November 1975.

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"W I N N I C E N T R I C S"

A publication of the

Royal Astronomical Society

Editor: J. Anderson,
695 Mulvey Ave.,
Winnipeg, Manitoba
R3M 1G3

1975-76 EXECUTIVE

President:	Mr. Roy Belfield 14 Argonne Bay Winnipeg, 256-4295
1st Vice-President:	Mr. Herb Davis 3 Belcourt Bay Winnipeg, 888-0210
2nd Vice-President:	Mr. Jay Anderson 695 Mulvey Avenue Winnipeg, 453-1779
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	Mr. Don Hladiuk 882 London Street Winnipeg, 668-3991
	Mr. Hans Thater 10 - 301 Church Avenue Winnipeg, 582-3278

PRESIDENT'S MESSAGE

I would like to take this opportunity to thank all of you for your support of my re-election as President for 1976.

This last year has been a busy one, for myself and other members, who have taken part in school programs. The highlight of the year had to be the May 24th Lunar Eclipse. The large turnout that evening was very encouraging.

With your help and participation, 1976 can be even more exciting. It has been suggested that the centre be more involved with the public re observing sessions, educational programs, and such. This, I think, is an excellent idea. 1976 could be known as Action Year!

There is our dream of having an observatory. It can be more than just a dream -- it can become a reality; we have the people and the know-how to make this possible. If you have any interesting ideas or suggestions, please contact a council member or myself. Such communication is essential if our observatory is to become an actuality.

In closing, may I thank once again, the members who gave their time to assist me in 1975.

R. Belfield
President

MARTIAN CANALS

With the surface of Mars now well-mapped, and the old theories of canals and intelligent life laid to rest, an opportunity for the critical evaluation of past visual observers presents itself. Carl Sagan and Paul Fox of Cornell University have carried out such a study, and report that *"the vast bulk of classical canals correspond neither to topographic nor to albedo features, and appear to have no relation to the real Martian surface."* No more than 10 or 20 fit some observed feature, and only half a dozen have a reality beyond question.

The two researchers indicated that the most detailed maps drawn by past observers were more often the least reliable. Tests by other investigators, prior to the launching of satellites to Mars, indicated that the human mind tended to link a series of dots into straight lines when these dots were on the limit of visibility.

A definite lesson can be learned from the research done by Sagan and Fox -- you tend to see what you want to see. Amateur astronomers should always be on guard against preconveived observations, especially for such things as swirls and whorls in the belts of Jupiter, or detail in the rings of Saturn.

-- Jay Anderson

NOVEMBER MEETING

TIME: November 14 8:00 p.m.

PLACE: Room 110, Lockhart Hall, University of Winnipeg

This meeting will feature two speakers and two interesting topics. Robert Miller, the Director of the University of Manitoba Planetarium, will speak on cosmic rays. Some major new discoveries are being made in this field and the implications are important for galactic studies. Mitch Tullock, a graduate student in astronomy, will introduce us to the real world of the astronomer by talking about some recent work he has done, and the possible discovery of an eclipsing binary star.

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SKY PHENOMENA

Date	*Time (CST)*	*Event*
Nov. 8	3 AM	Mercury 1.1 degree N of Uranus
" 10	Noon	First quarter moon
" 15	1 PM	Jupiter 5 degrees S of moon
" 18	4 PM	Full moon- eclipse in eastern CAnada
" 21	11 AM	Mars 5 degrees N of moon
" 21		Asteroid Ceres enters Hyades cluster
" 23	10 PM	Saturn 5 degrees N of moon
" 26	1 AM	Last quarter moon
" 29	1 PM	Spica 0.4 degrees N of moon
Dec. 2	7 PM	New moon
" 8	6 PM	Mars closest to Earth
" 10		Asteroid Ceres leaves Hyades cluster
	8 AM	First quarter moon

SKY PHENOMENA

Mars is approaching opposition and will continue to improve as a visual and photographic object. Rising about 3 hours after sunset, it should be one of the two most popular objects in the sky. Its size increases dramatically until opposition on December 8.

Jupiter continues to be prominent all night. One of the more intriguing things that can be seen on Jupiter is the passage of the shadow of its various moon across its surface. These can be seen with small telescopes, so the times of them are given below.

Venus is up about four hours ahead of the sun and warrants a quick look in the morning. On the 29th it will lie 5 degrees north of the moon and may be found more easily in daytime.

Saturn is again returning to more favourable viewing hours, though it still requires getting up in the wee hours of the morning. It will rise before midnight.

The asteroid Ceres will pass through the north side of the Hyades cluster this month and will be easy to photograph. The number of background stars should provide for a pleasing picture, though it will be harder to identify visually. Magnitude is about 6.8

SHADOW TRANSITS OF JUPITER'S MOONS

Date	*Time Beginning*	*Time Ending*
Nov. 9	11:31 PM	1:43 AM - Nov. 10
" 12	6:00 PM	8:12 PM
" 14	2:23 AM	4:59 AM
" 17	1:27 AM	3:38 AM
" 19	7:56 PM	10:07 PM
" 24	3:23 AM	5:34 AM
" 24	6:18 PM	8:53 PM
" 25	9:52 PM	12:03 AM - Nov. 26
" 27	7:17 PM	9:44 PM
Dec. 1	5:18 AM	7:29 AM
" 1	8:54 PM	11:29 PM
" 2	11:47 PM	1:58 AM - Dec. 3
" 4	11:21 PM	1:46 AM - Dec. 5
" 8	11:31 PM	2:05 AM - Dec. 9
" 10	1:43 AM	3:54 AM
" 11	8:12 PM	10:53 PM

NOTICES

-- A reminder goes out to those who may wish to submit observing projects to the National Convention in Calgary (May 21-24). The exhibit formats, and possible topics were listed in the June 1975 *WINNICENTRICS*, and by beginning now you have a good length of time to complete and polish up an exhibit. Entry forms must be acquired from Mr. Ulrich Haasdyk,

1976 General Assembly
3123 - 48th St. S. W.
Calgary, Alberta
T3E 3X6

Completed exhibits and accompanying entry forms must be posted no later than May 4th, 1976. Hopefully postal services will resume by that date. So get outside and do some star-gazing.

-- Roy Belfield gave several demonstration/lecture sessions to the Science Teachers Association of Manitoba on October 24th. Astronomical enthusiasm was apparently generated by his mention of the instruction evenings several members have had with various school and cub groups. Jay and Judy Anderson presented some Celestron observing and slides to a much smaller group of teachers at Camp Arnes on October 23rd, and about 30 grade 6 children were shown a brief and cloudy gaze of Jupiter on October 28th. They and three teachers from William Osler Elementary School then saw some slides taken on an obviously clearer night.

-- Phyllis Belfield has now completed the enclosed list of the Centre's books and journals. Such a quantity of one fingered typing should be well appreciated and put to good use. One book, however, is listed as belonging to the Centre from a number of years back, but was not in the boxes of paper and books that Phyllis acquired for her basement. That book is "The Larousse Encyclopedia of Astronomy", now out of print, and Phyllis requests anyone remembering the whereabouts of it to please contact her, as it makes a valuable addition to the library.

-- Observers at Mt. Palomar, California, have found another moon for Jupiter, bringing its total number of satellites to fourteen.

-- An astronomer from the University of Maryland has discovered a new galaxy embedded deep in the dust and gas along the Milky Way. This galaxy has remained undetected until this time because of the obscuration of its light by our galaxy. Reasoning that if a chocolate bar could be named Milky Way after our own galaxy, he decided that a galaxy could also be named after a chocolate bar. The name of the new galaxy is Snickers!

- Judy Anderson

PHOTOGRAPHING THE MOONS OF MARS

With Mars approaching the Earth very rapidly this month and next, it may be possible to capture one or both of the moons of this planet on film. Since the planet has a magnitude of more than -1, whereas the satellites are 11.6 and 12.8 respectively the task will be more difficult than spotting the companion of Sirius (which is not difficult in a Celestron 8). One favourable factor, however, is that Deimos may reach almost 3 times the distance from Mars as the planet is across. Unfortunately, the brighter satellite, Phobos, reaches an alongation of less than one planetary diameter.

The best technique may be to cut out a cardboard mask to fit over the telescope. Inside this mask, a six-sided hexagon is cut so that it changes the chape of the telescope aperature from round to hexagonal, but reduces its aperature as little as possible. This technique will cause 6 diffraction spikes to be seen around the planet -- but the spaces between the spikes will be darker than without the cardboard mask and the moons may be photographed if they lie inside the spikes. This is a device often used in observing close binary stars, and may work as well for planets.

The times of greatest elongation or separation from Mars are given below for the two satellites. At least 2 photographs should be taken, separated by several hours or even a few days. Both satellites orbit close to the equatorial plane. Exposures of between 3 and 6 minutes should probably be sufficient, though the exact value will depend on the type of telescope used.

The times shown are only approximate but useful attempts can be made for Phobos within one hour and for Deimos within 2 hours, of the maximum elongation.

Date	*Satellite*	*Elongation*	*Time (CST)*
Nov. 18	Phobos	West	3:00 AM
" 19	Deimos	W	4:00
" 19	P	W	6:00
" 20	P	East	5:00
" 21	D	E	1:30
" 21	P	W	3:30
" 22	P	E	3:00
" 23	P	E	2:30
" 24	P	E	1:00
" 24	P	W	4:30
" 24	D	W	5:00
" 25	P	E	0:00
" 25	P	W	4:00
" 26	D	E	2:30
" 26	P	W	3:00
" 27	P	W	2:00
" 28	D	W	0:00
" 28	P	E	4:30
" 29	P	E	3:00
" 29	D	W	6:00
Dec. 1	D	E	3:30

When you've managed to capture these two elusive objects, then try for the satellites of Uranus or Neptune ... or the fainter satellites of Jupiter ... or the fainter satellites of Saturn ...

-- Jay Anderson

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CONDENSED MINUTES

Twenty-four people appeared at the October 10th General Meeting. A number of new members appeared and quite a few old members were even anxious to pay their dues! A joyous Frank Richardson reported that approximately $350 is in the Centre's bank account as of September 30, and Paul Moffat then proceeded to place Jay Anderson as 2nd Vice-President, while Paul Moffat, Phyllis Belfield and Art Butterworth joined the list of councillors. Miss Ella Dack was placed as secretary, making a total of 2 women on council this year. A list of club equipment, now totally located in one basement was read out as follows:

3 1/2" refractor	4" refractor
3" reflector	3 --Elbow Moonwatch Telescopes
5" moonwatch telescope	1 condensor lens
1 Spitz Junior Planetarium	1 Shadowgraph
1 mirror grinding machine	1 -- 12 1/2" aluminized mirror
several stopwatches	

The 4" refractor is being modified with an equatorial mount and an optical finder. Loan of this apparatus may be arranged by contacting Roy Belfield.

It was proposed that some publicizing of the club be done by the members on a "second meeting" format, but no definite plans are available as yet.

Richard Bochonko talked briefly on the November 12 graze visible in Winnipeg, and was to make further plans regarding audio-visual equipment and locations for that evening.

Three new members are welcomed to the meeting: Mr. Ken Popan, Miss Kay Young and Mr. M. Clutton-Brock.

There being no further business, the meeting adjourned at 10:10 p.m. for coffee and socializing.

Respectfully submitted,
Ella Dack
Secretary

COORDINATING CHAIRMEN

For information on the following observing activities, or events in the following categories, please contact the following people:

Observing Recorder	Miss Ella Dack	943-3173
Astrophotography	Mr. Roy Belfield	256-4295
Aurora & Solar	Dr. John Scatliff	453-0514
Grazes	Mr. Frank Shinn	233-4384
Librarian	Mrs. Phyllis Belfield	256-4295
Lunar Observing	Mr. Don Hladiuk	582-3967
Meteors	Mr. Bill Krosney	582-2140
Occultations	Mr. Clyde Reid	(1)482-3930
Planets	Mr. Don Hladiuk	582-3967
Satellites & Asteroids	Mr. Paul Moffat	284-1344
Variable Stars	Mr. Herb Davis	888-0210

WINNICENTRICS Editor

Mr. Jay Anderson
695 Mulvey Avenue
Winnipeg, Manitoba
R3M 1G3
453-1779