

SPACE PROPULSION SYMPOSIUM (C4)
Electric Propulsion (4)

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ELECTRIC PROPULSION ACTIVITIES IN AIRBUS DS GMBH

Abstract

“Professor Oberth has been right with so many of his ideas I wouldn’t be surprised if one day we flew to Mars electrically”¹. The importance of electric propulsion is continuously growing after the announcement of BOEING to fly full electric propulsion spacecrafts. Electric propulsion, which had long time the role of a “prince in waiting”, has now been accepted by European satellite manufacturers for telecom applications. But still there is more to be achieved. Based on the technologies for Station Keeping applications Airbus DS in Friedrichshafen is currently developing supported by the German Aerospace Center and the European Space Agency a Power Processing Unit serving all EP thruster types (HEMP, RIT, T5/T6 and HET) for orbit raising. The core element is the generic High Voltage Module, which can be described as a functional block that can easily be adapted to specific thruster needs by exchanging a submodule without need for a deltaqualification. This modular approach provides the necessary flexibility and maximum of recurring elements. In addition Airbus DS is continuously looking for new innovations and improvements, therefore we currently assess new technologies (space and nonspace), usage of commercial parts... Customer benefits can be maximized by identifying synergies with other products, for example: between Micro- and Milli newton thrusters and high voltage modules for electric propulsion and pulsed high power EPCs. Airbus DS managed to harmonize these products based on the generic High Voltage Power Supply (HVPS).