

Interactive Presentations (IP)  
Topic 6 - Interactive Presentations (6)

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RESEARCH OF THE THRUST WITHOUT PROPELLANT.

**Abstract**

There are many scientific publications and news reports about the thruster that can create thrust without propellant. The main interest of researchers is the engine, which is a closed copper truncated cone, with an antenna inside. The antenna is fed a signal at a frequency near 2 GHz. It is possible to observe a small thrust, about 10 N. The nature of force is mysterious. In 2014, the results of 7 experiments in 3 different countries were been published. According to the official data in 2018, the US allocated 1.3 million dollars for the development of the thruster. However, the published papers do not report about a detailed study of various errors or distortions. Many attempts to theoretically explain the physical principle of the engine have been published, but none of them could be considered reliable. The goal of this work is to experimentally verify the existence of the effect and analyze it. We have created a truncated cone with a length of 230 mm with diameters of the ends 165 mm and 285 mm, wall thickness 3 mm, weight 12 kg. The cone is mounted and balanced on not equal-arm balance, shoulder for the cone 860 mm shoulder counterweight 387 mm. The lever is mounted on the bearing assembly. The cone movement is measured by using the movement sensor. The supply of the microwave signal is produced on the discone antenna inside the cone. Dimensions of the discone antenna are length of the forming 50 mm, opening angle 130, diameter of the disc 33.5 mm. The power supplied to the antenna is about 30 watts, the frequency is about 2 GHz. During the experiments, it turned out that it was extremely difficult to bring a cone with a counterweight to a completely equilibrium state, and there was always a damping movement of the cone in any direction with a scale of about several microns per minute. Feeding a microwave signal to the antenna can dramatically change the speed of the cone. The direction of the conditional thrust changes with the direction of the cone. The thrust was not sensitive to the placement of large permanent magnets nearby, and not sensitive to the ground of experimental setup.