

IAF SPACE POWER SYMPOSIUM (C3)
Space Power System for Ambitious Missions (4)

Author: Mr. Riyabrata Mondal
TU Bergakademie Freiberg (TUBAF), Germany

RESEARCH & DEVELOPMENT OF NEW CONCEPT OF ENERGY SUPPLY SYSTEM APPLIED TO
MARS(ADVANCED IN RENEWABLE ENERGY)

Abstract

Introduction Having a place to live on Mars is an energy requirement that is very important. In the past, the Apollo spacecraft and space shuttle were powered by fuel cells that were driven by reverse electrolysis of hydrogen and oxygen to produce electricity. However this process depends on the availability of very low hydrogen and oxygen (0.174Metodology Many modifications have been made to solar panels one of which is a direct power conversion from the panel itself. This advanced film technology has been developed by Siemens. The ST10 module is made of a monolithic structure of Copper Indium Diselenide (CIS) based on a series of solar-based series. These cells have a multi-layered, Siemens patented product, structure and process technology, called PowerMax® light film technology, characterized by exceptional outstanding reaction and long-term performance integrity. They offer excellent ST10 performance similar to crystalline photovoltaic modules Duo Power This is an example I have designed, as the name implies that we can use two-way power from a single power house. This powerhouse has a rotating ball that contains four straight wings in a wide flow of air. This force has wings with solar panels embedded in them. So during the day we can use the electric house as a source of solar energy by keeping the wings upright, now this immovable area can be made by changing the shape of the blades to one side facing the sun even when there is a wind blast. the wings will act as an aerodynamic in it so no movement will be given. Second night the electric house can be used as wind power. Conversation We can use the front panels of the roof cover as in Mars outside the atmosphere is made of radiation to keep the living space safe it should be inside a well-protected room. The advanced Solar cell has the ability to convert energy into radiation as well.