

Mapping and Planetary Spatial Infrastructure Team

INTRODUCTION

Jani Radebaugh – MAPSIT Chair

Planetary Science Subcommittee Meeting

DC, 29-30 September 2016



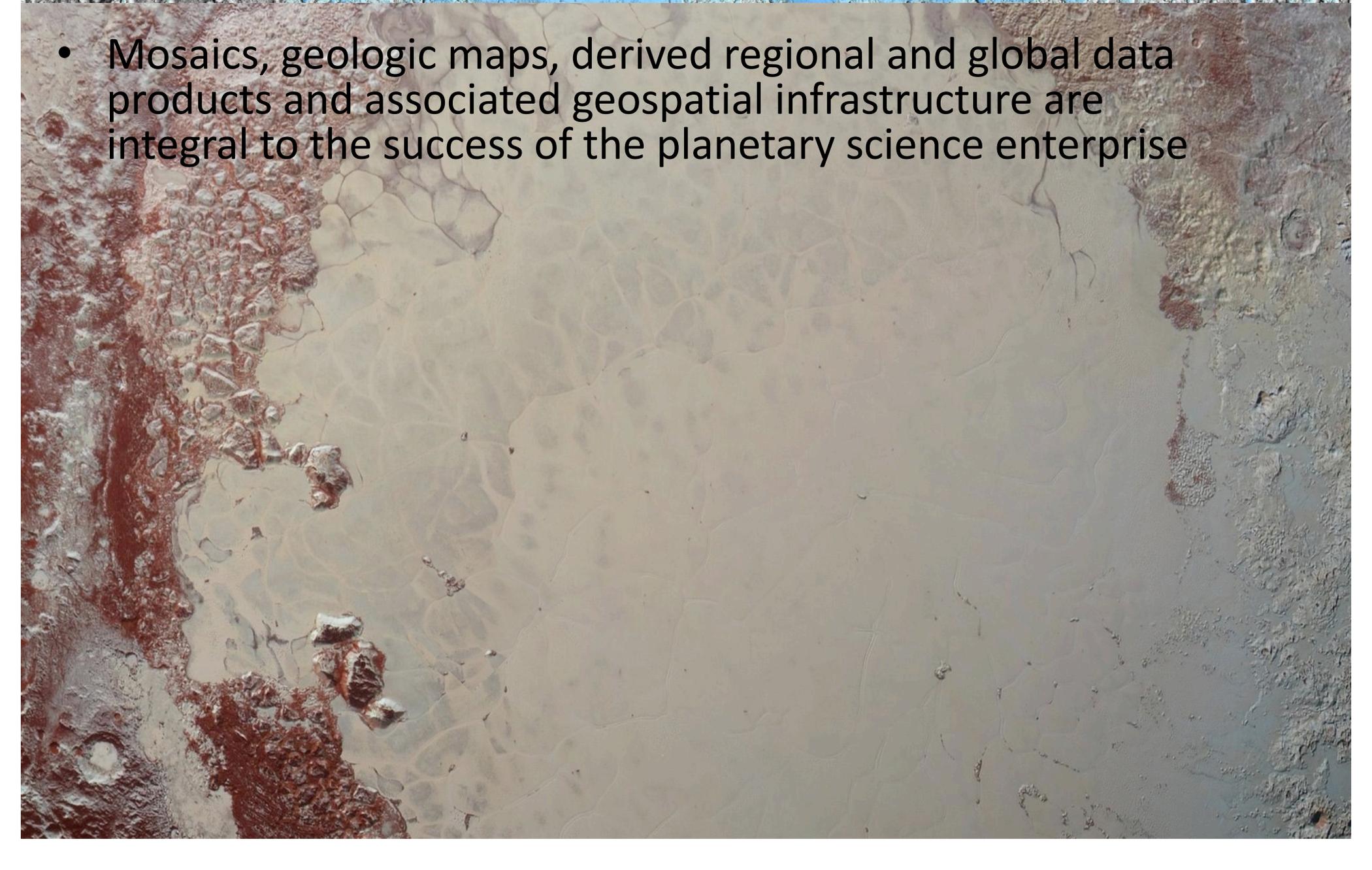
The Mapping and Planetary Spatial Infrastructure Team Motivation

- Mosaics, geologic maps, derived regional and global data products and associated geospatial infrastructure are integral to the success of the planetary science enterprise



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 - **Influence all phases of the mission lifecycle for science investigations and operations**
 - Strategic needs must be anticipated and prioritized by the community
- PSS recommended a “Cartography Research and Analysis Group” [CRAG] in Fall 2014.
 - A team fulfilling this role now exists in the form of MAPSIT
 - MAPSIT succeeds former Planetary Cartography and Geologic Mapping Working Group (PCGMWG) and assumes strategic planning role
- **We represent the planetary science community**
 - Help evaluate, prioritize and advocate for data, mapping, infrastructure needs
 - Another Analysis Group – Sarah Noble our POC

MAPSIT Steering Committee

- Jani Radebaugh, Brigham Young University [Chair]
- Samuel Lawrence, Arizona State University [Chair Emeritus]
- Brad Thomson, University of Tennessee Knoxville [Vice Chair]
- Justin Hagerty, United States Geological Survey
- Lisa Gaddis, United States Geological Survey
- James Skinner, United States Geological Survey
- Sarah Sutton, University of Arizona
- Trent Hare, United States Geological Survey
- Daniella DellaGiustina, University of Arizona
- Erwan Mazarico, NASA Goddard Space Flight Center
- David Williams, Arizona State University
- Brent Archinal, United States Geological Survey
- Robin Fergason, United States Geological Survey
- Jay Laura, United States Geological Survey
- Shane Byrne, University of Arizona

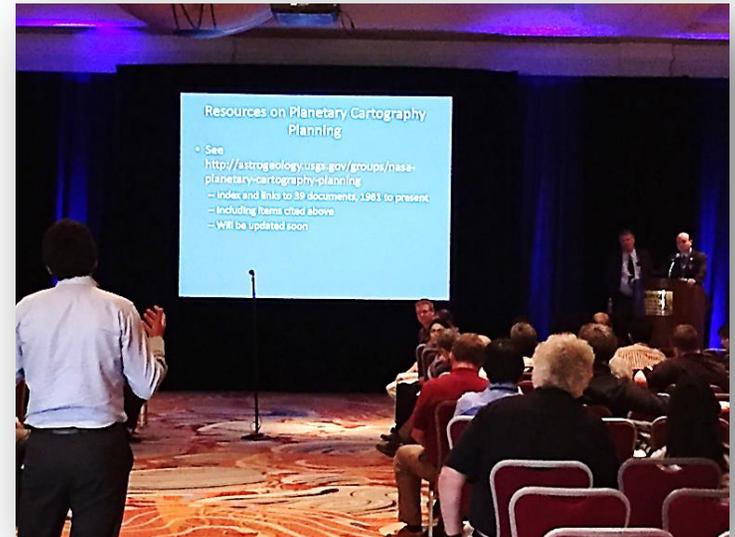
9/30/16

Representing a Diverse Community:

- *Domain geoscience specialists*
 - *Moon, Mercury, Small Bodies, Outer Planets, Mars...*
- *Photogrammetry and Geodesy*
 - *SOCET-SET, SOCET-GXP*
- *Geologic Mappers*
- *Mission participation*
 - *LRO, MRO, OSIRIS-Rex, MESSENGER, Cassini, Galileo*
- *Cartographic Software expertise*
 - *e.g. ISIS, ArcMAP, QGis, Lunaserv*
- *Data Archival and Dissemination*
- *Human Exploration*
 - *SKG and ISRU expertise*

MAPSIT Activities

- Town Hall at LPSC 46, 47
- “Planetary Spatial Infrastructure: At the Intersection of GIScience and Planetary Science”, LPSC 47, very well received (To be incorporated into LPSC topics for all meetings)
- 2nd Data User’s Workshop
 - 115 attendees in 2015
- Geological Mapper’s Meeting:
 - Flagstaff, June 13-15, 2016, 50 attendees
- Steering Committee Meeting June 16, 2016
 - Shoemaker Center, Flagstaff, AZ
- Synthesizing 2017-2022 Planetary Geospatial Strategic Plan [PGSP]
 - Undertaking comprehensive community stakeholder input process
 - Nominal delivery by mid 2017
- MAPSIT webpage now up
 - <http://www.lpi.usra.edu/mapsit>



MAPSIT R&A Concerns

- Presented in part to National Academies Space Studies Board committee on R&A restructure 5/16:
- PDART (Planetary Data Archiving, Restoration and Tools) is a strong addition
 - Recognition that producing data products useable by the community is valued by NASA
 - Concern that program is oversubscribed and underfunded to support the backlog of needed products
- How is geologic mapping faring under R&A?
 - PG&G (Planetary Geology and Geophysics) was home for mapping, seen a downturn in mapping since demise and some retirements
 - Can be funded if proposers understand how to propose – science if a DAP or SSW, PDART if not – and if their standalone (no additional modeling, e.g.) value for doing science is recognized.
 - Educate community what is possible under PDART and other programs.
 - How do we deal with the long time periods (4 years) required to create a map, especially a summative one (global Mercury)?
- Can DAP programs be used to create data products and software, or just PDART?



MAPSIT Goals

- Reach out to community, determine key needs
 - Products for all users and stakeholders
 - Standards for software/instruments? Level-1 data?
 - Basically, make sure **data is as easy to use as possible**
- Maintain communication with NASA HQ to inform both ways
- Determine how to interface with RPIFs (not “facilities” ...) and the PDS (link through Lisa Gaddis)
- Communicate with international partners
- Roll out 2017-2022 Planetary Geospatial Strategic Plan [PGSP]
 - Full community input
 - **Goal is a concise document to inform decision-making**
- Contribute to NASA Strategic Knowledge Gaps (SKGs)

MAPSIT Upcoming

- Planetary mapping session at GSA Denver 9/16 (went well! Great contributions, good interest)
- **New committee members solicited by community announcement** - vote and decide on them Oct 2016
- Town Halls ahead of Planetary Geospatial Strategic Plan
- First MAPSIT community meeting June 2017 Flagstaff, in conjunction with data users/mappers meeting

