

The Newsletter Magazine of the Ottawa Centre of the RASC

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Editor.....Rolf Meier.....77 Meadowlands Dr.W...224-1200
 Addresses.....Jacqui Tapping...61 Oval Dr., Aylmer...684-1186
 Circulation...Barry Matthews...2237 Iris St.....225-6600

THE BLUENOSE GENERAL ASSEMBLY

The General Assembly of the RASC was held this year in Halifax at Saint Mary's University from June 28 to 30. This was the first joint meeting with the CAS and RASC.

Friday was the first day of RASC activities. There was a National Council meeting in the afternoon, which was very long, being interrupted by supper and finally the RASC reception in the evening. This was followed by various slide shows, notably Toronto Centre's eclipse expedition to Africa.

Saturday was a paper session day. On the whole, the CAS papers were better in content, delivery, and interest, while the RASC papers were often trivial and uninteresting.

A highlight of Saturday evening was the annual RASC banquet, featuring lobsters which fought back. The speaker was Dr. John Percy, who praised smaller (less than 24-inch) telescopes and the work which he and others have conducted with them. The Chant medal was presented to David Levy, and the service award went to our own Stan Mott.

The song contest was held later with our own René Meyer and Mary Geekie winning the prize for our Centre. Unfortunately, their singing was better than the prize.

There were more papers on Sunday. Our own Rob McCallum and Mike Roney combined to produce a paper on the determination of the maximum of a cepheid variable light curve.

The annual meeting of the RASC was held, with Dr. Ian Halliday taking over as president. This was followed by a short council meeting.

On Sunday afternoon, the RASC went to the Halifax Yacht Club for a "picnic". This was followed by a

2-hour cruise on the Bluenose II, which took place in strong winds.

The display awards presentation ended the GA. There were 24 entries in 7 categories, with 7 displays being entered by Ottawa in 6 categories. Of the 7 awards, 5 went to the Ottawa displays. The winners were as follows:

Centre Display - Winnipeg
Individual Display - Damien Lemay (Quebec) - Sunspots
Optical Observing - Rob McCallum and Mike Roney
Radio Observing - Rob Dick
Design Project - Doug George
Atmospheric Phenomena - Rob McCallum
Open Category - Rolf Meier

Next year's GA will be held in Victoria, BC.

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OBSERVER'S GROUP MEETING - JULY 4

Mary Geekie and Reneé Meyer

Chairman Robt Dick opened the meeting at 8:15 pm with 42 people in attendance, 10 of whom were non-members. The group is reminded that Ted Bean is still looking for someone to take over hospitality as he wishes to step down.

Brian Burke informed the group that last month's public star night was clouded out at first, but it cleared up at midnight. Observers will have another star night on July 18. By mid-month, the planets will be setting just after sunset. Brian also informed the group that the Beginner's Package will be available by early fall.

Bob McCallum proceeded to show the group the Ottawa Centre members' displays recently entered at the Halifax General Assembly. The Ottawa Centre won the prizes in 6 of 8 categories as follows:

optical observing - Rob McCallum and Mike Roney
radio observing - Rob Dick
atmospheric observing - Rob McCallum
design project - Doug George
open category - Rolf Meier
song contest - Reneé Meyer and Mary Geekie

A more detailed account of the GA will be presented at the next meeting. Congratulations to all who entered. Rob also suggested the possibility of holding a Centre picnic complete with baseball game and star night in late summer.

The new RASC president, Ian Halliday, presented the Service Award to Stan Mott. This prestigious award was given to Stan for his outstanding service and contributions to the Ottawa Centre and to the RASC as a whole. Stan, who was nominated by the centre, has served 32 years on the Council and has been a supporter and invaluable librarian for the Ottawa Centre since 1956.

Another honourable award, the Chant Medal, was presented to David Levy at the GA in recognition of his extensive variable star observations (2000 a month) and for his contributions to the education of children in the field of Astronomy.

Congratulations to Stan and Dave!

Rob McCallum has kindly donated a gift certificate for historical books to the library from his GA prize. There was a reminder that the maximum for the Perseid Meteor Shower occurs August 12 (so start observing).

Doug Welch informed the group that a number of observers are going to observe the variable star CY Aquarii in many different ways, in order to put together a centre project display for next year's GA. This star has a regular pulse of 88 minutes, but sometimes it experiences abrupt period changes. These bold observers intend to compile visual observations, photographic photometry, a Cepheid instability strip, a movie, and la pièce de résistance - the size of the earth's orbit.

Ted Bean warned amateur mirror grinders of the problems of chipping and creating hollows in mirror blanks due to over-enthusiastic grinding. There will be no more telescope-making workshops until the fall.

A Celestron-8, including 4 eyepieces, crosshair, wedge, drive corrector, and no tripod is for sale, for \$1500. Call Ted for details at 224-7318.

Dave Fedosiewich showed slides and propaganda for the annual Stellafane convention to be held August 9 this year. Dave pointed out various unique telescopes, mounts, etc.

Rolf Meier explained the fundamentals of a camera and guided system. Rolf also discussed pictures that were taken with long focal length cameras, telephoto lenses, and the Aero Ektar at IRO. The brown background effect

of the slides may now be eliminated due to its being re-cemented. Next month Rolf will attempt to mount the camera on the telescope.

Bill Donaldson explained his method of calculating sunspot length and area. Bill projects the sun on a piece of paper and compares the size of the projected image with the size of the real sun. This ratio is then applied to the image of the sunspots to calculate their size.

The meeting was adjourned at 9:36 pm.

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OTTAWA CENTRE PICNIC

Rob McCallum

At the July Observer's Group meeting I mentioned the possibility of having a picnic. Well, there seems to be sufficient interest, so we've decided to go ahead.

The picnic will be held on Saturday, September 6. If this seems a little late in the year, let me explain the reasoning. Plans are to have the picnic evolve into a star night come dusk. By September it will be dark by 9 pm, so those who wish to bring the family need not be out too late.

It is still a little early, so we haven't as yet found a suitable location. It won't be in the city - we'd like dark skies for the star night. Gatineau Park, Lac Philippe in particular is a possibility, but we first would have to obtain permission to remain after dark. We should know definitely by the time you read this. If you can't make it to the August or September meetings, or if you simply want more information, please phone one of the members of the "organizing committee":

Rob McCallum	729-9977 (home)	563-2868 (office)
Rob Dick	722-5809	231-3885

At present we plan to have the event officially start with a ball game at 4 pm (no skill, just a sense of humour required), but as we will likely be near a beach, you can plan on making a day of it, if you wish. And if you are staying for the star night, and you have a telescope, be sure to bring it. Lastly, dress warmly - it'll likely be cool once the sun goes down.

In case of rain, give either Rob or Rob a call on the day of the picnic. We'll decide around noon whether or not to call it off.

There is surely nothing more impressive in the field of variable star observing than watching a star change in brightness before your eyes. Among the stars which vary rapidly enough to fit this description, CY Aquarii is king. CY is among a breed of variable called dwarf cepheids. These stars generally have periods between 1 and 5 hours and vary in brightness by 0.3 to 1.0 magnitude. Thus it is possible to observe several full cycles of light variation in the same night! What will be described here is a project to observe this star as completely as is possible for an amateur.

The project will have several aspects. These are:

- a) visual
- b) photographic
- c) cinematographic

Let us consider these in turn.

Visual observations will consist mainly of magnitude estimates made every 5 to 10 minutes - 5 preferably. These will determine the shape of the light curve and, more importantly, the time of maximum of the magnitude variations. This will allow the determination of period change when compared with previous observations.

If you have never observed variable stars before, this is a good star to get a lot of experience with little investment in time. It is suggested that you submit all observations, but indicate at what point in time you think you became "comfortable" with the observations.

The success of the photographic aspect of this venture will rest mainly on the construction of a photographic photometer. This instrument will measure the brightness of stars on exposures taken with the 16-inch. This would be an excellent addition to the instrumentation at IRO and its users are certainly not restricted to observing CY alone. I believe that the construction of one of these instruments is now under way.

Photographic photometry will allow the determination of the shape of the light curve and comparison with visual observations. The maximum of the light curve will also be determined accurately with this method. Furthermore, if V and B photometric filters are used alternately, it will be possible to determine the extent of colour change during a cycle.

Finally, there is the cinematographic aspect of the project. This is mainly for aesthetic purposes and will

demonstrate nicely how spectacular the light variation of this star is. The basic idea is to take the exposures from a photographic observing run and make super-8 films using them. Negotiations are currently under way to convince Jon Buchanan to produce and direct the film.

An interesting offshoot of the observations will be the ability to determine the size of the earth's orbit! This is possible because of the proximity of CY to the ecliptic. As you all know, light takes about 499 seconds to travel from the sun to the earth. So if it were possible to observe CY at opposition and at conjunction, there would be a shift of about 1000 seconds in the time of maximum which is not due to the period of the star changing. Due to observing constraints (you can't observe a 1th magnitude star near the sun) the effect that we can observe will be more on the order of 600 seconds. Still, this is a sizeable fraction of the period of CY and the effect should stand out clearly in visual observations.

Lest you think this is all talk, at the time of this writing 2 sets of observations have already been made. On July 4, immediately following the Observer's Group meeting, Rob McCallum, Doug George and I observed between 1:30 and 2:30 am and obtained consistent results. On the following Saturday, Doug George, Brian Burke, Mike Roney, Frank Roy, and Rob McCallum were able to make another run. I am particularly glad to see Doug and Brian observing; this is their first attempt at variable star observing.

One point I should stress is the necessity of no bias when observing either by yourself or with others. If you expect the star to continue brightening or fading, a maximum can be "forced" where it doesn't actually exist. As a result, some scatter in the light curve is expected. When observing with others, all observations must be written down and there should be no comparison of observations until the observing run is over. Time Must be CHU or WWV. All observations should be given to Rob McCallum.

While I have purposely avoided mentioning too many specifics in this article, Rob McCallum will have a handout with observing instructions and a chart at the August meeting. I should mention the brightness and some references. CY is located at 22h 35.2m, 1⁰ 16' N (1950). The range is approximately 10.4 to 11.2, depending on an individual's colour sensitivity.

This is a golden opportunity for a group of amateur astronomers to show the professionals that amateurs are capable of professional quality results.

References:

- 1) Astronotes; August, 1977; page 7
- 2) JAAVSO; No. 1, 1978; page 19
- 3) Observer's Handbook 1979; page 123 (comparison stars)
- 4) Burnham's Celestial Handbook, Vol. 1; page 184
(good finder chart)

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STAN MOTT RECEIVES SERVICE AWARD

The members of the Ottawa Centre are pleased that the National Society has awarded the Service Award of the Society to Stanley A. Mott in recognition of his contribution to the Centre, particularly in his role as librarian. Although he was not able to be present at the General Assembly in Halifax to receive the award, the society's president, Dr. Ian Halliday, presented him with the bronze medal at the Observer's Group meeting of July 4, 1980. Congratulations, Stan!

Following are the description of the Service Award as extracted from the constitution of the RASC and the citation prepared by the Centre in nominating him for the award:

"The Service Award is a major award given to a member in recognition of outstanding service, rendered over an extended period of time, where such service has had a major impact on the work of the Society and/or a Centre of the Society. The award is a small bronze medal which is given only by resolution of the National Council upon recommendation of the awards committee of the Council. The award shall be presented at the annual meeting of the Society."

"Stanley A. Mott, nominated by the Ottawa Centre. He is a life member of the Society, and became a member in 1938. He was Treasurer of the Ottawa Centre from 1947 to 1957, and since then has continuously held the position

of Centre Librarian. He has thus served on the Council of the Ottawa Centre for 32 years. As librarian, he has built up an outstanding library of some 300 books, often by contributing his own money to the Library Fund. He is present at all lecture meetings and opens the library at every meeting of the Observer's Group. In addition to his work with the library, he has made substantial donations to the original Observatory Fund and also to the Observatory Relocation Fund. For many years he was a very active meteor observer, and he was a member of the group which flew to North Bay by RCAF Dakota to observe the Giacobinid meteor shower of 1946. He was a regular member of the Ottawa Centre Meteor Observing Team during the International Geophysical Year. In addition, Stan has observed the solar eclipses of 1954, 1963, 1970, 1972, and 1979. One should also note that Stan and his flash camera have recorded many of the highlights of General Assemblies and Ottawa Centre events, and one of his photographs was used in Dr. McKinley's book, "Meteoer Science and Engineering". The impact of Stan's contribution to the success of the Ottawa Centre can hardly be overestimated.

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10 YEARS AGO IN ASTRONOTES

From the June, 1970 issue: "Several of the steps for which we have been pressing, as outlined in last month's Editorial, seem on the way to fulfilment so far as the National Newsletter is concerned. The cost of printing is to be investigated and a recommendation to increase the size to 'not more that 8' pages has been made to National Council. A list of names was put before the meeting and a vote taken on each. The name securing the most votes was 'Newsletter', with 'Convergence" second and 'Albedo' third."

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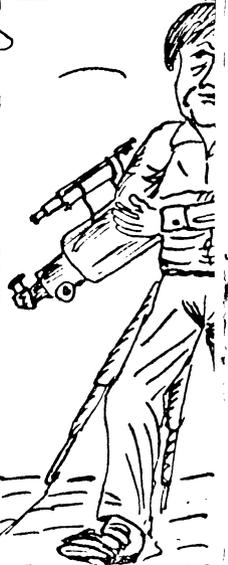
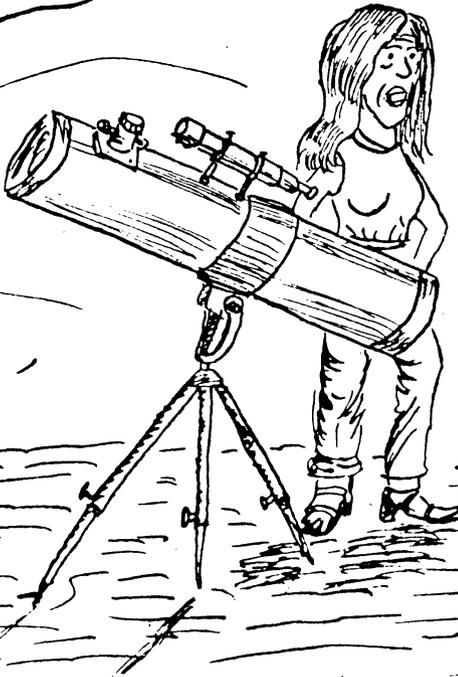
Articles for the September issue of Astronotes are due by August 22.

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STOP THE PRESS:

WANTED: 6 Members to work on the Dinner
Committee. Call Jacqui Tapping
684-1186 before August 10, 1980

NO OFFICER, TH
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TROU



THESE ARE TELESCOPES
STARS, AND WE'RE NOT
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SOLAR OBSERVING, EH?
HOWDYA SPELL SO-LAR?



ASTRO NOTES



OTTAWA ONTARIO
JUL 15 1964
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TO

MS. ROSEMARY FREEMAN CAST
NATIONAL SECRETARY
THE ROYAL ASTRON. SOC. OF CAN.
124 MERTON STREET
TORONTO, ONTARIO M4S 2Z2