Mercury tectonics and mapping the Neruda Quadrangle

How to cite:

For guidance on citations see FAQs.
**WHY MAP MERCURY?**

The BepiColombo mission is en-route to Mercury. Prior to the arrival of the spacecraft, it is imperative that a full set of comprehensive geological maps is produced, to provide context for the planned science phase of the mission.

**TECTONICS?**

“Study of the deformation of the rocks that make up Mercury’s crust and the forces that produce such deformation” — modified from Britannica

Tectonic landforms are abundant across Mercury’s surface revealing a complex history of crustal evolution. When and why did they form? Did they all form at the same time? Are they still active today?

**PROJECT OVERVIEW**

I am producing a geological map of the Neruda Quadrangle of Mercury at a scale of 1:3M. I am also investigating Mercury’s tectonic landforms where I am trying to find out their age and understand their formation mechanisms in order to constrain Mercury’s tectonic evolution.

I am digitally mapping using ArcGIS software with data collected between 2011–2015 by NASA’s MESSENGER (MErcury Surface, Space ENvironment, GEochemistry and Ranging) Mercury Dual Imaging System.