

IAF SPACE PROPULSION SYMPOSIUM (C4)
Interactive Presentations - IAF SPACE PROPULSION SYMPOSIUM (IP)

Author: Mr. IOURI PIGULEVSKI
Switzerland, dltech.ch@gmail.com

LASER ABLATION PROPULSION LAUNCH SYSTEM (LAPLAS) AS A BASIS FOR NEW
ACCESS-TO-SPACE PARADIGM.**Abstract**

Last year was a 60th anniversary of accessing space for the very first time (Sputnik, 1957). Despite of the huge technological advances in space exploration over the last sixty years the manner of launching from ground to space did not essentially change since then. The current chemical rockets still belong to the 1st generation launch systems with typical specific cost of launching payload at LEO over 10'000perkg. *Their inherent limitations and disadvantages are well known and cannot be avoided within the same technological to-space technological paradigm. Such a new game-changing paradigm would have to correspond to the 3rd generation launch system level of performance* per kg on LEO, which would bring about a sufficient return-on-investment, and the subsequent development of profitable commercial launch architectures. The 3rd generation launch system level of performance is far beyond the chemical rocket propulsion reach altogether while the Laser Ablation Propulsion Launch System (LAPLaS) is capable to meet the 3rd generation launch system requirements and can make the new access-to-space paradigm feasible.