

Wi-Fi in 6GHz



19th June
2025

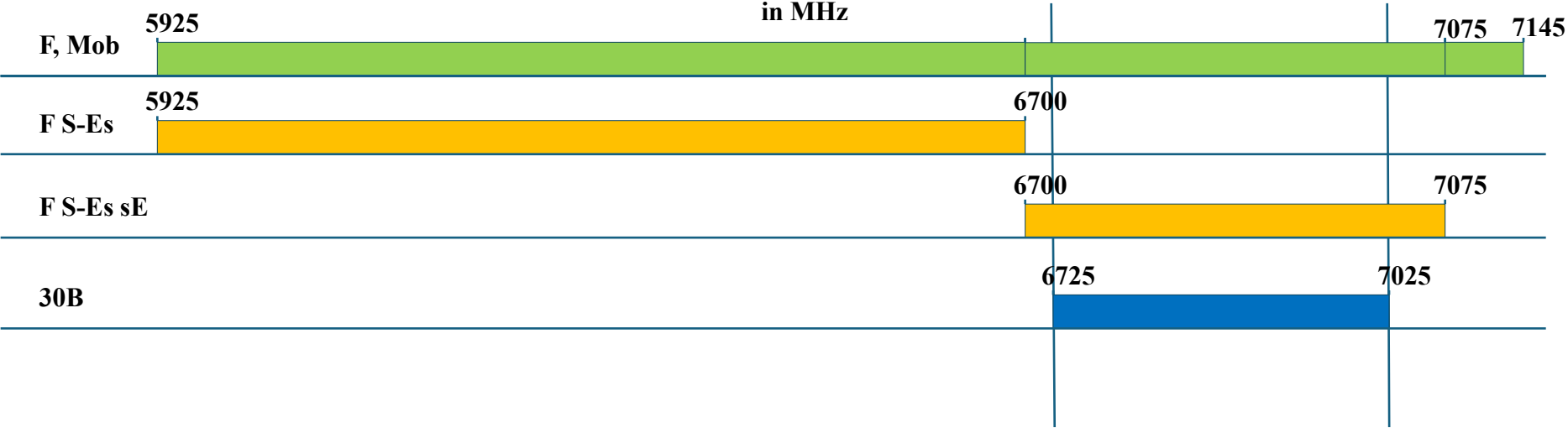


New Delhi
India

World Wi-Fi Day Celebrations

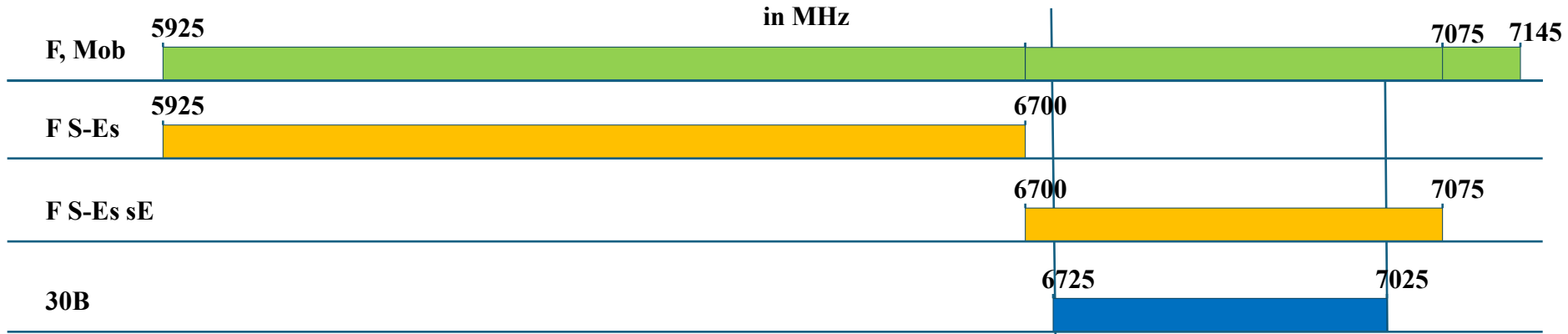
M P S Alawa
Joint Wireless Advisor
Regional Licensing Office (NR)
New Delhi

Radiocommunications service allocation in frequency band (6GHz)

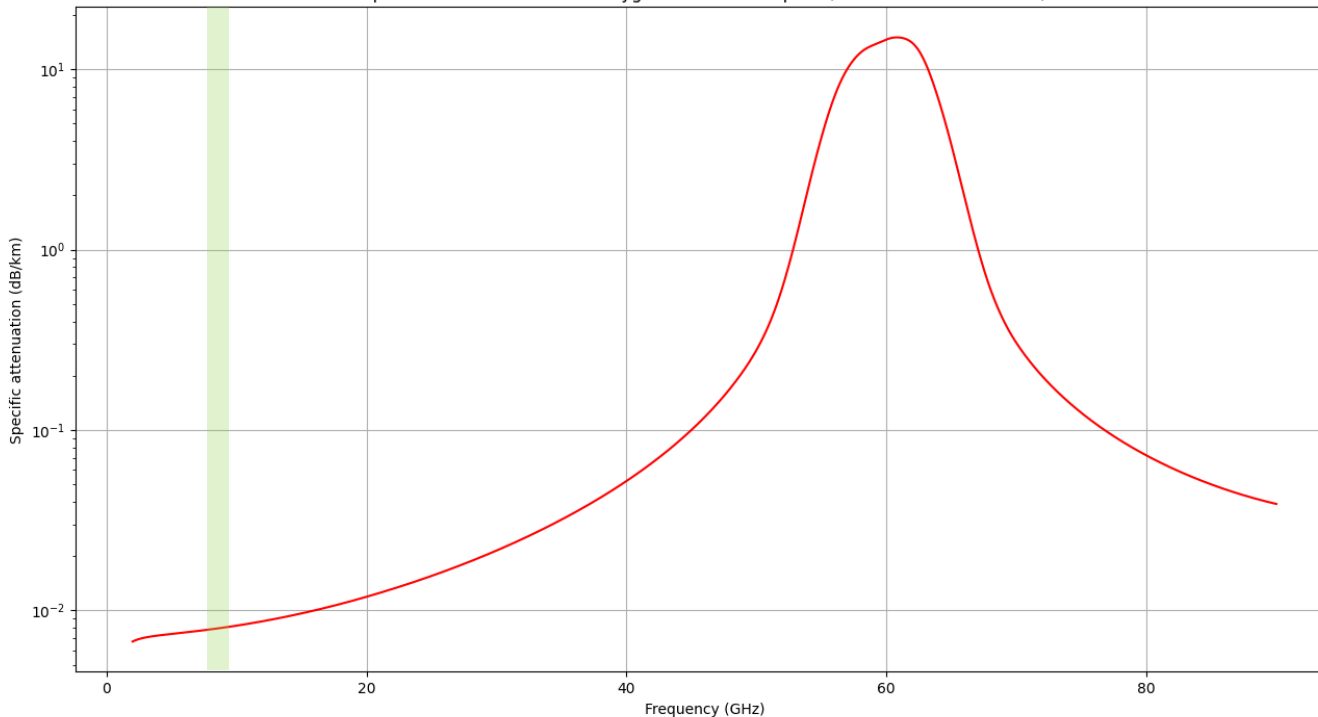


Allocation to services		
Region 1	Region 2	Region 3
5 925-6 700	FIXED 5.457 FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B MOBILE 5.457C 5.457D 5.457E 5.457F 5.149 5.440 5.458	
6 700-7 075	FIXED FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.441 MOBILE 5.457D 5.457E 5.457F 5.458 5.458A 5.458B	
7 075-7 145	FIXED MOBILE 5.457E 5.457F 5.458 5.459	

Importance due to less attenuation from oxygen and water vapours in frequency band (6GHz)

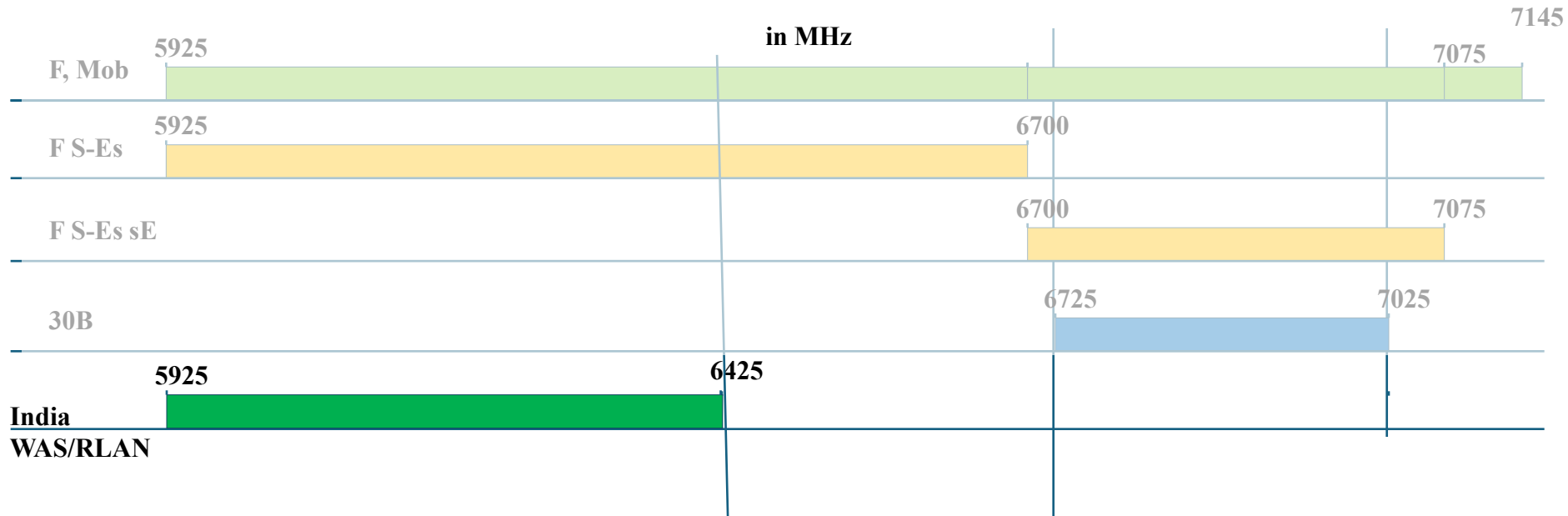


Specific attenuation due to oxygen and water vapour (ITU-R Rec P.676 & P.835)



- Attenuation in 6 GHz band due to Oxygen and Water vapours is negligible in comparison to 60 GHz.
- 6 GHz band provides less attenuation and higher speed

India identification of WAS/RLAN in (6GHz) band

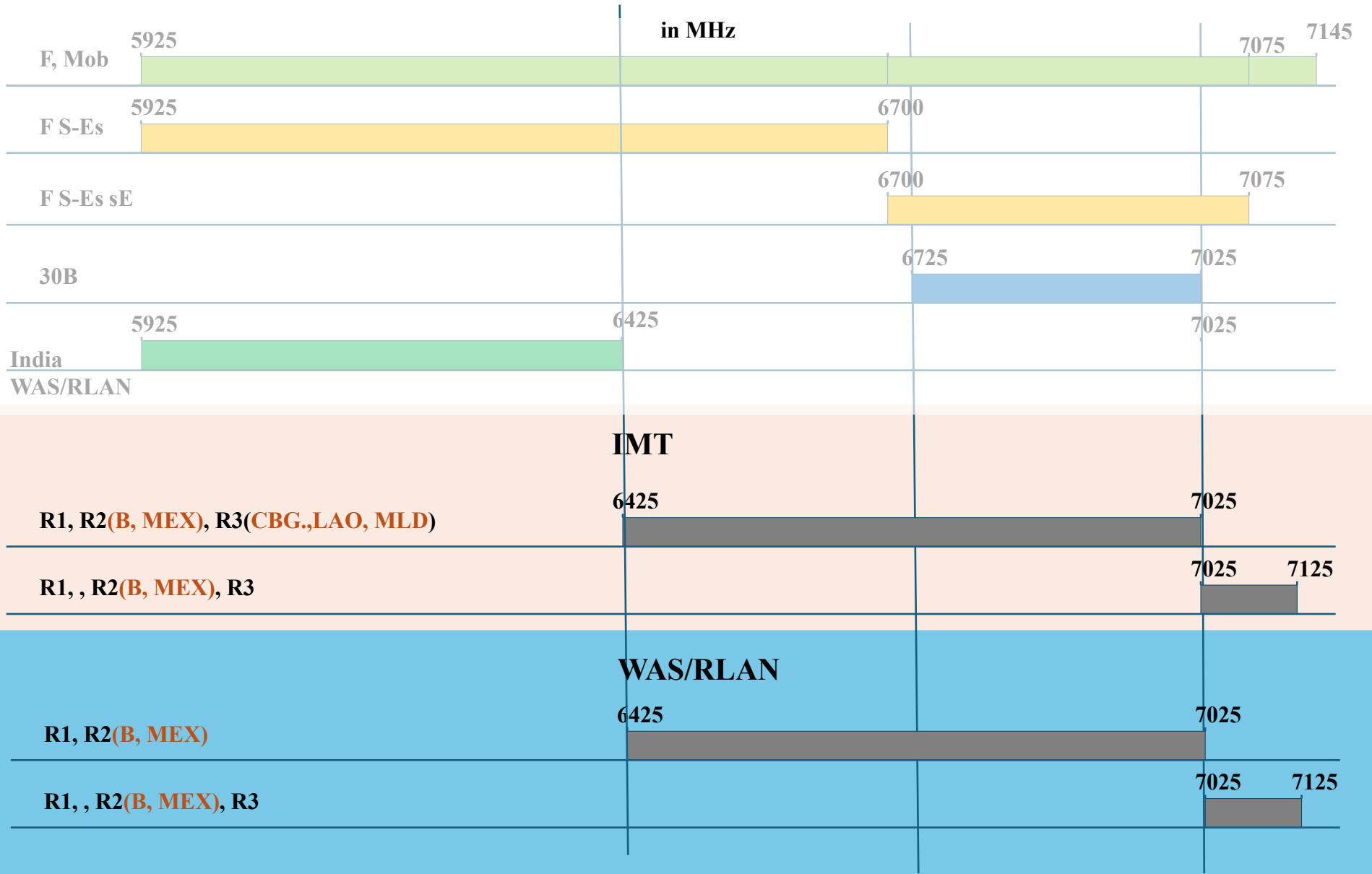


Table

Low power indoor and Very Low Power Outdoor WAS/RLAN Access Points and devices

Device Type	Max. PSD e.i.r.p for in-band emissions	Max. e.i.r.p for in band emissions	Max. Emission Bandwidth	Out of band emissions (Max e.i.r.p density)
Low Power Indoor	5 dBm/MHz	30 dBm	320 MHz	-27 dBm/MHz
Very Low Power Outdoor	-5 dBm/MHz	14 dBm	320 MHz	-27 dBm/MHz

Global situation on IMT and WAS/RLAN as per RR in (6GHz)



Global situation on IMT and WAS/RLAN as per RR in (6GHz)

WRC23 (out come)

5.457D In **Cambodia, Lao P.D.R. and the Maldives**, the frequency band **6 425-7 025 MHz** is identified for the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. **Resolution 220 (WRC-23) applies. (WRC-23)**

5.457E The frequency bands **6 425-7 125 MHz** in **Region 1** and **7 025-7 125 MHz** in **Region 3** are identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. **Resolution 220 (WRC-23) applies.**

The frequency bands are also used for the implementation of wireless access systems (WAS), including radio local area networks (RLANs). (WRC-23)

5.457F In **Brazil and Mexico**, the frequency band **6 425-7 125 MHz** is identified for the terrestrial component of International Mobile Telecommunications (IMT). The use of this frequency band for the implementation of IMT is subject to seeking agreement under No. 9.21 with neighbouring countries. This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. **Resolution 220 (WRC-23) applies.**

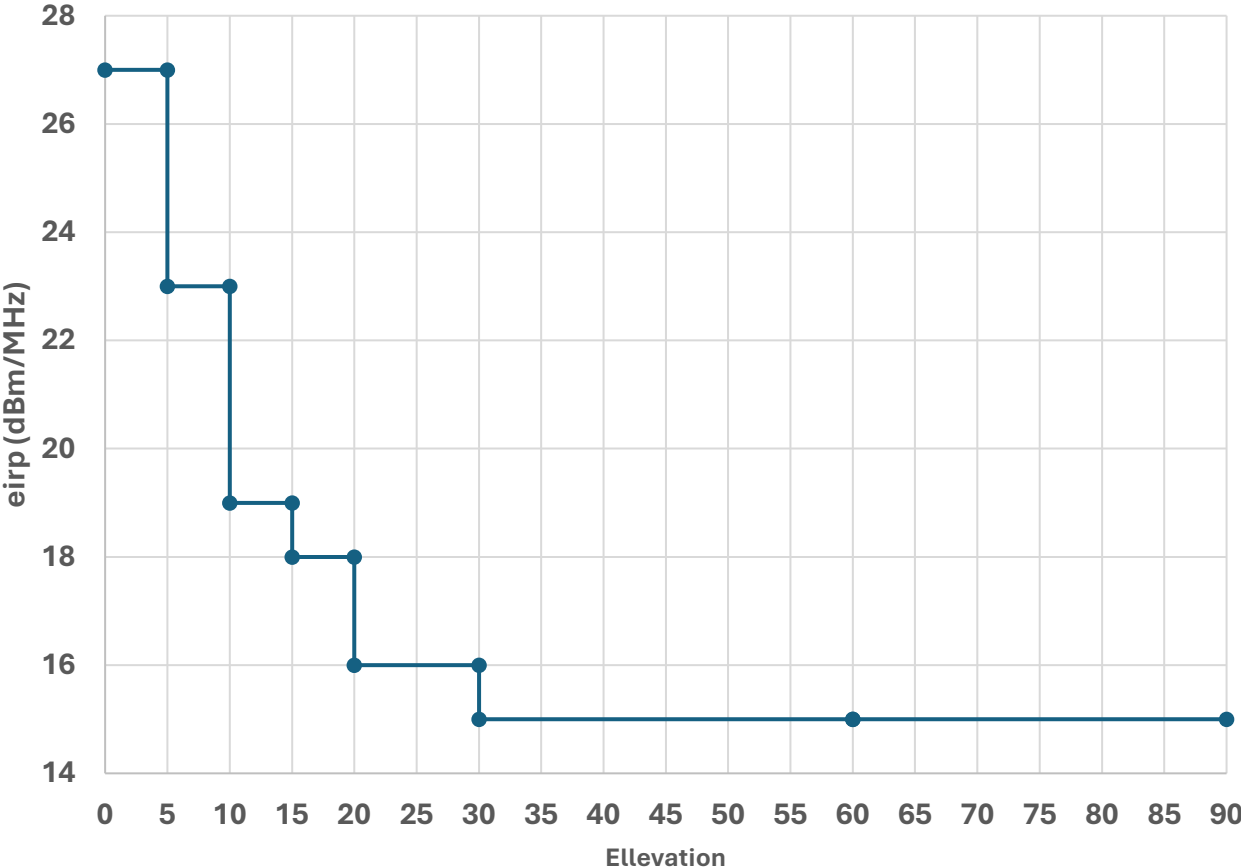
The frequency band is also used for the implementation of wireless access systems (WAS), including radio local area networks (RLANs). (WRC-23)

Global situation on IMT and WAS/RLAN as per RR in (6GHz)

WRC23 (out come)

Resolution 220 (WRC-23) applies. (WRC-23)

e.i.r.p. spectral density emitted by an IMT base station

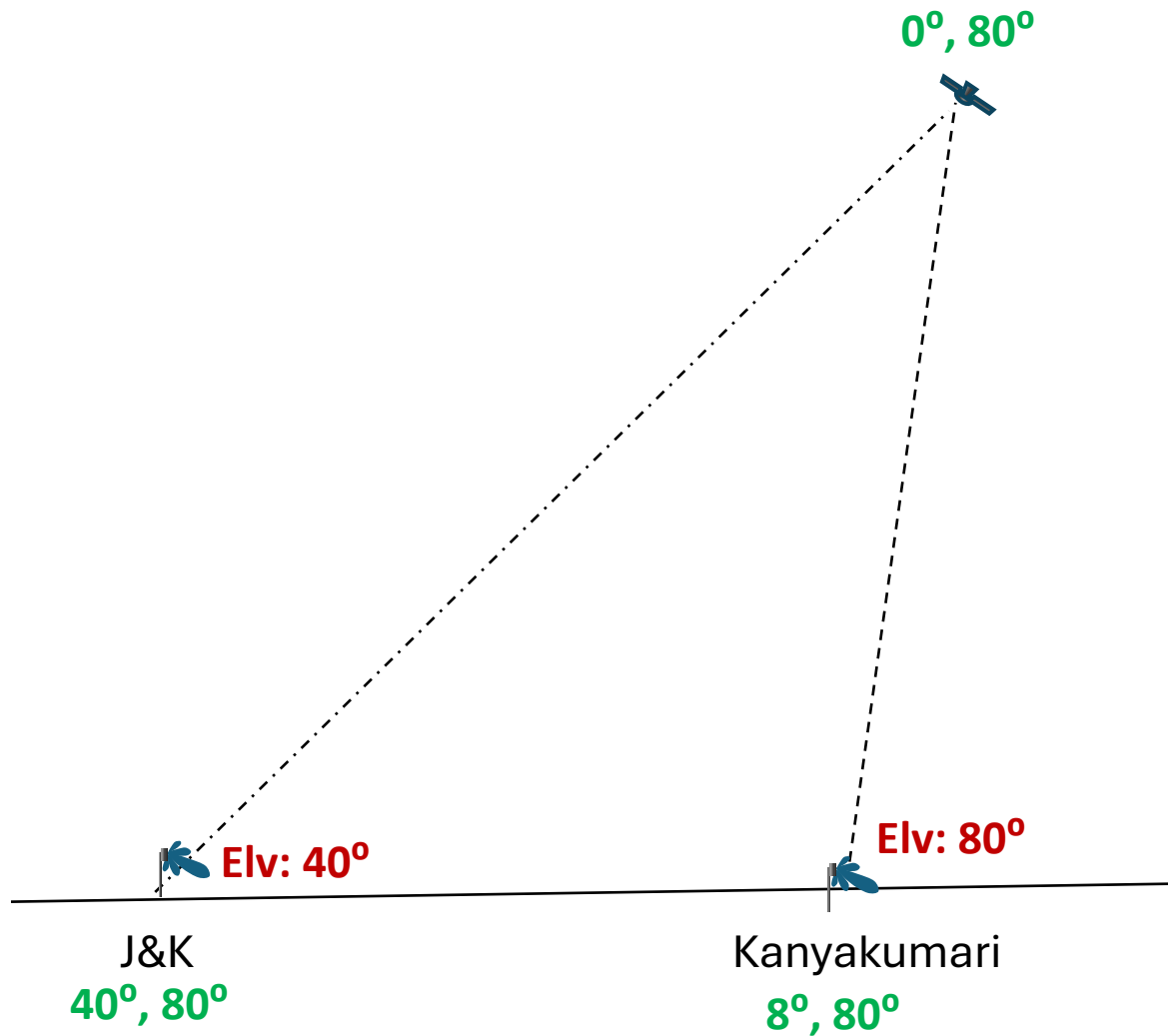


Elevation	e.i.r.p (dBm/MHz)
0-5	27
5-10	23
10-15	19
15-20	18
20-30	16
30-60	15
60-90	15

Global situation on IMT as per RR in (6GHz)

WRC23 (out come)

Resolution 220 (WRC-23) applies. (WRC-23)



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0-5	27
5-10	23
10-15	19
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Thanks

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