U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Prepared for the
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

ATLAS OF THE SATURNIAN SATELLITES
1:10,000,000 TOPOGRAPHIC SERIES
IAPETUS
Si 10M 1CM, 1992
I–2159 (SHEET 2 OF 2)

NOTES ON BASE

This map was compiled from Voyager 1 and 2 images of Iapetus. The Polar Stereographic and Mercator projections are based on a sphere with a diameter of 1,436 km. The projections have a common scale of 1:5,592,000 at lat ±56°. Longitude increases to the west in accordance with astronomical convention. Meridians are numbered so that the reference crater, Almeric, is centered on lat 52° N., long 276° (Davies and others, 1989). Other information regarding Saturnian satellite mapping was given by Batson and others (1984).

Digital mosaics were assembled at a digital scale of 1/2° (6.3 km) per pixel according to methods described by Batson (1987) and Edwards (1987), and they were transformed to the projections described above.

Digital processing and mosaicking were done by Ella M. Lee.

NOMENCLATURE

Si 10M 1CM: Abbreviation for Saturn, Iapetus (satellite); 1:10,000,000 series; first edition; controlled photomosaic (CM).

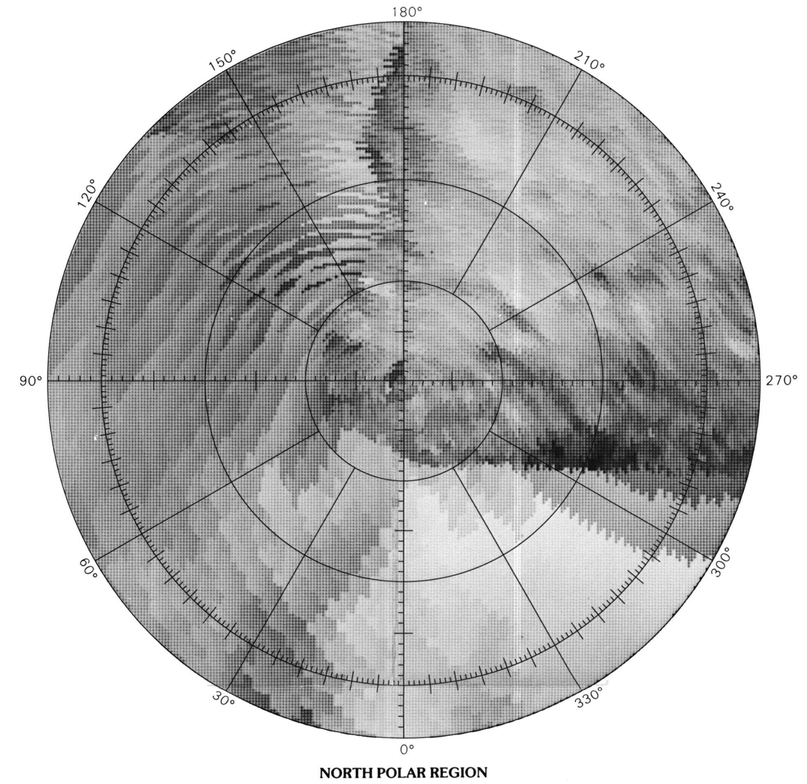
REFERENCES

Batson, R.M., 1987, Digital cartography of the planets: New methods, its status, and its future: Photogrammetric Engineering and Remote Sensing, v. 53, no. 9, p. 1211–1218.

Batson, R.M., Bridges, P.M., Inge, J.L., Lee, E.M., Masursky, Harold, Mullins, K.F., Skiff, B.A., and Strobell, M.E., 1984, Voyager 1 and 2 atlas of six Saturnian satellites: National Aeronautics and Space Administration, Special Publication 474, 175 p.

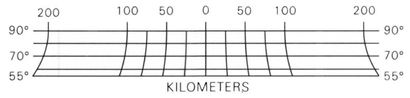
Davies, M.E., Abalakin, V.K., Bursa, M., Hunt, G.E., Lieske, J.H., Morando, B., Rapp, R.H., Seidelman, P.K., Sinclair, A.T., and Tyuflin, Yu.S., 1989, Report of the IAU/IAG/COSPAR Working Group on Cartographic Coordinates and Rotational Elements of the Planets and Satellites, 1988: Celestial Mechanics and Dynamical Astronomy, v. 46, p. 187–204.

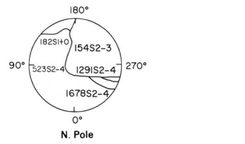
Edwards, Kathleen, 1987, Geometric processing of digital images of the planets: Photogrammetric Engineering and Remote Sensing, v. 53, no. 9, p. 1219–1222.

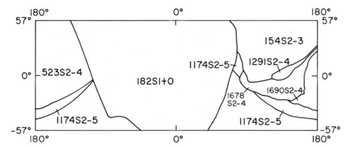


NORTH POLAR REGION

SCALE 1:6 114 700 (1 mm = 6 km) AT 90° LATITUDE
POLAR STEREOGRAPHIC PROJECTION

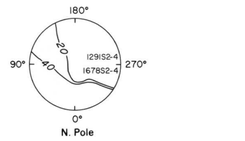


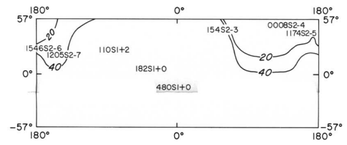




INDEX OF VOYAGER 1 AND 2 IMAGES

The mosaic was made from the Voyager 1 and 2 images outlined above. Copies of various enhancements of these images are available from National Space Science Data Center, Code 601, Goddard Space Flight Center, Greenbelt, MD 20771.

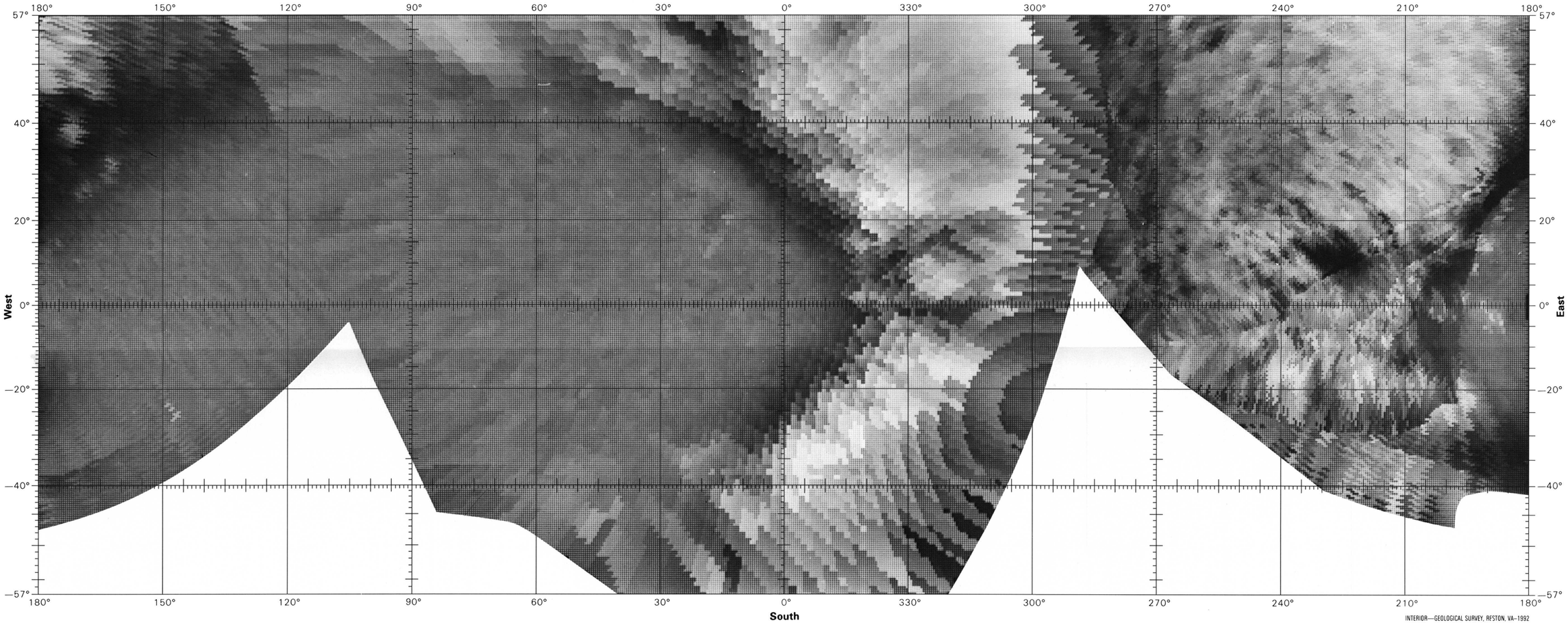




INDEX MAP OF NOMINAL IMAGE RESOLUTION

Picture numbers indicate the subspacecraft point at the time the image was acquired. Contour lines indicate the approximate resolution of available images expressed as kilometers per picture element.

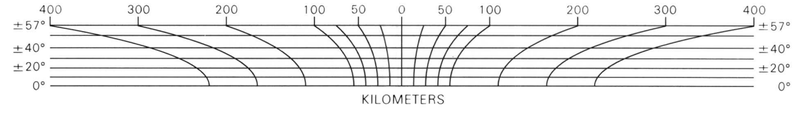
North



South

LEADING HEMISPHERE **SATURN-FACING HEMISPHERE** **TRAILING HEMISPHERE**

SCALE 1:10 000 000 (1 mm = 10 km) AT 0° LATITUDE
MERCATOR PROJECTION



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NOTE TO USERS

Users noting errors or omissions are urged to indicate them on the map and to forward it to U.S. Geological Survey, Building 4, Room 454, 2255 North Gemini Drive, Flagstaff, Arizona 86001. A replacement copy will be returned.

CONTROLLED PHOTOMOSAIC OF IAPETUS

1992