

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 (Banson and others, 1989). 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 ±21.3° and 1:4,769,000 at lat ±65.2°. Longitude increases to the west in accordance with astronomical convention. Planimetric 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" (1.3 km) per pixel according to methods described by Banson (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 Details from an unpublished, 1:15,000,000-scale, airbrush drawing were combined with the mosaic in regions where image data were very poorly resolved.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, 1988).

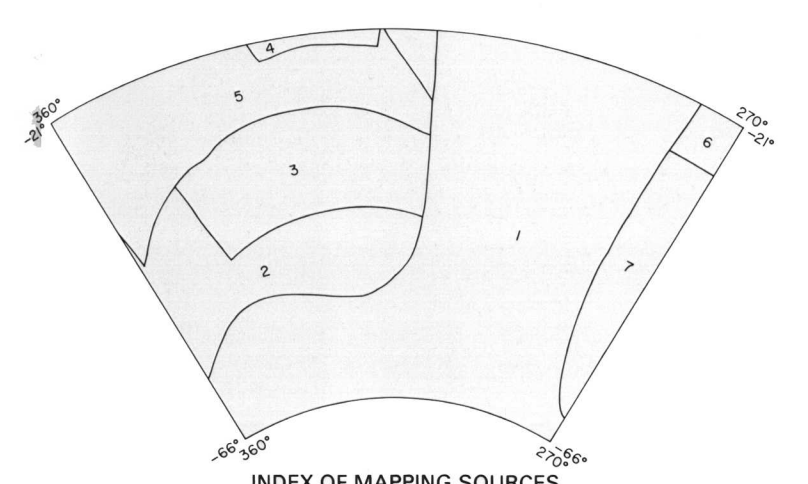
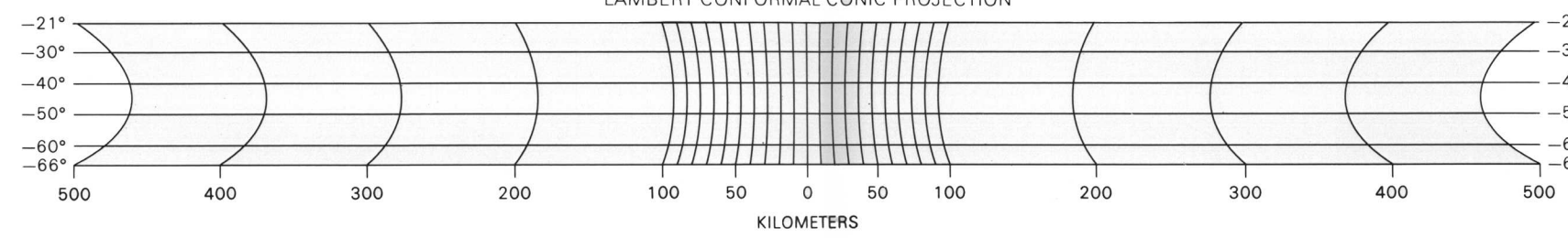
Jc 5M -44/315 CMN: Abbreviation for Jupiter, Callisto (satellite); 1:5,000,000 series; center of sheet, lat 44° S, long 315°; controlled photomosaic (CM), nomenclature (N).
Jc-14: Abbreviation for Jupiter, Callisto, sheet 14.

REFERENCES

- Banson, 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.
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- 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.
- 1988, Working Group for Planetary System Nomenclature, in 20th General Assembly, Baltimore, 1988, Transactions: International Astronomical Union Reports on Astronomy, v. 20A, p. 706.

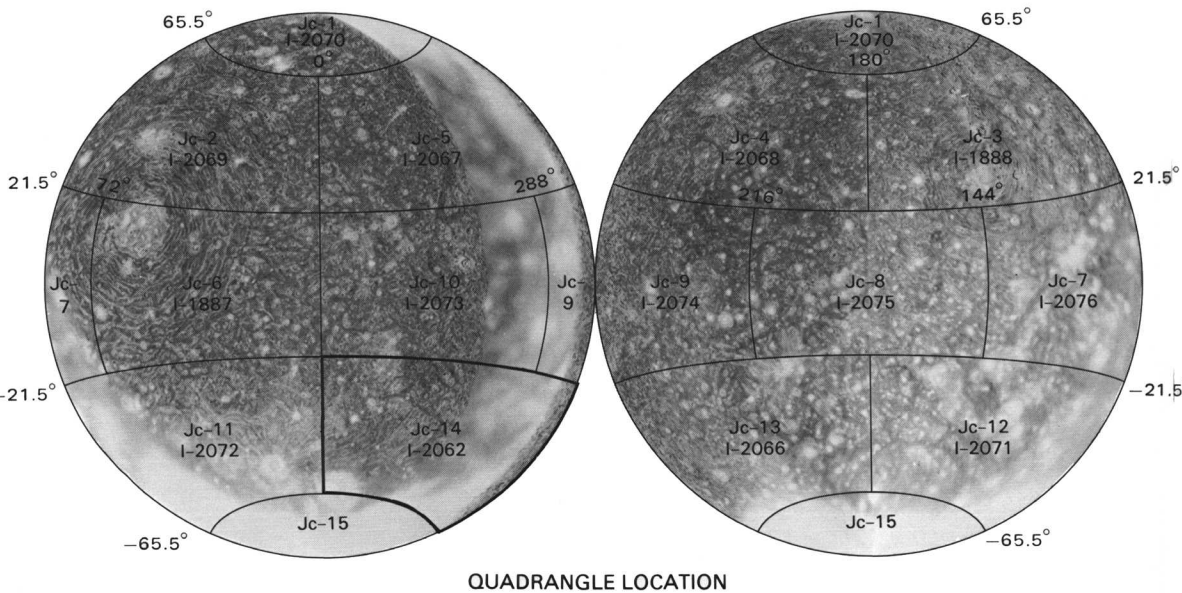
INTERIOR—GEOLOGICAL SURVEY, RESTON, VA—1990
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SCALE 1:5,000,000 (1 mm = 5 km) AT -30° AND -58° LATITUDE
LAMBERT CONFORMAL CONIC PROJECTION

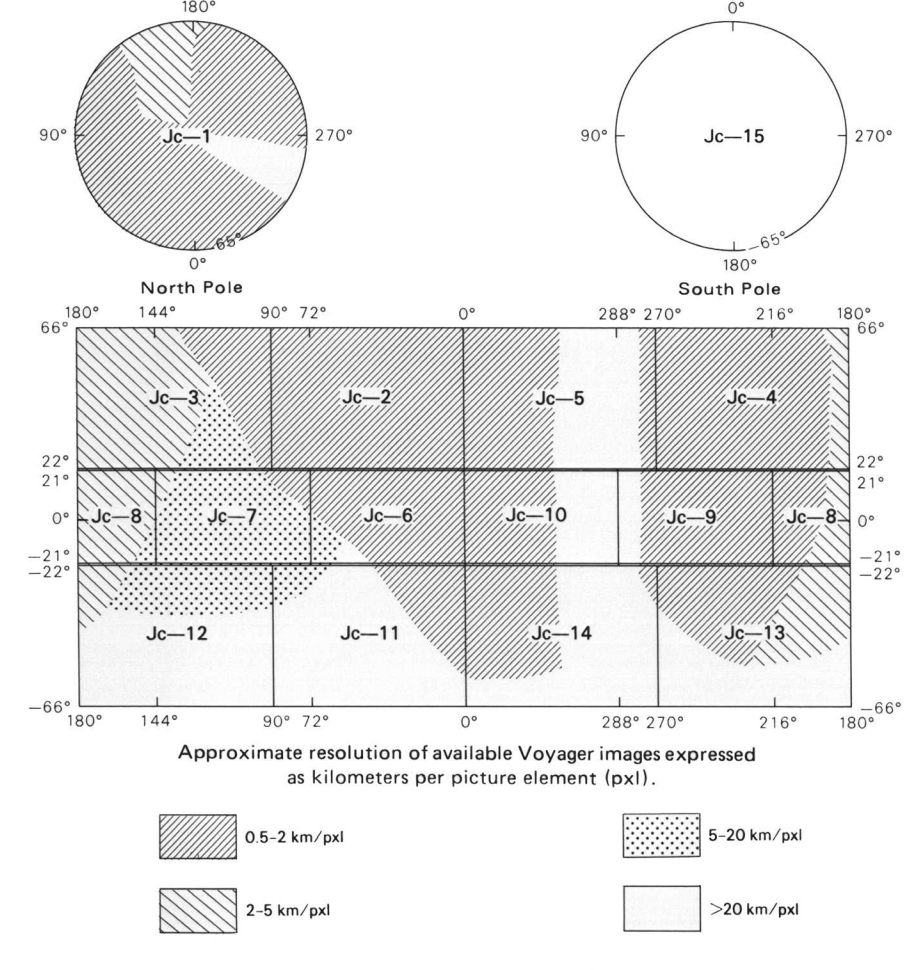


VOYAGER 1		VOYAGER 2		VOYAGER 1	
Index No.	Picture No.	Index No.	Picture No.	Index No.	Picture No.
1	1423 J1-3	6	1078 J2-2	15	J1+1
2	1723 J1+0	7	1094 J2-2	16	J1+1
3	1739 J1+0			17	J1+1
4	124 J1+1				
5	127 J1+1				

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 1 refers to published 1:5,000,000-scale map.



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

- 0.5-2 km/px
- 2-5 km/px
- 5-20 km/px
- >20 km/px

CONTROLLED PHOTOMOSAIC OF THE LEMPO QUADRANGLE OF CALLISTO
Jc 5M -44/315 CMN

(Jc-14)
1990

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, 2215 North Gemini Drive, Flagstaff, Arizona 86001. A replacement copy will be returned.

For sale by U.S. Geological Survey, Map Distribution, Box 25286, Federal Center, Denver, CO 80225