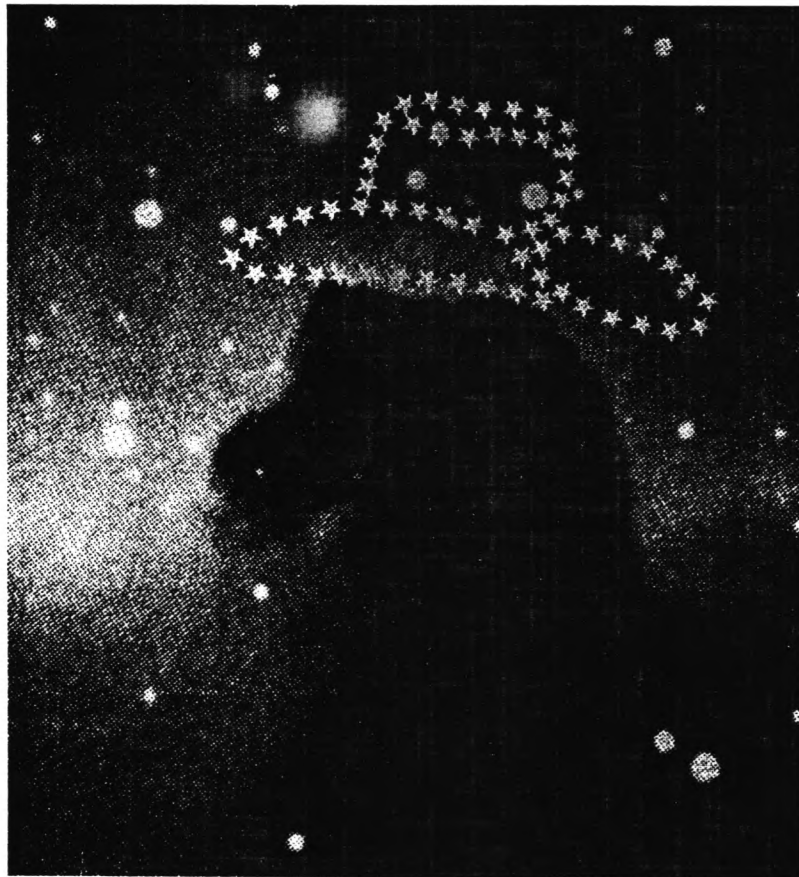


**The Royal Astronomical Society of Canada
1992 General Assembly**



**Calgary, Alberta
July 1-5, 1992**

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THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA



CALGARY CENTRE

July, 1992

Dear GA Delegate,

May I offer you a hearty Western welcome to the '92 GA. We have done a lot of planning and looked forward with anticipation and excitement to this event. Now, at last, the time has come; you are here and we feel our efforts were all worthwhile.

We have tried to provide daily activities that will keep you out of mischief. But, we've also left a little time for exploring the many interests Calgary has to offer, including a visit to the Stampede, if that arouses your curiosity. Calgary may be referred to as a 'Cow Town' but there is more to the Stampede City than horses and cowboys (cowpersons?) – so our volunteers are available to ensure you will be able to make the most of your stay with us. Whether it is information regarding the GA itself or the local tourist attractions, they will be happy to assist you.

We are all looking forward to visiting with you, so please exercise your jaws while here and get to know your fellow delegates. It is meetings like this that draw our nationwide organization together in our common interest, astronomy.

Be sure to include the General Assembly on Sunday morning in your schedule. This is your opportunity to vote on matters that concern all members. Some think this is a rather dull and boring event. Let me assure you, it can be very interesting. Please plan on attending.

Finally, have a great time!

Yours for dark skies,

A handwritten signature in cursive script, which appears to read 'Ruth D. Lewis'.

Ruth D. Lewis

President, Calgary Centre



THE CITY OF CALGARY
OFFICE OF THE MAYOR

AL DUERR
MAYOR

A MESSAGE FROM MAYOR AL DUERR

On behalf of City Council and the citizens of Calgary, it is a pleasure for me to welcome all delegates to the Amateur Astronomer's Convention in Calgary, July 1 - 5, 1992.

We are pleased to host this convention and know it is of great importance to all of you. I am sure you will enjoy the exciting schedule of events your organizers have planned, and I sincerely hope you will also be able to take in some of our world-famous Calgary Stampede activities.

While in Calgary, I encourage you to explore the many cultural, recreational and gastronomic attractions our city has to offer. We have a well earned reputation for warm western hospitality and will make every effort to make your stay in Calgary a most enjoyable one!

In closing, I wish you a very successful and enlightening convention and hope you will come back to visit us again.

Sincerely,

Al Duerr
MAYOR



Discover!

25

1967 YEARS 1992



ALBERTA
SCIENCE
CENTRE



CENTENNIAL
PLANETARIUM



Dear RASC Member,

On behalf of the Alberta Science Centre/Centennial Planetarium I wish everyone attending the General Assembly a warm, western welcome.

It is a real delight for us at the Science Centre/Planetarium to assist in hosting the General Assembly in this our 25th Anniversary year. The Calgary Centre of the Royal Astronomical Society of Canada is the organization which inspired the creation of the Planetarium - as a result the Calgary Centre and the Science Centre/Planetarium share a very special relationship.

In the run up to Canada's Centennial in 1967 a very active Calgary Centre hosted a number of Star Nights and special events, including a big space and astronomy exhibition at the Jubilee Auditorium. Public response was enormous and enthusiastic - convincing civic leaders that there was the support for a permanent facility devoted to space, astronomy and science in general.

Today the RASC and the Science Centre/Planetarium are involved in several joint ventures; an Astronomy Day special event, lectures, courses, observing programs and tours to solar eclipses. The opportunities for the two organizations to work together seem to expand all the time.

I salute the RASC's continuing commitment to public education and wish you every success at the General Assembly.

Sincerely,

William T. Peters
Executive Director

"twenty-five years of discovering, exploring, and expressing our universe"

P.O. Box 2100 ▲ Postal Stn."M" ★ Calgary, Alberta T2P 2M5 # 73 ● Ph. 221-3700

The 1992 R.A.S.C. GENERAL ASSEMBLY

Welcome to Calgary!

The Calgary Centre's GA Organizing Committee wishes to extend a warm welcome to all delegates and guests attending the 1992 General Assembly.

If this is your first visit to Calgary, then let us take this opportunity to share some background information about this exciting city. Many visitors are surprised to see the number of office towers, large shopping complexes (yes, we still do not have a Provincial Sales Tax) and contemporary housing in what was once a ranching and trading centre. The discovery of oil just south of Calgary in 1914 and just north in 1947 fueled a growth spurt that made this city Canada's energy capital.

Calgary's population is approximately 750,000 and is one of the highest cities in Canada (elevation 1049m). Calgary is located on the leeward side of the Rocky Mountains and is in the rain shadow. This is why our climate is semiarid in classification. The higher than average elevation tends to provide cool nights, so even though day time temperatures can reach 25 degrees Celsius, a sweater may still be required in the evening. The mountains also make our weather very unpredictable and unusual (eg. it can snow in Calgary in any month of the year).

REGISTRATION

The registration desk for the 1992 GA will be located near the main entrance to Kananaskis Hall at the University of Calgary. All delegates will receive their information packages in an environmentally friendly bag. They should contain the following:

- Name tag(s) with icons indicating which events you will be attending
- Cash refund for meal ticket(s) if previously ordered
- Map of the U. of C.
- Conference Booklet
- List of delegates
- GA Label Pin
- Helen Sawyer Hogg Lecture Ticket
- June issue of the Calgary Centre's *STARSEEKER*
- List of delegates
- promotional literature from some of our sponsors
- and various tourist brochures on Calgary and the surrounding area.

If you arrive early or late and nobody is at the GA registration desk, one can still check-in at the U. of C. residence by using the 24 hour service desk. The service desk is adjacent to the GA registration desk in Kananaskis Hall. The phone number to the conference housing service desk is (403) 220-3203.

The GA registration desk will be open during the following hours:

Wednesday, July 1 . . . 12:00 - 22:00
Thursday, July 2 09:00 - 21:00
Friday, July 3 09:00 - 21:00
Saturday, July 4 09:00 - 17:00
Sunday, July 5 13:00 - 17:00

NAME TAG: Your name tag is your ticket to several of the GA activities, so please make sure you have it with you at all times. The icons indicate which event you are signed up for. Calgary Centre volunteers can be recognized by their red ribbon.

DISPLAYS: The display room will be located in Kananaskis Hall in room 134. The room will be open at the same time as the registration desk above. The only exception will be on July 4 from 12:15 to 13:30 as judging of the displays will occur at this time.

GA SWEAT SHIRT: For anyone wishing to purchase the 1992 GA sweat shirt should proceed to the GA registration desk early before we run out. The shirt is selling for \$20 (including GST). It will certainly be required during our cool evenings.

PARKING: If you are staying in residence at the U. of C., one can obtain a parking pass (for \$2.00/day plus a refundable \$5.00 deposit for the pass) from the service desk. If you are not staying on Campus, then you will have to park in one of the parkades. The closest parking area for the Dining Centre is the Art/Park and for the Phys. Ed. Building is MacEwan Hall's underground parkade. The parking rate is \$0.55 per half-hour to a maximum of \$3.50 at the Art/Park to \$0.75 per half-hour to a maximum of \$5.00 at the MacEwan Hall Parkade.

CITY TRANSIT: The best way to get to and from the University is to use the Light Rail Transit (LRT). The adult fee is \$1.50 per trip and exact change is required for the ticket dispensing machines. You should hold onto your ticket at all times to prove your fare has been paid (it works on an honour system). The map on page 33 shows the location of the LRT Station.

TAXICABS: There are several cab companies operating in Calgary. Examples are Checker: 299-9999; CO-OP: 250-8294; and Red Top: 250-9222

RESTAURANTS: Calgary has many different restaurants to choose from. Here are a few suggestions: Yuzuki Japanese Restaurant: 261-7701 (510-9th Ave. SW); Shan-Tung Peking Cuisine: 283-3388 (332-14th St. NW); McQueen's Upstairs Seafood: 269-4722 (317-10 Ave SW); Paloma Steak House: 247-3411 (Main Floor, 4600 Crowchild Trail NW); Sarah's Pyrohy Hut: 277-2712 (1216 Centre St. N.).

Other places to see include:

Calgary Zoo	Calgary Tower
Heritage Park	Glenbow Museum
Energieum	Calgary Centennial Planetarium
Aerospace Museum	Grain Academy
Olympic Plaza (Downtown)	Speed Skating Oval (at U. of C.)
Shop in the Kensington District	Inglewood Bird Sanctuary
Phantom of the Opera at the Jubilee	Walk the 8th Avenue Pedestrian Mall

HANDY PHONE NUMBERS:

Astronomy Info Line .237-STAR	Planetarium Shows . 221-3700
Weather275-3300	Time/Temp. 263-3333
Emergency #911	AMA Road Report . 246-5853

Calgary has two morning newspapers: The Calgary Herald and the Calgary Sun plus a Calgary Edition of the Toronto Globe and Mail. CBC Radio is located at 1010 on the AM Band.

The University of Calgary

Welcome to the University of Calgary's Conference Housing. In February of 1988, the U. of C.'s Residence Complex served as the Athlete's Village for the XVth Winter Olympics. We are pleased to have you here, taking advantage of the Olympic Legacy.

The campus serves approximately 18,000 full-time students and just celebrated its 25th Anniversary last year. The majority of the students attending classes are from the southern part of Alberta however, a sizable percentage of the enrollment is from overseas, the United States and the other Canadian provinces.

The service desk at Kananaskis Hall will be open 24 hours per day to assist you with check-in and checkout. Should you need assistance with any of the following, they may be able to help:

- detergents and Kleenex
- newspapers
- recommendations on good service
- change for washing machines
- extending your stay

In addition, the following services are available on Campus:

- Pharmacy
- Banking machines (Royal and Bank of Montreal)
- Food Fair
- Pubs
- Travel Agent
- Convenience Store
- Bookstore

Meals will be served in the Alberta Room, located in the Dining Centre at the following times (subject to change):

Breakfast:	. . . . .	.07:00 - 10:30	Monday to Saturday
	. . . . .	.08:00 - 10:30	Sunday
Lunch:	. . . . .	.11:30 - 13:30	Monday to Sunday
Dinner:	. . . . .	.16:30 - 18:30	Monday to Sunday

Light snacks may be purchased in the periods between the listed times above. Snacks, finger food and pizzas will also be available in Legacy's which offers an informal pub style atmosphere, from 17:00 until midnight most weekdays.

Meals can be purchased by cash at the Alberta Room in the Dining Centre or any of the other 16 food outlets located on campus. The map on the following page shows the location of the food outlets at the U. of C. The Calgary Centre was trying to use a meal card system, however administration of the system made it too onerous for us to use. Any delegates who paid for a meal card(s) will receive a cash refund.

Please note that check out time is 11:00 am.!

WEDNESDAY, JULY 1, 1992 (Canada Day)

SUMMARY

<u>Time</u>	<u>Event</u>
12:00 - 22:00	Registration: — Kananaskis Hall (U. of C. Residence). Located near main entrance.
12:00 -13:30	Lunch: Dining Centre, Alberta Room
13:00 - 22:00	Display competition set up — Kananaskis Hall, room 134
16:30 - 18:30	Dinner: Dining Centre, Alberta Room
21:00 - 00:00	Canada Day Fireworks and Starnight. Ramsay School - 2223 Spiller Road SE. Delegates who have prepaid for this event can board the bus at 21:00 in front of Kananaskis Hall. Members with cars can use the accompanying map to find the location.

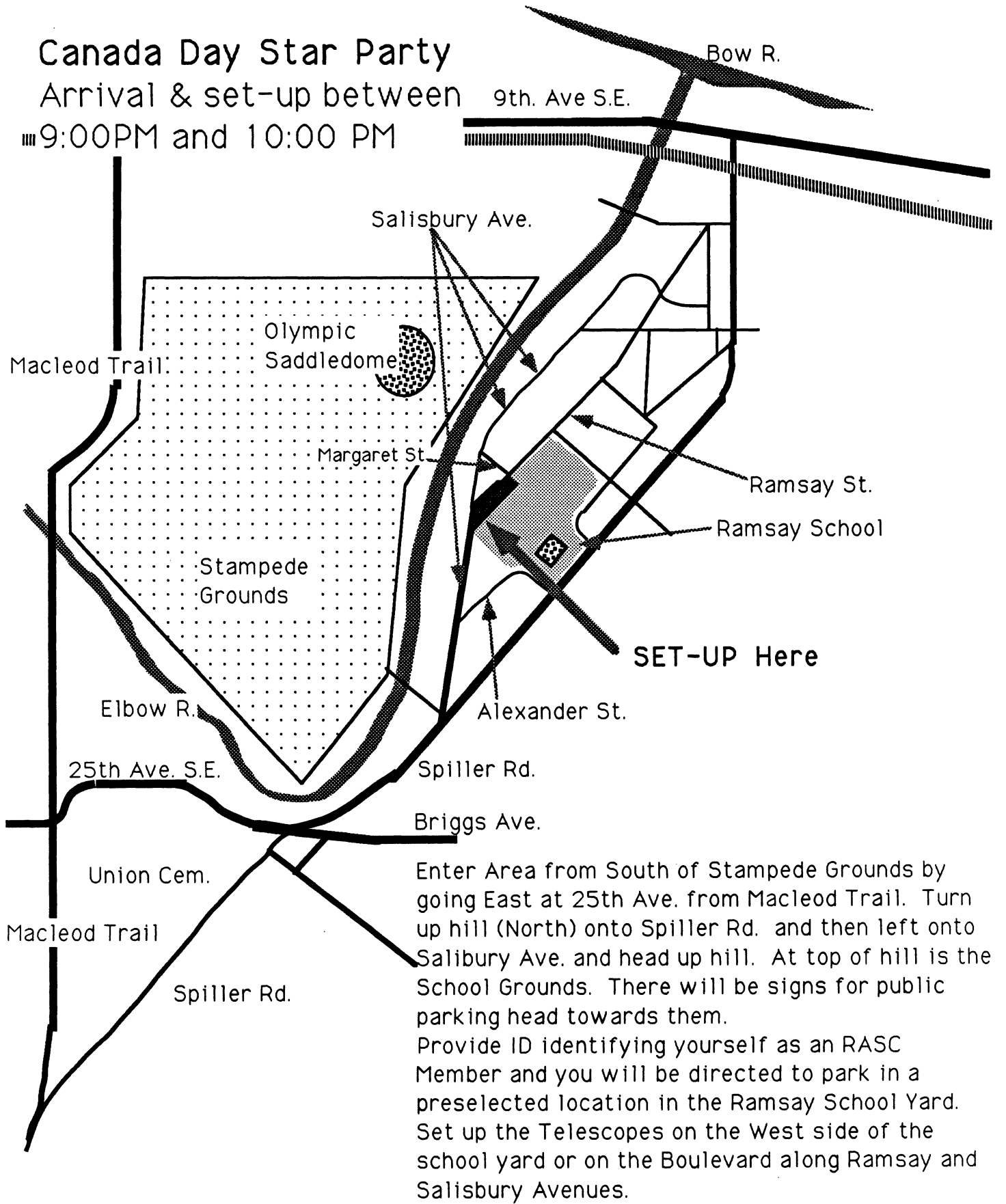
Wednesday, JULY 1, 1992 (Canada Day)

The registration desk opens at 12 noon at Kananaskis Hall at the University of Calgary. Those who are planning to enter the display competition can also bring your display to the above location from Wednesday noon to Friday evening. Judging will occur noon on Saturday and after the papers sessions (if necessary).

At 9:00 pm, in front of Kananaskis Hall, out of town delegates will board a bus to Ramsay Elementary School (2223 Spiller Road SE) where they will see the Canada Day fireworks from Scotch Man's Hill and also partake in a public observing session hosted by the R.A.S.C. Calgary Centre (weather permitting). Be sure to dress warmly as the nights tend to be quite cool in Calgary. All Calgary Centre members are encouraged to assist with this public observing session. This area is usually closed off to non-local traffic, so please carry your RASC membership card to be permitted to pass through any road blocks.

This pyrotechnic display will have music played in synch with the fireworks. So you might consider bringing your Ghetto-Blaster and tune in FM 107 at 11:00 pm for this 9 minute display.

Canada Day Star Party
 Arrival & set-up between
 9:00PM and 10:00 PM



Enter Area from South of Stampede Grounds by going East at 25th Ave. from Macleod Trail. Turn up hill (North) onto Spiller Rd. and then left onto Salisbury Ave. and head up hill. At top of hill is the School Grounds. There will be signs for public parking head towards them. Provide ID identifying yourself as an RASC Member and you will be directed to park in a preselected location in the Ramsay School Yard. Set up the Telescopes on the West side of the school yard or on the Boulevard along Ramsay and Salisbury Avenues.

Reminders: You will be setting up on grass and no power is provided. Bring an FM Radio and tune it to FM107 during fireworks.

THURSDAY, JULY 2, 1992

SUMMARY

<u>Time</u>	<u>Event</u>
07:00 - 10:30	Breakfast: Dining Centre, Alberta Room
08:00 - 16:30	Day Trip to K/T Boundary and Royal Tyrrell Museum in Drumheller. Roland Dechesne is the tour leader. Delegates who have prepaid for this event can board the bus at 8:00 am in front of Kananaskis Hall.
08:00 - 16:30	Day Trip to Banff and Lake Louise. Delegates should meet Art Snell in front of Kananaskis Hall at 8:00 am.
09:00 - 21:00	Registration — Kananaskis Hall near main entrance.
19:30 - 21:00	Helen Sawyer Hogg Public Lecture — Alberta Science Centre (ASC). Delegates who have prepaid for bus transportation can board the bus at 19:00 in front of Kananaskis Hall.
21:00 - 23:00	Wine and Cheese reception in Discovery Hall (ASC).

Thursday, July 2, 1992

After breakfast, a bus will be in front of Kananaskis Hall to take the delegates on a day trip to see the K/T Boundary and visit the Royal Tyrrell Museum in Drumheller. A smaller second day trip to Banff will depart from the same location.

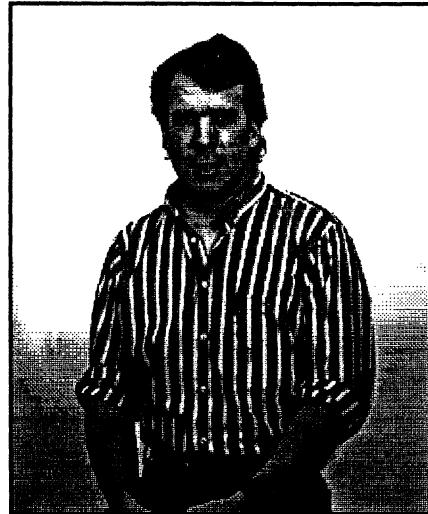
Delegates will return to the residence by 17:00 to enjoy a relaxing supper. At 19:00, a bus in front of Kananaskis Hall will transport the out-of-town delegates to the Alberta Science Centre/Planetarium for the Helen Sawyer Hogg Public Lecture. One can also take the LRT downtown. All local members are invited to attend this free lecture featuring Dr. Alan Hildebrand. Tickets will be included in each registration package and extra tickets can be picked up at the Science Centre box office the day of the lecture on a first come basis. Seating is assigned. Information on the lecture can be found on the following pages. After the lecture, R.A.S.C. members and delegates are invited to a wine and cheese reception in Discovery Hall and DinoMania. The highlight will be a birthday cake to celebrate the Planetarium's 25th Anniversary.

The Helen Sawyer Hogg Lecture

- Speaker:** Dr. Alan R. Hildebrand, Geological Survey of Canada, Ottawa
- Title:** "The Cretaceous/Tertiary Boundary Impact (or the Dinosaurs Didn't Have a Chance)".
- Date:** Thursday, July 2, 1992
- Time:** 19:30
- Location:** Pleiades Theatre, Alberta Science Centre
701 - 11th Street S.W., Calgary, Alberta
- Admission:** free

Dr. Hildebrand will discuss the history of the Cretaceous/Tertiary Boundary debate and the clues which led to the discovery of Chicxulub impact crater in Mexico. The environmental effects of this impact will be proposed as the extinction mechanisms which killed the dinosaurs and much of terrestrial life. The Chicxulub impact may have been the deadliest impact since life evolved on Earth because the impact targeted a thick sequence of carbonates and evaporites. The probability of recurrence of a disaster of this magnitude and lesser but still deadly impacts indicate that a measure of astronomical vigilance is required. For further background reading see the June 1, 1991 issue of *Natural History*, p. 47, for an article entitled "Cretaceous Ground Zero" by A. Hildebrand and W. Boyton.

Dr. Hildebrand graduated from the University of New Brunswick in 1977 with a B.Sc. in Geology. After working in the mineral exploration industry he eventually returned to school at the University of Arizona to earn a Ph.D. in Planetary Sciences. Now with the Geological Survey of Canada in Ottawa, Alan is continuing to work on impact related problems and the Cretaceous/Tertiary (K/T) boundary event. Alan's dissertation work revealed that the K/T crater was buried on the Yucatan Peninsula of Mexico. The crater, which he names Chicxulub, is 80 km across and is one of the largest craters known on Earth. Alan is also a life member of the R.A.S.C..



The Helen Sawyer Hogg Public Lecture is sponsored jointly by the Canadian Astronomical Society and the Royal Astronomical Society of Canada. It is so named in recognition of the lifelong contributions of Helen Sawyer Hogg towards increasing public awareness and appreciation of the Universe around us, an aim that the Lectureship also seeks to further. It is held annually, usually in conjunction with an annual meeting, alternating between the two Societies (with the R.A.S.C. hosting it in even-numbered years, C.A.S.C.A. in odd-numbered years).

Helen Sawyer Hogg Lecture Summary

Title: The Cretaceous/Tertiary Boundary Impact (or the Dinosaurs Didn't Have a Chance)

Speaker: Hildebrand, Alan R., Geological Survey of Canada, Geophysics Division, 1 Observatory Crescent, Ottawa, Ontario K1A 0Y3

Date: Thursday, July 2, 1992

Time: 19:30

Location: Pleiades Theatre, Alberta Science Centre
701—11th Street S.W., Calgary, Alberta

The five most compelling evidences of a large Cretaceous/Tertiary (K/T) boundary impact are that the platinum group elements (such as iridium) occur in the boundary layers in large amounts and in chondritic proportions, the boundary stratigraphy occurs globally with a uniformly distributed fireball layer and a geographically restricted ejecta layer, shocked mineral grains and tektites occur in the boundary layers, and the Chicxulub crater, a 180-km diameter probable impact crater buried in Yucatan, Mexico, is suitably located in both time and space to produce the layers.

Knowing the size and location of the K/T crater allows well-constrained modeling of the impact's environmental consequences. (The impacting projectile was a comet based on the amount of Ir distributed globally and the crater's size). The Chicxulub impact released $\sim 10^{25}$ joules on a timescale of minutes. This is $\sim 10,000$ times the energy that would be released by exploding the world's entire nuclear arsenal. Many geologists have favoured an endogenic cause for the K/T extinctions, however, this quantity of energy equals all the internal heat released by the Earth in $\sim 10,000$ years, all the energy released by subaerial volcanoes in $\sim 500,000$ years and all the energy released by the Deccan flood basalts in $\sim 1,000,000$ years. The Chicxulub impact released its energy $\sim 10^{12}$ times faster than the near-K/T-time Deccan eruptions which are often suggested as the extinction agent by those who favour volcanism-induced K/T extinctions. The geological instantaneity of the release of impact energy implies that an impact can cause a mass extinction whereas the effects of a long-duration volcanic eruption may be buffered by geological feedback mechanisms.

The combination of the large size of the crater and the thick carbonate / evaporite target may result in the Chicxulub impact being the deadliest since life evolved on Earth. Because the Chicxulub comet impacted a crustal segment covered by a carbonate/evaporite platform 3 km thick, shock-produced CO_2 would have caused severe ($\sim 10^\circ\text{C}$) greenhouse warming for 1,000 to 100,000 years. Furthermore, the shock-produced SO_2 from the evaporitic sulfates would have produced an acid-rain pulse sufficient to acidify the surface layer of the oceans.

Smaller impacts which would be deadly to our civilization occur approximately once every 500,000 years indicating that a measure of astronomical vigilance is required.

NOTES

FRIDAY, JULY 3, 1992

Time	Event
07:00 - 10:30	Breakfast: Dining Centre, Alberta Room
08:00 - 16:30	Day Trip to Banff and Lake Louise. Delegates can board bus in front of Kananaskis Hall at 8:00 am. Joe Clarke will be the local host.
08:00 - 10:00	Committee(s) meeting opportunity — Dining Centre, Red Room. Additional space is available at Kananaskis Hall, room 134.
09:00 - 21:00	Registration — Kananaskis Hall (residence) near main entrance
10:00 - 16:00	National Council Meeting — Scurfield Hall, Room SH257
11:30 - 13:30	Lunch: Dining Centre, Alberta Room
17:30 - 19:00	Western style barbeque — Courtyard behind Kananaskis Hall. Desserts will be served in the Dining Centre, Blue Room

MENU

Tossed Spinach Salad,
Marinated Vegetable Salad
Seashell and Seafood Salad
Baked Beans
Oven Brown Potatoes
Honey Garlic Ribs
Fruit Pies, Fresh Sliced Fruit, Assorted Beverages

21:00 - 1:00 Rothney Astrophysical and Wilson Coulee Observatory tours.

Friday, JULY 3, 1992

This day has many scheduled activities. Although no special arrangements have been made to transport delegates to see the exciting Stampede Parade, one is encouraged to take the LRT downtown around 7:30 am before transit service is halted to the parade route. The parade begins at 9:00 am and heads west on 6th Avenue, south on 10th Street and east on 9th Avenue. It's recommended to bring a lawn chair or blanket as the parade lasts about 3 hours. There will also be a second day trip to Banff-Lake Louise departing in front of Kananaskis Hall at 8:00 am. The National Executive have an opportunity to meet at 8:00 am in the Red Room at the Dining Centre. The National Council meeting is scheduled to begin at 10:00 am in room SH257 Scurfield Hall (watch out for the construction!). Other meeting areas are available (eg. the display room at Kananaskis Hall has a small lounge area). Delegates are encouraged to take some time to view the displays in room 134 at Kananaskis Hall.

The next scheduled activity is a western barbeque in the courtyard behind Kananaskis Hall beginning at 17:30. If the weather is inclement then it will be held indoors in the Blue Room (Dining Centre). At 19:00 the always entertaining Murphy Slide and Song Contest will begin in the Blue Room.

At 21:00, delegates who have prepaid for the observatory tours will board a bus to see the Rothney Astrophysical Observatory and the Wilson Coulee Observatory.

ROTHNEY ASTROPHYSICAL OBSERVATORY

The Rothney Astrophysical Observatory (RAO) of the Physics and Astronomy Department, University of Calgary, has been training students to observe with modern instruments for more than 20 years. It stands on a quarter section of land donated by Mr. A. R. (Sandy) Cross.

The original instrument is a 0.4m (16 inch) Cassegrain reflector used mainly for photometry. Typical targets are variable stars with periods of a day or less. Good light-curves can be obtained in less than ideal conditions with the Rapid Alternate Detection System (RADS), which "chops" from comparison star to variable to sky within a few seconds. Light-curves of an eclipsing binary measured at many wavelengths, combined with radial-velocity measurements from the Dominion Astrophysical Observatory (DAO) in Victoria, are used by a powerful computer program to produce a detailed model of the binary system.

The infrared telescope was dedicated in May 1987. It has a 1.5m (60 inch) metal primary mirror, to be replaced in about a year with a 1.83m (72 inch) honeycomb-back glass mirror, which will give significantly better-quality images. The infrared telescope has an unconventional "alt-alt" mounting. To track a star, both axes must be driven at varying rates. This requires the use of a computer for the many calculations. During observing, the computer controls data acquisition as well as pointing and tracking. For infrared photometry, measurements and fine adjustments all take place without observer intervention, once the object is acquired.

A photographic spectrograph is being converted to use a charge-coupled device (CCD) detector, to give digitized spectra of better sensitivity and linearity. A linear array infrared detector lent by colleagues at the University of California at San Diego is being built into an infrared spectrometer. The ability to obtain digitized spectra in the visible and infrared will significantly extend the type of work that can be done at the RAO.

Directions to the Rothney Astrophysical Observatory (RAO)

After the Murphy Slide and Song contest, delegates who signed up for the observatory tours should grab a warm sweater (or jacket) and proceed to the bus waiting in front of Kananaskis Hall at 21:00. Please wear name tag so everyone can get to know you.

For those with their own transportation, it is suggested that you follow the bus and refer to the following directions:

- drive south on Crowchild Trail NW until you reach the Glenmore Trail overpass
- head east on Glenmore Trail SW until arriving at Macleod Trail South
- turn right and travel south on Macleod Trail until you exit the city
- Immediately past the last set of lights (Sun Valley Blvd/164 Ave south) get into the right lane and turn right (west) onto Marquis of Lorne Trail (Hwy 22X) and head for Priddis. Zero your odometer at this turn.
- 15 km there will flashing yellow lights indicating divided highway is about to end.
- 17.3 km turn left (south) onto Hwy 22 to Millarville
- 19.9 km or 2.6 km from intersection, turn left (east) and drive up the hill to the Rothney Astrophysical Observatory. There is a long bungalow house opposite this turnoff. Dr. Dave Fry will then provide a tour of this outstanding facility.

THE WILSON COULEE OBSERVATORY

The Wilson Coulee Observatory was an idea submitted to the City of Calgary as a way to help celebrate Alberta's 75th Anniversary. A grant was received in 1980 and design and construction occurred in 1981-82. On January 29, 1983, exactly 25 years from the first meeting of the Calgary Centre, the observatory was opened by the Mayor of Calgary, the Honorable Ralph Klein. The Wilson Coulee Observatory consists of two structures. The largest building is a heated 800 square foot classroom used for meetings and school tours and the second is the unheated domed observatory.

The first scope mounted in the the 12 foot Ash Dome was a 32 cm (f7) Newtonian built by Noel Lingford (one of the founding members of the Calgary Centre). A second 32 cm (f6) Newtonian was purchased from Calgary Centre member Ted Pidgeon. In 1990, the Calgary Centre raised enough capital to purchase a Celestron 14. In 1991, the drive was replaced with a Byers upgrade and the telescope is now an outstanding observational instrument used for both planetary and deep sky observing and astrophotography. Members who want year round access pay a users fee (or key fee) to help cover operational expenses.

The observatory is located on the grounds of Strathcona-Tweedsmuir School (about 15 km south of Calgary's city limit). Due to its close proximity to the city, the Calgary Centre receives several dozen requests each year from community and school groups for tours of the facility. These tour groups provide an additional source of revenue through donations which is also used to help offset operational expenses. Since the opening of this facility in 1983, several thousand school-aged children have visited the Wilson Coulee Observatory.

To reserve a tour of this facility, just leave a message at 237-STAR.

Directions to the Wilson Coulee Observatory [from the RAO]

Following the RAO visit, a tour of our own observatory will be given. Again it is suggested that you follow the bus. The easiest directions are as follows:

- retrace you steps to Highway 2 South (MacLeod Trail).
- turn right (south) onto Hwy 2 and travel approx. 5 km south until you come to the Dewinton turnoff.
- turn right and follow the road west until it gently turns southward (about 1.7km)
- follow this road southward approx. 8 km until you reach 306 Ave. W.
- turn left (east) and follow the road until it forks north and south. Follow the north (left) fork. The road will pass a house on the left side of road and Strathcona-Tweedsmuir School on the right. Proceed through parking lot and take center fork between the trees. Welcome to the Wilson Coulee Observatory km. Robert Loblaw of the Calgary Centre will provide a brief slide presentation on the WCO in the classroom building.

If weather permits, R.A.S.C. members (especially from Calgary) are encouraged to meet the bus tour at the WCO at about 23:00 and set up telescopes for a mini-observing session. Please keep parking lot relatively clear so the bus can turn around.

SATURDAY, JULY 4, 1992

SUMMARY

<u>TIME</u>	<u>EVENT</u>
07:00 - 08:30	Breakfast: Dining Centre, Alberta Room
08:45 - 11:45	Papers Session I — Phys. Ed. Building, Room PEB 132
11:45 - 12:15	Group Photo and Pyramid
12:15 - 13:30	Lunch: Dining Centre, Alberta Room
13:30 - 16:30	Papers Session II — Phys. Ed. Building, Room PEB 132
18:00 - 22:00	Awards Banquet: Dining Centre, Blue Room

Saturday, JULY 4, 1992

The morning will begin with the papers session in room PEB 132, Physical Education building. Delegates will be able to hear many presentations that promise not only to be educational and informative, but several also promise to be very entertaining. Remember, the majority of the presenters are amateur astronomers and you do not require an astrophysics degree to understand these presentations. It is an excellent opportunity to see what other Centres and individuals are working on across Canada.

At the noon lunch break, everyone is invited to be in the traditional group photo (right outside room PEB 132). **Please** write your name on the card provided this morning so we can identify the people in the photo. If enough brave souls are present, the annual R.A.S.C. pyramid may also be photographed. Judging of the display competition will occur at noon and after the papers session.

The evening is reserved for the awards banquet which will begin with cocktails at 18:00 in the Dining Centre, Blue Room. Dress is formal western. At the banquet, delegates will also hear a presentation by outgoing National President Damien Lemay. His talk is entitled "The Future of Amateur Astronomy". After Damien's presentation there will be the awards presentation and the door prizes.

PAPER SESSIONS

<u>TIME</u>	<u>PRESENTER</u>	<u>CENTRE</u>	<u>TITLE OF PAPER</u>
8:45 — 9:00			Welcome to Delegates
9:00 — 9:30	MORRIS, Steven	Calgary	Astronomy at the South Pole
9:30 — 9:45	LANE, Dave	Halifax	The Micro Guider, a Digital Setting Circle Device
9:45 — 10:00	NEWTON, Jack	Victoria	CCD Imaging
10:00 — 10:15	HIMER, James T.	Calgary	Synopsis of 1992 AAVSO/WGAIT/AAS Workshop on CCD Imaging
10:15 — 10:30	COFFEE BREAK		
10:30 — 10:45	HLADIUK, Don	Calgary	Building a Backyard Observatory
10:45 — 11:00	LINK, Alister	Edmonton	Visual Effects of Mt. Pinatubo Volcanic Eruption
11:00 — 11:15	KELLY, Patrick	Halifax	Stamping out Astronomy
11:15 — 11:45	NELSON, Grace	Calgary	Teaching Astronomy to Children
11:45 — 12:15	GROUP PHOTO		
12:15 — 13:30	LUNCH BREAK		
13:30 — 14:00	LOHVINENKO, Todd	Winnipeg	Noctilucent Clouds seen from North America
14:00 — 14:30	OLSON, Dr. Barry	Lethbridge	The Oldman River Observatory: A New Observatory for Alberta
14:30 — 14:45	KELLY, Pat	Halifax	The Move to Build a Major Planetarium in Halifax
14:45 — 15:00	ADAMSON, ShirLee	Edmonton	My Twelve Years as a Rank Beginner in Astronomy
15:00 — 15:15	COFFEE BREAK		
15:15 — 15:30	CONNORS, Martin	Edmonton	An Inexpensive Planetary Research Laboratory
15:30 — 15:45	CONNORS, Martin	Edmonton	Crater-related Lava Flows of Venus (video)
15:45 — 16:00	DICK, Robert	Ottawa	Evolution of Shadow Bands During the Solar Eclipse 910711
16:00 — 16:30	ATWOOD, Randy	Toronto	The Great Eclipse of July 11, 1991 (video)

SUMMARY OF PAPERS

Astronomy at the South Pole

MORRIS, Steven L. — Calgary — 9:00 - 9:30

In recent years, several telescopes have been placed at the South Pole. Professor Morris spent one year in Antarctica and will describe what living in a harsh climate is like. Astronomy at the South Pole is only for the dedicated; this will become apparent during the presentation where Professor Morris will show what it is like to do astronomy at the 'other pole'.

The Micro Guider, a Digital Setting Circle Device

LANE, Dave — Halifax — 9:30 - 9:45

Modern digital setting circles add a new dimension to the astronomical observations undertaken by "Backyard Astronomers". Utilizing complex spherical trigonometry and the wide availability of microcomputers, these devices have become possible. Unfortunately, most commercial units are very expensive and thus out of the reach of many potential users. The Micro-Guider offers the electronics-inclined user the ability to realize digital setting circles at a modest cost. The paper will discuss the capabilities and design of the Micro-Guider. A future project that will control an alt-azimuth mounted telescope will also be presented.

CCD Imaging

NEWTON, Jack B. — Victoria — 9:45 - 10:00

CCD images and Miscellaneous Astro-photography. The tri-colour process to colour balance a CCD camera is explained and illustrated with slides. The camera is of the Santa Barbara Instrument Group called the ST-6. Images have been taken on Jack's home-built 25" Newtonian telescope. This presentation will provide an incite into what can be done with a CCD camera. Those who have further interest should attend the workshop on CCD photography that Jack will host during the GA.

Synopsis of 1992 AAVSO/WGAI/AAS Workshop on CCD Imaging

HIMER, James Thomas – Calgary – 10:00 - 10:15

Charge-couple devices have made significant contributions to astronomical observations and discovery. CCDs offer many advantages over previous detection methods used in photography, spectroscopy, and photometry however CCD data handling and reduction methods are more rigorous, time consuming, possibly error prone, and some data issues are not well understood. Over the years it has become disturbingly apparent to many members of WGAI that occasional CCD claims are unwarranted. The amateur CCD literature and commercial product claims may unintentionally be misleading, not by what they say, but more perhaps by what is left unsaid. The need to address these concerns and misconceptions was a prime motivation for the first joint AAVSO/WGAI workshop, bringing together amateur and professional astronomers to discuss CCD topics surrounding principles, systems issues, data reduction, spectroscopic and photometric applications, and applied student projects. Highlights of the Workshop and poster session will be presented.

Building a Backyard Observatory

HLADIUK, Don – Calgary – 10:30 - 10:45

We have all read about people who have built their own backyard observatory to take advantage of the skies from suburbia. This paper will illustrate the construction of a simple backyard observatory for the astronomy enthusiast. The roll-off roof observatory is an easy and inexpensive structure to build in a suburban location. Suggestions on how to improve upon the design will also be presented.

Visual Effects of Mt. Pinatubo Volcanic Eruption

LING, Alister – Edmonton – 10:45 - 11:00

In June of 1991, Mt. Pinatubo in the Philippines underwent several volcanic eruptions. The ash and sulphur aerosols spread around the globe during the following months. Numerous slides will be used to show the various and wonderful optical phenomena produced by the aerosols, including Bishop's Ring.

Stamping out Astronomy

KELLY, Patrick – Halifax – 11:00 - 11:15

Stamp collecting and Astronomy do mix. Stamps showing many of the areas of interest in Astronomy are available and Pat has collected and organized his astronomical stamp collection to show these many areas of interest. A display is also available to add to his description of one of his hobbies.

Teaching Astronomy to Children

NELSON, Grace – Calgary – 11:15 - 11:45

Do you use the space shuttle journey around the Milky Way slide set to teach young children about the solar system? We do at the Calgary Centre! Using an imaginative idea that has worked throughout time, the group pretends that they are traveling in the space shuttle to all of the planets in the solar system. We learn why we couldn't live there and learn about each planet... but, we lose some of our little astronauts along the way. The presentation is a good one and the slides are awesome. What can we do to keep their attention and their interest? Using a teaching method that allows the children to experience the concepts through specifically directed physical movements after each slide is shown, they are kept on task. Experience with them, the Blast off, the "bumpy ride", G-forces, weightlessness, going into orbit, dodging asteroids, re-entry and splashdown. See how a bright yellow parachute-like piece of fabric can be used to convey these concepts to groups of little tykes who simply want to go in orbits around the instructor. See how this new way to teach astronomy to children works.

Noctilucent Clouds seen from North America

LOHVINENKO, Todd and Mark Zalcik – Winnipeg – 13:30 - 14:00

In a tag team presentation, Todd Lohvinenko and Mark Zalcik will describe the results of two years of research of data collected by amateur astronomers and professionals on the subject of Noctilucent clouds.

The Oldman River Observatory: A New Observatory for Alberta

OLSON, Dr. Barry M. — Lethbridge — 14:00 - 14:30

In 1990, the Lethbridge Astronomy Society signed a lease agreement with the City of Lethbridge to allow the Society to occupy a few hectares of land in a city park for the purpose of establishing an observatory. An existing house on the site is used as the club house. A wooden Quonset opens prospects for future development. The Society is currently constructing a telescope building to house a 40.5 cm (16") Ritchey-Chretien design telescope built by Optical Guidance Systems.

The Move to Build a Major Planetarium in Halifax

KELLY, Patrick — Halifax — 14:30 - 14:45

The city of Halifax on the south shore of Nova Scotia has many amenities of cities much larger however it lacks a major Planetarium. In this presentation, the efforts of amateur astronomers and other interested individuals in the community will be described as they build justification for the construction of a Major Planetarium in this capital city of Nova Scotia.

My Twelve Years as a Rank Beginner in Astronomy

ADAMSON, ShirLee — Edmonton — 14:45 - 15:00

Don't give up! It's too cold outside! Don't make excuses! Learn what it is like to be an amateur astronomer for twelve long years and still enjoy the night sky. Too often we look toward the professionals and their pursuit of knowledge in the field of astronomy but few realize the joys only known to the amateur. Life is not always an eyepiece full of stars because amateurs know all too well the many problems that lurk in the dark. Hear how one avid amateur astronomer kept the title of "Rank Beginner" for twelve years and wants to go on learning while retaining the awe and amazement of a beginner.

An Inexpensive Planetary Research Laboratory

CONNORS, Martin – Edmonton – 15:15 - 15:30

The plummeting prices of home computers has put near professional capability for data processing and display into the hands of all. Use of a CDROM reader and IBM PC compatible is described as it pertains to the analysis of spacecraft images. Also explained is how one can get started and where data may be obtained.

Crater-related Lava Flows of Venus

CONNORS, Martin – Edmonton – 15:30 - 15:45

The relation of lava flows on Venus to cratering are twofold. There is some evidence of limited triggering of lava flows by impact. More common is 'embayment' of craters by lava from external sources. Magellan data is examined to study these two processes.

Evolution of Shadow Bands During the Solar Eclipse 910711

DICK, Robert S – Ottawa – 15:45 - 16:00

The observation of shadow bands during the solar eclipse of July 11, 1991 provided a unique opportunity to study the dynamic behaviour of the air column above La Paz, Baja California Sur. The approximate symmetry of the zenith angles for the partial phases leading to second contact allow the study of the atmosphere during the cooling and reheating of the air column above the observing site. The incident light from the Sun has been recorded during the total solar eclipse. A sensitive photometer with a wide dynamic range was designed and used to record the evolution of shadow bands before and after totality. Changes in the structure of shadow bands are presented and their symmetry about mid-eclipse is reported.

The Great Eclipse of July 11, 1991

ATWOOD, J. Randy – Toronto – 16:00 - 16:30

On July 11, 1991, thousands of people flocked to Hawaii, Mexico, and Central America to observe a total solar eclipse. A long period of totality and good weather prospects attracted both the serious eclipse chaser and the curious. Video from seven sites along the path, from Hawaii to Costa Rica have been combined to form this presentation. Along with a short discussion on the different types of eclipses, the sights and sounds will transport the viewer to the path of totality.

NOTES

AWARDS BANQUET

DATE: July 4, 1992
LOCATION: University of Calgary — Dining Centre, Blue Room
COCKTAILS: 18:00
DRESS: Formal Western

Programme:

19:00 Welcome
19:05 Head Table Introduction
19:10 Grace

MENU

Caesars Salad

Prime Rib of Beef au Jus
Yorkshire Pudding
Potatoes a la Parisienne
Broccoli Almandine
Glazed Carrots Julienne

Bombé Diplomat
Coffee or Tea

20:30 Break
20:45 Outgoing Address
Mr. Damien Lemay
R.A.S.C. National President

THE FUTURE OF AMATEUR ASTRONOMY

Historically, astronomy has been the domain of amateurs and professional astronomers, the difference between the two being more of a perception than the means used and the work performed. But, during the last century or so, areas where the amateur could truly make a scientific contribution has dwindled to a few subjects, like comet hunting and variable stars. In the recent decades, because of improvement in driven telescopes and films, astrophotography has flourished; but with questionable scientific return. With the advent of powerful microcomputers and a new tool, the CCD, coupled with a ubiquitous data communication network, some serious aspect of astronomy are just about to revert back in the realm of amateurs. During my talk I will present my view regarding the evolution of amateur astronomy up to about the year 2000. Throughout, it will be reminded that amateur astronomy should also continue to be looked at just for the fun of it.

21:15 Presentation to Damien Lemay
21:20 National Awards Presentation
21:40 GA Display Competition Awards Presentation
22:00 Door Prizes

DISPLAY COMPETITION

The display room is located in Kananaskis Hall, room 134 (near registration desk). The display room will be open for viewing for most of the GA.

The Murphy Slide and Song Contest will take place after the Western Barbeque on Friday, July 3 beginning at 19:00 in the Dining Centre, Blue Room.

Preliminary Judging will occur on Saturday, July 4 at 12:15 (after the group photo)

Final Judging (if required): Saturday, July 4 at 16:30 (after Papers Session II).

<u>CATEGORY:</u>	<u>JUDGE(S):</u>
01. Astrophotography - Piggyback	J. Newton
02. Astrophotography - Prime Focus	J. Newton
03. Astrophotography - Projection	J. Newton
04. Observational - Solar System	Fr. L. Kemble and A. Ling
05. Observational - Deep Sky	Fr. L. Kemble and A. Ling
06. Instrumentation Display	J. Mirtle and M. Paulson
07. Non-Observational Display	J. Mirtle and M. Paulson
08. Best Centre Display	all Judges
09. Best Youth Display	all Judges
10. Murphy Slide Show	all Judges
11. Song Contest	all Judges

Prizes will be presented during the Awards Banquet on July 4 in the Dining Centre, Blue Room (around 21:40). The GA Awards will immediately follow the National Awards Presentation.

GA AWARD Presentations:

<u>Presenter</u>	<u>Categories</u>
Jack Newton	1,2,3,
Alister Ling	4,5
Murray Paulson	6,7
Fr. Kemble	8,9
John Mirtle	10,11

SUNDAY, JULY 5, 1992

SUMMARY

<u>TIME</u>	<u>EVENT</u>
07:00 - 9:00	Breakfast: Dining Centre, Alberta Room
09:00 - 11:30	General Assembly — Phys. Ed. Building, Room PEB 132
11:30 - 12:00	National Council Meeting (same room as above)
12:00 - 13:30	Lunch: Dining Centre, Alberta Room
13:30 - 16:30	Astronomy Workshops — Phys. Ed. Building, Room PEB 132
16:30 - 18:30	Dinner: Dining Centre, Alberta Room
18:30 - 23:00	Stampede Grandstand Show. Delegates who have reserved tickets for this event can board their bus in front of Kananaskis Hall at 18:30.

Sunday, JULY 5, 1992

At 9:00 am in room PEB 132 (Physical Education) the R.A.S.C. General Assembly will convene. This is your opportunity to get involved and vote on issues that affect the future of your Society. One controversial item is a proposed fee increase that will surely stimulate some lively debate.

After lunch, one of the highlights of the 92 GA is the Astronomy Workshop (included in the registration fee). Beginning at 13:30 in room PEB 132, there will be 4 forty-five minute workshops. The first will be by Jack Newton (one of Canada's leading astrophotographers) and he will discuss CCD imaging. The next workshop will be on astrophotography using filters by John Mirtle. See how you can improve your astrophotos even under light-polluted skies. The next workshop will be chaired by Ruth Lewis. This workshop will review and demonstrate several astronomical software packages currently on the market. Presenters include Glenn Hawley, Andrew Lowe, Bruce Shier, for the MS-DOS brands and Don Hladiuk will present some of the MacIntosh software. The final workshop will be by Michael Wasylenko et al and will demonstrate hands-on teaching ideas for astronomy. These workshops will definitely be informative for everyone.

After supper at 18:30, delegates will board a bus and head to Stampede Park to enjoy the exciting chuck wagon races and the Grandstand show. A perfect way to end the 1992 General Assembly.

WORKSHOPS

CCD Astrophotography

NEWTON, Jack — Victoria Centre

With the aid of 35mm slides, Jack Newton will illustrate the photographic potential of commercially available CCD products. He will also discuss some of the software required for electronic darkroom processing. Other topics include:

- How to take a CCD image.
- What equipment do I need and how much is it going to cost to get started?

ASTROPHOTOGRAPHY WITH FILTERS

MIRTLE, John — Calgary Centre

John C. Mirtle of the Calgary Centre will be presenting a workshop on the use of filters in deep-sky photography. Filter use applies not only to prime focus photography, but also to piggyback and telephoto work.

This presentation is broken into three sections. The first part deals with light pollution — working around it in both colour and black-and-white. Not only can man-made light pollution ruin photography, natural light pollution can as well.

Part two looks at reducing optical aberrations in refractive optics. This includes refractors and telephoto lenses, again both in color and black-and-white.

On a lighter side, part three looks at special effects, all those fancy filters available at camera stores. Which ones work for astrophotography? Attend the workshop to find out. All sections of the presentation will be profusely illustrated with astrophotos.

COMPUTER WORKSHOP

The_Sky for Windows

SHIER, Bruce – Calgary Centre

This is a powerful program which exercises a number of functions. Constellation outlines on screen. Optional display of constellation boundaries and celestial equatorial grid. Computes and animates occurrences of Lunar and Solar eclipses. Zoom in on Moon to see both phase and orientation of the bright limb. Determines when conjunctions occur between any two or three planets. And more.

EclipseLive (version 2.0)

LOWE, Andrew – Calgary Centre

Automatic calculation of solar and lunar eclipse dates and elements between 4713 BC and 9999 AD. Real-time and time-lapse graphics simulation of all phases. Real-time simulation of shadow movements on map plots. Centre line, north/south limits by time, longitudinal shadow position and umbral/penumbral shadow outline.

EZ Cosmos, Sky Globe and Expert Astronomer

HAWLEY, Glenn – Calgary Centre

All 3 programs provide sky maps, constellation boundaries, zoom in and out, locate Messier objects and brighter NGCs. All are less expensive versions of the Voyager and The_Sky programs. This demonstration will give you some options if you have \$\$ concerns.

Voyager 1.2

HLADIUK, Don – Calgary Centre

Celestial database of thousands of objects. Re-creates the sky at any time from any location. Observe orbits of Earth and Mars from Jupiter or follow a newly discovered comet. Truly an interactive desktop planetarium.

OrbiTrack 2.1 (formerly MacSat)

HLADIUK, Don – Calgary Centre

Satellite tracking program. Predicts where and when the Shuttle will be visible from any location or real time display of the Mir space station orbit.

TEACHER'S WORKSHOPS

WASYLENKO, Mike – Calgary Centre

This workshop will discuss the philosophy behind and demonstrate some of the exciting activities used in teaching astronomy workshops across the province. Presented by members of Alberta Astronomy Resource Group (AARG). Teacher units will be available for purchase after the workshop.



Calgary, Alberta
July 1-5, 1992

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RASCEXEC@CUUG.AB.CA

Dear General Assembly Delegates,

In order to host the 1992 General Assembly, many people worked long hours to make it a successful event. I would like to acknowledge the 20 or so volunteers who sat through a year and a half of planning meetings so we could make your GA a memorable one.

In alphabetical order:

Joe Clarke	Dave Conley (ASC Liason)
J. Cam Fahrner	Ron Forth
Dr. David Fry (U. of C.)	Dennis Goodman
Glenn Hawley	Mel Head
Marianne Hladiuk	Ruth Lewis
Walter Lindenbach	Jeremy MacKenzie
John Mirtle	Grace Nelson
Roger Nelson	Bruce Shier
Peter Sim	Fred Stumpel

There are also several dozen Calgary Centre volunteers like Robert Loblaw, Roland Dechesne, Carolyn Sandstrom, Keith Mundy, and so on, who helped with key aspects of the General Assembly. I would also like to mention the staff at the University of Calgary and Alberta Science Centre for being so understanding and co-operative when we required information and/or assistance. The 1992 General Assembly was also very fortunate to receive support from several contributors that helped with our awards banquet.

To all the volunteers, committee members, delegates, contributors and supporters, thank you for making this a memorable General Assembly!

Sincerely,

Don Hladiuk
Chairman

1992 General Assembly Planning Committee

The GA Planning Committee would like to acknowledge the following for their generous contribution:

Alberta Science Centre/Centennial Planetarium
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Big Rock Brewery Ltd.
Blaskin & Lane Tire Centres
Celestron International
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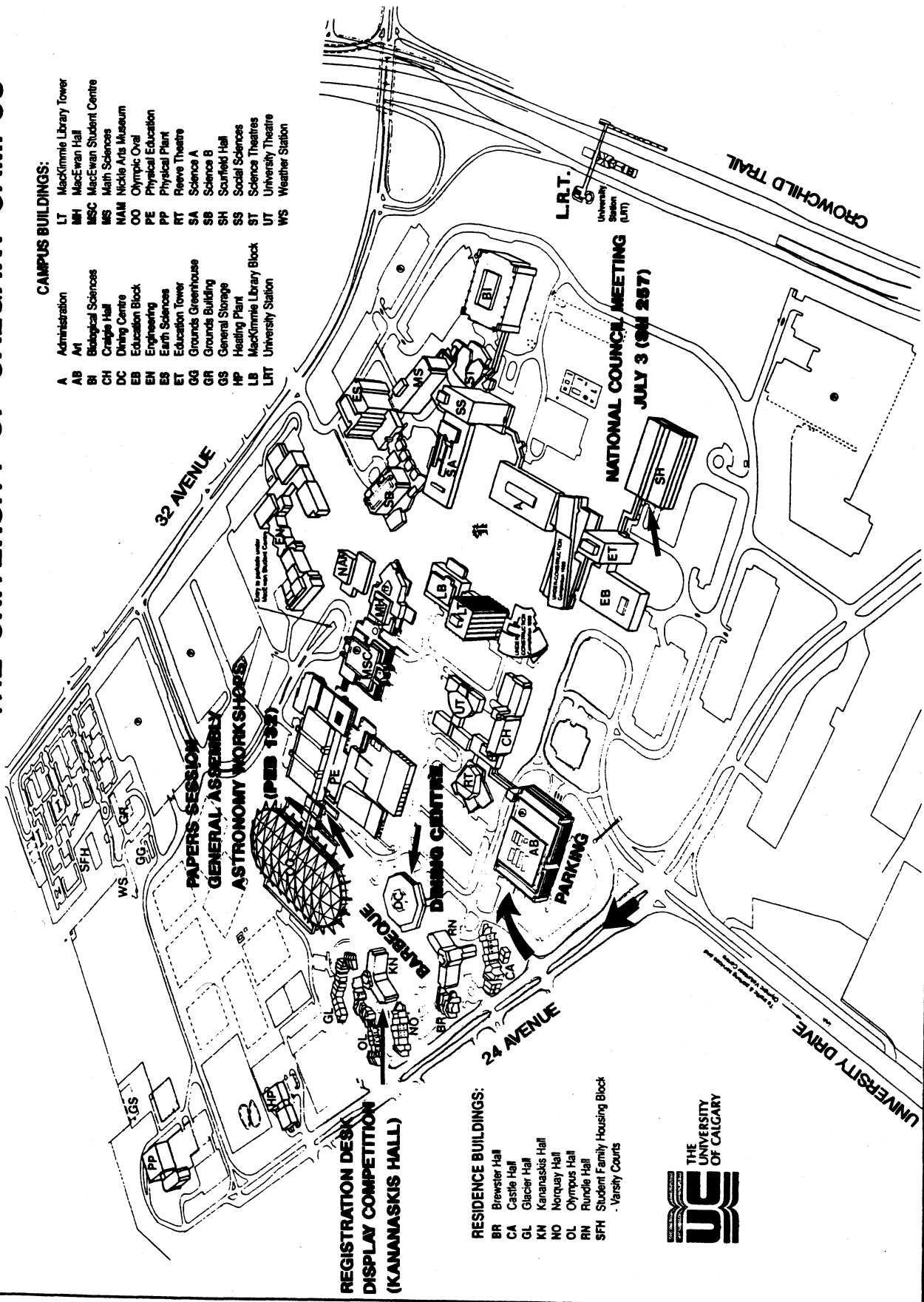
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THE UNIVERSITY OF CALGARY CAMPUS

CAMPUS BUILDINGS:

- | | | | |
|-----|-------------------------|-----|-------------------------|
| A | Administration | LT | MacKimmie Library Tower |
| AB | Art | MH | MacEwan Hall |
| BI | Biological Sciences | MSC | MacEwan Student Centre |
| CH | Craigie Hall | MS | Math Sciences |
| DC | Dining Centre | NAM | Nickle Arts Museum |
| EB | Education Block | OO | Olympic Oval |
| EN | Engineering | PE | Physical Education |
| ES | Earth Sciences | PP | Physical Plant |
| ET | Education Tower | RT | Reeve Theatre |
| GG | Grounds Greenhouse | SA | Science A |
| GR | Grounds Building | SB | Science B |
| GS | General Storage | SH | Scarfie Hall |
| HP | Heating Plant | SS | Social Sciences |
| LB | MacKimmie Library Block | ST | Science Theatres |
| LRT | University Station | UT | University Theatre |
| WS | Weather Station | WS | Weather Station |



RESIDENCE BUILDINGS:

- | | |
|-----|------------------------------|
| BR | Brewster Hall |
| CA | Castle Hall |
| GL | Glacier Hall |
| KN | Kananaskis Hall |
| NO | Norquay Hall |
| OL | Olympus Hall |
| RN | Rundle Hall |
| SFH | Student Family Housing Block |
| | Varsity Courts |



SCHEDULE OF EVENTS

Wednesday, July 1, 1992

- 12:00 - 22:00** Registration: — Kananaskis Hall (Residence) in main entrance
13:00 - 22:00 Display competition set up: — Kananaskis Hall, room 134
21:00 - 00:00 Canada Day Starnight and Fireworks Display — Ramsay School. Delegates can board bus in front of Kananaskis Hall at 21:00

Thursday, July 2, 1992

- 08:00 - 16:30** Day Trip to K/T Boundary and Tyrrell Museum in Drumheller. Delegates can board bus in front of Kananaskis Hall at 08:00
08:00 - 16:30 Day Trip to Banff and Lake Louise. Delegates meet Art Snell in front of Kananaskis Hall.
09:00 - 21:00 Registration — Kananaskis Hall (Residence) in main entrance
19:00 - 23:00 Helen Sawyer Hogg Public Lecture — Alberta Science Centre. Delegates can board bus in front of Kananaskis Hall at 19:00

Friday, July 3, 1992

- 08:00 - 16:30** Day Trip to Banff and Lake Louise. Delegates can board bus in front of Kananaskis Hall at 08:00
09:00 - 21:00 Registration — Kananaskis Hall (Residence) in main entrance
09:00 - 10:00 Committee(s) meeting opportunity — Dining Centre, Red Room
10:00 - 16:00 National Council meeting — Scurfield Hall, Room SH 257
17:30 - 19:00 Western Barbeque — Patio behind Kananaskis Hall and Dining Centre
19:00 - 21:00 Murphy Slide and Song Contest — Dining Centre, Blue Room
21:00 - 01:00 Rothney Astrophysical and Wilson Coulee Observatory Tours. Delegates can board bus in front of Kananaskis Hall at 21:00

Saturday, July 4, 1992

- 08:45 - 11:45** Papers Session I — Physical Education Building Block B, room PEB 132
09:00 - 17:00 Registration Desk is open
11:45 - 12:15 Group Photo and Pyramid
12:15 - 13:30 Lunch and Display Competition Judging
13:30 - 16:30 Papers Session II — Physical Education Building Block B, room PEB 132
18:00 - 23:00 Awards Banquet — Dining Centre, Blue Room

Sunday, July 5, 1992

- 09:00 - 11:30** General Assembly — Physical Education Building Block B, room PEB 132
11:30 - 12:00 National Council Meeting — Room PEB 132
12:00 - 13:30 Lunch
13:30 - 16:30 Astronomy Workshops — Physical Education Building Block B, room PEB 132
18:30 - 23:00 Stampede Grandstand Show. Delegates can board bus in front of Kananaskis Hall at 18:00

Official End of the 1992 General Assembly

See you all in Halifax for the '93 GA!