



IAF Committee Briefs

Winter 2024

IAF SPACE SECURITY COMMITTEE

Introduction

Space security has become one of the key topics in any discussion concerning space. The need to strengthen long-term sustainability, safety and security in space is shared by all nations. It is in the collective interest of all peaceful space-faring or space-using nations to encourage the responsible use of space and minimise orbital debris, in order to protect any in-orbit manoeuvring spacecraft from a risk of collision and to preserve the space environment.

At the same time, the peaceful use of Outer space, which prevailed in the past, is not to be taken for granted; we are facing a shift of paradigm with a contested and conflicting space domain. Today, close approach and proximity operations by foreign objects of satellite-inspection class are already a reality.

We acknowledge the increase of new comers and the diversification of space actors, the arrival of large constellations and the multiplication of small satellites, leading to a growing complexity of space operations. There are also developments towards active debris removal (ADR), on-orbit servicing (OOS), rendezvous and proximity operations (RPO), which can be perceived as dual use technologies. This combination of factors and trends brings many opportunities but it also means increasing risks of collisions and interferences, as space will become more and more dense and congested.

In this fast-changing environment, with an increase in both the risks and threats in space, the question of Space Situational Awareness (SSA) and Space Traffic Management (STM) is of the essence. Currently, and in the future, we will need to be able to detect, identify, characterise, understand, analyse, attribute and verify what is happening in outer space. An awareness of the highly dynamic and increasingly complex near-Earth space environment appears to be essential to safeguarding space-based assets, ensuring access

to space and contributing to the safety, security and sustainability of space in the long run.

The IAF Space Security Committee focuses on a wide spectrum of topics concerned with security, safety and sustainability. More than a technical committee, the IAF Space Security Committee engages in high-level policy and strategy Committee welcoming highly distinguished speakers, and fascinating policy and industrial professionals and experts from around the globe. From national to international bodies and through multi-actors, the Space Security Committee offers a 360 degrees range of topics and discussions enlightening the space security community as well as the public to a topic that concerns us all.

Latest Developments

Thanks to its high-level members and distinguished speakers, the IAF Space Security Committee was able to discuss and exchange on a wide variety of topics including rules and principles of responsible behaviours, space security governance, Traffic Coordination System for Space and the U.S. work on space systems cybersecurity.

The Committee welcomed the IAF President Clay Mowry who presented the IAF Sustainability, Investment and Security (SIS) Agenda for 2022-2025. He explained that these topics are interlinked, sustainability has dual aspects, in space and on earth. The Chair, Pascal Faucher, highlighted that the SIS Agenda is at the heart of the work of the Committee and expressed his and the Committee's support to promote these three important topics.

Indeed, during our IAC 23 Meeting, **Ambassador Hellmut Lagos Koller**, Chair of the Open-Ended Working Group on Reducing Space Threats and debriefed with us the 4th Session that took place from 28 August to the 1 September. He highlighted the different innovative

proposals and even cross-national initiatives. However, the atmosphere was not adequate to achieve consensus. The Chair of the OEWG reminded that even if it is the end of the OEWG, it is not the end of the dialogue on this complex subject. Finally, he highlighted the value of developing norms of responsible behaviours.

We had the pleasure to listen to **Guoyu Wang**, Dean of Air, Space Policy and Law of Beijing Institute of Technology, China, and Deputy Director of China National Space Administration Space Law Center, who shared the Chinese approach to space security governance or the road of rights in space, particularly about the to-be-observed principles for operators when facing the risks of in-orbit collision. The approach proposes to bring new legal concepts in space, such as right to access, passage right, priority right, and right of stay. Forming the Space Road Right (SRR) with the following recommended principles: Attribution of Burdens to Risks Maker Principle, Priority of Invaluable Project Principle, Priority of Space Mission for Public Interests Principle, Less Cost Principle (Efficiency Principle), Safety First Principle, and The Principle of Reciprocity and Comity. These principles would promote the development of International Space law, as well as provide a new tool to examine security matters.

During the IAC meeting, this past October, we had the chance to welcome **Richard DalBello**, director of the US Office of Space Commerce, who highlighted the TraCSS Program Objectives. The objectives are to relieve DoD of responsibility for SSA coordination of burgeoning global commercial space industry, provide 'Basic SSA Services' in a manner that promotes safer space operations, Encourage US Commercial SSA leadership and rely on commercial SSA providers, establish and maintain a resident space object data repository, conduct R&D activities that will advance the science and technology of SSA, and Promote global SSA standards and best practices.

His presentation was followed by the one of **Dick Bueneke**, Department of State, United States. It included the results of a White House space systems cybersecurity executive forum hosted by the Office of the National Cyber Director and the National Space Council:

<https://www.whitehouse.gov/briefing-room/statements-releases/2023/03/28/readout-of-space-systems-cybersecurity-executive-forum-hosted-by-the-office-of-the-national-cyber-director-and-the-national-space-council/>

as well as subsequent outreach to the commercial space sector:

<https://s-isac.org/the-office-of-the-national-cyber-director-joins-space-isac-and-uccs-for-space-systems-cybersecurity-roundtable/>

Highlights

The IAF Space Security Committee discussions along the year 2023 have been highly insightful and we have recorded a high number of participants to our activities throughout the year. In fact, we welcomed in our last meeting alone 4 new Committee Members, highlighting the growing interest in space security amongst professionals. The Committee also had the pleasure to welcome the IAF President, who shared his enthusiasm for the Committee's support to promote the SIS Agenda through its activities and discussions.

Future Outlook

The main focus of the Space Security Committee in the following years will be **Space Economy, Space Security and Space Sustainability**. Furthermore, the Committee suggested for its next meeting additional presentations on a more practical and operational approach for space traffic coordination and space situational awareness in more and more countries.

Committee Activities

We will closely follow the path set out by Clay Mowry, believing that activities and exchanges centred on sustainability, investment and security are key to promote cooperation, share scientific knowledge, and meet urgent concerns facing spacefaring nations. The Space Security Committee will continue to invite and share its knowledge with high level experts and researchers in the field of Space Security, encompassing both, national and international bodies as well as multi actors. Continuing the study of the risk level update of space threat, and organizing sessions promoting the submission of our topics.