

SPACE PROPULSION SYMPOSIUM (C4)  
Advanced and Combined Propulsion Systems (8)

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CREATION OF LPRE WITH THE USE OF DETONATION COMBUSTION IN THE CHAMBER

**Abstract**

A detonation combustion is considered now as a new, potentially effective alternative to traditional liquid propellant rocket engines, allowing us to obtain under theoretical estimations the increase in the specific impulse. NPO Energomash has started to research and design works of verification of possibility of realization of the detonation combustion in oxygen-kerosene LPRE. Preliminary calculation estimations and preliminary design of the model chamber of LPRE were conducted. At the first phase it is planned to produce the initiator of detonation combustion and to conduct it autonomous development tests at the test facility of NPO Energomash. The results of these activities are summarized in this paper.