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KEEPING SPACE SAFE AND SECURE: MILITARY ROLES IN SPACE TRAFFIC MANAGEMENT

Abstract

Space Traffic Management (STM) – the question of how to ensure the safety, security and sustainability of space activities amid a growing number of objects and actors in Earth orbit – has gained increasing political relevance in recent years and is now the subject of – sometimes overlapping – debates in various international fora. Surprisingly, however, the role and contributions of military actors have received relatively little attention in these discussions and in the relevant academic literature.

This paper underscores the military's vested interest in preserving a safe, secure and sustainable space environment. Beyond the immediate imperative of protecting national security assets in space, military actors recognize the strategic importance of preventing the proliferation of space debris and promoting responsible behaviours in space. They are also among the major providers of space situational awareness (SSA) data and have long-standing expertise in satellite operations that can be leveraged for STM. Collaboration between civil, commercial and military entities is therefore crucial to establishing effective STM mechanisms that address the shared interests of diverse stakeholders.

This paper examines the current state of the STM debates in the United States and Europe with a focus on military considerations. While the US government is in the process of transferring the provision of SSA-based space safety services from the Department of Defense to the Department of Commerce, the European Union (EU) has outlined a European approach to STM that is essentially based on the civilian EU Space Surveillance and Tracking (EU SST) programme, which systematically involves military actors to ensure that security interests are adequately preserved. The EU has also established a stakeholder consultation mechanism to define civil and military requirements for a future STM system.

Against this background, the paper discusses the role of military actors in contemporary STM debates and reflects on key military interests, requirements and contributions. It highlights the need to balance increased transparency in the interest of space safety with the protection of legitimate national security interests. It also explores the link between STM and international discussions on space security, such as current efforts to implement a behaviour-based approach to arms control in outer space. This research contributes to the ongoing discourse on STM by providing an analysis of the multifaceted role of military actors in shaping the future of space governance.