

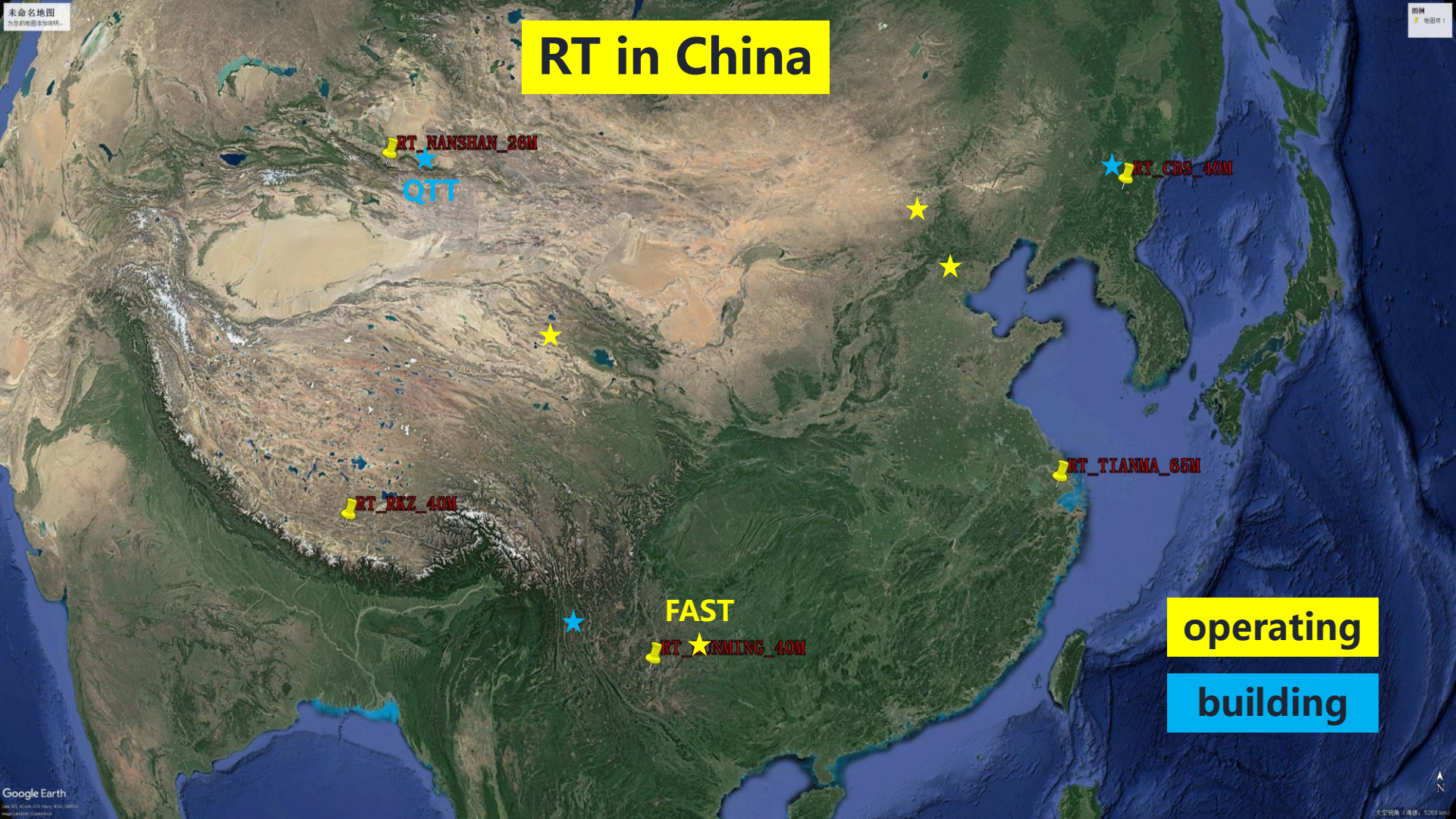
Radio astronomy facilities in China and recent activities for RFI protection

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Shanghai Astronomical Observatory, CAS

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RT in China



operating

building

FAST 500m
Prime focus
Band: L 19-beams



新华网
WWW.NEWS.CN

RQZ



FAST Core Array

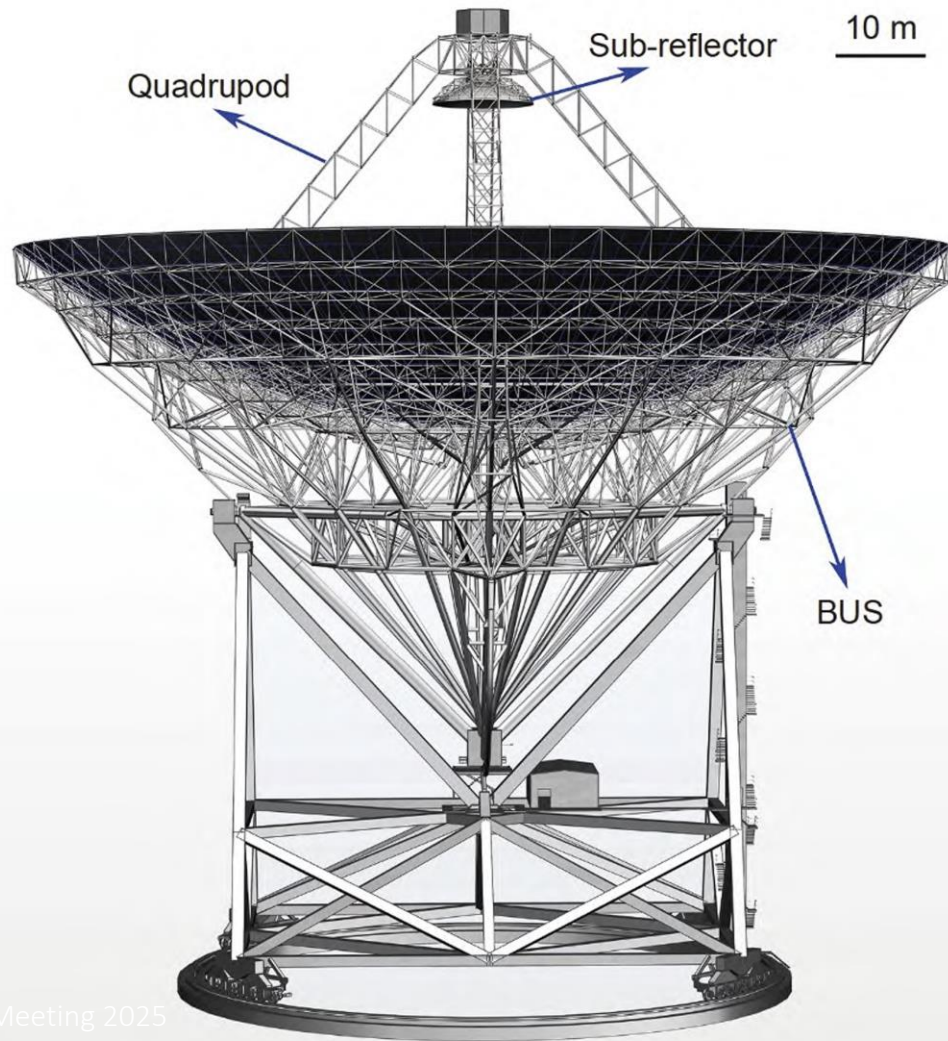
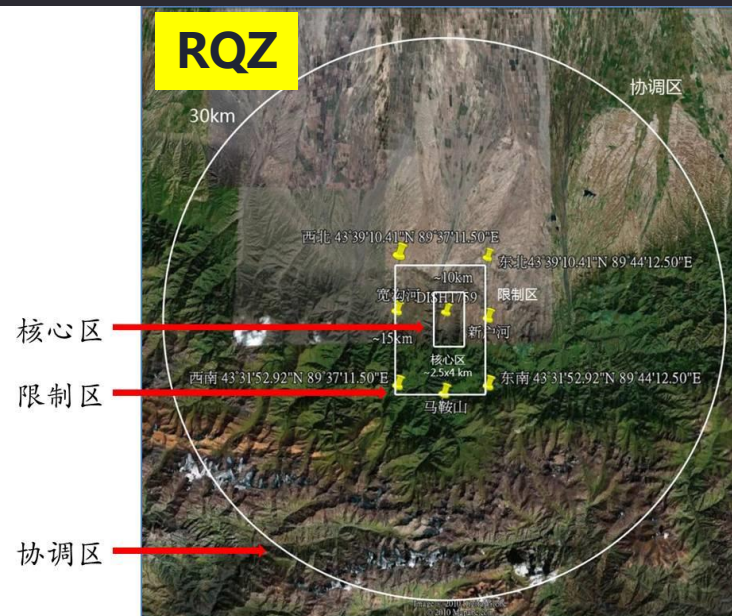


**FAST + 64 x 40m dish
Year 2030**

QTT 110m

Table 1 Specifications of the receivers

Type	Band (cm)	RF frequency (GHz)	Focus	T_{sys} (K)
Single beam	40	0.27-1.8	Primary	20
	15	0.7-4	Primary	16
	5	4-16	Gregory	18
	1.3	16-30	Gregory	20
PAF	20	0.7-1.8	Primary	20





Shanghai 65m Cassegrain

Band L/S/C/X/Ku/K/Ka/Q



RQZ

3km

1km

1km

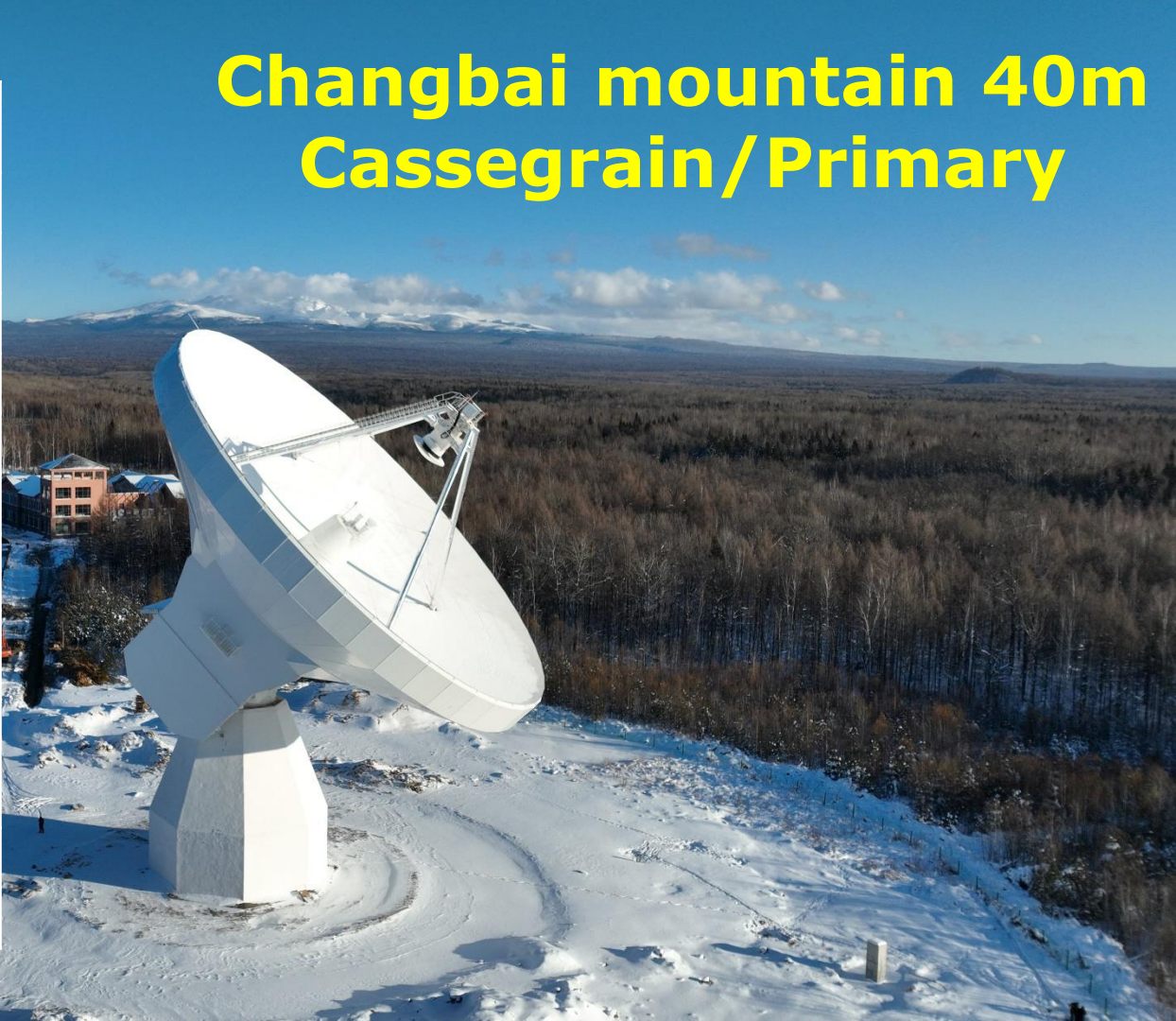
3km

TMRT



Changbai mountain 40m Cassegrain/Primary

Band	Freq range (GHz)	position
UWL	0.7 – 4	Main focus
C2X	4 – 12	Cassegrain
Ku	12 – 18	Cassegrain
K	18 – 25	Cassegrain
Ka	25 – 35	Cassegrain
Q	35 – 50	Cassegrain
W	67 – 116	Cassegrain
S/X	2.15 – 2.45 8.2 – 9.0	Cassegrain
S/X/Ka	2.15 – 2.45 8.0 – 9.0 25 – 35	Main focus
PAF	0.7 – 1.8	Main focus
PAF	4 – 8.5	Main focus



RQZ

G331

G331

G331

3公里核心区

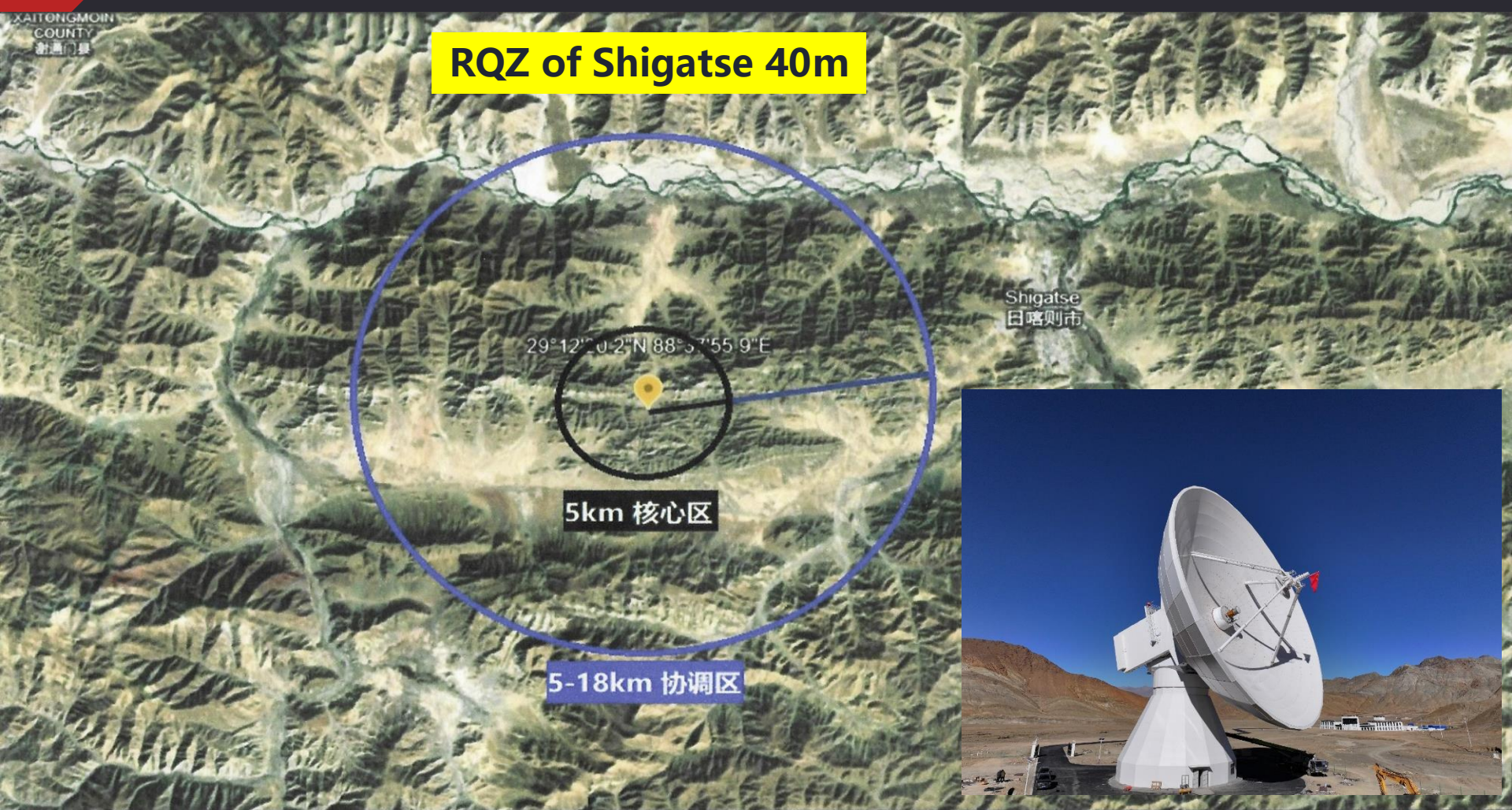
3-7公里协调区

S305

S1

白山长白山机场

RQZ of Shigatse 40m

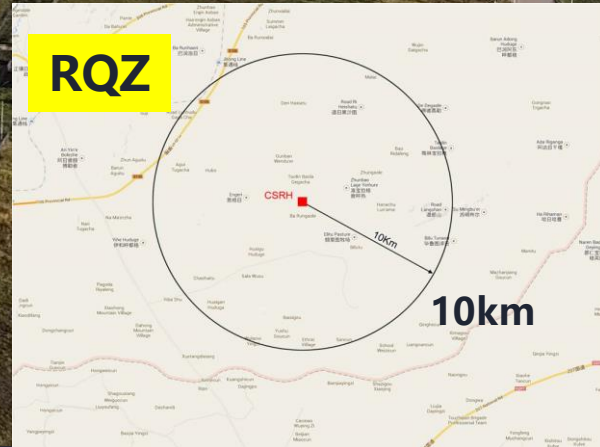


Solar observation facilities

MUSER

**40 x 4.5m + 60 x 2m
400MHz-15GHz**

**3 x 40m x 140m
327MHz & 654MHz**



SG7 & WP7D in China

1. Bureau of Radio Regulation of the Ministry of Industry and Information Technology of the People's Republic of China (the State Radio Office)
2. State Radio Spectrum Management Center is a technical agency for the state radio regulation
3. SG7: State Radio Spectrum Management Center
4. WP7D: SHAO (leader) , NAOC, PMO, XAO, YNAO, NSSC, Huawei, Spacesail, LANDSPACE
5. WAC27 agenda items: 1.16, 1.18

SG7 & WP7D in China

ICS 07.040
CCS M 35



中华人民共和国国家标准

GB/T 42557—2023

射电望远镜电磁环境保护技术规范

Technical specifications of electromagnetic environmental protection for
radio telescopes

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Dr. Haiyan Zhang

2023-05-23 发布

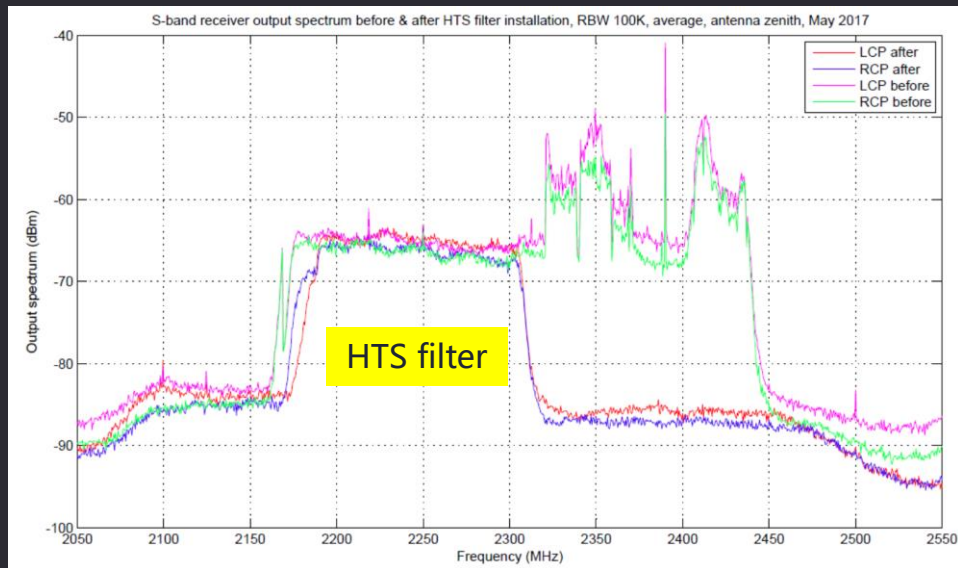
2023-12-01 实施

6. National standard documents for RAS
7. RFI measurements for new sites



SG7 & WP7D in China

8. RFI mitigation method research



Thank you!

9. RQZ analysis for new site

