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LEGAL CHALLENGES OF THE DEPLOYMENT OF CUBESATS FROM THE INTERNATIONAL SPACE STATION

Abstract

The development of small satellites has boosted a new era of peaceful exploration and use of outer space, allowing an increasing number of countries to place objects in orbit thanks to affordable development and operation costs. Recently, a new method of orbiting small space objects has set the scene, with the deployment of tiny satellites, cubesats, from the International Space Station (ISS). The Japanese Space Agency (JAXA) and the United Nations Office for Outer Space Affairs (UNOOSA) have elaborated the KiboCube Collaboration Programme, aimed at deploying in orbit cubesats built by developing countries from the JAXA Kibo Module of the ISS. Starting in 2018 with the 1KUN-KenyaSat, the first Kenyan space object, another successful deployment followed in 2020 and, in January 2021, UNOOSA and JAXA agreed to extend the Programme to 2024. This initiative is a remarkable possibility for developing countries that may lack the necessary resources for performing traditional launches, whether on their own or through procurement, and undoubtedly constitutes a significant implementation of the freedom of access to outer space and of the principle of international cooperation, enshrined in the Outer Space Treaty. From the legal point of view, the deployment of cubesats from the ISS entails some relevant profiles. First, although very small, cubesats shall be considered as “space objects” and are subject to the rules contained in the space treaties. Secondly, as multiple actors, both governmental and private, are involved, there is the need to identify the registering and launching state(s) in order to comply with international obligations. Moreover, one may ask whether a deployment from the ISS can be assimilated to a launch or not and, if so, whether the State exercising jurisdiction on the involved module may be qualified as a “launching State” under Liability and Registration Conventions, considering the distinctive features of the ISS as a complex space object. As deployments from the ISS are expected to increase, verifying if the existing definitions, and their current interpretation, fit this new opportunity is an essential tool to ensure compliance with the legal framework governing space activities. This paper is therefore aimed, on the one hand, at analysing the relevant legal profiles related to small satellites and, on the other hand, at identifying the rules applicable to the deployment of space objects from the ISS, in the light of the obligations imposed by the space treaties and within the framework of the ISS Intergovernmental Agreement.