

INTERIOR—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-15,814
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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, Sags, 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 Details from an unpublished, 1:15,000,000-scale, airbrush drawing were combined with the mosaic in regions where image data were very poorly resolved.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.

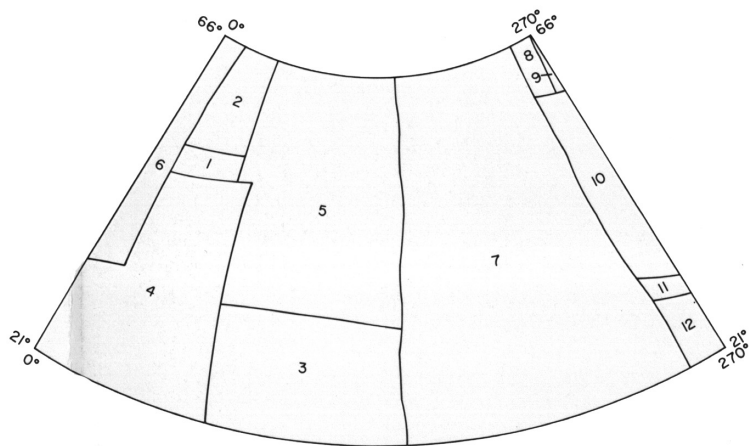
Digital processing and mosaicking were done by Kevin F. Mullins.

NOMENCLATURE

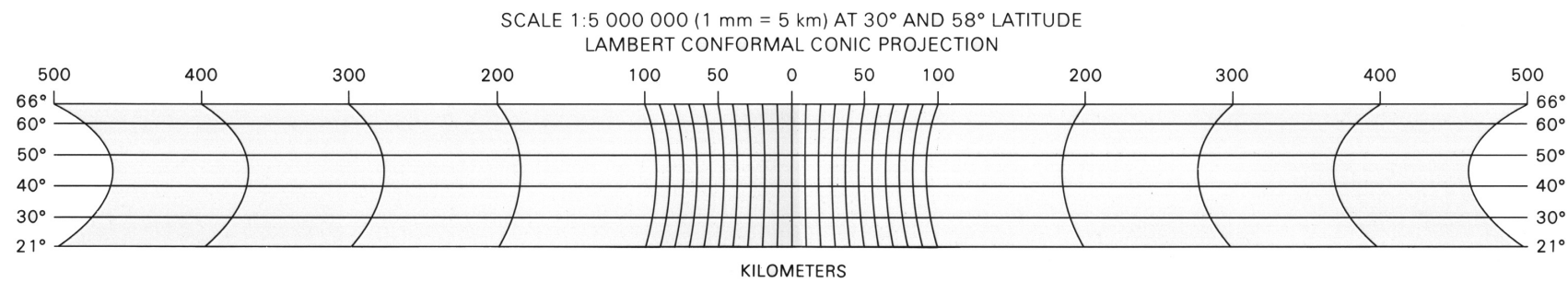
Names on this sheet are approved by the International Astronomical Union (1980). Jc 5M 44/315 CMN: Abbreviation for Jupiter, Callisto (satellite), 1:5,000,000 series; center of sheet, lat 44° N, long 315° ; controlled photomosaic (CM), nomenclature (N). Abbreviation for Jupiter, Callisto, sheet 5.

REFERENCES

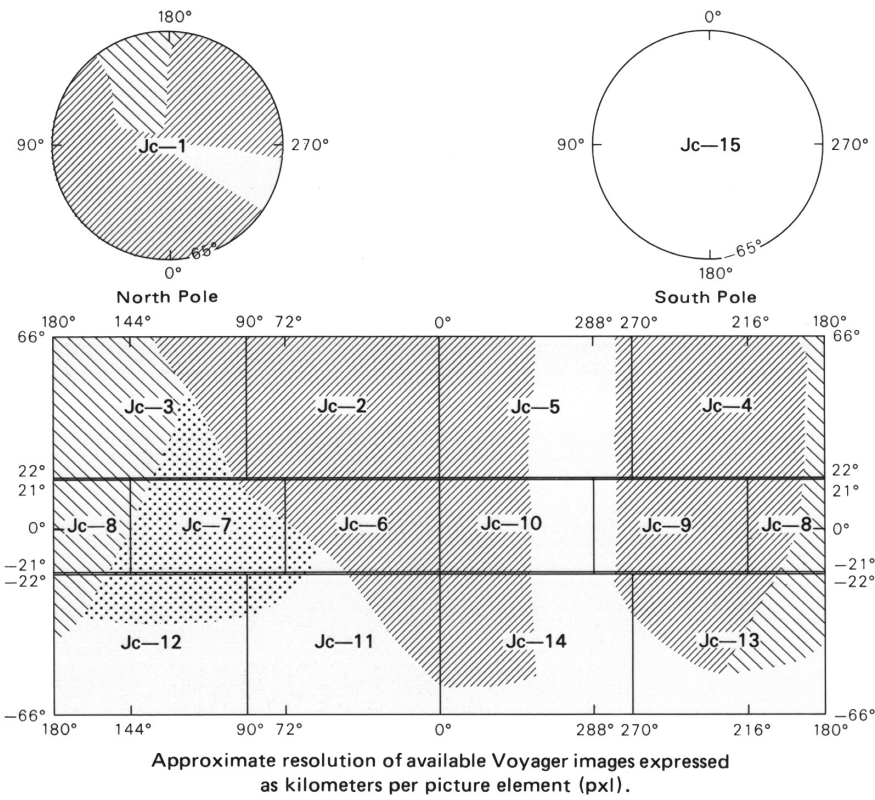
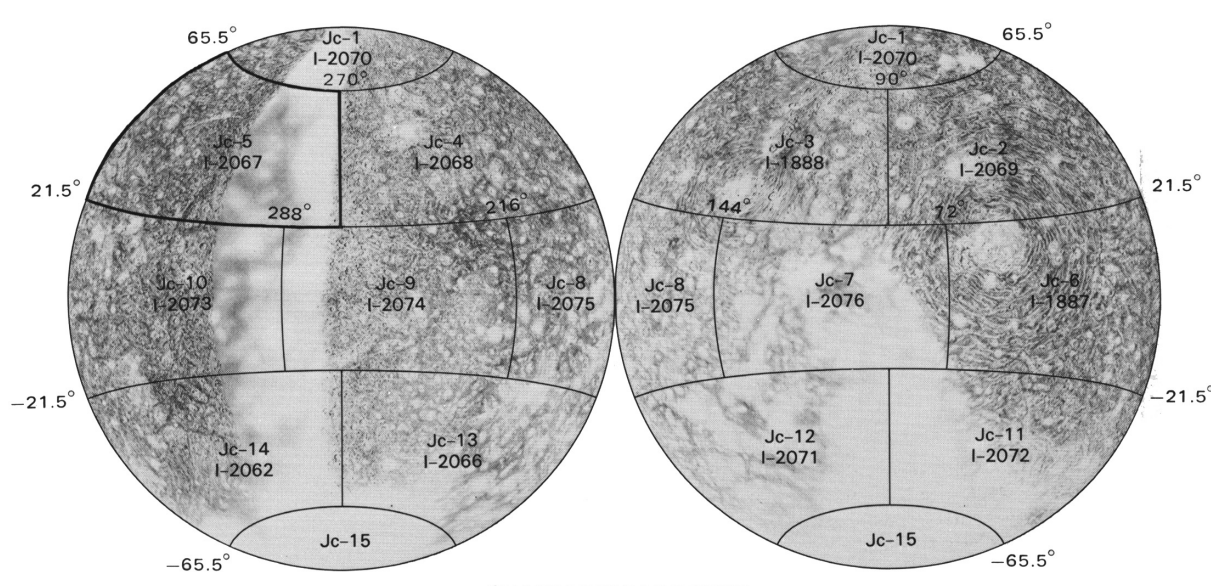
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Batson, R.M., Bridges, P.M., Inge, J.L., Isbell, Christopher, Masursky, Harold, Strobel, M.E., and Tyner, R.L., 1980, Mapping the Galilean satellites of Jupiter with Voyager data: Photogrammetric Engineering and Remote Sensing, v. 46, no. 10, p. 1303-1312.
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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		VOYAGER 1		VOYAGER 2	
Primary Source		Primary Source		Supplemental Source		Supplemental Source	
Index No.	Picture No.	Index No.	Picture No.	Picture No.	Picture No.	Picture No.	Picture No.
1	1747 J1+0	8	1030 J2-2	1739 J1+0	843 J2-2	843 J2-2	843 J2-2
2	1763 J1+0	9	1036 J2-2	1743 J1+0	847 J2-2	847 J2-2	847 J2-2
3	138 J1+1	10	1050 J2-2	1771 J1+0	851 J2-2	851 J2-2	851 J2-2
4	140 J1+1	11	1062 J2-2	178 J1+1	855 J2-2	855 J2-2	855 J2-2
5	186 J1+1	12	1086 J2-2	335 J1+1	859 J2-2	859 J2-2	859 J2-2
6	180 J1+1			337 J1+1	863 J2-2	863 J2-2	863 J2-2
7	1423 J1-3			339 J1+1	1006 J2-2	1006 J2-2	1006 J2-2
				341 J1+1	1014 J2-2	1014 J2-2	1014 J2-2
				351 J1+1	1038 J2-2	1038 J2-2	1038 J2-2
				355 J1+1	1054 J2-2	1054 J2-2	1054 J2-2
				357 J1+1			
				512 J1+1			
				518 J1+1			



CONTROLLED PHOTOMOSAIC OF THE ASKR QUADRANGLE OF CALLISTO

Jc 5M 44/315 CMN

(Jc-5)
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