The conference consists of the technical session on 10th November and the policy session on 11th November

PEACEFUL USE OF LASERS IN SPACE

PULS CONFERENCE
STRATEGY SESSION
11.11.2021, PRAGUE

>>> BREAKTHROUGH IDEAS IN GLOBAL GOVERNANCE <<<

INSTITUTE OF INTERNATIONAL RELATIONS PRAGUE

FACULTY OF SOCIAL SCIENCES
Charles University

BREAKTHROUGH INITIATIVES
BREAKTHROUGH PRIZE FOUNDATION

About PULS:
www.lasers4space.com

Peaceful Use of Lasers in Space (PULS) is an initiative to help laser technology to advance humanity's flourishing. Ensuring orbital safety of satellites, upon which our daily activities as well as progress of the 17 SDGs depends, can be dramatically improved by laser surveillance and debris removal. Remote laser-induced analysis of space resources can unlock cislunar economy and human sustainable expansion into space. Lasers can help us reach relativistic speeds with the cleanest space engine, light, as well as protect the Earth from dangerous asteroids. All these visions require transparent, benign and inclusive governance – PULS.

The PULS initiative has submitted a commentary for the UN Secretary General in reaction to the newly adopted UNGA resolution 75/36 for "Reducing Space Threats Through Norms, Rules and Principles of Responsible Behaviours". This resolution represents a fresh effort for an international discussion about norms in space and calls on the international community to submit their views on responsible behavior in space, which will be compiled into a report for the UN First Committee.

Focus and objective of this strategy session

The sessions will be held in the hybrid format.

The return of geopolitical rivalry, increasing critical dependence of all aspects of life on space infrastructure, and worsening space traffic management of crowded Earth's orbit, create a dire need for clear rules, effective norms and functioning regimes. However, the space domain has been highlighted by

the proliferation of operating capabilities among new state and non-state actors that has increased the collective action problem over agreeing on space governance. Instead of a wholesome approach to current space governance challenges, a technology-specific approach can compartmentalize arms control into its own specific areas.

One of these areas is laser technology, which offers a plethora of ground-breaking uses in space, from urgent space traffic tracking and space debris removal to space resource utilization and futuristic light sailing at relativistic speeds. However, just like any other powerful technology it can be used as a weapon in an environment without functional norms and rules. To prevent this, the scientific community, with support by Nobel laureate for physics Gérard Mourou, responded with the Peaceful Use of Lasers in Space (PULS) initiative, to raise awareness of the potential and risks of laser use in space and to open up the discussion about norms and regimes for enabling peaceful utilization of lasers' enormous potential in space.

The objectives of this session are to

1) introduce and summarize the opportunities, challenges and needs for peaceful use of lasers in space, and
2) follow up with open policy discussion, in which policy and other topic experts will present their short commentary on the presented issue of use of lasers in space.

The strategy session of PULS will consist of academics, technical experts and policy practitioners. Our objective is to discuss key issues, questions, challenges as well as the next steps forward in ensuring peaceful use of lasers in space.

While the session will be closed, a Policy Brief summarizing the recommendations and solutions of the outlined issues will be composed after the event with some drafted ideas at its ending session and published publicly. This policy session will follow up on a preceding technical session on the use of lasers in space and will include technical experts as well.

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Preliminary program

SESSION 01 – CHALLENGES AND NEEDS – 75 MINUTES – 15:00-16:15 CEST

Nikola Schmidt, IPS/FSV - Introduction/Welcome – 5 min.

Petr Bohacek, IIR - Background Paper/UN Commentary – 10 min.

Michael Spies, UNODA – Resolution 75/36 and arms control activities – 15 min.

Almudena Azcárate Ortega, UNIDIR – Review of Policy Challenges for Space Security – 15 min.

Pete Worden, Breakthrough Initiatives – Needs for Future Laser Uses – 15 min.

Stefan Scharring, DLR – Existing Needs from Developer/User Perspectives – 15 min.

COFFEE BREAK – 15 MINUTES - 16:15-16:30 CEST

SESSION 02 – WAYS FORWARD – 75 MINUTES – 16:30 – 17:45 CEST

Introduction and Opening Questions – 10 min.

Space Policy Experts Reactions – 50 min.

Summary – 15 min.

CLOSING – 17:45 – 18:00 CEST

DINNER IN PRAGUE

Confirmed Participants

Phil Mauskopf	*Arizona State University*
Mike Kelzenberg	*California Institute of Technology*
Thomas Dekorsy	*German Aerospace Center (DLR)*
Stefan Sharring	*German Aerospace Center (DLR)*
Roberto Battiston	*University of Trento*
Pete Worden	*Breakthrough Initiatives*
James Schalkwyk	*Breakthrough Initiatives*
Kyran Grattan	*Breakthrough Initiatives*
Joan Johnson-Freese	*Naval War College*
Maxmillian Mayer	*University of Bonn*
Almudena Azcarate Ortega	*United Nations Institute for Disarmament R*esearch
Jessica West	*Project Ploughshares*
Michael Spies	*United Nations Office for Disarmament Affairs*
Victoria Samson	*Secure World Foundation*
Daniel Porras	*Secure World Foundation*
Roberto Battiston	*University of Trento*
Jacopo Terragni	*University of Trento*
Tomas Hrozensky	*European Space Policy Institute*
Rodolfo Zontini	*European Space Policy Institute*
Raji Rajagopalan	*Centre for Security, Strategy and Technology*
Benjamin Silverstein	*Carnegie Endowment for International Peace*
Nikola Schmidt	*Institute of Political Studies in Prague*
Petr Bohacek	*Institute of International Relations in Prague*
Petr Halik	*Czech Ministry of Foreign Affairs*
Marketa Gregorova	*Member of European Parliament*

Jana Robinson *Prague Security Studies Institute*
Jakub Pražák *Prague Security Studies Institute*

Other PULS related publications available at ww.lasers4space.com

Johnson-Freese, Joan, and Nikola Schmidt. "Reaching for the Stars: The Case for Cooperative Governance of Directed Energy Technologies." *Bulletin of the Atomic Scientists* 76, no. 00 (May 2020): 1–6. https://doi.org/10.1080/00963402.2020.1751972.

Schmidt, Nikola, and Ondřej Ditrych. *Kick-Starting Cosmopolitan Governance Through Science: The Case of a Giant Laser System*. Policy Paper. Prague: Institute of International Relations, 2019.

Boháček, Petr. „Workshop Summary Report." Prague Laser SpaceApps Workshop 2019. Prague 25-27 September 2019. https://lasers4space.com/wp-content/uploads/2020/01/Laser-SpaceApps-Workshop-2019_Summary-Report.pdf

Boháček, Petr, Pavel Dufek, and Nikola Schmidt. "Peaceful Use of Lasers in Space: Context-Based Legitimacy in Global Governance of Large Technical Systems." *Alternatives: Global, Local, Political* 46, no. 3 (August 2021): 63–85. https://doi.org/10.1177/03043754211039624.

Schmidt, Nikola, and Ondřej Ditrych. "Space Community as an Enabler of Cosmopolitan Ideas through Large Technical Systems." *In review* (approx. 2021-22).

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