

ROYAL ASTRONOMICAL SOCIETY OF CANADA

PLANETARY SECTION

Bulletin No 2

February 7, 1962.

PROGRESS REPORT To date I have received replies to my first Bulletin from seven of the Centres of the R.A.S.C. I will here list the names of my contacts:

<u>Centre</u>	<u>Contact</u>	<u>Address</u>
Halifax	B. W. Allen	419 Windsor St., Halifax, N.S.
Hamilton	Edward Ostrosser	70 Sussex Ave., Hamilton, Ont.
Kingston	G. M. Steed	13 Chestnut St., Kingston, Ont.
Montreal	Geoffrey Gaherty, Jr	636 Sydenham Ave., Montreal 6, Que.
Niagara Falls	Grayson C. Gardner	488 Philip St., Niagara Falls, Ont.
Ottawa	Dr W. L. Orr	1952 Fairbanks St., Ottawa 1, Ont.
Québec	Rene Doucet	650 Blvd des Prairies, Cap de la Madeleine, Co. Champlain, Que.

Observations have already been received from Hamilton, Québec, and Montreal, and I have been promised some drawings by the Ottawa Centre. The other Centres, while not engaged in systematic planetary work at the present time, have expressed interest in participating in the Section's program as it develops.

Regarding the responsibilities of the contacts, they are expected to pass on the information in this and future Bulletins to members of their Centre particularly interested in planetary problems and if possible to the general membership as well (i.e. at meetings of the Centre or via the Centre's newsletter where such exists). The exact means is left to the good judgement of the individual, although I will be glad to do anything within my power to help. (In this respect I can supply a limited number of extra copies of these Bulletins.) The contact will also be responsible for keeping me posted on local activities. The details of this will be worked out in practice.

JUPITER I will shortly begin preparing a report on 1961 observations of Jupiter as mentioned in Bulletin No 1. I would appreciate it if any further observations were sent to me as quickly as possible for inclusion in this report. From the considerable amount of material on hand it should be possible to obtain some very interesting results from one of the most active apparitions in recent years.

OBSERVING PROGRAM Initially there will be a deliberate concentration on observations of the planet Jupiter. Some of the reasons for this are:

- (a) It is observable over a large part of the year and in particular will be well placed for most of 1962.
- (b) Any good telescope of 3 inches aperture or greater will show detail worth recording.
- (c) There is a wide variety of observation programs to suit practically every taste.
- (d) The experience gained will make observations of other planets much more profitable.

Detailed instructions and suitable report forms will be available in a few months. In the meantime I will briefly describe some of the types of observation possible.

Drawings. With practice almost anyone can learn to draw well enough to record the appearance of astronomical objects. The idea is to copy the telescopic image accurately, not to strive for "pretty" effects. The value of a drawing can be greatly increased by the addition of semi-quantitative data such as estimates of conspicuousness, intensity, and colour as described below.

Conspicuousness Estimates. This involves estimating the relative ease with which the belts or zones can be seen. The telescope's eyepiece is racked out of focus to present a featureless disk. As it is refocused the order in which the belts (or zones) reappear gives a good measure of their conspicuousness.

Intensity Estimates. The relative intensities of the belts and zones can be estimated using a 0-10 scale. The information revealed by these observations is quite different from that obtained from conspicuousness listings; here the actual shade of the feature is estimated rather than its overall impression.

Colour Estimates. These are necessarily subjective but nonetheless of use if great care is taken to eliminate spurious effects. A reflector is almost obligatory for this sort of work.

Central Meridian Transits. The observer times to the nearest minute the transits of bright and dark markings across the central meridian of Jupiter's disk (estimated by eye). Although the accuracy of a given timing may be low, a sufficient number of timings of the same feature on various occasions during a month or more yields a rotation period of accuracy at least equal to the best spectroscopic work. Almost all our knowledge of Jupiter's atmospheric currents over the last 70 years is based on amateur observations of this type. Except for the most prominent markings a 6-inch or larger is required.

Photography. Good photographs provide a useful check on visual observations and also can be measured to derive the latitudes of the belts. Due to the limitations of the photographic process, a 6-inch is probably the minimum for successful results.

Satellite Phenomena. Observations have shown that the phenomena of Jupiter's satellites predicted in the Handbook are frequently in error by several minutes. The exact nature of these variations from theory has yet to be determined; timings to the nearest 0.1 minute of occultations, eclipses, and transits can therefore be of value.

Lest the sheer quantity of programs frighten those who have done little along these lines, I certainly do not expect everyone to participate in all fields! My own method of getting started was to make drawings (a lot of them pretty horrid) at every opportunity until I could honestly feel that I was making a fair representation of what my telescope could show. The serious planetary observer must have the ability to consider his work objectively; unless he continually seeks to maintain the highest standards, his observations will be of value to no one.

In spite of the emphasis I have placed on Jupiter, I do of course welcome any observations of the other planets. As the Section's program gains momentum it will be expanded to include these, and this in turn will lead to the appointment of Assistant Co-ordinators.

It is my hope that this Bulletin will stimulate further interest in planetary work. Your comments and suggestions will shape the ultimate form which our program will take.

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on Observational Activities.
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