

PLANETARY SECTION

MARS COLOUR REFERENCE SYSTEM

The purpose of this project is to compile a colour map of Mars utilizing a system which, it is hoped, will eliminate the difficulties which arise from the inability of observers to objectively convey to others the subtle colours seen on Mars. Colour sketches can be made, of course, but media which are capable of giving a true representation are difficult to use at the telescope and are also time consuming.

The system selected is designed to make it unnecessary for the observer to decide upon a name for a colour seen; he simply records a code number which refers to a particular hue and tint in the reference system. In this manner a more objective summary of all observations submitted can be made.

The Colour Reference System consists of two series -

I -- a red-yellow group consisting of 6 strips, each containing 7 colour "chips", providing 42 shades;

II - a grey group consisting of 5 strips, each containing 7 "chips", providing 35 shades.

The observer thus has a total of 77 shades from which to select a possible match for the colours seen on Mars.

The shades selected for this experiment have been taken from the Du Pont "Colorizer" paint system and have been chosen from among the 1322 available tints on the basis of colour observations made at previous apparitions of Mars. The shades encompass a wider range than has been observed in the past but are included in order to avoid confining observers to a "prejudiced" selection.

Beneath each "chip" on a strip is a code number by which that particular shade is to be identified. In the upper right corner of each strip is found a number which can be used to readily arrange the strips in order of hue, as follows:

<u>Red-Yellow Series</u> - Strip No.	<u>Grey Series</u> - Strip No.
25	125
26	149
33	155
41	157
42	158
57	

The observer may experiment in order to find the most convenient manner in which to handle the colour strips but it is suggested that they may be fastened together, in two groups, by means of a fastener inserted through the holes at the top, or they may be glued or stapled to a sheet of cardboard. One method requires that the strips be viewed in turn while the other permits them to be seen all at once.

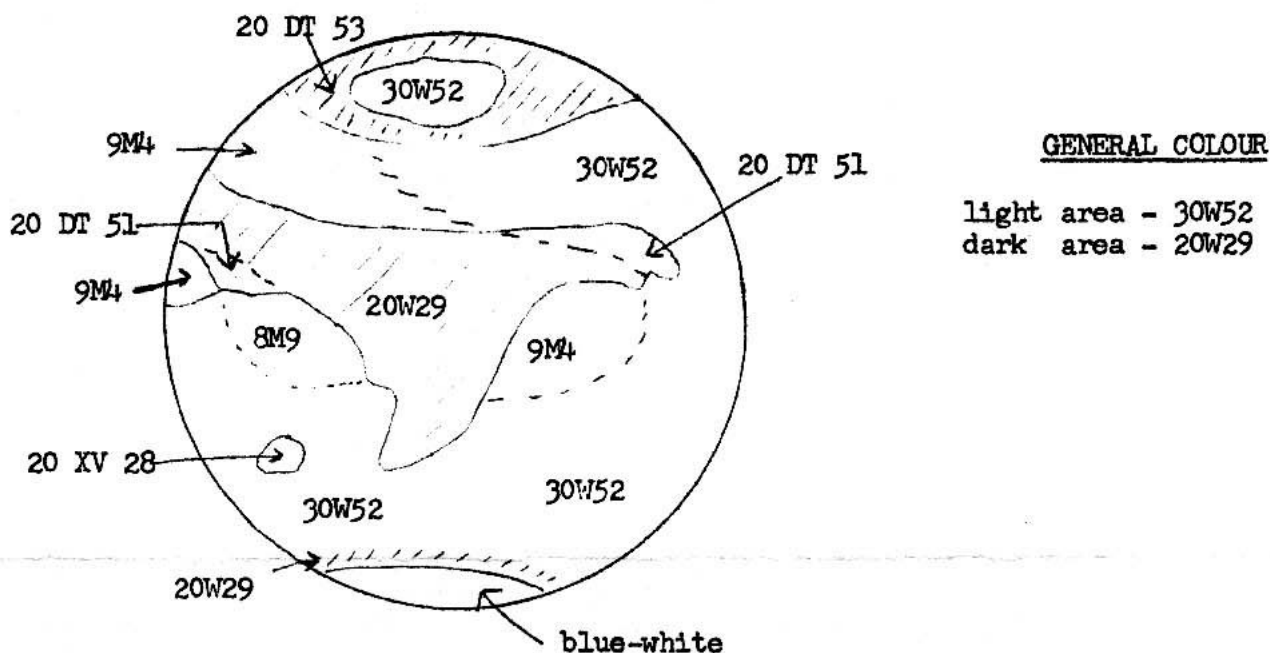
Essential pieces of equipment are a small clip-board to hold the sketching paper; a good light source, preferably a 60 or 100 watt frosted white bulb placed at the telescope; and sufficient extension cord to reach a source of house current.

The presence of a strong light near the telescope is not detrimental, as in other types of observing, owing to the brightness of the Martian image, and is necessary for proper viewing of the colour chips.

Naturally, colour filters are NOT to be used over the eyepiece.

It is recommended that the observer first sketch the major Martian surface on a prepared disk and, with pencil only, lightly shade in the darker areas. After a period of 20 minutes (to permit eye adaptation) he should then compare the group of red-yellow reference strips, one by one, with the general over-all appearance of Mars as seen in the telescope. Initially, this comparison might prove to be difficult, but with a little perseverance an observer will narrow his choice down to one strip and then, with further comparison, select one colour chip as being representative of the general colour of the Martian desert area. The observer would then take up the group of grey strips and, following the same procedure, would choose the closest colour match for the dark areas. He should then make note of the corresponding numbers of the colours selected, to one side of the Mars drawing.

The observer, having by now become familiar with the use of the Colour Reference System, should then examine a selected region on the Martian disk for subtle differences of colour. Such areas have been observed in the past on both the light and dark regions of Mars. When localized colour variations are observed, an outline depicting the boundaries and extent of such colour change should be noted on the drawing and the code number for this colour lettered directly on the drawing. Should this area be too small to superimpose the code number, simply use an arrow to identify it. An example of a hypothetical Mars drawing is presented below to aid the observer in the proper use of the Colour Reference System.



Archie L. Ostrander,
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