

OBSERVING MARS IN 1971

In 1971, the planet Mars will attract considerable attention, from laymen and from astronomers. For, this is the year in which Mars reaches its minimum distance from the Earth, some 35 million miles on August 10. No doubt, the press will publish a full quota of stories about canals, life on Mars, and whether or not the two moons of Mars are, in fact, satellites put into orbit by a long vanished race. There will invariably be the usual rash of flying saucer tales as is customary in years of close approach.

As Mars' crimson disc draws nearer and nearer, increasing in apparent diameter to a maximum of 25" of arc, astronomers the world over will commence to observe the markings and other phenomena associated with Mars. Since Mars will have an extreme southerly declination (-25°), it will be poorly placed for observation from most of Canada. Generally speaking, Mars will be only $15-20^{\circ}$ above the southern horizon. (Observers can find the altitude of Mars by adding 25° to their latitude and subtracting the total from 90° .)

There may be some Canadian observers, however, who would like to observe Mars during the coming opposition. Since, at the best of times, Mars is a difficult planet to observe, the following may be of some assistance.

Before observing Mars, the observer should be sure that his eyes are fully dark-adapted. When this has been successfully achieved, a cursory examination of the planet should be made. At first glimpse, a view of Mars may be somewhat disappointing. The viewer is liable to see only a pale pink disc with no features at all. The secret to drawing out the famous and illusory markings is to keep the eye at the eyepiece. Through prolonged staring, the features of the Martian surface will become visible. ~~From~~

From night to night, certain Martian features appear to undergo changes. The observer might keep a careful record of the intensities of these areas (0 being the lightest area and 10 being the colour of the background sky. All of the features may then be ranked on this scale.) Areas suspected of change are: Thoth, Solis Lacus, Trivium Charontis, Lunae Palus and Tempe. These may be found on the map on page 67 of the 1971 OBSERVER'S HANDBOOK.

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Of course, any clouds, dust storms or other atmospheric phenomena should be noted.

Those who possess telescopes of 10" aperture or larger may find that it will be possible to take photographs of Mars. This may be done without filter, or with either blue or yellow filters. The diameter of the photographic image ought not to be less than 3 mm. Ilford Pan F or Tri X, exposed from 2 to 4 seconds, may be used to good advantage. The developing time should be protracted slightly. A little experimentation will yield good results.

The writer would appreciate progress reports from observers who undertake the observation of Mars in 1971.

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