

SPACE POWER SYMPOSIUM (C3)
Wireless Power Transmission Technologies, Experiments and Demonstrations (2)

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NOVEL CONCEPTS AND TECHNOLOGICAL SOLUTIONS TO WIRELESS POWER
TRANSMISSION

Abstract

Wireless power transmission (WPT) is of interest for some space applications and would enable others. However, due to its still relatively low maturity (range, efficiency, specific power etc) its development and application has been limited so far.

Example space applications considered include: fractionated spacecraft, planetary/lunar remote power, the space elevator, wireless propulsion, reducing harness, and solar power satellites.

Following the initial ideas and first experimental attempts end of the 19th century, the two main concepts for transmitting power wirelessly both date back to the 1960s: the combinations of microwaves and rectennas and of lasers and PV receivers.

The present paper presents the results of a fresh look on novel concepts and technical approaches to the wireless transmission of power.