

2011 IISL-ECSL Space Law Symposium,
A new look at the delimitation of airspace and outer space
28 March 2011 – Vienna International Centre, Vienna

IS COMMON LAW A SOURCE OF SPACE LAW?

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I. INTRODUCTION

The question of the definition and/or delimitation of outer space was raised in the United Nations as early as 1959 and in the following years was discussed in the Scientific and Technical Subcommittee of the UN Committee on the Peaceful Uses of Outer Space. Since opinions of delegations diverged considerably and no consensus was possible, the Subcommittee concluded in 1967 that it was not possible to identify scientific and technical criteria which would permit a precise and lasting delimitation of outer space*. Had a limit been set at that time, it would have lasted without change at least half a century.

The item was also on the agenda of the Legal Subcommittee†. In that body the discussions have continued until the present time‡. As yet, no consensus on delimitation was reached. It is worthwhile, however, to note that a questionnaire will be sent to Governments of Member States enquiring on their detailed position on delimitation. New initiatives may be expected.

The question of definition and/or delimitation of outer space is quite different from the question of definition of a border

* UN document A/AC.105/39 of 6 September 1967

† UN document A/AC.105/C.2/7 of 7 May 1970

‡ UN document A/AC.105/942 of 16 April 2010

between two countries. The delimitation of outer space should serve only to find a region in space where space law applies. It will not and cannot be used to regulate traffic to outer space, a question solved by the Outer Space Treaty. Neither it can be used to regulate traffic from space, a question solved, in addition to the OST, by physical laws of orbiting objects

II. RECENT TECHNOLOGICAL CHANGES

Among the technological changes which occurred in the last forty years are the following:

- Space debris now constitute close to 95% of the population of space objects. Space debris spiral gradually down because of friction with the atmosphere. Since the density is low at high altitudes, it takes a long time to reach dense layers where friction would finally cause evaporation of an object. Massive parts may even reach the ground. The number of debris coming from outer space into the air is determined by the structure of the object in question, by its altitude above sea level, and by the density of atmosphere at the moment of reentry. It is independent of any possible boundary of outer space, adopted or not.

- Space traffic rules, in particular if they include an international approach to

coordination of air traffic and space traffic, may contain, if agreed in the future, a definition of a boundary.

- Navigation systems facilitate a precise determination of position of an object in space. The existence of three independent navigation systems will make it possible to determine the precise position of an object in space at least by one of the navigation systems. If navigation systems are systematically applied, it will be an improvement in precision over the present situation of relying on published orbital elements.

Recent technological changes in launching objects into space, though important and far-reaching, have not changed basic attributes of space flight.

III. ROLE OF SCIENCE AND TECHNOLOGY

The Scientific and Technical Subcommittee evidently expected in 1967 that sufficiently precise scientific and technical criteria are necessary for adoption of a delimitation line. In reality, physical conditions in the atmosphere change gradually with altitude and, moreover, some vary with a yearly period or with the period of solar activity.

What can be expected is that scientific research will provide, or already has provided, knowledge and understanding of natural phenomena and that technological design can produce vehicles capable of travelling in various media. Thus, science and technology can delineate a region in space where one kind of vehicles, those built on airlift, cannot operate, and where another kind of vehicles, those based on free flight in space in accordance with laws of celestial mechanics and of rocket propulsion, can operate.

Science cannot be blamed for the fact that there is no precise limit of outer space. A precise boundary would respect the fact that legal systems are different in outer space and in airspace. Operators of space objects would know what rules apply at what position in space.

IV. ALTITUDES ABOVE 100 KM

About 1000 active satellites, about 20.000 larger space debris, and a very large number of small debris are in various orbits at altitudes above 100 km. Launching countries announce the launchings to the General Secretary of the United Nations in accordance with GA Resolution 1721 (XVI) of 1961 or in accordance with the Registration Convention of 1974. The list of objects announced to the UN is not complete, yet it comprises the majority of objects. The practice of announcing launched objects to the UN has been going on for more than fifty years without any protests or opposition to the overflight of territories of sovereign states. It seems, that an unwritten (and seldom quoted) rule of Common Law has already become a part of Space Law.

Just one quotation expressing that States concerned failed to object overflights by space objects: Manfred Lachs, stated in his book of 1972,[§] in this context that “Within this perspective the conclusion seems to be warranted that an unwritten rule of law has gradually come into being”. This statement was made after a much shorter period of application than we have today.

The authority in law of the writer of this note, who is not a lawyer, can be easily opposed. The authority of a former Judge of

[§] Manfred Lachs, *The Law of Outer Space*, 1972, reissued by Martinus Nijhoff, Leiden, Boston, 2010, p. 57

the International Court of Justice, however, cannot be dismissed.

The only protest against using a part of outer space dealt with satellites in the geostationary orbit but not with satellites in low orbits. In the years 1976 and 2001 there was no consensus in the COPUOS whether or not the geostationary orbit is a part of outer space. The problem started when sovereignty claims were raised by equatorial countries over segments of the geostationary orbit, postulated in the Bogota Declaration in 1976. It was solved in 2001 when the COPUOS agreed on the statement that the geostationary orbit, characterized by its special properties, is part of outer space**.

Consequently the practice of free overflight by satellites can be considered to constitute Common Law and the region where space objects are in orbits can be considered to be outer space. That practice does not fix the border, but any international agreement of a border could not be higher than the altitude of lowest perigees.

The altitude of 100 km is a rounded of value of lowest perigees of satellite orbits. There are very few cases when a perigee was determined to a value slightly below 100 km, but observing errors may have played a role.

V. AN AGREEMENT ?

Most future problems arising from collisions or close approaches of objects in outer space could be solved by an agreement of the COPUOS that space law will be applicable in critical situations happening in outer space as specified by Common Law, i.e. above the altitude of lowest perigees.

VI. ALTITUDES BELOW 100 KM

** Report of COPUOS, GA Official Records, Fifty-sixth Session, Supplement No. 20 (A/5920), para 126.

Altitudes below 100 km but above current airlift altitudes are traversed by objects launched into space or returning from space to the ground, occasionally also by experimental flights. Coordination with air traffic is needed at times of launches. Instead of resorting to individual prohibitions of airplane flights over launching ports, a coordination of flights and launches by an international body, such as the ICAO, might be recognized as a preferable solution^{††}

^{††} L. Perek, Cooperation within the UN System, In The Fair and Responsible Use of Space, An International Perspective, Studies in Space Policy, ESPI 2010.