

INTERIOR—GEOLOGICAL SURVEY, RESTON, VA.—1989
Prepared on behalf of the Planetary Geology Program, Solar System Exploration Division,
Office of Space Science, National Aeronautics and Space Administration, under contract
W-15,314.
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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. 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 $1/32^\circ$ (1.3 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 Details from an unpublished, 1:15,000,000-scale, airbrush drawing were combined with the mosaic in regions where image data were very poorly resolved.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.

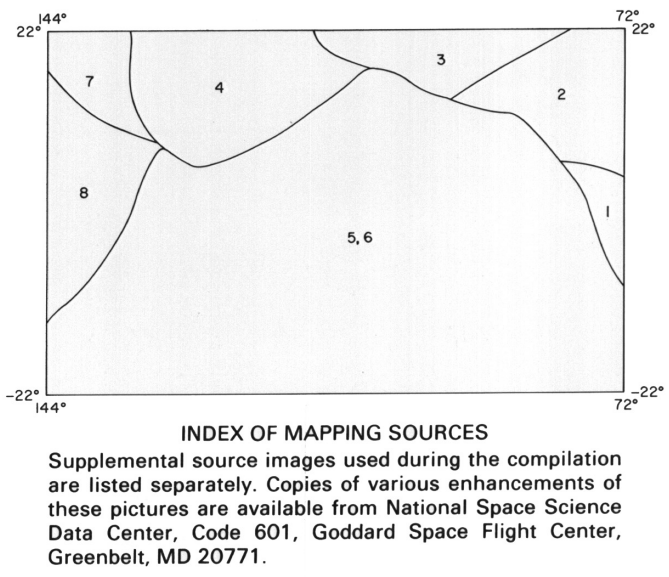
NOMENCLATURE

Names on this sheet are approved by the International Astronomical Union (1980, 1988).

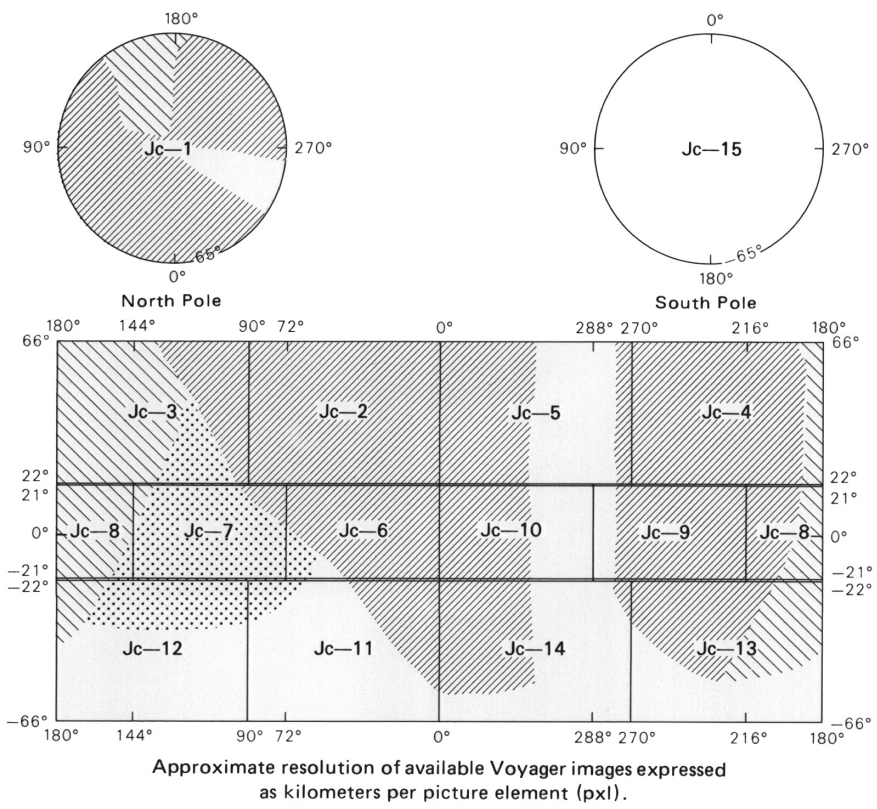
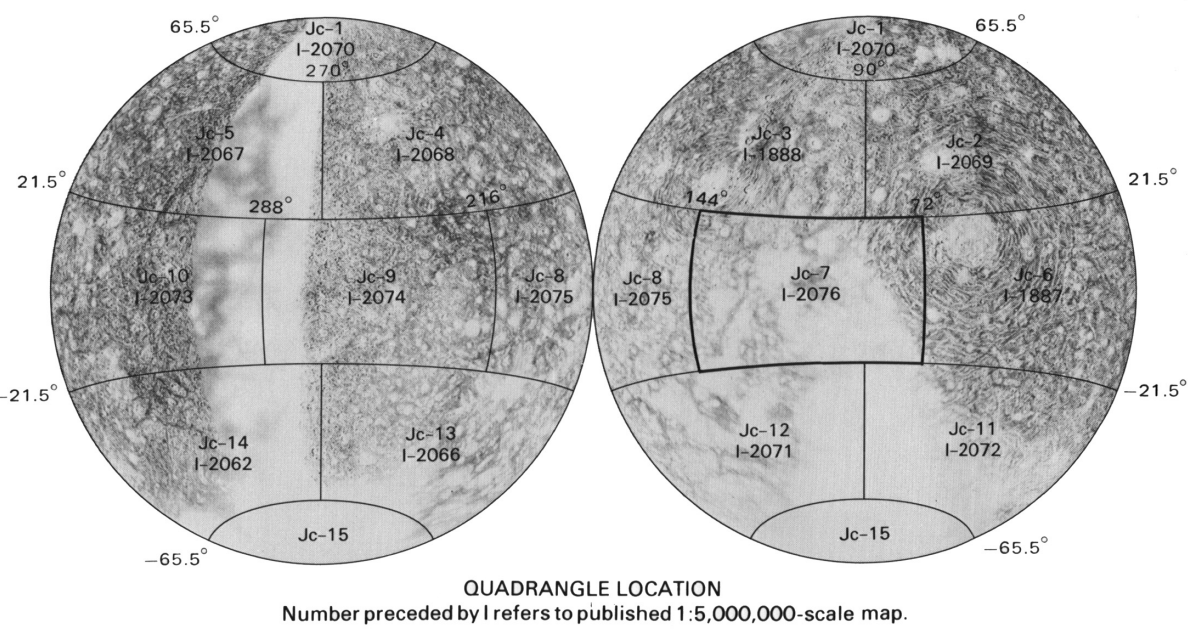
Jc 5M 0/108 CMN: Abbreviation for Jupiter, Callisto (satellite); 1:5,000,000 series; center of sheet, lat 0° , long 108° ; controlled photomosaic (CM), nomenclature (N).
Jc-7: Abbreviation for Jupiter, Callisto, sheet 7.

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, Mausuly, Harold, Strobel, 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. 1305-1312.
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.
—, 1988, Working Group for Planetary System Nomenclature, in 20th General Assembly, Baltimore, 1988, *Transactions: International Astronomical Union Reports on Astronomy*, v. 20A, p. 706.



VOYAGER 1		VOYAGER 2	
Index No.	Picture No.	Index No.	Picture No.
1	182 J1+1	5	629 J2-4
2	182 J1+1	6	834 J2-3
3	329 J1+1	7	414 J2-2
4	526 J1+1	8	426 J2-2
VOYAGER 1		VOYAGER 2	
Picture No.	Picture No.	Picture No.	Picture No.
1750 J1+0	418 J2-2		
180 J1+1			
185 J1+1			
311 J1+1			
572 J1+1			



CONTROLLED PHOTOMOSAIC OF THE NJORD QUADRANGLE OF CALLISTO

Jc 5M 0/108 CMN

(Jc-7)

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, 2255 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