

# MapONE

One Database for All Planetary Maps

**By:** Samantha Milligan, Michael Nelson,  
Ricardo McCrary, and Jake Stuck

# Meet the Team

Samantha Milligan



Team Leader,  
Customer Coordinator,  
Coder

Ricardo McCrary



Customer Coordinator,  
Coder

Jake Stuck



Architect,  
Coder

Michael Nelson



Recorder,  
Release Manager,  
Coder

# Meet the Sponsors & Mentor

**Dr. Sarah Black**



**Research Physical Scientist**

Terrestrial hydrothermal sites,  
physical volcanology, remote  
sensing/GIS

**Marc Hunter**



**IT Specialist**

1st Lt US Marines, taught  
planetary geography at NAU,  
spatial analysis cartography

**Melissa Rose**



**PhD Student**

Remote sensing,  
ecological modeling,  
biodiversity change

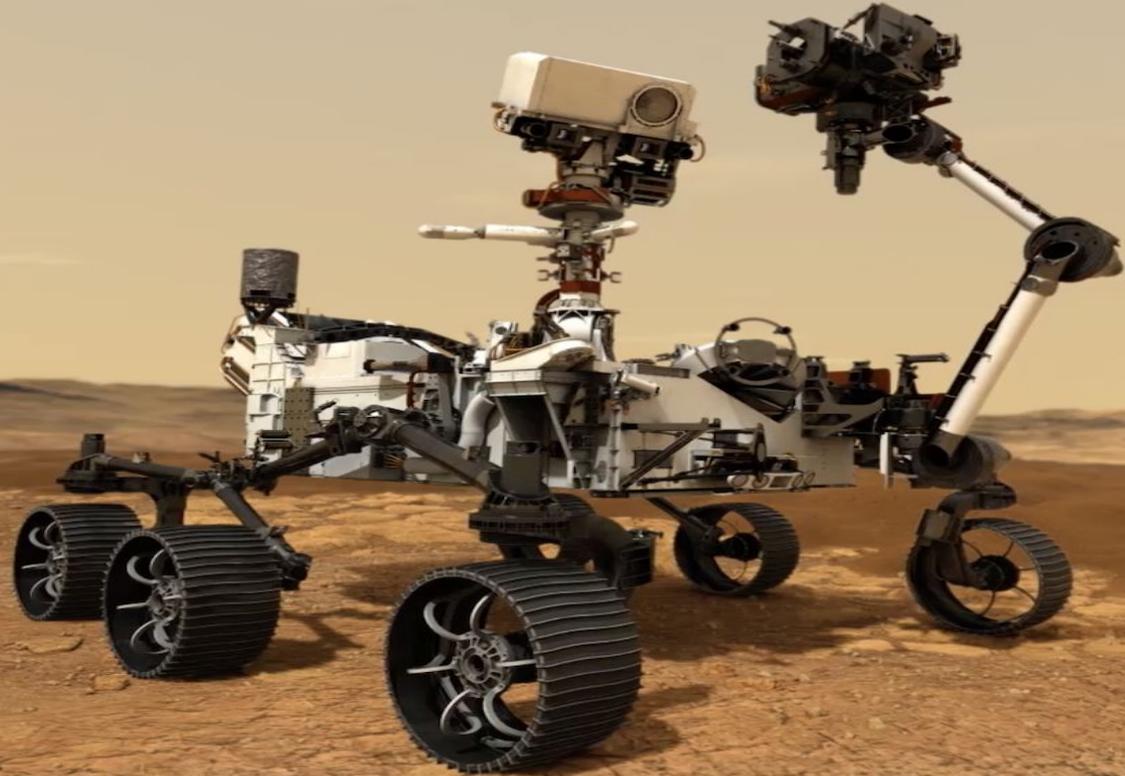
# Planetary Geologic Mapping (PGM) Program

- USGS Astrogeology Science Center
- Assists **National Aeronautics and Space Administration (NASA)**
- Supports **planetary science community**
- Collects, monitors, and analyzes natural resource conditions



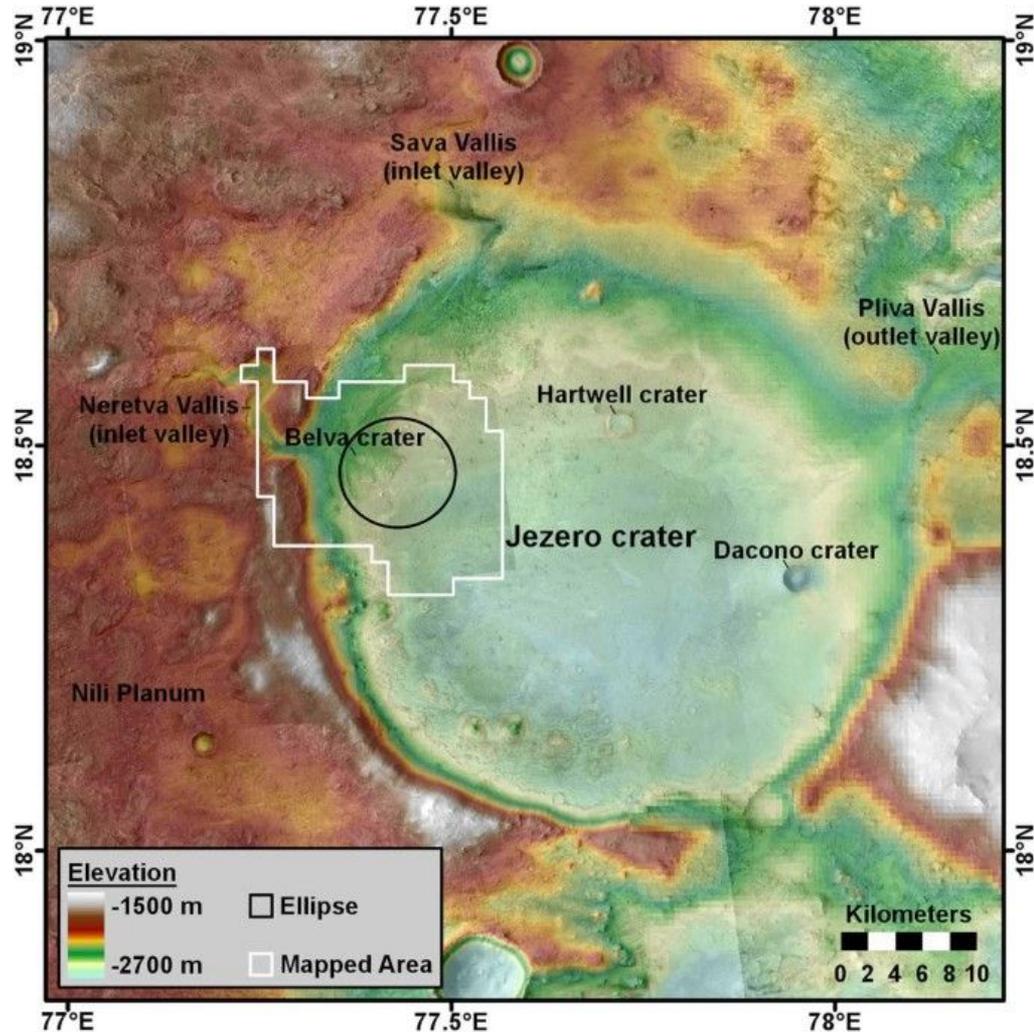
# Planetary Maps

- Essential to space exploration
- Provides resources before, during, & after space missions
- Mars Rover 2020 Perseverance



# Integration Concern

- **No single, centralized system** to collect/search ALL mappings
- Non-USGS maps published in journal articles/conference papers
- Crucial information may be overlooked
- Time-consuming



# One Database for All Maps

GUI, Web scraping, Machine Learning

## Geologic Mapping

Home Maps Guidelines Resources Meetings Milestones FAQ

### Projects for All

Show 10 entries

Search:

Project Name	Scale	Author	Status
<a href="#">A New Geologic Map of the Borealis Quadrangle (H-1) on Mercury</a>	1:5M	Ostrach, Lilian	Mapping in Progress
<a href="#">Acidalia Mensae</a>	1:500K	Parker, Timothy	Mapping in Progress
<a href="#">Aeolis Dorsa</a>	1:500K	Burr, Devon	Mapping in Progress
<a href="#">Aeolis Mons</a>	1:60K	Thomson, Bradley	Mapping in Progress
<a href="#">Alba Mons Summit</a>	1:1M	Crown, David	Mapping in Progress
<a href="#">Alba Mons Western Flank</a>	1:1M	Crown, David	Mapping in Progress
<a href="#">Aphrodite Terra</a>	1:10M	Hansen, Vicki	Technical Review
<a href="#">Argyre Planitia</a>	1:1M	Anderson, Robert	Mapping in Progress
<a href="#">Arsia Montes</a>	1:1M	Williams, David	Technical Review
<a href="#">Ascræus Mons</a>	1:1M	Williams, David	Technical Review

Showing 1 to 10 of 312 entries

Previous 1 2 3 4 5 ... 32 Next

**MapView Beta** by the NGMDB

MapView lets you explore some of our favorite geologic maps from the NGMDB (USGS/AASG). Note this interface is in beta, so feel free to send us any [comments](#), [bug reports](#), and [suggestions](#) as we continue to improve the interface.

**25,329** maps on screen ([Get full citation list](#))

Near: undefined, (Lng: -72.073, Lat: 24.941)

Filter Maps by the Following Scale Bin

All 500K 250K 125K 100K 62K 48K 24K

Promote Maps by:  Selected  Bedrock  Surficial

Selected Geologic Maps Here (NGMDB Map Catalog)

Filter results by title or author keyword

Sync Record Table Returns with Selected Scale Bin

Title Author Agency Year Scale

Showing 1-50 of 25,329 records. Next

Van Hoesen, J.G., Haisig, P.M., and Fisher, S.R., 2021, Hydrogeology of the Susquehanna River valley-fill aquifer system in the towns of Conklin and Kirkwood, Broome County, New York, U.S. Geological Survey, Scientific Investigations Report SIR-2021-5026, 1,24,000. **Surf**

Ruleman, C.A. and Brandt, T.R., 2021, Surficial geology of the northern San Luis Valley, Saguache, Fremont, Custer, Alamosa, Rio Grande, Conejos, and Costilla Counties, Colorado, U.S. Geological Survey, Scientific Investigations Map SIM-3475, 1:75,000. **Surf**

Green, R.C., Lamarche, A.G., Williams, C.P., Hebets, C.L., Evans, G.S., and Albritton, C.K., 2021, Geologic map of the USGS Vero Beach 30 x 60 minute quadrangle central Florida [3 plates. See report at [Open-File Report 109](#)], Florida Geological Survey, Open-File Map Series 112, 1:100,000. **Surf**

# Sources

- <https://www.usgs.gov/>
- <https://www.nasa.gov/>
- <https://www.ncbi.nlm.nih.gov/>