

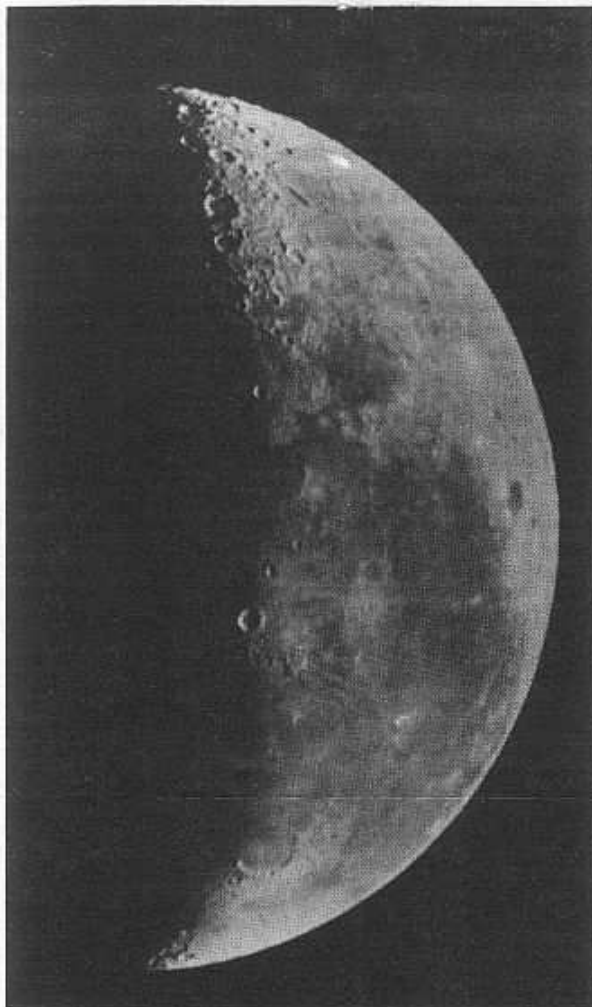
Stardust

A Monthly Newsletter of the
Royal Astronomical Society of Canada
Edmonton, Centre



JUNE MEETING NOTICE - The monthly meeting of the Edmonton Centre, Royal Astronomical Society of Canada will be held at the QUEEN ELIZABETH PLANETARIUM on Thursday, June 9th, commencing promptly at 08:15 p.m. President W. J. CARLE will preside. The guest speaker will be Mr. Robert BROUGHTON of Ellerslie. His topic will be "Amateur Radio Operators." This will concern the role of the amateur "Ham" in satellite tracking. Any and all who are interested are invited to attend, this the last meeting until September.

PLEASE NOTE: THIS IS THE LAST ISSUE OF STARDUST UNTIL SEPTEMBER
CARDS WILL BE MAILED IN THE INTERIM
THERE WILL BE NO REGULAR MEETINGS DURING JULY AND AUGUST
(Any special events, i.e., the Perseid shower gathering, etc.,
will be announced via postcard.)



PHOTOGRAPH BY DAVID ROLES --- South is up and North is down in the photo. (D.R.).



PHOTOGRAPH BY DAVID ROLES --- Venus and Mercury - conjunction

LUNAR AND PLANETARY ASTRO - PHOTOGRAPHY

Before describing four different setups for lunar and planetary photography - a few words about the photographs. The photo of the last quarter moon was taken with a 2.4 inch refractor, using an equivalent focal length of approximately 3000 mm, a yellow filter, and an exposure of 1/50 sec. on Tri-X film. The most prominent feature in this photo is the crater Copernicus, seen on the terminator amid the vast lunar "seas". North of Copernicus are the Carpathian Mountains, and much further north is the semi-circular Rainbow Bay. The brightest spot on the moon is the crater Aristarchus, seen approximately equidistant from Copernicus and Rainbow Bay, forming a triangle with them. Forming another isosceles triangle, this time with Copernicus and Aristarchus, is the crater Kepler surrounded by a series of "rays". Approximately halfway along the limb of the moon can be seen the very dark crater Grimaldi (a feature visible in the Zond 3 photos of the moon's far side). In the southern half of the photo, on the terminator is the very large crater Longomontanus and not too far from the limb of the moon, at about the same distance south is the large crater Schickard. About halfway between these two craters and slightly further south is an interesting elliptical crater Schiller (see page 88 of Feb. 64 Sky and Telescope for an unforshortened view). This crater may have been caused by a meteorite collision at a very low angle.

The next photograph taken on the third of July, 1965, shows a close conjunction of the planets Venus and Mercury. The photo was taken with the same telescope, using an equivalent focal length of approximately 1800 mm and an exposure of 1/2 sec. on Tri-X film. On the original negative the "phase" of both planets is visible. Fortunately, many good photos of the moon and brighter planets can be made without the use of a clock drive. The actual method used for photographing them will vary according to the astrophotographer. Four of these

the type and amount of equipment available to methods can be summarized as follows: 1. Prime focus photography using a single lens reflex, rangefinder or box-type camera with a removable lens. 2. Negative projection

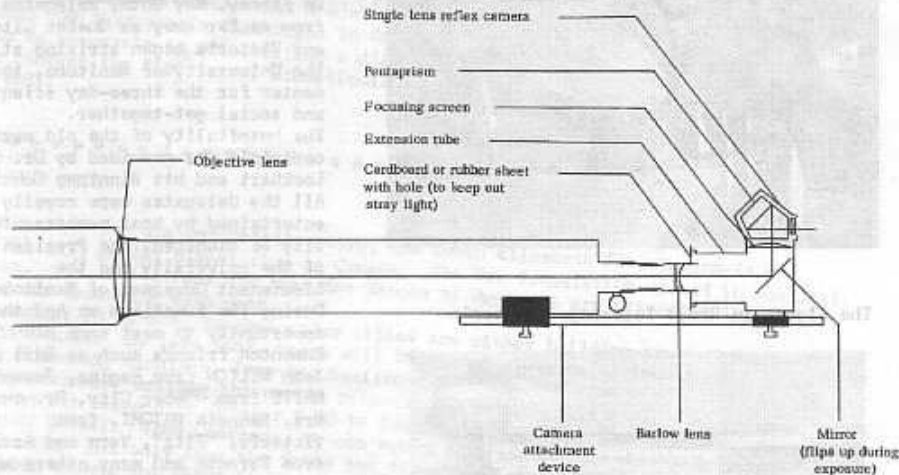
photography using a Barlow lens and the same cameras. 3. Eye-piece projection photography (positive projection), again using the same cameras. 4. Afocal photography using a camera with a non-removable lens.

Before any of the above methods are discussed in detail, it should be mentioned that astro-photography is much easier if the camera is securely attached to the telescope. Special devices are available from several different companies advertised in astronomical magazines. Such devices can also be home-made.

Prime focus photography involves using only the objective lens of the telescope (or mirror if the scope is a reflector) along with the camera body. If your camera is a single lens reflex and your telescope a refractor you will have no problem. Remove both the eyepiece of the telescope and the lens of the camera, and mount the camera body on the telescope. An extension tube, plus a rubber or cardboard sheet with a hole in it should be used between the camera body and empty drawtube of the telescope, in order to cut out stray light (see diagram for negative projection photography). Move the camera toward or away from the drawtube until the image of the moon or planet is in sharp focus on the ground-glass screen of the camera. Set the shutter speed of the camera (see exposure hints later in the article), and click away. A cable release or better still, a self-timer should be used to activate the shutter, since vibrations could spoil the photo. Be sure not to touch the scope until the shutter has clicked.

NOTE: THIS ENDS PART ONE OF THIS ARTICLE SUBMITTED BY DAVID ROLES --- PART TWO WILL APPEAR IN THE SEPTEMBER ISSUE OF STARDUST. (ED.).

Typical Setup for Negative Projection Astrophotography



Note: 1. Solid line going through optics shows light path
 2. Magnification increases as distance between Barlow lens and film plane increases.

PART FOUR (FINAL) of John P. DAY's winning essay "Little-known Phenomena in Astronomy and Meteorology." See March, April and May issue's of STARDUST for parts one, two, and three respectively.

A set of maps of France are included: sightings from September 17, 1954 to October 15, 1954 are included. What is important about them is that the sightings form great circles or lines. Could this be co-incidence? The chances are one in a trillion. Hallucinations? Do they travel on straight lines?

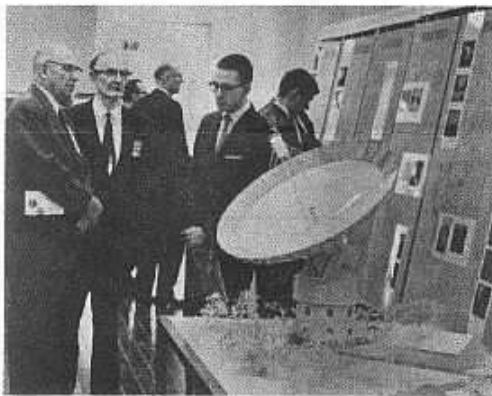
Two of the maps, that for (October 2, 1954, and that for October 7, 1954, have interesting properties.). When one is placed on another such that the centers of activity co-incide and the one map is rotated on this axis eventually the great circle lines co-incide, some even to the very points.

The skeptics have their spokesman, Dr. Menzel. In his book "Flying Saucers", he didn't help them much. The book is a collection of omissions, bad assumptions, half-truths, and even twisted quotations. If we are to believe that his method of making UFO's in his kitchen sink disproves saucers, one can prove by the same way that the moon does not exist.

Dr. Menzel admitst of the existence of 1,157 unexplained sightings and explains 25. A chart of these sightings (the 1,157) is included. It includes the period between April, 1947, to July, 1952.

What are flying saucers? They are not to be dismissed lightly, nor are they what such types as Adamski et al say they are. Perhaps a three year-old put it exactly. His opinion was that "nobody know".

THIS CONCLUDES John P. DAY'S winning essay, "Little-known Phenomena in Astronomy and Meteorology." (NOTE: The above essay does not necessarily represent the opinion of the Editor of Stardust but was taken verbatim from the original text by John P. DAY.).



The Algonquin Radio Telescope - Ontario



The General Assembly - WINNIPEG

The General Assembly of the R.A.S.C., its 76th since incorporation, was held this year in the Gateway to the West - Winnipeg. On Friday, May 20th, delegates from as far away as Quebec City and Victoria began arriving at the University of Manitoba, the center for the three-day scientific and social get-together. The hospitality of the old west certainly was provided by Dr. R. Lockhart and his Winnipeg Centre. All the delegates were royally entertained by host members, the City of Winnipeg, the President of the university and the Lieutenant Governor of Manitoba. During the functions we had the opportunity to meet some old Edmonton friends such as Earl and Joan MILTON from Regina, Joseph MATTE from Quebec City, Dr. and Mrs. Kenneth WRIGHT, from Victoria, "Fitz", Vern and Archie from Toronto and many others who all send their greetings back to Edmonton.

Mrs. Marie FIDLER,
Executive Secretary,
R.A.S.C., TORONTO.

One of the highlights of the General Assembly, for many, was the demonstration conducted in the University of Manitoba's new planetarium. The projector, a Spitz A3P, is somewhat more elaborate than the model at the Queen Elizabeth Planetarium, however it lacks the many special effects projectors devised by our talented President, Mr. W. J. CABLE. As yet, no provisions for music, color slides or movies have been made available, however the Province of Manitoba's centennial project in Winnipeg is a large planetarium and will undoubtedly include many of the features to which we have become accustomed in Edmonton at the Queen Elizabeth Planetarium.

The second day of the Assembly was devoted primarily to the Paper Session and a large number of committee meetings. As usual the papers covered the full range of astronomy with one paper by Dr. J.N.R. SCATLIFF of the University of Manitoba covering "Old Astronomical Instruments" and another by Dr. B.W. CURRIE of the University of Saskatchewan covering the interesting phenomenon of "Noctilucent Clouds!"

More detail of a very full General Assembly in Winnipeg will be given at the June meeting of the Centre.

GENERAL ASSEMBLY - 1 9 6 7

Le Centre Francais de Montreal, as next year's host to the General Assembly, is anxiously preparing for the hundreds of amateur and professional astronomers that will converge on Montreal during the centennial year. Conveniently scheduled during "EXPO" and the long week-end in May, the Assembly date will make it possible for R.A.S.C. members to take advantage of both extravaganzas. To make the package even more inviting the Centre de Montreal has booked close to 200 rooms for delegates at the University of Montreal, in viewing distance of the World's Fair.

STAR NIGHT

This year Star Night will be held on October 7th and 8th in the Northern Alberta Jubilee Auditorium. As has been the case for the past six years the National Aeronautics and Space Administration in Washington will co-operate by sending the Centre another large display on various aspects of astronautics. In addition we hope to acquire much material from sources in Canada, the United States and Europe.

One of the highlights of last year's space exhibition turned out to be the many fine displays designed and constructed by our own R.A.S.C. members. Public appreciation was widespread especially for the Mariner IV models of Bill CABLE, and John HOWELL of Calgary, as well as the exciting panorama of the solar system constructed by our secretary Angus SMITH.

The Committee on Educational Activities is anxious to see similar projects attempted for this year's Star Night in October. If you have any ideas or are willing to cooperate in constructing a display highlighting some aspect of astronomy please contact the Director of Educational Activities, Mr. Franklin LOEHDE at 429 * 1887.

Franklin LOEHDE

PLANETARIUM NOTES:

As most of you are undoubtedly aware, the Queen Elizabeth Planetarium is no longer the only public planetarium in Canada. The Dow Planetarium opened in Montreal, April 1st. All indications are that the people of Montreal are attending the Dow shows by the thousands each week.

Elsewhere in Canada, several major cities are either building or planning to build planetaria. By late 1967, there will be planetariums operating in Vancouver, Calgary, Edmonton, Winnipeg, Toronto, Hamilton, and Montreal.

I have already written the people responsible in each city suggesting we meet in Edmonton on the weekend of October 8-10 to found an association. Now is the time to do this, I feel. Then, perhaps, we can avoid some of the mistakes made in the United States. Not only have the large and old established planetariums formed an impenetrable clique but there is very little co-operation or exchanging of ideas. As a result, many of the great American planetariums have simply separated. We cannot afford the luxury of stagnant planetariums in Canada. I will propose, if the October meeting takes place, that membership be open to officials of any bona fide Canadian planetarium - regardless of its size or function.

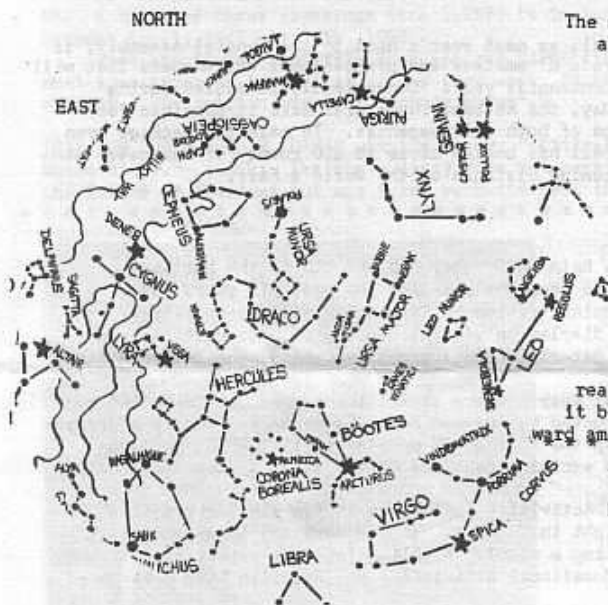
Meanwhile, on the home front, we are anxiously awaiting the arrival of our first planetarium telescope - an Optical Craftsmen 10" f/6 Newtonian. R.A.S.C. members will be more than welcome to use it - in Coronation Park - although it's primary function is for public demonstration. We will be operating a vigorous observing schedule here this summer every clear night. Those of you with telescopes are urged to join us and help instruct the public.

Our summer show in the theatre will be "A Day On the Moon." Actually the title is a bit deceiving. But even though we won't be taking people to the moon, we will be tracing the history of the exploration of our neighbour planet with some exciting new projection techniques and effects. R.A.S.C. members need only show their membership cards to gain admittance courtesy of the City of Edmonton, Parks and Recreation Department.

The Queen Elizabeth Planetarium wishes all Stardust readers a happy and relaxing summer.

Dave, George, Bill, Joanne, Harry and Bob.

Dave RODGER



The night sky - June 1st, 9 p.m.
about 40° North.

The planets for JUNE

Mercury - Too close to the sun for observation.
 Venus - An evening star visible briefly just after sunset low on the NW horizon.
 Mars - In Leo, sets before midnight.
 Jupiter - Too close to the sun until late in the month when it appears as a morning star near the eastern horizon just before sunrise.
 Saturn - In Aquarius, rises about midnight and reaches meridian at sunrise. On the 29th it begins to retrograde, i.e., move westward among the stars. *****

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