

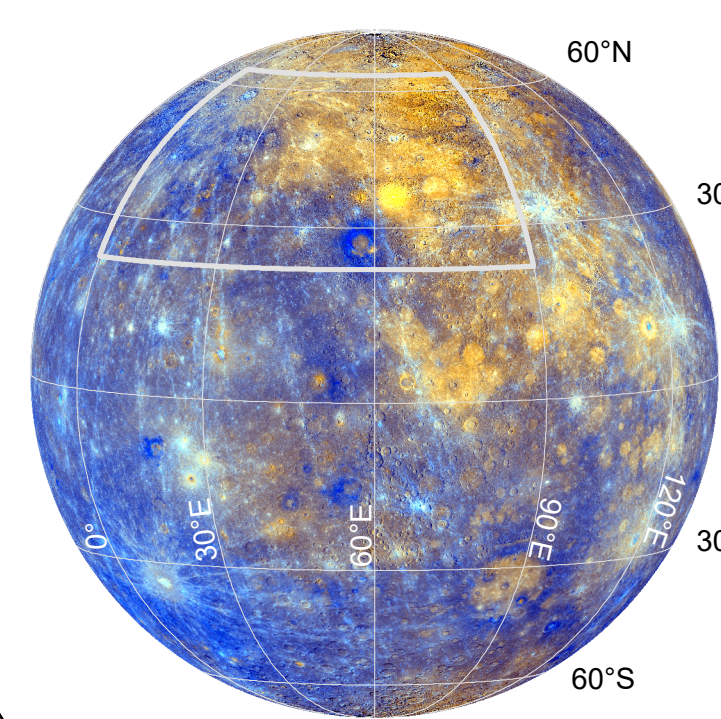
Geological map of the Hokusai Quadrangle (H05), Mercury

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1:3,000,000



90°N	H01 - Borealis Borea				
65°N	H05 - Hokusai Apollonia	H04 - Raditadi Liguria	H03 - Shakespeare Caduceata	H02 - Victoria Aurora	
22.5°N					
	H10 - Derain Piera	H09 - Eminescu Solitudo Cnophori	H08 - Tolstoj Phaethontas	H07 - Beethoven Solitudo Lycanias	H06 - Kuiper Tricena
22.5°S					
	H14 - Debussy Cyllene	H13 - Neruda Solitudo Persephones	H12 - Michelangelo Solitudo Promethei	H11 - Discovery Solitudo Hermiae Trismegisti	
65°S	90°E		H15 - Bach Australia		270°E

Geological units

- sp** Smooth plains
Sparsely cratered plains. Probably volcanic where areally extensive.
Small patches perched within impact crater terraces/ejecta probably impact melt.
- ip** Intermediate plains
Patches of smooth material confined by high-standing plains intermediate in roughness between smooth and intercrater plains.
Probably intercrater plains that has been partially inundated by smooth material of volcanic/impact origin.

Crater materials (five degradation classes)

- c₀** crater—pristine
Sharp rims and internal peaks. Textured ejecta blankets. Albedo rays present.
- c₁** crater—well-preserved
Sharp rims and internal peaks. Textured ejecta blankets. Albedo rays absent.
- c₂** crater—degraded
Muted rims and internal peaks. Ejecta blankets present but not strongly textured.
- c₃** crater—heavily degraded
Rims mostly complete, but subdued. Peaks and distal ejecta rare.
- c₄** crater—extremely degraded
Indicated in topography. Rims highly incomplete or absent. Ejecta present in largest examples only.
- d** Degraded catenae
Rims of smooth-floored secondary crater chains.
- cfs** Smooth crater floor
Smooth, sparsely cratered material confined to craters.
Probably impact melt (c₃), volcanic (c₁/c₂), or either/both (c₂/c₄).
- dh** Hummocky crater floor
Rough or cratered material confined within craters. Probably original crater floor texture in c₂/c₄ craters. Probably degraded wall and floor material in c₁–c₃ craters.

Surface features

- Crater rays
- Hollows
- Catenae
Secondary impact crater chains
- Bright, diffuse red spots
Putative pyroclastic deposits

Structures

- Graben
Found within volcanic crater fills
- Ridge
Found within volcanic crater fills
- Wrinkle ridge
Contractional landform common within smooth plains
- Wrinkle ridge ring
Contractional landform located above buried impact crater

Faults

- Thrust—confident identification
- Thrust—uncertain identification

Crater rims

- Rim crest of crater (diam. ≥ 20 km)
- Rim crest of crater (5 < diam. < 20 km)
- Rim crest of subdued or buried crater
- Irregular pit
- Putative volcanic vent

Geological contacts

- Certain—confident location
- Approximate—uncertain location

Coordinate system

Projection: Lambert Conformal Conic
Central meridian: 45° E
Standard parallel 1: 30° N
Standard parallel 2: 58° N
Sphere radius: 2440 km

Basemaps
Main map: MESSENGER MDS map projected Basemap Reduced Data Record (BDR)
Resolution: 256 pixels per degree (~160 meters/pixel)
Data source: https://ode-imaging.jpl.nasa.gov/data/messenger/msgrmds_4001/BDR/H05/
Mercury globe: MESSENGER MDS Enhanced Color Global Mosaic
Resolution: 64 pixels per degree (~665 meters per pixel)
Data source: https://astrogeology.usgs.gov/search/map/Mercury/Messenger/Global/Mercury_MESSENGER_MDIS_BASEMAP_EnhanceColor_Mosaic_Global_665m

Basemap credits: NASA/Johns Hopkins University Applied Physical Laboratory/Carnegie Institute of Washington

Cross section

Indicative cross section. Surface topography from Stark et al. (2017). Smooth plains thicknesses have been estimated from ghost crater diameters by Ostrach et al. (2015).

Alternative crater classification

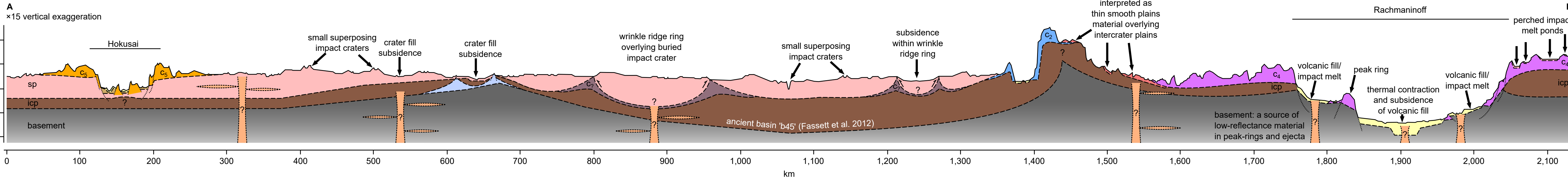
An alternative version of this map is available with three crater degradation classes compatible with those of other MESSENGER quadrangle geological maps of Mercury (Galluzzi et al., 2016; Mancinelli et al., 2016; Guzzetta et al., 2017).

Nomenclature

From the Gazetteer of Planetary Nomenclature
International Astronomical Union (IAU) Working Group for Planetary System Nomenclature (WGPSN)
Source: <http://planetarynames.wr.usgs.gov/Page/MERCURY/target> (21/01/2020)

Supplementary cross section key

- magma plumbing features (arbitrary forms and locations)
- crater materials (unclassified)
- basement



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