

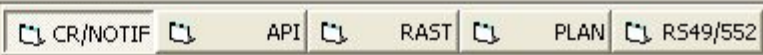
CAPTURE AND SUBMISSION OF APPENDIX 4 DATA FOR A SATELLITE EARTH STATION

**ITU – RRS-14 Asia
Hanoi, Vietnam
26-30 May 2014**

**Chuen Chern Loo
BR/SSD/SPR**

Coordination of earth stations

- *9.29 Requests for coordination under 9.15 to 9.19 shall be sent by the requesting administration to the identified administrations, together with the appropriate information listed in Appendix 4 to the Radio Regulations*
- SpaceCap software can be used for the capture of information required for coordination requests with the affected Administrations, and the resulting file can be sent to these affected Administrations
- When coordination is completed, the same file can be converted to a notification notice to be submitted to the Bureau



SpaceCap



Start Page



Notice Explorer



Open Notice



New Notice



Search

Start Page - AP4/II and AP4/III

Transaction Id:





CR/NOTIF API RAST PLAN RS49/552

Notice

Station

Beam

Attachments

Notice Id:

1

AP4/II and AP4/III (Appendix 4 - Annex 2A)

07.08.2012

Status

01

Notice submitted under:

☐ No. 9.6 Coordination ☐ No. 11.2 Notification ☐ First Notification ☐ Resubmission

☐ No. 9.11A Applies☐ Bands 21.4 to 22 GHz☐ Bands 21.4 to 22 GHz Special Procedure

☐ No. 9.7A Specific Receive GSO FSS Earth stn Coordination
☒ No. 9.17 Earth Station Coordination amongst Administrations

Date: DD.MM.YYYY 07.08.2012

Administration
Serial NbrA1f1. Notifying
Administration

CHN

A1f2. Notice
submitted on
behalf of these
administrations.

+

x

A1f3.
Intergovernmental
Satellite System

Notice intended for

☒ Addition☐ Modification☐ SuppressionBR Identification No. of Station
to be modified/suppressed

Type of Satellite Network or Earth Station

☐ GeoStationary Satellite Network☐ NonGeoStationary Satellite Network☒ Specific Earth Station☐ Typical Earth Station

Notice

Station

Beam

Attachments

Notice Id: 1 Administration: CHN Status: 01 Date: 07.08.2012

A1e1. Type of Station

☐ Typical ☒ Specific

A1e2. Earth Station Name

JINZHOU 3.7M

A1e3a. Country

CHN

A1e3b. Geographical Coordinates

Longitude

Degrees

121

E/W

E

Min

3

Sec

55

Latitude

Degrees

41

N/S

N

Min

5

Sec

38

A4c1. Associated Space Station

ASIASAT-AK1

A4c2. Nominal Orbital Longitude (if geostationary)

122.00

E

E/W

A7b1. Min Elevation Angle (GSO)

42.2

°

A7e. Table of Minimum Antenna Elevation Angles (NGSO)



A7e

A16b Commitment to meet PFD limits (applicable bands 13.75-14 GHz)

☐ Yes ☐ No ☒ N/A

A18a Commitment of aircraft earth station (applicable bands 14-14.5 GHz)

☐ Yes ☐ No ☒ N/A

A7d. Altitude

27

Metres

A7c. Operating Azimuthal Angles (GSO)

1. From

177.9

°

2. To

178.5

°



A7a

A7a. Table of Horizon Elevation/Distance

A7a. Horizon Elevation Diagram attached. See Attachment No.



List of Available Beams

- Beam 03R
- Beam 02R



File Edit Tool

A7a. Table of Horizon Elevation Angles



Notice

Azimuth	A7a1 Elevation Angle °	A7a2 Distance km (optional)
5	17.0	
10	16.0	
15	15.0	
20	10.0	
25	10.0	
30	10.0	
35	.0	
40	.0	
45	.0	
50	.0	
55	.0	
70	46.0	
75	35.0	
80	24.0	
85	12.0	
90	.0	
95	.0	
100	.0	
105	.0	
110	.0	
205	.0	
210	.0	



Close

API RAST PLAN RS49/552

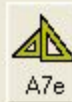
07.08.2012

 Latitude
 Degrees 41 N/S N Min 5 Sec 38

(stationary) A7b1. Min Elevation Angle (GSO)

42.2 °

A7e. Table of Minimum Antenna Elevation Angles (NGSO)


 Commitment of aircraft earth station
 e bands 14-14.5 GHz

☐ Yes ☐ No ☒ N/A

A7d. Altitude

A7c. Operating Azim

1. From

177.9

2. To

178.5



A7a. Table of Horizon Elevation/Distance

A7a. Horizon Elevation Diagram attached. See Attachment No.



List of Available Beams

- Beam 03R
- Beam 02R

Notice

Station

Beam

Group

Attachments

Notice Id: 1

Administration: CHN

Station Name: JINZHOU 3.7M

Characteristics of the Antenna

☒ Receiving Earth Station☐ Transmitting Earth Station

B1a. Beam Designation: 03R

Old Beam Designation
(if changed)[Assoc. Satellite](#)
[Transmitting Beam](#)
[Designation](#)☐ Add
☐ Mod
☐ Sup
of the
Antenna

B5. Earth Station Antenna Characteristics

a. Maximum Isotropic Gain

+/- dBi

52.5

b. Beamwidth

Degrees

0.45

A7f. Antenna Diameter
(meters) (only for
13.75-14GHz)A10a. E Stn Coordination
diagram. See Attachment

Antenna Radiation Pattern

B5c. Co-polar Radiation
Pattern Id:

605

[REC-580-6 ==> APEREC015V01](#)Diagram attached. See
Attachment no.:

d. Dgso (meters)

List of Available Groups
Group 2 Page No.



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Special Section
NoticeAttachments
Station

Beam

Group

Emissions

Frequencies

Coordination

Notice: 1 Station Name: JINZHOU 3.7M EAnt Id: 03R R Group Id: 2 Split Grp Id:

3. Observed Frequencies and Related Characteristics

☐ Add ☐ Mod ☐ Sup of the groupBR Identification of the Group
to be modified/suppressedPage
No.BR
Data

Characteristics Common to a Group of Frequencies



General Characteristics

C3a. Assigned
Frequency Bandwidth

2570 (kHz)

☐ C2c. compliance with No. 4.4 of the Radio Regulations

	C4a. Cls Stn	C4b. Nat Srv
▶	TC	CP

C6. Polarization

Type V Vertical Linear Polarization

If linear, provide
angle °

C5b. Recieving System

Noise
Temperature 44 Kelvins

Remarks



CR/NOTIF

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Special Section
NoticeAttachments
Station

Beam

Group

Emissions

Frequencies

Coordination

Notice: 1 Station Name: JINZHOU 3.7M EAnt Id: 03R R Group Id: 2 Split Grp Id:

3. Observed Frequencies and Related Characteristics

☐ Add ☐ Mod ☐ Sup of the groupBR Identification of the Group
to be modified/suppressedPage
No.BR
Data

Characteristics Common to a Group of Frequencies

General Characteristics

A3a. Operating Administration or Agency

032 ... ASIA SATELLITE TELECOMMUNICATIONS CO. LTD.

A3b. Responsible Administration

G ... MINISTRY OF INFORMATION INDUSTRY

To apply this information to
other groups, select the
beam or notice option.☒ Apply to current
group only☐ Apply to all groups
in this beam☐ Apply to all groups
in this notice



CR/NOTIF API RAST PLAN RS49/552

Special Section
NoticeAttachments
Station

Beam

Group

Emissions

Frequencies

Coordination

Notice Id: 1 Adm: CHN Station Name: JINZHOU 3.7M EAnt Id: 03R R Group Id: 2

Emissions Received by the Assigned Frequencies

	C7a. Designation of Emission	C8e1. C/N objective (total - clear sky) (dB)	C8e2. Attch No. C/N
▶	2M57G7W--	12.5	



Special Section
Notice

Attachments
Station

Beam

Group

Emissions

Frequencies

Coordination

Notice Id:

1

Adm: CHN

Station
Name:

Name:

JINZHOU 3.7M

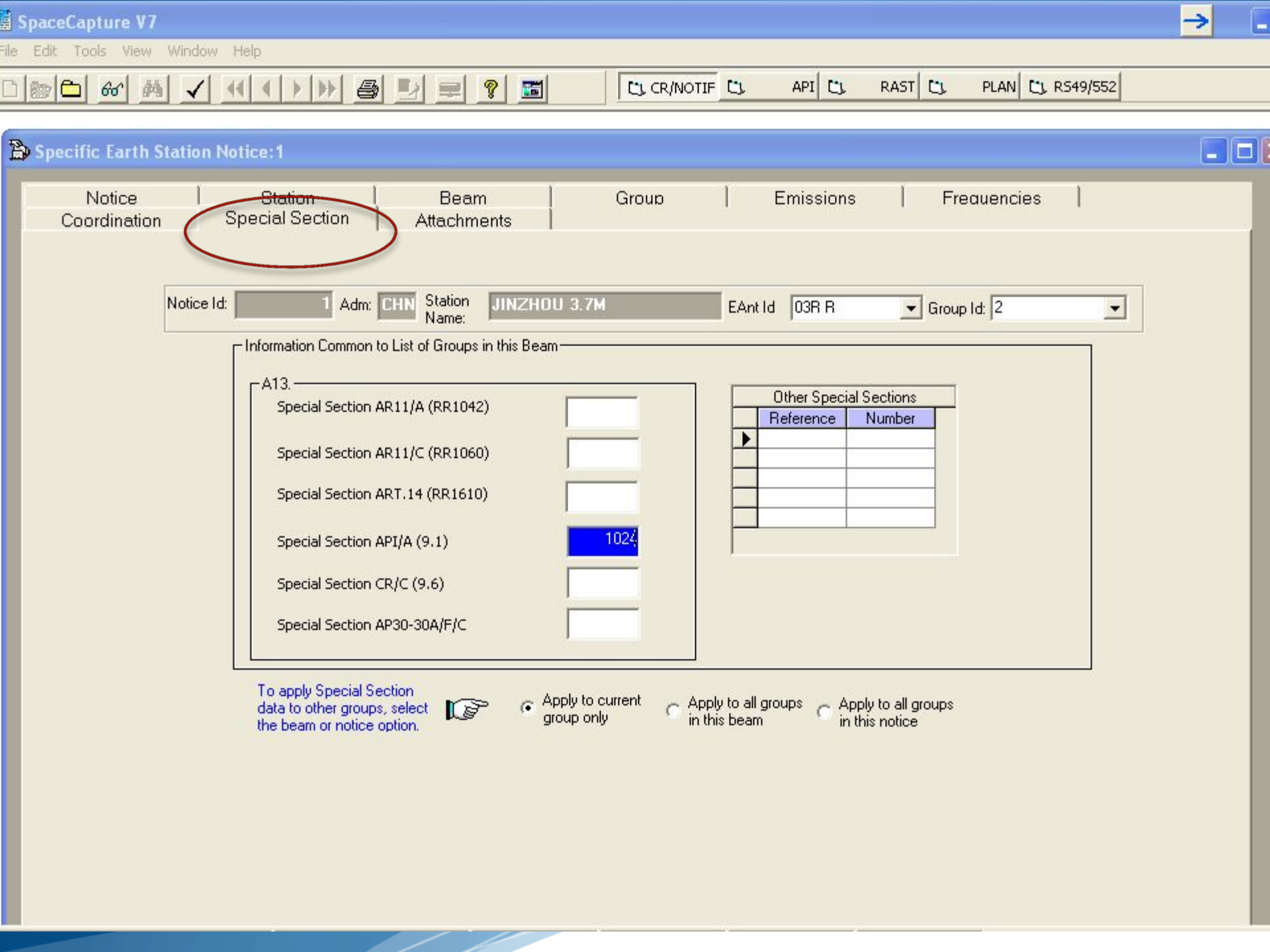
EAnt Id

03R R

▼ Group Id:

1. [

[illegible]



SpaceCap

Start Page

Notice Explorer

Open Notice

New Notice

Search

Notice Explorer - AP4/II and AP4/III

Notice id

Type

Adm./Org.

Orb. Pos.

Station name

Date rcv.

Status

List of notices

Count=1

000000001[A] S CHN/ JINZHOU 3.7M 07.08.2012 01

Control Box

Show

Clone

Export

Delete

To SNS

CFEX

SpaceVal

Esub

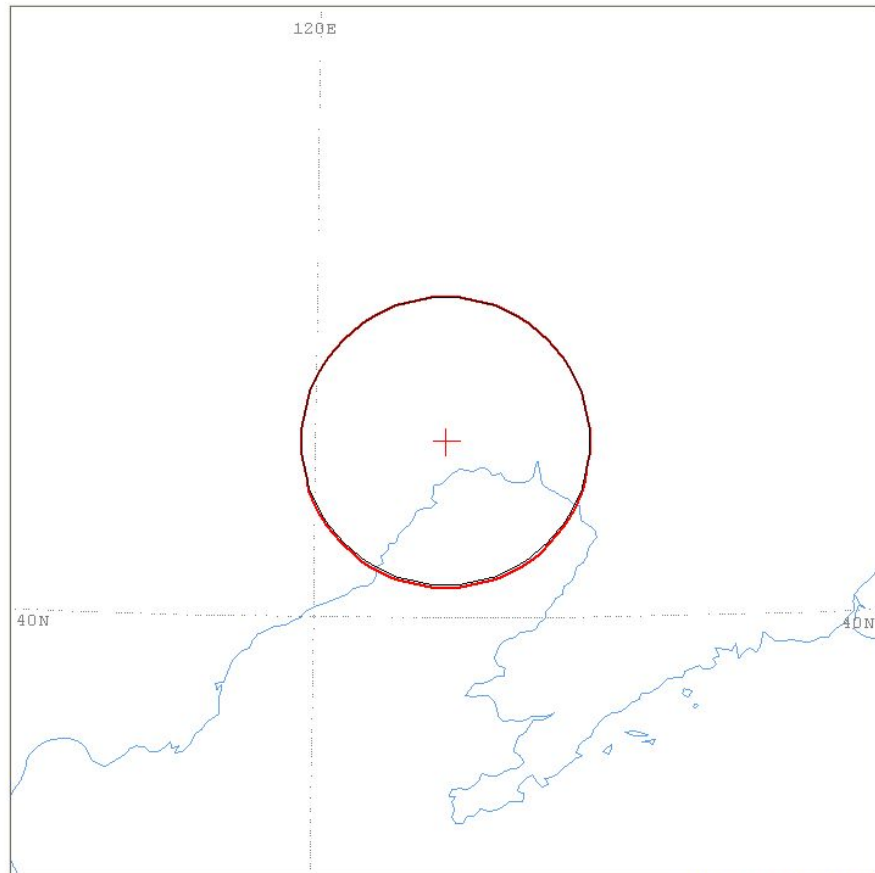
Generate coordination area diagrams with AP7 software

VERSION:2.0.0.0Appendix 7/Pls-2.0.0.0/Frm-2.0.0.0/Clc-2.0.0.0/Psp-1.2.0.0/SNS-2.0.0.0/AP7F-2.0.0.0/Ref-2.0.0.0

Diagram 1: 2.1_TABLE7. TRANSMITTING GSO ES in FIXED-SATELLITE SERVICE W.R.T. RECEIVING TERRESTRIAL STATIONS. TS in FS or MS

Notice ID: 1
Administration/Geographical area: CHN/CHN
Satellite orbital position: 122.00
Frequency band: 14436.70-14477.30 MHz

Earth station name: JINZHOU 3.7M
Earth station position: 121E035541N0538
Satellite name: ASIATAT-AK1



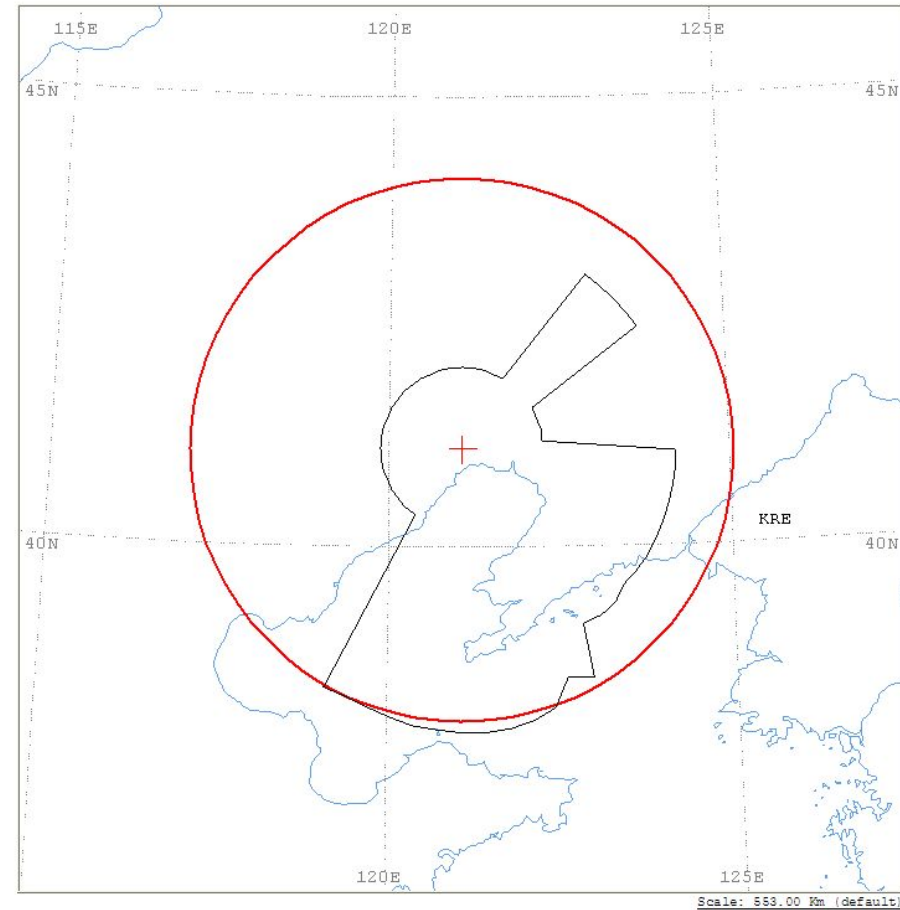
+ ES position
— Main Model

VERSION:2.0.0.0Appendix 7/Pls-2.0.0.0/Frm-2.0.0.0/Clc-2.0.0.0/Psp-1.2.0.0/SNS-2.0.0.0/AP7F-2.0.0.0/Ref-2.0.0.0

Diagram 2: 2.1_TABLE8. RECEIVING GSO ES in FIXED-SATELLITE SERVICE W.R.T. TRANSMITTING TERRESTRIAL STATIONS. TS in FS or MS

Notice ID: 1
Administration/Geographical area: CHN/CHN
Satellite orbital position: 122.00
Frequency band: 12686.70-12727.30 MHz

Earth station name: JINZHOU 3.7M
Earth station position: 121E035541N0538
Satellite name: ASIATAT-AK1



+ ES position
— Main Model
— Main Model2

Notification of an Earth station

- Any frequency assignment to a transmitting station and to its associated receiving stations shall be notified to the Bureau if (No.11.2)
 - Assignment is capable of causing harmful interference; or
 - Assignment is used for international radiocommunication; or
 - Assignment is subject to a world or regional frequency allotment or assignment plan which does not have its own notification procedure; or
 - if that assignment is subject to the coordination procedure of Article 9; or
 - It is desired to obtain international recognition; or
 - Non conforming assignment seeking to be recorded for information purposes only
- Similar requirements for receiving earth station (No.11.9)

Before submitting the notification

- Check the following:
 - Associated space station must already be notified
 - Provide the correct name used in BR databases
 - Check also the beam names/ if the frequency bands are covered by the bands used by the space station
- Use Spacecap to convert the notice from No.9.17 to No.11.2
- Use Spacecap to update the status of coordination of the earth station
- Run Spaceval to ensure that there are no fatal errors

Notice	Station	Beam	Attachments
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Notice Id: AP4/II and AP4/III (Appendix 4 - Annex 2A) Status

Notice submitted under:

☐ No. 9.6 Coordination
 ☒ No. 11.2 Notification
 ☐ First Notification
 ☐ Resubmission

☐ No. 9.11A Applies
 ☐ Bands 21.4 to 22 GHz
 ☐ Bands 21.4 to 22 GHz Special Procedure

☐ No. 9.7A Specific Receive GSO FSS Earth stn Coordination

☐ No. 9.17 Earth Station Coordination amongst Administrations

Date: DD.MM.YYYY
 Administration Serial Nbr

A1f1. Notifying Administration
 A1f2. Notice submitted on behalf of these administrations.

A1f3. Intergovernmental Satellite System

Notice intended for:
 ☒ Addition
 ☐ Modification
 ☐ Suppression
 BR Identification No. of Station to be modified/suppressed

Type of Satellite Network or Earth Station:
 ☐ GeoStationary Satellite Network
 ☒ Specific Earth Station
 ☐ NonGeoStationary Satellite Network
 ☐ Typical Earth Station




Notice Id: 1 Adm: CHN Station Name: JINZHOU 3.7M EAnt Id: 03R R Group Id: 2

[illegible]

To apply coordination to other groups, select the beam or notice option.



 Apply to current group only

☒ Apply to all groups in this beam

☐ Apply to all groups in this notice

Common Errors

- Space station name/beam name/ frequency band not covered
- Missing horizon elevation angle
- Missing minimum angle of elevation
- Missing coordination area diagram
- Missing antenna diameters when required
- Missing antenna radiation patterns
- Missing coordination agreements

Publication of the Earth Station Notice

- Part I-S

- When notice is found to be complete, it will be published in Part I-S, which will constitute the acknowledgement to the notifying administration of receipt of its notice (No.11.28).

- Part II-S

- Assignments, after detailed technical and regulatory examination, that are found to be favourable will be published in a Part II-S and recorded in the MIFR.

- Part III-S

- Assignments, after detailed technical and regulatory examination, that are found to be unfavourable will be published in a Part III-S.

Reasons for unfavorable findings

(Part III-S): examples of paragraphs

Notes for return of notices for earth station		
Provision	Examples of paragraphs	Resubmission Within 6 months
A N - X/9.17[X]	<p>With respect to the frequency assignment groups Nos. (...) of your earth station (...), it is noted that the <u>coordination procedure under No. 9.17</u> has not been shown as completed with the Administrations of (...) since the <u>coordination area of your earth station includes the territories of those Administrations</u> (see coordination contours attached). Thus, an unfavorable finding with respect to No. 11.32 has been reached and the notice in question is being returned to you in conformity with No. 11.37.</p> <p>Should the notice <u>be resubmitted with the indication that coordination has been successfully completed with the Administration(s)</u> mentioned above, a favorable finding might result.</p> <p>However, these being frequency assignments for reception, your Administration may be prepared to accept the interference resulting from existing and future terrestrial stations of the countries concerned. In this event, should your Administration resubmit the notice concerned and insist upon its reconsideration, the assignment will be recorded in the Master Register; symbol "H" will be inserted in Column 13B2 as well as AP5 PARA 6E(III) in the column reserved for coordination information.</p>	Yes
A N - X/9.7[X] No SS subject to coord.)	<p>With regard to the frequency assignment groups Nos. (...) of your earth station (...), it is noted that the <u>corresponding frequency assignments of the associated space station (...) have not yet been communicated to the Radiocommunication Bureau</u> for recording. Thus, these frequency assignments have been given an <u>unfavourable</u> finding with respect to No. 11.32 (see paragraph 2.1.2.1 of the Rules of Procedure relating to No. 11.32) and the notice in question is being returned to you in conformity with No. 11.37.</p> <p>Once the corresponding assignments of the associated space station have been notified and recorded in the Master Register, it will be possible to examine again your earth station notice.</p>	Yes
A N - X/9.7[X] Outside SA	<p>With respect to the frequency assignments groups Nos. (...) of your earth station (...), it is noted that the <u>station is outside the service area of the transmitting/receiving beam (...) of the associated space station (...)</u>. Consequently, your earth station frequency assignments have been given an unfavorable finding with respect to No. 11.32 (see paragraph 2.1.3 of the Rules of Procedure relating to No. 11.32) and the notice in question is being returned to you in conformity with No. 11.37.</p>	Yes
N X/ROP RCV4.4	<p>With regard to the frequency assignments groups Nos. (...) of your earth station (...), it is noted that the <u>associated space station (...) does not have any valid publication in the Radiocommunication Bureau</u>.</p> <p>As stated in paragraph 2.1.2.1 of Rules of Procedure relating to No. 11.32, starting from the principle that the leading element of a space network is the space station and that it would be misleading to record in the Master Register earth stations for which a space station (network) is not recorded, the Radio Regulation Board decided that an earth station cannot be recorded in the Master Register before its associated space station.</p> <p>In view of the above, according to Rules of Procedure, paragraph 4.4 of "Rules concerning the <u>Receivability</u> of forms of notice generally applicable to all notified assignments submitted to the <u>Radiocommunication Bureau</u> in application of the Radio Regulatory Procedures relating to space services" the subject notice is not receivable.</p>	Yes

Reasons for unfavorable findings

(Part III-S): examples of paragraphs

PFD limits No. 21.16	With regard to the frequency assignments groups Nos. (...) of your earth station (...), it is noted that the <u>value of the power flux-density</u> at the earth's surface produced by emissions from the space station (...) <u>exceeds the limits specified in No. 21.16</u> . Consequently, an <u>unfavorable</u> finding with respect to No. 11.31 has been reached, and the notice in question is being returned to you in conformity with No. 11.36 .	No
Min. elev. angle No. 21.14	With regard to the frequency assignments groups Nos. (...) of your earth station (...), it is noted that the <u>minimum elevation angle</u> of your earth station (...) <u>does not meet the limit specified in No. 21.14</u> . Thus, the frequency assignments of this earth station have been given an unfavorable finding with respect to No. 11.31 and the notice in question is being returned to you in conformity with No. 11.36 .	No
eirp density limits No. 5.503	With regard to the frequency assignments groups Nos. (...) of your earth station (...), it is noted that the <u>e.i.r.p. density</u> of emissions from earth stations <u>is not within the limits specified in No. 5.503</u> . Thus, these frequency assignments have been given an unfavorable finding with respect to No. 11.31 and the notice in question is being returned to you in conformity with No. 11.36 .	No
eirp limits No. 21.8	With regard to the frequency assignments groups Nos. (...) of your earth station (...), it is noted that the <u>earth station e.i.r.p. towards the horizon</u> is not <u>within the limits specified in No. 21.8</u> . Thus, this frequency assignment of this earth station has been given an unfavorable finding with respect to No. 11.31 and the notice in question is being returned to you in conformity with No. 11.36 .	No
Min. elev. angle No. 21.15	With respect to the frequency assignments groups Nos. (...) of your earth station (...), it is noted that the <u>minimum elevation angle</u> of the earth station <u>does not meet the limit specified in No. 21.15</u> (for space research service). Thus, the frequency assignments of this earth station have been given an unfavorable finding with respect to No. 11.31 and the notice in question is being returned to you in conformity with No. 11.36 .	No
eirp No. 22.26	With regard to the frequency assignments groups Nos. (...) of your earth station (...), it is noted that the <u>off-axis e.i.r.p.</u> from the earth station <u>is not within the limits specified in No. 22.26</u> . Thus, this assignment has been given an unfavorable finding with respect to No. 11.31 and the notice in question is being returned to you in conformity with No. 11.36 .	No
No. 4.5	With regard to the frequency assignments groups Nos. (...) of your earth station (...), it is noted that the <u>frequency assignments overlap a band not allocated to the service concerned</u> (see No. 4.5 and its related Rules of Procedure). Consequently, an <u>unfavourable</u> finding with respect to No. 11.31 has been reached and the notice in question is being returned to you in conformity with No. 11.36 .	No

Submission to Bureau

- Create a zip file ADM_ESName.zip containing
 - ESName.mdb (change to .itu)
 - Coordination contour diagrams generated using AP7 software
 - Any other attachments or notes in Word or PDF format
- Send email with attachment ADM_ESName.zip to BRMAIL@ITU.INT
- Send confirmation telefax to BR at +41 22 7305785

Questions?