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REFLECTANCE SPECTROSCOPY ANALYSIS FOR MINERAL IDENTIFICATION IN A PART OF MOON'S SURFACE

Abstract

The high resolution images of the moon have identified the presence of several minerals. A vivid study of the lunar surface may give us a clear picture of the deposition of the mineral types. The distribution and composition of minerals may be used to understand not only the petrogenic history but also the chemical evolution of the moon. Moreover the systematic mineral mapping may help to understand the litho-stratigraphy as well as the curvature of the surface. It would also provide an account of the important mineral resource present on the planet. Reflectance spectroscopy is an important tool for the mineral identification. The spectral response of different minerals in the different bands of the electromagnetic spectrum is used in this technique. The minerals exhibit absorption characteristics in particular bands depending upon their composition. This characteristic allows identifying the different minerals by spectroscopy. In the present study attempt has been made to analyze a part of lunar surface with the spectroscopy method using Hyper spectral Imager data. The study shows the presence of plagioclase feldspar, ferrous ion, silica in the moon's surface.