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"OFFENSE-DEFENSE RACE IN SPACE"

Abstract

The USA, Russia and China are engaged in a complex arms race involving not only nuclear weapons but also missile defenses, advanced conventional weapons and counterspace capabilities. Trends in counterspace capabilities exhibit increased reliance of strategic weapons on space-based assets. However, the dynamics of this multi-domain arms race are not well understood, particularly due to the lack of a cross-disciplinary approach involving both space and nuclear security communities. China's weapons test of a Fractional Orbital Bombardment System and hypersonic glide vehicle in 2021 underscores the urgent need for more comprehensive multi-domain analyses of such dynamics.

This paper makes the assumption that an arms race is already underway, and that nuclear and anti-satellite (ASAT) weapons as well as missile defenses play a key role in it. The paper will analyze the interconnectedness of these issues, drawing attention to a strategic competition involving both offensive and defensive systems and taking into account the dual-purpose nature of missile defense, as most mid-course missile defense systems have a latent ASAT capability. The paper will also reflect on recent ASAT tests and their potential drivers in this context. The paper consequently argues that any discussion on space weaponization is intricately connected to missile defense—and that efforts to regulate one may have significant implications for the other. The paper will conclude by proposing potential transparency and confidence-building measures, including a multilateral ban on destructive ASAT testing.

Keywords: space security, missile defense, ASATs, ASAT testing