

PLANETARY SECTIONMARS

As Canada's 100th birthday is also the year for one of the more favourable apparitions of Mars, the National Co-ordinator suggests that a 1967 map of Mars should be prepared by this Section as our Centennial contribution. A project of this magnitude requires the active participation of observers from all Centres of the Society to ensure its success.

The red planet will be nearest the earth on April 21-22, an ideal time for comfortable observing. Observations should cover the months of March, April and May with a concerted effort between March 23 and May 23. Since the period of rotation of Mars is 40 minutes longer than that of the earth, at the same time an observer will look directly at a given area on Mars 40 minutes later than on the previous night. Consequently, any Martian feature can be viewed on successive nights at a different local time, with new areas coming into view. After forty days, both hemispheres will have been observed from any one location. The advantage of having participants observe and record from various locations across Canada is readily apparent. With the time zones covering $5\frac{1}{2}$ hours on the same evening, an observer in Halifax and an observer in Vancouver (at 8:00 p.m. local time) will see totally different regions of Mars (displaced some 75°).

COLOUR MAP:

With the co-operation of members of Centres of the R.A.S.C., this Section will attempt to produce this map in an accurate colour representation. For the serious participant, a selection of 77 colour chips has been obtained, 35 hues of colours which might appear on the ocher "desert" maria, and 42 shades for the dark "continental" regions. These are numbered and mounted on cardboard strips and packaged for convenient comparison with the colour of the Martian disk observed at the eyepiece.

The observer should select from the strip the colour approximating that viewed and write the number on the particular region on his drawing. For these comparisons a clear white tungsten light should be used without colour filters. A complete set of colour strips will be sent to each Centre shortly with special instructions. A limited supply of additional sets is available.

OBSERVING HINTS:

After a first telescopic glimpse of Mars, a beginner may feel that this small pinkish disk is featureless except for the bright white areas at the poles. However, continuous observing of the planet for at least 20 minutes permits the eye to detect contrasts of shade and colour. Only then will the observer see the fine detail which is so apparent to one with experience.

Sketching is a valuable aid in training the eye to detect all there is to see. The observer then subconsciously scrutinizes small areas of the disk to enable these to be recorded. This type of search makes one fully aware of the abundance of detail that can be resolved. A red filter (Kodak Wratten 25) used at the eyepiece helps in discerning the greys from the reds.

At the eyepiece of an inverting telescope, the observer will notice that the Martian features first appear on the right limb, move from right to left (Martian west to east) across the central meridian of the disk and disappear on the left limb. As this motion is rapid, all drawings or sketches should be completed in as short a time as possible (5-10 minutes); the accuracy of the central meridian notations should be to the nearest minute.

Sample report forms are enclosed; please request additional copies.

DATA FOR THE 1967 APPARITION OF MARS

Date	R.A.	Decl.	0 hrs. U.T.		Central Meridian	Transit Time of Central Meridian
			Diameter of Disk	Mag.		
March 15	14 ^h 06 ^m	-10°04'	12.8"	-0.6	41°	21 ^h 50 ^m
April 1	13 54	9.08	14.5	-1.0	249	7 34
April 21	13 26	7.07	15.6	-1.3	74	19 31
May 1	13 13	6.11	15.4	-1.2	346	0 54
May 15	12 59	5.29	14.4	-0.9	222	9 23
June 1	12 56	5.51	12.8	-0	68	19 58

SATURN

This planet was observed frequently by Section members from October through December 1966. While the rings of Saturn thinned from night to night, the effect was most inspiring as it was realized that this thin thread of light at a distance of 800 million miles subtended only 1/20th of a second of arc on the evening of October 26. The following 15 observers made detailed observations of the ring system during the closure period as summarized below:

<u>Date</u>	<u>Observer</u>	<u>Centre</u>	<u>Aperture</u>	<u>Remarks</u>
October 20, 1966	M.Gerasimoff	Windsor	2.4" O.G.	Rings, bright, white, clear
23	S.Brown	Montreal	4"	Steady
23	D.Levy	"	8" refl.	Steady
23	M.Gerasimoff	Windsor	2.4" O.G.	Slight averted vision helped
25	A.Ostrander	Toronto	6" refl.	Very faintly seen
25	M.Gerasimoff	Windsor	2.4" O.G.	Seen occasionally, only averted
26	"	"	" "	Not visible
26	A.Capper	Montreal	3½" Ques.	Visible
26	A.Ostrander	Toronto	6" refl.	Not visible
26	D.FitzGerald	"	6" refl.	Not visible
26	"	"	8" refl.	Visible
26	R.V.Ramsay	"	8" refl.	Visible - very thin
26	R.R.Thompson	Maple, Ont.	6" O.G.	Visible - easy
26	I.Williamson	Montreal	6" O.G.	Visible
26	S.Brown	"	6" O.G.	Visible
26	L.Nikkinen	"	6" O.G.	Visible
27	A.Capper	"	3½" Ques.	Very thin
27	M.Kalbfleisch	Toronto	12½" refl.	Doubtful
27	R.Racine	Richmond Hill, Ont.	24" refl.	Not visible
28	Scheeline		6" refl.)
28	R.Prezament		6" refl.) Traces
28	D.Levy		8" refl.)
28	C.Papacosmas		6" refl.)

From 28 October to 17 December 1966, the non-illuminated face of the ring system could be seen from earth. The possibility that reflected light from Saturn might illuminate this side of the ring or that the rings were sufficiently transparent and thin to permit some sunlight to filter through challenged some members to attempt observations. R.V. Ramsay and D.J.FitzGerald of Toronto both reported negative results on November 20 when the rings were tilted $\frac{1}{4}^{\circ}$ to their line of sight. R. Racine, using the David Dunlap 24" reflector, reported that he succeeded in detecting faint threads of the rings during moments of good seeing.

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