



Promoting Cooperative Solutions for Space Sustainability

SELF-DEFENSE IN SPACE: PERSPECTIVES, ANALOGIES, AND PROSPECTS

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Self-defense in space

- Introduction
- Why this is an issue for the long-term sustainability of space
- Panel on international law and military activities of space
- Workshop on national perspectives on self-defense in space
- Scenario workshop on issues related to self-defense in space
- Conclusions



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Importance to space sustainability

- Increasing number of and diversity in *new actors*, concurrent with increasing *importance of space* in daily activities globally
- Stability rests upon *reliable and predictable access to space*
- Self-defense in space has become *a sticking point* for international discussions on space sustainability and stability
- *Affecting multilateral initiatives* like the COPUOS LTS guidelines and the draft International Code of Conduct



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Int'l law and military activities in space

- *International law has a direct impact on military activities* in peacetime and in conflict, so SWF co-hosted an open panel discussion on this issue in March 2015 in Washington, DC
- *International humanitarian law (IHL)* and the spectrum of activities that go from peace to conflict
- Tallinn Manual for cyber: authors worked on defining armed attack and actual cyber war
- *Clarity in norms and legal principles would help improve stability*



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National perspectives on self-defense in space

- Co-hosted a closed event in March 2015 in Geneva, Switzerland
- Focused on the *concept of an armed attack for outer space, proportional responses, the principle of distinction in outer space, and frequency interference*
- What is a proportionate response? What is the role of attribution?
- Art. 51 of the UN Charter, the PPWT, and self-defense in other documents
- ITU and the role it plays in “naming and shaming” RFI



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Scenarios exploring self-defense in space (1)

- Co-hosted a closed workshop in September 2015 in Washington, DC
- Scenario 1: uplink jamming of a commercial satellite that prevented command and control and degraded military capability
- *Assuming it was intentional*, could fall within a spectrum of impermissible actions which violate international law
- *Reticence by states to make clear distinctions in order to have more options for response*



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Scenarios exploring self-defense in space (2)

- Scenario 2: one country's satellites in Low Earth Orbit (LEO) started to experience anomalies after passing over a suspected ground-based laser weapons installation in another country
- *Proportionate response does not necessarily mean in-kind*
- IHL discussions of distinction and proportionality
 - Satellites versus human life
- Space does not have military infrastructure in place to make these kinds of decisions



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Scenarios exploring self-defense in space (3)

- Scenario 3: Jamming interfering with satellite navigation-based system, anti-satellite attack leaving debris on orbit and disabling more satellites
- *Hybrid warfare* and the complications thereof
- *Attribution of actions* and non-state actors
- *Deliberate creation* of space debris



- Simply mentioning the *topic does not lead to the de facto weaponization of space*
- Important to have this discussion because already affecting other initiatives
- As more countries become more dependent on space, loss of space assets becomes *more destabilizing*
- Space community needs to start looking at this issue to see ripple effects, same as have been done in other domains



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Questions?

Thanks.

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