Description of map units

Terrain units

btaA **Basal terrain a of Artemis** – High to very high-backscatter, high RMS slope, host to dominantly northeast-southwest trending 0.3-0.6 km wavelength penetrative tectonic fabric of undetermined origin. *Interpretation:* Local basal material

btbA **Basal terrain b of Artemis** – Moderate-backscatter, high RMS slope, host to dominantly northeast-southwest trending 0.3-0.6 km wavelength penetrative tectonic fabric of undetermined origin and topographic ridges spaced 10-50 km. *Interpretation:* Local basal material

bftZ **Basal fracture terrain of Zhibek Planitia** – moderate to low backscatter, low regional relief, terrain exposed locally through surrounding regions, and marked by penetratively developed parallel fracture. *Interpretation:* materials of unknown genetic origin deformed by regional and local tectonic structures prior to being locally covered.

st **Shield terrain** – intermediate-to-low backscatter material of heterogeneous texture. Composed of distributed edifices and associated material that forms a locally thin layer. *Interpretation:* composite shield-related volcanic materials.

Material units

sfaA **Shield field and associated flow material a of Artemis** – Low-backscatter, low RMS slope, pock-marked by shield edifices less than 5 km in diameter, sharp digitate boundaries with kipukas of unit btaA, located in the southwest region of Artemis. *Interpretation:* Localized thin, low-viscosity veneer of volcanic shields and associated deposits

sfbA **Shield field and associated flow material b of Artemis** – Low-backscatter, low RMS slope, pock-marked by shield edifices less than 5 km in diameter, sharp digitate boundaries with kipukas of unit btaA, located in the southeast region of Artemis. *Interpretation:* Localized thin, low-viscosity veneer of volcanic shields and associated deposits radiating from a centralized source

sfcA **Shield field and associated flow material c of Artemis** – Low-backscatter, low RMS slope, pock-marked by shield edifices less than 5 km in diameter, sharp digitate boundaries with kipukas of unit btaA, located in the eastern region of Artemis. *Interpretation:* Localized thin, low-viscosity veneer of volcanic material associated with volcanic shields

fQc **Flow material of Quilla Chasma** – Low-backscatter, low to moderate RMS slope, lobate to gradational boundaries, extends into local topographic lows. *Interpretation:* Localized volcanic material sourced from structures related to

Composite units

fcaA **Flow material a of Artemis** – Low-backscatter, low RMS slope, locally pock-marked by small shield edifices (less than 5 km diameter), localized lobate flow fronts, deformed by magmatic troughs, local inliers of unit btaA, located in the western region of Artemis. *Interpretation:* Composite of volcanic flows emplaced after the formation of the basal terrains

fcbA **Flow material b of Artemis** – Very low to moderate-backscatter, low RMS slope, pock-marked by small shield edifices (less than 5 km diameter), localized lobate flow fronts, locally hosts fine-scale polygonal fabric near the eastern margin, contact with unit btaA is in general digitate where the contact is at high angles to the trend of the penetrative fabric of unit btaA and gradational where the contact is near parallel to the trend of the penetrative fabric; embays unit mAc on the eastern-southeastern margin, located in the eastern region of Artemis. *Interpretation:* Composite of volcanic flows emplaced after the formation of the basal terrains

Undifferentiated Materials

ccp **Crater central peak material** – Undifferentiated, high-backscatter, high-RMS slope material located near the center of some impact basins as isolated inliers. *Interpretation:* Structurally uplifted breccia or rebounded material associated with bolide impact

cfi **Crater fill material** – Undifferentiated, low-backscatter, low-RMS slope material filling some impact basins. *Interpretation:* Gently emplaced material postdating impacts, possibly

ce **Crater ejecta material** – Undifferentiated, moderate to high-backscatter, high-RMS slope material. *Interpretation:* Near-field ejecta and structurally uplifted breccia associated with bolide impact

cfl **Crater flow material** – Undifferentiated, high-backscatter material apparently flowing from some impact basins. *Interpretation:* Impact melt or fluidized ejecta created by bolide impact

fu **Flow material; undifferentiated** – Undifferentiated, low to moderate-backscatter, low-RMS slope, texturally homogenous, discontinuous radar-boundaries, locally pock-marked by small shield edifices (less than 5 km in diameter), locally deformed by fractures, pit chains, and magmatic troughs. *Interpretation:* Composite of individual local to regional events, unlikely to represent a coherent stratigraphic unit across entire map area

lfu **Localized flow material; undifferentiated** – Low-backscatter, low-RMS slope material located in local topographic lows, commonly associated with small shield edifices (less than 5 km diameter). *Interpretation:* Localized flood lava flows

Radar Facies

rf **Radar facies** – high backscatter radar facies marked by penetratively developed (i.e., spaced at or below data resolution) tectonic fractures and flows (?). Major trends marked by lineaments. This facies does not represent a single coherent geologic unit formed at a specific time, or of a specific character. *Interpretation:* radar facies representing a composite unit of tectonic fabrics and flows.

Explanation

Primary Structures

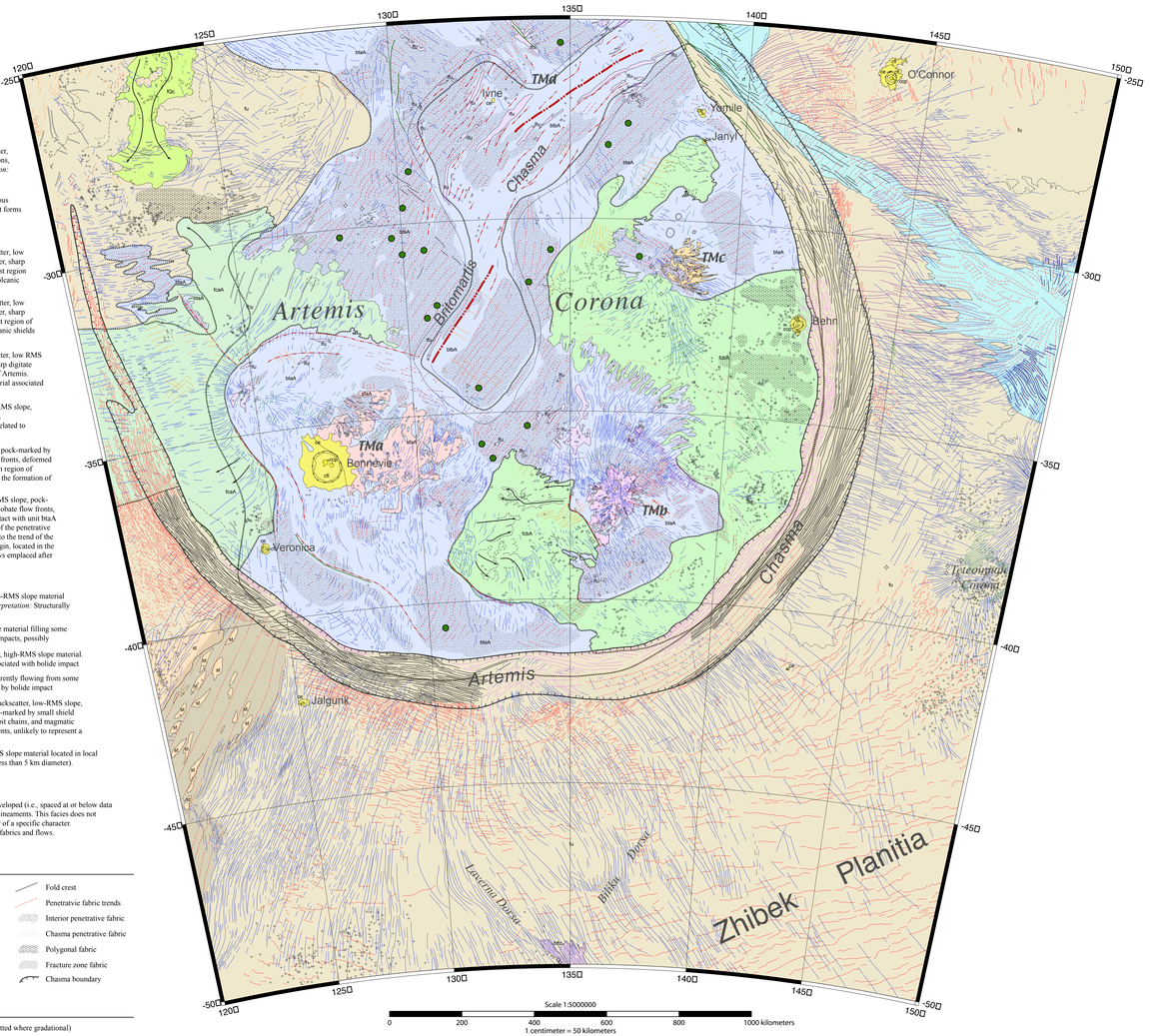
- Crater rim crest
- Shield (< 5 km)
- Shield (> 5 km)
- Pit crater
- Pit chains
- Channels
- Shallow troughs
- Radar boundary
- Flow direction
- Flow front
- Tick

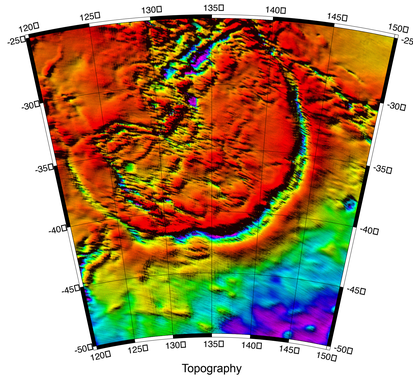
Secondary Structures

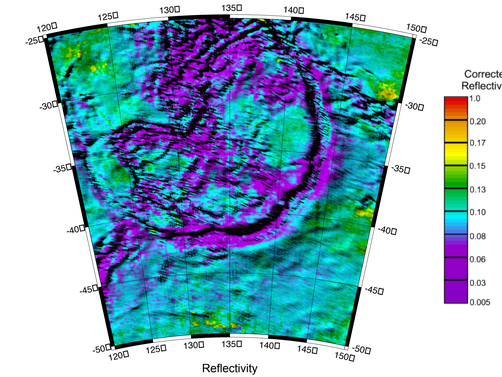
- Fractures
- Ridges
- Lineaments
- Double lineaments
- Graben
- Wrinkle Ridges
- Scarp
- Fold crest
- Penetrative fabric trends
- Interior penetrative fabric
- Chasma penetrative fabric
- Polygonal fabric
- Fracture zone fabric
- Chasma boundary

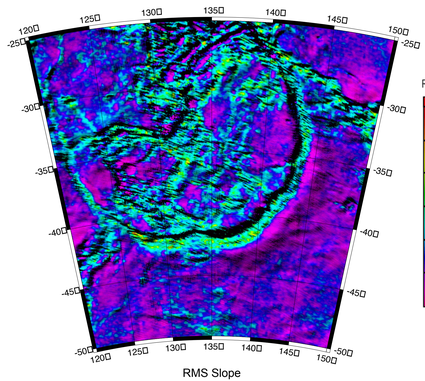
Other Symbols

- Contacts (thickly dotted where gradational)
- Penetrative fabric wavelength measurement site









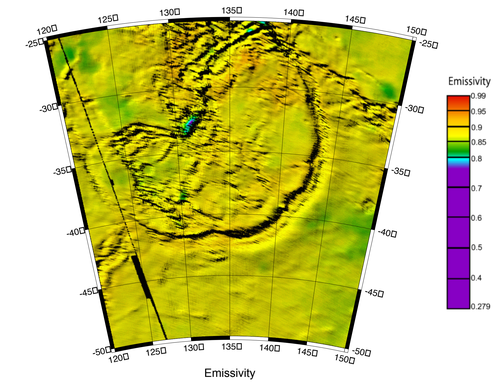


Plate 1. Geologic map of the Artemis Corona Quadrangle (V-48), Venus