

DESCRIPTION OF MAP UNITS
(See table 2 for color values in color categories.)
Mantling material - Low albedo deposit surrounding Bahbar Patra and unroofed patras at 15° N, long 342° E. Color category 2. Interpretation: Pyroclastic materials, volcanic systems. Superposition of all surrounding materials except thin deposits of Pitrae and dating of Voyager 1 materials still occur in Bahbar Patra that split during Voyager 1 encounter.

Plains material - Forms flat to gently sloping terrain. Also developed in Amaterasu Patra. Color category 1 and 2. Interpretation: Dominantly siliceous volcanic material. Formed near or around volcanic vents.

Flow materials
Patra material - Interpreted as volcanic flows consisting of silicates, sulfides, or mixtures of both, organized in a flow. Color category 1 and 2. Interpretation: Volcanic flows developed in Amaterasu Patra. Color category 1 and 2. Interpretation: Dominantly siliceous volcanic material.

Shield materials - Interpreted as shield volcanoes and flow fields of silicates, sulfide, or both. Color category 1 and 2. Interpretation: Volcanic flows developed in Amaterasu Patra. Color category 1 and 2. Interpretation: Dominantly siliceous volcanic material.

Tholus material - Forms circular, shield-shaped features with well-defined rim scarps and central depressions. Moderate albedo. Forms atop and below Tholus. Color category 1 and 2. Interpretation: Material of shield volcanoes characterized by central depression of the cone having high sulfur content. Crags of basal scarp uncertain.

Plains material - Forms flat to gently sloping terrain. Also developed in Amaterasu Patra. Color category 1 and 2. Interpretation: Dominantly siliceous volcanic material.

Plains material - Forms flat to gently sloping terrain. Also developed in Amaterasu Patra. Color category 1 and 2. Interpretation: Dominantly siliceous volcanic material.

Plains material - Forms flat to gently sloping terrain. Also developed in Amaterasu Patra. Color category 1 and 2. Interpretation: Dominantly siliceous volcanic material.

Plains material - Forms flat to gently sloping terrain. Also developed in Amaterasu Patra. Color category 1 and 2. Interpretation: Dominantly siliceous volcanic material.

Plains material - Forms flat to gently sloping terrain. Also developed in Amaterasu Patra. Color category 1 and 2. Interpretation: Dominantly siliceous volcanic material.

STRUCTURE
Tectonic features are grabens, scarps, linear and arcuate depressions, and ridges, all of which are generally less than 200 km long. These features are concentrated primarily on the mountain and plains units and may be associated with broad subsidence south and along over thermal anomalies (McEwen, 1985). All of the tectonic features within the quadrangle appear to be of local rather than global extent, although increased magma flow influence has been suggested (Schaber, 1986).

GEOLOGIC HISTORY
The interpretative geologic history of the Ruwa Patra quadrangle is a considerably shorter period of time than that of any previously mapped planetary body. The maximum average age of its surface, determined by the absence of impact craters and by the high geologic rates, is probably less than 10⁷ years (Johnson and Soderblom, 1982). The two Voyager encounters in 1979, 4 months apart, allowed that Io's geologic processes are dynamic and can change over periods of months and weeks, even days. Many areas are currently being resurfaced by volcanic materials, as indicated by the locations of plumes that were active during the Voyager encounters. The geologic units mapped on this map are considered to be representative of the surface as it was observed by the Voyagers in 1979.

REFERENCES CITED
BROWN, R.W., 1974. Optical line emissions from Io, W. von Karman, and Io, W. von Karman, eds., *Exploration of the Jovian System*. Dordrecht, The Netherlands, D. Reidel, p. 327-331.
BURNS, J.A., and MATTHEWS, M.S., eds., 1986. *Satellites*. Tucson, University of Arizona Press, 102 p.

REFERENCES CITED
BROWN, R.W., 1974. Optical line emissions from Io, W. von Karman, and Io, W. von Karman, eds., *Exploration of the Jovian System*. Dordrecht, The Netherlands, D. Reidel, p. 327-331.
BURNS, J.A., and MATTHEWS, M.S., eds., 1986. *Satellites*. Tucson, University of Arizona Press, 102 p.

REFERENCES CITED
BROWN, R.W., 1974. Optical line emissions from Io, W. von Karman, and Io, W. von Karman, eds., *Exploration of the Jovian System*. Dordrecht, The Netherlands, D. Reidel, p. 327-331.
BURNS, J.A., and MATTHEWS, M.S., eds., 1986. *Satellites*. Tucson, University of Arizona Press, 102 p.

REFERENCES CITED
BROWN, R.W., 1974. Optical line emissions from Io, W. von Karman, and Io, W. von Karman, eds., *Exploration of the Jovian System*. Dordrecht, The Netherlands, D. Reidel, p. 327-331.
BURNS, J.A., and MATTHEWS, M.S., eds., 1986. *Satellites*. Tucson, University of Arizona Press, 102 p.

REFERENCES CITED
BROWN, R.W., 1974. Optical line emissions from Io, W. von Karman, and Io, W. von Karman, eds., *Exploration of the Jovian System*. Dordrecht, The Netherlands, D. Reidel, p. 327-331.
BURNS, J.A., and MATTHEWS, M.S., eds., 1986. *Satellites*. Tucson, University of Arizona Press, 102 p.

REFERENCES CITED
BROWN, R.W., 1974. Optical line emissions from Io, W. von Karman, and Io, W. von Karman, eds., *Exploration of the Jovian System*. Dordrecht, The Netherlands, D. Reidel, p. 327-331.
BURNS, J.A., and MATTHEWS, M.S., eds., 1986. *Satellites*. Tucson, University of Arizona Press, 102 p.

REFERENCES CITED
BROWN, R.W., 1974. Optical line emissions from Io, W. von Karman, and Io, W. von Karman, eds., *Exploration of the Jovian System*. Dordrecht, The Netherlands, D. Reidel, p. 327-331.
BURNS, J.A., and MATTHEWS, M.S., eds., 1986. *Satellites*. Tucson, University of Arizona Press, 102 p.

REFERENCES CITED
BROWN, R.W., 1974. Optical line emissions from Io, W. von Karman, and Io, W. von Karman, eds., *Exploration of the Jovian System*. Dordrecht, The Netherlands, D. Reidel, p. 327-331.
BURNS, J.A., and MATTHEWS, M.S., eds., 1986. *Satellites*. Tucson, University of Arizona Press, 102 p.

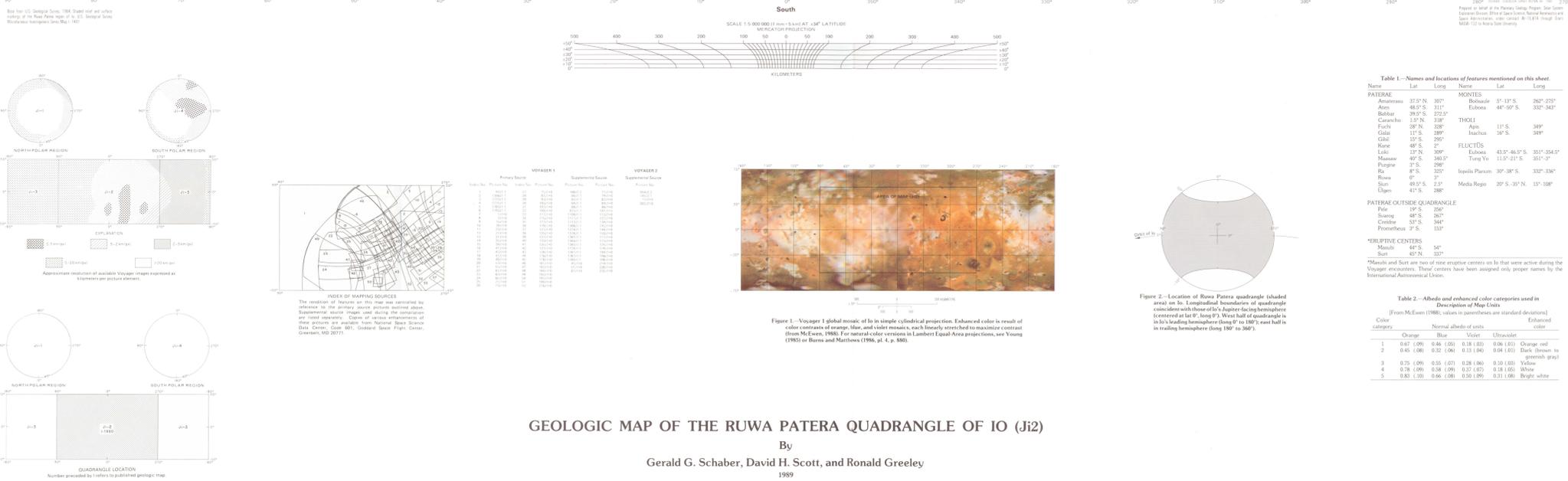


Figure 2. Location of Ruwa Patra quadrangle (shaded area) on Io. Longitudinal boundaries of quadrangle coincident with those of Io's Jupiter time hemisphere (centered at 0° longitude). The Ruwa Patra quadrangle is in Io's leading hemisphere (long 0° to 180°) even half in its trailing hemisphere (long 180° to 360°).