



# NOVA

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March 1979  
Vancouver, Canada

c/o H.R. MacMillan Planetarium  
1100 Chestnut St., V6T 1C2

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David A. Rodger

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Notice from the  
Centre Librarian

Keith Lloyd

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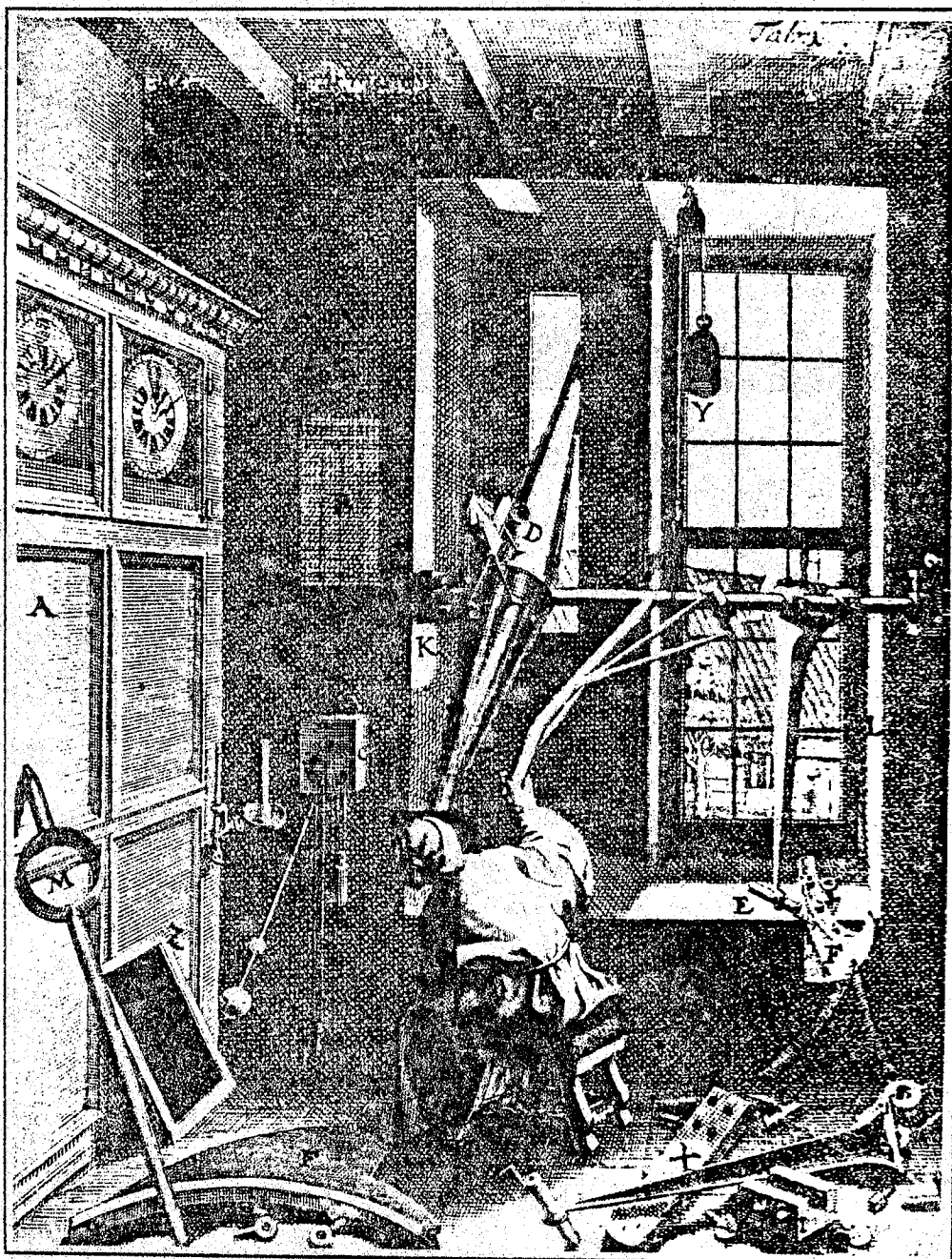
TOTAL SOLAR ECLIPSE

David A. Rodger

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ALL THIS AND NOT  
MUCH MORE.

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ARTIST'S CONCEPTION OF TELESCOPE FOR NEW OBSERVATORY

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March

# NOVA

1979

A Newsletter of the Vancouver Centre  
ROYAL ASTRONOMICAL SOCIETY OF CANADA

Editors: David Dodge and Ken Hewitt-White.... Assistants: Joanne Dodge and Lynda Smith

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## EDITORIAL

### NO NEWS IS GOOD NEWS?

At the March meeting of the Council for the Vancouver Centre of the RASC, it was decided to reduce expenses by limiting the number of issues of NOVA to six per calendar year. In other words, NOVA will, from April on, be bi-monthly with the usual 2 month summer break. In the place of NOVA, you will receive, on the odd months, a notice of the monthly meeting. It was also decided that all future issues of NOVA shall be in the hands of the members the week prior to the meeting. Back to first class.

Some of you will undoubtedly cry foul. What about the funds from the sale of the solar viewers? Those funds are being used to off-set the amount of deficit spending. Others will ask why we don't ask for a better split from the National Office (currently 60% - 40% split in the National Officer's favour). Well, we tried that. At a National Council meeting held in Winnipeg last February 25, the Vancouver Centre tabled a motion to do just that, and you can guess how that went over. The nays had it.

It seems to the editors that reduction of your newsletter to save costs is an unfair plan. Why should you suffer from other uncontrollable forces? It has always been maintained, in these pages, that NOVA is an extension of the Centre to those members who cannot always attend the meetings. You can also bet that a membership in the Vancouver Centre of the RASC will soon cost more than the current \$17.00.

.... On the brighter side of things, thanks go to those who helped in the assembly of the solar viewers. The dollars are rolling in, and all of our bills have been paid. Nice work, gang, and thank you.

DEADLINE FOR THE MAY ISSUE OF NOVA IS APRIL 23. That will give all prospective Hemmingways lots of time to finish your manuscripts.

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## LAST MONTH'S MEETING

No report.

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## NEXT MONTH'S MEETING

There will be no April meeting of the Vancouver Centre of the RASC, due to the Annual Banquet being held that month. Hope to see all of you there!

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## RASC ANNUAL BANQUET

As mentioned in last month's NOVA, this year's Annual Banquet will be held on Friday, April 13th at Hy's at the Sands Hotel on Davie Street near Denman.

The fare is Baron of Beef at \$8.00 for regular members, and \$7.50 for junior members. If you prefer a vegetarian menu, the cost is \$6.00 for regular members and \$5.50 for juniors.

The bar opens for cocktails at 6:00 p.m. with drinks at \$1.25 each. Dinner will be served at 7:30 p.m.

Please pay Doreen McLeod as soon as possible. If you do not anticipate seeing Doreen before the banquet please confirm your plans to attend by phoning Doreen and letting her know. This is imperative as we pay for each meal and we must know how many to order. Doreen's telephone number is 926-1450.

We are pleased to announce the after-dinner speaker for our banquet. Mr. Franklyn Shinn will be joining us for our festivities. Mr. Shinn was the assistant director of the Manitoba Planetarium from its inception ten years ago until his recent retirement. He is a renowned amateur astronomer and telescope maker. The topic he has chosen for us is titled, "Concepts and Missed Concepts". We look forward to an entertaining and stimulating evening.

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## UP-TO-DATE PICTURES OF JUPITER

Editors

A friend of the editors passed through Vancouver last week from the Jet Propulsion Laboratory in Pasadena, California. In his brief case he carried virtually all of the photographs from Voyager One. When they were all laid out on the table for our edification, it was remarked, "That's not a planet, it's a piece of art!". We think you'll have the same feeling when those photographs are reproduced in upcoming astronomical journals.

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The Royal Astronomical Society of Canada  
Vancouver Centre

Statement of Revenue and Expenditures  
for the year ending December 31, 1978

Revenue

Bank balance January 1, 1978		\$1232.92
Membership fees	\$2532.30	
Life member grants	35.00	
Donations	237.00	
Annual dinner	\$ 365.00	
less cost of dinner	<u>365.00</u>	000.00
Sales of observers' handbooks	67.50	
Bank interest	73.91	
Miscellaneous	77.28	
Total revenue		<u>3022.99</u>
		<u>\$4255.91</u>

Expenditures

Fees remitted to National Office	\$1827.30	
Library	29.61	
Rent and Affiliation fee	255.00	
Speakers' expenses	74.70	
Nova expenses	\$1072.71	
less S.A.S. payments	<u>193.25</u>	879.46
Miscellaneous	35.63	
Total expenditures		<u>3101.70</u>
Bank balance December 31, 1978		<u>\$1154.21</u>
Deficit during year		<u>(\$ 78.71)</u>

PLANETARIUM RE-OPENS

After a closedown of two months for extensive renovations, the H.R. MacMillan Planetarium will open its doors to the public on March 17, 1979. New carpets were laid down, and new (hopefully more comfortable) seats were installed and, best of all, the Zeiss star projector was given a new lease on life after a major overhaul, the first in ten years.

In preparation for the Planetarium's opening, two new shows have been produced by the staff. "A Glimpse of Infinity" questions the dilemma of modern physical science and the other half of the Planetarium's double bill, "Space Capsule", is designed to bring you up to date on current events in the space sciences.

Plan a visit to your new Planetarium soon!

## VARIABLE STARS - T Cassiopeiae

David A. Rodger

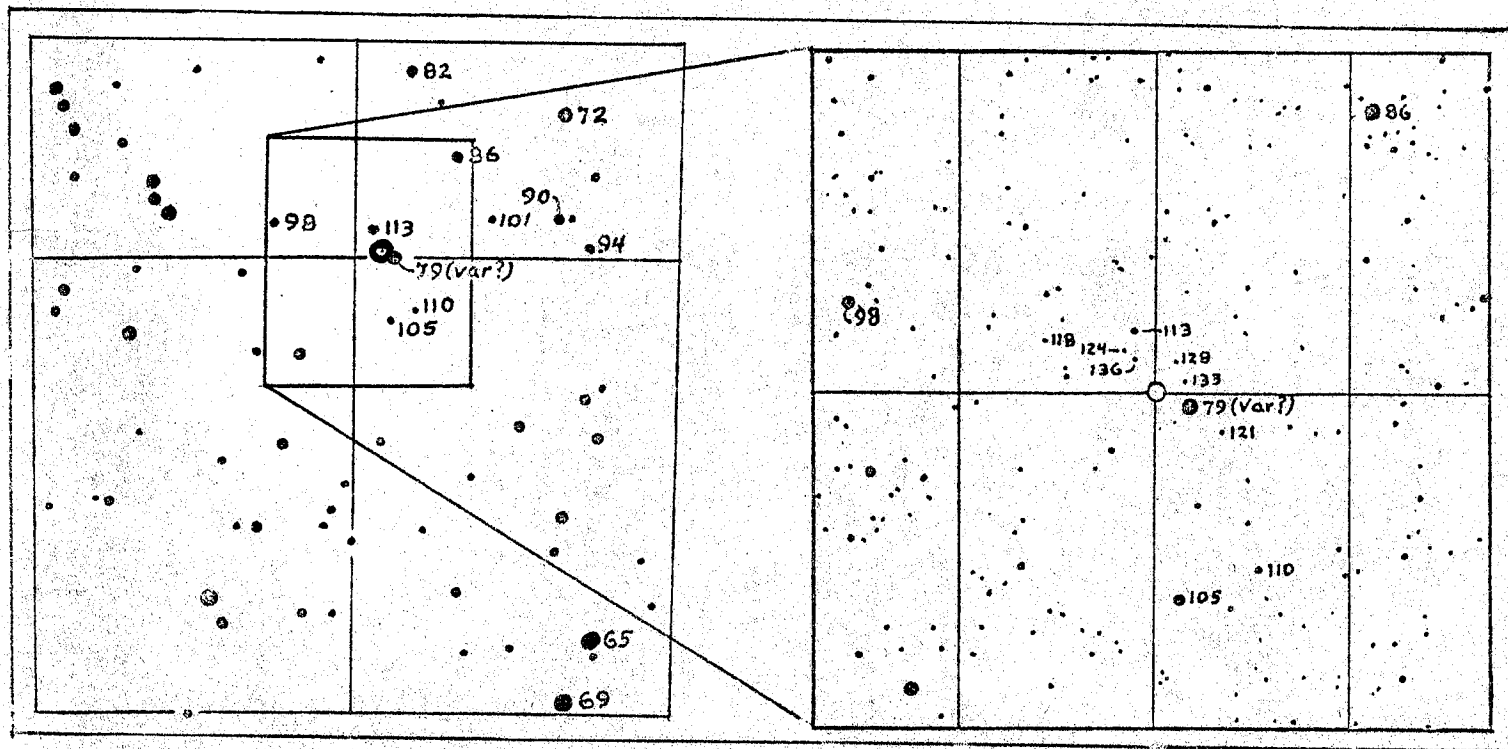
This variable is circumpolar and it is very easy to locate. Furthermore, it's cycle can be followed with any telescope of 60 mm diameter or larger.

We know the shape of the constellation Cassiopeia so well that few of us have ever taken to trouble to identify the major stars that form the famous "W" with their official names. Alpha Cassiopeiae is the most southerly of the prominent stars in the "W"; it's the star that marks the bottom of the second "V" in the letter. Close by are several fairly bright stars including Lambda Cassiopeia which appears on our finder map for the variables. Although I have made estimates of this star more than twenty times in the past three years, I still get confused occasionally when I first try to center the field in my telescope. Cassiopeia lies along the Milky Way remember; you will have the same problem trying to find stars in Cygnus or Lyra. You get the advantage of beginning your search in a region of the sky that's easy to find then the disadvantages of trying to pick out a particular star from a populous background. The opposite effect takes place in constellations such as Lynx where most of the effort goes into locating the constellation itself!

Anyway, once you have identified Lambda Cassiopeiae, using a low power eyepiece, T should be in the field. It lies in the direction of Beta Cassiopeia, the star that marks the right-hand tip of the "W". Look for two little runs of three stars each. The curves of these runs point towards an eighth magnitude star that practically sits on top of T.

There are abundant stars for making magnitude comparisons; just be sure not to confuse the 8th magnitude star with the variable. At its peak T is nearly the equivalent of the eighth magnitude star in brightness.

T Cassiopeiae was near its minimum when I last saw it in late December, so it should be back on the road to a brighter future when you view it this spring.



## THE TOTAL SOLAR ECIPSE - A Personal Observation

David A. Rodger

Our location was a dock in front of the village of Hecla, Manitoba. The dock extended out into the frozen wastes of Lake Winnipeg. The surface of the dock was concrete, or so it seemed, and some parts of it had been blown free of snow, so the footing was reasonably easy and setting up a camera tripod was no problem. The panorama included the snow-drifted lake to the northeast, east, and southeast; an old deserted barn or warehouse in the south beside a jog in the dock; an inner harbour to the immediate west where three commercial fishing boats were beached among the snowdrifts; and the scattered old houses and the Icelandic church, lying along the road that skirted the lakeshore from west to north.

We arrived on the dock shortly after 9 a.m. and immediately began setting up our equipment. Everyone in our party had cameras and there were two or three small telescopes.

First contact came at 9:40 a.m. approximately, the event being proclaimed by Bill Peters who was peering at the sun through a filtered Celestron 90. During the next forty minutes we noticed very little atmospheric change as the moon's disc proceeded across the face of the sun. No one could have been aware that an eclipse was in progress had they not been advised of it in advance. We watched the occultations of some sunspots, checked out a variety of solar filtering devices, and towards the end of the period monitored a slight drop in temperature. Since the thermometer registered well below freezing at the outset, the additional chill was pervasive. A brisk wind began to blow but the sky remained essentially clear except for some high cirrus.

A pair of jackrabbits, white with winter coats and obviously aware that a state of advancing night was upon them, leapt out from the trees by the beach to the south of us and headed out across the drifted lake. A crow flew overhead, cawing in medium voice, but otherwise there was no sign of animal life whatsoever.

By the time 10:30 a.m. arrived, though, the quality of the light had definitely changed. Snow crystals on a nearby derelict tree glistened as if there were a hundred tiny Christmas lights on the branches. Our shadows were sharp but faded to a grey-blue colour. I remember remarking that the level of light was slightly greater than that experienced on a full-moon-lit winter night when snow is on the ground.

Suddenly, the western sky went dark and our excitement rose. At the same time, a brightly coloured halo appeared to circle the sun. Still the sun was too bright to look at without the aid of filters and still an uninformed passer-by would not be aware of the eclipse.

Bill Peters was watching the progress of the moon through the telescope..

"The crescent is shrinking!" he shouted, and we looked up to see the beginning of the diamond ring effect. The diamond ring reminded me of one of the bulbs we have passed through the dome of the Planetarium when we have wanted to depict a bright star or planet in the sky. At first the light from this effect extended out beyond the tight, bright solar halo. Then, as it dimmed and shrunk, it passed the halo and fell in towards the edge of the sun's disc. Later, in recollecting the many thoughts and feelings I had during the eclipse, I remembered feeling as if I were an explorer on another planet in another solar system. A strange star was shining down upon this pale white landscape. I remember, too, being aware of how large the

solar image was, for now it was totality and the long-awaited event had arrived.

The total eclipse lasted 170 seconds where we were, and we were right on the center of the Center Line. During this period we gazed at the sun, voiced our various reactions, ignored questions, and directed one another's attention to various features around the sun or caused by it. The sky was not particularly dark and the only planet I saw was Venus. A few spotted Mercury close by the eastern side of the sun. Whether any stars appeared I cannot say; I didn't look for any. During the eclipse the eastern horizon was banded by a dusty haze surmounted by a reddish glow from north to south. The corona extended out for at least one solar diameter in all directions. Its structure was similar to that of the cirrus and the entire scene had some of the colours I have seen during noctilucent cloud displays back in Saskatchewan some years ago....the same pale blue-white.

The prominences were spectacular! As I gazed through the binoculars I saw them in the 7 o'clock position, 10 o'clock, and 2 o'clock. They stood out like the bristles on an artist's brush, a searing crimson that reminded someone of strontium when it's fired in a Bunsen burner.

I had a quick glance at the sun through the Celetron 90 telescope, bumped it out of position for a moment, fogged my glasses in excitement, backed away for another naked-eye glimpse... and then it was over.

As the diamond ring returned Bill shouted that we could still look for a moment, then he advised that it was time to put back the visors and filters to view the re-emerging sun. But few of us did, for as far as we were concerned, the eclipse was over. We began to discuss our views and impressions, exchanging reactions, commenting, and pacing to return the blood to frozen veins and faces.

It was my first total eclipse and I can't remember a more impressive sight from which to experience one. The landscape was subdued, we were alone, we had had no particular problems getting to the site, and we had nothing to distract us, as if that were possible.

The moon moved on and so did we!

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#### RENOWNED ASTRONOMER MOVES TO BANANA BELT!

Editors

I don't suppose there is a Canadian amateur astronomer who has not heard of Jack Newton. Jack's forte is the realm of deep sky photography, and has recently published a book on the subject.

Jack is now a resident of Victoria after a transferral from Toronto. He attained the position of Centre president not only of the Toronto Centre but also the Winnipeg Centre, and we're sure that the Victoria Centre will be more than happy to make room for a visiting past president there. Welcome to the banana belt, Jack!

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TO ALL USERS OF THE VANCOUVER CENTRE LIBRARY

Keith Lloyd

Normally, the Centre librarian does not have to write in because the library runs smoothly. But this is one of those rare occasions when I must ask for your co-operation. The library is very successful in the fact that an average of fifteen books are being borrowed a month. But a smaller average of books are being returned, and recently this has become a growing problem.

For the last five or six months, the number of books not returned has been increasing to the point where the library must start considering penalties for the people with overdue books.

I am asking you to return your overdue books.

Other members, on occasions, have asked for a book that they have seen on the shelf. The book, not being there, is obviously overdue and the member is disappointed that he cannot increase his knowledge in the field that he wishes to.

If you have borrowed a book for information and/or enjoyment, why not return the book at the next meeting so that someone else can get something out of the book. If you borrow books from the library don't take out more than you can read in one month. When you return your books at the next meeting, the other books you wanted should be on the shelf.

Two new rules for book borrowing have been implemented to help get rid of the problem at hand. As of February 13, 1979:

- 1) Any member with an overdue book will not be allowed to borrow any more books until the overdue book is returned.
- 2) Any member with a book that is two months overdue will be phoned before the next meeting and reminded to bring the book back.

With your help, the library will run smoother and for you, the borrower, it will be advantageous. The library is yours so don't abuse it. Its there to broaden your knowledge of the stars, but it won't help you if you cannot borrow the books you are interested in.

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Astronomers all over the North American continent were touting the fact that the recent eclipse would be the last until the year 2017. Of course, they don't include the eclipse that transits Hawaii and parts of Mexico in 1991. But then again it could be assumed that the astronomers don't consider Mexico part of the North American continent.

Speaking of eclipses, it was brought to the editors attention that in the 22nd century, British Columbia residents will be hosts to no less than five total eclipses in twenty five years, centered around the third decade. Maybe that time the astronomers and ophthalmologists will have co-ordinated their publicity strategy.

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