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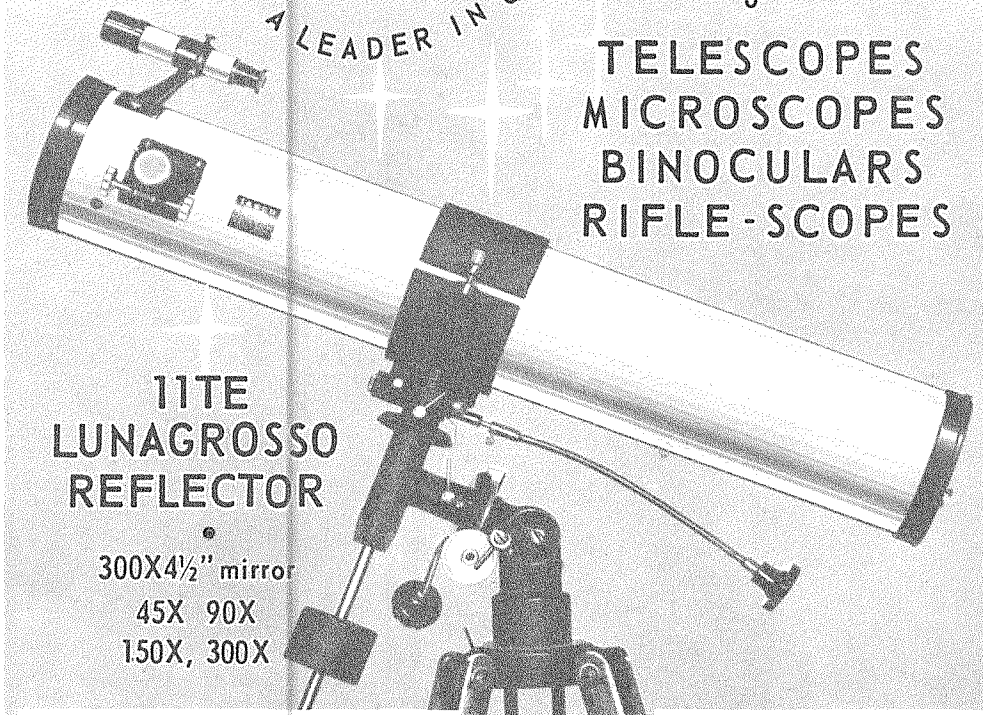

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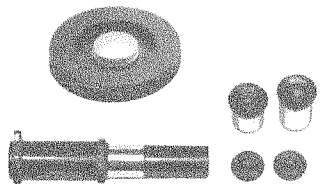

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RASC Meetings are held in the auditorium of the Manitoba Museum of Man and Nature on the second Friday of each Month. The agenda consists of guest speakers, films, discussion, also amateur projects, telescope making etc. The last few minutes are spent in the Planetarium theatre, where we review the sky for the coming month. This is followed by refreshments and get-to-gether. Membership fees are $10.00 for adults and student fees are $5.00. Fees include the Journal RASC, the Observers Handbook, and Winnicentrics.

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Mailing Address: Royal Astronomical Society of Canada,
Winnipeg Center, Room M215,
Manitoba Museum of Man and Nature,
190 Rupert Avenue, Winnipeg R3B 0N2

Editor: Mr. B. F. Shinn,
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1972

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EQUIPMENT LOAN STATUS

By resolution of Centre Council on January 3, 1971 a policy was established that equipment loans would be for a period of two weeks only. Since this department was established in Winnicentrics the equipment has been much more in demand. Waiting lists will be established and loans will be on a first-come-first-served basis. ALL EQUIPMENT LOANED MUST BE PICKED UP AND RETURNED BY THE BORROWER, AND DIRECT TRANSFER FROM ONE PERSON TO ANOTHER WILL NOT BE PERMITTED. ALL LOANS MUST BE FROM THE SOCIETY OFFICE.

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WE REQUEST THAT ALL EQUIPMENT ON LOAN BE RETURNED IMMEDIATELY AFTER TWO WEEKS' USE, TO MR. B. F. SHINN, AS OTHERS ARE ANXIOUS TO USE THE EQUIPMENT.

1972

PROGRAMME FOR FEBRUARY

MEETING TIME: Friday, February 18th, 8:00 p.m.

MEETING PLACE: Auditorium, Manitoba Museum of Man and Nature, The Planetarium.

TOPICS:

1) Handbook Half-hour - "The Observation of the Moon", Page 58, - Mr. Andrew Lindsay

2) Minor Planets - Mr. Paul Moffat

3) Lunar Eclipse - January 30, 1972

   a) Shadow Passage of Craters - Mr. Andrew Lindsay

   b) Occultations during the Eclipse - Mr. Frank Shinn

   c) Photography of the Event - Mr. Jack Newton

NOTICE: A meeting of the Lunar Observing Group will be held on Saturday, February 12th, at 2:00 p.m. at the "Black Brant Rocket" display case in the Planetarium Lobby. A record will be kep of the attendance.

OPPORTUNITIES TO OBSERVE -- FEBRUARY 1972

PLANETARY NEWS - Unfortunately the weather has not been very cooperative with us, in regards to prolonged viewing of the planets. Even so one should not miss the chance of taking a look at Saturn. This planet is near the meridian during evening twilight and sets just after midnight.

Saturn - is located in Tauris 6° southeast of the Pleides.

Venus - can be seen in the early evening in the west; setting three hours after the sun.

Ceres - the largest of all asteroids is well placed for observation with binoculars or small telescope, it is to be found in northern Leo and Cancer.

For you early risers, Uranus which is near the meridian three hours before sunrise can be seen with binoculars. Also the largest planet Jupiter is in the Southeast three hours before the sun rises.

R. Belfield.

LUNAR OBSERVATION by Andrew Lindsay

It is often believed that useful astronomical work can be done only at a great observatory, and that in consequence the modestly equipped amateur is wasting his time. This view has even been expressed by some professional astronomers but it is significant that professional astronomers of the first rank do not agree. So far as the moon is concerned, the amateur still has an important role to play. He must recognize his limitations, but there is much that he can do.

For lunar work, a 3 - inch refractor is not to be despised, though it cannot show fine detail. A 6-inch reflector or 4-inch refractor is better; and with a 6-inch refractor or an 8-inch reflector, a full programme can be carried out. This naturally assumes good optical quality, and also a really firm mount.

The first step in becoming a lunar observer is to learn the moon's principal features. An outline map shows the main maria and the largest craters, and a few nights with a telescope (or even binoculars) will bring a good deal of order out of the initial confusion. Indeed, the surface

POSSIBLE METEOR SHOWER ASSOCIATED WITH COMET P/GRIGG-SKJELLERUP

Predicted orbital elements for the 1972 return of Comet P/Grigg-Skjellerup by Sitarski (Acta Astronomica, Vol. 19, No. 2, 1969) and by Lea and Milbourn (B.A.A. Handbook 1971) indicate that the earth will make a close approach to the orbit of the comet on 1972 April 23.02. The encounter will occur at the ascending node, 51 days after the passage of the comet through the node, and the separation will be only 0.004 A.U. The apparent radiant will be at R.A. 107°.5 (07h 10m), Dec. -45°, in Puppis. The observed position of the radiant will be strongly affected by zenith attraction: when the apparent radiant is on the horizon, its observed altitude will be 12°. Although long recognized as a possible progenitor of meteors, the comet has only recently moved into an orbit giving a very close approach, and no previous meteor activity attributable to it has been noted. The favourable circumstances now extant encourage the hope that a strong shower may be seen, and that observations will be made by all suitably situated meteor observers.

(H.B. Ridley)

LUNAR OBSERVATION CONT'D

The best way of getting a general picture of the lunar surface is to follow the moon through its phases from crescent to full. In this way, all its major features will be seen as they are revealed by the slow progress of sunrise over its surface.

GENERAL NOTES (CONT'D)

from the floor. Mr. Roy Belfield, (tel. 284-3189) has kindly consented to be Chairman of the Planetary Section.

SCHEDULE OF MEETINGS

Due to the many demands for the use of our Auditorium, we have been obliged to make some changes in the dates of our meetings as follows:

Friday - February 18th
Friday - March 24th
Friday - April 21st
Friday - May 12th
Friday - June 9th

For the balance of the year and during all of 1973 we will continue to meet at the Auditorium on the second Friday of each month.

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presents a certain amount of harmony in the sense that, although it is covered with a tangle of objects, these can be organized into a number of different classes.

MARIA, OR SEAS. These form the lunar lowlands and differ in appearance from the highlands in being both darker and smoother. Most of the maria run into each other, extending from the Mare Foecunditatis via the Maria Tranquillitatis and Serenitatis, into the beautiful Mare Imbrium, and ending in the region of the Mare Nubium and Oceanus Procellarum, the latter being the larges sea, although somewhat ill-defined. In addition, there are smaller dark areas which may be known as a Lake(lacus), marsh (palus), or bay(sinus)all of which are offshoots of the maria.

WALLED PLAINS. Although it is convenient to refer to all circular lunar formations as "craters", they actually fall into definite categories. The walled plains are the largest features, ranging from about 60 to 180 miles across, with a mountainous ring several thousand feet high overlooking an inner floor that may itself have some fair-sized craters embedded in its surface.

RING PLAINS. These are the most impressive of the lunar features. They are smaller than the walled plains, with diameters of between 30 and 60 miles. The walls are relatively high, sometimes rising 10,000 feet or more, and the interior floor may be depressed below the level of the exterior terrain. These walls are often magnificent in themselves; they may be ridged or terraced with great complexity, especially on the inner slope. The floor itself often contains a central mountain mass that may rise to a height comparable to that of the wall, this mass is often divided into separate peaks.

CRATERS. Similar in cross section to the ring plains, except that the walls are much less complex, are narrower, and the central mountain is either small or totally absent. They are smaller than the ring plains with diameters as small as 5 miles, and many form the center of ray systems, deposits of bright matter that seem to radiate away from the crater across the outside surface.

CRATER CONES AND CRATER PITS. These are very small features, requiring a moderate telescope for their

detection. Crater cones are roughly conical, though not steep, formations, bearing tiny orifices at their summits. Crater pits are simply minute depressions in the lunar surface without recognizable walls.

CRATER CHAINS. The walled plains exhibt some impressive line-ups, such as the great series running rougly along the meridian in the southern hemisphere. The same is true of the craters and craterlets, which often occur in pairs and occasionally in long strings. It is obvious that the moon has been subject to some immense "peppering" force, whether from without or within; and the crater chains prove that, in many cases at least, the process was not a random one. This tends to support the volcanic rather than the meteoric theory of crater formation.

DOMES. These curious features, like low swellings or hillocks are of heights up to 1,000 feet and diameters up to two miles; they can be seen well only when near the terminator. They may represent solidified lava pushed up by high gas bubbles.

VALLEYS AND CLEFTS. Sometimes called rills, these range from colossal ravines more than a hundred miles long and several miles wide, to hairline cracks at the limit of telescopic visibility. The more delicate clefts are evidently true cracks in the surface, but some of the more prominent ones are seen to contain the remains of craterlets along their length. Great clefts often pass across the floors of walled plains, frequently breaking through the mountain wall and extending across the ground outside.

MOUNTAIN RANGES. It is not surprising that a world showing such drastic primeval activity has thrown up such superb mountain ranges. One of the finest, the Apennine Mountains, run across the meridian in the northern hemisphere, while the highest peaks on the moon, some of which reach 30,000 feet, occur near the south pole. These, the Leibnitz Mountains, actually run along the limb, so that under suitable conditions of libration they can be seen in profile, their glittering summits poking out against the sky. Other mountain ranges also run along the eastern limb, as well as marking off the Mare Imbrium from the Mare Serenitatis.

LAST NOTE CONT'D ON BOTTOM OF PAGE 7.

GENERAL NOTES

LUNAR ECLIPSE - January 30th, 2:02 a.m.

Mr. Jack Newton, our President, decided to put on a blitz in connection with the Lunar Eclipse, and this proved to be an unqualified success. Some 35 members of the Winnipeg Centre, RASC, turned up at Jack's home, 18 Peel Crescent, Charleswood late Saturday night and early Sun. a.m. to see the phenomena. Fifteen telescopes were set up, as well as closed television in the house for those not wishing to face the below zero temperatures outside. The photographs appearing in Monday's Free Press brought an avalanche of telephone calls from many people interested in Astronomy and who wished to join our Centre.

Would those members who took photographs please bring them to the meeting February 18th.

MEETING OF OBSERVATIONS CHAIRMEN

The Chairmen of the various disciplines held a very successful meeting at Mr. Newton's home on January 24, 1972, for the purpose of improving our meetings and deepening interest of members in the various observational activities. As a result, it was decided that our meetings would commence at 8:00 p.m. sharp, instead of 8:15 or 8:30. Members and visitors will register at the door as they arrive, and doors will be open at 7:30 with some of the Committee in charge. For members only, registration will include, in addition to your address and telephone number, the member's preference in observational disciplines, i.e., Solar, Lunar, Planetary, etc. This should eliminate delays in starting the meeting. All photographs willbe appropriately displayed so that they may be viewed either before or after the meeting.

As many of our members are rather shy about asking questions, they wish answered, it was decided to set up a question-box, enabling members to insert their questions and at the same time remain anonymous. Since Mr. Don Campbell has resigned as Councillor and as Chairman of the Planetary Section, it will be necessary to nominate a Councillor to replace him. Will members please give serious consideration to the person whom you wish to nominate as his replacement, as nominations will have to be made