

INTRODUCTION—GEOLOGICAL SURVEY, RESTON, VA—1990
Prepared on behalf of the Planetary Geology Program, Solar System Exploration Division,
Office of Space Science, National Aeronautics and Space Administration, under contract
W-15314.
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NOTES ON BASE

This sheet is one in a series of maps that cover the surfaces of the Galilean satellites of Jupiter at a nominal scale of 1:5,000,000 (Batson and others, 1980). Sources for the series were Voyager 1 and 2 images. Essential features of the mapping are noted below.

CARTOGRAPHIC CONTROL

Mercator, Lambert Conformal Conic, and Polar Stereographic projections used for the maps of Callisto are based on a sphere with a radius of 2400 km. The projections have common scales of 1:4,780,000 at lat $\pm 21.3^\circ$ and 1:4,769,000 at lat $\pm 65.2^\circ$. Longitude increases to the west in accordance with astronomical convention. Flammetric control was derived by photogrammetric triangulation using Voyager 1 and 2 pictures (Davies and Katayama, 1981). The meridians are numbered so that the reference crater, Saga, is centered on lat 0.6° N, long 326° .

MAPPING TECHNIQUE

Digital mosaics were assembled at a digital scale of $1/32^\circ$ (1.5 km) per pixel according to methods described by Batson (1987) and Edwards (1987) and transformed to the projections described above. Details from an unpublished, 1:15,000,000 scale, airbrush drawing were combined with the mosaic in regions where image data were very poorly resolved. The mosaic was retouched to obtain uniform tonal balance. Extreme variations in picture resolution precluded comparable display of the images used for the map compilation. Further limitations were imposed by dark albedo markings, which tend to obscure distinctive surface details. Digital processing and mosaicking were done by Kevin F. Mullins.

NOMENCLATURE

Names on this sheet are approved by the International Astronomical Union (1980).
Jc 5M 44/225 CMN: Abbreviation for Jupiter, Callisto (satellite); 1:5,000,000 series; center of sheet, lat 44° N, long 225° ; controlled photomosaic (CM), nomenclature (N).
Jc-4: Abbreviation for Jupiter, Callisto, sheet 4.

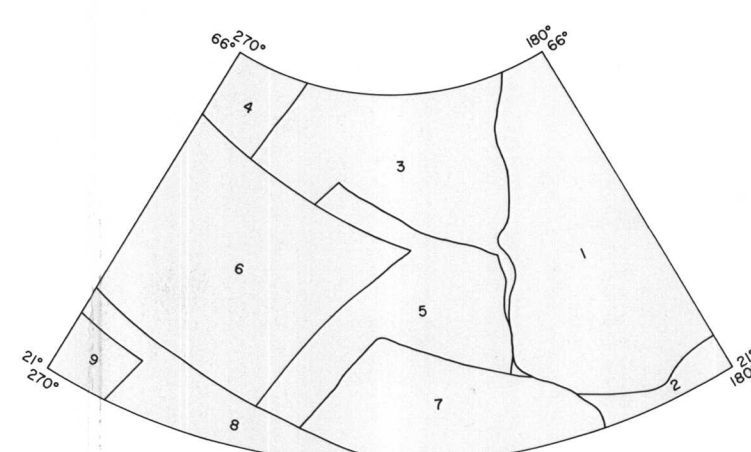
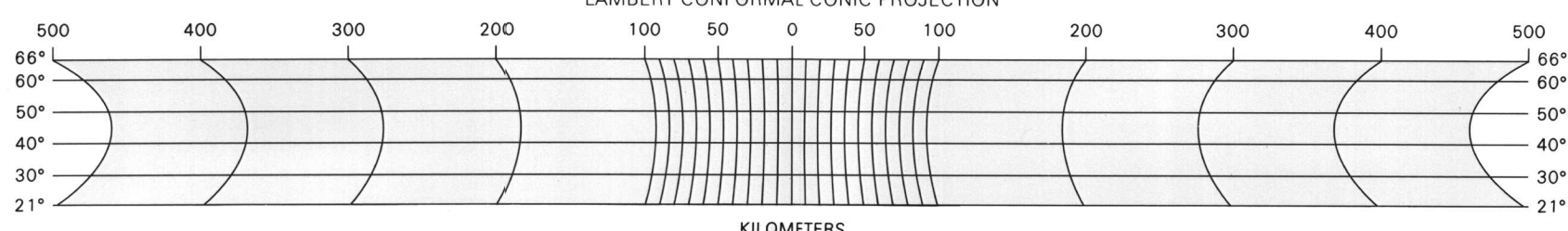
REFERENCES

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., Isbell, Christopher, Masursky, Harold, Strubell, M.E., and Tyner, R.L., 1980, Mapping the Galilean satellites of Jupiter with Voyager data. *Photogrammetric Engineering and Remote Sensing*, v. 46, no. 10, p. 1303-1312.
Davies, M.E., and Katayama, F.Y., 1981, Coordinates of features on the Galilean satellites. *Journal of Geophysical Research*, v. 86, no. A10, p. 8635-8657.
Edwards, Kathleen, 1987, Geometric processing of digital images of the planets: *Photogrammetric Engineering and Remote Sensing*, v. 53, no. 9, p. 1219-1222.
International Astronomical Union, 1980, Working Group for Planetary System Nomenclature, in 17th General Assembly, Montreal, 1979, *Transactions: International Astronomical Union Proceedings*, v. 17B, p. 297-304.

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, 2335 North Gemini Drive, Flagstaff, Arizona 86001. A replacement copy will be returned.

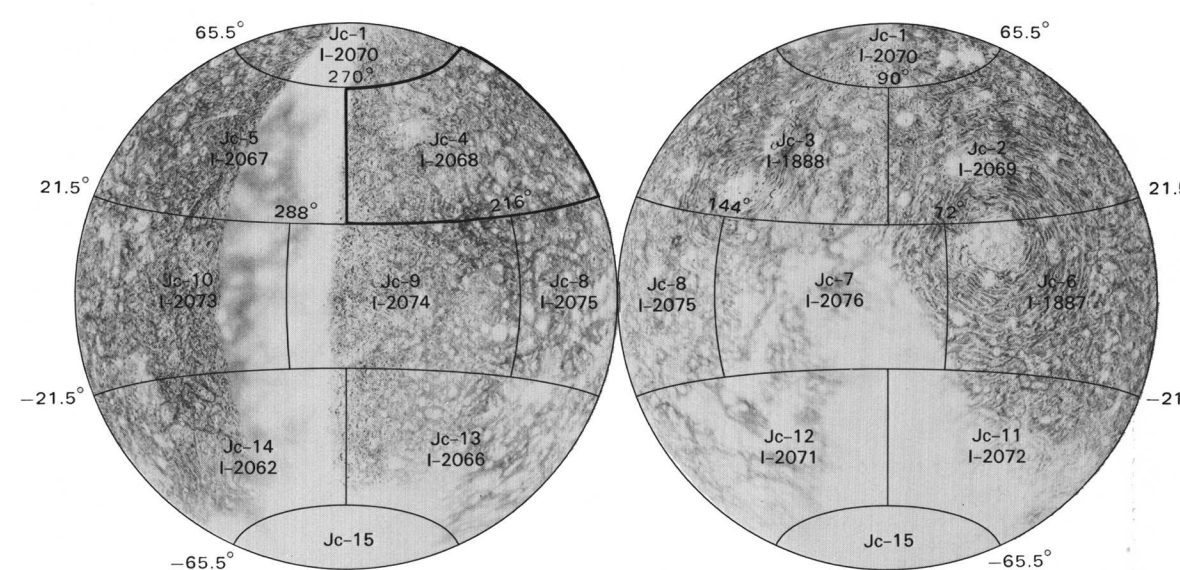
SCALE 1:5,000,000 (1 mm = 5 km) AT 30° AND 58° LATITUDE
LAMBERT CONFORMAL CONIC PROJECTION



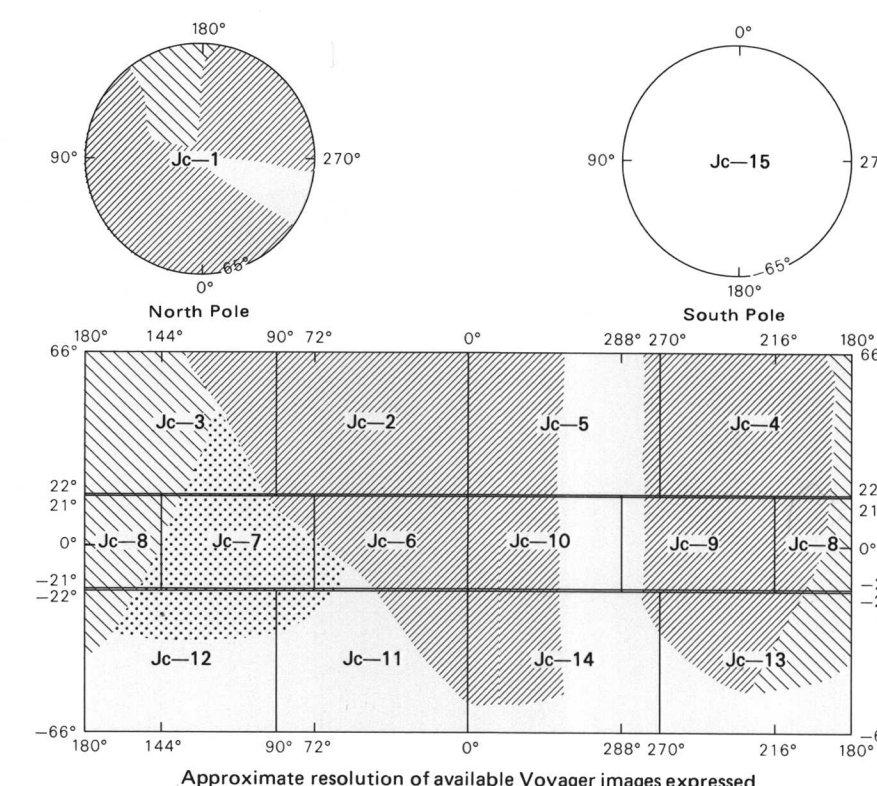
VOYAGER 1		VOYAGER 2	
Index No.	Picture No.	Index No.	Picture No.
1	418 J2-2	414 J2-2	855 J2-2
2	879 J2-2	422 J2-2	859 J2-2
3	1034 J2-2	428 J2-2	863 J2-2
4	1038 J2-2	430 J2-2	863 J2-2
5	1046 J2-2	434 J2-2	867 J2-2
6	1056 J2-2	843 J2-2	891 J2-2
7	1058 J2-2	847 J2-2	899 J2-2
8	1062 J2-2	851 J2-2	1039 J2-2
9	1066 J2-2		

INDEX OF MAPPING SOURCES

Supplemental source images used during the compilation are listed separately. Copies of various enhancements of these pictures are available from National Space Science Data Center, Code 601, Goddard Space Flight Center, Greenbelt, MD 20771.



QUADRANGLE LOCATION
Number preceded by I refers to published 1:5,000,000-scale map.



Approximate resolution of available Voyager images expressed as kilometers per picture element (kpi).



CONTROLLED PHOTOMOSAIC OF THE GLOI QUADRANGLE OF CALLISTO

Jc 5M 44/225 CMN

(Jc-4)
1990