The Planets in May:

- **Venus** on May 1
- **on May 15**
- **on May 31**
- **Mars** on May 1
- **on May 31**
- **Jupiter**
- **Saturn**
CONTENTS

President's Message............................01
Editor's Message..............................02
Minutes of the April Meeting................03
Planetarium News.............................03
From Other Centres...........................04
Good News Chaps..............................06
Astrophotography, Part II...................07
Astronomy Update.............................10
Sol III..........................................12
50 & 100 Years Ago...........................13
For Sale........................................15
Time is Running Out..........................15
Observer's Corner.............................16
Observing Notes..............................17
General Assembly News.......................18
Help.............................................19
Odds and Ends.................................20

STARDUST is published 11 times a year. It is available to all RASC members as well as by subscription ($2.50 per year) and at the planetarium bookstore (25¢ per copy). Make all subscriptions payable to: "Queen Elizabeth Planetarium" and send them to The Editor, Queen Elizabeth Planetarium, Coronation Park, Edmonton.

Articles dealing with astronomical subjects are welcome. Deadline for the June issue is May 8, 1978.

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CITY OF EDMONTON
PRESIDENT'S MESSAGE

I'd like to begin by extending thanks on behalf of the entire executive to those persons who contributed their time and effort to the cause of Starnight '78 at the Planetarium in mid-April. Nature conspired against us this year and the centre attraction of Starnight in the form of the outside telescopic demonstrations had to be shelved in favor of the interior displays and planetarium shows. Nevertheless, about 350 people attended the two nights in total, so I think it can be considered that Starnight '78 was as successful as possible under the circumstances.

We'll be hearing at the May meeting from Franklin Loehde concerning the final arrangements for the national convention of the R.A.S.C. during the May long weekend this year. Registrations from all across the country have been pouring in to the R.A.S.C. mailbox here at the Planetarium and it seems that virtually everyone of the centres of the R.A.S.C. will be represented. There have even been a few foreign enquiries from as far away as the southern United States, mostly, I think, on the strength of an announcement that appeared in the "Amateur Astronomers" column of the March issue of Sky and Telescope magazine (the author of this submission to Sky & Tel. has not yet admitted culpability). This description of our general assembly included mention of a tour to Jasper National Park, which would certainly be a steal for the price of a $12 registration fee!

Finally, I'd like to mention another brief presentation that we'll be hearing at the May meeting -- a short but triumphant summary (by the happiest optician in Canada) of the completion of the optics for the University of Alberta 50 cm telescope. Yes, I said completion, for after a three year gestation 'period' Barry Arnold's baby has finally been delivered and all three mirrors for both cassegrain focii
are now ready to be aluminized and installed into the telescope.

I should point out in closing that only bona fide registered delegates to the general assembly will be entitled to tour the observatory on May 21 and see this magnificent device in action, so hurry up and send in your registration while the buffalo burgers last.

Gary Finley

EDITOR'S MESSAGE

Well, another day, another STARDUST. If you don't like things in this issue, then you can blame it all on me because, for a change, the whole thing was typed by your fickle-fingered editor. Many thanks to Doug, Alan, Gary, Mark and Tony (plus some others who don't know they have contributed) for sending me stuff.

Next month's issue will be out early -- as in before the G.A. It might not reach all of you by the long weekend, because I'm not sure I can get it into the mails fast enough, but the June issue will be available for the G.A. delegates. So, if you have any articles, items etc for the June issue, could you please bring them to the May 8 meeting. STARDUST will be typed starting May 9, so late stuff will not get in.

Paul Deans
MINUTES OF THE APRIL 10 MEETING

The meeting was called to order by the President, Gary Finley. The Secretary read the minutes of the March 13 meeting - carried. Franklin Loehde gave a brief outline of the activities planned for the 1978 General Assembly. Doug Hube asked for papers from Edmonton Centre members for the paper session.

Gary Finley then introduced the guest speaker, Dr. Sreenivasan from the Calgary Centre, who spoke on "Mass Loss from Massive Stars".

Rod McConnell and Alan Dyer gave a report on the search for an observatory site for an Edmonton Centre observatory.

Anthony Whyte

PLANETARIUM NEWS

"Impact" and "Operation Morning Light, The Cosmos 954 Incident" continue until mid-June. The Cosmos show is a 10 minute mini-show that describes the recovery of pieces from the Cosmos satellite that was carried out by the armed forces during the first three months of January, 1978. "Impact" deals with cratering in the Solar System -- the whys and wherefores of the bombardment that took place over 4 billion years ago.

Changes in part-time personnel have occurred recently at the Planetarium. Tom Morrison has departed the lecturing staff (lured away by Physics) and was replaced by Karen Finstad. Out front, Cheryl Dunbar is no longer a part-time receptionist (after umpteen years of typing STARDUST). She has been replaced by 3 (yes, count em, 3) receptionists -- Pat Dunphy, Colleen Dach and Sandy Gairdner.

Finally a note regarding STARNIGHT '78 -- lots of people but no clear skies. Oh well, better luck next time.
FROM OTHER CENTRES

This little gem was found in the publication "The Observatory" and was reprinted in the April issue of STARSEEKER, the Calgary Centre newsletter.

A LESSON IN CREATION

In the beginning Alfven created the plasma and the magnetic field. And the plasma was without turbulence, and void; and the darkness was upon the face of the deep. And Arrhenius moved upon the charged particles. And Prentice said it mayest as well be a string of bananas. And Cameron said, Let there be a supernova: and there was a supernova. And Cameron saw the supernova, that it was good: And Cameron divided the protoplanets from the turbulence. And Alfven called the plasma correct, and the turbulence he called not correct. And the debate and the argument were the first day.

And Harris said, Let there be collisions in the midst of the planetesimals, and let them divide the small bodies from the large bodies. And Harris made the planets, and divided those which were the inner planets from those which were the outer planets; and it was so. And Alfven said that it was not correct. And Heppenheimer awoke from a deep sleep and said let there be Kirkwood gaps. And the debate and the argument were the second day.

And Tozer said, Let the heat under the surface be gathered together unto one place, and let the lava appear: and it was so. And Tozer called the process viscous heating; and the gathering together of the heat called he Convection: and Tozer saw that it was good. And Tozer said, Let the process occur in the asteroids, producing the differentiated surface, and the appearance after this kind: and it was so. And Alfven said it was not correct. And the debate and the argument were the third day.
And Kirsten said, Let there be radioactivities in the firmament of the heaven to measure the passing of time; and let them be for signs, and for years, and for aeons: and it was so. And Black made two great isotopic anomalies; the great Magnesium-26 anomaly, and the lesser Oxygen-16 anomaly: he made the Neon-E also. And Black set them in the firmament of the heaven to confuse Kirsten and to divide those who believed in irradiation from those who did not: and Black saw that it was good. And the debate and the argument were the fourth day.

And Kerridge said, Let the nebula bring forth abundant temperature differentials between the moving gas that hath disequilibrium, and condensates that may move in the open firmament of heaven. And Kerridge created great planets, and every carbonaceous meteorite that moveth, which the heavens brought forth abundantly after their kind, and every carbonaceous chrondrite after its kind: and Kerridge saw that it was good. But Marv sayeth that it all dependeth upon the temperature. And the debate and argument were the fifth day.

And McCrea said, Let the heavens bring forth the spiral galaxies with creeping dust: and it was so. And McCrea made the flocules after this kind, and proto-planets after that kind, and everything that creepeth upon the Galaxy: and McCrea saw that it was good. And Herbig said, Let us look upon T-Tauri stars: and let them have dominion over the Sun and the planets and over every creeping dust particle that creepeth upon the Galaxy. So each created the Sun and planets in his own image. Each saw everything that he had made, and, behold, it was not good. And the debate and the argument were the sixth day.

Thus the sun and the planets were finished, and all the host of them. And on the seventh day each ended his work which he had
made; and he rested on the seventh day from all his work. And each was confused by what the other had made.

These are the generations of the planets and of the Sun when they were created. Amen

The lesson for today, the second Tuesday before Easter is taken from the Book of Runcorn, called the Genatosis, beginning at Chapter 1, verse 1.

It was presented at the conference dinner in Durham Castle on April 6, 1976 during the NATO Advanced Study Institute on "The Origin of the Solar System".

GOOD NEWS CHAPS! ONLY TWO HUNDRED YEARS TO CLEAR WEATHER!

Variations of night cloudiness in latitudes about 30 to 50° N since 2300 BC

A few years ago the Royal Society of London and the British Academy held a joint symposium on the Place of Astronomy in the Ancient World, with the proceedings published in the Philosophical Transactions (Part A, vol. 276, no. 1257, 1974) of the Royal Society. Along with all the astro-archaeology there was quite a fascinating paper by H.H. Lamb on the earth's climate through historical and prehistoric time. One of his diagrams, reproduced above, shows
the variation in cloudiness in our latitudes through the millennia. If you extrapolate the curve at the right-hand edge of the diagram, you'll see that we must now be pretty close to peak cloudiness (which increases upwards in the diagram). On Lamb's claim for a rough 400 year periodicity in the data, that means that cloud cover should now diminish for the next couple of centuries. Just thought you'd like to know!

J.D.F.

(stolen from David Dunlap Doings, Vol 11, No 2, February, 1978)

ASTROPHOTOGRAPHY: A PERSONAL APPROACH Part II

However, enough about film and lenses, because there is a third major point I wish to emphasize: Don't load yourself down with too much gadgetry and geegaws that only serve to confuse and frustrate. More equipment doesn't necessarily mean better pictures. On any photo-taking session just take what you need and no more. (Celestron owners take note: You really only need two Allen wrenches to set up your scope. Why take along the whole set each time?) A lot of extra junk just clutters up your case and your tasks for the evening. And that is another thing you should always have -- a specific task or goal for each session.

Upon setting out for a night's observing session say to yourself: "Tonight I'm going to photograph M42", and go out and do it. Don't try to do too much in one evening, especially if it involves switching from deep-sky to planetary to prime focus to piggybacked photography, etc. Even if you only get one or two good photographs out of the night's work, you've done well.

Camera cases should be well organized, enabling you to get at all your equipment easily without having to rumage through layers of.
useless junk. It's an old adage, but everything should have its place, and everything should be in that assigned niche. It's not just a matter of neatness, something you'll soon find out as your fingers fumble around in the darkness searching for that missing cable release!

Of course, for those fortunate enough to own permanent observatories the situation is somewhat different, but for those of us relegated to setting up and taking down a complex array of hardware each time we want to use it, it is required that we be very well practised in the procedure. The mundane preparation of getting ready to photograph should never get in the way of the actual photography.

Which gets us to point four -- Know your equipment well. Practise setting it up during the day. These sort of dress rehearsals will tell you what problems to expect when trying to attach object A to object B. You don't want any surprises out in the field in the wee hours of the morning when that certain piece of equipment won't fit onto the telescope or won't focus or whatever. Nature will provide enough problems to content with. Don't exacerbate the situation by way of your own ignorance.

In this department is the old problem of aligning your telescope on the North Celestial Pole, so necessary for successful celestial photography. There are dozens of methods for doing this. Pick one that works for you and perfect it. Spending 2 hours aligning on the pole and only 1 hour photographing is ridiculous. Believe me, I learned that the hard way!

Here's point five: If you're starting out in astrophotography, do the following -- Load your camera with Tri-X (or possibly Plus-X
or even a medium speed color slide film) and shoot everything, making sure to record all the pertinent exposure data. This is the best way to become familiar with what the best exposure is for all the celestial objects you'll want to photograph. Once you acquire a standard set of exposure times for all types of objects using your "standard" film, it's an easy task to convert those exposure times when you switch to a faster or a slower film in the future.

In other words, when you're starting out, keep the variables down to a minimum. Use one standard film and one standard developer (Microdol-X perhaps). Don't experiment right from the start with exotic films and strange developers or darkroom trickery. Learn your basic at-the-telescope techniques and exposure data. Then and only then should you branch out into new areas in order to improve the results. With too many variables, too many things can go wrong and you won't know what to blame for the poor photos you're getting.

As you progress through the various levels of astrophotographic complexity, I think it makes sense to try to perfect a certain technique before moving on to some newer, loftier realm. As an example, I hear of people wanting to get into "cold-camera" photography because they hear it gives spectacular results. But these are people who are simply not ready to make such a quantum leap in their techniques. If you can't produce consistently good results with conventional deep-sky photographs, then you're certainly not ready to graduate to the "exotics" like cold-camera work. You'd be wasting your time and money and the equipment would only turn into a white elephant, perhaps discouraging you from the whole process of astrophotography.

There is one personal bias that I want to conclude with, one that concerns the question of why. Why bother with all the expense and
frustration? Why do astrophotography at all? I doubt if it's something that really needs explaining to any devotee of amateur or professional astronomy. Astrophotography is just one expression of the desire to see and learn more about what's up there, perhaps to capture on film something of the invisible and mysterious aspect of the universe.

Sure, amateur astrophotography can be a valuable research tool, as has been proven on many occasions. But I approach astrophotography along a different path. I prefer to enjoy it for its aesthetic qualities. To me a picture of some fuzzy little blob that only another astrophotographer can appreciate, no matter how difficult it was to achieve that photo, is not particularly impressive or satisfying. But, project a slide filled with thousands of stars and wreaths of nebulosity -- show it even to the uninitiated layman, and you'll get the reaction: "Wow, I didn't realize there were so many stars or that they were so colorful!"

If it's an astrophoto that anyone can appreciate, even without fully understanding the subject matter, then it's a good picture. And it's those sort of results that are worthwhile achieving.

Alan Dyer

ASTRONOMY UPDATE

Recent Results of Research in Astronomy

In principle, and now in practice, purely astrometric measurements can be used in determining the radial velocity of a star. As a star of large proper motion passes the Sun, the angle between our line of sight to the star and the star's direction of motion in space changes. The result is a steady change in the star's proper motion, that is, an acceleration, or a second-order effect in the measured positions with time. The radial velocity is a function of this
acceleration, and of the distance and proper motion at a given epoch.
A radial velocity has been determined in this way for the white dwarf
known as van Maanen's star. This is one of the nearest stars to the
Sun, being number 27 on the list which appears on page 113 of The
Observer's Handbook. The astrometric radial velocity is \( +25 \pm 18 \text{ km/s} \)
per sec. The spectroscopic radial velocity, determined in the clas­sical way, is \( +39 \pm 4 \text{ km/sec} \). The difference between these two
results, \( +14 \pm 18 \text{ km/sec} \), is ascribed to the gravitational redshift.

The photometrically measured colour provides values for surface
temperature and surface brightness. The distance and apparent
magnitude are well determined and give, therefore, an accurate value
for the intrinsic luminosity. By combining luminosity and surface
brightness, a radius of 0.013 (solar units) is found.

The mass of a star \( M \), is related to its radius \( R \), and gravita­tional redshift \( V \) by \( M = 1.6 R V \). Hence, the mass of van Maanen's
star is \( 0.3 \pm 0.4 \) solar mass which is consistant with the star's
identification as a white dwarf.

(Astronomical Journal 83, 197, 1978)

R Leonis is a very bright \((4.4 - 11.3)\) and therefore, well­known example of a Mira-type variable, and has a period of about 10
months. In the spectra of these cool stars there are strong lines
due to a variety of simple molecules, and some of the molecular
transitions are apparently due to maser activity. The light variations
are associated with pulsation-type motions of the photosphere. In the
case of R Leo, the velocity amplitude is 27 km/sec which implies a
displacement of photospheric layers of 140 solar radii.


Cygnus X-3, according to a recent, detailed model, may consist of
a neutron star rotating with a period between 10 and 30 milliseconds
(i.e., faster than the Crab), and forming a 4.8 hour binary system with a non-degenerate companion. Both gamma and X-rays vary with a period of 4.8 hours.


D. Hube

SOL III

Skylab Tumbles into Difficulties

The U.S. National Aeronautics and Space Administration (NASA) is trying to keep Skylab, its huge orbiting space station, in orbit. Early last month NASA established radio contact with the vehicle in an attempt to reorient the space station to slow down its descent to Earth.

Skylab's precarious position became known just after Cosmos 954 fell to Earth in northern Canada. The U.S. launched Skylab in 1973, but by last month Skylab's orbit had declined to an average of about 400 km above Earth's surface (it's initial orbit was 437 km).

NASA officials were speculating that Skylab could fall to Earth as early as late summer of next year. It is quite likely that large chunks of it would survive the fall through the atmosphere and damage anything they hit. NASA's hopes for Skylab lie with the Space Shuttle that will make its maiden voyage into space next spring. In October of next year the space agency hopes to send astronauts up to the Skylab in the Shuttle to attach a booster rocket to the huge station. This would carry it upwards into an orbit that would not decline for many years. If that happens, it might even be possible for astronauts to reoccupy the $2.5 billion edifice, but NASA needs a guarantee that Skylab won't have fallen to Earth before the project can get underway. To do that the agency needs to establish contact with the station and use its small rockets, which are too weak to
alter its altitude, to manoeuvre it into an attitude which minimises atmospheric drag. "We think it is tumbling now and we want it so that one end or the other is facing its flight path," explained project chief Robert Aller.

Last month NASA engineers tried twice to establish radio contact with Skylab from NASA's Bermuda tracking station. On the first day they achieved little, receiving only a weak off and on signal. But the second day's transmission appeared more promising. Whether the station has actually started to charge its batteries as instructed was unsure, however, but the hope remains that the reestablished contact will keep a historical piece of space hardware in orbit until the U.S. astronaut corps soars up to its rescue -- or that at least the agency will be able to bring it down to Earth in the remotest area imaginable.

(New Scientist, Vol. 77, No. 1094, p. 711) Paul Deans

ASTRONOMY 50 AND 100 YEARS AGO

May, 1928:

Does astronomical science need another unit of stellar distance? It would seem that, in general, any new unit should satisfy some or all of the following conditions:

1) It should be urgently required.

2) It should be a logical unit, in that it follows customary formation for units of its type.

3) So far as possible, it should be easy of comprehension by men of science who are not specialists in its particular province.

4) Where it is suggested as a replacement for a unit sanctioned by long usage, it must in every way be a better unit.
Does the word 'parsec' meet the requirements outlined above? From the point of view of the purest, nothing could be worse than this hybrid, but the nomenclature of science includes a few other verbal monstrosities, and this, in itself, is no argument against the term.

1) The 'parsec' is equal to 3.26 times the customary unit known as the light year; it does not indicate a magnitude of order different from the older unit.

2) The light year is a highly logical unit. In mechanics, our best definition of a length is still given by $s = vt$; that is, a length equals a certain velocity multiplied by the time. This is precisely the construction of the unit known as the light year.

3) The light year is a unit the significance of which is instantly grasped by the layman, or by the man of science in unallied fields.

4) While long usage does not necessarily give authority, the fact that the concept of visualising stellar distances by the time of light travel goes back to at least the year 1740, deserves thoughtful consideration. The actual term, light year, is not nearly so old.

May, 1878:

In the last Annual Report of the Director of the Imperial Observatory at Pulkova, M. Otto Struve, to the Visiting Committee, attention is called to an interesting acquisition recently made by this great astronomical establishment. It is known that the library possesses in addition to all the notable published works of Kepler, the nearly complete collection of his manuscripts. This circumstance caused Prof. Galle, of the Observatory at Breslau, to inform M. Struve
that certain articles of which the last direct descendants of Kepler, resident in Silesia, were in possession might be obtained by purchase, and the result has been that they are now deposited at Pulkova.

Edited from Nature

Anthony Whyte

FOR SALE

6" f/8 mirror -- finished. Comes with mirror cell, with diagonal and diagonal holder. Asking $60.00

Phone Murray Paulson -- 469-3473 evenings

432-3522 during the day

TIME IS RUNNING OUT

May 19 is fast approaching, but there is still time to enter the Great 1978 Observing and Display Competition! (Trumpets please) There are 12 categories in all, PLUS a special Judges Choice Award to be presented to any entry of an outstanding nature. There will be prizes galore:

A set of Meade Research Grade eyepieces (from the Queen Elizabeth Planetarium)

A $50 Gift Certificate from Celestron

A $50 Gift Certificate from Tele-Optics, Calgary

A $25 Gift Certificate from Roger Tuthill, Inc.

A complete set of Astro-Cards

Sets of astronomical posters, art reprints and photographic reprints from Astronomy Magazine, Sky Publishing and the Hansen Planetarium
Astronomical books
A pair of 16 x 50 TASCO binoculars
A handsomely mounted copper-plate etching of the Moon from "Everything In The Universe"
Plus MORE prizes to be announced.

Several categories still have few entries in them, so there is a good chance that YOU could WIN. All we need from you is a good photograph (a single slide or print will do), a well-prepared sketch of a planet, moon or deep-sky object -- anything that records what you observed in the sky. Over $650 worth of prizes will be given out on May 20! Let's see Edmonton Centre members win their share of the loot. (No, the judges will NOT be Edmonton Centre members, so they will be quite impartial. THEREFORE, we stand just as good a chance of winning as anyone else.)

Entry forms are available from Alan Dyer, c/o Queen Elizabeth Planetarium, Coronation Park, Edmonton...or phone 455-0119.

For further details on the categories and rules, see the February issue of the "National Newsletter" or the November issue of "STARDUST".

Alan Dyer

OBSERVER'S CORNER

The observer's group is continuing its highly successful meetings on alternate Sunday afternoons according to the schedule in STARDUST for April, 1978. Meetings are held in Room 445 (the staff lounge) of the U. of A. Physics building. These gatherings are very informal, and all those interested in discussing amateur astronomy with other R.A.S.C. members are encouraged to attend. A good time will be had by all!
The short feature for April 2nd's meeting was a film from Kitt Peak entitled "Exploring the Milky Way". Alan Dyer showed slides of some possible observing sites and of the Winnipeg Centre's observatory. In the ensuing discussion it was decided that the questionnaire on the observing site drawn up by Rod McConnell was complete and useful, and that some use may be made of the RASC's Devon shack when a site is developed. Eighteen people attended.

David Holmgren opened the April 16 meeting with a fine slide talk on galactic star clusters and his own experience observing them. There were slides from other members on the observing site selection problem, and Dave Beale showed his aurora photos. Andrew Lowe submitted some excellent astrophotos from lunar to deep sky to be shown at the meeting. Sixteen people attended.

Mark Leenders

OBSERVING NOTES

Mercury: On May 9, the planet is at greatest elongation west (26°) but the planet is difficult to see being only 11 degrees above the eastern horizon at sunrise.

Venus: At sunset it is about 26° above the western horizon, and sets about 2 1/2 hours later. On the 5th it is some 6° North of Aldebaran and on the 28th it is 1.6° North of Jupiter.

Mars: Moving from Cancer into Leo, the planet is in the south at sunset and sets about 5 hours later.

Jupiter: In Gemini low in the west at sunset, the planet sets about 3 hours after sunset. On May 28, it is 1.6° South of Venus.

Saturn: In Leo it is past south at sunset and sets 5 hours later.

Watch for: Mercury South of the Moon on the 4th, the η Aquarid Meteor Shower peaking on the 5th, Venus 6° North of Aldebaran the evening of the 5th, Aldebaran being occulted by the Moon (disappearance
at 20:52 M.D.T. on May 9, and reappearance at 21:29 M.D.T. on the 9th), Venus 6° North of the Moon also on the 9th, Jupiter 5° North of the Moon on the 10th, Mars 6° North of the Moon on the 14th, Venus 1.6° North of Jupiter on the 28th (at 20:00 M.D.T.), and as a final note, Mars 0.1° South of Saturn on the 4th of June at 18:00 M.D.T. The two close approaches of planets (Venus and Jupiter + Mars and Saturn) are excellent opportunities for acquiring simple astrophotos of conjunctions against (or with, in this case) a pleasing foreground. Taking photos every few days around the time of conjunction also provides graphic evidence of planetary motion. The η Aquarid meteor shower, (with a radiant point located just southwest of the Great Square of Pegasus) peaks when a New Moon is present. About 20 meteors per hour may be seen.

As a final reminder, New Moon is on May 6, so there is not much time left for astrophotography before the convention (and if you've left it this late, there may not be any hope left!!)

"Ηέ Λένεθων Βοσεμβων Βρρθοαψεα:
which is symboles for
The General Assembly Approaches!

DO NOT
PROCRASTINATE OR VACILLATE
ANY LONGER

GET YOUR REGISTRATION FORM IN NOW!
You saw our ad in the April issue of Sky and Telescope! Don't miss out on an astronomical weekend of fun and frolic! Register now for the G.A. Remember all Edmonton Centre members can attend the G.A. for HALF-PRICE! Only $6.00 to register -- everyone else in Canada pays $12.00.

Registration forms were mailed out in the April issue of STARDUST. If you did not receive a copy, registration forms will also be available in profuse abundance at the May meetings (both the Main meeting and the Observer's Corners at the U of A). Forms can also be obtained at any time from the nice people at the Queen Elizabeth Planetarium.

This is the G.A. they'll be talking about for years to come, so don't miss out.

Alan Dyer

HELP

WANTED: PEOPLE TO ASSIST WITH FRIDAY EVENING SOCIAL FOR THE 1978 General Assembly TO:

Help prepare Buffalo-on-a-Bun (a rare and delicate treat, the preparation of which had been lost for many moons until its rediscovery by Audrey Loehde).

Help prepare Coffee and Cookies (a not-too-rare treat, the preparation of which should be common knowledge).

Help.

If you have a spare moment or two to donate, Audrey Loehde would love to see your smiling face Friday evening. Please let her know you want to help by calling 477-8881.
ODDS AND ENDS

"Empty space is like a kingdom, and earth and sky are no more than a single individual person in that kingdom.

Upon one tree are many fruits, and in one kingdom there are many people.

How unreasonable it would be to suppose that, besides the earth and the sky which we can see, there are no other skies and no other earths."

Teng Mu
(ancient Chinese philosopher)

"Telescope week fell prey to Murphy's most evil doing. A full slate of advertising, followed by hard work...and a small but determined slate of RASC volunteers, was met with a slam in the face by Murphy's clouds.

And that's not all. Our last aching night at the telescope was followed by a break-in to the Bekins van (where telescopic equipment was stored). A 10" Cassegrain tube was stolen. Later, the tube was found, and the optics were neatly stripped out. So, some creep knew what he or she was doing and looking for and they found it. To the guilty, I wish upon you cloudy skies for life!

Ken Hewitt-White
(not-so-ancient editor of NOVA, the Vancouver Centre newsletter)

The last item brings up a point regarding an observatory... security. The 'scope was stolen from a van parked right beside the Vancouver planetarium! Obviously, around a far-off observatory fencing would be needed, but...keys must be distributed and who gets them? A select few? One or two dedicated souls who will be willing to go out any night someone wants to use the facility? Who???

Paul Deans
Any interested in the many facets of astronomy can find opportunities for sharing and increasing these interests by becoming associated with the Edmonton Centre of the RASC. Membership includes complementary admission to the Queen Elizabeth Planetarium, as well as receiving the annual RASC Observer’s Handbook, STARDUST (a monthly newsletter of the Edmonton Centre), and the Journal of the RASC published bi-monthly.

Meetings of the Centre are held at the Planetarium every second Monday of each month (except July & August) at 8:00 pm. These meetings feature guest speakers whose topics cover all aspects of amateur and professional astronomy. At the end of each meeting, an Observer’s Corner is held at which time aspects of observational astronomy are discussed.

Enquiries regarding membership may be directed towards the President or Treasurer, or come to a regular meeting and enquire at that time.

EDMONTON CENTRE COUNCIL

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OBSERVER’S CORNER

The Observer’s Group of the Edmonton Centre meets on alternate Sundays at the University of Alberta. Anyone interested in observing is invited to attend. For further information, please call the Observing Chairperson.
STARDUST
EDMONTON CENTRE, ROYAL ASTRONOMICAL SOCIETY OF CANADA
c/o Queen Elizabeth Planetarium
Coronation Park
Edmonton

NEXT MEETING

May 8, 1979 @ 8:00 pm
Queen Elizabeth Planetarium

TOPICS

Barry Arnold describing
the completion of the
optics for the U of A
50 cm telescope

A film: New View of Space

TO:

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