The constellation Sagitta is to be found on A. S. I. Chart VI, but the star S (10) is not marked, its position on that chart would be about 2 mm. to the left of the G in the word Sagitta, and 3 mm. below the e in 'neb.' There is a convenient comparison star (11) close to it, a little to the north and preceding—magnitude 5·3. These stars will be rather difficult to pick up with the naked eye, but will be easily seen with a binocular.

For o and μ Cephei, see A. S. I. Chart I.

Comparison stars.	ζ Cephei magnitude,	3·5
	19 ,, ,,	5·2

Algol (β Persei) is also to be found on plate I.

Comparison stars.	α Persei magnitude	1·9
	ϵ ,, ,,	3·0
	ν ,, ,,	4·0

Outline of Work for the General Section.

BY THE DIRECTOR OF THE SECTION.

It is suggested that an excellent object for observation by members of the General Section is the Sun.

Persons living in India are naturally very favourably placed for making such observations; moreover, the size and comparative nearness of the Sun make it possible for good work to be done even by those who are indifferently equipped as regards instruments.

For the sake of definiteness, I shall describe briefly a line of investigation along which members of the Society might with some advantage direct their attention, and which is likely to yield valuable data.

Spots on the Sun's surface have always been a fascinating subject for study, and the general observation of both sunspots and faculæ is open to everyone possessing a small telescope. Drawings of these disturbances in the luminous envelope of the Sun can always be obtained by the method described at the end of this article, while for those possessing larger instruments, there is an opportunity for more detailed study, with the help, possibly, of the photographic plate.

Such sketches or photographs are always of value, especially when the records extend from day to day as they should do.

Members should remember most particularly and *in every case* to record the local time at which the sketch was made and to append the date. For those using small instruments without cross wires or declination circles, the approximate position of the spot at the time of drawing may be indicated by sketching in the whole solar disc, and subsequently dividing it up into squares on the drawing.

Observations such as these may be useful as giving details at different times of the *form* of a particular spot, facula, or group of spots.

In addition to work of this nature, it is possible that many members of the Section may care to undertake a more systematic series of observations and to attempt to obtain data which may be of value in the decision of some definite point of controversy in the field of Solar Physics.

Questions, for example, of the real origin of sunspots, and of the possible connection which may exist between their origin and the attraction of certain planets, would come under this heading, and much can be done towards the solution of these problems by systematic observations of the time of appearance of new spots, and of the growth to a maximum intensity of spots which have already appeared.

As a matter of actual practice the data wanted are—(1) the local time of appearance of any new spot combined with daily drawings of its shape and apparent structure, and (2) the appearance and position of old spots, the drawings in both cases to be accompanied by a note of the local time and the date.

The heliocentric longitude* of the spot should also be observed by those with suitable instruments. Failing that, observers may note the time and date of the disappearance of a spot over the edge of the Sun's disc.

Data such as I have described, when a sufficient number of observations have been accumulated (especially at the time of the eleven yearly periods of sunspot maxima) may be used in testing Birkeland's theory of the origin of sunspots and in finding the period of rotation of the supposed solar nucleus. Birkeland supports the theory of a solid solar nucleus, whose time period is different from that of the gaseous envelope. Violent disturbances in equilibrium between the solid and gaseous portions of the Sun are supposed to have their seat in certain very well defined crater-like tracts on the surface of the nucleus, and these disturbances are what we see as spots on the surface of the photosphere. By

* The heliocentic longitude is the longitude of the spot as seen by an observer at the Sun's centre.

an ingenious method of dealing with the relative motion of the photosphere and the supposed solid nucleus, Birkeland is able to assign to each spot-area on the photosphere a definite crater-area on the nucleus, the crater-areas being apparently persistent in position for many years. Further data as to the position and place of appearance of new spots are wanted in order to test the validity of results already obtained, hence the suggested series of observations, which would probably afford interesting work for a good many years.

As regards the method of observing the Sun. By those with large instruments the direct method may be used, or the photographic.

In the former case, it is perhaps worth while to warn those who are unfamiliar with this kind of practical work of the extreme importance of protecting the eye with a piece of dark glass when making observations of the Sun with a telescope.

A very convenient way of obtaining drawings of the Sun's disc, and of spots which may exist thereon, is to allow the direct rays of the Sun, after passing through a hole in a window shutter or screen, to fall on the object glass of the telescope in the ordinary way, and then to place a piece of drawing paper at the eye-piece end of the instrument instead of the eye.

A real image of the Sun will be formed on the paper and may easily be sketched, provided the paper is steadily supported on some convenient stand. By varying the distance between the eye-piece and the paper, and by suitably focussing the former, the size of the image may be varied at will.