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Cyber-based security threats to space missions: establishing the legal, institutional and collaborative framework to counteract them (2)

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CYBER-ATTACKS AGAINST SATELLITES: EVOLUTION IN THE FIELD OF TECHNOLOGY,  
EVOLUTION IN THE FIELD OF TREATY INTERPRETATION?**Abstract**

Recent developments such as the cyber-attacks against SpaceX's Starlink constellation satellites or ISRO's statement of fighting against more than one hundred cyber hacking attacks daily confirm that satellites are far from being immune from such attacks. At the same time satellite-based services are pivotal for critical infrastructure on earth such as broadcasting, Wi-Fi services and telecommunications. In this regard, the present paper aims to examine the possible legal implications of cyber- attacks against satellites under Articles 2(4) and 51 of the United Nations' Charter. Particularly, the author will attempt to interpret the foregoing rules of the UN Charter under the customary rules of treaty interpretation codified in the Vienna Convention on the Law of Treaties in order to examine whether cyber-attacks against satellites may qualify as an 'act of aggression' in terms of Article 2(4) of the UN Charter and accordingly if States have a right to lawful defense against such attacks pursuant to Article 51 UN Charter. In this context, it will be examined in particular whether the international legal system is mature enough to apply an evolutive interpretation of the term 'act of aggression' including cyber-attacks against satellites without the actual use of physical force.