

## Description of EPFD validation and results of examination

### Input parameters

#### Mask link data

Mask Id.	Direction	Minimum frequency, MHz	Maximum frequency, MHz	Linked orbit IDs / Satellite IDs
1	↔	17800	18400	All
2	↑	27500	27600	All
3	↓	17800	18600	All
4	↑	27600	30000	All
11	↓	19730	19770	1 - 18 (sat IDs: 2 - 5, 7 - 10, 12 - 15, 17 - 20, 22 - 25, 27 - 30, 32 - 35, 37 - 40, 42, 43)
12	↓	19730	19770	1 - 18 (sat IDs: 1, 6, 11, 16, 21, 26, 31, 36, 41)

#### Common SNS Data

##### Common

A.4.b.7.d.1 Exclusion zone type	A.4.b.7.d.1 Exclusion zone size, degrees
Y - topocentric angle (earth based)	6

##### Orbits

Apogee/Perigee/Inclination	A.4.b.6.d Uses station keeping	A.4.b.6.e Uses specific precession
1200/1200/87.9	No keeping	Default

#### TT&C Scenario (Downlink 19.73-19.77 GHz)

##### Common

A.4.b.7.d.1 Exclusion zone type	A.4.b.7.d.1 Exclusion zone size, degrees
Y - topocentric angle (earth based)	12

##### Downlink

A.4.b.6.a Number of satellites transmitting to any latitude within corresponding range		
From latitude	To latitude	Number
-90	90	2

#### TT&C Scenario (Uplink 27.52-27.53 GHz)

##### Common

A.4.b.7.d.1 Exclusion zone type	A.4.b.7.d.1 Exclusion zone size, degrees
Y - topocentric angle (earth based)	6

##### Uplink

A.4.b.7.b Earth station density (1/km <sup>2</sup> )	A.4.b.7.c Average distance (km)	A.4.b.7.a number of satellites receiving simultaneously
6.74E-07	1217	40

#### Ka-scenario (27.6-30 GHz, 17.8-18.58 GHz)

##### Common

A.4.b.7.d.1 Exclusion zone type	A.4.b.7.d.1 Exclusion zone size, degrees
Y - topocentric angle (earth based)	6

##### Uplink

A.4.b.7.b Earth station density (1/km <sup>2</sup> )	A.4.b.7.c Average distance (km)	A.4.b.7.a number of satellites receiving simultaneously
6.74E-07	1217	50

##### Downlink

A.4.b.6.a
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Number of satellites transmitting to any latitude within corresponding range		
From latitude	To latitude	Number
-90	90	50

**Group table**

Beam(s)	Direction	Minimum frequency, MHz	Maximum frequency, MHz	A.4.b.7.cbis Minimum elevation angle
GRA, GRB, GRC, GRD	R	27520	30000	5
GTA, GTB, GTC, GTD	E	17800	19770	5

**Results**

B1A Beam designation	B2 Emi-Rcp	BR7a Group id./ Target Group id.	GHz	Orbital planes id. no.	Mask ID	Article 22 Limit	Result	Article 22 Examination
GRA	R	119833718 119833719 119833720 119833721	27.6-30	1 - 18	4	TABLE 22-2	Pass	Favorable
GRA	R	119833750 119833751 119833752 119833753	27.52- 27.53	1 - 18	2	TABLE 22-2	Pass	Favorable
GRB	R	119833726 119833727 119833728 119833729	27.6-30	1 - 18	4	TABLE 22-2	Pass	Favorable
GRB	R	119833754 119833755 119833756 119833757	27.52- 27.53	1 - 18	2	TABLE 22-2	Pass	Favorable
GRC	R	119833734 119833735 119833736 119833737	27.6-30	1 - 18	4	TABLE 22-2	Pass	Favorable
GRC	R	119833758 119833759 119833760 119833761	27.52- 27.53	1 - 18	2	TABLE 22-2	Pass	Favorable
GRD	R	119833742 119833743 119833744 119833745	27.6-30	1 - 18	4	TABLE 22-2	Pass	Favorable
GRD	R	119833762 119833763 119833764 119833765	27.52- 27.53	1 - 18	2	TABLE 22-2	Pass	Favorable
GTA	E	119833685 119833686 119833687 119833688	17.8-18.58	1 - 18	1, 3	TABLE 22-1B TABLE 22-3	Pass Pass	Favorable
GTA	E	119833689 119833766 119833767 119833768	19.73- 19.77	1 - 18	11, 12	TABLE 22-1C	Pass	Favorable
GTB	E	119833694 119833695 119833696 119833697	17.8-18.58	1 - 18	1, 3	TABLE 22-1B TABLE 22-3	Pass Pass	Favorable
GTB	E	119833769 119833770 119833771 119833772	19.73- 19.77	1 - 18	11, 12	TABLE 22-1C	Pass	Favorable
GTC	E	119833702 119833703 119833704 119833705	17.8-18.58	1 - 18	1, 3	TABLE 22-1B TABLE 22-3	Pass Pass	Favorable
GTC	E	119833773 119833774	19.73- 19.77	1 - 18	11, 12	TABLE 22-1C	Pass	Favorable

		119833775 119833776						
GTD	E	119833710 119833711 119833712 119833713	17.8-18.58	1 - 18	1, 3	TABLE 22-1B TABLE 22-3	Pass Pass	Favorable
GTD	E	119833777 119833778 119833779 119833780	19.73- 19.77	1 - 18	11, 12	TABLE 22-1C	Pass	Favorable

Notes:

1. Findings are promulgated as favorable when all applicable limits in Article 22 are met for given group of frequency assignments in all applicable scenarios.
2. The Result column can be either Pass or Fail (see Rec. ITU-R S.1503-2). N/A (Non Applicable) refers to the case when an applicable Article 22 limit is not examined in the current scenario.
3. Qualified Favorable is established due to continuous application of Resolution 85 (WRC-03) on request by the notifying administration.