

SASKATOON SKIES

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January, 1992

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Saskatoon Skies Information

Next month's deadline is Friday, January 31, 1992. Please have any submissions in to me by then in order to be included in the next issue. Saskatoon Skies is a monthly publication of the Saskatoon Centre of the Royal Astronomical Society of Canada. Submissions may be sent to one of the following:

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Submissions mailed to the Centre's address may not be retrieved in time for inclusion unless you tell me it's there.

Minutes of the Executive Meeting
University of Saskatchewan Observatory
September 16, 1991

Attendees: Mike Wesolowski, Bill Hydomako, Mike Williams, Darryl Rybotycki, Carol Blenkin, Ed Kennedy, Jim Wood, Don Friesen

Item	Detail	Action
107.	Meeting called to order 7:05 P.M.	D. Rybotycki
108.	Edmonton Centre is putting on an astronomy workshop on October 4-6.	B. Hydomako
109.	The Kingston centre is offering a speaker exchange to other Centres.	B. Hydomako
110.	The Montreal Centre is offering the book <i>The Joy of Gazing</i> by David Levy for resale in lots.	B. Hydomako
111.	M. Wesolowski proposed that he (and other volunteers) continue making presentations on astronomy in elementary schools. This was agreed to.	M. Wesolowski
112.	Summary of National Council Minutes: <ul style="list-style-type: none"> - membership fee increases are possible next year - the society is looking for a new treasurer - a short discussion on the Peter Millman memorial - reviewing the model Centre by-laws by M. Williams - a light pollution committee has been formed - The RASC has 20 active committees - The Gemini Project (twin 8 metre telescopes) is dead. 	E. Kennedy
113.	Report on the National Light Pollution Committee.	J. Wood
114.	The use of the term "chairperson" is now in use by the National Council in place of "chairman".	E. Kennedy
115.	There is a possibility that Damien Lemay, the National President, will be visiting the Centre in January, 1992. The general meeting date may have to be moved to accommodate this.	D. Rybotycki
116.	Meeting adjourned at 7:55 PM.	B. Hydomako

Minutes of the General Meeting
Room B-111, Health Sciences Building
University of Saskatchewan
September 16, 1991

Item	Detail	Action
117.	Meeting called to order 8:08 P.M.	D. Rybotycki
118.	It was moved and accepted that the minutes of the May meeting be accepted as published in the June Newsletter.	P. Crosthwaite
119.	Review of items covered in the executive meeting.	D. Rybotycki
120.	Review of the National Meeting minutes.	E. Kennedy
121.	J. Wood presented a slide show covering his attempts to photograph the Perseids.	J. Wood

122. E. Kennedy presented a slide show on his work in historical data. E. Kennedy
 123. J. Wood has loaned a copy of Cosmos to an individual whose name he forgets, and would like it back. J. Wood
 124. Next month will be the executive elections. Members are invited to run for any of the positions. D. Rybotycki
 125. Stan Shadick of the Physics department is offering courses on astronomy through the U of S extension division. D. Rybotycki
 126. Meeting adjourned 9:30 P.M. D. Rybotycki

Minutes of the Executive Meeting
 University of Saskatchewan Observatory
 December 16, 1991

Attendees: E. Kennedy, A. Hartridge, M. Williams, B. Hydromako, J. Wood, C. Blenkin, R. Huziak

Item	Detail	Action
44.	Meeting called to order 7:06 PM.	B. Hydromako
45.	M. Williams asked if there were any questions on the financial statement as published in the November newsletter.	M. Williams
46.	M. Williams discussed the GST and its effect on the finances of the Centre.	M. Williams
47.	The issue of programming was discussed.	M. Williams
48.	The January program was discussed: a) Need to book a room for January 8. b) Need to advertise the meeting. c) Need to investigate having the meeting at the library.	R. Huziak R. Huziak R. Huziak
49.	Look into having Sandy Ferguson speaking in February, 1992.	R. Huziak
50.	Look into having Stan Shadick speaking in the spring of 1992.	J. Wood
51.	M. Williams read a letter that he wished to send to the National Council, discussing the proposed fee increase from \$32 to \$40. It was moved and seconded that the letter be sent.	E. Kennedy R. Huziak
52.	The General Assembly in Calgary next summer was discussed and the need for some Centre representation.	R. Huziak
53.	Meeting adjourned at 7:57 PM.	B. Hydromako

Minutes of the General Meeting
 Room B-111, Health Sciences Building
 University of Saskatchewan
 December 16, 1991

Item	Detail	Action
54.	Meeting called to order 8:15 PM.	R. Huziak
55.	The financial statement was discussed. It was moved that the statement be accepted.	M. Williams J. Young

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| 56. | The programs for the coming months were discussed. There is now a tentative program for each month until June. | R. Huziak |
| 57. | Next year's proposed fee increase was discussed. | R. Huziak |
| 15. | Participation in next year's General Assembly in Calgary was discussed. | R. Huziak |
| 58. | The January 8, 1992 meeting was discussed: where to meet, if an executive meeting should be held. | R. Huziak |
| 59. | Jim Patterson, an out-of-town member, was welcomed. | R. Huziak |
| 60. | Richard Huziak made a presentation about telescope making in the Centre. | R. Huziak |
| 61. | The Minutes of the November meeting were adopted as published. | J. Wood
J. Young |
| 62. | Meeting adjourned at 9:20 PM. | R. Huziak |

ROYAL ASTRONOMICAL SOCIETY OF CANADA 1992 GENERAL ASSEMBLY

The Calgary Centre would like to invite astronomers, both professional and amateur, to rendezvous near the magnificent Rocky Mountains for the 1992 Royal Astronomical Society of Canada General Assembly. Located in the beautiful Bow River Valley, Calgary – this year's host city – has much to offer delegates attending this gala event. One can shop in Canada's energy capital, or escape into the wilderness of the Rockies, or simply renew or initiate new friendships with other enthusiasts. Accommodations for the 1992 GA will be at the University of Calgary, and an extended stay can be arranged to take in the eightieth running of the Calgary Exhibition and Stampede, plus numerous other tourist attractions. The GA is loaded with interesting activities! Here are some of the planned events:

July 1, 1992

After registering at the University of Calgary, attend the Canada Day fireworks display and public star night hosted by the Calgary Centre.

July 2, 1992

Enjoy a day trip to Drumheller, Alberta to visit the Royal Tyrrell Museum of Paleontology, and step back in time to when the dinosaurs ruled the Earth. A stop is planned to visit the K/T boundary which marks the extinction of the dinosaurs in the geologic record, possibly due to an asteroid impact 65 million years ago. In the evening visit the Alberta Science Centre/Centennial Planetarium featuring a robotic dinosaur exhibit, and have a piece of birthday cake to celebrate their 25th anniversary. The Calgary Centre played an important role in establishing the Planetarium as the city's Centennial Project back in 1967. The Helen Sawyer Hogg public lecture featuring Dr. Alan Hildebrand will be held this same evening at the Planetarium.

July 3, 1992

Friday morning and afternoon are booked for the National Council Meeting and various committee meetings. If you are not committed to these meetings, then you are free to either enjoy the Stampede Parade or take a day trip to Banff and Lake Louise. The evening will feature a Western Barbeque,

Murphy Slide Show and Song Contest, and tours of the U. of C. operated Rothney Astrophysical Observatory and the Calgary Centre's home away from the city lights, the Wilson Coulee observatory.

July 4, 1992

Listen to interesting speakers during the Paper Sessions planned for Saturday morning and afternoon. A group photo will be taken of the delegates during the noon lunch break. The evening will consist of a formal banquet, an awards presentation, and an after dinner talk by Damien Lemay, our National President

July 5, 1992

On the final day of the GA, the Annual Meeting and National Council Meeting are planned for the morning. The afternoon will feature free astronomical workshops on astrophotography, astronomical computing, CCD imaging and astronomy education. The final event is a night at the exciting Stampede Grandstand Show.

The GA will include the traditional photography and display contests. The categories this year are:

- *Best Centre Display
- *Solar System Observational Display
- *Deep Sky Observational Display (Including Radio Astronomy)
- *Instrumentation (Scopes and Accessories)
- *Non-Observational (Education/Light Pollution, etc.)
- *Astrophoto – Tripod and Piggyback
- *Astrophoto – Prime Focus and Schmidt Camera
- *Astrophoto – Projection
- *Best Youth Display (Under Age 16)
- *Murphy Slide Show (Best of the Worst)
- *Song Contest

Further information on contest rules is available by contacting the Calgary Centre. Registration forms are available from the editor of *Saskatoon Skies* and will be made available at General Meetings. You may also contact: RASC – Calgary Centre, c/o Ms. Dennis Goodman, 28 Southland Crescent S.W., Calgary, Alberta, T2W 0K3. Phone (403)252-7095 or leave a message at (403)237-STAR (24 hours).

NOTICE OF OBSERVER'S GROUP MEETING

The next Observer's Group meeting will be held on Saturday, February 1, 1992 at 7:30 PM at the Rystrom Observatory. New members that are interested in attending and need directions can phone the editor (or any other member of the executive) for help.

EDITOR'S NOTES

(1) Happy New Year!

(2) You will note that I am once again attempting to publish the minutes from the September meeting.

(3) As published in last month's issue of *Saskatoon Skies*, there will not be a general meeting on January 20 (the third Monday) as would normally be expected. This month's meeting has already been held on January 8, when Damien Lemay, the National President of the RASC, visited us. The next General Meeting will take place on February 17, as noted elsewhere in this issue.

(4) How many readers got out of bed for the partial lunar eclipse on December 21? I got out of bed in good time, saw that it was overcast (I couldn't even find the moon), and went back to bed (my wife was quite upset because I was somewhat chilled when I crawled in beside her). We'll just have to wait for the next eclipse in June, which, although still partial, occurs at a civilized hour.

(5) This month, amateur astronomers in Saskatchewan have an opportunity to make a significant contribution to science by timing an asteroid occultation, which can then be used to determine a profile for the asteroid. Details elsewhere in this issue!

(6) Information about the 1992 General Assembly taking place in Calgary from July 1-5 is included in this issue. Registration forms are not included (because the extra pages would drive up our postage costs) but are available from the editor upon request, or at the next General Meeting.

(7) Where are my articles?

UNIVERSITY COURSES AND WORKSHOPS

The University of Saskatchewan Extension Division is offering several courses that are of general interest for children in the 9-15 age range. Information is summarized below. Call the Extension Division Registration Office at 966-5539 for additional information. Feel free to pass this on to anyone you think might be interested!

1. **Astronomy: From the Beginning of Time to a Universe of Galaxies**
Wednesday evenings, 7-9 PM, January 15 - February 12, 1992, \$65
2. **Build Your Own Take-Home Telescope**
Thursday, March 12, 1992, 7-10 PM, \$48
3. **Build Your Own Take-Home Robot**
January 20, 22, 24, 1992, 7-9 PM and again March 16, 18, 20, 1992, 7-9 PM,
\$80

NOTICE OF MEETING

The next General Meeting will be held on Monday, February 17, 1992, in Room B-111 of the Health Sciences Building on the University of Saskatchewan Campus. The speaker will be Professor Emeritus J.E. Kennedy who will discuss the "Moon Hoax" of 1835, in which a series of articles appeared in *The Sun*, a New York newspaper, claiming that the moon was inhabited.

LUNAR OCCULTATIONS IN 1992

Mike Wesolowski

For the convenience of observers in Saskatoon, the information presented in the occultation section of the *Observer's Handbook 1992* has been reduced to circumstances specific to Saskatoon. This information is presented in the table below. From left to right, the columns give the date of the occultation, the name of the occulted star, the magnitude of the occulted star, (note that the data in the *Observer's Handbook* is limited to stars of magnitude 5.0 or brighter), the circumstances (DD means the star disappears at the dark limb of the moon, RD means the star reappears at the dark limb of the moon), the elongation of the moon from the sun in degrees (where 90 indicates first quarter, 180 is full moon, etc.), the Central Standard Time of the occultation to the nearest minute, and the position angle of the event (the point on the moon's circumference at which the star will appear or disappear, measured from the north point eastward around the limb of the moon. Stars known to be multiple are indicated by an asterisk after the star's name (these are of interest to observe as the occultation may be seen as occurring in steps as each component is covered or uncovered).

Unfortunately, there are no spectacular occultations of bright stars or planets visible from Saskatoon this year. The brevity of the list below is due to the relatively bright limiting magnitude used; the number of occultations visible from a given location increases rapidly as the limiting magnitude is lowered. As the list stands, binoculars should be adequate to see these occultations well.

For additional information about observing occultations, refer to the *Observer's Handbook 1992*, pages 110–113. Information about the marked multiple stars is also given within the indicated reference, as well as addresses to write to for additional information or to report observations.

Date	Name	M _v	Circumstances	Elongation	Time	Position Angle
February 6	κ Psc	4.9	DD	36	19 ^h 02 ^m	84
February 14	1 Gem*	4.3	DD	126	05 23	126
April 5	ZC 472	5.0	DD	36	21 54	51
April 8	η Gem*	3.2	DD	74	22 48	150
April 9	μ Gem*	3.2	DD	76	01 53	55
May 6	ζ Gem*	3.7	DD	58	23 55	96
May 20	ν ¹ Sgr*	5.0	RD	223	02 43	249
June 28	ν Tau*	4.4	RD	331	03 24	245
July 11	θ Oph	3.4	DD	151	20 25	110
August 9	ν ¹ Sgr*	5.0	DD	145	22 12	115
August 22	ZC 709	4.3	RD	282	04 00	227
September 18	ν Tau*	4.4	RD	253	04 24	281
October 1	44 Oph	4.3	DD	73	20 52	61
October 15	ZC 599	4.5	RD	221	00 05	294

ASTEROID OCCULTATION ON JANUARY 17

Mike Wesolowski
Richard Huziak

At about 6:25 AM Friday morning, January 17, amateur astronomers in Saskatchewan will have an opportunity to make a unique contribution to astronomy. The asteroid 15 Eunomia will pass in front of a 9th magnitude star in the constellation Hydra, causing a very noticeable 2 magnitude drop in brightness of the star. If the start and end of this occultation is timed, a chord across the asteroid is obtained. When combined with observations from widely spaced locations, the entire asteroid profile can be derived.

Richard Huziak and I would like to coordinate an effort to make timings of this event from as many different locations as possible. Equipment required is relatively simple – a tape recorder and access to time signals, as well as accurate knowledge of your geographic position and altitude above sea level (this doesn't have to be known beforehand). We have finder charts for the star and can provide them upon request. Would-be observers require a good southern horizon, as the constellation Hydra is pretty low for observers in Saskatchewan.

The recommended observing procedure is as follows: prior to the predicted occultation time (several minutes, since astronomers are also interested in the possibility of a satellite to the main asteroid), begin observing the star with the tape recorder running. Ideally, you should also be recording short wave time signals simultaneously. Record (verbally, on tape) whenever you look away and resume observing, so the gaps in coverage are known. At the beginning and end of the occultation, shout it out! The actual times of the events can later be extracted from the recording.

Variations on this procedure are possible. For example, you can simply record the duration of the occultation with a stopwatch directly. This is not as useful as actually recording the times, but can still be used. If you don't have access to a radio capable of receiving time signals, the NRC provides time signals over the phone (for 30 seconds per call), which may be obtained by calling 613-745-1576. If your microphone is good enough, you might be able to record these time signals off of the phone directly (I haven't tried it). Richard and I used nursery monitors last year in order to keep the radio, nursery monitor receivers and tape recorder in the warmup shelter, while keeping the transmitter with us at the telescope.

It should be noted that the predicted path of the asteroid's shadow is not definite and may shift as the asteroid's position is determined more accurately prior to the occultation. Nevertheless, even a negative observation is valuable and should be reported – it establishes where the asteroid and any potential satellites were not. Richard and I are willing to handle the reporting of all observations to the International Occultation Timing Association so we ask that you report your observations, positive and negative, to us. Ideally, this should include the original tape recording, and details as to type of instrument used, observing conditions, etc.

For additional information, as well as an example of results that have been obtained last year, refer to the January, 1992 issue of *Sky and Telescope* magazine, pages 72-77, available from the main library branch in Saskatoon. You may also contact us directly at 931-3425 (days, both of us), 665-3392 (evenings, weekends, Richard) or 373-0137 (evenings, weekends, Mike).