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A LEGAL APPROACH TO NATIONAL EMERGENCY MANAGEMENT OF SPACE WEATHER: CHINA AS A CASE STUDY

Abstract

The attention of the space community has been increasingly drawn to space weather, not only because its uncertainty and adverse effects might pose a great threat to the safety of space operations and finally will undermine the long-term sustainability of outer space activities, but also because its negative societal and economic impacts are obvious, in particular at the time of extreme space weather events. China has more than two hundred space objects in outer space, of which the safe operation has an essential role in China's social and economic activities. Hence, the national emergency management of space weather is indispensable for China. There have not been specific international rules established for addressing the legal issues associated with space weather directly to date within current international law, although some general principles enshrined in international space law can provide broad guidance for addressing this issue. Moreover, national space law or regulation addressing the emergency management of space weather in China is lacking. While the USA's law-making practice in national emergency management of space weather may provide a paradigm for China, the differences in the political regime and administrative mechanism between the USA and China indicate that it is only possible that China may make an adaptation to the American national law addressing space weather or select some rules of the document that fit into China's situation and administrative culture. To build and sustain its national capability to respond to space weather over the long term and minimize the harmful societal or economic impacts of space weather, a comprehensive legal regime for the national emergency management of space weather should be in place in China, which primarily revolves around mitigation, preparedness, response, recovery, research promotion, insurance, and international cooperation, etc.