

## Editorial

This is the first issue of the "National Newsletter" (for want of anything better to call it). Conceived many years ago and born at the 1969 General Assembly, the NNL has the potential to lessen some of the tensions from which our Society perennially suffers. It is a forum to which all can contribute and from which all can benefit, whether they be from St. John's or Victoria, amateur or professional, English speaking or French speaking, observer, instrument maker, philosopher or bookworm.

At least for the time being, the NNL will appear as part of the *Journal* – for reasons of economy and convenience. Its editorial content will primarily be the responsibility of COCOCA – the Committee on Coordination of Centre Activities whose members are: K. E. Chilton, Mme R. Matteau, E. R. V. Milton, J. R. Percy (chairman), R. V. Ramsay, Mrs. D. Russell and T. Tothill.

## Wanted

An interesting, apt and preferably bilingual name for the NNL.

Contributions! Brief, relevant and original articles, observations, reviews and letters (in English or French) in the general area of astronomy. Send them to Newsletter, R.A.S.C., 252 College St., Toronto.

## Reminders for Skygazers

Early 1970 will bring a partial eclipse of the moon, on Feb. 21, a total eclipse of the sun, on Mar. 7, a transit of Mercury and a close approach of Venus and Mars, both on May 9. See your *Observer's Handbook* for further details.

## Occultation of Star by Jupiter Predicted

Too late for inclusion in the 1970 *Handbook*, Gordon E. Taylor of H. M. Nautical Almanac Office reports a predicted occultation of the star SAO 139497 (8<sup>m</sup>.4) by Jupiter on June 5, 1970. From Washington, disappearance occurs at 02<sup>h</sup>.6 U.T., P.A. 2950; the reappearance is too low. From California, disappearance occurs in daylight; reappearance occurs at 07<sup>h</sup>.6 U.T., P.A. 98°. Similar times and position angles apply to parts of eastern and western Canada, respectively.

## Christmas Comets

A new comet was discovered by J. C. Bennett in Pretoria on Dec. 28, according to an IAU telegram. The position of the 8.<sup>m</sup>5 object, when discovered, was R.A. 1<sup>h</sup>03<sup>m</sup>, Dec. -65° 50'. The other Christmas comet, Tago-Sato-Kosaka, was just as prominent as was expected, according to first reports. This comet is moving slowly northward; its position on Feb. 3 is predicted to be R.A. 2<sup>h</sup>06<sup>m</sup>, Dec. +23°; these co-ordinates are increasing, at that time, at about 5<sup>m</sup> and 2° per day, respectively.

## A Decade of Progress

Among the top 10 science stories of the decade, according to *Time* magazine, 6 were related to astronomy. Much of this activity occurred in 1969. Studies of pulsars indicated that they are rapidly spinning superdense remnants of supernova explosions. The relation between quasars, discovered in the early 1960's, and other types of objects has been clarified somewhat in 1969, Orbiting Astronomical Observatory II recently celebrated its first birthday, and continues to supply vast amounts of data on stars and galaxies. Two successful moon landings were the highlights of 1969; they require no further discussion here, except to note that one group of our members took a particular interest in the flights.

A group of Montreal observers, under the chairmanship of Mrs. Pierrette Jean, took part in a vast international network known as LION (Lunar International Observers Network), whose object was to keep the moon under nearly continuous surveillance during the 6 days of the Apollo 11 manned space flight. The program was jointly sponsored by NASA, Lockheed Co. and the Smithsonian Institute.

78 positive reports were submitted for 31 lunar areas; of the 3 messages which were finally sent to Houston for transmission to the spacecraft, one originated with the Montreal group: "General obscuration (loss of observable lunar detail) reported for the central region of Mare Tranquilitatis at 10.10 G.M.T. July 20." It is hoped that similar surveillance can be continued and expanded for future missions.

Mrs. Pierrette Jean

Three occultations of the Pleiades in 1969 provided additional interest in the moon for our members. John Howell, of Calgary, reports on an unusual lunar occultation (though not of a Pleiades star) observed during the Apollo 10 space flight.

Observing conditions were very good on May 23, and the writer had spent an hour searching the lunar equatorial area in the hope that a brief reflection or perhaps a water vent would indicate the position of the astronauts.

At  $5^{\text{h}}35^{\text{m}}$  U.T., the star ZC 1392A ( $7^{\text{m}}0$ ) and its secondary 1392B ( $8^{\text{m}}5$ ),  $0'36$  distant at P.A.  $250^\circ$ , were quite close to the approaching dark lunar limb, some  $12^\circ$  from the north cusp. This very close double appeared single in the 10-inch f/8.1 Newtonian being used, at 200X. The profile of this section of the lunar limb shows a fairly uniform slightly serrated outline, with no very large elevations. The writer's position was 6.7 mi south of the predicted limit, and a short occultation of some 4.5 mm was expected.

At  $5^{\text{h}}38^{\text{m}}20^{\text{s}}$ , the  $7^{\text{m}}0$  primary was occulted, the  $8^{\text{m}}5$  secondary remaining visible. The effect was as if one of the astronauts had flicked a switch and "turned down" the brightness by  $1^{\text{m}}5$ ! At  $5^{\text{h}}38^{\text{m}}24^{\text{s}}$ , the secondary suddenly blinked off and on again in a fraction of a second, as probably the tip of a lunar peak passed in front of the star. At  $5^{\text{h}}38^{\text{m}}26^{\text{s}}$ , the secondary was finally occulted. The primary reappeared at  $5^{\text{h}}42^{\text{m}}53^{\text{s}}$ , about  $8^\circ$  nearer the cusp, but the secondary was too close to the primary and too faint to be seen emerging from behind the limb, nor was any slight change in magnitude apparent to the observer.

Another observer, Mr. Orla Johansen, was 10 mi north of the writer and 3.75 mi from the predicted graze limit. He timed the primary occultation at  $5^{\text{h}}38^{\text{m}}54^{\text{s}}$ , and the secondary at  $2^{\text{s}}$  later, but was disappointed in not observing the reappearance which should have occurred some 3 minutes later.

Perhaps Mr. Howell's letter will encourage other observers to try this interesting method for studying close binary stars.

1969 was a year of great progress in planetary astronomy. However, NASA was not the only organization probing the planets recently; the Hamilton Centre observers report their observations of Saturn in this issue of the *Journal*. The same group also reports observations of Venus:

A total of 69 drawings of Venus was compiled by Ken Chilton, John Garden, Dean May and Barry Sherman. Observations were begun in 1968, and continued until March 31, 1969, when the phase had dwindled to  $8^\circ$ . Dichotomy, or 50% phase, was observed on January 19. Only a few very indistinct markings were seen. No ashen light or any undue extension of the cusps was seen. Ken Chilton performed polarization observations, using a rotatable polaroid filter between the lenses of the eyepiece. Some polarization was detected, but this did not seem to be confined to specific areas. On the night of March 31, Venus was sufficiently far north of the sun that it could be seen both as an evening star in the northwest, and next morning as a morning star in the northeast!

An important event in 1969 for amateur astronomers the world over was the formation of the International Union of Amateur Astronomers (IUAA). Ken Chilton reports:

The idea of an IUAA was originally proposed by Patrick Moore and Ulf Johansson in a letter in *Sky and Telescope* in 1966. Response was good, and at the 1967 meeting of the IAU in Prague, an informal steering committee was established. Shortly thereafter, there came a magnificent offer from the Unione degli Astrofili Italiani and the Associazione Astrofili Bolognesi to host the inaugural Congress of the IUAA in Bologna. The offer was gratefully accepted by the steering committee, and on Saturday, April 19, 1969, the Congress convened.

The official opening was marked by a short address by Cardinal Lescaro of Bologna, who welcomed the delegates. In accordance with the rules of parliamentary procedure, a vote was taken to formally establish the IUAA. Dr. Luigi Baldinelli, President of the Associazione Astrofili Bolognesi, was nominated President of the IUAA. The election was unanimous! A major activity of the busy week-end was the drawing up of a constitution. The following officers were elected: Prof. Oto Oburka, Czechoslovakia, and F. Michael Flinsch, U.S.A., Vice-Presidents; H. G. Miles, U.K., Dr. V. A. Bronshten, U.S.S.R, and Ken Chilton, Canada, Secretaries; F. Marchesini, Italy, Treasurer.

The fledgling IUAA now needs the support of amateur astronomers, both individually and in groups, from all over the world. It is hoped that the IUAA can act as a vehicle for making coordinated and correlated observations of real use to the science of astronomy.

Closer to home, it was a year of good progress for our Society. The lengthy process of federal incorporation was completed, culminating in the first combined Annual Meeting and General Assembly in Toronto.

### **And in 1970**

Don't forget the 1970 General Assembly in Edmonton, May 15 to 18! Centres should already be thinking about displays. *Unattached members* who wish to present papers at the Assembly should send their manuscripts for approval to: Chairman, Session for Papers, R.A.S.C., 252 College St., Toronto, by *April 1*. Members of centres should submit their manuscripts to their Centre Council before sending them to Toronto.