

Experimental approach to monitor the weathering parameters

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It is important to understand the characteristics, degree, and mechanism of the space weathering to know the mineralogy and reaction on the planetary surface. Previous studies demonstrated that sub-micron Fe-metal grains produced at the mineral surface contribute such spectral changes. Some quantitative understandings of the Fe-metal generation and other weathering parameters, however, are still remained to be solved. The purpose of this study is to evaluate such weathering parameters using analogous weathered material heated by CO₂ laser beam. Mineral reflectance of analogous weathered material which separated by grain size are analyzed and compared each other but no reddening effect is observed in these samples.