, as it extended up to the constellation Aries or higher. The sun remained relatively inactive in January but more spots appeared in early February giving a Relative Sunspot Number of 44 on the 6th and 34 on the 11th and 12th.
2. As for suggestions for observing in the next while, we can offer the following:  
(i) In the coming months we urge members to plan to see Halley's Comet during the "observing windows" especially in the months of March and April. Carefully study the ephemeris and prepare to go to a location that offers a suitable southern horizon. (ii) Check the Handbook also for information about the morning configurations of the planets Mars, Uranus, and Saturn. (iii) Those who own larger telescopes should be reminded that March, April, and May are the best months this year for observing Pluto which is at opposition in late April. Best of luck! Plan your observing carefully.
3. We thank all those who attended our anniversary banquet and meeting on January 23 and made them such a success.
4. Here is our calendar for upcoming meeting dates:

Feb. 14.	Leo Enright	Champlain's Astrolabe
Feb. 28	David Stokes	Calculating Planetary Orbits
Mar. 14	Margaret Cohoe	The Kingston Observatory
THE MEETING OF MAR. 28 IS CANCELLED.		
Apr. 11.		OPEN
Apr. 25	Terry & Ruth Hicks	Halley From New Zealand
May 9	Murray Anderson	Mars
May 23	Peter Jedicke	The Kingston-London Centres' Exchange Lecture
June 13		OPEN
June 27		OPEN

5. Your editor would like to hear from readers more often. Our address is as follows:

R.A.S.C. - Kingston Centre,  
Box 1793,  
Kingston, Ont.  
K7L 5J6

Clear skies!  
Good observing!

