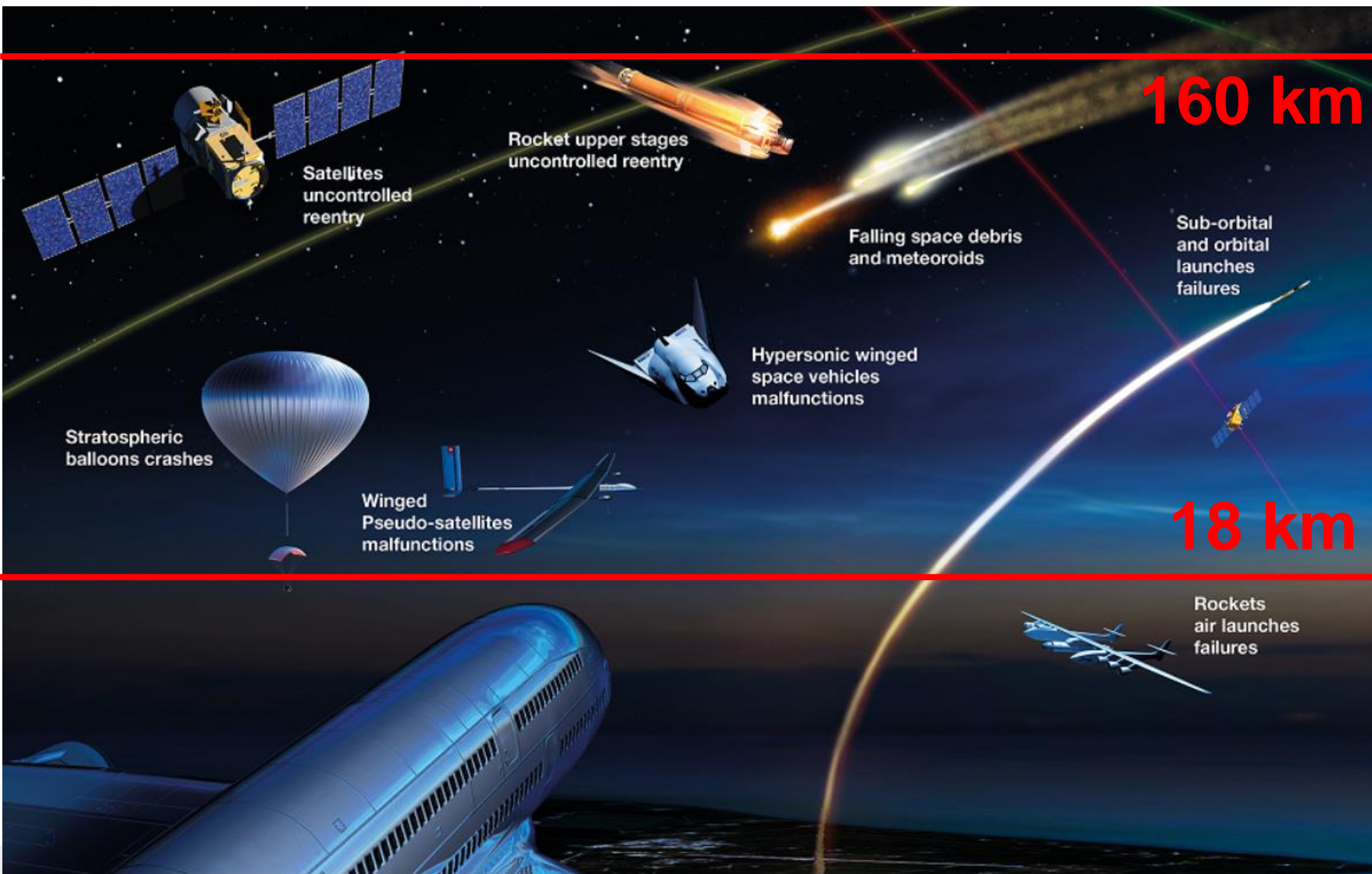


***Proposal for a Near Space Legal Regime to
Separate Airspace and Outer Space***

by
M. Gupta & T. Sgobba IAASS

Presentation Structure

- I. Understanding the Problem
- II. Past and Current Debates
- III. Background of the IAASS Study
- IV. Proposed Draft Convention
- V. Definitions
- VI. Important Provisions



Near Space:

Proposed region between 18-160 km, rather than a simple demarcation line between airspace and outer space at 100 km

Rationale:

- *The upper limit of Air Traffic Control region is at 18 km*
- *The lower limit of Earth orbits is at 160 km*

Understanding the Problem

- The issue of delimitation of outer space stays unresolved since 1967
- Current legal challenges:
 - Suborbital flights, local and point-to-point
 - High altitude platforms loitering operations
 - Unregulated space traffic bound and return overflight risk



Near Space legal regime aims

- Account for emerging development and operations of hi-altitude platforms and suborbital systems;
- Ensure that citizens of all nations are equally protected from the risks posed by over-flying space systems and objects during launch and re-entry operations;
- Provide legal certainty to business.

Past and Current Debates

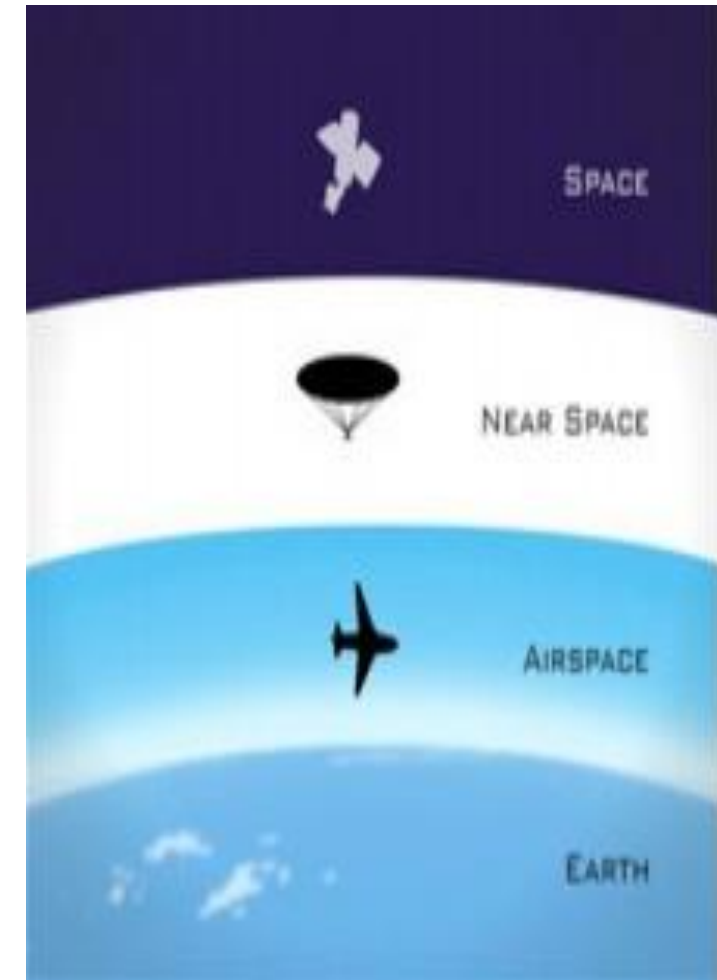
- Theories on delimitation of air space and outer space
 - Functionalism
 - Spatialism
 - Lowest point of orbital flight
 - Aerodynamic lift
- Many proposed denominations
 - Manfred Lachs (neutral Zone or *neutralia*, 1970) as a region of innocent passage
 - Thomas Gangale (mesospace, 2018)
 - Joseph Pelton (protozone 2019)
 - Liu Hao & Fabio Tronchetti (Exclusive Economic Utilization Space, 2019)

Background of the IAASS Study

- IAASS launched an internal study to draft a *Legal Convention for Near Space* to be presented to the Legal Sub-committee of UN COPUOS in 2020
- The study Draft Convention is being circulated among civil society
- It is an attempt to encourage a detailed discussion on the legal parameters of Near Space

Proposed Draft Convention

- Aims to balance the national economic and security interests of countries below with the collective international interest for safe and free transit through Near Space
- Draft identified legal challenges and considered aviation law, outer space law
- Law of the sea was used as a reference model
- Additionally, international trade agreements and national space legislations were studied



Near Space related definitions

- Near Space is defined as a region of space between 18-160 km above sea level, which is above and adjacent to national airspace, but is separate from airspace; separate from outer space; not part of the underlying country territory but subjected to the underlying country jurisdiction
- Horizontal boundaries of Near Space are TBD
 - either, coincide with national airspace boundaries of underlying country
 - or, include EEZ and contiguous zone
- ‘Aero-space object’ any system meant for operation in Near Space.
- Suborbital flight: ‘a rocket-powered flight up to any altitude during which the vehicle does not reach orbital velocity’ (i.e. , not a matter of altitude but of velocity and trajectory)

Important Provisions

- Underlying State would not have sovereignty but jurisdiction over Near Space
- Innocent passage of civil/commercial systems is freely allowed but has to comply with (TBD) internationally agreed safety standards to be enforced by national regulatory bodies
- Near Space over High Seas under ICAO, similar to Art.12 Chicago Convention
- Underlying State has right to use and administer to exclusion of others
 - Gives economic priority rights to underlying State
 - Can permit placement of stationary or hovering objects
 - Governing principles for private activities: near feasible universal access, highest degree of safety and security, uniformity of standards and international cooperation