

NOTES ON BASE
This is one map in a series of topographic maps covering the entire surface of Mars at nominal scales of 1:25,000,000 and 1:5,000,000 (Batson, 1973; 1976). The major source of map data was the Mariner 9 television experiment (Masursky and others, 1971; de Vasconcelos and others, 1972).

ADOPTED FIGURE
The figure of Mars used for the computation of the map projection is an oblate spheroid (flattening of 1/192) with an equatorial radius of 3393.5 km and a polar radius of 3375.7 km.

PROJECTION
The Mercator projection is used for this sheet, with a scale of 1:5,000,000 at the equator and 1:4,336,000 at lat 30°. Longitudes increase to the west in accordance with usage of the International Astronomical Union (IAU, 1971). Latitudes are areographic (de Vasconcelos and others, 1972).

CONTROL
Planimetric control is provided by photogrammetric triangulation using Mariner 9 pictures (Davies, 1973; Davies and Arthur, 1973) and the radio-tracked position of the spacecraft. The first meridian passes through the crater Airy-O (lat 5.19° S) within the crater Airy. No simple statement is possible for the precision, but local consistency is 10-15 km.

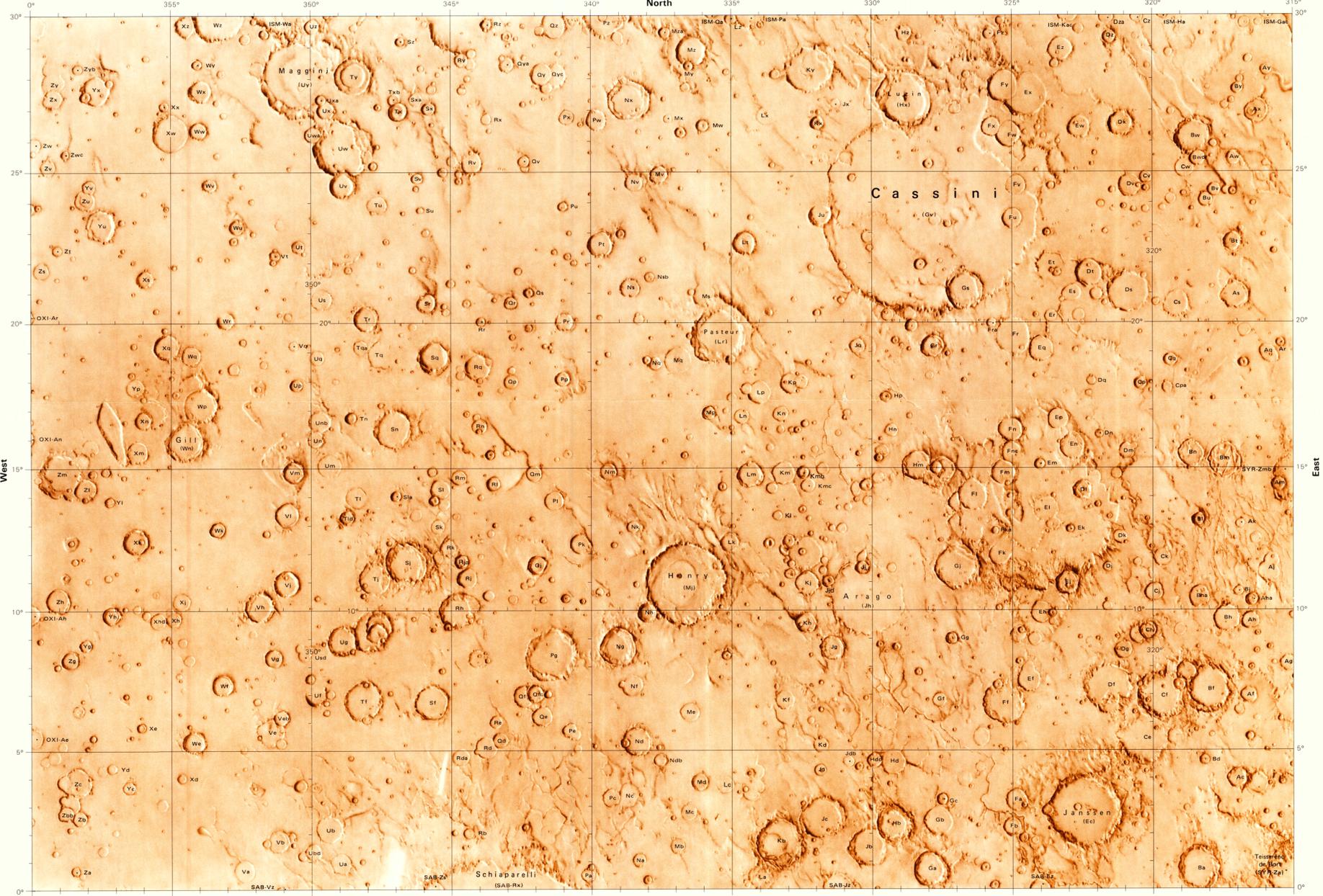
MAPPING TECHNIQUE
A series of mosaics of Mercator projections of Mariner 9 pictures was assembled at 1:5,000,000. Shaded relief was copied from the mosaics and pasted with uniform illumination with the sun to the west. Many Mariner 9 pictures besides those in the base mosaic were examined to improve the portrayal (Levinthal and others, 1973; Green and others, 1975; Inge and Bridges, 1976). The shading is not generalized and may be interpreted with nearly photographic reliability (Inge, 1972). Shaded relief analysis and representation were made by Anthony G. Sanchez.

COLOR
No attempt was made on the map to duplicate precisely the color of the Martian surface, although the color used does approximate it.

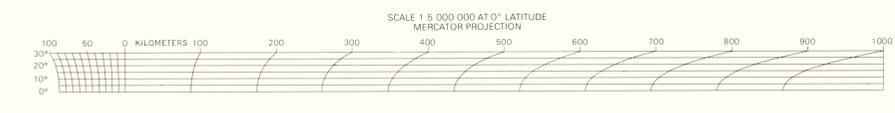
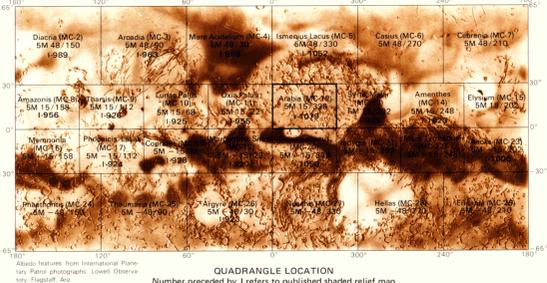
NOMENCLATURE
All names on this sheet are approved by the International Astronomical Union (IAU, 1974; 1977). Double and triple letter designations for craters refer to position on the map and are derived from a grid based on equidistant meridians and parallels; the alphabet (I and O omitted) runs in the direction of increasing longitude (W) and latitude (N). The complete designation of a crater is the name of the quadrangle followed by a double or triple letter. The prefix ARA (identifying the Arabia quadrangle) is part of the complete designation but, for brevity, is not shown on most craters. Some craters have commemorative names; letter designations for these craters are shown in parentheses. Where craters lie mostly on an adjacent map, their letters are shown on the other map; where craters lie exactly on the boundary of two maps, their letters are derived from the eastern or southern map.

MC-12: Abbreviation for Mars Chart 12
M 5M 15/338R: Abbreviation for Mars 1:5,000,000 series; center of sheet, 15° N latitude, 338° longitude; shaded relief map R.

REFERENCES
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QUADRANGLE LOCATION
Number preceded by 1 refers to published shaded relief map



NOTE TO USERS
Users noting errors or omissions are urged to indicate them on the map and to forward the map to Astrogeologic Studies, Geologic Division, 2255 North Gemini Drive, Flagstaff, Arizona 86001. A replacement copy will be returned.

Camera pictures

Index No.	DAS No.	Index No.	DAS No.
1	9306119	24	6116343
2	9306353	25	6116560
3	9306863	26	6116713
4	9307026	27	6117000
5	9307809	28	6118019
6	6611963	29	6118793
7	6611633	30	6118443
8	6611963	31	6118733
9	6611403	32	6118333
10	6611403	33	6118733
11	6611363	34	6118713
12	6611023	35	6118763
13	6611063	36	6118763
14	6611063	37	6651753
15	6611063	38	6651013
16	6611063	39	6651333
17	6611063	40	6651013
18	6611063	41	6651013
19	6611063	42	6651013
20	8118913	43	6651293
21	8118913	44	6651223
22	8118913	45	6651153

INDEX TO MARINER 9 PICTURES
The mosaic used to control the positioning of features on this map was made with the Mariner 9 A-Camera pictures outlined above. Useful coverage is not available in cross hatched areas. The DAS numbers may differ slightly (usually by 5) among various versions of the same picture.

SHADED RELIEF MAP OF THE ARABIA QUADRANGLE OF MARS
MC-12
M 5M 15/338 R
1978



R103184
A.V.
C.L.

M(200)
I-1079
C1