DEPARTMENT OF THE INTERIOR UNITED STATES GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE

JET PROPULSION LABORATORY, CALIFORNIA INSTITUTE OF TECHNOLOGY

AND THE

LANGLEY RESEARCH CENTER

NORTH

LANGLEY RESEARCH CENTER
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

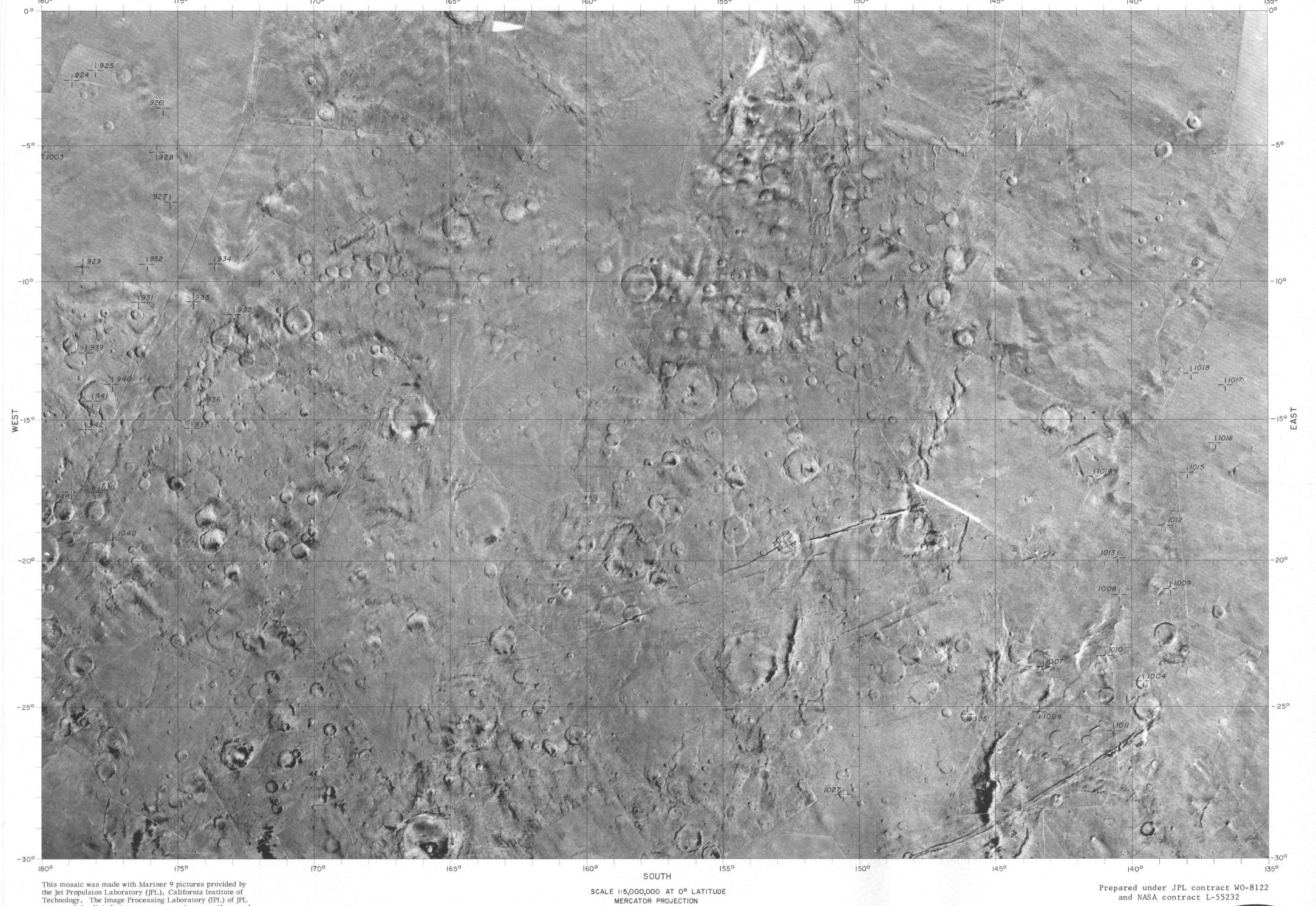
ATLAS OF MARS

MEMNONIA

MC-16

M 5M -15/158 SM

(SEMICONTROLLED PHOTOMOSAIC)
1:5,000,000 CARTOGRAPHIC SERIES



This mosaic was made with Mariner 9 pictures provided by the Jet Propulsion Laboratory (JPL), California Institute of Technology. The Image Processing Laboratory (IPL) of JPL processed the digital pictures to remove image artifacts and geometric distortions, to enhance high-frequency topographic detail while subduing low-frequency albedo variation, and to transform the pictures to a Mercator projection. The U.S. Geological Survey performed further artifact removal and modified contrast and tone of each picture analytically on the digital magnetic tapes provided by IPL for uniformity of tone and contrast within the mosaic. Photographic reproductions of the pictures were generated from the magnetic tapes and mosaicked by the U.S. Geological Survey.

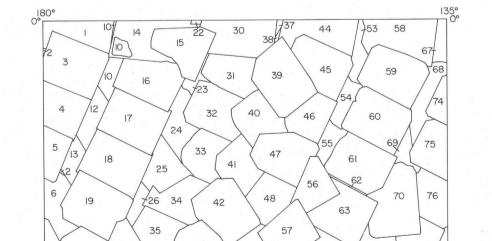
Primary horizontal control points, where available, controlled the placement of pictures. Where these points were not available, picture placement was controlled by spacecraft tracking data and by matching images in overlap zones between pictures. Discrepancies in matching these images are less than 10 km over 90% of the mosaic. The number designations and positions of the primary control points, shown by broken crosses (-\|-\|-\|-\|), are those given by Davies and Arthur (1973).

Aerographic latitudes are shown on this mosaic. The projection is based on a theoretical dynamical ellipticity of 1/192. The scale is based on an equatorial radius of 3393.4 km.

Selected References

Batson, R. M., 1973, Cartographic products from the Mariner 9 mission: Jour. Geophys. Res. (in press).

Davies, M. E., and Arthur, D. W. G., 1973, Martian surface coordinates: Jour. Geophys. Res. (in press).



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IDENTIFICATION NUMBERS OF PICTURES IN THE MOSAIC

U.S. Geological Survey

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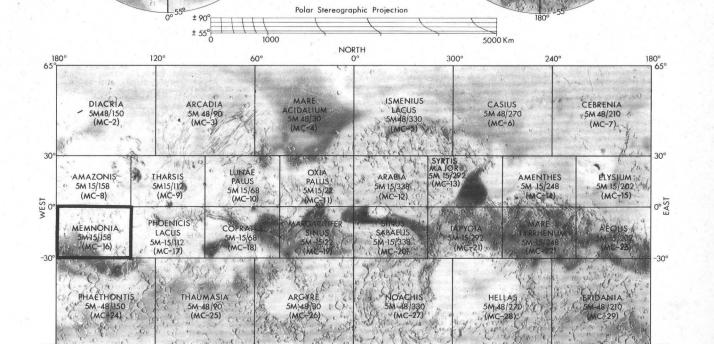
standards or nomenclature.

MEMNONIA

MC-16

M 5M -15/158 SM SEMICONTROLLED PHOTOMOSAIC

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PRIOTOGRAPHS, LOUNCELL OBSER-VATORY, FLAGSTAFF, AZ

165°

LOCATION OF QUADRANGLE ON MARS

1000 KILOMETERS

NORTH POLAR REGION

M(200) R290 no.73-332

S. WASHIN IT)

AUG 29 1973

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