

# UV reflectance pattern of Copernican and Eratosthenian craters in the lunar highland region

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The lunar surface is exposed to meteoroid bombardment and solar wind particles, being physically and chemically affected. The micrometeoroids and the energetic particles cause the surface to be space-weathered. The impact of large meteoroids creates craters by excavating subsurface materials and transforms minerals through the melting process. Some researchers reported that UV reflectance in highland regions presents information on space-weathering states and glasses produced by shock pressure during the impact. In this study, we show the UV patterns in dozens of Copernican and Eratosthenian craters in highland regions. By analyzing the UV reflectance in each morphological unit of the craters, we discuss the surface condition of the craters in terms of space weathering and vitrification of regolith grains. This study will enhance our understanding of the UV characteristics of surface materials and the environments of fresh craters.