

26th IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE SOLAR SYSTEM (A5)
Interactive Presentations - 26th IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE SOLAR
SYSTEM (IPB)

Author: Mr. ravinder singh
Concordia University, Canada, singhravinder133@gmail.com

HUMAN EXPLORATION OF THE MOON AND CISLUNAR SPACE

Abstract

This proposal presents a new technology called the Modular Robotic Additive Manufacturing Infrastructure (MoRAMI) for enabling human exploration of the Moon and cislunar space, building on existing capabilities and infrastructure. The proposed technology focuses on a modular approach to infrastructure development, leveraging advancements in robotics and additive manufacturing to establish sustainable and scalable habitats and resource extraction facilities.

MoRAMI incorporates a flexible and adaptable approach to lunar and cislunar exploration, enabling efficient resource utilization and scientific research. It also incorporates interfaces to facilitate international cooperation and collaboration, including shared infrastructure and communication networks.

The MoRAMI technology roadmap includes a series of key milestones, including the establishment of a permanent lunar base, the development of in-situ resource utilization capabilities, and the deployment of long-term scientific research stations. The roadmap also outlines a phased approach to infrastructure development, prioritizing critical capabilities and expanding as needed.

The MoRAMI technology represents a significant advancement in human exploration of the Moon and cislunar space, offering a sustainable and scalable approach to establishing a permanent human presence beyond Earth. It also provides a framework for international cooperation and collaboration, enabling shared exploration and resource utilization.

Papers are invited to discuss the MoRAMI technology, its implementation, and its implications for the future of human space exploration. The session will also provide a forum for discussion and collaboration among researchers, policymakers, and industry leaders.