



General Assembly



Program Guide

1979

Greetings & Felicitations!

It's here! It's here, it's finally here! Welcome to the 13th Annual General Assembly, and welcome to the Fork of the River Thames! Holy Cow, it's finally here! It's great to have you here, in Middlesex County, the Garden of Southwestern Ontario. And welcome to the fabulous campus of the University of Western Ontario. Let the bells ring and the birds sing, it's too good to be true, but it's finally here!

"Once again, it is time for the General Assembly of the Royal Astronomical Society of Canada; the 'Gathering of the Clans,' when all the family from across Canada congregate. A unique moment when we can all get together to swap ideas and information and learn something new in Astronomy at the same time.

This year, for the first time ever, the London Centre has the honour and pleasure of acting as your host. On behalf of my executive and membership, may I take this opportunity to welcome you, one and all, to the Forest City for what we know will be the best G.A. ever. My colleagues have worked very hard and have spared no expense in their effort to see to it that there will be never a dull moment from Friday noon when you sign in until Monday when we bid you adieu. We know that you will join with us to make this annual meeting the success it so richly deserves to be.

ROBERT W. CORNFORTH
President, London Centre

We are simply squealing with delight to be putting on this show. There's something for everyone, from the serious side of theoretical, practical or observational astronomy right down to the admittedly nutty shenanigans of the 4th Annual R.A.S.C. Pyramid and the 1st Annual (we hope -- are you listening, Halifax?) Song Contest. It's been FOUR YEARS in the making, and it'll all take only FOUR DAYS to unravel, so enjoy yourselves as quickly as you can!

This program booklet is your guide to all the activities of the Assembly. As well, it provides background and incidental information which should make your stay in London more rewarding. We hope you'll find it to be good reading all by itself, and we sure would appreciate hearing your comments.

* * * * *

THE TEAM

Obviously, something as big as a General Assembly requires a great deal of effort to implement. We had quite a team of London Centre members who contributed in many ways. Hoping not to miss anyone, they were:

London Is fine In '79

Dale Armstrong, Owen Ash, Walter K. Campney,
 Jill Carroll, Paul Clinton, Eric Clinton, * *
 Robert A. Cornforth, Leslynn Flegel, Mike Flegel,
 Tom Blinds, Peter Bedicke, Dianne Victoria * *
 Kapitanluk, Rick McCammon, Ronald B. Sawyer,
 Gerald Schieven, Steve Sharpe, Mark Sinkins, * *
 Tom Steckner, Carl White. * *

As well, the London Centre received support,
 financial or otherwise, from various entities. * *
 They included: Department of Astronomy at the * *
 University of Western Ontario, The Royal Bank * *
 of Canada, R.A.S.C. National Council, Labatt's, * *
 Bell Canada, The Government of Ontario, South * *
 West Ontario Travel Association, and all the * *
 prize donors. * *

THE PHILOSOPHY * *

Our philosophy in planning this General * *
 Assembly starts with the idea that it is an * *
 opportunity for the local centre to literally * *
 play host to all the others. It is our way * *
 of throwing an Astronomical Party. As such, * *
 we hope that it will be as unique as each of * *
 the Assemblies we have attended in the past * *
 years. There is no such thing as an "optional" * *
 part of the G.A. You don't HAVE to attend,
 but we hope you will---all the events!

NAMETAGS

Your nametags have been designed with special thoughts about the General Assembly. Naturally, the G.A.'79 logo appears. Just as naturally, the Society's crest is there to remind you which group you belong to! The Maple Leaf represents the fact that we are a nationwide Society of Canadians; for our foreign delegates, the leaf will serve as a souvenir in years of the hospitality which we are trying to serve them during their stay here. And the fact that your nametag is completely done in green ink represents the colour of a forest, for this is London, the Forest City. We hope that, wherever you call home, you will long remember the Forest City with fondness.

The three X's or O's along the bottom of your nametag serve as our method of controlling the Assembly. This is why it is absolutely essential that you wear your nametag at all times, or, at the very least, carry it with you. The fact that you have a nametag at all indicates positive proof that you are a registered delegate at the Assembly: one nametag is issued to each delegate who paid the fee. If you lend your nametag to someone else, then you will not be able to attend the sessions yourself. Since only three functions during the assembly involve an additional charge, the mere presence of a nametag is your admission "ticket" to all the sessions and meetings which are included in the cost of your registrations. The three positions under your name refer to the Elginfield Observatory visit and Bar-B-Q dinner on Saturday, the Annual Banquet on Sunday, and the Bruce Nuclear Power Development excursion on Monday, respectively from left to right. The presence of an X indicates that you have paid, and thus are permitted to participate; you will not be able to join in the activity if you are displaying an O. If your nametag has an error inherent in it, you must see ERIC CLINTON as soon as possible, as only Eric is authorized to investigate and make the necessary corrections. See Eric, also, if you wish to change the status of your nametag by paying or cancelling.

M I S C E L L A N E O U S I N F O R M A T I O N

THE CITY CORRIDORS: Unlike Edmonton, where the Assembly was held in 1978, London is NOT laid out in any sensible way. Downtown, at least, there is some semblance of a grid pattern, but the suburbs look like a plate of spaghetti, half eaten. Naturally, the main way to the city is the McDonald-Cartier Freeway, the 401 Highway. The other major east/west arteries are Southdale and Commissioners Roads in the south end; Dundas Street which runs right through downtown and Oxford and Huron Streets in the north end. Huron Street is called Sarnia Road on the west of the River. From the 401 to downtown, the artery is Wellington Road, and from downtown north to the University, the artery is Richmond Street. There are only two other north/south routes worth worrying about: Highbury Avenue (Highway 126), which is a good, quick way of connecting to the 401 Eastbound, and Wharncliffe/Western Road, which is the best connection from the University down to the 401 Westbound.

PARKING. If you have brought your car with you to the Assembly, you may park it all weekend in the MEDWAY PARKING LOT, which is just across the River from Delaware Hall. You must pick up a "gate card" at the registration desk. Casual parking will cost a quarter for each entry into the parking lots at either MEDWAY or TALBOT, which is just across the intersection from Delaware Hall. For delegates who need to park close to the paper sessions or the Sunday Dinner, the most convenient location "on the hill" would be the large visitors' lot behind the D.B. Weldon Library, which is accessed from the traffic circle in front of the Cronyn Observatory. Parking in the Weldon lot will probably also be a quarter.

TRANSIT. The London Transit system is fantastic, depending on where you are. Although some of the suburbs complain about infrequent service, the University/downtown corridor is very well served. The primary route on this artery is #6-RICHMOND; sometimes you will see a bus on this route bearing the designation UNIVERSITY or DOWNTOWN. Bus stops in London have small, rectangular, yellow signs with a schematic image of a bus in black. Fare is fifty cents (\$.50) in exact cash or a ticket, five of which may be purchased from the driver for \$2.00, although the driver will not make change for anything larger than a \$5.00 bill. Full information is available at the storefront office at Dundas & Richmond or by calling 433-2561.

LIQUOR STORES & BEER: The closest Liquor Control Board of Ontario store is located in the Westown Plaza, on Oxford Street a few blocks west of the River. The nearest Brewer's Retail Store is on Picadilly Street, just off Richmond Street and one block south of Oxford Street. Check on closing times before you go too late, the numbers are LCBO: 432-7951 and Brewer's: 439-6461.

TAXIS. Try U-NEED-A at 438-2121 or ABOUTTOWN at 432 2244.

HOSPITALS & FIRST AID. If there should be any medical emergency during the weekend, you should know that the Emergency Department of University Hospital is just a short distance north of Delaware Hall on Perth Drive. If the need arises, London Centre members will take anyone up to the hospital.

CODLS. London Postal Codes begin with N6; the University is N6A 3K7. Please remember to include the Postal Code on all mail. For our American visitors, please remember to affix proper Canadian postage to your mail during your stay here: 17¢ on letters and 15¢ on postcards.

CAMPING: Fanshawe Campground, in the north-east corner of the city, will be open this weekend. The nearest KOA affiliate is a few minutes drive east of the city, off the 401 highway.

.....MORE

Schedule Of Events

* * *

F R I D A Y

* * *

12:00 p.m. to 10:00 p.m.

REGISTRATION

GW1 Lounge
Delaware Hall,
Ground Floor

Your first stop should be in the foyer of Delaware Hall, where you pick up the keys to your residence accomodation. At the registration desk, downstairs, you will receive your registration kit and your nametag. Try to clear up any problems with your registration immediately, and remember to pay your \$3.75 for Sunday Lunch and \$1.00 for the Group Photo.

1:00 p.m. to 5:00 p.m.

ASTRONOMICAL FILMS

GC13 Music Room
Delaware Hall
Ground Floor

A number of films have been arranged for this session, including "Journey Into Light" from Kitt Peak National Observatory and the new version of "The Universe." Jim Gall will bring a clip of Jupiter from the Voyager mission, and there will be the old BBC standbys as well, courtesy of the UWO Department of Astronomy.

12:00 p.m. to 10:00 p.m.

COMPETITION SET UP

Room G65
Delaware Hall

Walter Campney and the Competition team will be on hand to assist entrants with the set-up of their displays. Walter will try to keep the room open as long as possible throughout the weekend, and there will be someone from the London Centre "on guard" at all times while the room is not locked up tight.

10:00 a.m. to 2:00 p.m.

"TELESCOPE" TAPING

Hume Cronyn Observatory

Cablecast Community Broadcasting will have their mobile studio set up to videotape segments of the London Centre's television program, hosted by Peter Jedicke. Out of town members are invited to go on camera" to discuss their astronomical activities.

2:30 p.m. to 5:00 p.m.

NATIONAL COUNCIL MEETING

Room GW6, Delaware Hall

ATTENTION: No formal plans have been made for dinner this evening. We suggest that you head for the IMPERIAL, our regular hang-out, or try out the restaurants listed in this booklet.

7:00 p.m. to 9:00 p.m.

WINE & CHEESE PARTY

GW1 Lounge
Delaware Hall,
Ground Floor

An idea we "lifted" from the Toronto and Halifax General Assemblies. Meet, mingle, sip and nibble. It's on the house--our way of saying that we're glad to have you here! An excellent opportunity to catch up on chit-chat with fellow members of the astronomical community from other Centres in all the various parts of our country.

.....MORE

F R I D A Y E V E N I N G...continued

8.00 p.m. to 10:00 p.m. *A chance to show your slides, films, pix; tell us all about your activities, your favourite folly or a recent astronomical success. This is the regular meeting night of the London Centre. Gerald Schieven of London will lead off with a presentation of some astounding historical research about the little-known astronomer, P.D.Q. MESSIER.*

"M147 SESSION"

Room M147 in the
Medical Sciences Building

9.00 p.m. to 11:30 p.m. *Through the courtesy of the University of Western Ontario's Department of Astronomy and their Public Astronomy Co-ordinator, Dr. David F. Gray, delegates will have an opportunity to visit this historic on-campus observatory and tour the facilities.*

OBSERVATORY VISIT

Hume Cronyn Observatory

and then.....YOU'RE ON YOUR OWN! (But get plenty of sleep.)

* * *

S A T U R D A Y

* * *

7.15 a.m. to 9:15 a.m. *LATE REGISTRATIONS...will be handled in Delaware Hall on the ground floor. Delegates who arrive after 3:30 p.m. will be ferried out to the Elginfield Observatory or Weldon Park on the first available Shuttle Service.*

BREAKFAST

Dining Room, Delaware Hall

9:00 a.m. to 12:00 p.m. *DISPLAY AREA... Competition Chairman Walter K. Campney will attempt to have the Display Room, GE6 in Delaware Hall, open as often and as long as possible, especially Saturday afternoon.*

PAPER SESSIONS

Lecture Theatre 1059
Engineering Sciences Building

10:15 a.m. to 10:45 a.m. *LUNCH... You're on your own for lunch today. You might like to go downtown, but be sure to be back by 3:30 p.m. to get ready for the Elginfield tour. Or, if you stay on campus, we suggest that you stroll over to the University Community Centre to the cafeteria there and then visit the CANADA-WIDE SCIENCE FAIR in the triple gymnasium. Please note that the cafeteria in Delaware Hall will NOT be open for lunch today.*

COFFEE BREAK

Outside the Lecture Room

12:30 p.m. *GROUP PHOTOGRAPH*

Outside walkway between Thames Hall and Somerville House.

.....MORE

S A T U R D A Y...continued

3.00 p.m. to 11.30 p.m.

OBSERVATORY TOUR
AND OUTDOOR BAR-B Q

Elginfield Observatory and
D.B. Weldon Park Pavilion

at 6:00 and proceed to the Park.

The University's Astronomy Department has invited the delegates for a tour of the facilities at Elginfield, including the 122-cm. telescope. Busses will leave from in front of Delaware Hall promptly at 3:30, so don't be late. (As we are trying to encourage group participation, no private transportation will be permitted.) Staff members at Elginfield will be on hand to answer questions, and the format of the visit will be "Open House." The busses will leave Elginfield at 6:00 and proceed to the Park. The dinner menu will consist of Ribeye Steak on a Kaiser, Baked Brown Beans, and various salads. Dessert will be strawberry shortcake. In case of bad rains, the same dinner will be served, but back at Delaware Hall. After the Bar-B-Q, there will be football and frisbee playing; the West will be looking for its first victory in the 3rd annual East-West Classic. Frank Loehde, National 2nd Vice-President, will be the Imperial Grand Wizard for the 4th Annual Pyramid---it was Frank's co-ordinating efforts which resulted in the success of the five-level pyramid at Coronation Park in Edmonton last year! When it finally gets dark, delegates will be invited to set up telescopes. If you need transportation for your 'scope, see DALE ARMSTRONG or MARK SINKINS, who are co-ordinating the Saturday night observing. The busses will return to Delaware Hall at staggered times, to allow those who wish to return early not to interfere with those who wish to stay late.

MIDNIGHT!

INFORMAL GATHERING

Delaware Hall
1S Lounge

You guessed it, this is the Song Contest! The judges will be MARIE FIDLER and NORM SPERLING, and the "award" will be presented by Owen Ash of the London Centre. No entry form is required; anyone at all may sing a song, but only one entry from each Centre will be judged as part of the contest. We won't be able to provide any musical instruments, but if you can bring your own kazoos, juice harps, ocarinas or other acoustical embellishments (why do you think we had beans for supper?), then they're allowed, so long as they're played by Centre members, and not kidnapped symphony people!

* * *

S U N D A Y

* * *

7:15 a.m. to 9:15 a.m.

BREAKFAST

Dining Room, Delaware Hall

9:00 a.m. to 12:00 p.m.

PAPER SESSIONS

Lecture Theatre, Room 110
Middlesex College

2:00 p.m. to 5:00 p.m.

ANNUAL MEETING

Lecture Theatre, Room 110
Middlesex College

LUNCH TODAY... presented the Assembly Committee with quite a dilemma. Because it is a holiday weekend, the University's normal on-campus lunch spots are closed on Sunday and Monday. Since bus service in London is none too enviable on Sundays and Holidays, "dining out" is only feasible for those with automobiles, especially since the Annual Meeting will be back in the same room as the paper sessions right after the lunch hour. SO...we have arranged to open the Dining Room in Delaware Hall, from 12:00 p.m. until 1:30 p.m. ONLY, with the cost of lunch being \$3.75. This \$3.75 fee MUST BE PAID IN ADVANCE, AT THE TIME OF YOUR REGISTRATION, in order that we can inform the Food Services people how many will be attending... Once again, the Display Room will be open during this time.

COFFEE BREAK... At press time, there was some question as to whether or not it would be possible to have a coffee break during the paper sessions on Sunday---but we'll try!

S U N D A Y...continued

6.30 p.m.

CASH BAR OPENS

7.30 p.m.

ANNUAL BANQUET

8.30 p.m.

PRESENTATIONS

9:00 p.m.

RUTH J. NORTHCOTT LECTURE

The Great Hall,
in Somerville House

This, of course, is our "Drancy Fess" Ball...the Grande Finale to the whole affair. The Cash Bar will be open from 6:30 until 7:30 and then again after 8:30 as the presentations get underway. The dinner itself will feature Roast Duck a L'Orange, and dessert will be a sherried trifle. Don't forget that we will toast the Queen! The presentations after dinner will begin with the traditional greetings from the Head Table. Then the Society will present its annual awards, this year, there will be a Ken Chilton Award winner, a C.A. Chant Medal recipient and the results of the Simon Newcomb Award competition. In addition, the judges' decisions in the 1979 R.A.S.C. Competition will be announced and the prizes presented to the winners or their representatives. The highlight of the evening, and, indeed, of the whole Assembly, will be the Ruth J. Northcott Memorial Lecture, entitled "THE HIGH FRONTIER" and delivered by Dr. Gerard K. O'Neill. The lecture will be illustrated with slides and film, and should provide us all with a great deal of Food For Thought as part of our memories.

Afterwards.....IT'S UP TO YOU!

* * *

M O N D A Y

* * *

7.15 a.m. to 9.15 a.m.

BREAKFAST

Dining Room, Delaware Hall

8.30 a.m.

DEPARTURE FOR
BRUCE NUCLEAR
POWER DEVELOPMENT

In front of Delaware Hall

We hope you will be bright-eyed and bushy-tailed for this trip, because it promises to be a real treat. It is a long drive to Bruce, at least 2½ hours depending on the road and traffic conditions. Therefore, it is imperative that we leave promptly at 8:45 a.m. PLEASE be on the bus shortly before this time, as delays will be deadly. LUNCH will be served as part of your \$10.00 fee; it will consist of submarine sandwiches and soft drinks. Because the Park is being opened especially for us, we must clean up after ourselves, so please help out...We are scheduled to arrive at the Security Gates at Bruce at 12:30. Note that, again because we are trying to promote group togetherness, NO PRIVATE TRANSPORTATION IS PERMITTED----you take the bus or you don't go. Also, remember that open sandals and dresses are strictly a no-no for the dress code today, and do bring a windbreaker no matter how warm it is. Our tour of the Bruce Nuclear Power Development should take about 2½ hours, so it ought to be over by 3:00 p.m. We will return via a different route, for variety, and should be back in front of Delaware Hall by 6:00 p.m. at the very latest. We would also like to have all the displays picked up about this time. If you are signed up for the Bruce trip and have transportation connections out of town which are around this time, then you could be in trouble. You should talk to us as early as possible, and we'll discuss the various alternatives with you.

11.30 a.m.

LUNCH

Inverhuron Provincial
Park Picnic Area

12:30 p.m.

TOUR OF B.N.P.D.

1979 Competition Awards

By Walter K. Campney, Competition Chairman

I would like to invite everyone to the Display room, Delaware Hall GE6, where you will find the results of much hard work by some of the best amateurs in the country. There should be something of interest for everyone.

There are ten categories:

Centre Display
Observational Equipment or Techniques
Amateur Radio Astronomy
Open
Solar Eclipse or Solar Activity (Photographic & Visual)
Deep Sky (Photographic & Visual)
Solar System (Photographic & Visual)

In addition to the above, there is a special category for the Best Song. The judging for this category will take place Saturday at midnight. No entry form is needed for this category, and improvisations are welcome. Just remember that the lyrics must be original and only one entry is permitted from each Centre. Unattached members are encouraged to participate. If you've got the urge to belt out your favourite ballad, go right ahead. Even if you're not the official entry we'll be glad to hear you. (What am I saying?!) We even have a "Special Trophy" for this "Special Category."

I would like to thank the concerns listed below at left for contributing to the success of this Competition. The best way for us spendthrift consumers to thank them is to give them a piece of our paycheques

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THE JUDGES

J. H. MOORHEAD is assistant Professor in the Department of Astronomy here at the University of Western Ontario.

L. A. HIGGS is with the Astrophysics Branch of the Herzberg Institute of Astrophysics, and a member of the Ottawa Centre.

TERENCE DICKINSON is a popular Astronomy writer who appears regularly on "Quirks & Quarks," and a member of the Toronto Centre.

THE DISPLAY ROOM

The display room will be open by 12:00 p.m. on Friday and I would like to request that all entries be set up before 10:00 p.m. on that day. Judging will commence Saturday afternoon and the winners will be announced at the Society's Annual Dinner on Sunday evening. Displays should be removed by 6:00 p.m. on Monday at the very latest.

I will endeavour to keep the display room open for as much time as is possible. However, it is CERTAIN that the room will be open at least during the following times:

FRIDAY-----noon to midnight
SATURDAY-----in the afternoon between the judging
and the Elginfield trip, and the evening.
SUNDAY-----between the Papers session and the Society
Dinner, and again later in the evening.
MONDAY-----early morning to 6.00 p.m.

We will post the exact times in a convenient location. Good luck to the entrants and clear skies to all! To the winners, congratulations, and to the losers---better luck next year in HALIFAX!

* * * * *

A FEW QUICK FACTS FOR YOU SERIOUS AMATEURS.....

	LATITUDE	LONGITUDE	ALTITUDE (approx.)		
Delaware Hall	43°00'37" N	81°16'11"W	315 m above s.l.		
Weldon Park	43°02'49" N	81°17'34"W	340 m "		
	SUNRISE	SUNSET	MOONRISE	MOONSET	
May 18	0558	2045	0150	1232	All
May 19	0557	2046	0230	1342	times
May 20	0556	2047	0306	1452	EDT

AND BY THE WAY.....

The imposing structure of DELAWARE HALL, built in the early 1960's, is the University's sole campus residence for girls only. But don't get your hopes up, fellas, that's only during the school year! Over the holiday weekend, we expect to be the only people inhabiting the building, which is situated right on the west bank of the River Thames at the end of University Bridge, on the northeast corner of Perth and University Drives. Its distinctive X-winged floor plan is unmistakable, and the four wings are commonly referred to by the cardinal compass points, although they have proper names as well. Delaware is generally considered a showpiece of campus, mainly because of the large number of donations which have been received over the years from former residents. This has earned the building the nickname of "Delaware Hilton."

Abstracts Of Papers

THE CANADA-FRANCE-HAWAII TELESCOPE, AN OPPORTUNITY FOR CANADIAN ASTRONOMERS. (INVITED GUEST LECTURE) Dr. W. H. Wehlau, Chairman, Scientific Advisory Committee C.F.H.T. Chairman, Astronomy Department, University of Western Ontario. Honourary President, London Centre.

During 1979, the 3.6 metre telescope will be installed in the Dome and the first observations will be made. The co-operation of Canada, France and the University of Hawaii in achieving this has been successful and interesting before and after the agreements were signed in 1974.

The site on Mauna Kea, Hawaii, was chosen because of the excellent seeing, dark sky, clear nights and good transparency there. The telescope design provides for observations at coude, cassegrain, and prime foci. The telescope itself, ancillary equipment such as spectrographs and photometers and observing possibilities will be discussed.

THE OTTAWA CENTRE'S RADIO TELESCOPE Ken Tapping, Vice-President of Ottawa Centre and Chairman of the Radio Telescope Group.

On 21 October, 1978, the Ottawa Centre's radio telescope commenced operation at the Centre's Indian River Observatory. It uses two 45ft. antennas separated by over 600 feet and is one of the largest amateur-built radio telescopes in the world. It was constructed by a small group of centre members and has been in use for regular observing programmes since it opened. Radio emissions from the sun, radio galaxies, the Quasar 3C84 was successfully detected. This paper will describe the construction and testing of the instrument.

RADIO OBSERVATIONS OF THE FEBRUARY 1979 SOLAR ECLIPSE Ken Tapping

Although Ottawa was clouded out on the day of the eclipse, the Ottawa Centre's radio observations went ahead without any difficulty. The project consisted of two parts; firstly, using the Centre's radio telescope at the Indian River Observatory and one other amateur radio telescope, the variations were measured in the solar radio waves during the eclipse. Secondly, studies were made of the ionospheric changes during the eclipse. This was a joint venture with the Ottawa Amateur Radio Club. By monitoring the strength of several distant radio stations and by using a homemade ionospheric sounder (a sort of radar system), the variations in the ionization levels in the upper atmosphere were monitored. This paper describes the observations and the conclusions drawn from them.

NOVA CYGNI 1978 Mr. Warren Morrison, Peterborough, Ontario

On the evening of September 9, 1978, the author came across a star in the constellation Cygnus which proved to be a nova about two days before maximum light. This paper will describe the circumstances surrounding this discovery and trace the subsequent history of the nova. The art of nova hunting will then be discussed with particular emphasis on the nova search programme of the American Association of Variable Star Observers.

.....MORE

ASTRONOMY, NAVIGATION AND NOVA SCOTIA IN THE EIGHTEENTH CENTURY
Randall C. Brooks, Halifax Centre R.A.S.C.

Astronomy and navigation are intimately bound together in the 18th century history of Nova Scotia. The French and later the English went to great lengths to obtain good cartographic data for the region. The men directing these nautical surveys were capable, industrious and enterprising and were responsible for the establishment of three astronomical observatories. Two of these have been previously unrecognized in the astronomical history of Canada and one predates J.F.W. Des Barres' Castle Frederic Observatory of 1765 at upper Falmouth, N.S.

PROJECT ZUBENELGENUBI 1978 Gerald Schieven, Vice-President, London Centre

In 1977 and again in 1978 an application was made by the London Centre R.A.S.C. to Young Canada Works, for funds (approved for the summer of 1978) to run Project Zubenelgenubi 1978, a public awareness of astronomy programme. Seven people including a project manager, two other university students and four high school students were hired for periods running between May 8 and September 8. Ten public and separate schools in London and Woodstock were visited with a slide presentation, then displays, including boards, posters, telescopes, slides etc. were brought to eight malls and two libraries, spending one week at each location and also a weekend at Storybook Gardens in London. In the evenings, telescopes were set up in parks throughout London for public observing. Over 3000 students and hundreds of other people were thus introduced to astronomy.

THE CONSTRUCTION OF A LENSELESS SCHMIDT CAMERA, OR, A PROJECT WITHOUT AN OBJECTIVE Michael P. Edwards, Bedford, Nova Scotia.

In 1931, Bernhardt Voldemar Schmidt published a paper which described how a high resolution, deep space camera of small focal length and wide field could be constructed. Also, it would provide images without coma. In spite of the revolutionary qualities of his camera, he could not find a buyer of his instrument. This paper will discuss construction of a small lenseless Schmidt camera and show the results obtained with this instrument.

VERY SMALL COMPUTERS APPLIED TO ASTRONOMY J. Don Jones, Castlegar, B.C.

I would describe my application of an SR-52 programmable calculator for: (1) Writing a short programme, (2) Repeating Shapley's location of the centre of the galaxy from location of globular clusters, (3) Determination of distance and size of stars from colour index, absolute and apparent magnitudes, (4) Investigation of stellar structures. These calculations could be done using microcomputers as well and the depth and scope of the investigations could be extended as well.

FLAMSTEED'S MYSTERIOUS STAR, 3 CAS A R. Peter Broughton, Toronto Centre

The supernova which gave rise to the strong radio source Cas A is thought to have occurred in the last half of the seventeenth century. Though apparently the supernova went unnoticed, Flamsteed's catalogue does include a fifth magnitude star, otherwise unknown, at a present location less than 0.3 degrees from the radio source. The star's position is based on angular distances to two stars which Flamsteed measured on August 16, 1680. One of these distances is consistent with 3Cas being the star we now call AR Cas, but the other distance cannot be reconciled with any other known star. If this is a mistake, then it is the only one amongst all of Flamsteed's sextant observations; if it were an observation of Cas A, the error would still be 6½ minutes of arc, much larger than Flamsteed's mean observational error. The situation is reminiscent of Tycho's supernova whose position error is eight times Tycho's mean observational error.

.....MORE

EXPLORING PLANET EARTH Norman Sperling, Sky & Telescope magazine

Over the past year, I have acquired a number of spectacular Landsat pictures. Some of these were published in Sky & Telescope in the November, 1978, and February, 1979, issues, but most have never been shown or published anywhere. My talk will pay special attention to Canadian scenes, including some ~~circular~~ features which ought to be geologically investigated to see if they are astroblemes.

AN ASTRONOMY PROGRAMME FOR YOUNG CHILDREN David H. Levy, Kingston Centre

An unusual programme for teaching Astronomy to young children was conducted at a large day camp near Montreal during the past three summers. Children from ages four to eleven were given their first major introduction to Astronomy and related science in a relaxed, out of school milieu that included astronomical discussions, demonstrations and observing sessions. One summer ended with an experiment that tested the youngsters' ability to observe a meteor shower.

R.A.S.C.H. OBSERVATIONS OF DELTA CEPHEI Walter Zukauskas, Halifax Centre

During the autumn of 1978, some members* of R.A.S.C. Halifax observed delta cephei visually with the naked eye, binoculars and small telescopes. The objectives of this programme were three: (1) to encourage the study of both variable stars and variable star observing techniques, (2) to assemble the observations into a light curve for the star, (3) to determine an epoch of maximum brightness and to compare this time with that predicted by a representative ephemeris. I will review the programme and will present the astronomical results.

*Those contributing observations were: Randall Brooks, Ron Burke, Rick Burton, Michael Edwards, Peter Edwards, Mike Gilhooly and Walter Zukauskas.

MICROMETEORITES AND THE JAPANESE ASTRONOMERS Darwin Christy, Lockport Astronomy Society, Lockport, New York, United States

(Abstract not available at Press Time.)

ASTRONOMY IN BRITAIN Mrs. Phyllis Allen, Hamilton Centre

(Abstract not available at Press Time.)

A PUBLIC EXPEDITION TO OBSERVE THE 1979 SOLAR ECLIPSE Harlan Creighton, National Recorder of the R.A.S.C., The Pas, Manitoba

Recently, a total eclipse of the sun occurred in southern Manitoba. A group of instructors from Keewatin Community College, The Pas, Manitoba, took advantage of the eclipse to teach some basic science to both students and members of the public. The College's eclipse expedition will be briefly discussed.

NOTES ON THE PAPER SESSIONS: As much as possible, this listing of the abstracts of the papers to be presented at the 1979 General Assembly is maintained in the order in which the presentations will be made. Naturally, last minute changes in the program or in the schedule may be necessary. We hope that this will not be cause of any inconvenience to anyone.

The Chairman for the paper sessions will be London Centre President, Robert W. Cornforth, and any notifications regarding any of the presentations should be directed towards him.

Reflections and Libations

Keeping your tummy filled during the General Assembly should be no problem at all. Especially if you have a car or can catch a ride with someone, your choice of price ranges and foodstyles is really very delightful.

To start with, breakfasts are included with your residence accomodation package. University food services all across the land have a terrible reputation, but, HECK, the food wasn't that bad at the residences in Calgary or Edmonton, so we think it will be eminently edible here.

If you're not staying in Delaware Hall, that's your own fault! You can probably get a meal at your hotel, or beg your landlord. We told you to stay in residence!

Lunches are a bit more complicated. The campus food spots are severely limited in the "off season." The only cafeteria open on a cash basis on Saturday is located in the University Community Centre, and even that will be closed on Sunday. SO...on Sunday we have arranged to serve lunch in the cafeteria of Delaware Hall during the break after the paper sessions and before the Annual Meeting. This will cost \$3.75, and you must pay us ahead of time and get a little ticket, or you really won't get fed---the Food Service people insist on knowing exactly how many meals to prepare. That's only fair to them, after all. AND... on Monday's trip to Bruce Nuclear, we will be bringing submarine sandwiches along to enjoy a picnic at Inverhuron Provincial Park. The cost of THIS lunch is included in your Bruce fee.

For dinner on Saturday and Sunday, we are assuming you will be joining the Society functions at Weldon Park and the Great Hall. Friday is the only day we are specifically NOT planning anything for dinner, and there is method to this madness, too. We want you to try the restaurants around. Most of us will be at THE IMPERIAL, which is our regular hang-out. We know the owner, and he knows we're coming, so it should be just like home there.

But if you're interested in something a little more specialized, fancy or expensive---or even going the other way to something a bit more pedestrian and plebian---then read on, for here is a summary of everything that's worth knowing about London's "spots" for a weekend.

Close to campus, sorry to say, there isn't too much. However, in a real pinch, you might try the University grill or pick up a pizza at Little Caesar's--- both are just south of the "gates" on Richmond Street.

The corner of Oxford and Richmond Streets is undergoing a tremendous revitalization. It has something of almost everything, isn't too far from campus, and is right on the LTC bus routes. For simple pleasure and a fine welcome for Strommies, try THE IMPERIAL. For a low-budget attempt, there is the Hi-Fi Restaurant or Collegeview. PICKLES is a classy delicatessen which is reknowned for its bagels. In the more sophisticated category, there are GOODY'S and CAFE DU MIDI, both in the beautiful boutique promenade known as Village Corners. Only slightly farther south are the CEEPS, which has been the off-campus pub since the forties at least, and MOTHER'S for pizza and spaghetti freaks in a '20s atmosphere. Two tiny restaurants with excellent reputations but no liquor licences are the TODDLE INN and the TARTAN, but don't risk the GOLDEN FRY. If it's donuts you're into, the nearest Tim Horton's is just two blocks west of Richmond on Oxford. This whole corner is about 25 minutes walk from Delaware Hall down Richmond Street. Or, if you walk down Western Road to Oxford (instead of walking down Richmond), you'll be near the Paragon Restaurant or Vido's Take-Out, neither of which are recommended, and the Subwich (for possibly the niftiest subs in town), Kentucky Fried Chicken and Pizza Delight.

Downtown, of course, is replete with all manner of dining establishments. Your more expensive feasteries include the Holiday Inn's Plaza Dining Room (with a Sunday Brunch!), the Terrace Cafe in City Centre Mall, Friar's Cellar, Latin Quarter, Talbot Square Restaurant (best onion soup around), or Maggie's Speakeasy. Nathan's and Say Cheese are two specialized delicatessens. The Keg 'N' Cleaver and Great West Beef cater to the steak-and-salad set, while the London Fishery serves guess what? For those not on expense accounts, there are the Shorthorn (beef), Swiss Chalet (chicken), Mario's (Italian), or even the Colonial Steak House and the Casino Restaurant. None of them are a waste, so suit your taste. But don't go to the Maple Leaf or the Chris Restaurants (if they're even open anymore). The Chinese fancier will be satisfied at the Hoo-Hoo or in greater style and at greater expense at Ming's.

The south end of the city also has quite a few places along the main drag from the 401 Freeway. There's Lee Gardens for luxurious Chinese, Andres, Howard Johnson's, the Crock & Block, Scott's Fried Chicken (an experimental at-home with the Colonel), or Dandy's slop joint. Before 10:00 p.m. you might get a kick out of the food boutique at WhiteOaks Mall if you're in the bowels of the city. OH... forget about the east end---scientists are still trying to decide if life as we know it can exist there!

There's a smattering of others around, of course. The Barn is at Huron & Highbury; their smorgasbord is highly regarded. Or the Corkscrew near Wharmcliffe & Dundas is quite amazing. The Jade Garden might just be the best value in the whole city for Chinese; it's at Waterloo & Cheapside, not too far from campus.

If you like to stash the hash, London is the place for you. Westerners will be glad to know that the nearest Boston Pizza is on Oxford Street, 'way out east in a plaza next to Sinclair Pontiac-Buick---and they're open until 4:00 a.m., that's what amazes the local yokels! The nearest McDonald's to campus is also on Oxford Street, but 'way out west, and you can't miss it, of course. There's a Wendy's on Wharmcliffe south of the downtown area, and a Harvey's just a little further. Furtner still on Wharmcliffe there is a Dairy Queen, Burger King and another McDonald's (the city has six of them the last time I looked), as well as a Mister Donut.

This, of course, has just been a quick rundown of pretty well the whole city. For a closer look at some of the establishments you might specifically be interested in, we called upon our official London Centre restaurant critic to donate his comments. (Prices quoted are based on estimates for two people from past experience.)

Andres A quiet atmosphere, plush, comfortable seats and a better-than-average menu are the main plusses for this recently-refurbished restaurant. A cozy piano lounge helps ease the pain of waiting any length of time, or to relax with a long cool one. Figure on spending at least \$30.00 for a half-decent meal with a modest bottle of dry French. (Corner Wellington & Bradley, South end.)

Cafe Du Midi A new restaurant for London, this offers an "open-air" style except that it is located in the middle of a shopping plaza. The fare is traditional French foods, but fantastic. A bit pricey. (In the Village Corners.)

The Corkscrew This is your basic surf-and-turf. An above average salad bar, but a rather imposing waiting bar. Average meal runs about \$25. (Wharmcliffe, just a block north of the new Dundas intersection.)

The Garage The number one smorgasbord place in the city. Amidst antique cars and filling pumps you can gorge yourself on well-prepared roast beef, or whatever you feel like. \$20. should be enough for a full stomach. (Downtown, on King Street just east of Talbot Street, two blocks from Richmond.)

Gabrielle's An unexcelled wine list is featured here, where most people congregate after the theatre or whatever. During the day they serve European dishes which are out of this world, and have a pastry assortment that can't be beat. (Their black forest cake is the best.) On a fullcourse meal and all the trimmings figure on \$45. easy. If it's just a litre or two of your favourite red after the show, then \$10. should cover it. (Just north of downtown, on Albert Street between Richmond and Talbot.)

Goody's This is what you call your basic "nice little restaurant. Nothing too fancy yet they serve excellent dishes (their escargots are fantastic) but perhaps with a slightly small wine list. It can get a little crowded, and might not be the best place if you're looking for something intimate. About \$25. with wine and tip. (Just south of Oxford off Richmond, in Village Corners.)

The Imperial The "official" restaurant of the London Centre, this restaurant serves good tasting food from a large menu, with exceptionally reasonable prices. Not much of a wine list, but, what the hey, they serve one of the best pizzas in town, not to mention their Chocolate Sundaes which Mr. Jedicke has made famous. The cost of your average meal for two with a couple of drinks is about \$13. depending on what you want. (On Richmond at Oxford.)

Friar's Cellar This little restaurant is found deep beneath the Wellington Hotel, where the waiters are dressed as monks, and the surroundings are those of catacombs. They feature a number of interesting meals, such as a multi-level tray full of cuts of various fowl, served in flames at your table. Average cost is \$30. (Downtown, on Wellington just past the CNR overpass.)

Reg'N'Cleaver Another surf and turf. If you like constant service, this is the place. If you want a meal away from the waiter, forget it. Food's pretty good though. \$25. for the meal and wine, and \$100. to tell the waiter to get lost should do the trick. (Downtown, on Richmond at York.)

The Latin Quarter Famous for their "Yard of Ale," a must for any serious beer drinker, this is a favourite of many Londoners. The atmosphere is dark but quiet, with a simple folk guitarist supplying the melodies and a simple menu and drinking list to keep the evening uncomplicated. \$18. should do it. (Just north of Downtown, On Maple Street between Richmond and Talbot.)

The London Fishery The obvious name for a place that serves a lot of fish. What else can I say, except that it might taste better in Halifax. \$20. including wine, but that's a light meal. (Downtown, York at Talbot.)

Ming's I guess a list of restaurants isn't complete without mention of at least one of the seventy million Chinese establishments about town. This one might not be everyone's favourite, but it's certainly the most popular, probably due to their more varied menu and extravagant prices. Don't expect to leave without \$30. less in your pocket. (Downtown, on Wellington south of the CPR overpass.)

Mother's I'm sure most people know about Mother's, but if not then you might want to trot on down to one (I think there are three now) and try one of their pizzas. Main features are snappy service, antique interiors and they are cheap, cheap, cheap! A beer apiece and pizza for two with tip is less than a sawbuck. (Richmond just south of the CPR crossing, Wellington Road South and Dundas Street East.)

Say Cheese Not an especially good place to go if you don't like cheese. On the other hand, if you do like cheese, you will end up in seventh heaven. Not only do they feature almost every cheese made on earth, but I'm sure they invent a few just to keep people on their toes. Cheese soups, cheese desserts, cheese anything, they have meals of all sorts, with cheese worked in somehow. \$15. should be enough to make you sick of cheese forever. (Downtown, right on Dundas Street.)

People and places

L O N D O N --- "THE FOREST CITY"

Would you think it strange if a city tore out parking spaces to put in trees? London did in the early sixties. The official designation "The Forest City" stems from a plan instituted late in the last century to give London a mantle of wood and leaves. Even today, it is a tradition in the newfangled suburbs to plant a tree on the front lawn of every house. The result is that, except for a growing number of apartment and office towers, there is hardly any city visible at all above the tops of the trees. Naturally, if you look hard enough, you can also see the myriad of church steeples which every town in Southwestern Ontario seems to have considered *de rigueur* during the formative years of the region, and the smokestacks which give London such a strong industrial base.

London is the 72nd largest city in North America, a tremendously mediocre statistic. But there is more retail shopping space here per capita than in any other city on the continent. London has more millionaires per capita than any city in Canada. And if you read about the Civic Government in London, you are bound to run across the fact that, of all the cities in North America, none besides London has been given a Triple A credit rating by the Wall Street financial wizards---even the Ontario Provincial Government only has Double A!

Southwestern Ontario, of course, was originally home to various North American Indian tribes. Fur traders and voyageurs such as La Salle were active in the area during the 17th Century. When John Graves Simcoe, Lieutenant-Governor of Upper Canada, wanted to move his capital from Niagara-On-The-Lake, London was one site he considered. He named the River Thames, and is reputed to have said that London was "eminently suitable for the metropolis of all Canada."

But there wasn't much here until the 1820's, when London was made military headquarters for the area and a sizable barracks was built on the present site of Victoria Park. London became a city in 1854 when the Court House, which still stands across the corner from its more modern counterpart, was built. The old city grew around that very spot where the River Thames forks---hence our nickname, "The Fork of the Thames." Successive annexations, culminating with a vast land acquisition in 1961, brought London to its current boundaries.

Since the twenties, London has been known across the length and breadth of the land as a conservative wealthy centre for finance and industry. Companies such as London Life Insurance and Labatt's Breweries established their world headquarters here, and more recently Commonwealth Holiday Inns and Canada Trust have risen to national prominence. Large installations such as General Motors Diesel Division and Somerville Industries have given London a manufacturing presence as well. Furthermore, London has grown into a regional health care centre, with excellent hospitals like Victoria, St. Joseph's and University acquiring some of the most advanced medical technology in the world. Then, of course, there is the University of Western Ontario, which moved onto its present campus in 1923 and celebrated its Centennial in 1978. UWO has given London a fine academic reputation, not to mention two separate decades (the forties and the seventies) of national college football dynasties.

L O N D O N...continued

For the future, things do look bright for London. Planning authorities in the Provincial Government have designated London as a high-growth area. Our present population of a quarter million could double by the first years of the next century. As the agricultural industry which is so predominant in the environs of London becomes more and more technologically advanced and, hence, both more fruitful and complex, London will attract all manners of businesses to the region. If Ontario Hydro is permitted to build a proposed new 500 kilovolt transmission line to London from the Bruce Nuclear Development, then London could expect to attract industry merely because of the dependable status of its power supply well into the next millenium. And, of course, as long as Canadians persist in their two favourite purchases----life insurance and beer-- London will have its share of executives. One other item that looms LARGE in London's future is the Royal Astronomical Society of Canada. Our centre intends to turn London into a city of amateur astronomers. One day, we'll even lobby for a by-law to turn the street lights off at night!

AND...Guy Lombardo, world-famous bandleader, was born and raised in London...Darryl Sittler played his junior hockey for the London Knights...No Londoner has ever been to the moon...Ted Giannalous left London to become the KGB Chicken in San Diego, California... London construction firm Ellis-Don, one of the country's largest, built Commonwealth Stadium in Edmonton and was recently awarded a contract to build a giant Ford plant in Windsor...Dr. Thomas Cream, who is suspected by many to have been "Jack the Ripper", lived here for a time...Sir Frederick Banting did his undergraduate studies at UWC...Wellington Square Mall was North American's first enclosed downtown shopping mall...Boeing 747's can land at London's International Airport...Geographically, London is located in a large bowl-shaped valley, although there are now some suburbs situated beyond the bowl... To get here from North Bay, you turn right at Toronto...

OR...David Suzuki graduated from Central Secondary School in 1954...the Toronto Blue Jays are owned by Labatt's...the Wenige Expressway, which runs from the south branch of the River Thames to Hamilton Road along highway 126, is the world's shortest superhighway...John G. Robarts, Ontario's former Premier, is a Londoner...the last public hanging held at the Court House was in 1869...According to the Visitor & Conventions Services Bureau, London receives 454 hours of sunshine during the month---probably because the clouds spend so much time in the night sky...

AND STILL MORE...Thomas Edison enjoyed staying overnight at the Tecumseh Hotel, which was located at the present site of the Bus Depot... A pink flamingo, thought to have escaped from the Detroit Zoo, was spotted two weeks ago in North London...the Northern Life tower in the City Centre complex is London's tallest building...London's Centennial Museum, on Queen's Avenue next to the Library, has been visited by over 218,000 sorry people...Entertainers Paul Soles and Tommy Hunter lived in London...the London Board of Education has a microwave television system for educational use which is regarded by many outsiders (and ALL insiders) as the best in North America... Eldon House, built in 1834, is London's oldest surviving residence, and is now a museum...HOW ABOUT THAT, EH?

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GERARD K. O'NEILL

Dr. Gerard K. O'Neill is a physics Professor at Princeton University in the United States. Born in Brooklyn, he joined the Navy at the age of 17. He received his Ph.D. in Physics from Cornell University in 1954 and immediately went to work at Princeton.

Dr. O'Neill's work is primarily in the field of high-energy particle physics. It was Dr. O'Neill who first suggested, in 1956, a method of colliding two beams of subatomic particles head-on to make the collision more energetic than if one particle were at rest. This technique is the basis for "storage rings," which now comprise nearly every major particle beam facility in the world.

In 1969, while teaching a freshman physics course and feeling a need to provide his gifted students with a sense of the relevance of science, Dr. O'Neill posed the question "Is a planetary surface really a suitable place for an expanding technological civilization?" The answer intrigued him so thoroughly that he conceived of a scheme to literally put the resources of space at the disposal of Mankind. Since the first full-length article on this subject appeared in the magazine "Physics Today," in September, 1974, Dr. O'Neill has been recognized around the world as a leading thinker on the topic, and been in great demand as a speaker. Dr. O'Neill has written a book, "The High Frontier. Human Colonies In Space," to describe his research, and this book has sold very well in both its original hardcover edition and an expanded paperback version. Bring your copy to have it autographed!

This is an especially opportune time to have Dr. O'Neill speak to the Society, because the biennial Conference on Space Manufacturing/Space Settlements took place at Princeton from May 14 to May 17, summarizing all research activity.

Dr. O'Neill's visit to London is the result of a very fortuitous chain of events and connections. He will be appearing as the Ruth J. Northcott Memorial Lecturer, and thus the General Assembly Committee owes thanks to the National Council of the Society. Furthermore, Labatt's and Bell Canada made the whole idea possible in the first place by giving financial assistance to the London Centre. Finally, Dr. O'Neill and his office at Princeton University, especially assistants Peggy Davis and Laura Hagopian, have been most kind and co-operative in arranging and organizing his lecture here.

THE L5 SOCIETY

There will be more than a half dozen unfamiliar faces at the Annual Dinner on Sunday night. They will belong to members of the L5 Society chapters in Ann Arbor and Detroit, Michigan, and Buffalo and Rochester, New York. The L5 Society is devoted to the slogan "L5 In '95!", meaning that a first-step space colony should be built at the Lagrangian triangular libration point of the earth-moon system before the year 1995. Because the aims of this group are so closely tied together with the concepts put forth by Dr. O'Neill, these visitors will have a special interest in the evening's activities. (Windsor and Niagara Centres, take note: be on the make for potential "hands-across-the-border" membership recruits!

In addition to the L5 Society and a few similar groups which have adopted Dr. O'Neill's proposals, Dr. O'Neill himself has spearheaded the establishment of the SPACE STUDIES INSTITUTE, which is trying to gather memberships and funds (who isn't?). The idea behind SSI is that, with sufficient capital, it could support research which is in danger of being cut off by U.S. Congress.

THE HUME CRONYN MEMORIAL OBSERVATORY

By Dr. H. R. Kingston from the JOURNAL of the R.A.S.C., March, 1940.

Last year the University of Western Ontario was very fortunate in being the recipient of a generous gift of an observatory and telescope from Mrs. Frances Amelia Cronyn, in memory of her husband, the late Hume Cronyn. While a member of the Federal Government during the Great War, Mr. Cronyn pressed upon the government the need of federal aid for research, and it was through his untiring efforts on behalf of this project that the National Research Council of Canada was formed. The wisdom of this step has since been proven over and over again by the problems that have been attacked and solved by this institution, with subsequent benefits of inestimable value to Canada. On Mr. Cronyn's death, his family decided to establish a memorial to his life and work, and last spring consideration was given to the project of having this memorial take the form of an observatory. In due course Mrs. Cronyn approved the idea, and gave to the University of Western Ontario the sum of \$40,000 to erect the building and purchase a telescope. The building will be called the Hume Cronyn Memorial Observatory.

"The purpose of the gift is to aid in the teaching of Astronomy in the University, to encourage the work of the London Centre of the Royal Astronomical Society of Canada, and, in general, to stimulate in the public mind an interest in Astronomy. Further, it is planned to use the equipment in a modest program of research, in collaboration with other observatories, in fields where instruments of this size can do effective work. It is hoped that the work of the observatory will inspire some students to pursue astronomical research in some of our great observatories with their large and powerful equipment.

"The observatory building is 31 feet by 45 feet in size, and is constructed of Credit Valley limestone, trimmed with Indiana sandstone, and is now (March) fast taking shape. The first floor contains the foyer, beyond which is an office and library. In the foyer will be suspended a Foucault pendulum, and also there will be on display here the Dresden meteorite, which the University was fortunate in securing last fall through a gift from the directors of the London Life Assurance Company. The walls of the foyer will contain panels of astronomical transparencies. The basement, which is practically at grade level at the rear of the observatory, contains a lecture room capable of seating about eighty persons. A workshop and a small kitchenette have also been included here. On the second floor is the observing room, which extends four feet beyond the eighteen foot circle of the dome, giving adequate space for observers to move about beyond the sweep of the telescope. One corner of this room is occupied by the dark room. Above the office and library is an observation roof for constellation study and mapping. A stair leads from this to the roof of the observatory around the dome, where further observation space is available. The dome is constructed of copper over a steel framework.

"The telescope is a ten-inch refractor with three-inch finder and synchronous motor drive. The auxiliary equipment includes ten eyepieces, zenith prism diagonal, solar wedge diagonal, ocular spectroscope, sun and moon glasses and dew cap. The telescope will carry a Schmidt camera with a twelve-inch mirror and eight-inch correcting plate. The pier of the telescope rests on two beams separate from those supporting the floor, and carried by two pillars. Thus any vibration of the floor cannot be transmitted directly to the telescope.

"The observatory is situated on one of the highest points of the campus, and will be a substantial and pleasing addition to the beautiful group of buildings which now grace the grounds of the University of Western Ontario."

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THE HUME CRONYN MEMORIAL OBSERVATORY.....continued

The observatory was officially opened on October 25, 1940 (as reported in the November, 1940, issue of the JOURNAL---they must have been magicians to put them out that quickly, or else they cheated in the naming of the issues) and a lot of water has passed under the University Bridge since then. Obviously, things have changed at the Observatory, not least among which are its surroundings---which have now totally obliterated most of the horizon. What a sight the countryside must have been from the roof of the observing dome in those days! It should be very interesting to visit the Observatory during the General Assembly and see it as it now stands, almost 40 years after its opening.

AND...Dr. Kingston, who wrote the article on the previous page (which is reproduced, incidentally, almost without changes from the Journal version), was the founder of the London Centre. He remained its mentor throughout his career as an astronomer, an educator, and an administrator at the University. Upon his death in 1963, a small sum was made available from his estate, as per his instructions, to the Centre. Government of Canada Bonds were purchased which remain our Centre's largest financial asset, although they are not very highly rated nowadays by investment councillors! But each year, usually in March, we try to have a special guest lecture at our regular monthly meeting, and this is known as the H. R. Kingston Memorial Lecture in his honour. He was the only London Centre member ever to be privileged to serve a term in office as National President of the R.A.S.C.

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THE ELGINFIELD OBSERVATORY

In spite of the quaint beauty of the Cronyn Observatory, the University's astronomers could not seriously pretend that it had the same capabilities as a larger telescope. In the 1960's, as part of the general expansion of the entire University (and Universities in general, for that matter), plans were included for a more modern facility which could pursue a more ambitious research program.

A site of over 300 acres was acquired roughly 25 kilometres north of London, near the town of Elginfield. With growth to the south of the city being almost explosive, north was deemed a better direction to be in, despite the fact that the glow of London quickly became a factor in the darkness of the southern sky from Elginfield. Situated on a gentle, rolling ridge, the observatory is protected from nearby lights and roads. All things considered, this remains an excellent site!

Roughly a half-million dollars was spent on the construction of the observatory buildings; work began in March, 1968. The telescope itself, a 122 cm Ritchey-Chretien design purchased from the Boler & Chivens division of the Perkin-Elmer Corporation for \$430,000, was installed on July 31, 1969. A \$350,000 grant from the National Research Grant assisted the University in the acquisition of the telescope. On September 4, 1969, Dr. D.W.R. McKinley, the NRC's Vice-President of Laboratories, officially opened the new installation, then the third largest in Canada.

THE IVEY REFRACTOR

A third astronomical installation available to the University of Western Ontario is located atop the Natural Sciences Centre, where the Department of Astronomy's office's once were located. Donated by the Ivey Foundation, it is a 6" Unitron refractor. In spite of encroaching campus lights, it has long been a favourite haunt of members of the London Centre of the R.A.S.C.

D. B. WELDON PARK

This spacious 42-acre outdoor facility is located just minutes north of London's city limits on the east side of Highway 4, in the hamlet of Arva. It was set up by the Township of London over a quarter of a century ago. In addition to a large area of forest, there is a quaint pond that may or may not attract a horde of mosquitoes (it's still early in the year.) The Park also has athletic facilities for baseball and tennis. The official 'ball diamond has light standards (and a second diamond will be built this summer) but there was no game scheduled for May 19 as the program book went to press. There are two tennis courts and a smaller diamond for non-league baseballers.

The park is named after Colonel Douglas B. Weldon, a prominent and wealthy Londoner who donated much of the land. Weldon library on the campus at the University of Western Ontario is also named in his honour.

BRUCE NUCLEAR POWER DEVELOPMENT

On Monday, some of the delegates will be boarding air-conditioned busses and leaving London towards Tiverton, Ontario, along a route that will pass through some of the richest farmland in Canada and alongside Lake Huron, possibly the prettiest of the Great Lakes.

The destination will be Bruce Nuclear Power Development. Operated by Ontario Hydro, the first installation there was Douglas Point Generating Station, completed in 1967. The recently completed Bruce Nuclear Generating Station "A" consists of four 800 megawatt heavy water reactors, known as the "Canadian Deuterium System." An identical plant (Bruce 'B') is currently under construction, and it remains to be seen how quickly Hydro will complete this project in the current political climate. In addition, the original plans included four specialized plants for the extraction of Heavy Water (Deuterium Oxide) from lake water. At least one of these has been cancelled due to lack of anticipated demand over the remaining years of this century. Participants in the Monday excursion will find a pamphlet in their registration kits which more fully describe the complex.

Especially because of the intense media publicity which the Bruce installations (and the nuclear power industry in general) have received since the near-disaster at Three Mile Island in Pennsylvania, there has been some concern over the status of our trip. At press time, authorities at Bruce still planned to give the G.A. delegates a "semi-technical" tour. This will include a slide show and introductory talk, a visit to the construction site of Bruce 'B', and a walk through the Bruce "A" plant.

Because Monday is a statutory holiday, there will be only a skeleton staff on hand, but the public affairs department will do their best to answer all of our questions. Cameras are permitted in all areas of the Development. Plant officials have advised the Assembly Committee that **IT IS VERY IMPORTANT FOR ALL TOUR PARTICIPANTS TO WEAR SHOES, NOT SANDALS, AND SLACKS, NOT DRESSES OR SHORTS.** Be prepared to climb a lot of stairs, and conquer your acrophobia **BEFORE** we arrive. Bring along a windbreaker or light jacket, as it can be very breezy there.

BEFORE the tour goes to Bruce Nuclear, we will be stopping for lunch at Inverhuron Provincial Park. This will be a picnic format, and is included in the cost of your trip. Originally, this park was a full-service facility with camping and everything else. The Bruce Development expropriated most of the land, and now there is only a rock-strewn beach and picnic area remaining. Nevertheless, it is a pretty place, and will give us a chance to eat before the visit. Officials at the park have advised the Assembly Committee that, officially, Inverhuron does not open until May 25. They will look the other way if we are there for lunch, but

we have agreed that we astronomers will clean up after ourselves, which isn't too much for them to ask of us, is it? Especially when we consider that we are getting special permission to use the Park.

Our route will take us along Highway 4 to Clinton, then west to Goderich and north from there along Highway 21 to Tiverton. On the return leg, we shall follow 21, the "Bluewater Highway" along the shore of Lake Huron to Grand Bend. Then we will turn east and come in to London on Highway 81, the Nairn Road and Highway 22. We should be back by 6:00 p.m., barring any problems.

CANADA WIDE SCIENCE FAIR

The Canada-Wide Science Fair is an annual event sponsored primarily by the Youth Science Foundation. It brings together most of the winners from regional fairs in well over a dozen areas of the country. Currently in its 18th year, the Fair will be held in London from May 12 to 19. Accordingly, R.A.S.C. members will have an opportunity to visit the Fair and view some of the many exhibits. Competition for prizes at the national level is fierce and some of the work these younger students have done is simply amazing. In fact, the R.A.S.C. regularly honours these students by presenting an award at the Fair. Dr. Percy, our National President, will be presenting the award for 1979 at the Science Fair's closing dinner, Saturday night.

The Science Fair will take place principally in the University Community Centre, the lowslung building located between the two great concrete monoliths of campus, the Weldon Library and the Social Sciences Centre. The exhibits will be in the large triple gymnasium. Persons who wish to visit the Science Fair should do so on Saturday afternoon, after the group photograph. Although it will likely be crowded, there is a cafeteria in the Community Centre where you could catch a bite to eat. Just remember to be back at Delaware Hall by the time the busses to Elginfield Observatory leave!

FEDERAL ELECTION

All our delegates from Canada are no doubt aware that the Parliament of our Dominion will be holding its semi-regular, long-period variable popularity contest on Tuesday, May 22. For the benefit of our visitors from south of border, it should be briefly mentioned that, in accordance with the British North America Act under which Canada is governed, the Prime Minister of Canada is responsible for calling an election sometime before his "mandate" runs out. This differs markedly from the American system in which elections are held regularly on a specific date.

In the London area, you will probably be hearing the names of the local candidates a great deal this weekend. JUDD BUCHANAN, a former Minister for Science and Technology in Trudeau's cabinet, is the Liberal candidate in London West. JOHN MCGARRY, a local lawyer, will contest the riding for the Progressive Conservatives. PADDY MUSSON will represent the New Democratic Party. In London East, the incumbent is Liberal CHARLIE TURNER, and he will be challenged by the NDP's ROB MARTIN and TOM COURCHENE of the Conservatives, both of whom are professors at the University of Western Ontario.

A London group called SCIENCE, TECHNOLOGY AND YOU (which spells "STAY") will be holding an all-candidates meeting in the Social Sciences Centre (Room 2050) Friday evening, May 18. As this meeting is open to the public, anyone who is more interested in politics than Astronomy is encouraged to attend this meeting instead of the M147 Session.

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WE HOPE YOU ENJOYED YOURSELF IN LONDON;
WE WILL LOOK FORWARD TO SEEING YOU IN HALIFAX.