Data for an Article titled "Development of micro ice production apparatus and NIR spectra measurement of frosted minerals for future lunar ice exploration"

Aoi Ogishima[1] and Kazuto Saiki[1]

[1]Osaka University, Department of Earth and Space Science, Graduate School of Science, Osaka, Japan

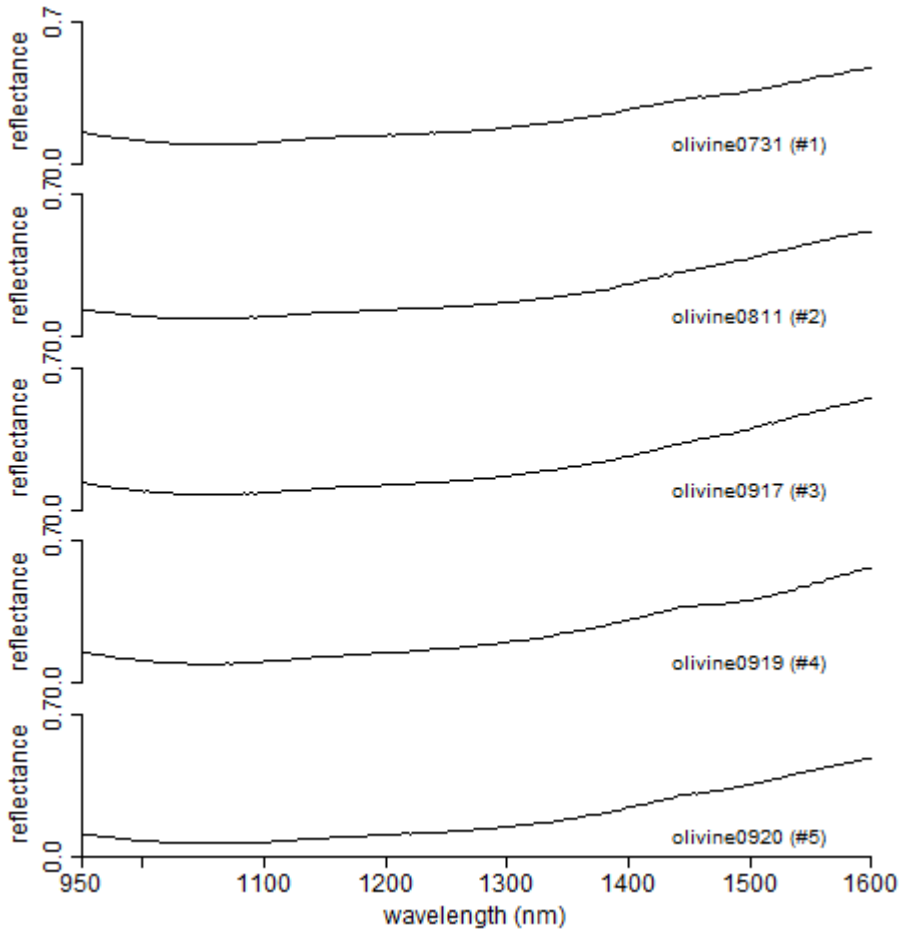
Corresponding author: Kazuto Saiki (ksaiki@ess.sci.osaka-u.ac.jp)

In addition to this file, the files listed in Table 1 are the original data in the manuscript submitted to *Geophysical Research Letters* (# 2019GL086827).

Table 1. The table of measured mass and corresponding spectral reflectance data file name for all samples.

Spectral data file name(.csv)	run number	Mmineral+ice (g)	Mmineral (g)	Mice (g)	Mmineral+ice (wt %)	δ Mmineral+ice (wt %)
olivine0731	#1	3.65	3.587	0.063	1.7260	0.0004
olivine0811	#2	0.466	0.461	0.005	1.0730	0.003
olivine0917	#3	1.653	1.644	0.009	0.5445	0.0009
olivine0919	#4	0.161	0.158	0.003	1.8634	0.0088
olivine0920	#5	0.237	0.235	0.002	0.8439	0.006
plagioclase0823	#6	0.604	0.601	0.003	0.4967	0.0023
plagioclase0901	#7	0.605	0.602	0.003	0.4959	0.0023
plagioclase0904	#8	0.157	0.155	0.002	1.2739	0.009
plagioclase0905	#9	0.452	0.443	0.009	1.9912	0.0031
plagioclase0911	#10	0.635	0.625	0.01	1.5748	0.0022

Fig. 1 The plots of NIR spectra showing the contents of the attached CSV file.



CSV data list

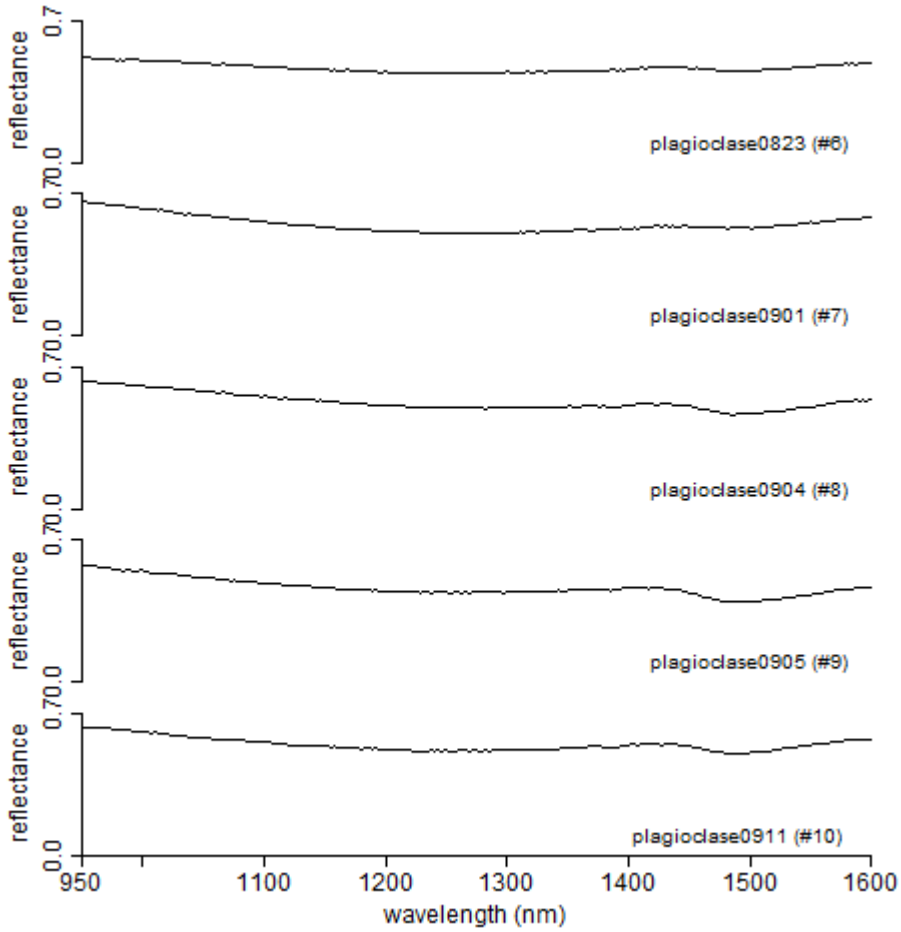
olivine0731.csv

olivine0811.csv

olivine0917.csv

olivine0919.csv

olivine0920.csv



CSV data list

plagioclase0823.csv

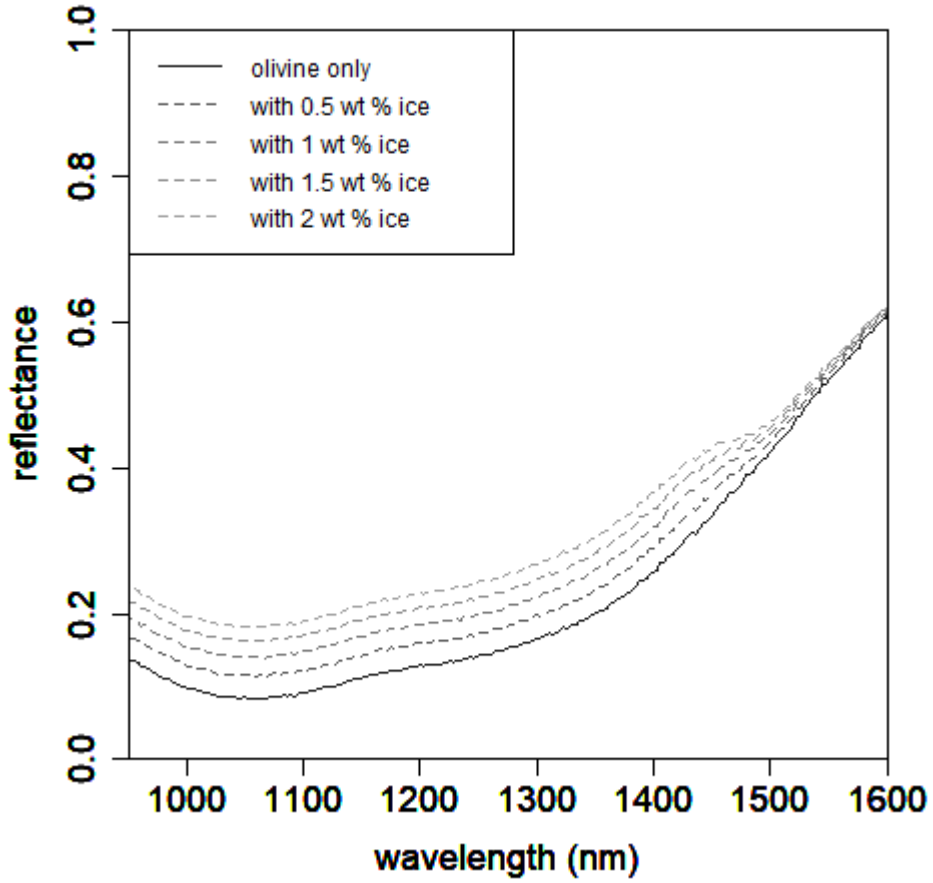
plagioclase0901.csv

plagioclase0904.csv

plagioclase0905.csv

plagioclase0911.csv

Fig.2　The plots of Hapke's model spectra for mixtures which contains 0 wt % (=standard laboratory spectrum), 0.5 wt %, 1 wt %, 1.5 wt %, 2 wt % ice showing the contents of the attached CSV file.



CSV data list

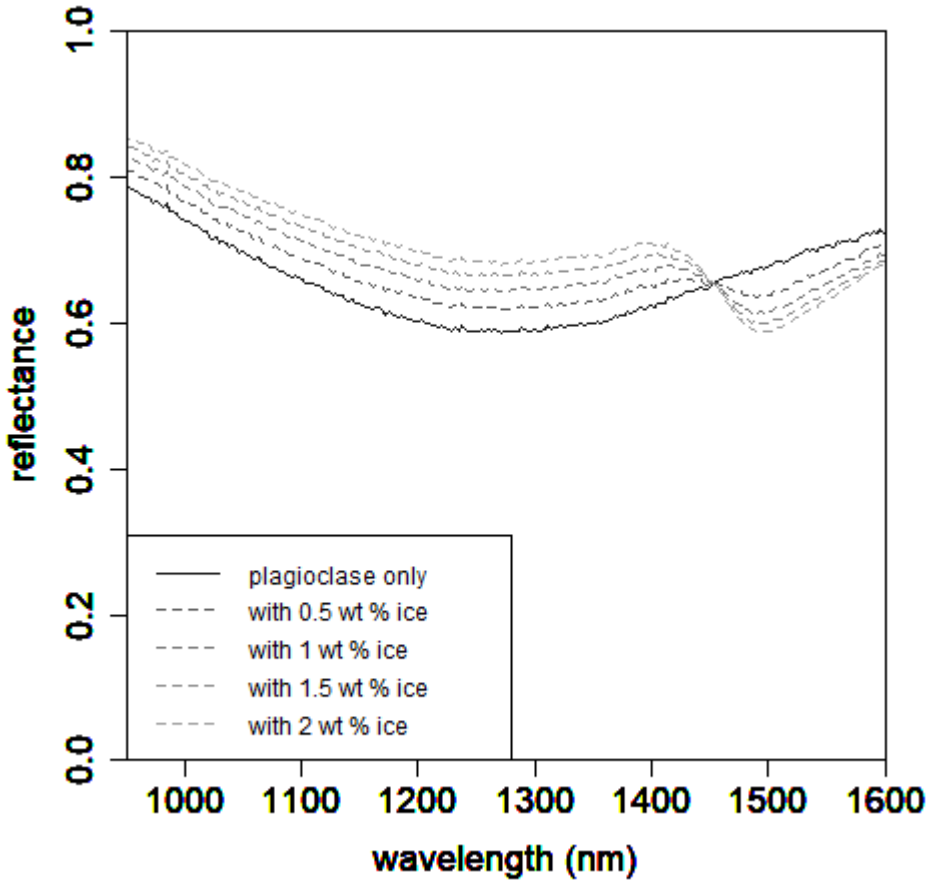
onlyolivine1112.csv

hapke_olivine0.5.csv

hapke_olivine1.0.csv

hapke_olivine1.5.csv

hapke_olivine2.0.csv



CSV data list

onlyplagioclase1112.csv

hapke_plagioclase0.5.csv

hapke_plagioclase1.0.csv

hapke_plagioclase1.5.csv

hapke_plagioclase2.0.csv