



REGULUS

JANUARY-FEBRUARY 1991

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

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PUBLICITY.....	Bill Broderick	(000)	000-0000
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ASTRONOMY DAY.....	Stan Hanna	(000)	000-0000
	Peggy Torney	(000)	000-0000

MEETINGS IN 1991

Regular meetings of the Kingston Centre are held on the second Friday of each month at 8 p.m., in Room D-216, MacIntosh-Cory Hall, Queen's University. Non-members are welcome. Executive meetings are one-half hour before regular meetings.

JANUARY 11	JULY 12
FEBRUARY 8	AUGUST 9
MARCH 8	SEPTEMBER 13
APRIL 12	OCTOBER 11
MAY 10	NOVEMBER 8
JUNE 14	DECEMBER 13

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MESSAGE FROM THE PRESIDENT

By Ian Levstein

Greetings! I hope the holiday season went well for everyone. I'd first like to thank past-President **Denise Sabatini** for her terrific contribution to the Kingston Centre. The increase in membership over the past two years is a reflection of the **fine job** she performed. I'd second like to thank **Regulus** editor **Bill Broderick**, for reviving our Centre newsletter and turning it into a vibrant and informative periodical. Many new members may not realize that our Centre receives newsletters from many of the other 21 RASC Centres. Some are professionally typeset and published with photos and feature-length articles. Others are less fancy, perhaps thinner, but no less a **labour of love**, and each is indicative of the regionality and interests of the membership. A small Centre such as ours should **feel proud** that our newsletter is not only a fine publication, but at least equal in scope to newsletters of larger Centres. Well done, Bill. I'd third like to thank (in advance) and welcome the new members of the executive and committees for volunteering their time and effort to the Centre. It's nice to see new blood in these important roles. Contrary to popular belief, the Centre does not run itself, and only seems to work so well and so smoothly because **everyone pitches in** and lends a hand/car/telescope when needed.

As I begin my first term (ever the optimist) as Kingston Centre President, I have something for each of us to consider. As a secondary school teacher, I know for a fact that there are **many youngsters** out there who are **thirsty for knowledge** and would welcome the **opportunity to learn** about the universe around them. Unfortunately, we often take it for granted that children learn about astronomy in school--but this is rarely the case. In recent years, the emphasis in education has been on the development of the "independent problem solver" who has learned "survival skills". To be sure, both are worthy goals and important skills to possess, but this type of education has also tried to hurry-up our students in an effort to get them into the "real" world A.S.A.P. Astronomy, however, is not a hurry-up science. It provides us with an opportunity to relax, reflect and marvel at the universe we live in. Astronomy in school, is usually glossed over in science class unless the teacher is him/herself interested, but even that does not guarantee success. I recently had evidence of this.

I was invited, on October 4, 1990, to lead an observing session for some gifted high school students at Lemoine Point Conservation Area. It was a clear night, but the full moon washed out just about everything. I was very surprised, upon asking the teacher in charge why he deliberately chose an evening when seeing would be so poor, to be told that "this was the week for astronomy". I was disappointed to find such a **rigid interpretation** of the course outline for those students. Time lines in education are **not set in stone**. How much more interesting that evening would have been if the moon was out of the sky. Some of those students were looking--really looking--at the night sky--for the **first time** in their lives. What a difference 10 days might have made. Surely, the science course would not have suffered severely.

The point of all this, is this: each of us can **make an impression** on a young person, if we care to. All it takes is a bit of **good planing** and a **desire to get young people interested in astronomy**.

(Continued on page 5.)

KINGSTON CENTRE SECRETARY'S

ANNUAL REPORT, 1990

This past year was a very exciting one for the members of the Kingston Centre. In addition to the 12 regular and 12 executive meetings, we had a very special meeting to welcome our Honorary President, **David Levy**, literally days after discovering his seventh comet.

The year started off with local astronomer **Terrence Dickinson**, talking about the Voyager 2 Neptune Fly-By. At that same meeting **Ruth Hicks**, past president, received the **A. Vibert Douglas Award** for service to the Kingston Centre. In February, **Gerald Moriarty-Schieven** spoke about Star Formation and Protoplanets, then left to take up employment at the J.P.L. in California. **Ian Levstein** spoke to us in March about the role of Astronomy in the Science Fiction Film. April's guest speaker was **Dr. Philip Baille**, who spoke about the Great Men of Astronomy from ancient times to 1700. April also brought a very successful Astronomy Day exhibition at two local malls, with displays, pamphlets and telescopes galore (including the 13' Green Pig).

May was Members' Night, and we listened to five short talks from: **Bill Broderick**--tektites; **Chris Collin**--time; **Leo Enright**--sidereal time; **Gisela Broderick**--astrology; and **Denise Sabatini**--the New Grange Alignment of the Boyne Valley Cairn. Also in May, we were pleased to learn of **David Levy's** sixth comet discovery, **Comet Levy 1990c**. In June, **Walter MacDonald** talked about his Questar 12" Experience. In July, **Terry Hicks** answered the question: Where Will the Sun Set? **Bill Broderick** spoke again in August about Our Cosmic Connections, but not before **Stan Hanna** received his long-sought-after **Messier Certificate**, and not before we learned that **David Levy** had discovered **Asteroid Levy 1990BN**. With **Terrence Dickinson**, our Centre also held a very successful observing session at Charleston Lake Provincial Park where Comet Levy 1990c and Saturn were the main attractions. Members' Night came once again in September, and **Ian Levstein** showed slides of summer aurorae and Comet Levy 1990c. **Arthur Covington** spoke about radio astronomy and brought in a tape-recording of pulsars, and **David Stokes** read a letter to and a poem by his friend **Patrick White**, concerning the discovery of Comet Levy 1990c.

October brought back **John Griese III** to speak about the July 1989 Total Solar Eclipse, and we welcomed the addition of a new 32mm eyepiece for our Centre's 10" Dobsonian reflector. In November, **Leo Enright** told us about the Holleford Crater, just a few miles north of Kingston. A special meeting was called two weeks later to hear **David Levy** talk about his comet discoveries, and we were all pleased to hear that our Honorary President had just discovered, photographically, his seventh comet--**Comet Shoemaker-Levy 1990c**. David was also honoured to present to our President, **Denise Sabatini**, the **A. Vibert Douglas Award** in recognition of her service to the Kingston Centre. In December we held our **annual dinner and election night**, resulting in many new faces on the executive. Also that evening, **Terry Hicks** talked briefly about the problems faced by navigators in finding longitude before the invention of the Harrison Chronometer, and **Ruth Ricks** gave us a brief overview of Stonehenge.

(Continued on page 5.)

REPORT OF THE NATIONAL COUNCIL REPRESENTATIVE

FOR 1990

During 1990 I attended, as the Kingston Centre's National Council Representative, all four meetings of the National Council of the Royal Astronomical Society of Canada. They were the meetings of February 17 in Toronto, June 29 and July 2 at the time of the General Assembly in Ottawa, and September 29 in Toronto.

Reports were given either in writing for the Centre's newsletter or verbally at a Centre meeting, or both, following all of these National Council Meetings.

During the year many important decisions were made by National Council, some of them being those in regard to liability insurance for the Centres, articles to be sold to promote the Society and to raise funds, a large-scale planned trip for the 1991 solar eclipse, and special lectures marking the **Centennial Year** of our Society.

At the first meeting of the year, the Kingston Centre's request for a **Special Projects Grant** to reimburse the person who had refurbished our Centre's Telescope was honoured with the full amount requested. At the General Assembly a new fee structure was approved, and a new national president took office. An announcement was made that an **asteroid had been named** in honour of our Society on the occasion of its **hundredth** birthday.

At present I am involved in two national committees, namely the **Seal Committee**, whose task it is to formulate guidelines to protect the use of our Society's Seal, and the "**Junior Handbook**" **Committee**, of which I am the chairman, and whose mandate it is to produce a beginner's observing guide.

I have been honoured to serve this Centre as its National Council Representative during 1990. Thank you for this privilege.

Respectfully submitted,

LEO ENRIGHT

EDITOR'S REPORT

My first year as editor has been a very enjoyable experience for me. It has enabled me to get involved in the Centre in an area where I feel I can make a real contribution.

I am particularly gratified at the response received to date to our invitation to advertise in **Regulus**. Revenues received in 1990 in the amount of \$166.55 from advertising reduced significantly the cost of the newsletter to our Centre.

As well, I have been privileged to work with a fine group of people, who have given me their full support and cooperation. Working with them has been a terrific experience.

I look forward to another exciting and fulfilling year in 1991, and thank you for the privilege of continuing to serve our Centre as editor of your newsletter.

BILL BRODERICK

PRESIDENT'S REPORT FOR 1990

By Denise Sabatini

I'd like to begin this report by thanking everyone who made this year a fun and exciting year.

The **Aurora Phone Line** continues to alert us of those spectacular nights.

This year has also been one which we received much exposure. We had **Astronomy Day** in two malls. We had good representation at the G.A. in Ottawa. Our request to host the **Spring 1991 N.F.C.A.A.A.** was accepted. And our Honorary President discovered two comets and gave a talk which was open to the public.

We also continued our educational programs, such as the night an "**astronomy night**" was hosted by **David Stokes** at Bob's Lake for many students.

I'm looking forward to the upcoming year and offer any assistance needed to the new President.

Respectfully,

DENISE SABATINI

MESSAGE FROM THE PRESIDENT

(Continued from page 2.)

I would very much like to see an **astronomy club** in each high school in the area, where students can get together with an interested staff advisor to learn about the cosmos. One of my goals as president, is to try and attract not only **new blood**, but **young blood** to our Centre. If we don't make the attempt to ensure the future of our Centre by inviting both high school and college/university students to attend our meetings and observing sessions, we are soon (astronomically speaking) going to be an old-persons' Centre.

Our Centre's **future** lies in our hands.

IAN LEVSTEIN

SECRETARY'S ANNUAL REPORT, 1990

(Continued from page 3.)

We have had a terrific year. We have been treated to fine presentations and more than a dozen **new members** have been accounted for. Our current membership list shows **eight life members, two senior members and 43 regular members**. Best wishes to the new executive.

Respectfully submitted

IAN LEVSTEIN

IN PRAISE OF THE LONG-SUFFERING ASTRONOMER'S SPOUSE

By David Griffith

(Reprinted from Nova Notes, newsletter of the
Halifax Centre, for January-February 1990.)

The time has come for we creatures of the night to cease contemplating the heavens long enough to contemplate the many sacrifices made by our "astronomy widows/widowers". For far too long have the trials and tribulations of these heroes and heroines been overlooked. Their time has come.

Consider, if you will, the following hypothetical scenarios that are played out, night after night, by those "star-crossed" lovers: the astronomer and his/her spouse.

Who else but an astronomer's spouse is faced with the dilemma of answering such questions as, "Why does your husband stand outside at night in subzero weather wearing a black cape?" You consider attempting to explain to this worthy soul the concepts of night vision and light pollution, but would probably do just as well to admit that your husband is a vampire.

Who else but an astronomer's spouse has to contend with such ultimatums as, "Honey, I'm coming in to grab a bite to eat. Would you please shut off all the lights and sit in total darkness for a while?" And when you finally emerge into the kitchen, clad in five layers of clothing, a black cape and red goggles, what do you think is going through the minds of the guests your spouse invited over for tea?

Who else but the poor astronomer's spouse lives in constant fear of the dreaded "night drive"? While you are uttering superlatives concerning that lovely aurora in the north, your loved one is feverishly attempting to call your attention to that string of vehicles approaching from the east.

Who, but our long-suffering spouses, are continually subjected to being ruthlessly shaken from a peaceful night's repose, only to be escorted, clad only in nightgown or pajamas, into the backyard to "experience an occultation"? Such incidents typically occur during the dreaded "observing window", a period during which our heroes and heroines are deprived of the security and warmth of a shared bed. When communications are restored next morning, the sky gazer is scarcely worth talking to, wandering about as if in a trance, a victim of "astronomer's hangover".

Consider too, the financial burden shoulder by the astro-spouse. The sky gazer becomes a virtual rogue when bitten by the crave for a new accessory. While husband or wife is desperately trying to balance the books, our astronomer lurks in the shadows, waiting for a chance to dip into the emergency fund to finance a new Nagler. And if there isn't enough? Well, there's always little Joey's piggybank!

Such are the burdens of our tormented mates. What recourse do they have? Sadly, their choices are few. The more desperate ones could perhaps install bright yard lights and trade in the four wheel drive "scope mobile" for a tiny sports car. Some will, after years of resisting, succumb to the creatures of the night and become one of them, doomed to roam the fields by night, thirsting for the ideal observing site.

So, here's to you, astro-spouses! We acknowledge your plight! We hear your cries for overcast skies and Full Moons. We feel your pain, and we offer you release from it...

Just cone closer...closer.....look into my eye(piece)...deeper...deeper...feel the photons...

FEES FOR 1991

Membership fees for 1991 were revised at the Annual Meeting held December 14, 1990. The new fees are:

REGULAR MEMBERSHIP: \$40.00 per year (increase of \$3.00)
YOUTH MEMBERSHIP (under 18): \$25.00 per year (increase of \$2.00)
SENIOR MEMBERSHIP (over 65): \$25.00 per year (new)
LIFE MEMBERSHIP: \$640.00 (no change to previously-announced amount)
ASSOCIATE MEMBERSHIP (spouse, child, or parent of member): \$10.00 per year
(increase of \$0.75)

Please note that the above fee revisions are the result of **additional** Kingston Centre surcharge amounts approved at the Annual Meeting. If you have already remitted based on the amounts announced in the November-December issue of **REGULUS**, a remittance for the additional amount at your earliest convenience, would be appreciated by our Treasurer Peter Kirk. Thank you very much.

OTHER IMPORTANT MOTIONS PASSED AT THE ANNUAL MEETING

1. The amounts of the Kingston Centre **surcharges** to the annual Society dues (previously \$5.00 for regular members and \$3.00 for youth members) were deleted from Article III of our By-Laws and replaced with a statement that the surcharges for Ordinary, Youth and Senior Members be **determined from time to time** by motion of the Executive Council of the Centre . . . and that there shall be **no more than two** fee adjustments in one membership year.
2. The **Librarian** to be an officer and member of the Executive Council of the Centre.
3. The **Secretary's** and **Treasurer's reports** to be forwarded to the Society's Secretary and Treasurer by the 15th day of January each year.
4. The **Annual Meeting** of the Centre to be held each year between October 1 and December 31.
5. **Senior Membership** was added to the several classes of membership. Senior members--those over 65--may receive the benefits of membership at a special reduced fee, as noted above, upon specific application and payment of the Senior Membership fee.

Other Points of Note

1. The main governing document of our Centre will now be called "By-law Number One" instead of the "Constitution²".
2. The word "he" in Article VI will be replaced by the words "he or she".
3. Since the governing document of the Society is now called "By-Law Number One of the Royal Astronomical Society of Canada" the word "By-laws" in Article III.2 will be changed to "By-law".
4. Senior membership is not "automatic". As the definition in **By-law Number One** of the Society states, "A senior member is one who is at least 65 years of age, who has **specifically applied for this class of membership**, and who has paid the senior membership fee".

GREETINGS FROM THE WEST

Greetings to all of you!

Here's my fee for 1991. Hope to see many of you out here for the G.A. in May.

Meanwhile, I'm still on the waiting list for David Levy's group to Baja for the July 11 eclipse!

Many thanks for **Regulus**--I like the format and the articles, specially "What is Heaven?" and "The Sky from Down Under" in the last issue. Astro Jumbles are also a great idea. Compliments to Bill Broderick for a very fine publication.

Best wishes to all of you!

ANGELIKA HACKETT
Burnaby, B.C.

Good to hear from you, Angelika. Hope you make it to Baja. I'm sure some of us will make it to the G.A. Many thanks for the kind comments regarding **Regulus**. We'll try to keep up the good work. ED.

**There once was a man from Kitt Peak
Who came to Kingston to speak
About his six comets (and gazing!),
He was quite simply amazing--
He'd bagged Number Seven that week!**

WALTER MACDONALD

Lines written on the occasion of **David Levy's** visit to Kingston Centre on Thursday, November 22, 1990.

FOR SALE

THREE-INCH REFRACTOR--TASCO--plus accessories, e.g. zoom erector lens, tripod, moon chart. \$250.00 or nearest offer. Call J. W. Stonier, (000) 000-0000 (Inverary).

ASTRO JUMBLE

Due to time constraints and lack of space, this issue's "ASTRO JUMBLE" puzzle has had to be "put over" to the next issue. However, in case anyone is waiting in suspense (we doubt that), here are the answers to our last puzzle:

PLATO, ARCHIMEDES, TYCHO, CLAVIUS, COPERNICUS

Other prominent features on the Moon are: THE MARIA OR SEAS.

I saw Eternity the other night
Like a great ring of pure and endless light,
All calm, as it was bright;
And round beneath it, Time in hours, days, years,
Driv'n by the spheres
Like a vast shadow mov'd; in which the world
And all her train were hurl'd.

-- HENRY VAUGHAN

GARY'S ASTRO FABRICATING

2" Helical focusers (precision made,all aluminum)..\$55
2" and 1.25" Adapters..\$15
2" and 1.25" Adapters with 48mm filter threads..\$25
Precision collimating tool (reflecting type)..\$30
Eyepiece parlocaling rings (adjustable)
1.25"..\$5 each 2"..\$7 each
Offset spider assemblies - 6" -27"available..\$25 and up
(ultra rigid-reduces tension on tube)
Diagonal holders 1" - 6"available.\$15 and up
Quick release finder scope mounts..\$40 and up

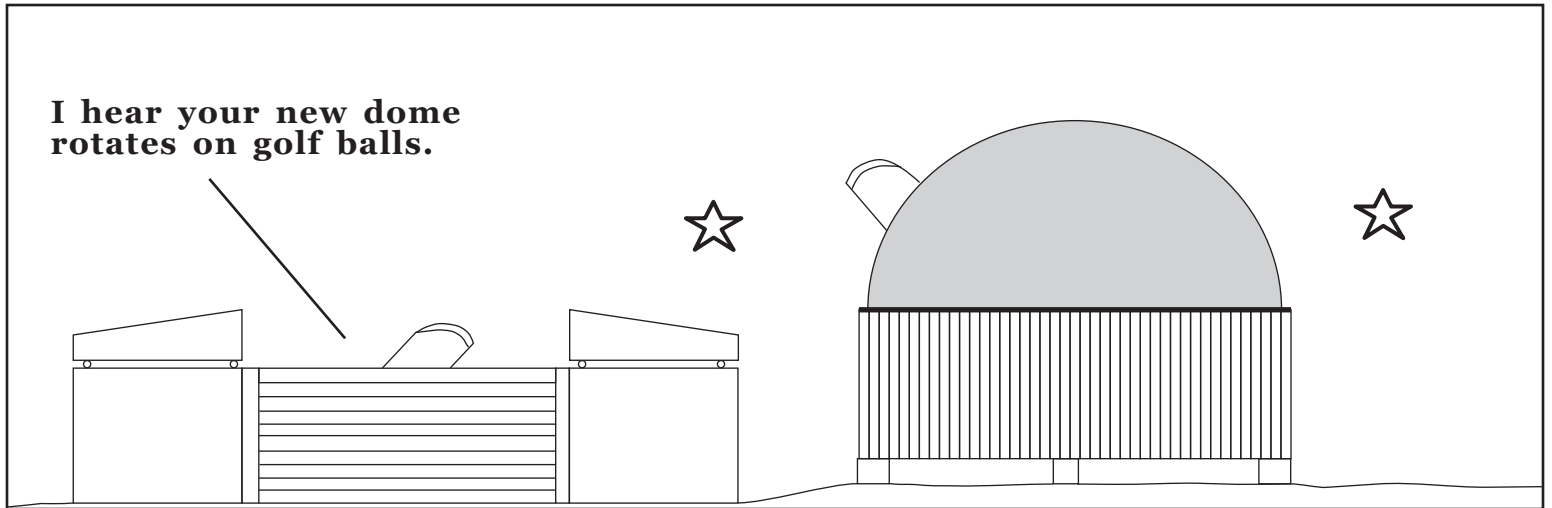
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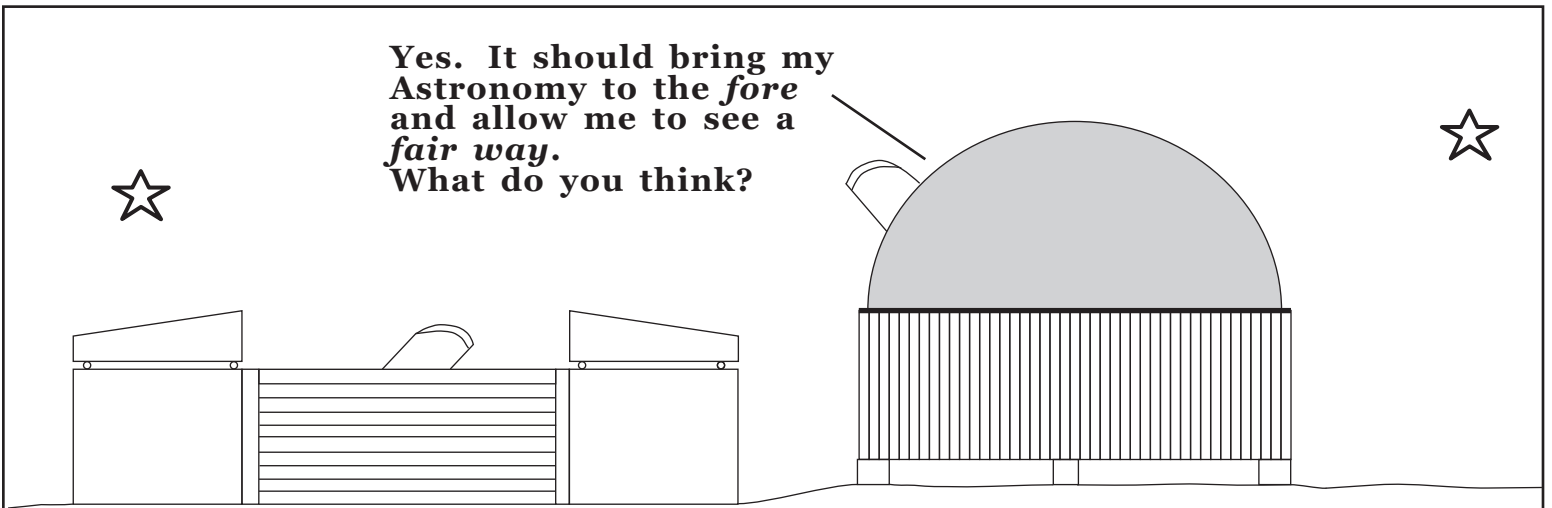
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The Celestial Observer

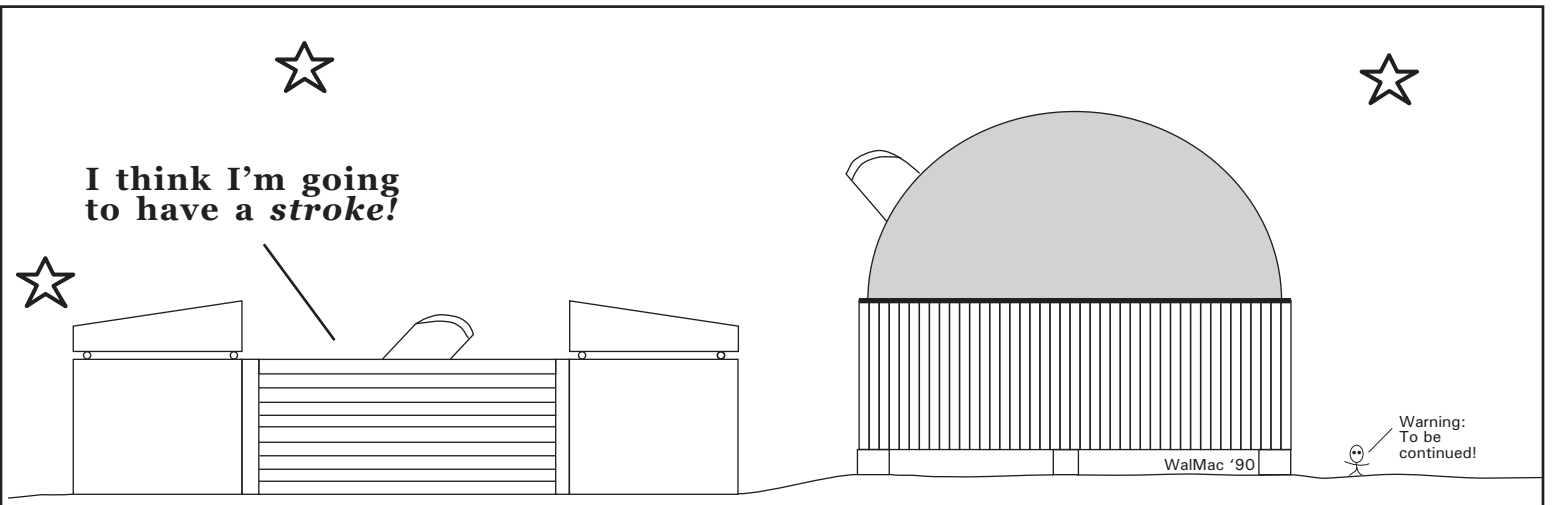
I hear your new dome rotates on golf balls.



Yes. It should bring my Astronomy to the *fore* and allow me to see a *fair way*. What do you think?



I think I'm going to have a *stroke!*



THE BENEFITS OF JOINING THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

Why should I join the R.A.S.C. - Kingston Centre?

For your membership fee you receive ALL of the following:

1. The **Journal of the R.A.S.C.** and the **Newsletter/Bulletin** published bi-monthly. (Cost to non-members of the **Journal** alone is \$72.00 per year.)
2. The **Observer's Handbook** - a superb observing guide, loaded with all kinds of information including star maps and lists of all the interesting objects to observe. (Cost to non-members is \$13.50 per year.)
3. Our Kingston Centre's newsletter, **Regulus** (Cost to non-members is \$8.00 per year.)
4. Discounts at certain retailers for items of interest to many amateurs. (Our members have actually saved hundreds of dollars.)
5. A regular organized program of free lectures by both professional and amateur astronomers.
6. The use of our Centre's 10" Newtonian telescope.
7. The use of the R.A.S.C.'s considerable library resources and the Kingston Centre's library resources.
8. Access to our Centre's periodicals and newsletters from other Centres.
9. The advice of experienced amateur astronomers on observing, and astrophotography, and other aspects of astronomy.
10. The opportunity to attend and to vote at the R.A.S.C.'s annual General Assembly.
11. The opportunity for the exchange of ideas and fellowship with people who are also interested in astronomy.
12. Outings, field trips, and observing sessions with knowledgeable amateur astronomers.

Membership fees for 1991 are as follows:

Regular Membership: \$40.00 per year.

Youth Mem. (under 18): \$25.00 per year.

Senior Mem. (over 65): \$25.00 per year.

Life Membership: \$640.00

Associate memberships are available to additional family members.

For more information, please contact us at this address:

R. A. S. C. - Kingston Centre,
P. O. Box 1793,
Kingston, Ontario.
K7L 5J6

or come to one of our meetings on the second Friday of each month at 8:00 pm. in Room D-216, Mackintosh-Corry Hall, Queen's University, in Kingston.

We hope to see you at our next meeting.

INTERNATIONAL DARK-SKY ASSOCIATION

3545 N. Stewart, Tucson AZ 85716 U.S.A.

Sample Letter to Help Build Awareness and Ask for Help

Dear

Here is an issue about the environment that you might not have heard of yet: *Light Pollution*. It is a growing threat to the nighttime environment, one which has already seriously harmed astronomers, both amateurs and professionals. We are faced with the potential that in only a generation or two very few people will be able to have a "live" view of the universe. Urban sky glow will have blotted out the dark sky, just as a lighted room blots out the view of a slide show.

Components of light pollution include:

1. *Urban Sky Glow*, which is destroying mankind's view of the universe.
2. *Glare*, blinding us and harming visibility. Glare is never good.
3. *Light Trespass*, someone's outdoor lights offending us, "trespassing" on our property.
4. *Clutter*, trashing the nighttime environment, and causing confusion as well.
5. *Energy Waste*, wasted light costs over One Billion Dollars a year, in the U.S.A. alone.

There are solutions to all these problems. Quality lighting is the key. These solutions preserve the dark skies, improve the quality of the nighttime lighting and the nighttime environment, and save money as well. It is a Win/Win/Win situation.

Awareness of the problem and of the solutions is needed, of course, and is grossly lacking, even among many lighting professionals. Lack of awareness is the main problem, rather than any resistance, in implementing these solutions.

You can help. Please do. Here's how:

First, be come aware. Insist on quality lighting. Use it yourself. Quality lighting is well shielded (so the light is used, not wasted), uses the right amount of light (not overkill), includes time controls when possible, and includes the use of low pressure sodium (LPS) as the light source when possible (LPS is the most cost effective light source, excellent where color rendering is not critical). Such quality light is directed downward where it is needed, not up or sideways where it is wasted and causes glare, light trespass, and bright skies.

Second, a non-profit organization, the International Dark-Sky Association, has recently been formed, with the goals of raising awareness of the issues and of pushing for solutions to the problem. The organizations will also address the similar issues of radio interference, space debris, and other environmental threats to mankind's view of the universe. All these adversely effect the general public and seriously threaten the future of viable frontier astronomical research everywhere.

Attached are several sheets which discuss a few of these issues. I hope you will take the time to read them, and to think about the issue. IDA, indeed all who care about the environment, can use your help. Please do become aware of the issue, and please do join IDA and help.

Sincerely yours,