

WHAT'S IN A NAME...?

The Definition of a 'Space Object'

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WHY DOES IT MATTER?



- ◆ ‘Space object’ causing damage triggers international third-party liability under the 1972 Liability Convention
- ◆ ‘Space object’ requires registration by 1975 Registration Convention
- ◆ ‘Space object’ effectively triggers application of much of the 1967 Outer Space Treaty & the 1968 Rescue Agreement



SPACE OBJECT *VERSUS* AIRCRAFT

- ◆ Qualification as ‘aircraft’ brings with it the application of major aviation treaties & national air law
- ◆ Aircraft = “any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth’s surface”
- ◆ The one hybrid real-life case...?
 - US defined space shuttle as ‘space object’
 - & other states remained silent

'SPOT THE SPACE OBJECT'

XCOR Lynx

Blue Origin New Shepard

Virgin Galactic WhiteKnightTwo plus

Blue Origin

**Boeing CST-100 – docking
with ISS**



THE DEFINITION (1)

- ◆ Liability / Registration Convention:
 - Includes component parts
 - Includes launch vehicle ...
 - Includes unsuccessful launch → *intention = key*
- ◆ By inference from Outer Space Treaty / Rescue Agreement
 - Objects *launched* ...
 - Launch = assumed to be (at least initially) vertical & using rocket propulsion...
 - ... *into outer space*

THE DEFINITION (2)

◆ National space law interpretation

- Some do not use it at all ...  
- ... or do not define it  
- Some simply refer / repeat   
- Some define 'space object' ...
    
- ... or use differently-defined 'object' / 'spacecraft'
   

→ Most proper / common interpretation experts:

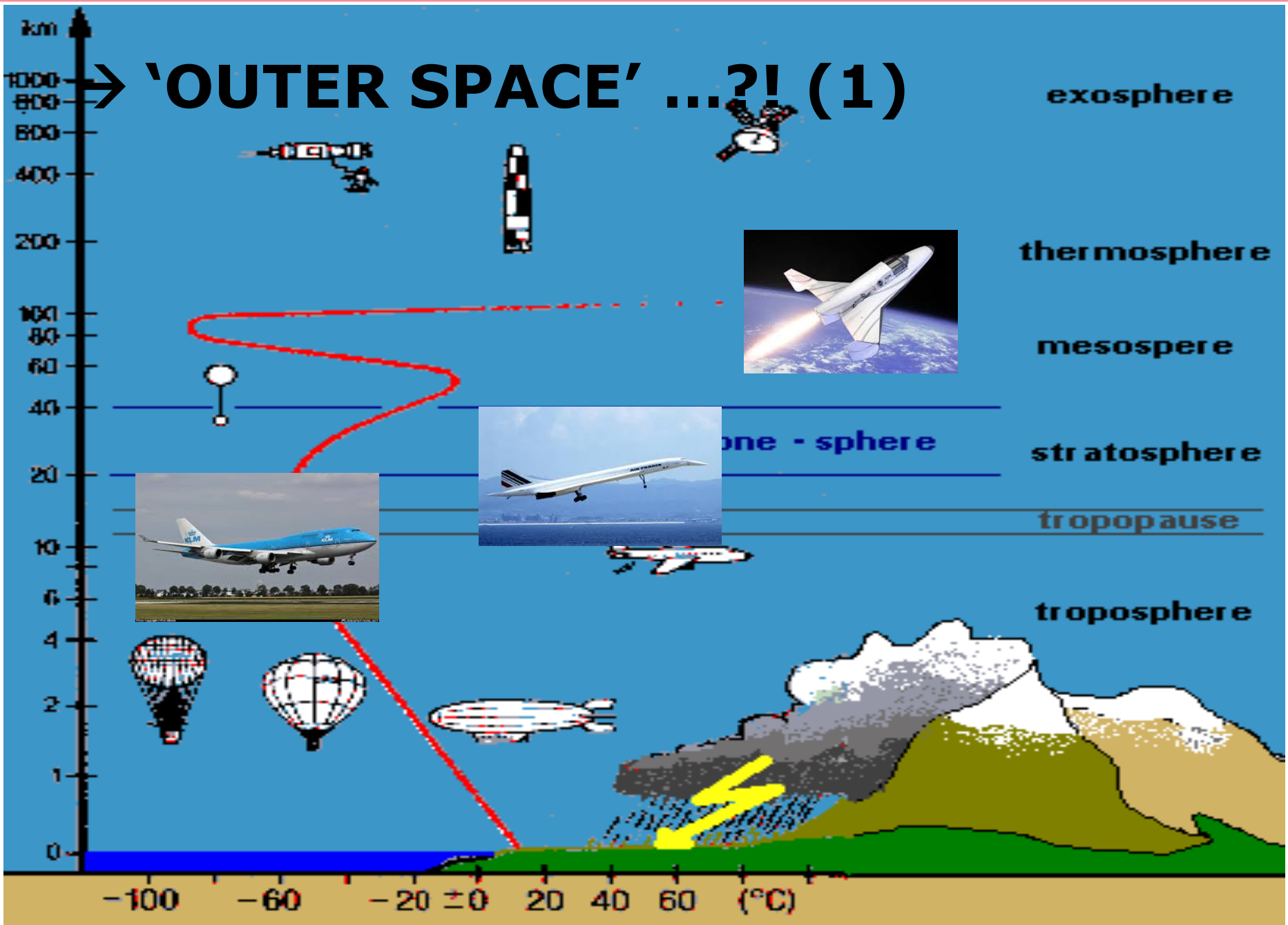
Anything (aimed to be) sent into outer space

Nebraska Law

→ AIRCRAFT AND SPACE OBJECT?

Remember: the 'launch vehicle' of a 'space object' is also a 'space object'...

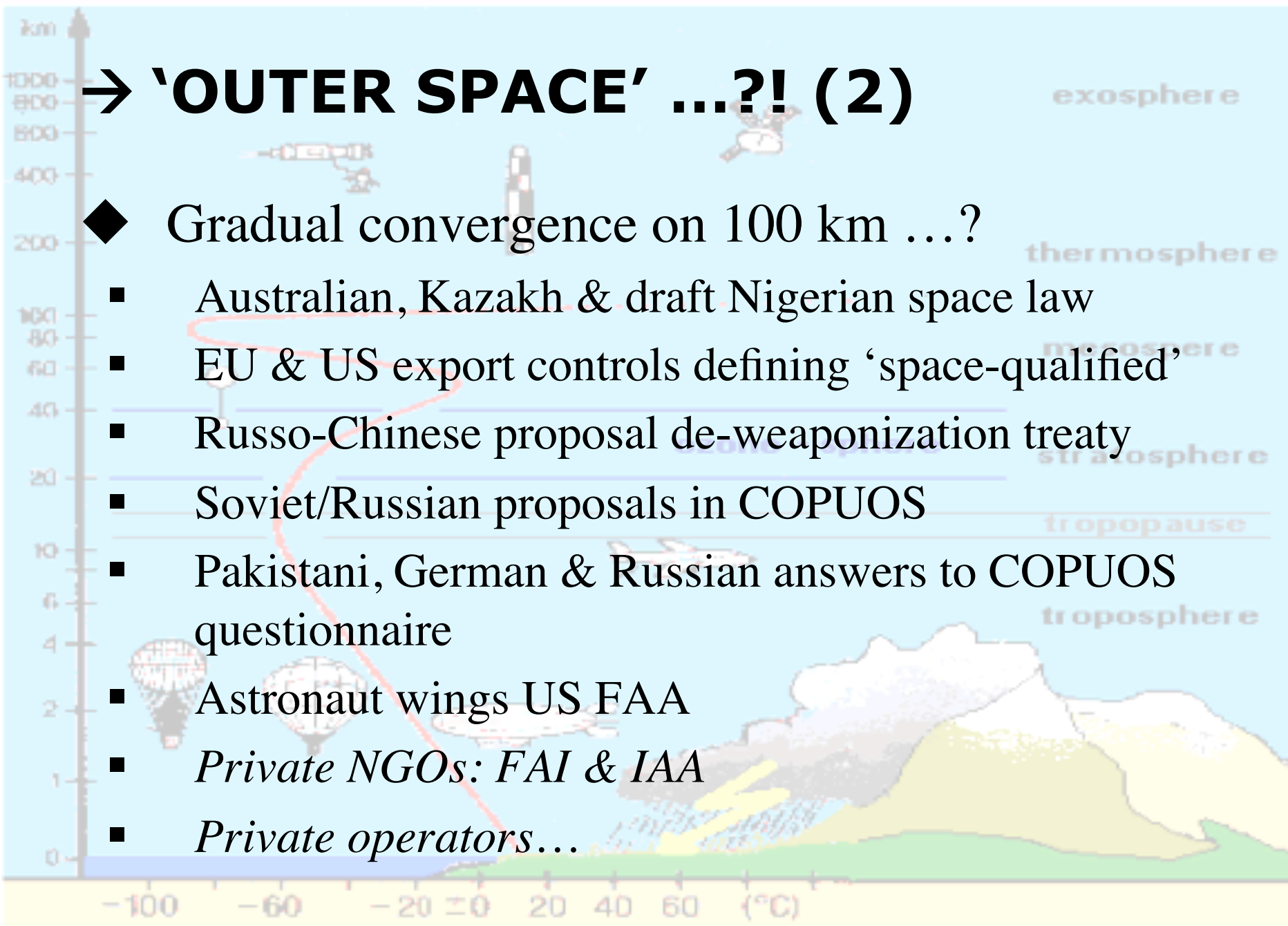
'OUTER SPACE' ...?! (1)



→ 'OUTER SPACE' ...?! (2)

◆ Gradual convergence on 100 km ...?

- Australian, Kazakh & draft Nigerian space law
- EU & US export controls defining 'space-qualified'
- Russo-Chinese proposal de-weaponization treaty
- Soviet/Russian proposals in COPUOS
- Pakistani, German & Russian answers to COPUOS questionnaire
- Astronaut wings US FAA
- *Private NGOs: FAI & IAA*
- *Private operators...*



'DO WE REALLY NEED A BORDER...?!'

1963

Courtesy Thomas Gangale,
JSD-Candidate at the University of
Nebraska-Lincoln.

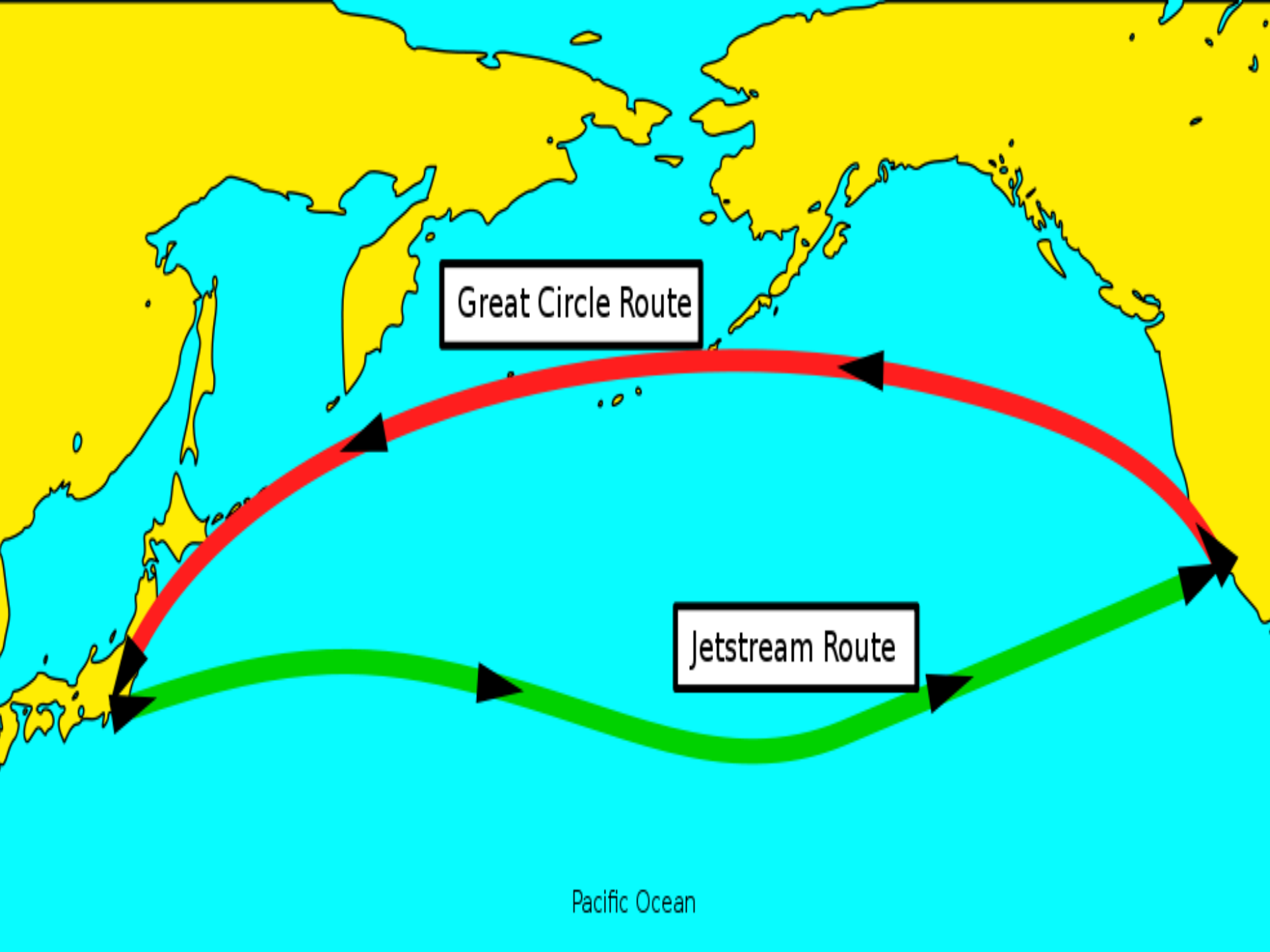
2010



→ DEFINITION 'SPACE OBJECT'?

- ◆ “Any man-made object intended to be sent into an area beyond 100 km altitude above mean sea level”
 - Triggers relevant requirements UN space treaties
 - In case also (potentially) qualifying as aircraft:
 - Air law only applies to the extent of use of airspace (possible interference with aviation) & use of airports (possible interference with aviation) = ATM/ATS/ATC
 - Air law may be used as reference for development specific space law for *manned* space objects
 - *E.g.* criminal air law; in the future certification?





Great Circle Route

Jetstream Route

Pacific Ocean

Thank you word cloud in multiple languages including: danke, 謝謝, ngiyabonga, teşekkür ederim, gracias, thank you, obrigado, grazie, merci, and many others.