

SPACE POWER SYMPOSIUM (C3)  
Poster Session (P)

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SPACE SOLAR POWER DEMONSTRATION STATION IS A NECESSARY STEP IN SPACE POWER  
DEVELOPMENT.

**Abstract**

Space Solar Power Stations (SSPS) development involves ensuring clean and waste-free energy for humanity by the Sun - ever-living source. The current number of developing SSPS projects, the number of participants and different technical solutions for SSPS implementations has increased drastically. However, the physical and technical problems exist which make difficult the implementation of such decision: • SSPS mass and dimensions parameters for gathering energy are limited • Necessity of creation of energy transmission channel with high efficiency and high accuracy guidance • Supporting thermal condition Clearly, many participants of race for the space power in their project step by step solve these problems, but the key moment, allowing space development of power would be a caring-out of demonstration test with all operating systems of future industrial SSPS • Satellite platform • Photoconversion system • Laser channel of energy transmission • Ground conversion system of the laser emission into power One of the options of demonstration SSPS realization is presented in the Paper