# Global Survey of Exposure Areas of Volcanic Glass-Rich Sites on the Moon based on Hyperspectral Remote Sensing

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Spectral Profiler (SP) onboard SELENE/Kaguya has obtained continuous spectral reflectance data (hyperspectral data) for about 70 million points on the Moon in the visible and near-infrared wavelength ranges. Using a data ming approach with all the SP data, global distributions of large area sites with exposed end-member of various lunar major minerals have been revealed: olivine-rich sites, purest anorthosite sites, high Ca pyroxene-rich sites, low Ca pyroxene-rich sites, and spinel-rich sites. In addition to these sites, it is expected that there are exposure sites of quenched glasses from volcanic eruptions on the lunar surface. Although several remote-sensing observations for the volcanic glasses on the Moon have been reported, the global distribution of the glass-rich sites on the Moon has been unknown. Thus, we conducted the global survey using SP data to reveal the global distribution of the glass-rich sites on the Moon. From the global distribution data, we will discuss the compositional variation of the lunar mantle and/or the distribution of the amount of volatiles in the mantle.

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