

MiniGrant 2022: *Development of a GIS Data Model for Hyperspectral Mapping Spectrometers (A. Frigeri, IAPS Roma)*

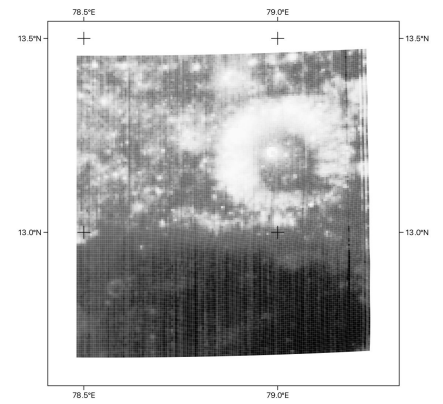
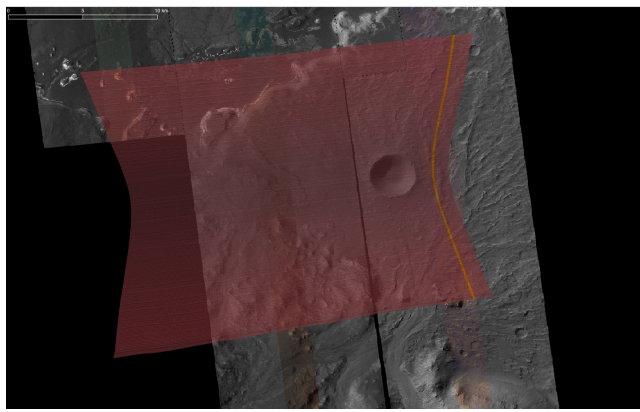
Milestone 1: development of a standalone application **pix2vec** to represent ground pixel projection of spectrometers in the Geospatial Vector format for GIS (Geographic Information System). Programming language: python.

Software is published as Free Open Source Software (FOSS): DOI: [10.5281/zenodo.8206075](https://doi.org/10.5281/zenodo.8206075) on the GitHub collaborative development platform. Instruments supported: M3, CRISM

Milestone 2: implementation in C++ of the Geospatial Data Model into the [ISIS software](#) ([Gaddis et al., 1997](#)) main code:

<https://github.com/afrigeri/ISIS3/tree/pixel2map>

will be reviewed by the ISIS developers team and implemented in the main program, instrument supported: all spectrometers supported by ISIS.



Dissemination

- Commette member for [6th Planetary Data Workshop held in June 2023 in Flagstaff, AZ](#)
- Oral presentation of the project at the 6th Planetary Data Workshop: **Frigeri A.** Hare T. [Geospatial Vector Representation of Planetary Mapping Spectrometers Data \[#7088\]](#): Hyperspectral data is characterized by hundreds of bands that are difficult to handle when cartographically processed. Here we present our work of developing a GIS vector model to represent the geometries of mapping spectrometers.
- American Geophysical Union (AGU) Fall Meeting, San Francisco, December 2023:
Abstract ID: 1386580 **Frigeri A.** Hare T., Abstract Title: [Pix2vec: Free Open Source Software for Geospatial Vector Representation of Planetary Remote Sensing Spectrometers](#)

A Peer-reviewed publication is planned for publication in 1st half 2024