

SPACE EXPLORATION SYMPOSIUM (A3)
Moon Exploration – Part 2 (2B)

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PETROGRAPHIC STUDIES OF BASALTIC ROCKS FROM A MOON-MARS ANALOGUE:
HVERAGERI, ICELAND**Abstract**

Iceland has been used in many occasions for geologic astronauts training, therefore is not unreasonable an exhaustive analysis about the benefits we can obtain in the use of Iceland as Moon-Mars analogue site. Similarities between the landscape of Iceland and the Moon are quite noticeable in the stunning glacial valleys as well as in the surroundings of volcanic craters and lava fields. Furthermore, the Moon is formed by cooling of large masses of igneous material, as is also the case of Iceland hence the study of Icelandic volcanic processes and materials may help us to understand the processes suffered by our satellite many millions years ago and its consequences. During CAREX Iceland campaign, several samples were taken in a basaltic lava flow near the geothermal active area of Hverageri to be recognized in outcrop and analyzed using an optical microscope. The petrographic study conducted by the authors show variations in the plagioclase and olivine percentages within the samples that are not altered hydrothermally. Further geologic, geochemical and isotopic studies are necessary to provide a temporal sequence of flows and a better understanding of the volcanic history of area.