

NATIONAL NEWSLETTER

Editor: NORMAN GREEN

Assistant Editors: HARLAN C. CREIGHTON / MARIE FIDLER / E. R. SEAQUIST

Please submit all material and send all communications to the address below:

The Editor, Newsletter, McLaughlin Planetarium, 100 Queen's Park, Toronto, Ontario

Joint Meeting

ROYAL ASTRONOMICAL SOCIETY OF CANADA

AND

AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS

The 1974 General Assembly will be a joint meeting with the AAVSO hosted by the Winnipeg Centre at the University of Manitoba, Winnipeg, Manitoba. Note that the meeting will be held from June 28–July 1, 1974. We hope that these dates will encourage many members to attend.

A special feature of the Assembly will be *Centrascope '74, Festival of Telescopes*.

Centrascope '74 like Stellafane will be an opportunity for Amateur Telescope Makers to display their creations and have them judged by experts. There will be judging and awards in five categories: 1. Originality of design. 2. Mechanical excellence. 3. Best optical performance. 4. Best telescope made by a junior member. 5. Radio telescopes. For details, please contact the Centrascope '74 committee chairman: Mr. B. F. Shinn, 173 Kingston Row, Winnipeg, Manitoba, R2M 0T1.

The exhibits committee invites displays from all members and centres. Commercial exhibits are also welcomed. Awards will be presented to the best non-commercial displays. For more information, please contact the Exhibits committee chairman: Mr. Roy Belfield, 859 Nassau Street, S., Winnipeg, Manitoba, R3L 2N1.

We request that you consider now the preparation of papers for the assembly. Papers on all aspects of observational, theoretical or instrumental astronomy will be welcomed and considered by the Papers Committee for the session. Abstracts of about 150 words in length should be prepared and sent before May 15, 1974 to: Dr. J. B. Rice, Department of Physics, Brandon University, Brandon, Manitoba, R7A 6A9. Members of Centres should first submit their abstracts to the Executive of their Centre, for approval. It is suggested that authors should aim at about 10 minutes for the presentation in order to allow some time for discussion.

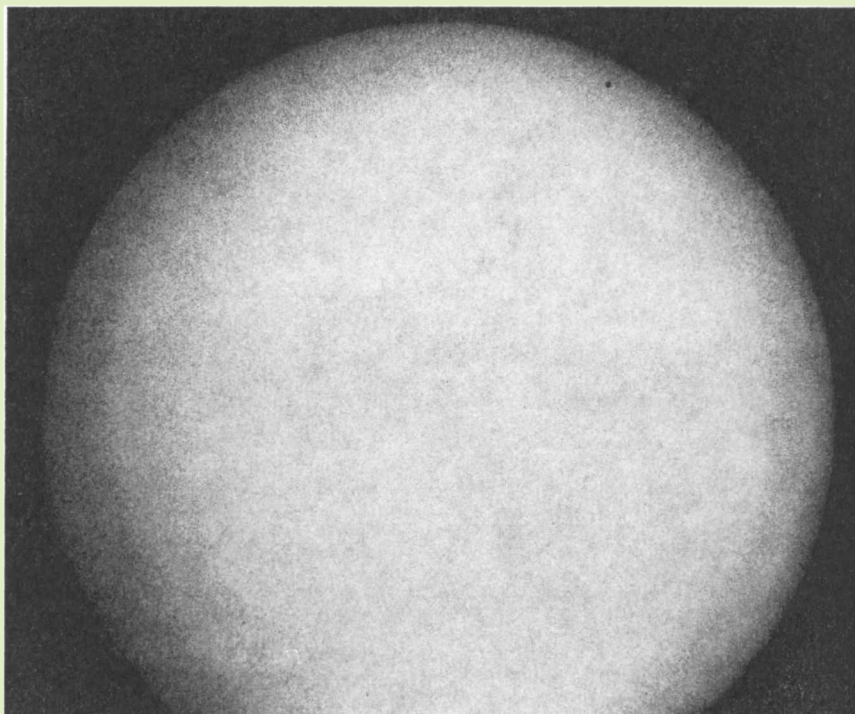
Besides our joint meeting, there will be many other attractions. 1974 is the 100th Anniversary of the Incorporation of Winnipeg as a city. Many colourful and exciting events will take place to celebrate this historical event. During the assembly dates, the Red River Exhibition will also be held.

Plan now to attend this assembly.

RICHARD BOCHONKO,
Chairman, Local Planning Committee
for 1974 RASC General Assembly
University of Manitoba
Winnipeg, Manitoba.
R3T 2M8

“The November 10 Transit of Mercury”

Mercury crosses between the earth and the sun only 14 times this century. The eleventh and last transit visible this century from Canada, was observed by members of the Toronto Centre. Robert Ballantyne and Bill Peters organized an expedition to the Scarborough Bluffs at 5:30 a.m. on Saturday morning. Eight car loads of eager amateurs arrived and set up a variety of equipment. I set up my tasco 3 inch refractor in the front yard of my Newmarket residence.



MERCURY TRANSIT	11.10.73	8:05 A.M.
3" 30X	500TH SEC	TRI ×

The dawn proved clear and the first glimpse of the rising sun showed Mercury as a rich black spot near the western limb. As the sun rose, higher magnification (200×) showed Mercury as a distinct spot, as if etched onto the sun by some solar draftsman.

Our Scarborough team reported similar success. Mercury appeared as a three dimensional object drifting between the earth and the sun. Mercury was easily seen on a projected image for group viewing.

I photographed Mercury using eyepiece projection through a number 9 welding glass. The sun's low altitude did not seem to affect the photographic results.

JACK NEWTON,
Toronto Centre

Jesse Ketchum, 1885-1973

It is with deep regret that we record the passing, on October 26th in his 89th year, of Jesse Ketchum who for nearly two decades was Director of the Telescope Makers Group in the Toronto Centre of the R.A.S.C.

Jesse bore the same name as his great-grandfather, a pioneer businessman in the Town of York (now Toronto) who was active in promoting public education in the infant years of Toronto.

Jesse was born in 1885 on his father's farm at Orangeville, Ontario, and later moved with his family to Ottawa. As a youth he prospected for silver in the newly developing mining area at Cobalt in Northern Ontario and about 1907 he moved to Saskatoon, then largely a prairie tent city. After working in various capacities for the railroad Jesse later took up railroading full-time as station agent and telegrapher at various points in Saskatchewan. He had various hobbies but astronomy, a subject in which he was self-taught, headed the list.

Upon retirement from the Canadian National Railways in 1948, Jesse moved back to his native Ontario and settled in the town of New Toronto, now part of Metropolitan Toronto's Borough of Etobicoke. Soon after his arrival, he became a sort of "father" to a small group of younger Toronto Centre members who were interested in telescope making. Later a regular Telescope Makers Group was set up under the wing of the Centre and Jesse became its Director.

On Saturday evenings during the summer he could usually be found with a telescope on the lawn beside the big dome of the David Dunlap Observatory, offering a look at some celestial object to those visitors who were waiting their turn to go inside to see the 74-inch telescope.

In 1962 he became the second member of the Toronto Centre to be awarded the Society's Service Award medal.

Jesse Ketchum will be greatly missed by all his friends within the Society and outside. To his wife Agnes, herself a member of Toronto Centre, and to his family we extend our deepest sympathies.

FREDERIC L. TROYER,
Recorder, Toronto Centre.

Getting More Out of Your Astrophotos

by Richard Berry

Richard Berry, a Master of Science graduate of York University, is an amateur astrophotographer with several years of practical experience behind him. He is well known by his fellow members in the centre for his many useful contributions in centre activities.

In this article, he outlines an organized method as a foundation for beginning astrophotography on an amateur level.

Astrophotography can be a pretty discouraging hobby – cloudy weather night after night, out-of-focus and underexposed results, and always the stream of superb pictures appearing in *Sky & Telescope* to put you in your place. It may seem downright impossible to get any enjoyment or sense of accomplishment.

Yet it is possible to get a great deal of satisfaction from astrophotography without spending a fortune or owning a 200-inch. From my own experience, I have found five techniques that help make taking pictures of the sky enjoyable for me.

First Technique: Know Why You Are Taking Pictures of the Sky and What You Hope to Accomplish

If your goal is to impress people and make them admire you, okay – but you have very tough competition from the professionals. The people you want to impress will always have seen better results than yours.

If you want to see the sky as your eyes can never see it, or to record details better than memory can hold them, your goal is easy and requires only simple equipment. Film has the ability (which the eye does not) to accumulate an image, so that faint nebulae invisible to the eye record on film. Film can record every detail on the moon in a fraction of a second – and hold that detail for centuries.

Second Technique: Tackle Do-Able Projects

In choosing a project such as moon photography or photographing asteroids, the Milky Way, or aurorae, you must evaluate what your equipment can do, and then pick something do-able. You must consider: (1) the sky quality where you observe, (2)

the characteristics of your equipment, (3) the quality of your clock-drive or hand guiding, (4) how much time you can afford to devote to the project, and (5) how much technical know-how you have or can acquire. For instance, when I started taking pictures of the Milky Way (because I wanted to know where the brightest parts were, and to see it all in one view), (1) I talked someone into letting me use his farm where the sky was clear and dark, (2) I had a fairly good 35 mm camera, (3) I could track the sky by hand pretty well for 10 minutes, (4) I could spend only a few nights a month, and (5) I knew how to develop and print my own film. As time went on I improved items 2 and 3 – now I use a war surplus lens for exposures up to an hour long. But what is important here is that I had all the necessary equipment and skills to do that particular project. It is no fun to “bite off more than you can chew,” and usually more fun to start with something that gives results fairly soon, then build up from there.

Third Technique: Get Feedback from Your Results

If something doesn't work, figure out why. If your moon photos are moved, don't blame it on the film. Find out whether your telescope mount is sufficiently stable, and if it's too jiggly, fix it OR choose a more do-able project. Bad results can be very informative – they will show what the limits of your equipment are – when to “pack it in” – and, providing you either modify your goals or improve your equipment, bad results are not wasted effort.

Fourth Technique: Make the Best “Readout” You Can

Once captured on film, an astrophoto does no good unless transferred to a form you can see and examine closely. Professionals usually examine their plates directly, but their plates are fairly large. I find prints most satisfying, so I have learned how to make them. However, if you don't know how to use an enlarger, it is easy to learn, and most people can get use of one at their school or by joining a camera club. Slides can be an answer, but are very expensive compared to black and white prints. If you are seriously interested in astrophotography, eventually you must learn all about photography and do your own darkroom work.

Fifth Technique: Examine Your Results Thoroughly

Here is where the real satisfaction lies – when you sit down and look at your photos. As a rule of thumb, I like to spend ten times as long looking at a photo as I did taking it. If it takes me an hour (total) to get a good moon photo, I want to look at it dozens of times for months in the future, and every time I want to see more in it. Consider the typical fate of a full moon photograph with a 3-in. telescope (refractor): the tendency is to glance at it, say, “Oh, the moon,” and forget it. Look again: How many bright spots (craters) are there: Which ones are they – old, worn or fresh ones? Trace the rays with tracing paper. Trace the maria. Compare the picture with others for librations. There are probably around ten million bits of information in the photograph. Even fuzzy star photos are crammed full of information about variable stars, possible novae, and brightnesses of thousands of stars. It is only in the examination that your curiosity and scientific interest are satisfied; in examination you really see what is there to see – as your eyes never could.

(Reprinted from Toronto Centre, “Scope”).

Change of Address

This is just a short note to notify members of a change of my address. Effective September 12, 1973, it will be:

Room 356, Gordon House,
Queen's University,
Kingston, Ontario.

It is a small but important change from my previous address in Kingston.

GEOFFREY J. R. WYGT
Sec.-Treas., Kingston Centre