

Organizers:

Institute of International Relations, Czech. Faculty of Social Sciences, Charles University Czech. HiLase, Academy of Sciences, Czech.
Institute of Plasma Physics, Academy of Sciences, Czech. Breakthrough Initiatives, USA.

Laser Space Applications and Technology Developers Workshop



Date:	25-26 September 2019
Location:	HiLase, Dolní Břežany, Prague, Czech Republic (map)(homepage)
Organizers:	Charles University, the Czech Academy of Sciences ⁱⁱ , Breakthrough Initiatives
Length:	2 days (laser users and laser developers)
Participation:	15-20 research institutions
Outcome:	A laser research roadmap

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DESCRIPTION AND OBJECTIVES

This by-invitation-only roundtable workshop aims at the application potential of high (average) power lasers in the space program - from Earth-orbit **debris tracking, maneuvering and removal**, through **asteroid prospecting and deflection**, to **interplanetary and interstellar travel**. Although these distinct applications require different final laser parameters to reach their goal, they have a common challenge: to develop a state-of-the-art laser system. Nonetheless, all the laser systems must meet the following conditions: **high power/energy**, a **high repetition rate**, **effective heat removal** and “**compactness**”.

Within this workshop, we will discuss the fundamental parameters of the future laser systems. The workshop represents the connection between “users” and laser developers. The workshop will bring together several world-class laser researchers from Europe, the United States and elsewhere in the world to discuss current findings and trends.

The first day of the workshop will focus on the users and will be split into three blocks: Photon Propulsion, Asteroid Deflection and Prospecting, and Space Debris. Each section will include a keynote talk followed by four 15-minute presentations and a panel of all the speakers on the topic. The second day will focus on laser developers (**materials, optics, amplification media**, etc.) from research institutions and companies.

The goal of the workshop is to **create a shared research roadmap** between users and developers as part of a long-term policy strategy to establish international consortia, acquire funding and foster political support.

The International Organizing Committee

Pete Worden, Philip Lubin, Tomas Mocek, Nikola Schmidt, Miroslav Krus