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Committee on the Peaceful Uses of Outer Space

Information relating to any practical case known that would warrant the definition and delimitation of outer space

Note by the Secretariat

Addendum

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II. Information received from Member States

Bahrain

[Original: English]
[4 January 2021]

The current commercialization of platforms and space tourism are driving the increase in the number of suborbital and orbital flights, and space commercial law requiring the definition and delimitation of outer space is probably going to be considered in the near future.

Mexico

[Original: Spanish]
[19 January 2021]

This response relates not to a practical case but rather to an eventuality in view of the growth in air traffic and space flights, hence the importance of the meetings between the International Civil Aviation Organization and the Committee on the Peaceful Uses of Outer Space in relation to the following:

(a) The instruments governing activities in airspace (the Convention on International Civil Aviation of 1944, the annexes thereto and the Convention on Compensation for Damage Caused by Aircraft to Third Parties of 2009);

(b) The treaties governing outer space activities.

Space flights currently take off from terrestrial spaceports and therefore pass through airspace. In the event of an incident or accident in airspace, two sets of regulations will apply.

Philippines

[Original: English]
[20 January 2021]

An international definition and delimitation of outer space may help in future legislation regarding commercial human spaceflight (e.g., space tourism), including in relation to the licensing of operators, safety regulations and the protection of consumer rights.

III. Replies received from permanent observers of the Committee

International Civil Aviation Organization

[Original: English]
[20 January 2021]

The International Civil Aviation Organization has no comment further to the response provided in document A/AC.105/1112/Add.9, and the responses to questions (c) and (e) contained in document A/AC.105/1039/Add.15.

International Space University

[Original: English]
[19 January 2021]

The authors would like to draw the attention of the Working Group on the Definition and Delimitation of Outer Space to the case of high-altitude platform stations. The Radio Regulations of the International Telecommunication Union, in article 1.66A, define a high-altitude platform station as "a station located on an object at an altitude of 20 to 50 km and at a specified, nominal, fixed point relative to the Earth".

Because of their unique capabilities and features, high-altitude platform stations have the potential to bridge the gap between terrestrial networks and space satellites.[1] The collocation of high-altitude platform stations at a relatively high altitude in national airspaces, coupled with their performance of what are ordinarily considered to be space activities, demands a more flexible approach in the delimitation of outer space.

The mixed nature of high-altitude platform stations makes the full application of either aviation law or space law unfit to properly regulate their activities, similar to what happens with regard to suborbital flights. Accordingly, various authors have argued that such "borderline" activities suggest the development of an intermediate zone located between airspace and outer space, called "near space".[2]

This area would be located between 20 and 99 km above sea level, and its legal regime could be a combination of air and space law. The authors suggest that the Working Group may find the concept of near space as a suitable compromise able to overcome the long-standing dispute between "spatialists" and "functionalists".

Space Generation Advisory Council

[Original: English]
[26 January 2021]

(a) High-altitude pseudo-satellites are under manufacture and testing, demonstrating the ability to travel long distances for extended periods of time at altitudes higher than those reached by traditional aircraft;

(b) Sizeable anthropogenic debris below the Karman line, registered with the United Nations;

(c) Suborbital flight tests are increasingly proving the technological readiness of private companies to offer suborbital transportation;

(d) The very low Earth orbit is garnering interest for Earth observation and telecommunication purposes, narrowing the gap between activities in upper airspace and the lowest perigee that is technologically possible.

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[1] Muhammad Reza Kahar Aziz and Iskandar, "Channel estimation for LTE downlink in high altitude platforms (HAPs) systems", in *Proceedings of the Sixth International Conference on Information and Communication Technology* (New York, Institute of Electrical and Electronics Engineers, 2013), pp. 182–186.

[2] Olavo de Oliveira Bittencourt Neto, *Defining the Limits of Outer Space for Regulatory Purposes*, Springer Briefs in Space Development (2015), p. 61; see also Mélanie Herrenbrandt, "High altitude platform stations (HAPS): questioning the legal delimitation between the airspace and the outer space for stratospheric activities", Master's thesis (University of Luxembourg, 2020) pp. 33–40.