COLOR-CODED GLOBAL TOPOGRAPHIC MAPS OF MARS, Sherman S. C.
Wu, Annie E. Howington-Kraus, and Karyn Ablin, U.S.
Geological Survey, Flagstaff, Arizona 86001

A Digital Terrain Model (DTM) has been derived with both
Mercator and Sinusoidal Equal-Area projections from the
global topographic map of Mars at a scale of 1:15 million and
a contour interval of 1 km [1]. Elevations on the map are
referred to the Mars topographic datum that is defined by the
gravity field at a 6.1-millibar pressure surface with respect
to the center of mass of Mars [2]. The DTM has a resolution
at the equator of 1/59.226° (exactly 1 km) per pixel [3]. By
using the DTM, we have generated color-coded global maps of
Mars' topography in both the Mercator projection (Figure 1)
and the Sinusoidal Equal Area projection (Figure 2). On both
maps, colors indicate 1 km increments of height. From the
equal-area dataset, the positive and negative elevation
distributions are calculated to be 67% and 33%, respectively.
The color-coded global topographic map in Mercator projection
will be published as a USGS map.

References

[1] U.S. Geological Survey, 1989, Misc. Inv. Ser. Map I-
       2030, 3 sheets.

[2] Wu, S. S. C., 1981, Annales de Geophysique, Centre
       National de la Recherche Scientifique, Numero 1,
       Tome 37, p. 147-160.

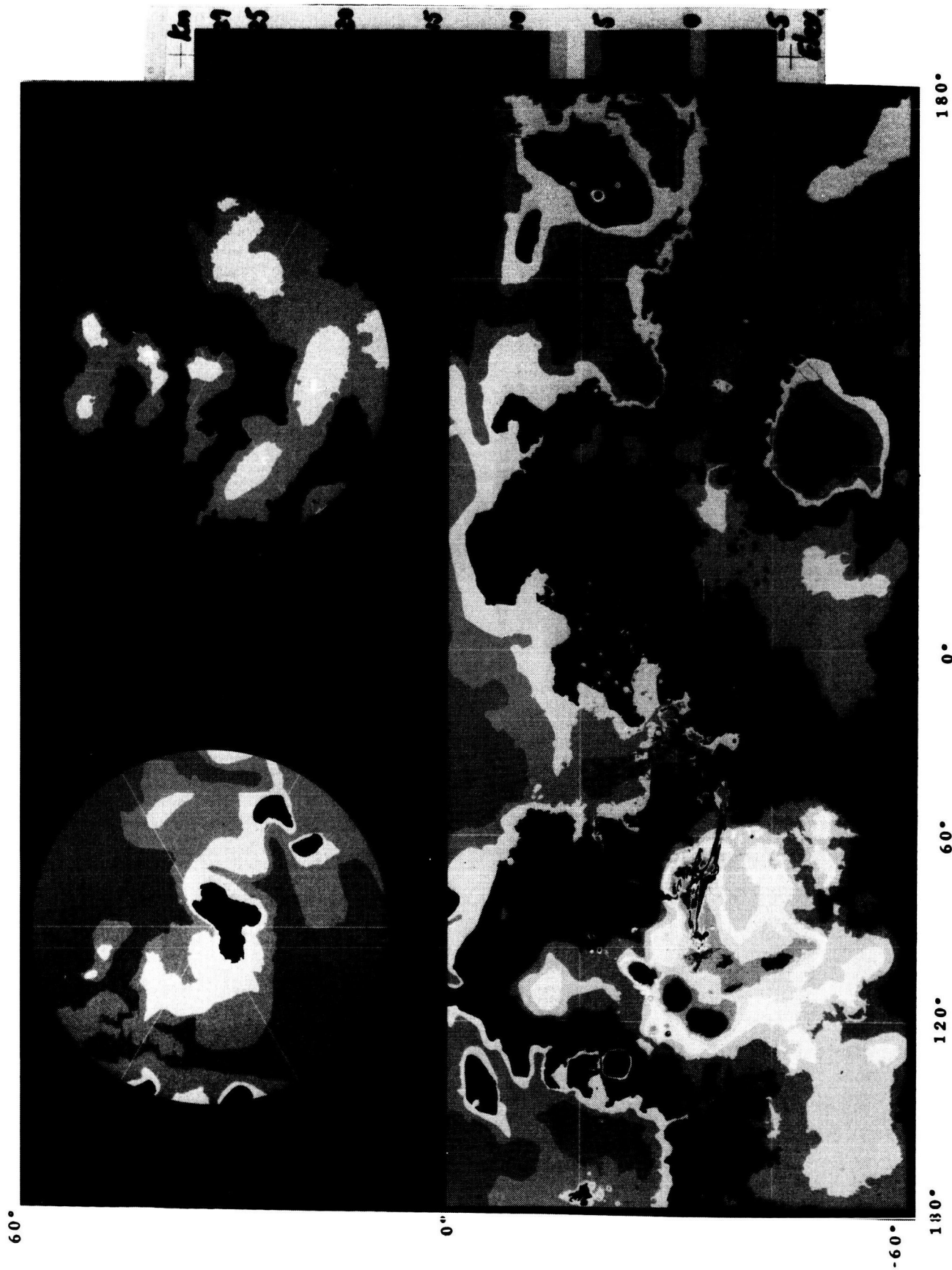[3] Wu, S. S. C., and Howington-Kraus, A. E., 1987, LPS
       XVIII, p. 1108-1109.

Figure 1: The global topographic map of Mars (Mercator projection)

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Figure 2: The global topographic map of Mars (Sinusoidal Equal Area projection)