Filing for use of Inter-Satellite Services (ISS) in the frequency bands 18.1-18.6 GHz, 18.8-20.2 GHz and 27.5-30 GHz.

1. WRC-23 allocated use of the frequency bands 18.1-18.6 GHz, 18.8-20.2 GHz and 27.5-30 GHz to the inter-satellite services.

2. The footnote RR No. **5.521A** and Resolution **679 (WRC-23)** are applicable and such use is not subject to coordination under RR No. **9.11A**.

3. Symbol for class of station in the inter-satellite service.

| Symbol | Space Station Class of Station |
|--------|--|
| ES | Station in the inter-satellite service |

4. For use of the frequency bands 18.1-18.6 GHz, 18.8-20.2 GHz, 27.5-29.1 GHz and 29.5-30 GHz by space stations, the allocation is limited to inter-satellite links between nongeostationary satellites or between non-geostationary satellites and geostationary satellites.

5. For use of the frequency band 29.1-29.5 GHz by space stations, the allocation is limited to inter-satellite links between non-geostationary satellites and geostationary satellites.

6. Additional mandatory Appendix **4** data items

| A.27 | COMPLIANCE WITH RESOLUTION 679 (WRC-23) | Advance publication of a non- geostationary-satellite network or system not subject to coordination under Section II of Article 9 | Notification or coordination of a non- geostationary-satellite network or system |
|--------|---|---|--|
| A.27 | COMPLIANCE WITH RESOLUTION 679 (WRC-23) | | |
| A.27.a | a commitment from the notifying administration of a non-GSO space station receiving in the frequency bands 27.5- 28.6 GHz and 29.5-30 GHz that the equivalent power flux-density produced at any point in the geostationary-satellite orbit by emissions from all combined operations of inter-satellite and Earth-to-space links shall not exceed the limits given in Article 22, Tables 22-1B, 22-1C and 22-2 Required only for non-GSO space stations submitted in accordance with Resolution 679 (WRC-23) | + | + |
| A.27.b | a commitment from the notifying administration of space stations receiving in the frequency band 27.5-30 GHz that, upon receiving a report of unacceptable interference, the notifying administration will follow the procedures in <i>further resolves</i> 3 of Resolution 679 (WRC-23) Required only for non-GSO space stations submitted in accordance with Resolution 679 (WRC-23) | + | + |

| A.27.c | a commitment of compliance with the per-satellite power flux-density level in the frequency band 19.3-19.7 GHz, as defined in No. 5.523DA Required only for the notification of space stations submitted in accordance with Resolution 679 (WRC-23) | + |
|----------|---|---|
| A.27.d | the exclusion zone angle in degrees, defined as a minimum angle between the geostationary arc and the inter-satellite link transmitting direction, measured at the non-geostationary transmitting space station Required only for non-geostationary space stations transmitting to another non-geostationary space station in the frequency bands 27.5-28.6 GHz and 29.5-30 GHz | + |
| A.27.e | the mask pattern defined in terms of the e.i.r.p. in a 40 kHz bandwidth as a function of the off-axis angle between the non- geostationary transmitting space station boresight line and the line from the non-geostationary transmitting space station to a point on the geostationary-satellite orbit, and as a function of the latitude at nadir of the non-geostationary transmitting space station Required only for non-geostationary space stations transmitting to another non-geostationary space station in the frequency bands 27.5-29.1 GHz and 29.5-30 GHz or non-geostationary space stations transmitting to another geostationary space station in the frequency band 27.5-30 GHz | + |
| A.27.f | COMPLIANCE WITH resolves 3.3 OF RESOLUTION 679 (WRC-23) | |
| A.27.f.1 | a commitment by the notifying administration for a non-GSO FSS system with an altitude of apogee of less than 20 000 km communicating with lower orbiting non-GSO space stations in the frequency bands 18.3-18.6 GHz and 18.8-19.1 GHz that the pfd shall be in conformity with the pfd limits on the Earth's surface specified in Annex 3 to Resolution 679 (WRC-23) Required only for the notification of non-GSO space stations submitted in accordance with Resolution 679 (WRC-23) | + |

6.1 Appendix 4 items A.27.d./e. Capture

| 🏠 File Edit Tools View Window Help | | | | | | | |
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| | | | | | | | |
| Notice Station Beam | | | | | | | |
| Notice Id: 123500211 Administration: EGY Status: 50 Date: 22/02/2024 A1a. Identity of the Satellite Network A1b. A4b2 Number of Orbital Planes 1 A4b1. Reference body [T] Earth A4b3a. Co HORUS-SAT A4b3e1. Nbr of Satellites to NH A4b3e2. Nbr of Satellites to SH A4b3a. Co | | | | | | | |
| A1g. Short Duration Mission N A27. Parameters | | | | | | | |
| 3 Orbital information A27. Parameters | [] | | | | | | |
| A4b. Orbital Information for each Orbital Plane, where the Earth is Minimum Frequency MHz Maximum Frequency MHz A27d. Exclusion zone A27e. Mask pattern angle in degrees identifier | Save and Close | | | | | | |
| Orbital Plane in blane 4b. Satellites plane 4c. Period ddd 4c. Period plane 4d. Apoge exp 4d. Period exp 4d. Period exp | Close | | | | | | |
| | | | | | | | |
| A.17b.d,e Compliance with PFD or EPFD limits: Enter PFD or EPFD values A26. For satellite networks with freq, assign. (not subject to coord, under Sec. II Art. 9) in the bands 7250-7750 MHz (sto-E), 7900-8025 MHz (E-to-s); A26. Parameters | | | | | | | |
| Commitments: Manage Commitments (Please use this function only after all frequency assignments have been captured in the notice) A27. Compliance with Resolution 679 (w/RC-23): A27. Parameters | | | | | | | |

6.2 The submission format for Item A.27.e of Appendix 4

Description

The item **A.27.e** of Appendix **4** is described as the mask pattern defined in terms of the e.i.r.p. in a 40 kHz bandwidth as a function of the off-axis angle between the non-geostationary transmitting space station boresight line and the line from the non-geostationary transmitting space station to a point on the geostationary-satellite orbit, and as a function of the latitude at nadir of the non-geostationary transmitting space station transmitting transmitting to another non-geostationary space station in the frequency bands 27.5-29.1 GHz and 29.5-30 GHz or non-geostationary space station in the frequency bands 27.5-29.1 GHz and 29.5-30 GHz or non-geostationary space station in the frequency bands 27.5-29.1 GHz and 29.5-30 GHz or non-geostationary space station in the frequency bands 27.5-29.1 GHz and 29.5-30 GHz or non-geostationary space stations transmitting to another geostationary space station in the frequency bands 27.5-29.1 GHz and 29.5-30 GHz or non-geostationary space stations transmitting to another geostationary space station in the frequency bands 27.5-29.1 GHz and 29.5-30 GHz or non-geostationary space stations transmitting to another geostationary space station in the frequency bands 27.5-29.1 GHz and 29.5-30 GHz or non-geostationary space stations transmitting to another geostationary space station in the frequency bands 27.5-29.1 GHz and 29.5-30 GHz or non-geostationary space stations transmitting to another geostationary space station in the frequency band 27.5-30 GHz in accordance with Resolution **679 (WRC-23)**.

This e.i.r.p. mask is used by the Radiocommunication Bureau:

- to check the compliance of non-geostationary-satellite (non-GSO) emissions with the power flux density (pfd) limit given in § 6 of Annex 5 to Resolution **679 (WRC-23)** as described in Appendix 3 to Annex 5 to this resolution,
- to assess whether the emissions from a non-geostationary (non-GSO) space station operating intersatellite links with a geostationary (GSO) space station are within the envelope of the typical earth stations of the GSO network as described in Appendix 1 to Annex 5 to Resolution 679 (WRC-23),
- to assess whether the emissions from a non-geostationary (non-GSO) space station operating intersatellite links with a non-GSO space station are within the envelope of the typical earth stations of the non-GSO system as described in Appendix 2 to Annex 5 to Resolution 679 (WRC-23).

Mask format

Administrations are required to provide the e.i.r.p. mask in XML format with header as follow:

<satellite_system ntc_id="12345678" sat_name="MySatName">

<**eirp_mask_isl** mask_id="1" low_freq_mhz="29500" high_freq_mhz="30000" refbw_khz = "40" format = "T" a_name = "latitude" b_name="offaxis angle">

where:

| Field | Type or range | Units | Example |
|---------------|------------------|---------|----------|
| mask_id | Integer | _ | 1 |
| low_freq_mhz | Double precision | MHz | 29 500 |
| high_freq_mhz | Double precision | MHz | 30 000 |
| refbw_khz | Double precision | kHz | 40 |
| format | Character | - | "Т" |
| a_name | {latitude} | degrees | latitude |
| b_name | {offaxis angle} | degrees | angle |

After the header the XML contains arrays of the e.i.r.p. values that can vary by latitude at nadir of the non-geostationary transmitting space station and off-axis angle between the non-geostationary transmitting space station boresight line and the line from the non-geostationary transmitting space station to a point on the geostationary-satellite orbit.

The e.i.r.p values shall be provided for all latitudes from -90 to 90 degrees with maximum step of 15 degrees including 0-degree latitude. For all latitudes outside of the range from [-inclination angle] to [+inclination angle], the e.i.r.p. value of "-999" should be used.

The e.i.r.p values shall be provided for all off-axis angles from 0 to 80 degrees with the maximum step of 1 degree and from 80 to 180 degrees with the maximum step of 10 degrees including 0, 80 and 180 degrees off-axis angles and, for non-GSO space stations transmitting to another non-GSO space station, the off-axis angle shall include a value of the exclusion zone width.

An example of the e.i.r.p. mask XML file is provided below:

<satellite_system ntc_id="12345678" sat_name="MySatName">

```
<eirp_mask_isl mask_id="1" low_freq_mhz="29500" high_freq_mhz="30000" refbw_khz =
"40" format = "T" a_name = "latitude" b_name="offaxis angle">
```

```
<by_a a="-90">
```

```
<eirp b="0">-999</eirp>
```

```
</by_a>
```

```
<by_a a="-75">
<eirp b="0">-999</eirp>
</by_a>
...
```

```
<by_a a="0">
```

<eirp b="0">30.0206</eirp>

<eirp b="1">20.0206</eirp>

<eirp b="2">12.49485</eirp>

<eirp b="3">8.092568</eirp>

<eirp b="4">4.9691</eirp>

```
<eirp b="5">2.54634976</eirp>
```

```
<eirp b="6">-4.9794</eirp>
```

```
•••
```

```
<eirp b="[exclusion_zone]">-18.9471149</eirp>
```

•••

```
<eirp b="80">-9.381681</eirp>
```

<eirp b="90">-12.50515</eirp>

```
<eirp b="100">-16.90743</eirp>
```

```
<eirp b="110">-18.9471149</eirp>
```

<eirp b="120">-18.9471149</eirp>

...<eirp b="180">-18.9471149</eirp>

```
</by_a>
```

```
•••
```

```
<by_a a="-90">
```

<eirp b="0">-999</eirp>

```
</by_a>
```

</eirp_mask_isl>

</satellite_system>

6.3 Submission of Commitments under RES 679

| 🏠 File | Edit T | ools Vi | ew Wi | ndow H | lelp | | | | | | | | | | | |
|--------|--|-------------------------------|------------------------|--------------------------------------|-----------------------------------|-----------------------------------|---------------------|---|---------------------------------------|---|-----------------------------------|--|----------------------------|--|---|-------------------------------------|
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| | Notic | e | | Sta | ation | | | Bear | n | | | | | | | |
| | | | Notice Id | : 12 | 3500211 | Admi | inistration | r. EG | Y | Status: | 50 | Date: | | 22/02/20 | 24 | |
| | A1a. Identity of the Satellite Network HORUS-SAT A1c. A4b2. Number of Orbital Planes A4b1. Reference body (T) Earth A4b3a. A4b3e1. Nbr of Satellites to NH A4b3e2. Nbr of Satellites to SH | | | | | | | A4b3a. Co | | | | | | | | |
| | | | | | A4b. Or | bital Info | rmation f | or each Orl | bital Pla | ne, where | the Eart | h is the refe | rence | e body | | |
| | | Orbital Plane id | 4a. Inclin Angle | 4b. Satellites in the plane | 4c. Period ddd | 4c. Period hh | 4c. Period mm | 4d. Apogee | 4d. apog exp | 4e. Perigee | 4e. perig exp | 4f. Minimum Altitude | 4f. Min Alt exp | 4i. Argument of the Perigee (degrees) | 4m. space station uses sun-synchro- nous orbit | 4n. local time refer- ence |
| | | 1 | 97.40 | 2 | 0 | 1 | 35 | 500.00 | 0 | 500.00 | 0 | 500.00 | 0 | | yes | D |
| | * | | | | 1 | | | | | | | | | | | • |
| | A.17b with F |),d,e Com PFD or EF | pliance PFD limits: | Enter F | PFD or E | PFD vali | ues | A26. For sec under Sec MHz (E-to- | atellite r . II Art. 3 s), 20.2 | networks w 9) in the ba 921.2 GHz | ith freq. nds 725 (s-to-E), | assign. (no i0-7750 MH and 30-31 | t subji Iz (s-ti GHz | ect to coord. o-E), 7900-802 (E-to-s): | A26. Par | ameters |
| | Comn | nitments: (Pleas assign | e use this ments ha | Man function o ve been c | age Con nly after aptured i | amitment all frequ n the no | s ency tice) | | A27. | Complianc | e with F | esolution 6 | 79 (W | /RC-23): | A27. Para | ameters |

6.4 User Interface of Notification Modification under Resolution 679

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| Notice | Station | Beam | Strapping | Noise Gamma |
| Notice Id: Notice s No. 9 Spec | 165 AP4/II and AP4. ubmitted under/for: .6 Coordination • No. 11. No. 9.11A Applies • Bands ific Earth Station Coordination | /III (Appendix 4 - Annex 2A) .2 Notification RES679 s 21.4 to 22 GHz Special Proce n under No. 9.7A | 30/11/2024 | Status 01 |
| Date: DD A1f1.Noti Administra A1f3. Intergove Satellite S Type of Satellite S | /MM/Y 30/11/2024 Administ Serial N fying ation ↓ A1f2. N submitt behalf rmmental ↓ ↓ behalf administ system atellite Network or Earth Station GeoStationary Satellite Netw NonGeoStationary Satellite | tration br Notice ted on of these strations. x A5./A6. Coordin Work Network | Addition Addition Addition Agreements Level Agreement | nded for ation solon ation No. of Station ied/suppressed /A6a1. Coordination Agreements Satellite Network List |

6.5 Point of contact to be provided in accordance with Resolution 679 further resolves 4 c)

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| | \$49/552 |
| | |
| Coordination Special Section Assoc Earth Station Assoc Space Station Notice Station Beam Group Emissions Frequence | cies) |
| Notice 1 Satellite CSN-L4 Beam Id ISU E V Group Id: 123785443 V Split | |
| 3. Observed Frequencies and Related Characteristics | |
| C Add C Mod C Sup of the group BR Identification of the Group Page BR Data | |
| Characteristics Common to a Group of Frequencies D General Characteristics | |
| Characteristics Common to a Group of Frequencies | |
| A2a. Date Bringing into use A2b. Period of | |
| 17.12.2024 Validity 50 Years | |
| A36c Point of Contact | Point of Contact |
| A3a. Operating Agency | Select a Point of Contact Create/Modify a New Point of Contact |
| 134 CHINA SATELLITE NETWORK GROUP CO., LTD. | Name of the Person or Entity |
| A3b. Responsible Administration | |
| G MINISTRY OF INDUSTRY AND INFORMATION TECHNOLOGY | E-mail Address |
| | Telephone Number |
| | |
| | Address |
| To apply this information to Apply to all groups in Apply to all groups in Manage POC | |
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