DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Prepared in Cooperation with the
JET PROPULSION LABORATORY, CALIFORNIA INSTITUTE OF TECHNOLOGY
FOR THE LANGLEY RESEARCH CENTER
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

ATLAS OF MARS
1:250,000 TOPOGRAPHIC SERIES
PART OF THE CYDONIA REGION
M 25OK 44/10 CM, 1976
I-990

NOTES ON BASE

This is one photomosaic in a set of topographic map sheets covering areas of special interest on Mars at nominal scales of 1:1,000,000 and 1:250,000 (Batson, 1973). 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 transverse Mercator projection is used for this sheet, with a scale of 1:250,000. 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-O (lat 5.19° S) within the crater Airy. No simple statement is possible for the precision, but local consistency is 2 km.

IMAGE PROCESSING

Digital image processing, performed by the Jet Propulsion Laboratory, California Institute of Technology, included contrast enhancement and "high-pass filtration," which accentuates small details in the image and subdues broad variations in tone.

NOMENCLATURE

Names on this sheet are approved (IAU, 1974; Millman, written commun., 1975), except the following names which are proposed: Cydonia Mensae, Chom, Cruz, Dein, Gaan, Gwash, Lutsi. Named craters bearing double or triple letters in parentheses are designated by the same letters on the 1:5,000,000 Mare Acidalium sheet which covers this area. The prefix ACI–(identifying the Mare Acidalium sheet) is part of the complete designation, but for brevity it is not shown on most craters.

M 25OK 44/10 CM: Abbreviation for Mars, 1:250,000 series; center of sheet 44° N latitude 10° longitude; controlled photomosaic, CM.

REFERENCES

Batson, R. M., 1973, Cartographic products from the Mariner 9 mission: Jour. Geophys. Research, v. 78, no. 20, p. 4424-4435.
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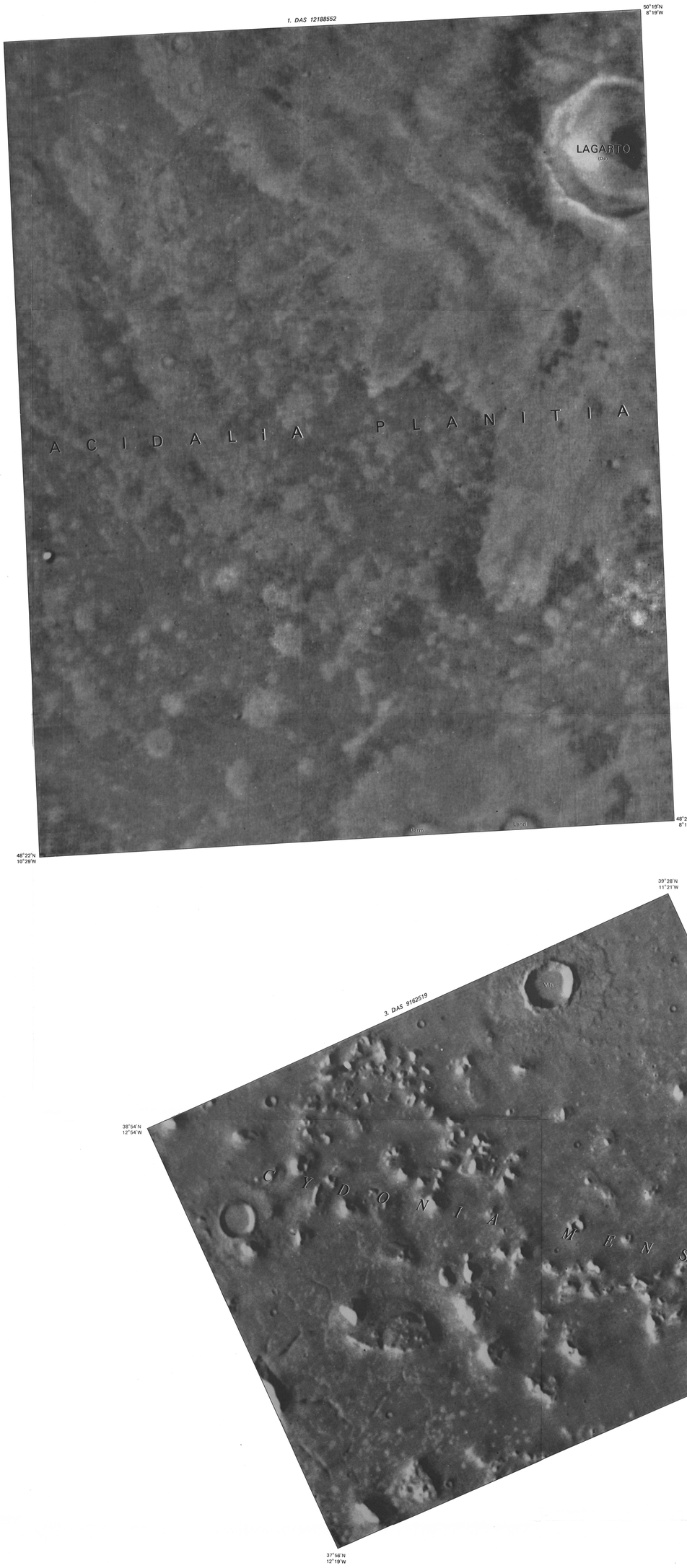
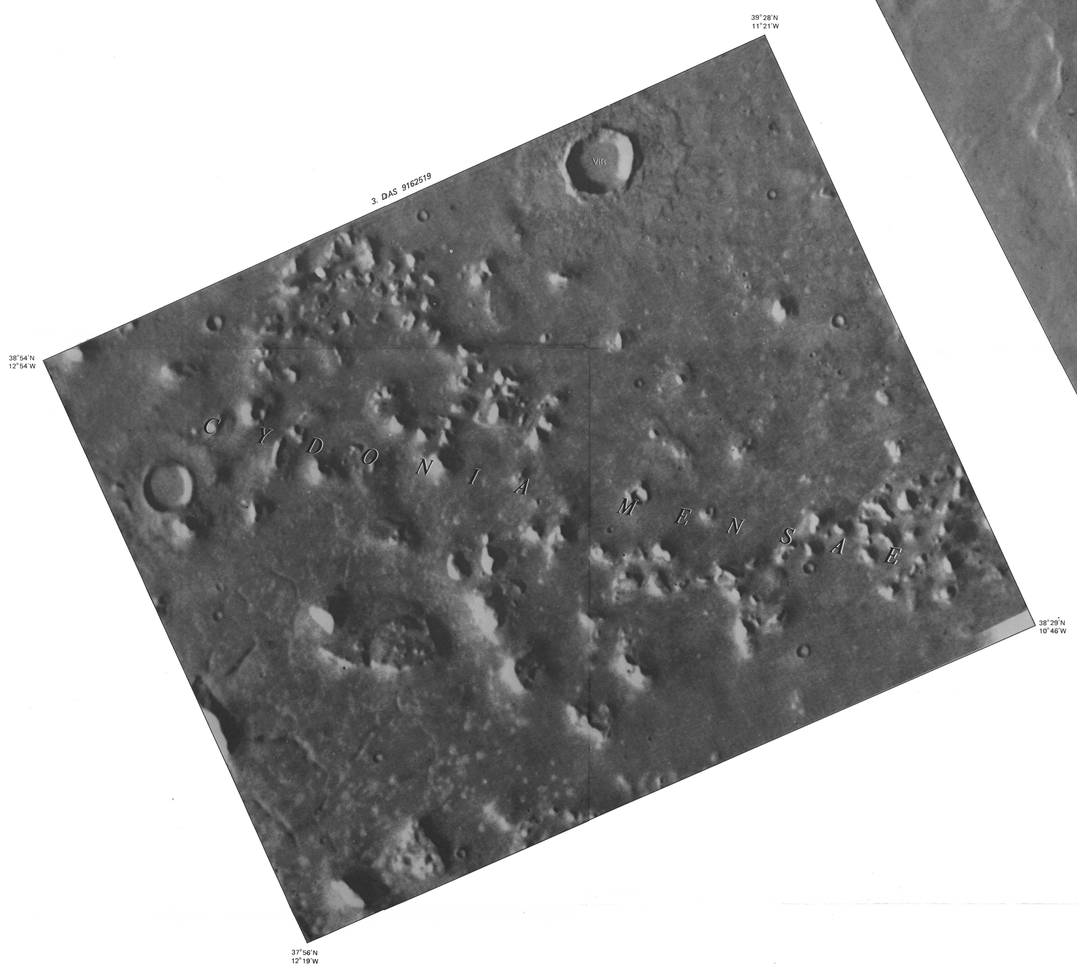
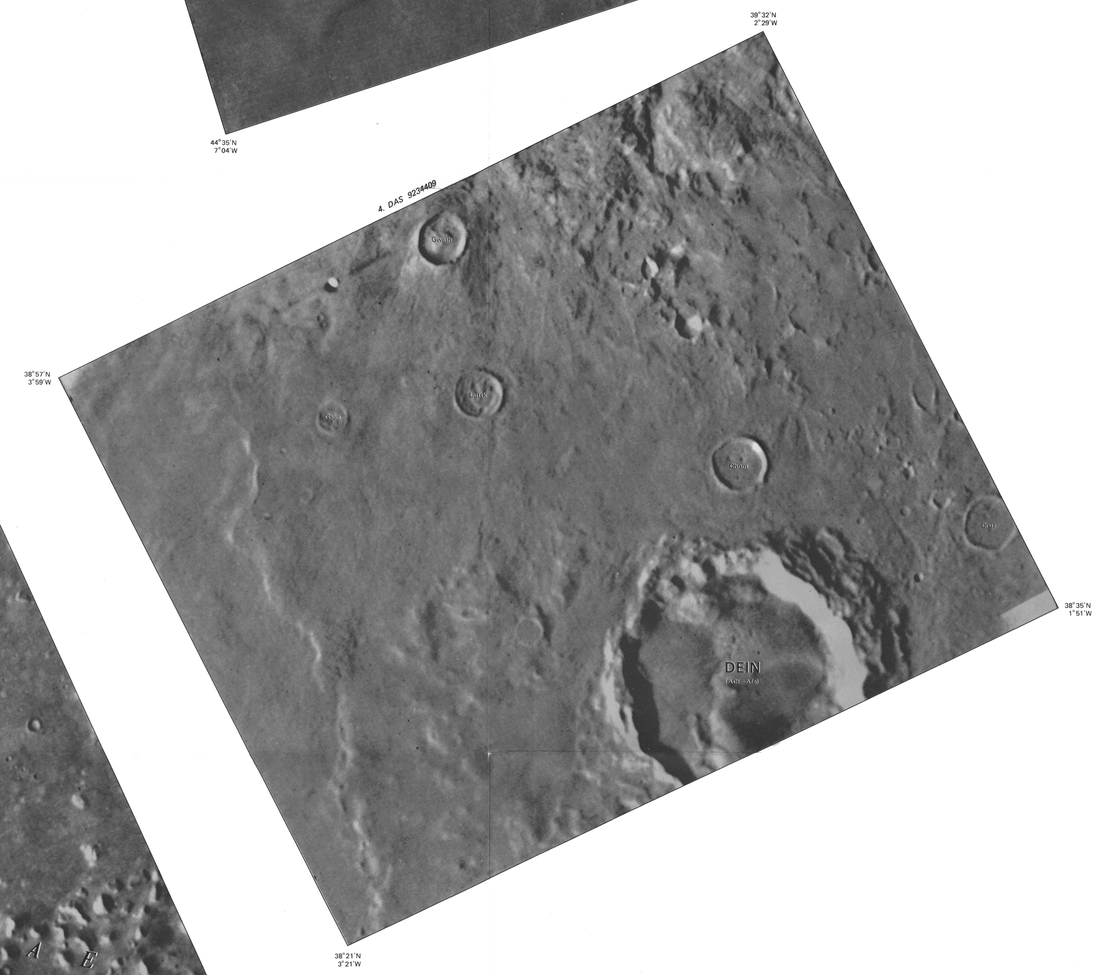
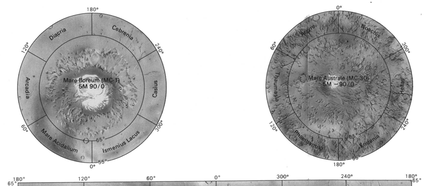
Masursky, Harold, Batson, R. M., Borgeson, W. T., Carr, M. H., McCauley, J. F., Milton, D. J., Wildey, R. L., Wilhelms, D. E., Murray, B. C., Horowitz, N. H., Leighton, R. B., Sharp, R. V., Thompson, T. W., Briggs, G. A., Chandeysson, P., Shipley, E. N., Sagan, Carl, Pollack, J. B., Lederberg, Joshua, Levinthal, E. C., Hartmann, W. K., McCord, T. B., Smith, B. A., Davies, M. E., de Vaucouleurs, G. D., and Leovy, C. B., 1970, Television experiment for Mariner Mars 1971: Icarus, v. 12, no. 1, p. 10-45.
de Vaucouleurs, G. D., Davies, M. E., and Sturms, F. M., Jr., 1973, The Mariner 9 areographic coordinate system: Jour. Geophys. Research, v. 78, no. 20, p. 4395-4404.









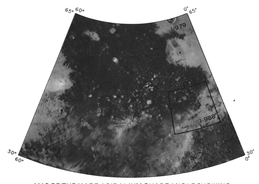
QUADRANGLE LOCATION
Arrow indicates location of the Cydonia region
Number preceded by I refers to published topographic map

Albedo features from International Planetary Patrol photographs, Lowell Observatory, Flagstaff, Ariz.

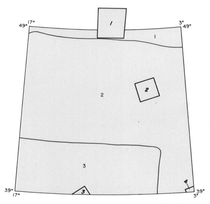
N

SCALE 1:250 000

5 0 KILOMETRES 5 10 15 20 25 30 35 40 45



MAP OF THE MARE ACIDALIUM QUADRANGLE SHOWING
LOCATION OF THE CYDONIA REGION



A-camera pictures		High resolution B-camera pictures	
Index No.	DAS No.	Index No.	DAS No.
1	12188617	*1*	*12188552*
2	9162624	*2*	*9162659*
3	9162484	*3*	*9162519*
		4	*9234409*

INDEX TO MARINER 9 PICTURES
The high resolution B-camera pictures in the Cydonia region are shown above in their proper position superposed on the A-camera pictures used to control the positioning of features on map I-988, Topographic map of the Cydonia Region of Mars.

HIGH RESOLUTION MARINER 9 PICTURES IN THE CYDONIA REGION OF MARS
(VICINITY OF THE VIKING MARS 1975, SPACECRAFT 2 LANDING SITE)
M 25OK 44/10 CM
1976

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For sale by U.S. Geological Survey,
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