IAF SPACE EXPLORATION SYMPOSIUM (A3)
Space Exploration Overview (1)

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HUMAN SPACE EXPANSION TOWARDS A SPACE CIVILISATION

Abstract

Survival and prosperity of the human species is not predetermined. In the long term, the sun's lifecycle and the evolution of planets means that Earth ultimately has only a finite time to support human life. In the near term, unsustainability, inequality, and conflict pose existential threats to humanity. Therefore, to ensure the preservation, evolution, and inspiration of the human species, human space expansion may become a necessity.

However, space's status quo is disorganised, fragmented, and unharmonised. Extrapolation of this current state increases risks of tension and conflict amongst nations, the environmental pollution of satellites and space debris, territory wars, and nationalism, propelling earthly problems into space – causing space to eventually close off and become inaccessible.

To address the problem, this project explores ways to unite humanity's potential by conceptualising a holistic vision for human civilisation in the Solar System and beyond. By integrating space science and space engineering with humanities and societal factors, this project establishes a foundation for discussions on a space civilisation.

This project aims to promote that space is not a void, rather an abundant environment that becomes more accessible as our technology advances. The field of space exploration presents emerging growth opportunities and invites individual contributions. With uncharted scientific discoveries, technological advancements, and societal improvements awaiting, space needs talent in diverse areas, including science, technology, engineering, policy, law, administration, environment, philosophy, anthropology, sociology, art, biology, psychology, business, economics, and more. It is the hope that this project provides a spark for anyone in any field in any location, to accelerate humanity further into the Space Age. For the audience, the takeaway message is that space is the opportunity for one individual to make a meaningful contribution to human history.