

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Space Exploration Education (5)

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INTRODUCTION TO THE NEW KOREAN OUTREACH PROGRAM USING A GIS INTEGRATED
PLANETARY MAPPING SYSTEM

Abstract

Korea is planning a space mission to the Moon by as early as 2018 starting with a lunar orbiter and lunar landing mission. This will be followed by sample return programs by 2020 and 2025, respectively. Compared to other countries, Korea has a relatively brief history in space and planetary sciences. With the expected Korean missions on the near-term horizon and the relatively few Korean planetary scientists, Korea Institute of Geoscience and Mineral Resources (KIGAM) has established a new planetary research group. Its focus will be: (1) cosmochemistry and remote sensing in order to study planetary surfaces of the solar system, (2) education for young scientists and students for its lunar missions in order to build a promising planetary space exploration in the future. The KIGAM-based planetary science program will work towards international cooperative space missions, as well as research programs whose focus will be both planetary materials and planetary data systems. Education for young students can be successfully accomplished with international cooperative outreach programs in conjunction with internationally accessible planetary data system (PDS). For the past four decades, several tens of planetary space missions have produced enormous amount of data, which are publicly accessible. These data can be used by young prospective planetary scientists and students to understand the planetary surfaces of the Moon and other planetary bodies in the solar system such as Mars. In order to effectively utilize these PDS data, development of a GIS integrated planetary surface information system of the Moon and Mars is underway. KIGAM's planetary research group is developing a GIS-based lunar planetary mapping system for both research and public outreach. This presentation introduces the GIS integrated lunar mapping system, which includes integrated geomorphic, geologic, elemental, and mineralogical remote sensing data sets of the Moon as one of the prospective Korean planetary outreach programs.