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Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach (3)

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SKY LAKE – MOON ENVIRONMENT DESIGN

Abstract

Sky Lake is a visionary environmental design that uses the natural geological cavities and excavated landscapes (from mining of 3D printing) on the Moon to provide new vision for long term habitation. Utilising the ability of water to protect from radiation Sky lake creates a layer of water above craters, quarries, and caves. These large climatized spaces allow for enhanced living conditions and larger-scale terraforming experimentation including diverse biological environments that have controllable microclimates. It provides wider freedom of movement, the ability to work in sunlight, and even the possibility to create rain.

This paper presents the Sky Lake concept and design. It explores the basic architectural and engineering viability for construction considering current or near-future technology and look as some details including techniques for sealing the regolith, water purification, irrigation system and access. It identifies ideal locations bearing in mind the Moon's natural resources and optimal daylight hours. It discusses how Sky Lake can impact and accelerate the development of the new moon society. We examine the practical and poetic potential for humans to walk on the lunar surface without a spacesuit and leave the first-foot print (rather than boot print) in the lunar dust.