



SPACE LAW AND POLICY
WITH SIMULATED NEGOTIATIONS
[13]

[5] COMMERCIAL USES OF OUTER SPACE:
SPACE TOURISM

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SPACE NEWS:

BBC News [9 July 2016]

New arrivals reach International Space Station

<http://www.bbc.com/news/science-environment-36755460>

A three-member multinational crew have arrived on the International Space Station (ISS) aboard a Russian Soyuz rocket. NASA TV captured **American** and **Japanese** astronauts Kathleen Rubins and Takuya Onishi, with **Russian** cosmonaut Anatoly Ivanishin as they entered the ISS. The trio lifted off from the Baikonur Cosmodrome on July 7 and will join NASA astronaut and station commander Jeff Williams and two Russian cosmonauts who have been aboard the orbital outpost since March.

OUTLINE

- ① Applicability of Air and Space Law
- ② Authorization
- ③ Registration
- ④ Liability
- ⑤ The Status of Space Tourists

(See, Stephan Hobe “Legal Aspects of Space Tourism”

Nebraska Law Review, vol. 86 (2), 2007)

① APPLICABILITY OF AIR AND SPACE LAW

◆ Type of launch vehicle for space tourism

- ① Aircraft + manned space launch vehicle
- ② Rocket + Capsule-type of launch vehicle
- ③ Aircraft for Parabolic Flight (0-g experience)

✂ Parabolic Flight by Airbus A300 in 2002

<https://www.youtube.com/watch?v=1ieR8hIXUIg>

✂ Virgin Galactic:

<https://www.youtube.com/watch?v=M-gxmqUfQ80>



© Virgin Galactic: SpaceShipOne



©Virgin Galactic: SpaceShipTwo

① APPLICABILITY OF AIR AND SPACE LAW

◆ Problem 1: The lack of delimitation of airspace and outer Space

- Functionalism
- Spatialism
- Others (Hybrid / No definition)

.... general understanding (not legal): at the height of 110km

✘ Australia national space law amended in 2002

defines space object reachable to the height of 100 (opinion juris?)

✘ the status of the zone between 80 km to 100 km is so vague

◆ Problem 2: Legal status of aircraft used for space mission

② AUTHORIZATION

◆ Art. VI of the Outer Space Treaty of 1967

...“The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty.” ...

→ private entities need to obtain authorization and continuous supervision
from an appropriate state

Example: US FAA is in charge of licensing private launching activities

③ REGISTRATION

◆ Application of national air law and international space law

depends on the registration of flight/launch vehicle as aircraft or spacecraft

→ "registration" enable the state of registry to retain
jurisdiction and control over the flight/launch vehicle

Example: SpaceShipOne

The spacecraft attached to the aircraft was registered as a part of aircraft
Appendix 7 Art. 17 of Chicago Convention gave the nationality to the aircraft

→ After the separation,

The spacecraft was registered as space object

under Art. II of the Registration Convention of 1975

③ REGISTRATION

◆ Problem:

The state of registry needs to be determined among several launching states

However, the registration is required **after** the launch

→ in the case of SpaceShipOne, the separation needs to be regarded as “launch”
to avoid any lack/confusion of applicable law

→ in the case of the mode “Rocket + Capsule Type, both are space objects.

In PRACTICE.....

US does not register any aircraft in the UN registry which is used for space missions

④ LIABILITY

◆ Passenger Liability

[Case study: SpaceShipOne]

Before separation of aircraft and space craft

The Montreal Convention of 1999 and Convention on Rome of 1952

After the separation

The Liability Convention of 1972 applies to the spacecraft

- ◆ Before separation, in the case of emergent landing on the High Sea,
what is the legal status of passenger ?



© Virgin Galactic: SpaceShipOne

⑤ LEGAL STATUS OF SPACE PASSENGERS

- ◆ The state of registry of space objects retain jurisdiction and control over the personnel of a spacecraft
- ◆ No definition of “personnel of an aircraft” in international law
- ◆ Several terms to describe astronauts and private space passenger

The Outer Space Treaty of 1967

“astronauts are **envoys of mankind**” (Article V)

“use of **military personnel**” is allowed (Article IV)

...states are responsible for its **nationals** in outer space (Article VI)

(The state of registry) “retain jurisdiction and control “over any **personnel** thereof” (Article VIII)

The Rescue Agreement of 1968

“**the personnel of a spacecraft**” (Article 1, 2, 3 and 4)

The Registration Convention of 1975

...jurisdiction and control over “any personnel thereof. (Article II (2))”

⑤ LEGAL STATUS OF SPACE PASSENGERS

◆ Inter-Governmental Agreement of International Space Station

① Professional Astronauts/Cosmonauts + Expedition Crewmembers

Governmental crew for ISS with official qualification

② Spaceflight Participants

Passengers in support of member states on contract

who stay in ISS in accordance with Code of Conduct for Space Passengers

◆ US SPACE Act of 2015

prohibits “governmental astronauts” to use FAA licensed launch vehicle.

SIMULATED NEGOTIATION

Time Table:

16:00 ~ 16:15 Group Discussion

16:15 ~ 16:35 Presentation

THEME

"WHAT ARE POSSIBLE (BUSINESS) MODELS FOR SENDING PASSENGER/ASTRONAUTS FOR FREE TO OUTER SPACE?"

You are working in **Department of Environment**, in charge of monitoring **space debris**. Your country wants to send you for scientific research; however, it has no space agency. Please make a project model to let you go and work in outer space (example: ISS / Moon).

TEAM **A**

TEAM **B**

TEAM **C**

END