

IAF MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM (A2)
Life and Physical Sciences under reduced Gravity (7)

Author: Mr. Riyabrata Mondal
TU Bergakademie Freiberg (TUBAF), Germany, riyabrata@gmail.com

Mr. Aagashram Neelakandan
TU Bergakademie Freiberg (TUBAF), Germany, aagashramn@gmail.com

SPACEBIOMIMICRY: EVOLVING OCEANIC ORGANISMS IN SPACE FOR MIMICKING THEIR
ADAPTATIONS FOR DEVELOPING NOVEL STRUCTURAL AND CONTROL SYSTEM

Abstract

Space is a cold and harsh environment which induces many property changes in the materials and restrictions to the structural movements in space. But one advantage of space is that it has almost no atmosphere (depending on our altitude) and there won't be any drag associated with fluid flow. This wouldn't be an advantage for humans, but certain organisms might have traits hidden in them which can be triggered or unlocked by the microgravity conditions. In this proposal, we would like to explore the natural adaption and mutations evoked by the microgravity of space in sea organisms (mainly tentacles creatures (Octopus) - since they are already in less gravity situation due to the buoyancy of water and they have been methods developed for lab breeding) and using that to create a new type of control systems and structures as similar to Space BioMimicry. This will open a new sector of how natural selection works in a microgravity environment and allow us to understand how anatomical and physiological features of a space-grown organism (alien race) might be there and how it will evolve. This can also throw some light on the theories of life seeded from space and help humans counteractant for becoming a space species.