SSHADE Users Newsletter

Focus on Mirabelle

November 2026

Dear SSHADE users,

This month, we would like to use this newsletter to focus on the French database: Mirabelle.

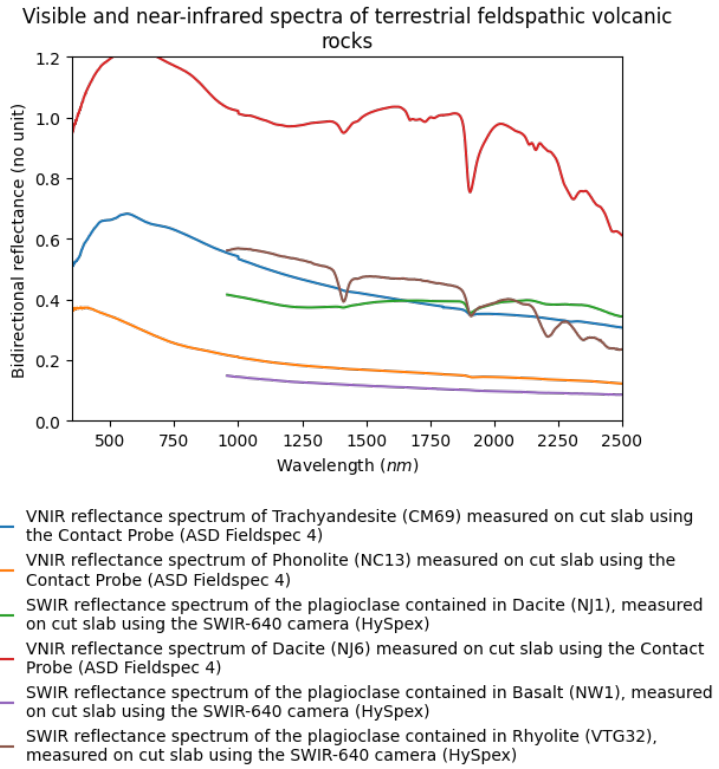
Developed by the CRPG (Centre de Recherches Pétrographiques et Géochimiques) Nancy, Mirabelle is a database specialized in VNIR (0.35–2.5 microns) data with a focus on properties of terrestrial rock samples used as planetary analogues.

Two recently imported datasets illustrate this focus particularly well, as they compile VNIR reflectance spectra of a broad range of terrestrial feldspathic rocks — from volcanic to plutonic — together with spectra of the plagioclase minerals they contain. Feldspathic rocks are excellent analogues for Mars igneous lithologies, helping us better understand the recent signatures of feldspars detected from orbit, and their implication for magmatic processes on the red planet.

Please find below the two datasets available on Mirabelle.

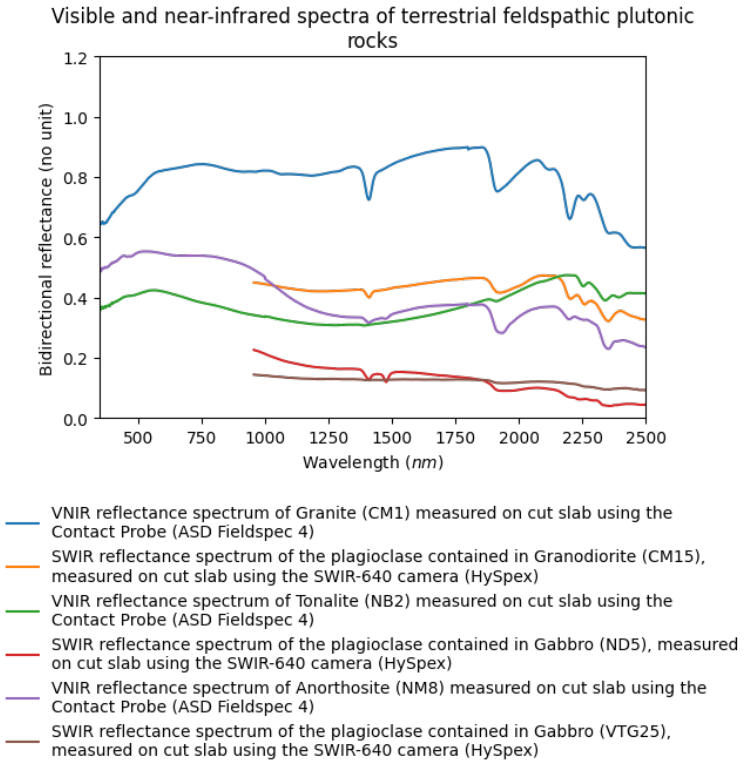
Terrestrial feldspathic volcanic rocks

VNIR and SWIR reflectance spectra of terrestrial feldspathic volcanic rocks including andesite, basalt, dacite, latite, phonolite, rhyolite, trachyandesite and trachybasalt samples, along with the spectra of the plagioclase they contain. This dataset includes 46 spectra measured on whole rocks (uncrushed samples) with a contact probe (ASD Fieldspec 4) and a SWIR imaging camera (HySpex SWIR-640).



Terrestrial feldspathic plutonic rocks

VNIR and SWIR reflectance spectra of terrestrial feldspathic plutonic rocks, including anorthosite, diabase, diorite, gabbro, gneiss, granite, granodiorite, migmatite, pegmatite, monzogabbro, syenite and tonalite samples, along with the spectra of the plagioclase they contain. This dataset includes 86 spectra measured on whole rocks (uncrushed samples) using the same setup.



Both datasets were acquired at CRPG by PhD student Marie Barthez, with the support of the ANR Mars-SPEC project (ANR-21-CE49-0003).

Stay tuned for future data.
Have fun with SSHADE data!
The SSHADE team

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