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SPACE POWER SYMPOSIUM (C3)
Space-Based Solar Power Architectures / Space & Energy Concepts (1)

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SMALLER CONCENTRATED SBSP SATELLITES IN SUN-SYNCHRONOUS ORBIT

Abstract

This is an introduction to the idea we are developing for having smaller satellites launched to come closer to the space for Space Based Solar Power feasibility border. This concept uses photovoltaic cells designed for specific bandgaps. This combination of high efficiency, high solar concentration, low orbits and small satellites provides a solution to the cost effective development of SBSP.

With an investment of approximately $1 billion these designs could be orbiting in less than ten years. Note that this one time fu

We think a solution can be found in the use of Elliptical Orbits. Due to the second Kepler law of planetary motion, the satellite spends about two thirds of the time near its apogee where it provides what is very close to a stationary perspective centered over the high latitudes. A PowerSat operating in a low Molniya orbit can achieve a utilization rate of 70