

SPACE POWER SYMPOSIUM (C3)
Space Power Experiments Applications and Benefits (4)

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EXPERIMENT FOR SPACE BASED SOLAR POWER(SBSP) USING JEM OF INTERNATIONAL
SPACE STATION

Abstract

SBSP: Space Based Solar Power(SBSP) is amazing generating system of new energy from solar power, which was proposed at 1968 by Dr. Peter Glayser. Though this energy solution tried to be developed several times in Japan and U.S, the technology has not been completed still now cause of transportation cost. In 2007,Department of Diffence,U.S,(DOD) did feasibility study of Space Based Solar Power for achievement on 2030. NASA has started the demonstration project for Space Based Solar Power 2008 which utilize International Space Station(ISS),especially Japanese External Module(JEM).Honestly SBSP project can be achieved using current technology if not considering scale and cost. In this project, Commercial technology components will be made the most of, instead of using space rated products. SBSP ISS payload demo is comprised of laser, Acquisition, Tracking and Pointing system (ATP) and space craft functions with the mass of 100[kg] and the power of 2400[W] maximum from ISS, integrated all the mission and spacecraft instruments. ISS payload demo aims at demonstrating the whole process of generating electricity and send it on the ground. To accomplish this mission, ISS payload demo uses all of current technology. ISS payload demo will be attached to JEM external faculty(JEM-EF) which has ten experiment container. ISS payload plan to be launched on 2010 to ISS. This project is developed for space business such as selling electricity or carbon offset which offers space technology to developing country instead of selling army equipment or weapon.