

# PaSSTEL : PlanetAry Surface Spectroscopy Toulouse Experimental Laboratory

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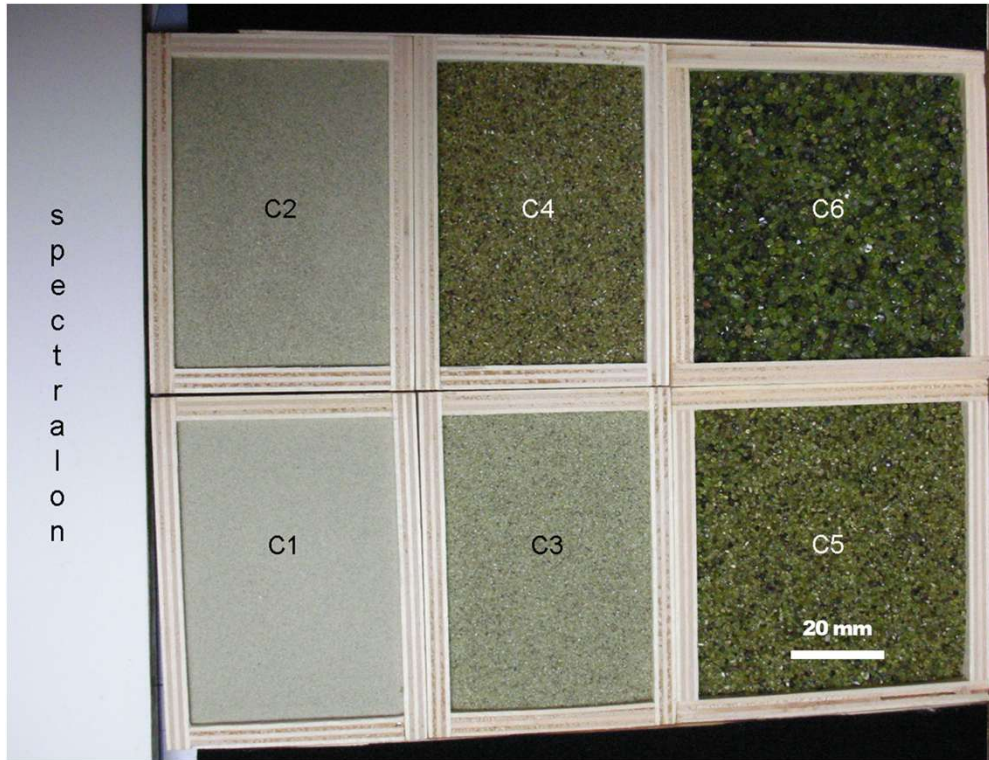


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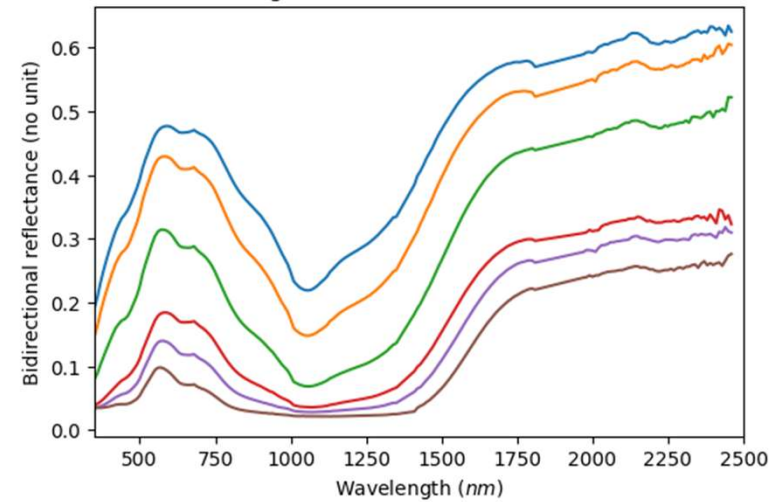


Echantillons : provenant de produits volcaniques naturels (roches ou poudres)

Données (1) spectro ASD : hyperspectrales VIS NIR



Olivine Hawaii Forsterite Fo88 sand 45-75  $\mu\text{m}$  (C1) to 1000-2000  $\mu\text{m}$  (C6) grains Vis-NIR reflectance



- Olivine Hawaii Forsterite Fo88 sand 45-75  $\mu\text{m}$  (C1) grains Vis-NIR reflectance
- Olivine Hawaii Forsterite Fo88 sand 75-125  $\mu\text{m}$  (C2) grains Vis-NIR reflectance
- Olivine Hawaii Forsterite Fo88 sand 125-250  $\mu\text{m}$  (C3) grains Vis-NIR reflectance
- Olivine Hawaii Forsterite Fo88 sand 250-500  $\mu\text{m}$  (C4) grains Vis-NIR reflectance
- Olivine Hawaii Forsterite Fo88 sand 500-1000  $\mu\text{m}$  (C5) grains Vis-NIR reflectance
- Olivine Hawaii Forsterite Fo88 sand 1000-2000  $\mu\text{m}$  (C6) grains Vis-NIR reflectance

Shade meeting, 11-12/02/2025



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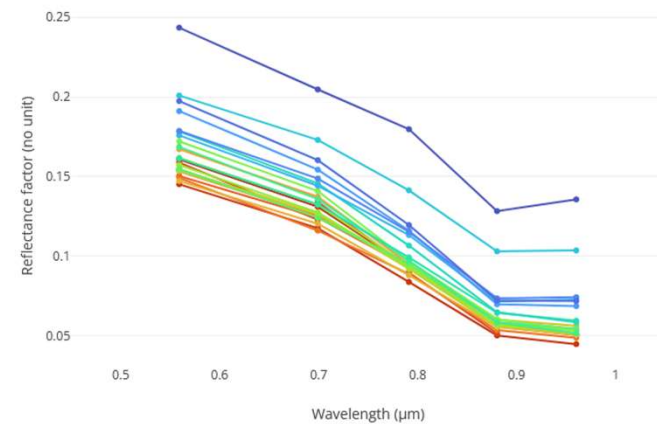
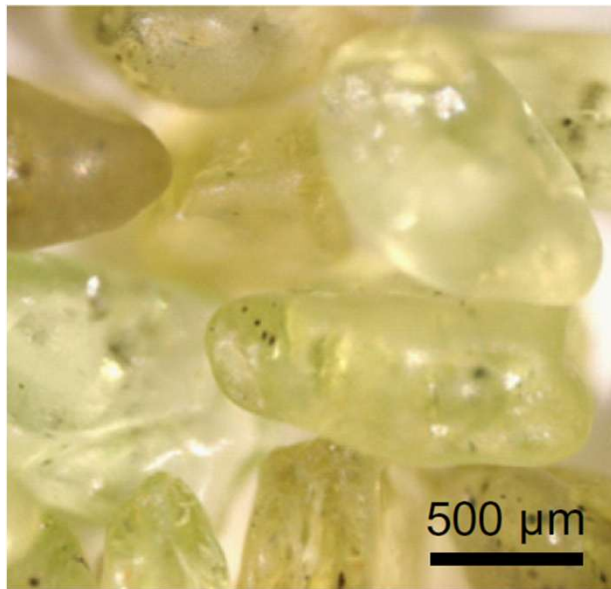


Echantillons : provenant de produits volcaniques naturels (roches ou poudres)

Données (2) multiangulaires spectro-imageur ISEP : multispectrales VIS NIR



Olivine C5 (500-1000 μm)



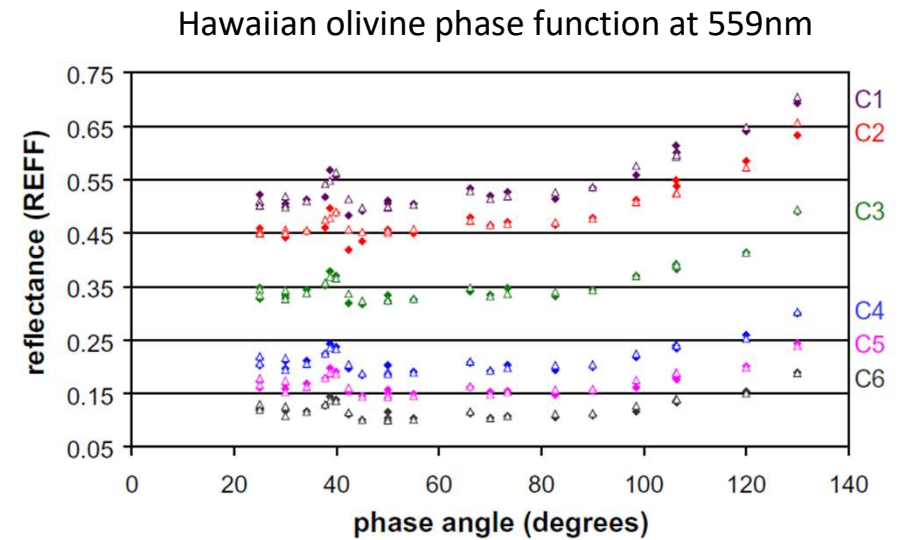
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=10°, e=35°, az=0°, ph=25°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=10°, e=35°, az=180°, ph=45°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=30°, e=0°, az=0°, ph=30°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=30°, e=20°, az=180°, ph=50°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=30°, e=30°, az=135°, ph=55.0247°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=30°, e=40°, az=180°, ph=70°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=30°, e=60°, az=0°, ph=30°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=30°, e=60°, az=135°, ph=82.7138°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=30°, e=60°, az=180°, ph=90°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=30°, e=60°, az=315°, ph=42.3368°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=45°, e=55°, az=270°, ph=66.0725°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=50°, e=0°, az=0°, ph=50°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=50°, e=25°, az=0°, ph=25°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=50°, e=30°, az=135°, ph=73.3914°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=50°, e=30°, az=315°, ph=34.1564°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=50°, e=60°, az=135°, ph=98.4943°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=50°, e=60°, az=315°, ph=37.7679°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=50°, e=70°, az=180°, ph=120°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=55°, e=65°, az=135°, ph=106.413°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=55°, e=65°, az=315°, ph=39.8824°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=60°, e=60°, az=135°, ph=106.28°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=60°, e=60°, az=315°, ph=28.7092°)
- Multiangular reflectance of Olivine Hawaii in 5 Vis bands (500-1000 μm grain size) (i=60°, e=60°, az=315°, ph=28.7092°)



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**Proposition** de représentation graphique de la fonction de phase (données multiangulaires) : sélection d'un sous-jeu de domaines angulaires (incidence, émergence, phase) et d'un domaine spectral



**Difficultés rencontrées** (non liées à Sshade) :  
perte de disques durs en 2023 entraînant un arrêt (provisoire)  
d'importation de données dans PaSSTEL