

SPACE PROPULSION SYMPOSIUM (C4)
Interactive Presentations (IP)

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ELECTRO-MAGNETIC VACUUM THRUST PRODUCERS (EMVTP)

Abstract

Technologies associated with electro-magnetic accelerating effect of energy carriers are considered to be wasteful. It implies that having one and the same impulse and having a smaller 'energy carrier', it may pick-up speed in the long run, but this velocity rate can be reached at the cost of enormous energy losses. This is vividly seen on the comparison analysis of the costs of the motor powers of chemical rockets, which are equal to 3,5 kW/N , ultramodern Hall power generator (NASA - 457M) with motor power exceeding 24 kW/N, and photon drive (quantum) with propulsive thrust equal to 30000 kW/N . It is common knowledge that electromagnetic waves after running into mechanical structures, manufactured out of conductive materials, induce electric currents of 10^{-12} – 10^{-9} . This synergy of electrical field with the magnetic component contributes to the generation of forces impacting a conductor. The specified forces are negligible.

However, if an alternating electrical current is passed through a conductor with a frequency rate and angle corresponding to the frequency rate and angle of the electromagnetic wave then this conductor will be influenced by a more significant electro-dynamic power from the side of the electromagnetic wave. This force value will be directly proportional to this electrical current magnitude. As of today there has been designed and manufactured a bearing component of electromagnetic vacuum thrust producers with rating value of $3 \cdot 10^{-5}$ N, which being a part of an autonomous propulsive system had been tested in ground conditions. The received outcome accurately not lower than 95% The design of electromagnetic vacuum thrust propulsions represent well-known linear electric motors in which the stator is the indicated environment of electromagnetic fields outspreading from the Universe and the moving element is the load-bearing component of the electromagnetic vacuum thrust producers. The efficiency factor of such electrical devices theoretically may be increased up to 70