

NOTES ON BASE
This map is one of two showing shaded relief and albedo on Mars between lat 15°N and 15°S. Images used in the portrayal are Viking Orbiter 1 pictures taken during a season of minimum variation in surface albedo patterns, when the solar planetocentric longitude (L_p) with respect to Mars was 65° to 75° (with the exception of small areas near long 360° compiled with an L_p of 89°). All pictures were taken through clear or red filters when the solar zenith angle was small, during Viking spacecraft orbital revolutions 583 through 687 (March and April of 1976) and 1323 through 1374 (February and March of 1980).

ADOPTED FIGURE
The figure of Mars used for computing the map projection is an oblate spheroid (flattening of 1/192) with an equatorial radius of 3,393.4 km and a polar radius of 3,375.7 km.

PROJECTION
The Mercator projection is used for the two maps in this set. Longitudes increase to the west in accordance with astronomical convention for Mars. Latitudes are arographic.

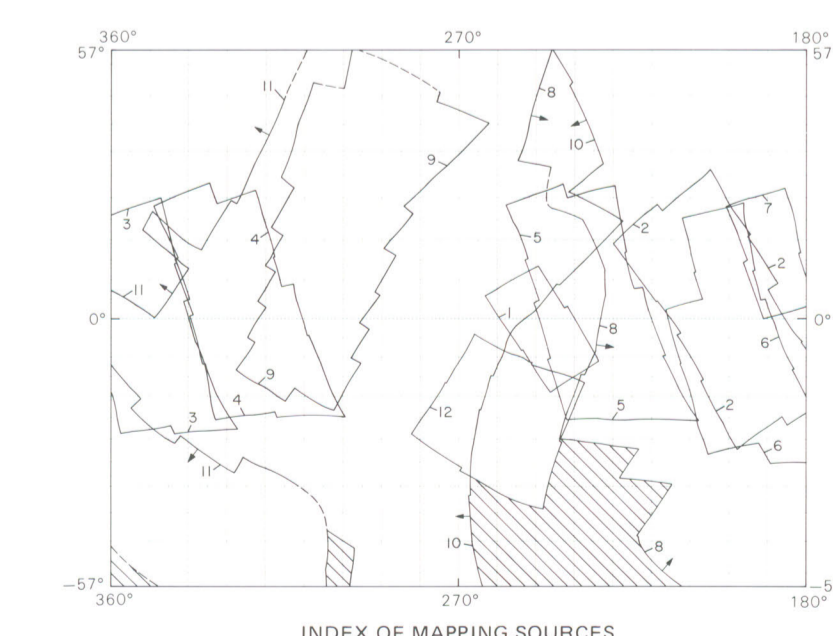
CONTROL
Planimetric control for the 1:5,000,000-scale maps used to compile the bases for the two maps was derived from photogrammetric triangulation using Mariner 9 pictures (Davies, 1973). This control net was upgraded through the use of Viking data (Davies and others, 1979). At least 85 percent of the image control points lie within 60.5 km of the positions established in 1978.

MAPPING TECHNIQUE
The mapping bases used for this series were assembled from 1:5,000,000-scale shaded relief maps (Batson and others, 1979), reduced and digitally transformed to the Mercator projection where necessary. During shaded relief portrayal, features on these bases were used to position details taken from Viking Orbiter pictures. Shaded relief is shown as if illuminated from the west; methods and interpretation techniques used were described by Inge (1972) and Inge and Bridges (1975). Details of the albedo markings were taken from medium-resolution Viking Orbiter images and drawn on a photographic copy of the original shaded relief map. The overall albedo balance was maintained by reference to a low-resolution solar albedo map made with Viking Infrared Thermal Mapper (IRTM) data (Kieffer and others, 1981; Pleskot and Miner, 1981). Shaded relief analysis and representation were made by Barbara J. Hill. Analysis and portrayal of albedo markings were made by Susan L. Davis.

NOMENCLATURE
All names shown on this sheet are approved by the International Astronomical Union (IAU), 1974, 1977, 1980, and 1983 except for provisional names, which are indicated by an asterisk. M 15M 0/270 AN Abbreviation for Mars 1:15,000,000 series; center of map lat 0° long 270°; shaded relief and markings (AN), nomenclature (N).

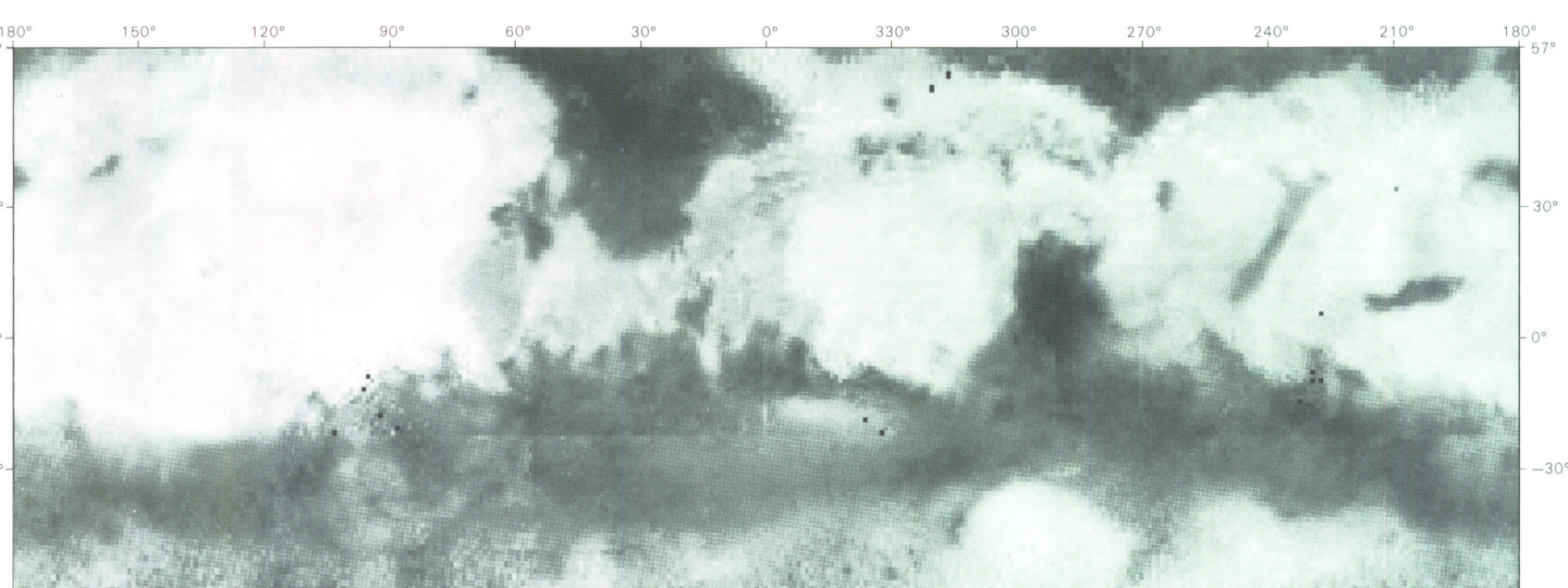
REFERENCES
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SCALE 1:15,000,000 (1 mm=15 km AT 0° LATITUDE)
MERCATOR PROJECTION



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SOLAR ALBEDO, EASTERN AND WESTERN REGIONS OF MARS
This map was made with data from the Viking Infrared Thermal Mapper (IRTM). Broadband brightness (0.3 to 3.0 microns) measured by the IRTM was reduced to Lambert albedo for four Martian seasons that were relatively free of atmospheric dust and local brightening. These data were averaged into resolution elements of 1° latitude by 1° longitude. Absolute albedo range from 0.16 to 0.33 (Pleskot and Miner, 1981).



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