

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 (Bateson 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 Bateson (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 Details from an unpublished, 1:15,000,000-scale, airbrush drawing were combined with the mosaic in regions where image data were very poorly resolved.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.

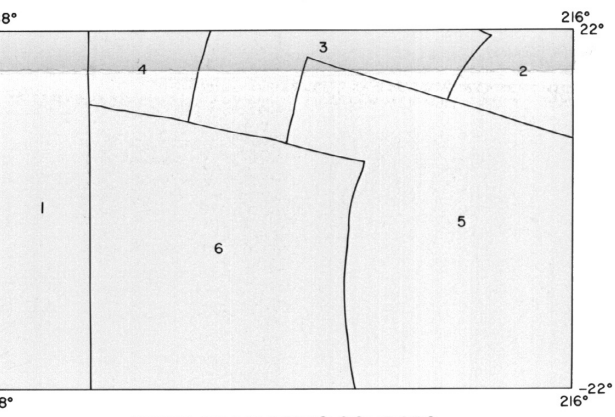
NOMENCLATURE

Names on this sheet are approved by the International Astronomical Union (1980). Jc 5M 0/252 CMN: Abbreviation for Jupiter, Callisto (satellite); 1:5,000,000 series; center of sheet, lat 0° , long 252° ; controlled photo-mosaic (CM), nomenclature (N).

Jc-9: Abbreviation for Jupiter, Callisto, sheet 9.

REFERENCES

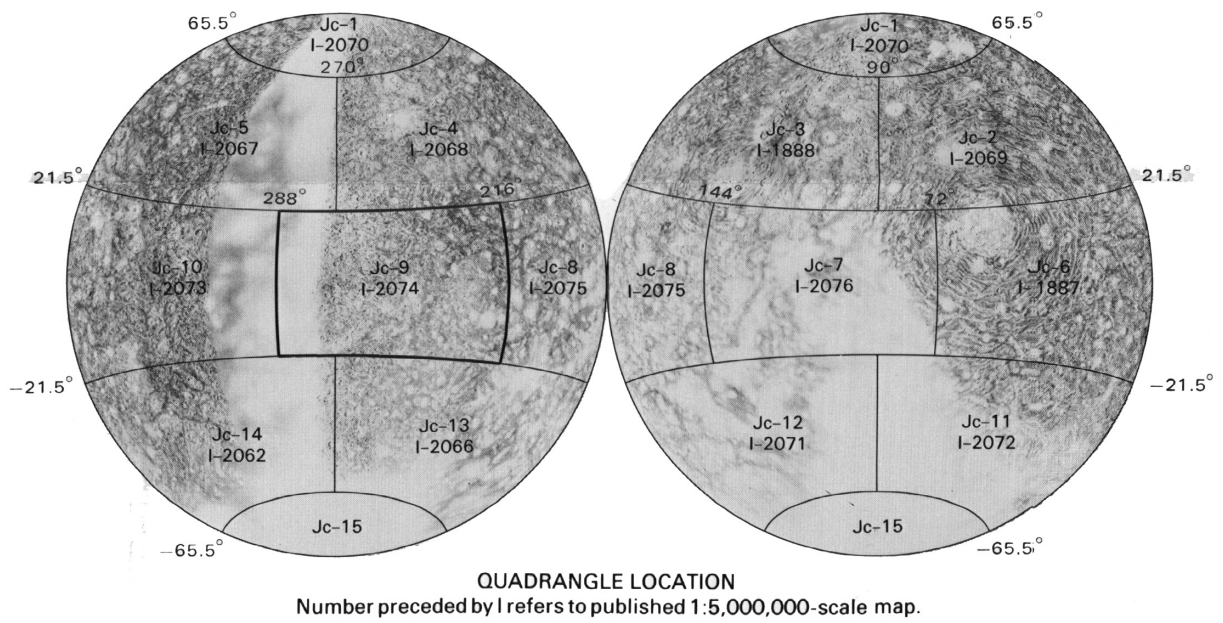
- Bateson, R.M., 1987, Digital cartography of the planets: New methods, its status, and its future: Photogrammetric Engineering and Remote Sensing, v. 53, no. 9, p. 1211-1218.
- Bateson, R.M., Bridges, P.M., Inge, J.L., Isbell, Christopher, Masursky, Harold, Strobel, M.E., and Tyner, R.L., 1980, Mapping 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.



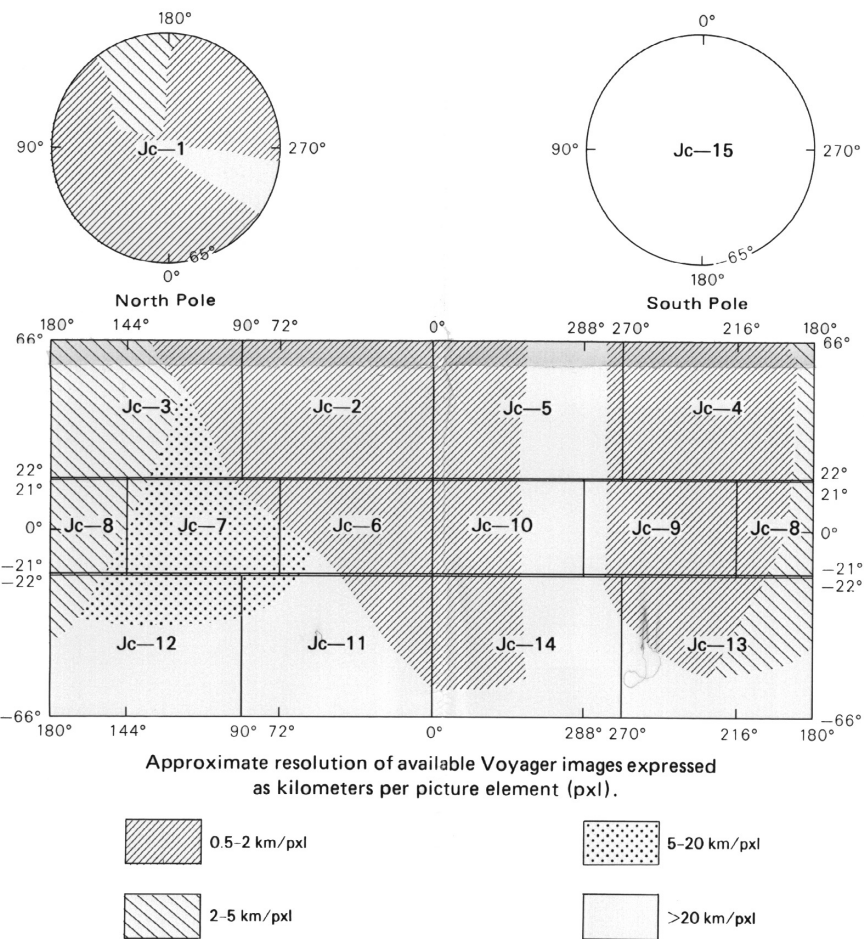
Supplemental source images used during the compilation are listed separately. Copies of various enhancements of these pictures are available from National Space Science Data Center, Code 601, Goddard Space Flight Center, Greenbelt, MD 20771.

VOYAGER 1		VOYAGER 2	
Index No.	Picture No.	Index No.	Picture No.
1	1423 J1-5	2	1088 J2-2
3		4	1088 J2-2
4		5	1074 J2-2
5		6	1070 J2-2

VOYAGER 2	
Picture No.	Picture No.
875 J2-1	895 J2-2
430 J2-2	899 J2-2
434 J2-2	903 J2-2
442 J2-2	907 J2-2
446 J2-2	911 J2-2
859 J2-2	1002 J2-2
867 J2-2	1006 J2-2
871 J2-2	1046 J2-2
875 J2-2	1050 J2-2
891 J2-2	1082 J2-2
891 J2-2	1090 J2-2



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



CONTROLLED PHOTOMOSAIC OF THE VALFÖDR QUADRANGLE OF CALLISTO

Jc 5M 0/252 CMN

(Jc-9)

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