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SPACE EXPLORATION SYMPOSIUM (A3)
Mars Exploration – missions current and future (3A)

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A NOVEL CONCEPT OF CONCEPTUAL VEHICLE FOR THE MARS MANNED MISSION

Abstract

The quest for searching life on the other planet has been became the passion of modern science and all the people of earth wants to know, is the life possible on other planet? Till now we are unable to find out. Mars is one of the attractive planet in the universe where we supposed to possibilities of life. Several missions have been carried out to check the possibilities of life on Mars.This paper presents a Novel Concept of Conceptual Vehicle for Manned mission to the Red planet. Survival on Mars is a challenging task considering the various known and unknown danger including the environment, Solar Radiation and absence of life supporting elements. For a safe and comfortable stay on the Mars and to perform scientific experiments human will need highly structured basis to survive in the condition of the Mars. The vehicle consists of two major parts: - 1. LAB, to perform scientific experiments. 2- Habitat Section, where human will perform daily living activities. The humans can easily drive the vehicle to a safer location in case of any danger. Since oxygen is not available in the atmosphere of Mars so it is provided by installing a novel system "Recyclable Respiration System" in the vehicle which continuously provides fresh oxygen to the humans by recycling the exhaled Carbon-di-oxide. The power supply to the vehicle is mainly provided by the use of Multi-Mission Radioisotope Thermo-electric Generator (MMRTG) as well as Solar Panels are used as a back-up support to produce electricity for various applications inside the LAB and Habitat Module. The concept can be great success in exploring the surface of Mars from different-different places of Mars and we can find out possibilities of supporting life on Mars.