



WINNICENTRIC 8

P.O. BOX 215

ST. JAMES P.O.

WPG., MAN. R3J 3R4

WINNICENTRICS

Vol. 27 No. 6

November/December 1987

1987/88 Council

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Librarian - Mr. Chris Rutkowski
National Representative - Mr. Lorence Mlodzinski
Observatory Director - Mr. Lorence Mlodzinski (668-3974)
Winnicentrics Editor - Ms. Myra Banman

* Please send Winnicentrics articles to: #16-825 Corydon Ave., Wpg.,
R3M 0W6

upcoming events

Dec. 11 "SUNDIALS & STANDING STONES: HUMANKIND'S OBSERVATIONS OF THE SUN" - Speaker - Chris Rutkowski. This is a greatly expanded and illustrated version of the paper Chris presented in Toronto at the General Assembly. Using the destruction of the Polo Park sundial as a stepping stone, Chris reviews how people have observed, feared, and revered the sun since prehistroci times.

Dec 19 STAR PARTY AT GLENLEA - MESSIER OBJECTS - this session will be 1 days after new moon and if skies are clear, we'll be able to search for all visible Messier objects. All members are invited to see the observatory first hand. We meet at DUSK.

from the EDITOR'S DESK

Keep looking
up!
-Myra

This issue has a little bit of everything in it, from humour to a very important document, from our upcoming calendar to what's happening at the observatory. So, read and enjoy!

Projects at the Observatory: There have been a lot of interesting things happening down at Glenlea, including some very good work in photometry and spectroscopy. Because of these projects and the interest they generate, our observatory has been extremely busy and occasionally overbooked. To avoid any problems regarding usage of the observatory, please call Lorence Mlodzinski (668-3974) to book your time.

As well, the new sign-in book is at Glenlea, and any members (non-members too!) are asked to sign it, as well as record any comments (eg. problems with equipment or the area) in the Notices Book.

Upcoming Meetings: Keep these dates marked on your calendar:

- January 8 - Regular General Meetings @ 8:00 p.m., Theatre 100, St. Paul's College
- January 16 - Star Party at Glenlea - Deep Sky Observing @ dusk

Upcoming Winnicentric Issues: As many of you have heard, the Winnicentric staff is DESPERATELY seeking material from its members. If you are willing to submit an article, or simply offer suggestions of what you would like to see in future issues, please call me or speak to me at one of our meetings. Any input is greatly appreciated!

St. Paul's College - Room 110: Winnipeg Centre has recently moved its library and meeting room to St. Paul's College at U. of M. In lieu of paying rent for Room 110 (our library), St. Paul's has requested that we set up a scholarship fund, in order to offset their costs of our operating expenses in the rooms. Enclosed in this issue is the proposal. Please read it carefully, and bring any questions or concerns you have to the next meeting. The proposal will be ratified by an all member vote at the December meeting.

MEMBERSHIP RENEWALS: If you have not yet submitted your membership fees for the 1987/88 year, please do so a.s.a.p. You can renew at any meeting, or by sending you cheque to: Centre Secretary, Box 215, St. James P.O., Winnipeg, Man., R3J 3R4.

2 Car Rule

It was proven a long time ago that during the winter months members should not attend the observatory with only one vehicle. We have a standing rule that two cars must be at the observatory site at all times.

TEST YOUR BRAIN!!

TEST YOUR BRAIN!!!

Reprinted from Orbit - Hamilton Centre

Do you know a lot about space vehicles? Are you an expert on rocket technology? Ha!, that's what you think! Try this quiz on for size...

1. What ancient civilization invented the rocket?
 - a) The Scots
 - b) The Chinese
 - c) The Gypsies
 - d) The Mennonites
2. When designing a rocket, which of the following equations is most important?
 - a) $F=ma$
 - b) $F=mc^2$
 - c) Time=Money
 - d) $\text{Deg. F} = \text{Deg. C} (1.8) + 32$
3. The Russian word "Sputnik" translates into English as:
 - a) "satellite"
 - b) "potato"
 - c) "triumph of working class over capitalist aggressors"
 - d) "nuclear warhead"
4. When Neil Armstrong first stepped on the Moon, he said:
 - a) "...one small step for man, one giant leap for mankind".
 - b) "...one baby step for man, one flying leap for mankind".
 - c) "...oh well, I guess it's all downhill from here".
5. When inside an orbiting spacecraft, which of the following is most important?
 - a) watch out for icebergs
 - b) Keep the windows closed
 - c) don't answer any strange knocks at the door
 - d) don't forget to flush
6. Soviet spacecraft often have trouble docking in orbit. This is because:
 - a) there is no up or down in space
 - b) the effects of alcohol are intensified by weightlessness
 - c) they keep cross-threading the coupling



7. The European Space Agency uses launch facilities based in South America. The main reason for this is:

- a) proximity to the equator, which increases maximum payload capacity
- b) proximity to Rio de Janeiro, which offers many recreational research facilities
- c) the native indians work for cocoa leaves

8. In 1962, Canada's first satellite was launched into orbit. It was called:

- a) Argonaut
- b) Oskpik
- c) Diefenbeaver
- d) Alouette

9. The record for the longest duration in space by a manned mission is held by:

- a) Skylab 3
- b) Soyuz 22
- c) An unnamed Soviet crew which was launched in 1965 and hasn't returned yet

10. Fill in the blank on this famous quote. "Houston, we've got a (blank)

- Apollo 13.

- a) problem
- b) winner
- c) secret
- d) woman

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Q: Why doesn't the Dog Star laugh?

A: Because it's Sirius!

Q: What do baby constellations wear on their feet?

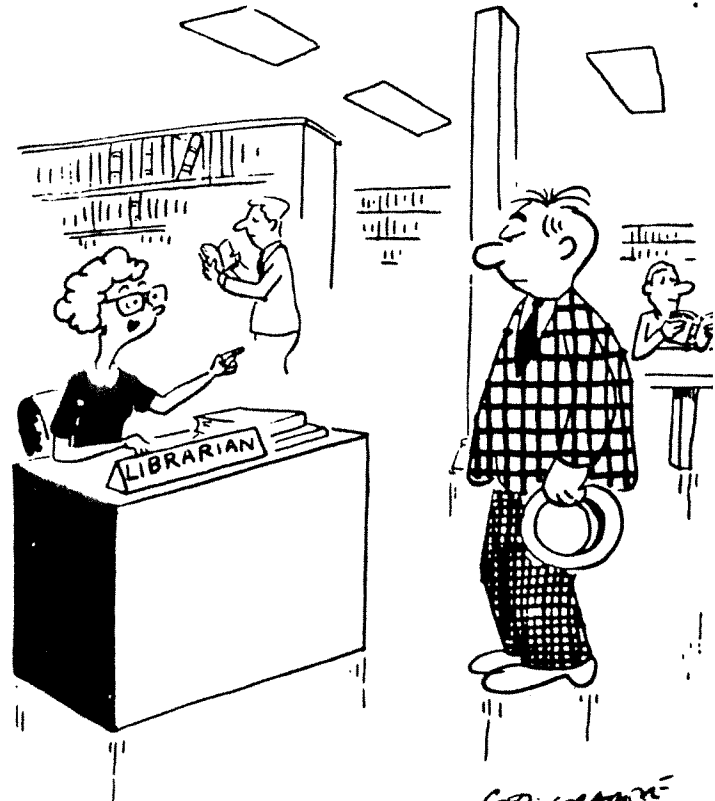
A: Bootes!

Q: What do you call a musical star?

A: A Capella!

Q: What star is really "with it" and sings the blues?

A: Sol!



"... 'How I Made a Fortune in Astronomy'...
Oh, that's under Science Fiction."

PROPOSAL OUTLINING THE DEVELOPMENT
OF ROOM NUMBER 110, IN THE BUILDING
OF ST. PAUL'S COLLEGE, UNIVERSITY OF
MANITOBA, BY THE ROYAL ASTRONOMICAL
SOCIETY OF CANADA, WINNIPEG CENTRE.

DRIFT
TERMS OF ACQUISITION

This outlines the agreement between the Royal Astronomical Society of Canada, Winnipeg Centre (hereafter called the Winnipeg Centre) and St. Paul's College of the University of Manitoba (hereafter called St. Paul's College).

- The Winnipeg Centre will be allowed to develop Room 110 in St. Paul's College for its use as a resource centre and work area.
- All plans and development must be approved by St. Paul's College, as well as the University of Manitoba Operations and Maintenance Physical Plant Management Department.
- The Winnipeg Centre will pay development costs for the installation of lighting, electrical and telephone service in Room 110, if required, including labour charges, materials and supplies.
- The Winnipeg Centre will pay for monthly telephone service to Room 110, when and if it is installed.
- The Winnipeg Centre will maintain Room 110, including the immediately adjacent hallway, in good condition, as well as to conform to all local fire and safety regulations.
- It is understood that electrical costs for the room fall under the jurisdiction of the Jesuit Fathers of St. Paul's College. Electrical consumption charges will be offset by donations to the Scholarship Fund (as outlined later in this document), and will in effect be paid by the Jesuit Fathers of St. Paul's College. This matter will be the subject of continuing discussion between the Winnipeg Centre and St. Paul's College. St. Paul's College will represent the interests of the Jesuit Fathers of St. Paul's College in these discussions.
- The Winnipeg Centre will provide a free copy of all publications produced by itself, for donation to the St. Paul's College Library.
- The Winnipeg Centre will agree to act as a resource for any member of St. Paul's College, upon request.
- St. Paul's College will allow the development and use of Room 110, subject to the above conditions.
- St. Paul's College will provide 24-hour access to Room 110, to the extent of providing keys to the College and Room 110 for designated members of the Winnipeg Centre.
- St. Paul's College will allow access and use of Room 110 by the Winnipeg Centre for a trial period of 5 (five) years from the date this agreement is ratified by both parties, after which the terms of agreement will be renegotiated and reassessed.
- The Winnipeg Centre agrees to provide to St. Paul's College details of the value of the Winnipeg Centre's assets contained in Room 110. This information is for insurance purposes, and will be updated and reviewed annually.

Submitted by
Chris A. Rutkowski
R.A.S.C., Winnipeg Centre

DRIFT

REQUIRED DEVELOPMENT

As Room 110 presently lacks electrical outlets, these may have to be installed, requiring some wiring.
Lighting may have to be improved in Room 110. The area is presently lighted by two bare bulbs hung from the ceiling.
The exhaust fan would have to be repaired or replaced. Its present exhaust through the window would be secured and/or reinforced.
Light repairs and cosmetic improvements would be made in Room 110, especially under the window, where some water seepage has caused some discolouring and crumbling of the plaster. The room will also be painted.
Any electrical development would be made so as to meet with Electrical Codes set by the City of Winnipeg, and would be subject to approval by an Inspector of the City of Winnipeg.
The Winnipeg Centre agrees that any major physical renovations will remain in Room 110 in the event of the termination of this Agreement.
St. Paul's College will provide a receipt for income tax purposes of the value at the original cost of any major renovations if made by the Winnipeg Centre.

DRAFT

THE ASTRONOMY SCHOLARSHIP FUND

Winnipeg Centre proposes the establishment of a Scholarship Fund at St. Paul's College.

Winnipeg Centre will open the Scholarship Fund with a donation of \$250.00 (Two Hundred and Fifty Dollars) to St. Paul's College. An additional amount of \$250.00 (Two Hundred and Fifty Dollars) will be donated towards the Scholarship Fund during the 1987/88 Fiscal Year, with funds obtained from fund-raising efforts at St. Paul's College.

Winnipeg Centre will contribute to the Scholarship Fund annually.

Scholarship Fund will be held in trust by St. Paul's College for this sole purpose, unless otherwise mutually agreed by the Winnipeg Centre and St. Paul's College.

Awarding of the Scholarship will be to a candidate selected from a list of eligible candidates.

Eligible candidates will be registered with St. Paul's College, and will be enrolled in at least one 200-level (second year program) or 300-level (third year program) astronomy course offered by the Department of Mathematics and Astronomy at the University of Manitoba.

Eligible candidates will be recommended by either the Winnipeg Centre or St. Paul's College.

Eligible candidates for the Scholarship must have a Cumulative Grade Point Average of at least 3.0, with a Grade Point Average in Astronomy of at least 3.4.

Eligible candidates must either be members in good standing of the Royal Astronomical Society of Canada, or be willing to become members upon their application for the Scholarship.

Selection of a recipient will be made by a majority vote of the Selection Committee, consisting of the Council and Executive of the Winnipeg Centre.

Selected candidate will be recommended by the Winnipeg Centre to the Academic Affairs Committee of St. Paul's College.

Amount of the Scholarship will be the cost of 1 (one) of the courses noted above, not to exceed the value of half of the current Scholarship Fund balance.

1 (one) Scholarship will be awarded during each University calendar year. The event that there is no eligible candidate in a particular year, the Winnipeg Centre will add an equivalent amount of 1 (one) Scholarship to the Fund that year.

Terms of the Scholarship and the status of its Fund will be reviewed by both St. Paul's College and the Winnipeg Centre after a period of two years from the execution of this agreement.

DRAFT

ASTRONOMY LECTURE SERIES

As part of the agreement between the Winnipeg Centre and St. Paul's College, the Winnipeg Centre proposes the establishment of a free lecture series at St. Paul's College.

The Winnipeg Centre will provide selected individuals to lecture on astronomy-related topics at their own expense, or by mutual and shared expenses as arranged with St. Paul's College.

Both the Winnipeg Centre and St. Paul's College may seek additional funding for the lecture series from outside sources.

The Astronomy Lecture Series will be open to the public, but will be designed to provide to students of St. Paul's College the opportunity to learn about topics not normally covered in their courses at St. Paul's College. The lectures will enable students to gain new insight into their studies at St. Paul's College, complementing their education in the sciences and humanities.

Arrangements for the Astronomy Lecture Series will be mutually decided by the Winnipeg Centre and St. Paul's College.

Two appointed representatives from St. Paul's College and two appointed representatives from the Winnipeg Centre will meet on a regular basis to determine the form of the Astronomy Lecture Series.

It is proposed that the facilities of St. Paul's College be used for this Series.

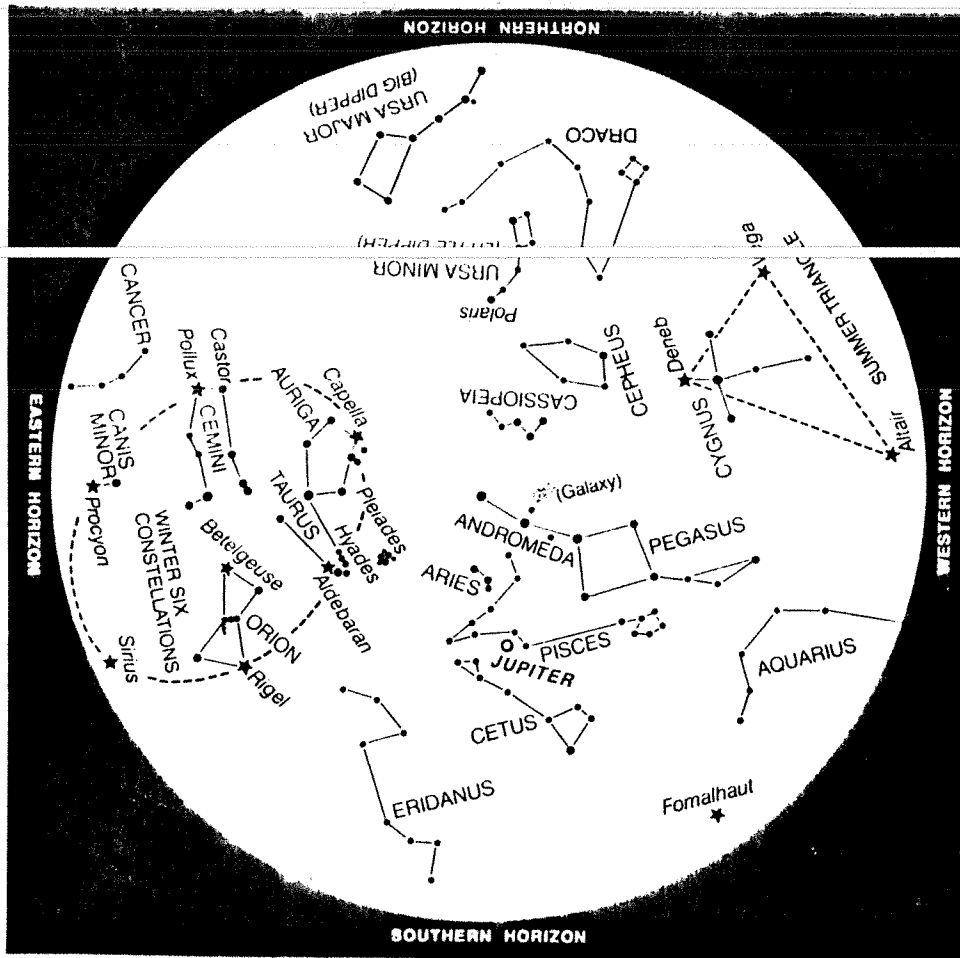
It is further proposed that the Winnipeg Centre be allowed to hold its General Meetings at St. Paul's College, using the facilities of St. Paul's College.

It is understood that General Meetings of the Winnipeg Centre will be open to any member of St. Paul's College.

The Director's Office of St. Paul's College will be notified by September 1 of each year of the meeting dates of the Winnipeg Centre during that coming University Calendar Year.

DECEMBER SKY

1 . 9 . 8 . 7 .



Planets

Observation of Venus, difficult at the beginning of December, will become easier as the month progresses. At the end of December it will be fairly high in the southwest at sunset and will set about three hours later. On the 22nd Venus will be 2° (i.e., four moon widths) north of a crescent Moon — a lovely sight. Jupiter is well up in the east at sunset, and will move across the southern sky to set in the west about three hours before sunrise. The reddish "star" in the east in the predawn sky is Mars; it is about 25° above the eastern horizon at dawn.

Calendar

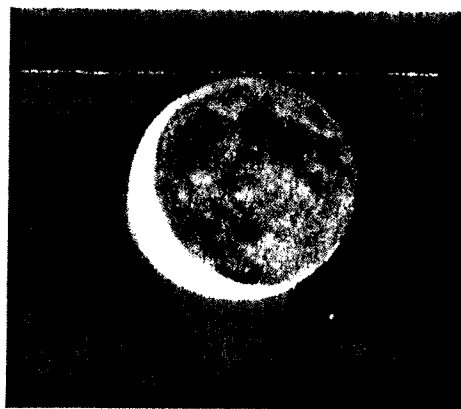
| d | h | (Universal Time) |
|----|----|--------------------------------|
| 1 | 10 | Jupiter 4° S. of Moon |
| 5 | 08 | Full Moon |
| 13 | 12 | Last Quarter Moon |
| 14 | 18 | Geminid meteors |
| 16 | 03 | Spica 0.1° N. of Moon |
| 17 | 21 | Mars 5° N. of Moon |
| 19 | 12 | Antares 0.2° N. of Moon |
| 20 | 18 | New Moon |
| 22 | 10 | Solstice; winter begins |
| 22 | 22 | Venus 2° N. of Moon |
| 23 | 00 | Ursid meteors |
| 27 | 10 | First Quarter Moon |
| 28 | 15 | Jupiter 4° S. of Moon |

Winter Begins Officially

This year the winter solstice occurs (i.e., winter begins officially) at 9:46 Universal Time on December 22nd. Subtract the appropriate number of hours to convert to your time zone.

Earthlight on the Moon

Occasionally, when a very young Moon displays a thin crescent, the rest of its disk, faintly illuminated, can be seen extending beyond the cusps of the crescent. Somehow it looks as if the Moon were in a cradle. What causes this phenomenon? The crescent is seen by sunlight reflected directly from the Moon, whereas the rest of the Moon is faintly illuminated by light reflected back from the daytime side of the Earth — in other words, by twice-reflected sunlight. This lovely sight, sometimes called "the Old Moon in the New Moon's Arms," is greatly enhanced when viewed with binoculars.



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 Astronomy Division
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