37/19 N92-10922

COMPLETION OF COMPILATION OF THE 1:2,000,000-SCALE TOPOGRAPHIC MAP SERIES OF MARS, Sherman S. C. Wu, Raymond Jordan, Patricia A. Garcia, and Karyn K. Ablin, U.S. Geological Survey, Flagstaff, AZ 86001

Using special photogrammetric techniques (Wu et al., 1982), we have been systematically mapping Mars' topography at a scale of 1:2,000,000 from high-altitude Viking Orbiter images. Of the 140 maps in the series, 120 have previously been compiled on the AS-11AM analytical stereoplotters. In FY91, the remaining 20 maps will be compiled (most of these are between ±30° latitude and the poles). Elevations on the maps are related to the Mars topographic datum (Wu, 1981). The Mars planetwide control net (Wu and Schafer, 1984) is used for the control of compilation. The maps have a contour interval of 1 km and a vertical precision of ± 1 km, and thus they are more detailed than previous maps.

References

- Wu, S. S. C., 1981, A method of defining topographic datums of planetary bodies: Annales de Geophysique, AGEPA 7, Tome 37, fasc. 1, p. 141-160.
- Wu, S. S. C., and Schafer, F. J., 1984, Mars control network, in Technical Papers of the 50th annual meeting of the American Society of Photogrammetry and Remote Sensing, Washington, D.C., March 11-16, 1984, v. 2, p. 456-463.
- Wu, S. S. C., Elassal, A. A., Jordan, Raymond, and Schafer, F. J., 1982, Photogrammetric application of Viking orbital photography: Planetary and Space Science, v. 30, no. 1, p. 45-55.