

### NOTES ON BASE

This is one map in a series of topographic map sheets 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, 1970).

## 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 3393.4 km and a polar radius of 3375.7 km.

## PROJECTION

The Lambert conformal conic projection is used for this sheet with standard parallels at 35.8° and 59.2°. A scale of 1:4,336,000 at lat 30° was chosen to match the scale at lat 30° of the adjacent Mercator projections. Longitudes increase to the west in accordance with usage of the International Astronomical Union (IAU 1971). Latitudes are areographic (de Vaucouleurs and others, 1973).

## 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-0 (lat  $5.19^{\circ}$  S) within the crater Airy. No simple statement is possible for the precision, but local consistency is about 10 km.

## MAPPING TECHNIQUE

A series of mosaics of Lambert conformal conic projections of Mariner 9 pictures was assembled at 1:5,000,000.

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

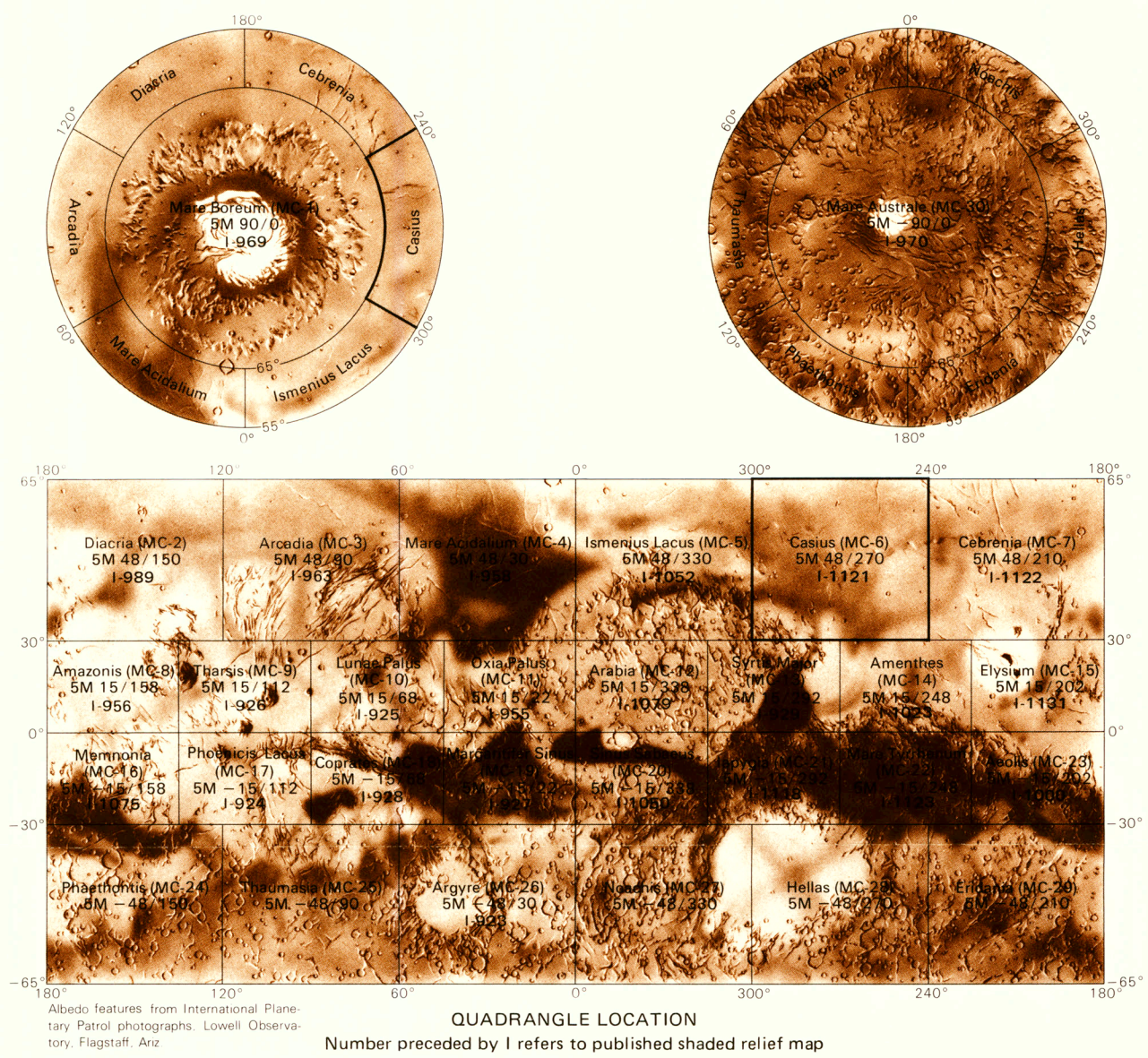
All names on this sheet are approved by the International Astronomical Union (IAU, 1974). Double and triple letter designations for craters refer to position on the map and are derived from a grid based on equidistant meridians and parallels; the alphabet (I and O omitted) runs in the direction of increasing longitude (W and E) and latitude (N). The complete designation of a crater is the name of the quadrangle followed by a double or triple letter. The prefix CAS (identifying the Casius 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. Those craters lying exactly on the boundary of two maps, their letters are derived from the eastern or southern map.

MC-6: Abbreviation for Mars Chart 6.  
M 5M 48(270) R: Abbreviation for Mars 1:5 000 000 series; center of sheet

## REFERENCES

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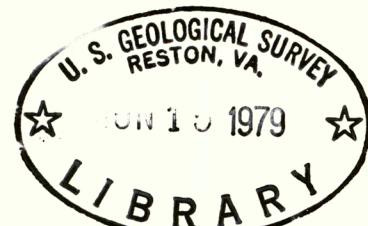
Interior—Geological Survey, Reston, Va.—1978—G78241  
Prepared on behalf of the Planetary Geology Program,  
Planetary Division, Office of Space Science, National  
Aeronautics and Space Administration under contract  
W-13-709



## SHADED RELIEF MAP OF THE CASIUS QUADRANGLE OF MARS

MC-6  
M 5M 48/270 R  
1978

**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.



For sale by Branch of Distribution, U.S. Geological Survey,  
1200 South Eads Street, Arlington, VA 22202, and Branch of Distribution  
U.S. Geological Survey, Box 25286, Federal Center, Denver, CO 80225.

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~~C 269~~  
~~C. 2~~

**M(200)**  
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