

## GEOLOGICAL MAPPING OF MERCURY AND THE NERUDA QUADRANGLE (H13).

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### ABSTRACT

**Introduction:** With ESA-JAXA's BepiColombo mission en route to Mercury, a full set of comprehensive geological maps of the planet is required, to provide context for the planned science phase of the mission [1]. Mapping on a quadrangle basis as part of collaborative effort by PLANMAP [2, 3] is nearing completion with 7/15 quadrangles finished, and the remaining underway or scheduled. Here we review the Open University contribution, especially current progress for the Neruda quadrangle (H13; 180–270°E, 22.5–65°S).

#### Data and methods:

*Primary basemap:* H13's ~166 mpp v1.0 BDR tiles with moderate (~74°) solar incidence angles.

*Secondary basemaps:* low (~45°) and high (~78°) incidence angle basemaps; ~665 mpp enhanced color mosaic; MLA- and stereo-derived DEMs.

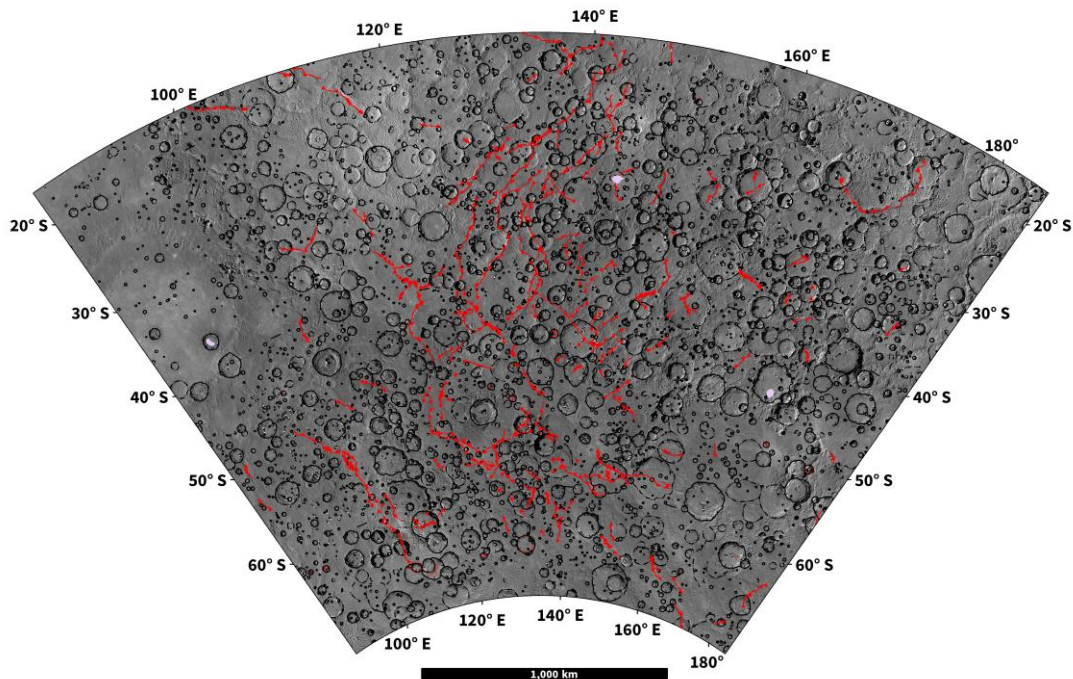
*Map projection:* Lambert Conformal Conic (c. meridian, 135°E; st. parallels, 30°S and 58°S; radius, 2439400 km).

*Scale:* 1:3M with digitization scale at 1:300k.

**Progress:** Hokusai (H05), Derain (H10) and Debussy (H14) maps are finished. H13 crater rims and tectonic features are mostly completed, and crater floor material mapping is underway. Bach (H15) mapping has commenced and mapping of Discovery (H11) is scheduled to begin in October 2021.

**References:** [1] Rothery D. A. et al. (2020) *Space Sci. Rev.*, 216, 66. [2] Galluzzi V. et al. (2019) *Geophys. Res. Abs.*, 21, EGU2019-18802-1, [3] Galluzzi V. et al. (this meeting).

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**Figure Caption:** Mapping progress for H13 Neruda.