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SUBORBITAL FLIGHTS: APPLICABLE LAW

Abstract

Following the cancellation of the NASA Constellation program and the US Space Shuttle retirement, increasing attention has been paid to more flexible and less expensive space transportation vehicles, such as suborbital spacecraft. "Suborbital flights" are flights in which a spacecraft climbs to altitudes higher than 100 km but its trajectory intersects the atmosphere or surface of the gravitating body from which it was launched so that it does not complete an orbital revolution. Its speed and altitude are insufficient to go into orbit and it falls back to Earth. Some vehicles are specifically designed to perform suborbital flight; they include manned or unmanned vehicles (the German V-2 rocket, the Intercontinental Ballistic Missiles. Many private companies are showing increased interest in manned suborbital flights, as they offer great commercial opportunities in terms of space tourism and hypersonic flights. Virgin Galactic has recently performed the third test flight of SpaceShipTwo, a spaceplane designed for space tourism, while NASA is currently developing its integrated Orion/SLS program. Other applications include the use of rockets for microgravity research and the use of suborbital vehicles for rapid intercontinental travel, which is a very promising market. This paper aims to address a multitude of legal issues associated with the hybrid nature of these vehicles capable of traveling in airspace and outer space. Problems arise concerning whether air or space law should apply to suborbital flights, especially in certain stages of the flight, such as when the space vehicle is released from its carrier aircraft in airspace or as the latter returns to Earth performing a horizontal landing at a spaceport. Other issues stemming from the commercialization of outer space and the advent of space tourism and hypersonic passenger flights include the definition of such travelers, i.e. whether they are to be considered "passengers" and, as such, should fall within the scope of air law or not, as well as whether informed consent agreements acknowledging the inherent risks associated with space flight activities are sufficient or if mandatory insurance coverage should be imposed. Moreover, we should also consider whether national regulations may be sufficient to effectively regulate or whether it would be preferable to opt for a uniform international legal framework,at the beggining im the European context, jointly developed by the major organizations engaged in the sector, EASA,ICAO and ESA, which plays a key role in the new space competences assigned to the EU by the Lisbon Treaty.