

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

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SPACE SOLAR POWER SATELLITE FOR INTERPLANETARY MISSION

Abstract

Ever since humans have landed on the moon, many space agencies have investigated the Moon, Mars, and asteroids, driven by the quest for knowledge and future space missions. For the interplanetary mission, space engineers are working on the satellite, conceptual design of space habitat, and exploration system. The state of the art in those missions relies on the radioisotope thermoelectric generator or solar panel attached with batteries to store power, which is plagued by certain limitations. For instance, the collection of solar energy is inversely proportional to the distance from the Sun. Moreover, to run the central processing unit, avionics and payload inside the spacecraft requires constant monitors of temperature. In addition, this power generation unit of satellites carries a pack of batteries to store energy, which makes more than 10 - 25