

Radio Altimeters and 5G C-Band Deployment



Federal Aviation
Administration



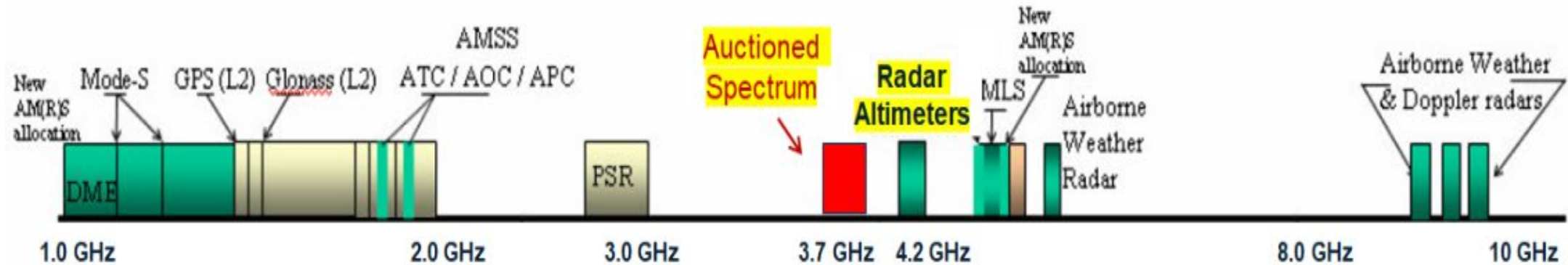
Date: April 2022

Discussion Topics

- Synopsis 5G C-band Spectrum Deployment (NAS)
- Mitigations
- Global Deployment

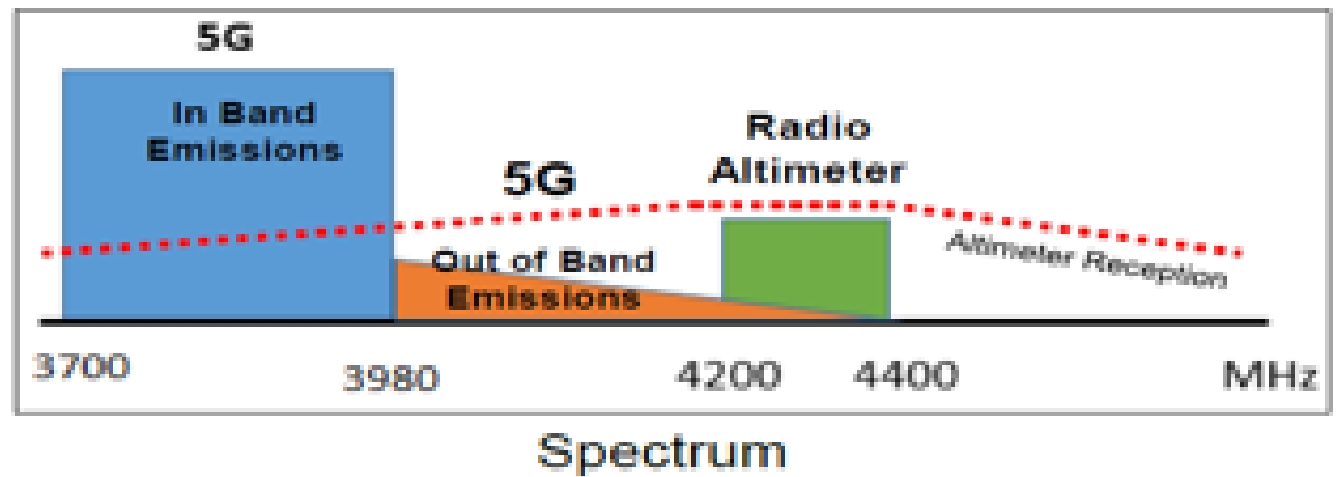


5G C-Band Relative to Radio Altimeters

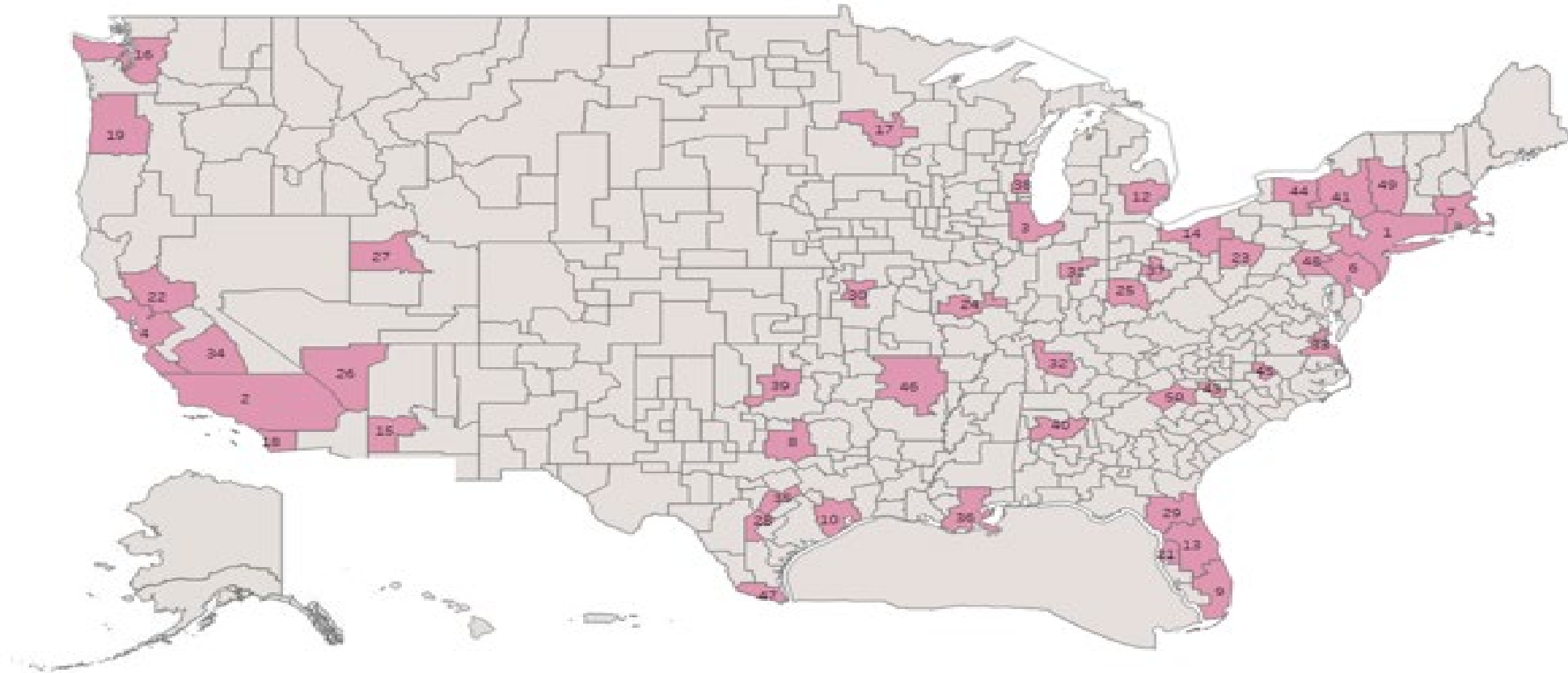


International Civil Aviation Uses of Microwave Spectrum

Source: ICAO (2009), Author's Notes



5G C-Band Wireless Broadband Deployment



Wireless broadband deployment will occur in phases in 46 markets beginning January 5, 2022. The FCC defines these areas as Partial Economic Areas (PEAs) 1-4, 6-10, 12-19, 21-41, and 43-50.



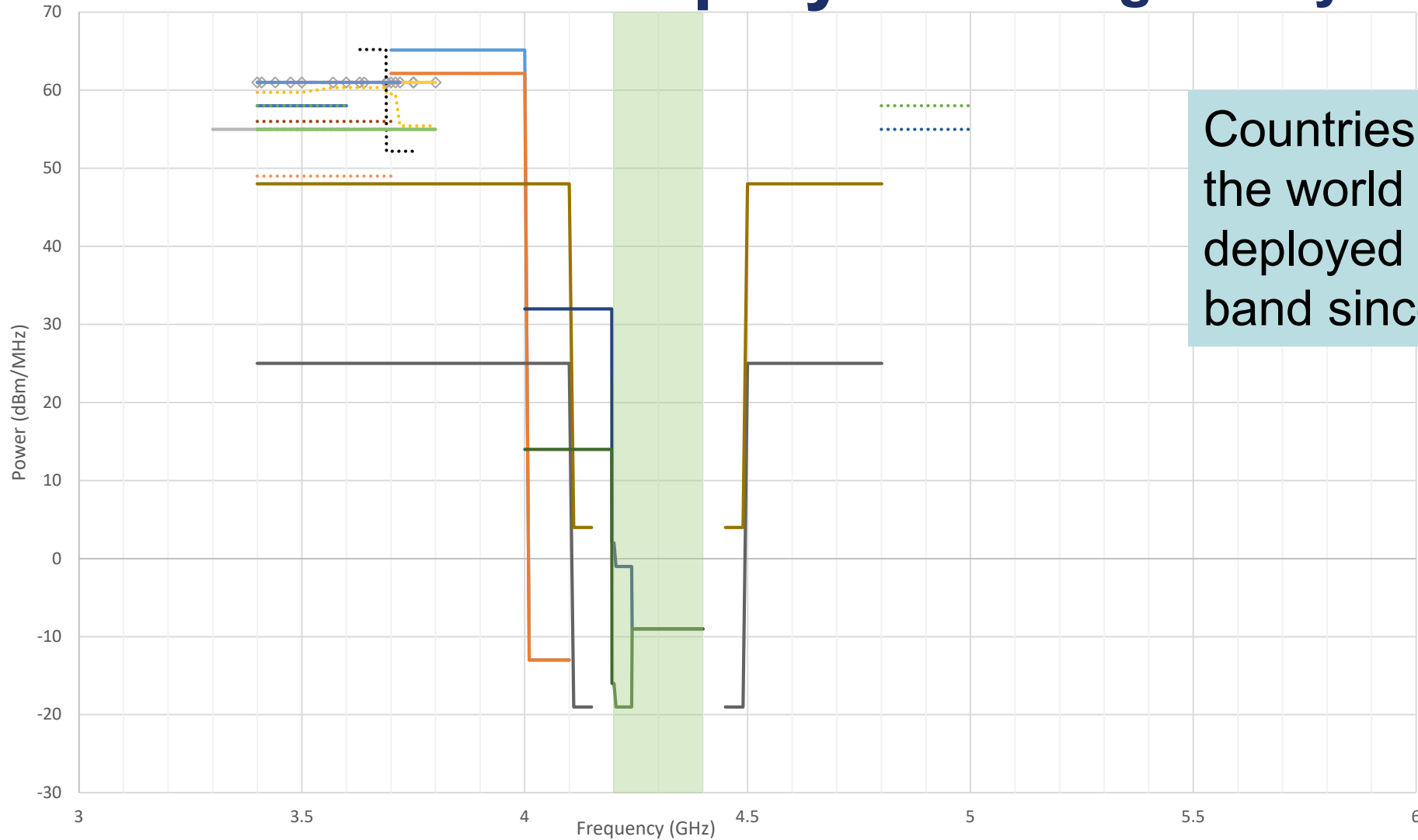
Mitigations

- **Airworthiness Directives (AD)**
- **NOTAMs**
- **Alternative Methods of Compliance (AMOC)**
- **Voluntary actions by ATT and Verizon**
 - Reduced power levels
 - Lower frequency
 - Partial protection of 114 airports
- **Additional guidance (SAIB, SAFO)**

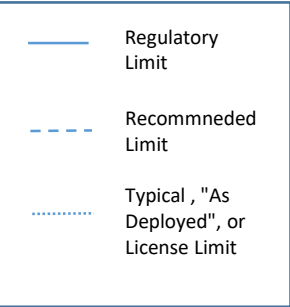
FAA Website: <https://www.faa.gov/5g>



Global 5G C-band Deployment-Regulatory Power Limits



Countries around the world have deployed 5G C-band since 2018.



- US (Rural)
- US (Urban)
- Europe
- France
- UK
- China (Huawei)
- China (ZTE)
- Australia
- Japan (small cell)
- Japan (macro cell)
- UK (Medium Power)
- UK (Low Power)
- New Zealand
- Republic of Korea
- Brazil
- Ireland
- Sweden
- Romania