REGULUS

MARCH-APRIL 1990

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

OFFICERS

HONORARY **PRESIDENT**.....	**David Levy**	000 000-0000
PRESIDENT.....	Denise Sabatini	000 000-0000
VICE PRESIDENT.....	Hein Van Asperen	000 000-0000
SECRETARY.....	Ian Levstein	000 000-0000
TREASURER.....	Peter Kirk	000 000-0000
LIBRARIAN.....	David Stokes	000 000-0000
NEWSLETTER.....	Bill Broderick	000 000-0000
NATIONAL COUNCIL REP.....	Leo Enright	000 000-0000
ALTERNATE.....	Walter MacDonald	416 000-0000
ASTRONOMY DAY COORDINATORS	Stan Manna	000 000-0000
	Denise-Sabatini-Enright	000 000-0000
	Peggy Torney	000 000-0000

UPCOMING MEETINGS

Regular meetings of the Kingston Centre are held at 8p.m. on the dates indicated in **Room D-214, MacIntosh-Carry Hall, Queen's University.** Non-members are welcome. Executive Members please note: Executive meetings are one-half hour before regular meetings.

Date	Speaker	Subject
March 9	Ian Levstein	Science Fiction and Media
April 20	Phillip Baie	Great Men of Astronomy
May 11	Members' Night	Special talks by members
June 8	Walter MacDonald	TBA

REPORT OF THE JANUARY 1990 NATIONAL COUNCIL MEETING

The **National Council** of our Society held its first meeting of 1990 in Toronto on Saturday, February 17. The National President, **Dr. Lloyd Higgs**, presided, and at least ten of the Centres of the Society were represented by their National Council Representatives. The agenda included reports from the officers and standing committees of the Society, and several important decisions were adopted.

Council approved the request for a grant of $350.00 to be given to the **Centre de Quebec** for the publication of its annual **Almanach Graphique**, and approval was given to a previous request by our Kingston Centre for funds to reimburse **Larry Manuel** who had done so much to refurbish the **A. Vibert Douglas Memorial Telescope** which is used by our members and in our educational programs. The amount **approved was $135.00,** matching the amount that our Centre had raised at the time of the meeting. Approval was aLso given to a plan submitted by **Ms. Kathy Cresswell,**

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of the Hamilton Centre, who has volunteered to oversee the marketing of a line of promotional products for the Society, including clothing, coffee mugs, key chains, and an assortment of goods.

Copies of the beautiful new poster that Centres may use in advertising any of their events were made available to Council Representatives--something that will be a boon to advertising in many of the Centres. The poster's distinctive photograph of M51, the Whirlpool Nebula, will doubtless become associated with activities in many Centres.

The Chairman of the R.A.S.C. **Seal Committee**, which had been formed to investigate the current use of the Society's seal, reported that the first draft of the guidelines for the use of the seal would be submitted at the **next** Council meeting and suggestions were invited from the Councils of the Centres. The **Centennial Committee**, composed of **Dr. Bishop, Dr. Percy, and Mr. Broughton**, has arranged a very exciting public **symposium on astronomy** to mark the **one hundredth anniversary** of the **incorporation of our Society**. This event, to take place in Ottawa on **Saturday, June 30**, will mark the beginning of our **annual General Assembly**, and it will feature lectures by **five** prominent amateur and professional astronomers. Although Canada Post chose not to honour our Society's request for a **postage stamp** relating to astronomy in Canada, there was an announcement from the Centennial Committee that the Post Office is going to issue a stamp honouring a member of the **meteorological society** which, in Toronto, was a predecessor of our Society.

The **Treasurer** presented his current financial statement and his proposed operating **budget** for 1990; both were approved by Council. The budget projected a moderate deficit. A fee increase will probably be necessary and will likely be voted on at the General Assembly; indeed, an annual **fee increase** of about $5.00 is needed at the present time just to maintain the battle against **inflation** that has taken place since the last increase.

The work of the **Constitution Committee** continues, in spite of the approval last year of the new **Bylaw Number One** of the Society. Council approved very minor changes to the committee's suggested rewording to three articles of the bylaw, and another one will be given further study by the committee. In addition, a draft version of a set of bylaws that is to serve as a **model** to all Centres was issued; these are to be studied by the executives of the Centres so that eventually all bylaws in the Centres are such that they do not conflict with those of the Society.

Quite a number of **announcements** were made by various officers and chairmen of committees. **Mr. McGregor**, the editor of the **National Newsletter**, announced that he would be **giving up** that position after serving for **five years**; he hoped that a **replacement** could be found by the time of the General Assembly or shortly thereafter. It was announced that the **Comet Halley Time Capsule** will be sealed at the time of the upcoming General Assembly. Plans are going very well for the Society-sponsored 1991 **Solar Eclipse Expedition**, with 128 people already having paid a deposit. An announcement was made that this year's winner of the Society's new **Plaskett Medal**, which has replaced the Gold Medal, will present a paper at the General Assembly. Information about, and ideas for celebrating **Astronomy Day** --actually **Astronomy Week** this year--from April 21 to 29--were presented, a very exciting prospect since **Comet Austin** should be at its best during that time.

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1989 SECRETARY'S REPORT
FOR THE
KINGSTON CENTRE
ROYAL ASTRONOMICAL SOCIETY OF CANADA

Nineteen eighty-nine was, as the previous year, a very exciting and interesting time for the Kingston Centre of the R.A.S.C.

Our year got off to a start with a visit from **Michael Csuzdi** and a presentation of his theory of **Repulsion Forces in Planetary Landmasses,** leading to continent formation. Next was a visit from a local writer and amateur astronomer **Terrence Dickinson,** who spoke of a recent visit to **Australia** and showed slides taken from the southern hemisphere. March saw a slide show and talk from our president **Denise Sabatini** and husband **Leo Enright** on a winter trip to the Kennedy Space Centre. In April Denise spoke to us again, on the **ancient culture of the Mayas with regard to astronomy.**

In May, **Walter MacDonald** showed us an **astronomy program** he has on his computer, which among other things, contains the **NGC** and **SAO catalogues.** June was an open discussion about **light pollution,** followed by a slide presentation from **Stanley Hanna.** In July, **Leo** showed a series of slides of the **Voyager fly-by of Jupiter and Saturn** to whet our appetite for the coming encounter with **Neptune.** August was a very interesting month with a visit from **Mike Jefferson** of the Hamilton Centre, giving us **tips on buying a telescope,** the **total lunar eclipse,** member **David Levy co-discovering yet another comet--Comet Okazaki-Levy-Rudenko 1989r--** and the famous **Voyager fly-by of the planet Neptune.**

September was **Members' Night** to present anything they wanted, and we had a good selection of photos and slides. October saw Joady Ulrich present **Astronomy on Canvas,** with highlight of the month being the Centre co-sponsoring a visit and talk from **Clyde Tombaugh,** the discoverer of Pluto. November was special, as we were visited by our National President **Dr. Lloyd Higgs,** who spoke to us on **Radio Astronomy.** December came, and so did our **annual business meeting** and another visit from **John Griese III** speaking on **two recent visits to Hungary** and what amateur and professional astronomers are doing in that country. So, as you can see, 1989 held lots of enlightening speakers, great slides and photos, new discoveries, and good fun!

ELDON ADAMS
Secretary (1989)
Kingston Centre RASC.

The representative from the **Ottava Centre** presented a detailed schedule of events for the General Assembly this year. Other information was received concerning the 1991 General Assembly already approved for the weekend of May 17 to 20 in Vancouver, and looking further into the future, information about tentative plans for Calgary in 1992, Halifax in 1993, and Windsor in 19985.

Council extended a vote of congratulations to **Doug George** on his **comet discovery** and to **Dr. John Percy** on his recently being elected the **president** of the **A.A.V.S.O.**

Complete details regarding all the items discussed at this meeting may be found in the **minutes of the meeting** which will be distributed to our Centre Presidents and National Council Representatives.

Leo Enright
National Council Representative

THE 1989 SATURN OCCULTATION

John W. Griese, III

Here at Stamford Observatory in southwestern Connecticut, we awaited the weekend of July 3rd with great anticipation. This was **"Occultation Weekend"!** Would we see it (for a change) or get clouded out?

As Sunday approached, the weather seemed to be holding up. We bad planned to observe the occultation on **television** through our 22-inch Gregory-Maksutov reflector and get the event on video-tape. Also, I had a small hand-held photo-electric photometer; for those readers familiar with such instruments, this one was an Optec SSP-3. It would go on our 7-inch Cassegrain guide telescope.

We also hoped to have members of our astronomical society, the Fairfield County A.S., observing from the building's large deck with various small telescopes.

As the weekend progressed, the weather started looking good. In fact, I was able to do photoelectric observing conducting our regular research program which is the monitoring of variable stars and photography and charting of variable star fields, all for the AAVSO.

Saturday night, my colleague and Observatory Director **Charles Scovil** called our member with the television equipment, **Peter Armstrong**, to be sure that he would be joining us, and **Peter** agreed to show up with all the gear. We continued **crossing our fingers** for a clear Sunday night.

Sunday, we awoke to **clear skies** and the **promise of a good night** to come. I kept the 22-inch busy during the evening and at 1 a.m. our guests started showing up. The TV gear arrived and I worked with **Peter** to try to get a **good focus** with the largest possible image. With **Charles'** help, we mounted the TV camera on our eyepiece turret which is an f/15 focus and we got a nice image on the TV monitor.

I went on to put the photometer on the 7-inch and discovered to my chagrin that Saturn and **28 Sagittarii** could not be separated in the detector area. So much for photometry. Back to the TV.

Along with our set-up in the dome, several people had CB's on the deck and were doing well with them.

Just as we got the TV set-up working well, which included a sound-track of **time signals** fed directly to the tape, **28 Sagittarii** was starting to interact with **Saturn.** We watched with fascination as the star image on the set began to disappear behind the image of the rings. It flickered in and out--then reappeared in the Cassini Division, then it was gone again. We watched numerous events between star and rings.

Finally, the star popped out between the rings and Saturn's body. At this time we watched very closely, as we wanted to see whether **28 Sagittarii** would disappear immediately behind **Saturn** or fade in and out, then disappear in steps, as predicted. Yes, the star seemed to disappear and reappear, then just as we thought it was gone, there it was--briefly. Finally, it disappeared behind **Saturn**--in steps, very brief ones. We had seen the event and had it on tape as well!

SATURN OCCULTATION (continued)

We played parts of the tape back and it looked pretty good. Unfortunately, the seeing was poor throughout the occultation and Saturn had been low in the south (over a city for us) the entire time. Now as we dismantled the equipment, we noted that dawn would soon arrive.

YOUR CONTRIBUTIONS WANTED

Articles and other itens are invited for publication in this newsletter. They should be typed, if possible, and sent to the editor: Bill Broderick, R.R. 0, XXXXXXXXXXXXXX, Ontario XXX XXX. All statements and opinions are those of the authors and may not necessarily be shared by the Centre or the R.A.S.C. Every effort will be made to ensure that information given is factual and accurate. The editor willingly accepts full responsibility for inaccurate, unscientific and non-factual assertions and will, willingly take the prescribed number of lashes with a wet noodle for any such which he allows to be published. Other Centres and astronomical organizations may freely reprint anything which their editors find worthy, providing full credit is given.

HUMOUR

Said the sweet young lady, "Oh, I see how astronomers figure out the distance of the stars and their sizes and temperatures and all that. What really gets me is how they find out what their names are!"

--Isaac Asimov

An astronomer once remarked to Bishop Fulton J. Sheen: "To an astronomer man is nothing but an infinitesimal dot in an infinite universe."

"An interesting point of view," remarked the bishop, "but you seem to forget that your infinitesimal dot of a man is still the astronomer."

--Justice Jacob N. Braude

ASTRO JUMBLE

Unscramble the letters (see clue), then use the circled letters to solve the puzzle. Good luck!

T A R S R A T P I E S

L A L M S A D L Y I P S

B I P U L C C U L E T E R S

L O H O C S L A K T S

S E P E R N A W P R A C E T I L S

D I M A E N I T R E I S V E W

CLUE: **ASTRONOMY WEEK ACTIVITIES**

WHAT A GOOD ASTRONOMY WEEK PROGRAM COULD RESULT IN

ANSWERS TO "ASTRO JUMBLE"

Star Parties/Mall Displays/Public Lectures/School Talks/Newspaper Articles/Media Interviews.
INCREASED MEMBERSHIP.

WHERE WILL THE SUN RISE?

Bill Broderick

As these words are written, in early February, it's heartening to see that each day the sky in the east is a **little lighter** as I pike out at 6:15 am. for another day at the office. Each evening the sun sets a little later. In the late afternoon of Sunday, February 4, as I turned the telescope on **Jupiter**, the sun was still above the horizon--the time just after 5 p.m. (Incidentally, this was the time we had set for our **outdoor Christmas lights** to come on just two months ago!)

Jupiter itself was an **exquisite sight** in the 10-inch--a small brown/gray/white/yellow agate ball floating in a blue sky--the **Northern Equatorial Belt** hanging in drapes and festoons above its equator--the **Southern Equatorial Belt** still conspicuous by its absence. The **Great Red Spot**, salmon-coloured, prominent near the giant planet's east limb. Alternating gray and white bands in the polar areas. The "seeing", in a **rare occurrence** for this area, must have been very close to 10!

While I stood entranced at the eyepiece, the sun quietly slipped beneath the distant horizon. The time was just after 5:15 p.m. Its setting point was well north of where I had list noted it about a week before.

Which brings me to the question of determining the **rising and setting points of the sun** for any day in the year.

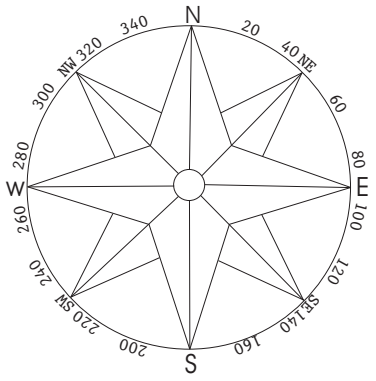
Being knowledgeable about matters astronomical (aren't we?), we know that our earth is **tilted on its axis** and that, as it moves around the sun, first **one polar hemisphere, then the other** is turned toward the sun. This is what gives us our **changing seasons**, our **variable hours** of light and darkness, and a sun that is **high in the sky in summer** and **low in the sky in winter.**

All of which has a bearing on **just where** the sun **rises** and **sets** all through the year.

Suppose that you and I want to know, for our own information, edification, or amusement, just where the sun will rise--or set--on a particular date, how can go about finding out? We could, of course, go outside on all available sunny days throughout the year and measure the sunrise and sunset points with a compass. But that would be cheating! Besides, it would take too long. We want to know now--or at least soon--not next year.

Can you figure it out?

How about a little exercise? Where will the sun **rise** and **set** at the **beginning and end of Astronomy Week?** The dates are **April 21** and **29**, respectively. Take a stab at it and let's have your solutions and also your comments. I'll publish my solution and any others that are different, in the next issue.



HINT: Practically all the information you need to solve the problem is in the **Observer's Handbook**. One detail that isn't is the **latitude** for Kingston, 44°14' north. (But you already knew that, right?)