

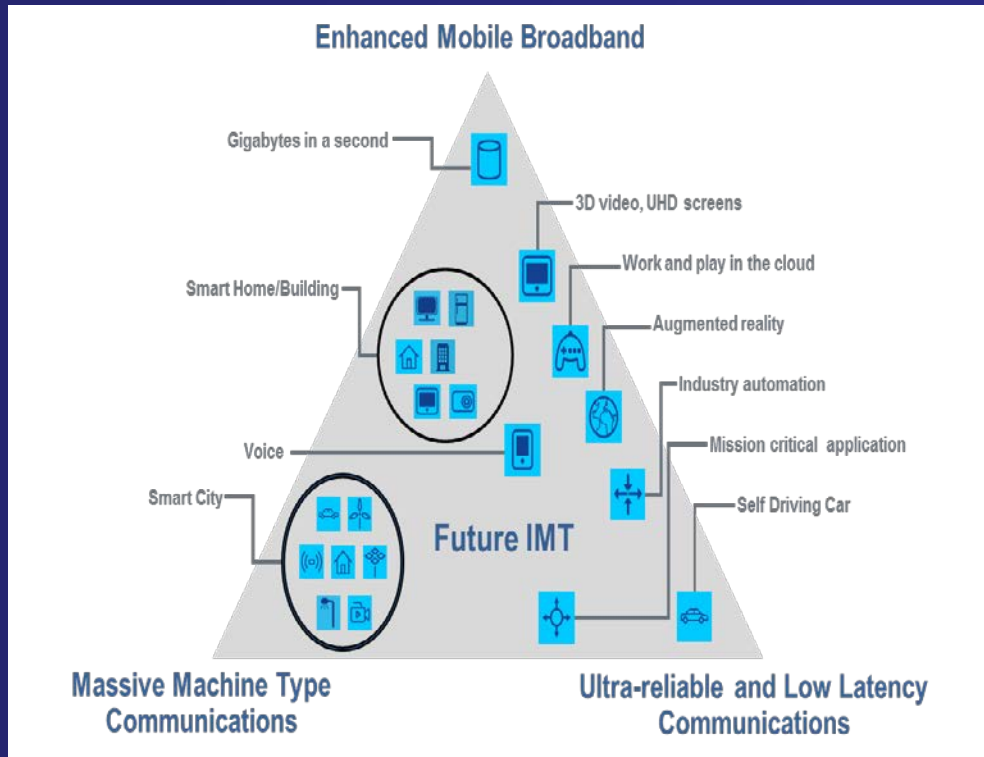


5G Spectrum Research progress in China

IMT-2020 (5G) Promotion Group
2017.5

5G Spectrum vs. Scenarios

Test environment and suitable band

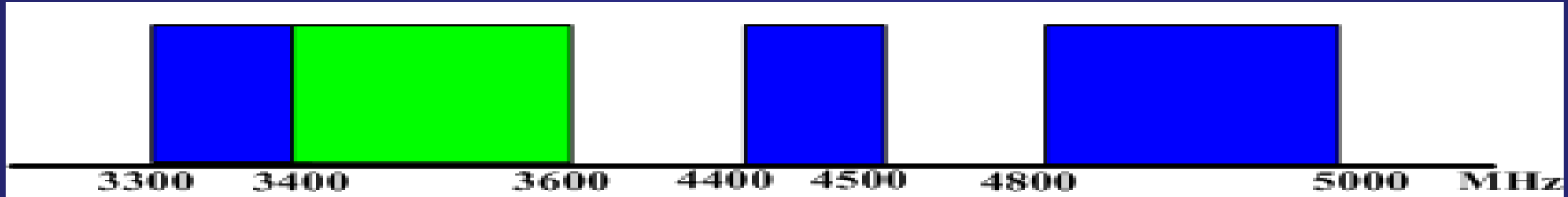


eMBB			
Indoor hotspot	Dense urban	Rural coverage	High speed
LF and/or HF	LF and/or HF	LF	LF

M-MTC	URLLC
Urban coverage	Urban coverage
LF	LF

- LF (below 6GHz) could cover all the test environments.
- HF (above 6GHz) only covers indoor hotspot and dense urban environments.

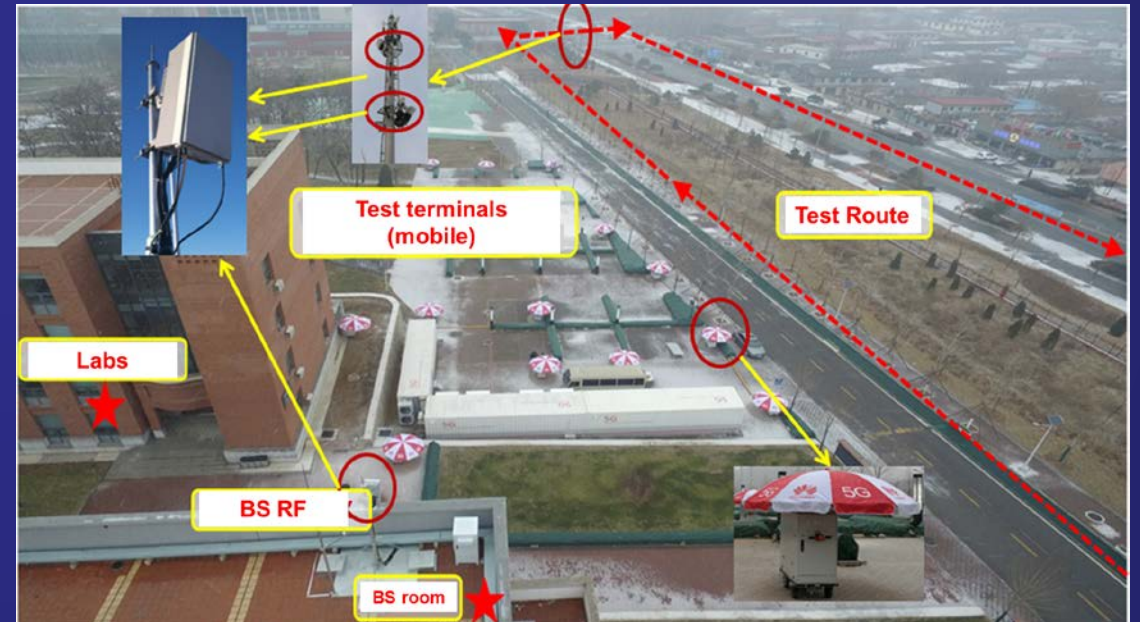
Spectrum Development on 5G in China-LF



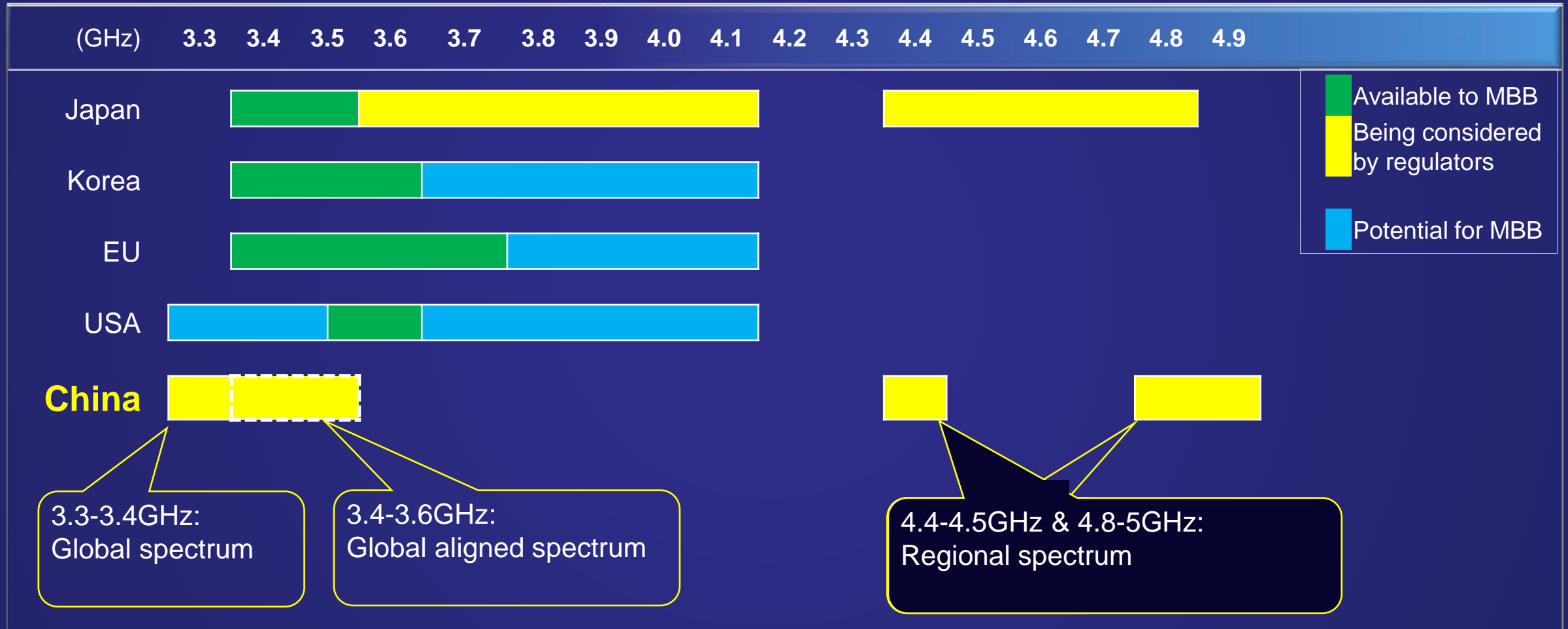
- ✓ Sub6GHz bands are the core 5G spectrum, focus on connectivity & coverage & mobility.
- ✓ 3400-3600MHz: Phase 1 China trial frequency band since January 2016, IMT vs. FSS compatibility trial is due to be finished by 2017.
- ✓ 3300-3400, 4400-4500, 4800-5000MHz: IMT identification in Chinese Regulations on the Radio Frequency Allocation, which was intended to be published by the end of 2017.

3.5GHz Compatibility Test

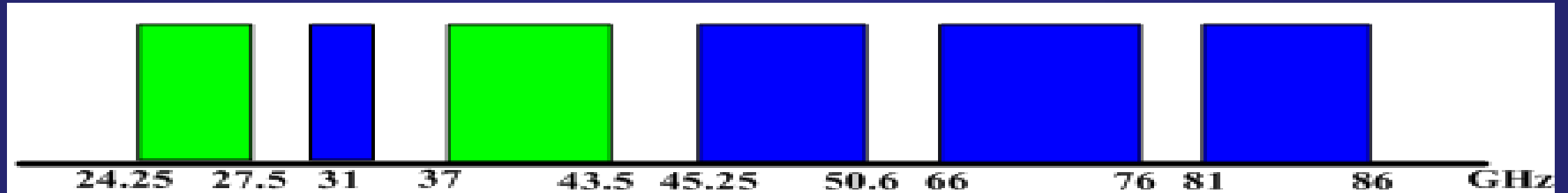
- On January 7th, 2016, MIIT launched 5G compatibility lab test and field trial.
- Lab compatibility test was finalized at the end of 2016.
- Field trial environment was set up in Huairou, Beijing to verify the compatibility between IMT @ 3.4-3.6GHz and FSS @ 3.6-4.2GHz.



Global C-Band Status



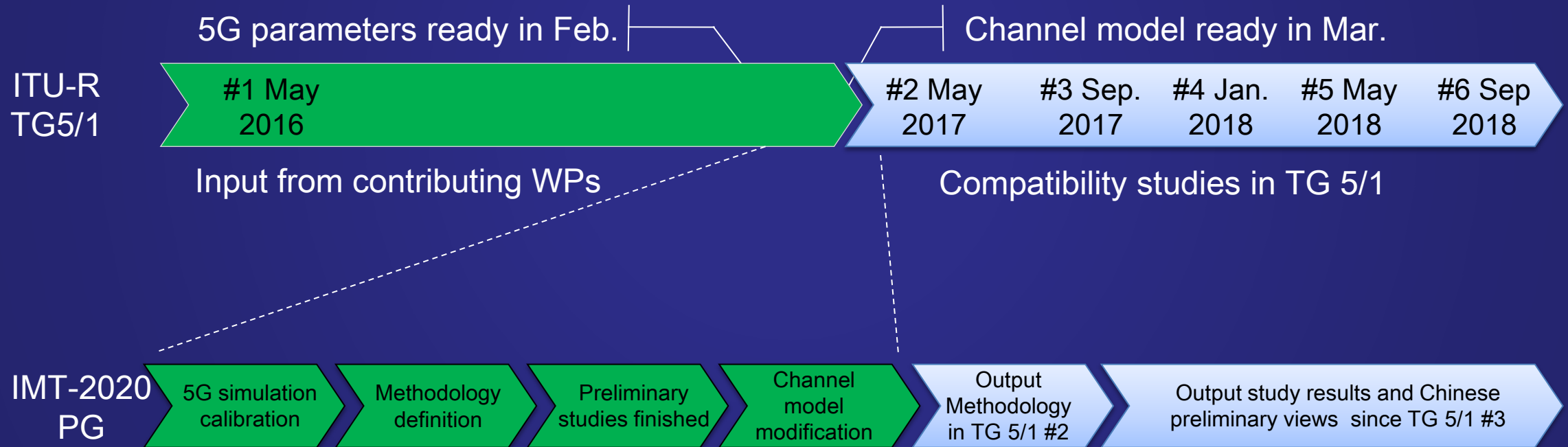
Spectrum Development on 5G in China-HF



- ✓ High frequency bands are complementary 5G spectrum, focus on capacity boosting & self-backhaul.
- ✓ High priority for 20~40GHz for outdoor deployment.
- ✓ 26GHz and 40GHz are the key compatibility studying bands in IMT-2020(5G) Promotion Group

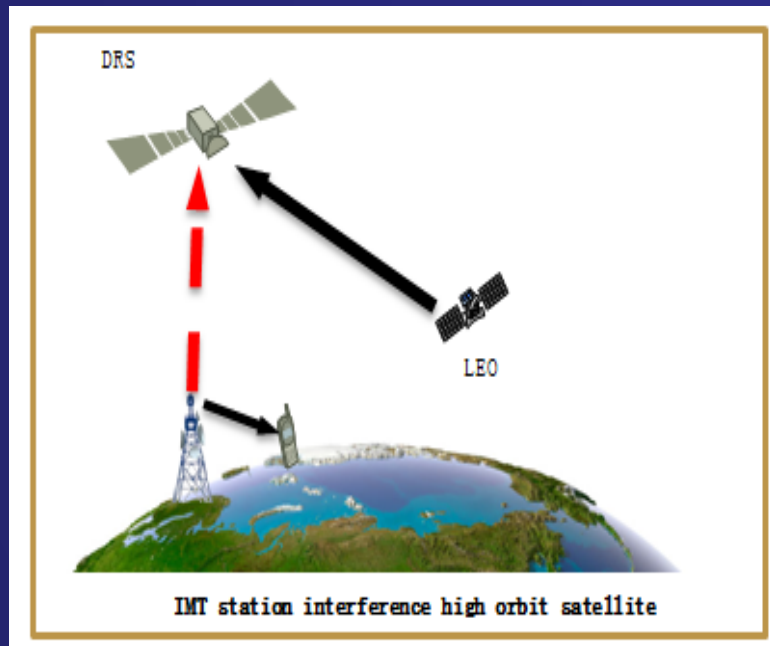
Work Plan for 5G HF Compatibility Study

- China is intended to output consideration on compatibility methodology in TG 5/1 #2, and output results and preliminary views since TG 5/1 #3.

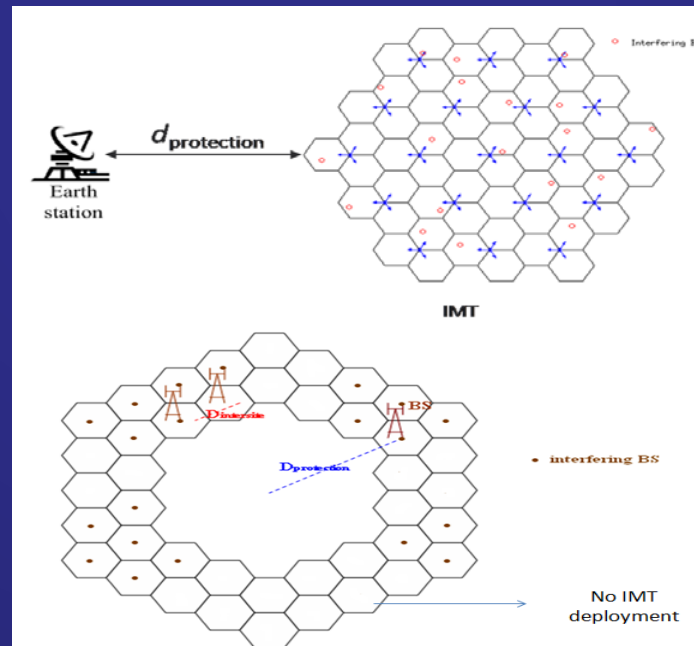


Compatibility Studies@26GHz &40GHz

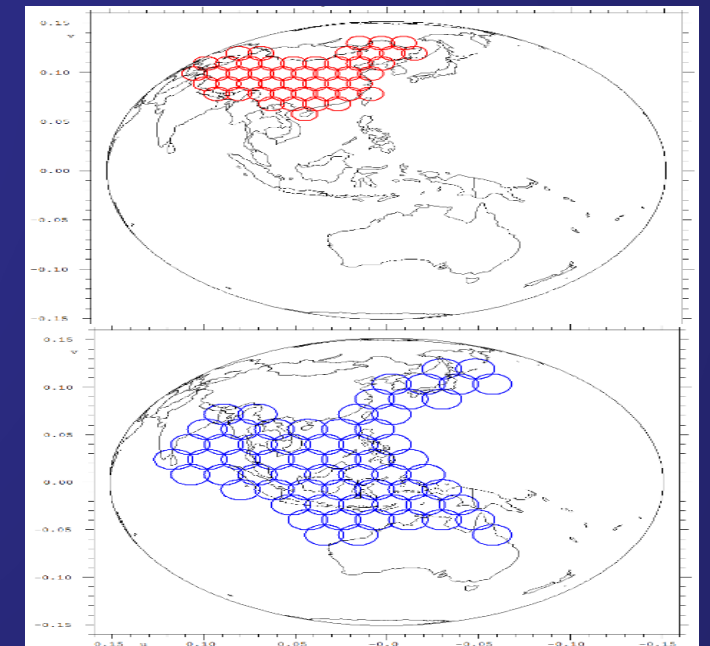
- Several compatibility studies are carrying out in IMT-2020(5G) Promotion Group based on the inputs from contributing WPs of WRC-19 Agenda Item 1.13.
 - ✓ IMT vs. Inter-Satellite Service (ISS), Earth Exploration-Satellite Service(EESS) and Fix Satellite Service(FSS) @26GHz band
 - ✓ IMT vs. FSS @40GHz band



IMT vs. ISS



IMT vs. EESS/FSS ↓ @ 26&40GHz



IMT vs. FSS ↑ @ 26GHz

Summary

- Low frequency bands (below 6GHz) are basis for 5G system, which enables seamless wide area coverage capability and also applies to internet of vehicles and internet of things scenarios.
- High frequency bands (above 6GHz) are key supplemental for 5G system, which enables high-capacity wideband transmission capability.
- Low frequency band planning and High frequency compatibility studies should be accelerated.
- International cooperation is important to promote global/ regional harmonization of 5G spectrum.