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The relationship between space law and cyberlaw, and other recent developments in space law (5)

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CYBER SPACE AND THE USE OF FORCE: APPLICABILITY OF JUS AD BELLUM AND JUS IN BELLO RULES TO CYBER-ATTACKS AGAINST SPACE SYSTEMS

Abstract

Cyber-attacks pose a significant threat to space activities: indeed, not only they may limit the functionality of space systems but they can also lead to the complete loss of a space object. For example, cyber means can be used to disrupt space-to-space communications, interfere with uplink or downlink communication streams, damage the software or hardware of a space system and manipulate payload control facilities. Such a treat calls for an analysis of the legal regime regulating the right to respond to (and, possibly, to anticipate) cyber-attacks against space systems both in times of peace and in conflict situations. In short, the key question is how jus ad bellum and jus in bello rules apply to cyber offensive actions against space objects and their related ground facilities. Answering this question is undoubtedly problematic because these rules were developed having in mind ‘terrestrial’ situations and conventional means of warfare. Realistically, an answer can only be given through a double-step process: first, by understanding cyber technologies and their capability to affect space systems; second, by adapting public international law principles to the technological, political, and legal reality of the 21st century. The purpose of the present paper is to assess if and to what extent jus ad bellum and jus in bello rules apply to cyber-attacks against space system and to suggest criteria to enable recourse to these rules in the context of cyber warfare in space.