SPACE PROPULSION SYMPOSIUM (C4)
New Missions Enabled by New Propulsion Technology and Systems (6)

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# PROSPECTS OF USE OF SPACE-ROCKET FOR ANTI-ASTEROID PROTECTION OF THE EARTH

**Abstract**

In the report presented variant of design of the module impact on the asteroid, containing in its composition propulsione, which uses the effect of the interaction with an external magnetic field. Propulsione is able to create traction in the process of flight without the expense of side working body. It promotes efficiency of performance of the put objective of flight substantially, as compared to the variants of engines, for work of that the expense of working body is needed at manoeuvring. This significantly increases the efficiency of performance of the behind-the giving of the flight, in comparison with the engine options for the work which required the expense of the working body for maneuvering. Presents options for the use of such a module for the protection of asteroids on the re-rise of the mass of a threatening object: Apophis, an asteroid with a diameter of 500 m, diameter asteroid-rum 1000-2000 m. Accordingly shows the general characteristics of the modules of the impact of the as-teroid as the power of influence: the 'gravitational tug, kinetic impact, laser treatment, nuclear impact, "attack" the synthesis of heavy hydrogen. Some variants of media and orbital stages for the withdrawal of the orbit anti- asteroid the modules. Preliminary calculations show that a modification of the carrier rocket "Zenit" in conjunction with upper stage block "Frigate" can be used to output to the orbit module of the who-the actions of the asteroid is on a trajectory, catching up asteroid Apophis.