

INTERNATIONAL TELECOMMUNICATION UNION

Radiocommunication Bureau

(Direct Fax No. +41 22 730 57 85)



Circular Letter
CR/65

22 November 1996

To Administrations of Member States of the ITU

Subject: Forms of notice for use when notifying frequency assignments to stations in the space radiocommunication services to the Radiocommunication Bureau

References:

- Appendix S4 to the Radio Regulations (Geneva, 1996)
- Final Acts of the World Radiocommunication Conference, Geneva, 1995 (WRC-95)
- IFRB Circular Letter No. 820 dated 4 May 1990
- IFRB Circular Letter No. 839 dated 11 October 1990
- BR Circular Letter No. CR/58 dated 21 October 1996

To the Director-General

Dear Sir,

1. In view of the entry into force on 1 January 1997 of part of the above-mentioned Final Acts and, in particular, of the revised Appendix S4 to the Radio Regulations, the Bureau has developed new forms of notice ApS4 which are to be used by administrations in the application of the procedures of coordination (Sections II and III of Article 11, Resolution 33 or Resolution 46, as appropriate) or the procedure of seeking agreement (Article 14) for assignments to stations in the space radiocommunication services as well as for their recording in the Master Register (Article 13).

2. Two blank copies of the new forms of notice ApS4/II and ApS4/III together with detailed instructions for completing the forms are enclosed with the present Circular Letter. It is suggested that each administration make copies in sufficient quantity to meet its own foreseeable requirements. Please note that these forms contain some minor editorial improvements and corrections with respect to the advance copies of the forms distributed with BR Circular Letter No. CR/58. These changes have no impact on the format for electronic notices which remains valid as described in BR Circular letter CR/58.

3. Administrations are requested to start using these new forms of notice as from 1 January 1997 and as of that date to disregard the forms AP3/II and AP3/III currently in use.

4. A new form is currently being developed by the Bureau to cover the requirements of Section I of Article 11 for the advance publication of information in accordance with RR1044. Until that form is available, administrations are requested to continue to use the existing AP4 notice form. In the case where the procedure of Resolution 46 applies, the additional data items required by that Resolution can be provided as attachments to the AP4 form.

5. The Bureau is also considering the use of standard notice forms for the modification and notification procedures of Appendices 30 and 30A. Development of these forms is expected to commence shortly. Until these forms are available, administrations are requested to submit the information as a list based on Annex 2 of the appropriate Appendix as found in Volume 2 of the Radio Regulations.

6. The ApS4/IV notice form for the notification of Radioastronomy stations is also under development.

7. The Bureau has also considered the implications of the entry into force of Appendix S4 on the terrestrial radiocommunication services and concluded that there is no need to introduce any change to the current forms of notice for terrestrial services. Although some new items were introduced in Appendix S4, they are intended primarily for coordination purposes between administrations (e.g., the new elements 7E, 7F, 8AB and 9K). Administrations may submit these elements, in the notification procedure, if they so wish, by using the option of OTHER INFORMATION (supplied on a separate sheet), as in the case of notification of the elements 4F, 5G and 10F, which are not mandatory for notification purposes, but are used in the context of the coordination procedure of Resolution 339 (formerly Article 14A). The new requirements of Appendix S4, in the context of the terrestrial services, will be taken into account in the development of the appropriate notice forms in the frame of the TerRaSys Project. Administrations will be informed on this subject in due course.

Yours faithfully,

Robert W. Jones
Director, Radiocommunication Bureau

Enclosures

Distribution:

- Administrations of Member States of the ITU
- Members of the Radio Regulations Board

ANNEX 1
(to BR Circular Letter No. CR/65)

**INSTRUCTIONS FOR FILLING OUT THE FORM OF NOTICE ApS4/II AND ApS4/III
RELATING TO SPACE RADIOCOMMUNICATION STATIONS**

(Annexes 2A and 2B of Appendix S4 to the Radio Regulations, WRC-95)

1. INTRODUCTION

1.1 The Forms of Notice ApS4/II and ApS4/III have been developed by the Radiocommunication Bureau in accordance with the decisions of WRC-95. In drawing up the forms, the Bureau has taken into consideration the intensive use made by the Bureau of the ITU computer in the treatment of the forms of notice. These forms also serve as the basis of the PC-based data capture system that the Bureau has developed for use by administrations and which is explained in detail in BR Circular Letter No. CR/58 dated 21 October 1996.

1.2 The present instructions are supplementary to those contained in Annexes 2A and 2B of Appendix S4 to the Radio Regulations, WRC-95.

1.3 These forms of notice, however, do not cover some items of Appendix S4 concerning additional information which are required only when they have been used as a basis to effect coordination with another administration. The reason for this is to keep the forms of notice as simple as possible for the great majority of frequency assignments. Whenever this additional information is to be notified, it should be provided on a separate attachment. Annex 2B of Appendix S4 provides, in tabular form, the items that are to be provided for the different types of coordination and notification including the indication as to whether an item is mandatory or optional. For convenience, this Annex is reproduced in Annex 2 to this Circular Letter.

2. GENERAL

Two forms are attached to this Circular Letter. These concern the coordination or notification of a satellite network (Notice Form ApS4/II) and the coordination or notification of an earth station (Notice Form ApS4/III). These designations maintain a relationship with the earlier Appendix 3 forms AP3/II and AP3/III. Each of these forms consists of several parts described below and followed by some explanations.

2.1 The Form of Notice ApS4/II consists of the following parts to be used in connection with coordination of satellite networks, and notification of space stations (for reference see provisions of Articles 11, 13 and 14 and Resolutions 33 and 46 of the Radio Regulations), which are presented on eight pages identified in the lower left corner:

- Forms ApS4/II-1a, 1b *Satellite network* (general characteristics of the satellite network)
- Forms ApS4/II-2a, 2b *Satellite network characteristics for reception at the space station*
- Forms ApS4/II-3a, 3b *Satellite network characteristics for transmission from the space station*
- Forms ApS4/II-4a, 4b *Overall link characteristics*

2.2 The Form of Notice ApS4/III consists of the following parts to be used in connection with coordination and notification of earth stations (for reference see provisions of Articles 11, 13 and 14 and Resolution 46 of the Radio Regulations), which are presented on five pages identified in the lower left corner:

- Form ApS4/III-1 *Earth station* (general characteristics of the earth station)
- Forms ApS4/III-2a, 2b *Transmitting earth station characteristics*
- Forms ApS4/III-3a, 3b *Receiving earth station characteristics*

2.3 These Forms have been created to cover the relevant data items listed under Sections A, B, C and D in Annex 2A to Appendix S4 as appropriate, taking account of the Tables in Annex 2B to the Appendix.

2.4 In each part, each information item/data field includes a number in its label. This number is the same as that used for the same item in Appendix S4 (WRC-95). For example, on the page labelled "Form ApS4/II-2a" (at the bottom), the field "A2a Date of bringing into use" is the item numbered 2a in Part A of Annex 2A to Appendix S4.

2.5 Data items that are related are grouped together in a box. For example, the page labelled "Form ApS4/II-2b" (at the bottom) contains a box titled "Emissions of the associated transmitting station(s)". It is possible to specify 7 different emissions (with associated power, power density and C/N values) in this box. If there are more emissions, use another page of the same type to provide additional data, after checking (✓) the field labelled "More emissions on next page" on the preceding page. In all cases where there is more information than can fit in a box, follow this procedure.

2.6 The forms in the series ApS4/II (see paragraph 2.1) are to be used when data pertaining to a satellite network is to be provided. In any one such application, one Form ApS4/II-1a would be used, together with as many of the Forms ApS4/II-1b, ApS4/II-2a, ApS4/II-2b, ApS4/II-3a, ApS4/II-3b, ApS4/II-4a and ApS4/II-4b as are necessary to provide all the relevant details for the orbit characteristics and all satellite antenna beams and frequency assignments concerned.

The use of the Forms ApS4/II-2a and ApS4/II-2b is based on the concept of providing details concerning a group (list) of assigned frequencies operating within a given satellite receiving antenna beam, for which the associated frequency assignments have common information. This common information may be an individual data item (such as the date of bringing into use or the assigned frequency band) or a block of data items (of which there are two, viz the coordinations obtained or requested and agreements reached or sought, as well as the details of the emissions of the associated transmitting stations).

This then requires that for each new satellite receiving beam a new set of Forms ApS4/II-2a and ApS4/II-2b are required.

Within a given beam, the information to be provided in the second part of Form ApS4/II-2a ("Information common to the following groups (lists) of assigned frequencies in this beam") is taken as data common to all assignments for which the assigned frequencies are listed in the associated Form ApS4/II-2b, and may indeed remain common for more than one such group (list) of assigned frequencies (see below).

Similarly, the information to be provided in the first two parts of Form ApS4/II-2b ("Characteristics common to the following group (list) of assigned frequencies" and "Transmitting station(s) associated with the following group (list) of assigned frequencies") is taken as data common to the assignments for which the assigned frequencies are listed in the bottom part of that form.

If, for example, there are two groups of frequency assignments (for a given beam), each group having a different set of emission data (designation of emission, peak powers and power densities, C/N objectives) with all other data remaining constant, two completed ApS4/II-2b forms would be required, one for each group of assigned frequencies. These two forms would then be associated with a single ApS4/II-2a form to provide the complete data for that satellite receiving beam.

In the same way, different associated transmitting earth stations would require separate complete ApS4/II-2b forms if any of the data changed, other than that concerning the station itself (i.e. that data contained in the box headed "Earth station"). If this data concerning uniquely the station itself is the only change then all that is necessary is to provide further ApS4/II-2b forms with the box headed "Earth station" completed together with the box "More associated transmitting stations on next page" (checked (✓) on the preceding ApS4/II-2b form (see paragraph 2.5)).

The number of Forms ApS4/II-2b required for a given beam will thus depend on the complexity of the structure of the assignments and their characteristics, including those of the associated transmitting stations. It should also be noted that additional Forms ApS4/II-2a would be required if the data provided in the second part of these forms did not remain constant for all combinations of data provided on the Forms ApS4/II-2b.

The above comments are valid also for Forms ApS4/II-3a and ApS4/II-3b.

For Forms ApS4/II-4a and ApS4/II-4b (when used), the data is to be provided effectively in two lists, with the Serial Number information allowing the cross-reference between the two lists. Care in the ordering of the strapping data provided in Table D1 should ensure that the length of the list in Table D2 can be

minimized. That is, in Table D1, strapping details should be grouped such that a group applies to one associated receiving earth station with one set of values for columns a1/a2 and b1/b2 in Table D2.

2.7 The forms in the series ApS4/III (see paragraph 2.2) are to be used when data pertaining to an earth station is to be provided. For any one such application, one Form ApS4/III-1 would be used, along with as many of the Forms ApS4/III-2a, ApS4/III-2b, ApS4/III-3a and ApS4/III-3b as are necessary to provide all the relevant details for all satellite beams and frequency assignments concerned.

The use of these forms is effectively the same as given above in paragraph 2.6 for the ApS4/II set of forms.

2.8 These forms, in addition to their use to provide data pertaining to a new satellite network or earth station (Forms ApS4/II and ApS4/III respectively), can also be used to modify or suppress data pertaining to an existing network or station. The relevant indication (**A** for ADD, **M** for MOD, **S** for SUP) is to be given in the corresponding box at the top right-hand corner of the first page in the area titled "Notification intended for". In the case of a modification of an existing station, where certain data fields are to be added, modified or suppressed, ALL the data in the particular box as they would look after the change have to be provided. In addition, when the corresponding beam, associated station or group of assigned frequencies (Form ApS4/II) or the corresponding antenna or group of assigned frequencies (Form ApS4/III) is being modified indicate this by entering **M** or **R** in the field that has been provided for this purpose at these levels.

For data items where this flag is NOT provided, when changes are to be notified, provide ALL the data in the box as they would look after the change.

A more detailed explanation of the action indicators "A", "M", "S" and "R" can be found in **NOTE 3** to be found on pages 27 to 29 of BR Circular Letter No. CR/58.

2.9 Certain fields in this notice form have a superscript "1" as part of their labels. This has the following meaning:

- 1) This information is not required for the notification of a typical earth station.

2.10 Certain information has to be provided as an explanatory text or in a graphical form by means of an attachment. The presence of such an attachment should be identified by a reference to its number in the boxes provided for this purpose on the form. Instructions for presentation of graphical data are given in IFRB Circular-letter No. 769 of 23 December 1988.

3. DETAILED INSTRUCTION FOR FILLING OUT NOTICE FORMS

3.1 The instructions for filling out the individual data items on Notice Forms ApS4/II and ApS4/III are given below. The items appear in the order that they appear on the relevant forms. In paragraph 3.2 the detailed instructions for Form ApS4/II are given. In paragraph 3.3 those for Form ApS4/III are given. Each item (together with the reference to Appendix S4) appears in bold text with the detailed instructions concerning that item appearing immediately underneath.

The pages of a complete notice should be numbered consecutively in the boxes provided for this purpose in the top right hand corner of each form.

3.2 INSTRUCTIONS FOR NOTICE FORM ApS4/II

GENERAL CHARACTERISTICS OF THE NOTICE (ApS4/II-1a)

Date

A date given by the notifying administration for its own use.

Administration serial number

A serial or reference number given by the administration for its own use. When provided, this serial number is published in the Index to Part I-S of the BR Weekly Circular (this applies to **RR1488 Notification** only).

A1f Notifying administration

The country symbol designating the notifying administration and the symbol designating the international satellite system, if appropriate (see Tables Nos. B1 and B2 of the Preface to the IFL, the SRS and the WIC). If there is no symbol in Table No. B2 of the Preface corresponding to the international satellite system concerned, spell out its name in box REMARKS, and the Bureau will provide a symbol.

RR1488 Notification

Enter "X" to indicate that this is the purpose of submitting the form.

RR1060 Request for coordination

Enter "X" to indicate that this is the purpose of submitting the form.

RR1610 Agreement under Article 14

Enter "X" to indicate that this is the purpose of submitting the form.

Request for assistance of the BR for RR1060 and/or RR1610

Enter "X" to indicate that this is the purpose of submitting the form.

RS46 Request for coordination

Enter "X" to indicate that this is the purpose of submitting the form.

General characteristics of the notice (ApS4/II-1a) (cont.)

Action indicator ADD/MOD/SUP

Enter **A**, **M** or **S** for the addition of a new satellite network, or the modification or suppression of an existing satellite network, as appropriate.

In the case of modification or suppression provide the BR identification number of the satellite network to be modified or suppressed.

In this context "existing satellite network" is taken to mean either:

- (a) a satellite network for which a Special Section AR11/C, RES33/C or RES46/C has already been published, if the notice form is forwarded under RR1060 or RS46 (request for coordination); or
- (b) a satellite network for which a Special Section AR14/C has already been published, if the notice form is forwarded under RR1610 (agreement under Article 14); or
- (c) a satellite network for which the relevant details are already recorded in the Master International Frequency Register if the notice form is forwarded under RR1488 (notification under Article 13).

First notification

Enter "X" in the case of any notification other than resubmission.

Resubmission

Enter "X" in the case of resubmission of a notice after its return by the Bureau with an unfavourable Finding with respect to coordination or the probability of harmful interference; otherwise leave blank (applies to **RR1488 Notification** only).

BR identification number of network to be modified/suppressed

If the action indicator is "**M**" or "**S**", enter the BR identification number of the satellite network to be modified or suppressed. In these cases the administration has to provide, in addition to the BR identification number, the identity of the satellite network (Item A1a) as well as the nominal orbital longitude (Item A4a1a) if the satellite is geostationary.

CHARACTERISTICS OF THE NETWORK (ApS4/II-1a, 1b)

A1a Identity of the satellite network

Enter the name of the space station using not more than 20 characters (identity of the satellite network).

A4a1a Nominal orbital longitude

Enter the nominal orbital longitude of the space station expressed in decimal degrees E or W; the value should not exceed 180 degrees.

A4a2a Longitudinal tolerance

Enter the planned longitudinal tolerances in decimal degrees relative to the nominal orbital longitude. Boxes headed "To West" and "To East" should both be completed; they are provided in order to cover cases where tolerances are not symmetrical.

Characteristics of the network (ApS4/II-1a, 1b) (cont.)

A4a2b Inclination excursion

Enter the inclination excursion expressed in decimal degrees expected throughout the lifetime of the space station (i.e. the maximum angle between the plane containing the orbit and the plane of the Earth's equator).

A4a3 Visibility arc

Enter the extreme west and east longitudinal positions (expressed in degrees) on the geostationary-satellite orbit which are visible from all points in the service area and which are at an elevation angle of 10 degrees from the furthest removed points within the service area. These two longitudes delineate a portion of the geostationary-satellite orbit arc within which a satellite will always have an angle of wave arrival on the earth's surface of ≥ 10 degrees and can thus, from a propagation point of view, provide an adequate quality of service to the area. In some cases, such as service areas in high latitudes or very large service areas, the visibility arc may be zero, since the service area may include points on the Earth's surface at which the wave arrival angle is less than 10 degrees.

A4a4 Service arc

Enter (expressed in degrees) the longitudes of the western and eastern extremes of the arc of the geostationary-satellite orbit within which the space station could provide the required service to all its associated earth stations in the service area(s).

A4a5 Reason for service arc being less than visibility arc

Provision of this attachment is obligatory if the notice concerns a space station on board a geostationary satellite operating with earth stations and the service arc (box A4a4) is less than the visibility arc (box A4a3). If the attachment is provided, enter its number in the box, and provide the reasons for which the service arc is less than the visibility arc. This reason may be one of the following:

- the space station is on board a satellite together with another space station for which the orbital position was established by a Plan or is restricted by other conditions;
- the design of the space station antenna system is too complex to permit large variations in the satellite position;
- time of day of the satellite eclipse is important;
- specific propagation conditions may require a higher arrival angle of the signal at the earth station.

A4b1 Inclination angle

Enter the angle (expressed in decimal degrees) of the inclination of the orbital plane relative to the equatorial plane of the earth.

A4b2 Period

Enter the time elapsing between two consecutive passages of the satellite through a characteristic point on its orbit expressed in days and hours, or in hours and minutes (see RR178).

A4b3a Apogee

Enter the relevant altitude of the apogee, expressed in kilometres above a specified reference surface serving to represent the surface of the Earth or of the reference celestial body (see RR179). Where the value is greater than 99999.99 km, provide the apogee in exponential format (to the base 10).

Characteristics of the network (ApS4/II-1a, 1b) (cont.)

A4b3b Perigee

Enter the relevant altitude of the perigee, expressed in kilometres above a specified reference surface serving to represent the surface of the Earth or of the reference celestial body (see RR179). Where the value is greater than 99999.99 km, provide the perigee in exponential format (to the base 10).

A4b4 Number of satellites

Enter the total number of satellites having the same radio frequency characteristics and the same notified orbital characteristics being used for the given service.

Reference body

Enter the symbol "T" if the attracting celestial body which primarily determines the motion of the satellite is the Earth; otherwise indicate the body concerned by using the symbols:

- L - Moon
- J - Jupiter
- M - Mars
- V - Venus
- S - Sun.

Indicate any other celestial body by describing the body in box REMARKS.

A4b5 Additional orbital information for non-geostationary satellites notified under Resolution 46 (WRC-95)

NOTE: The following information is to be provided for non-geostationary satellites whose assignments are subject to the provisions of Resolution 46 (WRC-95); otherwise leave blank.

Number of orbital planes

Enter the number of orbital planes (N_p).

For each orbital plane provide the following:

Number of satellites in this plane

Enter the number of satellites in the orbital plane (N_s).

Right ascension

Enter the right ascension of the ascending node (Ω) for the orbital plane, in degrees, measured counter-clockwise in the equatorial plane from the direction of the vernal equinox to the point where the satellite makes its South-to-North crossing of the equatorial plane ($0^\circ \leq \Omega < 360^\circ$).

Inclination angle

Enter the inclination angle (i), in degrees, for the orbital plane with respect to the reference plane, which is taken to be the Earth's equatorial plane ($0^\circ \leq i < 180^\circ$).

Semi-major axis

Enter the semi-major axis of the orbit (α) in kilometres.

Characteristics of the network (ApS4/II-1a, 1b) (cont.)

Eccentricity

Enter the eccentricity of the orbit (e), ($0 \leq e < 1$).

Argument of the perigee

Enter the argument of perigee (ω_p), in degrees, measured in the orbital plane, in the direction of motion, from the ascending node to the perigee ($0^\circ \leq \omega_p < 360^\circ$).

Satellite number and initial phase angle

For each satellite in the orbital plane enter the number of the satellite (i), numbering in increasing order, and the initial phase angle of the satellite (ω_i), in degrees, in the orbital plane at reference time $t = 0$, measured from the point of the ascending node ($0^\circ \leq \omega_i < 360^\circ$).

SATELLITE ANTENNA BEAM DETAILS (ApS4/II-2a, 3a)

NOTE: Several of the items described below apply only in the case of a satellite transmitting antenna beam.

ADD/MOD/SUP/REP of the beam

Enter **A**, **M**, **S** or **R** for an addition, modification, suppression or replacement of the beam, as appropriate.

B1 Beam designation

If the notice concerns a space station on board a geostationary satellite, enter the satellite antenna beam designation by a symbol consisting of up to four characters. For practical reasons, there are different approaches for the designation of the beam. It may consist of:

- (a) numbers such as 1, 2, 3, etc., which refer to the number of the figure representing the corresponding antenna gain contours diagram published in the relevant Special Section; or
- (b) numbers such as 195, which identify a beam having a maximum gain of 19.5 dB; or
- (c) a symbol of up to four letters (or a letter and a figure), which is used to represent the abbreviated beam name, such as "GBL" for global, "NWQ" for North West Quadrant, "WH" for West Hemisphere, "Z1" for zone 1 or "O" for omnidirectional.

For steerable beams, the last character shall always be the letter "R".

If the notice concerns a space station on board a non-geostationary satellite, enter the beam designation as described above.

Old beam designation

If the beam designation is changed, indicate the old beam designation.

Satellite antenna beam details (ApS4/II-2a, 3a) (cont.)

B3a1/B3b1/B3b2/B4a Maximum isotropic gain

Enter the appropriate sign (+ or -) followed by the isotropic gain (G_i ; see RR154) of the antenna in the direction of maximum radiation, expressed in dBi.

B3d Pointing accuracy

If the assignments associated with this beam are to a space station on board a geostationary satellite, enter the maximum antenna deviation expressed in decimal degrees relative to the nominal pointing direction; otherwise leave blank.

B3a2/B3b1/B3b2 Antenna gain contours diagram

Provision of this attachment is obligatory if the assignments associated with this beam are to a space station on board a geostationary satellite which is operating with earth stations. Enter a number identifying the presence of such an attachment and on this attachment indicate the designation of the antenna satellite beam, the maximum isotropic antenna gain and the gain contours plotted on a map of all the Earth's surface visible from the satellite, preferably in a radial projection from the satellite on to a plane perpendicular to the axis from the centre of the Earth to the satellite. The contours which correspond to a gain of 2, 4, 6, 10 and 20 dB below the maximum isotropic gain, and at 10 dB intervals thereafter as necessary, are also to be indicated. Whenever possible in the case of circular or elliptical contours, the gain contours of the space

station antenna should also be provided by a set of equations. The gain contours should take account of the antenna pointing error (planned longitudinal tolerance, inclination excursion and pointing accuracy) so that the worst-case interference situation may be identified. If the error is not included it should be so specified.

This attachment can also be used to convey information about service area(s) (see item C11a). Instructions for the presentation of graphical data are given in IFRB Circular-letter No. 769 of 23 December 1988. The antenna gain contours diagram can be replaced by a statement indicating that the maximum antenna gain varies by less than 2 dB over the whole visible part of the Earth.

Where a steerable satellite antenna beam is used (see RR183) and the effective boresight area (see RR168A) is identical with the global or nearly global service area no contours need be provided. The maximum antenna gain is applicable to all points on the Earth's visible surface.

Where a steerable beam is used and the effective boresight area is less than the global or nearly global service area the effective antenna gain contours (see RR168B) are to be provided. These contours shall be provided as defined above. An example where effective antenna gain contours would be required is for space-to-Earth transmissions in the bands between 11.7 and 12.75 GHz where the allocations to services in the Table of Frequency Allocations (Article S5 of the Radio Regulations - Geneva 1996) differ from Region to Region, this implying, in consequence, that the service area of a steerable beam would be limited to the visible part of the Region concerned.

This information can also be provided in electronic format; see Section 4 for further information.

B3e/B4a/B4b Antenna radiation pattern

Provision of this information is obligatory if the assignments associated with this beam are to a space station on board a geostationary satellite and the antenna beam is directed towards another satellite, or if they are to a space station on board a non-geostationary satellite. This information can be provided in any one of three different ways, as indicated below.

Satellite antenna beam details (ApS4/II-2a, 3a) (cont.)

1. Reference radiation pattern

Indicate the reference radiation pattern, preferably by means of the following symbols or similar symbols not exceeding 12 characters.

Symbol Description of the radiation pattern

REC-465	Current version of Recommendation ITU-R S.465: "Reference earth station radiation pattern for use in interference assessment in frequency range from 2 to about 30 GHz."
REC-580	Current version of Recommendation ITU-R S.580: "Radiation diagrams for use earth stations operating with geostationary satellites."
AP28	Point 4, Annex II of Appendix 28. NOTE: This radiation diagram is identical to that in Annex III to Appendix 29.
ND	Quasi-omnidirectional radiation pattern with the maximum isotropic gain stated in B3a1/B3b1/B3b2/B4a.

2. Radiation diagram

If the attachment is provided, enter a number identifying its presence. Define the antenna radiation pattern by means of a table, a diagram or a set of equations giving the isotropic gain in dBi as a function of the angular separation in all directions from the maximum beam axis. A basic distinction in presenting this data should be made regarding the maximum isotropic antenna gain and the side-lobe radiation. For high gain antennas sufficient data (say in steps of 0.1 degree) should be provided for off-axis angles less than 1 degree, whereas for off-axis angles greater than 50 degrees the radiation pattern is rather flat, and much lower definition could suffice. On the other hand, for low gain antennas less data is necessary around 1 degree, and more data may be needed for the region of off-axis angle greater than 40 degrees. In general, the radiation pattern is assumed to be rotationally symmetrical and should be an envelope of peaks for all 360 degrees in a plane; however, some antennas are designed with nulls in predetermined directions in order to reduce interference and this should also be indicated with sufficient clarity and identification of the plane. If available, indicate the actual measured radiation pattern (relative to isotropic), rather than the reference radiation pattern. For rotationally non-symmetrical patterns, the diagram should be presented for the most important directions, such as that of the geostationary-satellite orbit.

This information can also be provided in electronic format; see Section 4 for further information.

3. Non standard antenna

If the radiation pattern of the antenna can be described by a logarithmic expression as follows:

$$G = \text{COEFA} - \text{COEFB} * \text{LOG}(\text{PHI})$$

provide the values of Coefficient A and Coefficient B (in dBi) in the relevant boxes.

B3f Antenna gain vs orbit longitude diagram

Provision of this attachment is obligatory if the assignments associated with this beam are to a space station on board a geostationary satellite and in a frequency band allocated for bi-directional use (i.e. Earth-to-space and space-to-Earth). If the attachment is provided, enter a number identifying its presence. The information to be provided is the estimated isotropic antenna gain in dBi towards the geostationary-satellite orbit, in directions which are not obstructed by the Earth, by means of a table or diagram of antenna gain against orbit longitude from 0 to 360 degrees. Instructions for the presentation of graphical data are given in IFRB Circular-letter No. 769 of 23 December 1988.

This information can also be provided in electronic format; see Section 4 for further information.

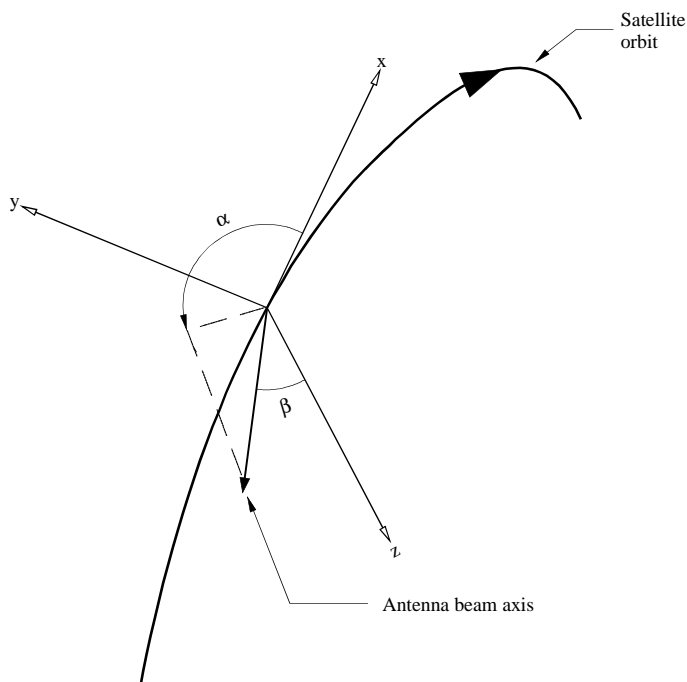
Satellite antenna beam details (ApS4/II-2a, 3a) (cont.)

B4b Additional satellite antenna beam information for non-geostationary satellites notified under Resolution 46 (WRC-95)

NOTE: The following information is to be provided for non-geostationary satellites whose frequency assignments are subject to the provisions of Resolution 46 (WRC-95); otherwise leave blank.

Satellite beam orientation

Two angles are to be provided to indicate the orientation of the satellite antenna beam. These are based on the orientation of the antenna beam axis with respect to a three dimensional rectangular coordinate system where the x-axis (roll axis) is in the direction of the satellite orbit, the y-axis (pitch axis) is at the same altitude as the x-axis and at right angles to it and the z-axis (yaw axis) is at right angles to both and in the direction of the centre of the earth (or other reference body). Angle alpha (α) is the angle in the x-y plane between the x-axis and the projection of the antenna beam axis on that plane ($0^\circ \leq \alpha < 360^\circ$) and angle beta (β) is the angle between the antenna beam axis and the z-axis ($0^\circ \leq \beta < 90^\circ$). When $\beta = 0^\circ$, angle α is meaningless and a default value of $\alpha = 0^\circ$ should be provided in that case. See diagram below.



If the orientation cannot be described by use of the angles alpha and beta, give the relevant information in an attachment.

Gain versus elevation angle diagram

Enter the number of this attachment in this box and provide the satellite antenna gain $G(\theta_e)$ as a function of elevation angle at a fixed point on the Earth, either in the form of a diagram or in tabular form.

Spreading loss data

Enter the number of this attachment in this box and provide the spreading loss as a function of elevation angle, either in the form of equations or in graphical format.

Satellite antenna beam details (ApS4/II-2a, 3a) (cont.)

Maximum EIRP at 4 kHz

Enter the appropriate sign (+ or -) and the value of the maximum peak envelope equivalent isotropically radiated power for the beam (expressed in dBW/4kHz) averaged over the worst 4 kHz band.

Average EIRP at 4 kHz

Enter the appropriate sign (+ or -) and the value of the average peak envelope equivalent isotropically radiated power for the beam (expressed in dBW/4kHz) averaged over the worst 4 kHz band.

Maximum EIRP at 1 MHz

Enter the appropriate sign (+ or -) and the value of the maximum peak envelope equivalent isotropically radiated power for the beam (expressed in dBW/1MHz) averaged over the worst 1 MHz band.

Average EIRP at 1 MHz

Enter the appropriate sign (+ or -) and the value of the average peak envelope equivalent isotropically radiated power for the beam (expressed in dBW/1MHz) averaged over the worst 1 MHz band.

INFORMATION COMMON TO GROUPS (LISTS) OF ASSIGNED FREQUENCIES (ApS4/II-2a, 3a)

A2a Date of bringing into use

- a) In the case of a new assignment, indicate the date (actual or foreseen, as appropriate) of bringing the frequency assignment into use.
- b) Whenever the assignment is changed in any of its basic characteristics (except in the case of a change of the name of the space station), the date to be indicated shall be that of the latest change (actual or foreseen, as appropriate).

Use two digits each to indicate the day, month and year, in that order.

A2b Period of validity

If the assignments associated with this beam are to a space station on board a geostationary satellite, enter the period of validity of the assignment expressed in years (see Resolution 4 (Rev. Orb-88)); otherwise leave blank.

A3a/A3b Operating agency/Administration responsible for the station

Using symbols from Table No. 12A/12B of the Preface to the IFL, the SRS and the WIC, indicate the operating agency or company and the postal and telegraphic addresses of the administration to which communications should be sent on urgent matters regarding interference, quality of emissions, and questions referring to the technical operation of stations (see Article 22 of the Radio Regulations). If there is no symbol in Table No. 12A/12B of the Preface corresponding to the administration or agency concerned, spell out the name in box REMARKS with reference to box A3a or A3b as applicable, and the Bureau will provide the symbol.

Information common to groups (list) of assigned frequencies (ApS4/II-2a, 3a) (cont.)

Special Section AR11/A (RR1042)

Enter the number of the Special Section of the Weekly Circular in which the advance information was published under Section I of Article 11.

Special Section AR11/C (RR1060)

Enter the number of the Special Section of the Weekly Circular in which the coordination information was published under Section II of Article 11; leave blank if the space station does not belong to a geostationary-satellite network or if such publication has not been made.

Special Section Art. 14 (RR1610)

Enter the number of the Special Section of the Weekly Circular in which the request for agreement under Article 14 was published; leave blank if such publication has not been made.

Other Special Sections

Enter the reference and the number of the Special Section of the Weekly Circular in which any other request for coordination was published; leave blank if such publication has not been made. (See paragraph 2 of Section II of the Preface to the IFL, the SRS and the WIC.)

A5/A6 Coordinated with or agreement reached with

Enter the provisions under which coordination has been successfully completed or agreement reached (see Table No. 11/1 of the Preface to the IFL, the SRS and the WIC) and the country or geographical area symbols (see Table No. B1 of the Preface) indicating the country or countries concerned. Leave one blank space between country symbols. Note that coordination under RR1060 is required only if the space station concerned belongs to a geostationary-satellite network.

A5/A6 Coordination requested with or agreement sought with

Enter the provisions under which coordination has been requested or agreement sought (see Table No. 11/1 of the Preface to the IFL, the SRS and the WIC) and the country or geographical area symbols (see Table No. B1 of the Preface) indicating the country or countries concerned. Leave one blank space between country symbols.

Remarks

This box should be used to supply any other information or remark which the notifying administration considers useful and which is not contained on the form itself or in an attachment thereto.

CHARACTERISTICS COMMON TO A GROUP (LIST) OF ASSIGNED FREQUENCIES (ApS4/II-2b, 3b)

NOTE: Several of the items described below apply only in the case of a satellite transmitting antenna beam or in the case of a satellite receiving antenna beam.

ADD/MOD/SUP/REP of the group

Enter **A**, **M**, **S** or **R** for an addition, modification, suppression or replacement of the group, as appropriate. In the case of modification, replacement or suppression provide the BR identification number of the group to be modified, replaced or suppressed.

Characteristics common to a group (list) of assigned frequencies (ApS4/II-2b, 3b) (cont.)

C4a/C4b Class of station/Nature of service

Indicate the appropriate class of station and the nature of service using the symbols given in Tables Nos. 6A1 and 6B1 respectively of the Preface to the IFL, the SRS and the WIC. Up to four pairs of values can be provided.

C6 Polarization

Enter the symbol for the type of polarization in the first box (see symbols for the type of polarization in Table No. 9D1 of the Preface to the IFL, the SRS and the WIC). In the case of linear polarization (symbol "L"), indicate in the second box the angle (in degrees) measured counter-clockwise in a plane normal to the beam axis from the equatorial plane to the electric vector of the waves as seen from the satellite.

C3a Assigned frequency band

Enter the bandwidth of the assigned frequency band as defined in RR141, expressed in kHz. The assigned frequency band should in no case exceed the bandwidth of a single satellite transponder.

C5a Receiving system noise temperature

Enter the total receiving system noise temperature expressed in kelvins, referred to the output of the space station receiving antenna.

C11a Service area

Note: Service area is required in all cases except in the case of an assignment to a space station operating as space-to-space relay, in which case the box is to be left blank.

The service area can be defined either by the country symbols or geographical area symbols (see Table No. B1 of the Preface to the IFL, the SRS and the WIC), or graphically by a service area diagram in an attachment. When the service area is the visible part of one or more of the three radiocommunication Regions (see RR392 to RR399), this can be indicated, as appropriate, by the symbols RG1, RG2, or RG3 for Region 1, Region 2 and Region 3 respectively. If the attachment is provided, enter a number identifying the presence of the attachment. A graphical presentation of the service area can be provided on the same diagram as the antenna gain contours; in this case, the attachment number would be the same for both applications.

This information can also be provided in electronic format; see Section 4 for further information.

C11d Affected region

Provision of this attachment is obligatory in the case when the procedure of Resolution 46 applies; otherwise leave blank. If the attachment is provided, enter its number in the box, and provide the appropriate information required to calculate the affected region due to the MSS space stations (as defined in Recommendation ITU-R M.1187).

C8g Maximum aggregate power

Enter the maximum aggregate power (dBW) of all carriers supplied to the input of the antenna. This information applies only to the case of a receiving satellite antenna beam operating with a transmitting associated earth station.

Characteristics common to a group (list) of assigned frequencies (ApS4/II-2b, 3b) (cont.)

C9c Type of modulation and multiple access data

Provision of this attachment is obligatory in the case when the procedure of Resolution 46 applies; otherwise leave blank. If the attachment is provided, enter its number in the box, and provide the information on type of modulation and multiple access.

C9c Spectrum mask diagram

Provision of this attachment is obligatory in the case when the procedure of Resolution 46 applies; otherwise leave blank. If the attachment is provided, enter a number identifying its presence.

C8d Maximum total peak power

Enter the maximum total peak envelope power (dBW) supplied to the input of the antenna for each contiguous satellite bandwidth. For a satellite transponder, this corresponds to the maximum saturated peak envelope power in the bandwidth of each transponder. This information applies only to the case of transmission from the space station.

SPACE STATION EMISSIONS OR EMISSIONS OF THE ASSOCIATED TRANSMITTING STATIONS

C7a Designation of emission

Indicate the necessary bandwidth (RR146) and class of emission (RR133) in accordance with Article 4 and Appendix 6; see also IFRB Circular-letters No. 457 of 2 June 1980 and No. 511 of 8 July 1982.

C8a1 Maximum peak power

Enter the appropriate sign (+ or -) and the maximum value of the peak envelope power (RR151), expressed in dBW, supplied to the input of the antenna for each corresponding emission (carrier type).

C8b1 Maximum peak power

Enter the appropriate sign (+ or -) and the maximum value of the total peak envelope power (RR151), expressed in dBW, supplied to the input of the antenna for the corresponding emission.

Note: If the maximum values of peak envelope power are being provided for individual carriers, they should be of type C8a1. If the notification does not concern individual carriers (e.g. as in spread spectrum applications) provide a general designation of emission (item C7a) and total peak envelope power values of type C8b1.

C8a2 Maximum power density

Enter the appropriate sign (+ or -) followed by the value of the maximum power density per Hertz (expressed in dBW/Hz) supplied to the input of the antenna for each corresponding emission (carrier type) averaged over the worst 4 kHz band for carriers below 15 GHz, or averaged over the worst 1 MHz band for carriers above 15 GHz. For narrow band carriers with a necessary bandwidth (RR146) less than the reference bandwidth, the peak power should be averaged over the reference bandwidth (4 kHz or 1 MHz) to obtain this value of maximum power density.

Characteristics common to a group (list) of assigned frequencies (ApS4/II-2b, 3b) (cont.)

C8b2 Maximum power density

Enter the appropriate sign (+ or -) followed by the value of the maximum power density per Hertz (expressed in dBW/Hz) supplied to the input of the antenna averaged over the worst 4 kHz band for carriers below 15 GHz, or averaged over the worst 1 MHz band for carriers above 15 GHz. For narrow band carriers with a necessary bandwidth (RR146) less than the reference bandwidth, the peak power should be averaged over the reference bandwidth (4 kHz or 1 MHz) to obtain this value of maximum power density.

Note: If the values of maximum power density are being provided for individual carriers, they should be of type C8a2. If the notification does not concern individual carriers (e.g. as in spread spectrum applications) provide a general designation of emission (item C7a) and maximum power density values of type C8b2.

C8c1 Minimum peak power

Enter the appropriate sign (+ or -) and the minimum value of the peak envelope power (RR151), expressed in dBW, supplied to the input of the antenna for each corresponding emission (carrier type).

C8c2 Minimum power density

Enter the appropriate sign (+ or -) followed by the value of the minimum power density per Hertz (expressed in dBW/Hz) supplied to the input of the antenna for each corresponding emission (carrier type) averaged over the worst 4 kHz band for carriers below 15 GHz, or averaged over the worst 1 MHz band for carriers above 15 GHz. For narrow band carriers with a necessary bandwidth (RR146) less than the reference bandwidth, the peak power should be averaged over the reference bandwidth (4 kHz or 1 MHz) to obtain this value of minimum power density.

C8e C/N objective (total-clear sky)

Enter the required carrier to noise ratio, in decibels, for the overall link for each carrier when clear sky propagation conditions apply.

Type of maximum peak power and power density values

If the values of maximum peak power and power density are of type C8b1 and C8b2, enter an "X" in this box.

Reason for absence of minimum peak power and power density values

If no values of minimum peak power and power density are provided, provide the reason therefor in an attachment and enter the number of this attachment in the box.

ASSOCIATED EARTH STATION

The following information is required if the associated stations are earth stations

ADD/MOD/SUP/REP of the station

Enter **A**, **M**, **S** or **R**, for an addition, modification, suppression or replacement of the associated earth station, as appropriate.

Characteristics common to a group (list) of assigned frequencies (ApS4/II-2b, 3b) (cont.)

C10b1 Earth station name

Enter the name of the locality by which the earth station is known or in which it is located, using not more than 20 characters; see Table No. 4A1 of the Preface to the IFL the SRS and the WIC for standard abbreviations. If an earth station uses more than one antenna, the station name should be supplemented by a number (e.g. 1, 2, 3, etc.) to distinguish one antenna from another. If the satellite system is planned to comprise groups of earth stations (each group having different characteristics) a typical earth station corresponding to each such group has to be the subject of a separate page and should be identified by separate designations in this box.

Old earth station name

If the associated earth station name is changed, indicate the old name.

Country

Indicate the country in which the station is located using the appropriate symbol given in Table No. B1 of the Preface to the IFL, the SRS and the WIC. This information is not required for the notification of a typical earth station.

C10 Type of station (Specific/Typical)

Enter "S" or "T" for a specific or typical station, as appropriate.

C10b2 Geographical coordinates

Indicate the geographical coordinates (in degrees and minutes) of the earth station antenna site. This information is not required for the notification of a typical earth station.

C10c1a/C10c1b Class of station/Nature of service

Indicate the appropriate class of station in C10c1a and the nature of service in C10c1b, using the symbols given in Tables Nos. 6A1 and 6B1 respectively of the Preface to the IFL, the SRS and the WIC. Up to four pairs of values can be provided.

C10c5 Receiving system noise temperature

Enter the lowest total receiving system noise temperature expressed in kelvins, referred to the output of the earth station antenna under clear sky conditions. This value shall be indicated for the nominal value of the angle of elevation when the associated transmitting station is aboard a geostationary satellite and, in other cases, for the minimum value of angle of elevation.

C10c2 Maximum isotropic gain

Enter the appropriate sign (+ or -) followed by the isotropic gain (G_i ; see RR154) of the antenna in the direction of maximum radiation, expressed in dBi.

C10c3 Beamwidth

Enter the total beamwidth at the mean half-power points of the main lobe, expressed in decimal degrees. Describe in detail in attachment C10c4b, if not symmetrical.

C10c4a Reference radiation pattern

Indicate the reference radiation pattern, preferably by means of the following symbols or similar symbols not exceeding 12 characters.

Characteristics common to a group (list) of assigned frequencies (ApS4/II-2b, 3b) (cont.)

Symbol Description of the radiation pattern

REC-465	Current version of Recommendation ITU-R S.465: "Reference earth station radiation pattern for use in coordination and interference assessment in the frequency range from 2 to about 30 GHz."
REC-580	Current version of Recommendation ITU-R S.580: "Radiation diagrams for use as design objectives for antennas of earth stations operating with geostationary satellites."
REC-694	Current version of Recommendation ITU-R M.694: "Reference radiation pattern for ship earth station antennas".
AP28	Point 4, Annex II of Appendix 28. Note: This radiation diagram is identical to that in Annex III to Appendix 29.
29-25LOG(FI)	Represents a reference radiation pattern similar to that in Recommendation ITU-R S.465 with side lobe radiation reduced by 3 dB.
27-25LOG(FI)	As above with side lobe radiation reduced by 5 dB.
N-25LOG(FI)	Represents a generic radiation pattern of the same type and allows for values of N other than those listed above.
ND	Quasi-omnidirectional radiation pattern with the maximum isotropic gain stated in C10c2.

C10c4b Antenna radiation pattern diagram

If a radiation pattern cannot be indicated by reference to one of the symbols in C10c4a, or the measured radiation diagram of the antenna is available, give the relevant information in the attachment. If the attachment is provided, enter the attachment number identifying its presence. This information can also be provided in electronic format; see Section 4 for further information.

Alternatively, if the radiation pattern can be described by two logarithmic expressions as follows:

G = GMAX	PHI < 1°
G = COEFA - COEFB * LOG (PHI)	1° ≤ PHI ≤ PHI1
G = MAX (MIN (G(PHI1), COEFC - COEFD * LOG (PHI)), -10)	PHI > PHI1

provide the values of Coefficient A, Coefficient B, Coefficient C and Coefficient D (all in dBi) and PHI1 (in degrees) in the relevant boxes.

ASSOCIATED SPACE STATION

The following information is required if the associated stations are space stations

ADD/MOD/SUP/RES of the station

Enter **A**, **M**, **S** or **R**, for an addition, modification, suppression or replacement of the associated space station, as appropriate.

C10a Space station name

Define the associated space station with which communication is to be established by providing its name if it is on board a geostationary satellite or by providing the name of the system to which it belongs if it is on board a non-geostationary satellite.

Characteristics common to a group (list) of assigned frequencies (ApS4/II-2b, 3b) (cont.)

Old space station name

If the associated space station name is changed, indicate the old name.

Transmitting/Receiving beam designation

Enter the transmitting or receiving beam designation of the associated space station, as appropriate, by means of a four character code.

Old beam designation

If the beam designation of the associated space station is changed, indicate the old beam designation.

C10 Type of station (Geo/Non-geo)

Enter "G" or "N" for geostationary or non-geostationary associated space station, as appropriate.

GROUP (LIST) OF ASSIGNED FREQUENCIES (ApS4/II-2b, 3b)

C2a Assigned frequency

Enter the assigned frequency as defined in RR142, expressed in kHz up to 28 000 kHz inclusive, in MHz above 28 000 kHz to 10 500 MHz inclusive, and in GHz above 10 500 MHz, and enter letter k, M or G as appropriate.

OVERALL LINK CHARACTERISTICS (ApS4/II-4a, 4b)

The overall link characteristics are required only for frequency assignments to geostationary space stations using simple frequency-changing transponders and operating with earth stations.

Table D1 indicates line by line the strapping (connection) between the uplink and downlink frequency assignments for each intended combination of receiving and transmitting beams of the space station. The serial number is to be used to relate each strapping with the relevant equivalent satellite link noise temperature and transmission gain information given line by line in Table D2 for each associated receiving earth station whose name or designation is to be entered in the last column:

- a1 Lowest equivalent satellite link noise temperature, in kelvins;
 - a2 Transmission gain (γ), in dB, associated with the value in a1;
 - b1 Equivalent satellite link noise temperature, in kelvins, that corresponds to the highest ratio of transmission gain (γ) to equivalent satellite link noise temperature;
 - b2 Transmission gain (γ), in dB, associated with the value in b1;
- Associated receiving earth station name See C10b1 on Form APS4/II-3b.

When the above values in Table D2 apply to several strappings (connections) in Table D1, the Reference to Serial No(s). is to be given by means of a range. Include sequential line numbers in Table D2 to facilitate reference to each line of data when modification of such data is required.

3.3 INSTRUCTIONS FOR NOTICE FORM ApS4/III

GENERAL CHARACTERISTICS OF THE NOTICE (ApS4/III-1)

Date

A date given by the notifying administration for its own use.

Administration serial number

A serial or reference number given by the administration for its own use. When provided, this serial number is published in the Index to Part I-S of the BR Weekly Circular (this applies to **RR1488 Notification** only).

A1f Notifying administration

The country symbol designating the notifying administration and the symbol designating the international satellite system, if appropriate (see Tables Nos. B1 and B2 of the Preface to the IFL, the SRS and the WIC). If there is no symbol in Table No. B2 of the Preface corresponding to the international satellite system concerned, spell out its name in box REMARKS, and the Bureau will provide a symbol.

RR1488 Notification

Enter "X" to indicate that this is the purpose of submitting the form.

RR1107 Request for coordination

Enter "X" to indicate that this is the purpose of submitting the form.

RR1610 Agreement under Article 14

Enter "X" to indicate that this is the purpose of submitting the form.

Request for assistance of the BR for RR1107 and/or RR1610

Enter "X" to indicate that this is the purpose of submitting the form.

RS46 Request for coordination

Enter "X" to indicate that this is the purpose of submitting the form.

Action indicator ADD/MOD/SUP

Enter **A**, **M** or **S** for the addition of a new earth station, or the modification or suppression of an existing earth station, as appropriate.

In the case of modification or suppression provide the BR identification number of the earth station to be modified or suppressed.

In this context "existing earth station" is taken to mean either:

- (a) a station for which details of the request for coordination were forwarded under RR1107/1113 or RS46; or
- (b) a station for which a Special Section AR14/C has already been published, if the notice form is forwarded under RR1610 (agreement under Article 14); or
- (c) a station for which the relevant details are already recorded in the Master International Frequency Register if the notice form is forwarded under RR1488 (notification under Article 13).

General characteristics of the notice (ApS4/III-1) (cont.)

First notification

Enter "X" in the case of any notification other than resubmission.

Resubmission

Enter "X" in the case of resubmission of a notice after its return by the Bureau with an unfavourable Finding with respect to coordination or the probability of harmful interference; otherwise leave blank (Applies to RR1488 Notification only).

BR identification number of station to be modified/suppressed

If the action indicator is "M" or "S", enter the BR identification number of the earth station to be modified or suppressed. In these cases the administration has to provide, in addition to the BR identification number, the name of the earth station (Item A1e2), the country in which the station is located and its geographical coordinates (Items A1e3a and A1e3b), if appropriate, and the name of the associated space station (Item A4c1).

CHARACTERISTICS OF THE EARTH STATION (ApS4/III-1)

A1e1 Type (Specific/Typical)

Enter "S" or "T" for specific or typical station, as appropriate.

A1e2 Name of the earth station

Enter the name of the locality by which the earth station is known or in which it is located, using not more than 20 characters; see Table No. 4A1 of the Preface to the IFL, the SRS and the WIC for standard abbreviations. If an earth station uses more than one antenna, the station name should be supplemented by a number (e.g. 1, 2, 3, etc.) to distinguish one antenna from another. If the satellite system is planned to comprise groups of earth stations (each group having different characteristics) a typical earth station corresponding to each such group has to be the subject of a separate notice and should be identified by separate designations in this box.

A1e3a Country

Indicate the country in which the station is located using the appropriate symbol given in Table No. B1 of the Preface to the IFL, the SRS and the WIC. This information is not required for the notification of a typical earth station.

A1e3b Geographical coordinates

Indicate the geographical coordinates of each transmitting and receiving antenna site comprising the earth station (longitude and latitude in degrees and minutes). If the coordination area of the earth station overlaps the territory of another administration indicate also the seconds with an accuracy of one-tenth of a minute. This information is not required for the notification of a typical earth station.

A4c1 Associated space station

Indicate the name of the associated space station with which communication is to be established.

Characteristics of the earth station (ApS4/III-1) (cont.)

A4c2 Nominal orbital longitude

If the associated space station with which communication is to be established is on board a geostationary satellite, enter the nominal longitude of the orbital position of that satellite expressed in decimal degrees E or W (the value should not exceed 180 degrees); otherwise leave blank.

A7a Horizon elevation diagram

Enter the number of the attachment containing the diagram indicating the horizon elevation angle for each azimuth around the earth station; the horizon elevation angle is the angle viewed from the center of the earth station antenna between the horizontal plane and a ray that grazes the visible physical horizon in the direction concerned. Instructions for presentation of graphical data are given in IFRB Circular-letter No. 769 of 23 December 1988.

Alternatively, fill in the table provided for the values of horizon elevation angle. In this case it is not necessary to fill in values for each 5 or 10 degrees of azimuth; only changes in the horizon elevation angle need be indicated. Thus, for example, if the horizon elevation angle has a constant value of 1.5 degrees between azimuths of 50 and 180 degrees only two entries are required in the table; one for an azimuth of 50 degrees and one for an azimuth of 180 degrees. In addition, if for two consecutive values of azimuth in the table, the horizon elevation angles are different, intermediate values will be calculated by linear interpolation.

This information is not required for the notification of a typical earth station.

A7b Elevation angle

Enter the planned minimum operating angle of elevation of the antenna in the direction of maximum radiation towards the associated space station, expressed in decimal degrees from the horizontal plane. In the case of a geostationary-satellite network, these angles are to be calculated for the nominal orbital longitude, taking into account the tolerances. This information is not required for the notification of a typical earth station.

A7c Operating azimuthal angles

Enter the planned range of operating azimuthal angles for the direction of maximum radiation, each value expressed in decimal degrees clockwise from True North. In the case of a geostationary-satellite network,

these angles are to be calculated for the nominal orbital longitude, taking into account the tolerances. This information is not required for the notification of a typical earth station.

A7d Altitude

Enter the height of the center of the antenna above mean sea level, expressed in metres. This information is not required for the notification of a typical earth station.

A10 Coordination area diagrams

Provision of this attachment is obligatory. Enter the attachment number in the box and provide the earth station coordination diagrams. The diagrams shall be drawn to an appropriate scale, indicating, for both transmission and reception, the location of the earth station and its associated coordination areas, or the coordination area related to the service area in which it is intended to operate the mobile earth station.

CHARACTERISTICS OF THE ANTENNA (ApS4/III-2a, 3a)

B1 Associated satellite beam designation

Enter the receiving or transmitting beam designation by a symbol consisting of up to four characters. For practical reasons, there are different approaches for the designation of the beam. It may consist of:

- (a) numbers such as 1, 2, 3, etc., which refer to the number of the figure representing the corresponding antenna gain contours diagram published in the relevant Special Section; or
- (b) numbers such as 195, which identify a beam having a maximum gain of 19.5 dB; or
- (c) a symbol of up to four letters (or a letter and a figure), which is used to represent the abbreviated beam name, such as "GBL" for global, "NWQ" for North West Quadrant, "WH" for West Hemisphere, "Z1" for zone 1, "O" for omnidirectional.

For steerable beams, the last character shall always be the letter "R".

ADD/MOD/SUP/REP of the antenna

Enter **A**, **M**, **S** or **R** for an addition, modification, suppression or replacement of an antenna, as appropriate.

Old beam designation

If the beam designation is changed, indicate the old beam designation.

B5a Maximum isotropic gain

Enter the appropriate sign (+ or -) followed by the isotropic gain (G_i ; see RR154) of the antenna in the direction of maximum radiation, expressed in dBi.

B5b Beamwidth

Enter the total beamwidth at the mean half-power points of the main lobe, expressed in decimal degrees. Describe in detail in attachment B5c1, if not symmetrical.

B5c1 Antenna radiation pattern diagram

If a reference radiation pattern cannot be indicated by reference to one of the symbols in B5c2, or the measured radiation diagram of the antenna is available, give the relevant information in the attachment. If the attachment is provided, enter the attachment number identifying its presence. This information can also be provided in electronic format; see Section 4 for further information.

Alternatively, if the radiation pattern can be described by two logarithmic expressions as follows:

G = GMAX	PHI < 1°
G = COEFA - COEFB * LOG (PHI)	1° ≤ PHI ≤ PHI1
G = MAX (MIN (G(PHI1), COEFC - COEFD * LOG (PHI)), -10)	PHI > PHI1

Provide the values of Coefficient A, Coefficient B, Coefficient C and Coefficient D (all in dBi) and PHI1 (in degrees) in the relevant boxes.

Characteristics of the antenna (ApS4/III-2a, 3a) (cont.)

B5c2 Radiation pattern

Indicate the reference radiation pattern, preferably by means of the following symbols or similar symbols not exceeding 12 characters.

Symbol Description of the radiation pattern

REC-465	Current version of Recommendation ITU-R S.465: "Reference earth station radiation pattern for use in coordination and interference assessment in the frequency range from 2 to about 30 GHz."
REC-580	Current version of Recommendation ITU-R S.580: "Radiation diagrams for use as design objectives for antennas of earth stations operating with geostationary satellites."
REC-694	Current version of Recommendation ITU-R M.694: "Reference radiation pattern for ship earth station antennas".
AP28	Point 4, Annex II of Appendix 28. Note: This radiation diagram is identical to that in Annex III to Appendix 29.
29-25LOG(FI)	Represents a reference radiation pattern similar to that in Recommendation ITU-R S.465 with side lobe radiation reduced by 3 dB.
27-25LOG(FI)	As above with side lobe radiation reduced by 5 dB.
N-25LOG(FI)	Represents a generic radiation pattern of the same type and allows for values of N other than those listed above.
ND	Quasi-omnidirectional radiation pattern with the maximum isotropic gain stated in B5a.

INFORMATION COMMON TO GROUPS (LISTS) OF ASSIGNED FREQUENCIES (ApS4/III-2a, 3a)

A2a Date of bringing into use

- a) In the case of a new assignment, indicate the date (actual or foreseen, as appropriate) of bringing the frequency assignment into use.
- b) Whenever the assignment is changed in any of its basic characteristics (except in the case of a change of the name of the earth station), the date to be indicated shall be that of the latest change (actual or foreseen, as appropriate).

Use two digits each to indicate the day, month and year, in that order.

A3a/A3b Operating Agency/Administration responsible for station

Using symbols from Table No. 12A/12B of the Preface to the IFL, the SRS and the WIC, indicate the operating agency or company and the postal and telegraphic addresses of the administration to which communications should be sent on urgent matters regarding interference, quality of emissions, and questions referring to the technical operation of stations (see Article 22 of the Radio Regulations). If there is no symbol in Table No. 12A/12B of the Preface corresponding to the administration or agency concerned, spell out the name in box REMARKS with reference to box A3a or A3b as applicable, and the Bureau will provide the symbol.

Information common to groups (lists) of assigned frequencies (ApS4/III-2a, 3a) (cont.)

Special Section AR11/A (RR1042)

Enter the number of the Special Section of the Weekly Circular in which the advance information was published under Section I of Article 11.

Special Section AR11/C (RR1060)

Enter the number of the Special Section of the Weekly Circular in which the coordination information was published under Section II of Article 11; leave blank if the associated space station does not belong to a geostationary-satellite network or if such publication has not been made.

Special Section Art. 14 (RR1610)

Enter the number of the Special Section of the Weekly Circular in which the request for agreement under Article 14 was published; leave blank if such publication has not been made.

Other Special Sections

Enter the reference and the number of the Special Section of the Weekly Circular in which any other request for coordination was published; leave blank if such publication has not been made. (See paragraph 2 of Section II of the Preface to the IFL, the SRS and the WIC.)

A5/A6 Coordinated with or agreement reached with

Enter the provisions under which coordination has been successfully completed or agreement reached (see Table No. 11/1 of the Preface to the IFL the SRS and the WIC) and the country or geographical area symbols (see Table No. B1 of the Preface) indicating the country or countries concerned. Leave one blank space between country symbols. Note that coordination under RR1060 is required only if the space station concerned belongs to a geostationary-satellite network.

A5/A6 Coordination requested with or agreement sought with

Enter the provisions under which coordination has been requested or agreement sought (see Table No. 11/1 of the Preface to the IFL the SRS and the WIC) and the country or geographical area symbols (see Table No. B1 of the Preface) indicating the country or countries concerned. Leave one blank space between country symbols.

Remarks

This box should be used to supply any other information or remark which the notifying administration considers useful and which is not contained on the form itself or in an attachment thereto.

CHARACTERISTICS COMMON TO A GROUP (LIST) OF ASSIGNED FREQUENCIES (ApS4/III-2b, 3b)

NOTE: Several of the items described below apply only in the case of a transmitting earth station or in the case of a receiving earth station.

ADD/MOD/SUP/REP of the group

Enter **A**, **M**, **S** or **R** for an addition, modification, suppression or replacement of the group, as appropriate. In the case of modification, replacement or suppression provide the BR identification number of the group to be modified, suppressed or replaced.

Characteristics common to a group (list) of assigned frequencies (ApS4/III-2b, 3b) (cont.)

C4a/C4b Class of station/Nature of service

Indicate the appropriate class of station and the nature of service, using the symbols given in Tables Nos. 6A1 and 6B1 respectively of the Preface to the IFL, the SRS and the WIC. Up to four pairs of values can be provided.

C6 Polarization

Enter the symbol for the type of polarization in the first box (see symbols for the type of polarization in Table No. 9D1 of the Preface to the IFL, the SRS and the WIC). In the case of linear polarization (symbol "L"), indicate in the second box the angle (in degrees) measured counter-clockwise in a plane normal to the beam axis from the equatorial plane to the electric vector of the waves as seen from the satellite.

C3a Assigned frequency band

Enter the bandwidth of the assigned frequency band as defined in RR141, expressed in kHz. The assigned frequency band should in no case exceed the bandwidth of a single satellite transponder.

C5b Receiving system noise temperature

Enter the value of the lowest total receiving system noise temperature expressed in kelvins, referred to the output of the earth station antenna under clear sky conditions. When the associated space transmitting station is on board a geostationary satellite the value to be entered is that for the nominal antenna elevation.

C8g Maximum aggregate power

Enter the maximum aggregate power (dBW) of all carriers supplied to the input of the antenna.

EMISSIONS COMMON TO OR RECEIVED BY THE ASSIGNED FREQUENCIES (ApS4/III-2b, 3b)

C7a Designation of emission

Indicate the necessary bandwidth (RR146) and class of emission (RR133) in accordance with Article 4 and Appendix 6; see also IFRB Circular-letters No. 457 of 2 June 1980 and No. 511 of 8 July 1982.

C8a1 Maximum peak power

Enter the appropriate sign (+ or -) and the maximum value of the peak envelope power (RR151), expressed in dBW, supplied to the input of the antenna for each corresponding emission (carrier type).

C8b1 Maximum peak power

Enter the appropriate sign (+ or -) and the maximum value of the total peak envelope power (RR151), expressed in dBW, supplied to the input of the antenna for the corresponding emission.

Note: If the maximum values of peak envelope power are being provided for individual carriers, they should be of type C8a1. If the notification does not concern individual carriers (e.g. as in spread spectrum applications) provide a general designation of emission (item C7a) and total peak envelope power values of type C8b1.

Emissions common to or received by the assigned frequencies (ApS4/III-2b, 3b) (cont.)

C8a2 Maximum power density

Enter the appropriate sign (+ or -) followed by the value of the maximum power density per Hertz (expressed in dBW/Hz) supplied to the input of the antenna for each corresponding emission (carrier type) averaged over the worst 4 kHz band for carriers below 15 GHz, or averaged over the worst 1 MHz band for carriers above 15 GHz. For narrow band carriers with a necessary bandwidth (RR146) less than the reference bandwidth, the peak power should be averaged over the reference bandwidth (4 kHz or 1 MHz) to obtain this value of maximum power density.

C8b2 Maximum power density

Enter the appropriate sign (+ or -) followed by the value of the maximum power density per Hertz (expressed in dBW/Hz) supplied to the input of the antenna averaged over the worst 4 kHz band for carriers below 15 GHz, or averaged over the worst 1 MHz band for carriers above 15 GHz. For narrow band carriers with a necessary bandwidth (RR146) less than the reference bandwidth, the peak power should be averaged over the reference bandwidth (4 kHz or 1 MHz) to obtain this value of maximum power density.

Note: If the values of maximum power density are being provided for individual carriers, they should be of type C8a2. If the notification does not concern individual carriers (e.g. as in spread spectrum applications) provide a general designation of emission (item C7a) and maximum power density values of type C8b2.

C8c1 Minimum peak power

Enter the appropriate sign (+ or -) and the minimum value of the peak envelope power (RR151), expressed in dBW, supplied to the input of the antenna for each corresponding emission (carrier type).

C8c2 Minimum power density

Enter the appropriate sign (+ or -) followed by the value of the minimum power density per Hertz (expressed in dBW/Hz) supplied to the input of the antenna for each corresponding emission (carrier type) averaged over the worst 4 kHz band for carriers below 15 GHz, or averaged over the worst 1 MHz band for carriers above 15 GHz. For narrow band carriers with a necessary bandwidth (RR146) less than the reference bandwidth, the peak power should be averaged over the reference bandwidth (4 kHz or 1 MHz) to obtain this value of minimum power density.

C8e C/N objective (total-clear sky)

Enter the required carrier to noise ratio, in decibels, for the overall link for each carrier when clear sky propagation conditions apply.

Type of maximum peak power and power density values

If the values of maximum peak power and power density are of type C8b1 and C8b2, enter an "X" in this box.

Reason for absence of minimum peak power and power density values

If no values of minimum peak power and power density are provided, provide the reason therefor in an attachment and enter the number of this attachment in the box.

GROUP (LIST) OF ASSIGNED FREQUENCIES (ApS4/III-2b, 3b)

C2a Assigned frequency

Enter the assigned frequency as defined in RR142, expressed in kHz up to 28 000 kHz inclusive, in MHz above 28 000 kHz to 10 500 MHz inclusive, and in GHz above 10 500 MHz, and enter letter k, M or G, as appropriate.

4. ELECTRONIC SUBMISSION OF INFORMATION

Information concerning satellite networks and earth stations can be submitted either on the notice forms described in this Circular Letter or by electronic means. To this effect the Radiocommunication Bureau has developed specifications for such submissions and the details are to be found in BR Circular Letter No. CR/58 of 21 October 1996. Formats are given for both the alphanumeric and graphical data to be provided as the parts of notice forms ApS4/II and ApS4/III. Administrations can choose to submit information as notice forms and diagrams on paper or electronically. All four combinations of type of submission of the alphanumeric and graphical information (paper/paper, paper/electronic, electronic/paper, electronic/electronic) can be accepted.

In the context of this Circular Letter, the four types of graphical information that can be furnished electronically are:

- Antenna gain contours diagrams for geostationary satellites (Items B3a2/B3b1/B3b2)
- Service areas (Item C11a)
- Estimated antenna gain vs orbit longitude diagrams (Item B3f)
- Antenna radiation pattern diagrams for space stations and earth stations (Items B3e/B4a/B4b, C10c4b, B5c1)

When such information is provided electronically, it is important that the indication given in the box "See attachment No." associated with a particular diagram, when used in conjunction with the header information in the electronic file, is such that the Bureau will be able to uniquely identify the file pertaining to that diagram.

ANNEX 2B (to Appendix S4)

Table of characteristics to be submitted for space and radio astronomy services

A. General characteristics of the satellite network or the earth station

Items in Appendix	Advanced publication of a geostationary-satellite network	Advanced publication of a non-geostationary-satellite network	Notification or coordination of a GSO network (including Appendix 30B/S30B)	Notification or coordination of a non-geostationary-satellite network	Notification or coordination of an earth station	Notice for space stations in the BSS under Appendix 30/S30	Notice for feeder-link stations under Appendix 30A/S30A	Notice for stations in the FSS under Appendix 30B/S30B	Items in Appendix	Radio-astronomy
A.1.a	X	X	X	X		X	X	X	A.1.a	
A.1.b						X				
A.1.c							X		A.1.c	
A.1.d								X	A.1.d	
A.1.e.1					X					
A.1.e.2					X					
A.1.e.3					X					
A.1.e.4									A.1.e.4	X
A.1.f	X	X	X	X	X	X	X	X	A.1.f	X
A.2.a	X	X	X	X	X	X	X	X	A.2.a	
A.2.b	X		X						A.2.b	
A.2.c									A.2.c	X
A.3	X	X	X	X	X	X	X		A.3	X
A.4.a.1	X		X			X	X	X	A.4.a.1	
A.4.a.2	X		X			X	X		A.4.a.2	
A.4.a.3	X		X						A.4.a.3	
A.4.a.4	X		X						A.4.a.4	
A.4.a.5	X		X						A.4.a.5	
A.4.b		X		X					A.4.b	
A.4.c					X					
A.5			X	X	X	X	X	X	A.5	
A.6			X	X	X	X	X	X	A.6	
A.7.a					X					
A.7.b					X					
A.7.c					X					
A.7.d					X					
A.8						X				
A.9						X				
A.10					X					
A.11						X				
A.12							X		A.12	

X Mandatory information

O Optional information

C This information need only be furnished when it has been used as a basis to effect coordination with another administration

B. Characteristics to be provided for each satellite antenna beam and for each earth station antenna

Items in Appendix	Advanced publication of a geostationary-satellite network	Advanced publication of a non-geostationary-satellite network	Notification or coordination of a GSO network (including Appendix 30B/S30B)	Notification or coordination of a non-geostationary-satellite network	Notification or coordination of an earth station	Notice for space stations in the BSS under Appendix 30/S30	Notice for feeder-link stations under Appendix 30A/S30A	Notice for stations in the FSS under Appendix 30B/S30B	Items in Appendix	Radio-astronomy
B.1	X	X	X	X	X	X	X	X	B.1	
B.2	X	X	X	X	X			X	B.2	
B.3.a	X		X						B.3.a	
B.3.b.1	X		X						B.3.b.1	
B.3.b.2	X		X						B.3.b.2	
B.3.c	O		C						B.3.c	
B.3.d	O		X			X	X	X	B.3.d	
B.3.e	X		X						B.3.e	
B.3.f	X		X				X		B.3.f	
B.3.g.1						X	X	X	B.3.g.1	
B.3.g.2						X	X	X	B.3.g.2	
B.3.g.3						X	X	X ⁹⁾	B.3.g.3	
B.3.g.4						X	X	X ⁹⁾	B.3.g.4	
B.3.g.5						X	X	X ⁹⁾	B.3.g.5	
B.3.g.6							X		B.3.g.6	
B.3.g.7						X			B.3.g.7	
B.4.a		X		X					B.4.a	
B.4.b		X		X					B.4.b	
B.5.a					X				B.5.a	
B.5.b					X				B.5.b	
B.5.c					X				B.5.c	
B.6									B.6	X

X Mandatory information

O Optional information

C This information need only be furnished when it has been used as a basis to effect coordination with another administration

⁹⁾ Only information on co-polar antenna characteristics is required.

C. Characteristics to be provided for each group of frequency assignments for a satellite antenna beam or an earth station antenna

Items in Appendix	Advanced publication of a geostationary-satellite network	Advanced publication of a non-geostationary-satellite network	Notification or coordination of a GSO network (including Appendix 30B/S30B)	Notification or coordination of a non-geostationary-satellite network	Notification or coordination of an earth station	Notice for space stations in the BSS under Appendix 30/S30	Notice for feeder-link stations under Appendix 30A/S30A	Notice for stations in the FSS under Appendix 30B/S30B	Items in Appendix	Radio-astronomy
C.1	X	X						X	C.1	
C.2.a			X	X	X	X	X		C.2.a	
C.2.b									C.2.b	X
C.3.a			X	X	X		X		C.3.a	
C.3.b									C.3.b	X
C.4	X	X	X	X	X	X	X		C.4	X
C.5.a	X	X	X	X			X	X	C.5.a	
C.5.b					X				C.5.b	
C.5.c									C.5.c	X
C.6	X	X	X	X	X	X	X		C.6	
C.7.a	O	O	X	X	X	X	X		C.7.a	
C.7.b	O	O	C	C	C				C.7.b	
C.7.c	O	O	C	C	C				C.7.c	
C.7.d	O	O	C	C	C				C.7.d	
C.8.a	X ^{1), 7)}	X ^{1), 7)}	X ⁷⁾	X ⁷⁾	C ⁸⁾				C.8.a	
C.8.b	X ^{1), 7)}	X ^{1), 7)}	X ⁷⁾	X ⁷⁾	X				C.8.b	
C.8.c	O	O	X ⁶⁾	X ⁶⁾	X ⁶⁾				C.8.c	
C.8.d			X ²⁾	X ²⁾					C.8.d	
C.8.e	O	O	X ⁶⁾	X ⁶⁾	X ⁶⁾				C.8.e	
C.8.f	X ³⁾	X ³⁾							C.8.f	
C.8.g			C ⁴⁾	C ⁴⁾	C ^{4), 5)}				C.8.g	
C.8.h						X			C.8.h	
C.8.i							X		C.8.i	
C.8.j								X	C.8.j	

X Mandatory information

O Optional information

C This information need only be furnished when it has been used as a basis to effect coordination with another administration

¹⁾ Only the value of maximum power density is mandatory.

²⁾ For transmission from the space station only.

³⁾ For space-to-space relay only.

⁴⁾ For transmission from the earth station only.

⁵⁾ Not required for coordination under No. S9.15, S9.17 or S9.17A.

⁶⁾ Required, if applicable, for the type of transmission. If not applicable, a reason why it is not applicable is required.

⁷⁾ One or the other of C.8.a or C.8.b is mandatory, but not both.

⁸⁾ Only the value of total peak envelope power is required for coordination under No. S9.15, S9.17 or S9.17A.

C. Characteristics to be provided for each group of frequency assignments for a satellite antenna beam or an earth station antenna (end)

Items in Appendix	Advanced publication of a geostationary-satellite network	Advanced publication of a non-geostationary-satellite network	Notification or coordination of a GSO network (including Appendix 30B/S30B)	Notification or coordination of a non-geostationary-satellite network	Notification or coordination of an earth station	Notice for space stations in the BSS under Appendix 30/S30	Notice for feeder-link stations under Appendix 30A/S30A	Notice for stations in the FSS under Appendix 30B/S30B	Items in Appendix	Radio-astronomy
C.9.a	O	O	C	C					C.9.a	
C.9.b						X	X		C.9.b	
C.9.c		X		X					C.9.c	
C.10.a	X	X	X	X					C.10.a	
C.10.b	X	X	X	X			X		C.10.b	
C.10.c.1	X	X	X	X			X	X	C.10.c.1	
C.10.c.2	X	X	X	X			X	X	C.10.c.2	
C.10.c.3	O	O	X	X			X	X	C.10.c.3	
C.10.c.4	X	X	X	X			X	X	C.10.c.4	
C.10.c.5	X	X	X	X				X	C.10.c.5	
C.10.c.6							X		C.10.c.6	
C.11.a	X	X	X	X					C.11.a	
C.11.b							X		C.11.b	
C.11.c						X		X	C.11.c	
C.11.d		X		X					C.11.d	
C.12								X	C.12	
C.13									C.13	X
C.14						X			C.14	

X Mandatory information

O Optional information

C This information need only be furnished when it has been used as a basis to effect coordination with another administration

D. Overall Link Characteristics

Items in Appendix	Advanced publication of a geostationary-satellite network	Advanced publication of a non-geostationary-satellite network	Notification or coordination of a GSO network (including Appendix 30B/S30B)	Notification or coordination of a non-geostationary-satellite network	Notification or coordination of an earth station	Notice for space stations in the BSS under Appendix 30/S30	Notice for feeder-link stations under Appendix 30A/S30A	Notice for stations in the FSS under Appendix 30B/S30B	Items in Appendix	Radio-astronomy
D.1	X		X						D.1	
D.2.a	X		X						D.2.a	
D.2.b	X		X						D.2.b	

X Mandatory information

O Optional information

C This information need only be furnished when it has been used as a basis to effect coordination with another administration

DATE (Day/Month/Year)	FORM OF NOTICE	PAGE 1 OF	ApS4/II
Administration Serial Number	SATELLITE NETWORK (APPENDIX S4 - ANNEX 2A)		
A1f. NOTIFYING ADMINISTRATION	RR1488 Notification <input type="checkbox"/>	RR1060 Request for Coordination <input type="checkbox"/>	RR1610 Agreement under Article 14 <input type="checkbox"/>
FIRST NOTIFICATION <input type="checkbox"/>		RS46 Request for Coordination <input type="checkbox"/>	Request for Assistance of the BR for RR1060 <input type="checkbox"/> and/or RR1610 <input type="checkbox"/>
RESUBMISSION <input type="checkbox"/>			BR IDENTIFICATION No. OF NETWORK TO BE MODIFIED / SUPPRESSED
			NOTIFICATION INTENDED FOR ADDITION <input type="checkbox"/> MODIFICATION <input type="checkbox"/> SUPPRESSION <input type="checkbox"/>

1. CHARACTERISTICS OF THE NETWORK

A1a. IDENTITY OF THE SATELLITE NETWORK				
A4. ORBITAL INFORMATION				
a. FOR GEOSTATIONARY SATELLITES ONLY				
1. NOMINAL ORBITAL LONGITUDE	2a. LONGITUDINAL TOLERANCE	2b. INCLINATION EXCURSION	3. VISIBILITY ARC	4. SERVICE ARC
Degrees	Degrees	Degrees	Degrees	Degrees
E/W	To West To East	E/W	From W E/W To E E/W	From W E/W To E E/W
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. REASON FOR SERVICE ARC < VISIBILITY ARC. SEE ATTACHMENT No.				<input type="checkbox"/>
b. FOR NON-GEOSTATIONARY SATELLITES ONLY (see also page ApS4/II-1b if Resolution 46 applies)				
1. INCLINATION ANGLE	2. PERIOD	3a. APOGEE (km)	3b. PERIGEE (km)	4. NUMBER OF SATELLITES
Degrees	Days Hours Min.	provide exponent to base 10 if value > 99999	provide exponent to base 10 if value > 99999	REFERENCE BODY
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

GENERAL NOTES :

- i. This form of notice consists of four parts - 1, 2, 3 and 4 - as indicated below:
 - 1 - Characteristics of the network
 - 2 - Satellite network characteristics for reception at the space station
 - 3 - Satellite network characteristics for transmission from the space station, and
 - 4 - Overall link characteristics.

In each part, each information item/data field includes a number in its label. This number is the same as that used for the same item in Appendix S4 (WRC-95). For example, on the page labelled "Form ApS4/II - 2a", the field "A2a. Date of bringing into use" is the item numbered 2a in Part A of Annex 2A to Appendix S4.
- ii. Data items that are related are grouped together in a box. For example, the page labelled "Form ApS4/II - 2b" contains a box titled "Emissions of the associated transmitting station(s)". It is possible to specify 7 different emission values (with associated power, power density and C/N values) in this box. If there are more emissions, use another page of the same type to provide additional data, after checking (✓) the field labelled "More emissions on next page" on the preceding page. In all cases where there is more information than can fit in a box, follow this procedure.
- iii. This form can be used to add, modify or suppress an existing station, by entering **A**, **M** or **S** in the box at the top right-hand corner of this page in the area titled "Notification intended for". In the case of a modification of an existing station, where certain data fields are to be added, modified or suppressed, provide ALL the data in the particular box as they would look after the change. In addition, indicate that the corresponding beam, associated station or group of assigned frequencies is being modified by entering **M** or **R** in the field that has been provided for this purpose at these levels.
- iv. Certain fields in this notice form have a superscript "1" as part of their labels. This has the following meaning :
 - 1 - This information is not required for the notification of a typical earth station.

A4. ORBITAL INFORMATION (CONTINUED)

b5. FOR NON-GEOSTATIONARY SATELLITES ONLY
IF NOTIFIED UNDER RESOLUTION No. 46 (WRC-95) PROVIDE:

NUMBER OF ORBITAL PLANES

FOR EACH ORBITAL PLANE PROVIDE:

ORBITAL PLANE NUMBER	NUMBER OF SATELLITES IN THIS PLANE	RIGHT ASCENSION	INCLINATION ANGLE	SEMI-MAJOR AXIS	ECCENTRICITY	ARGUMENT OF PERIGEE
<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	km <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

FOR EACH SATELLITE IN THE ORBITAL PLANE PROVIDE THE INITIAL PHASE ANGLE

SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE
<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

ORBITAL PLANE NUMBER	NUMBER OF SATELLITES IN THIS PLANE	RIGHT ASCENSION	INCLINATION ANGLE	SEMI-MAJOR AXIS	ECCENTRICITY	ARGUMENT OF PERIGEE
<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	km <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

FOR EACH SATELLITE IN THE ORBITAL PLANE PROVIDE THE INITIAL PHASE ANGLE

SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE
<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

ORBITAL PLANE NUMBER	NUMBER OF SATELLITES IN THIS PLANE	RIGHT ASCENSION	INCLINATION ANGLE	SEMI-MAJOR AXIS	ECCENTRICITY	ARGUMENT OF PERIGEE
<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	km <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

FOR EACH SATELLITE IN THE ORBITAL PLANE PROVIDE THE INITIAL PHASE ANGLE

SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE
<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

ORBITAL PLANE NUMBER	NUMBER OF SATELLITES IN THIS PLANE	RIGHT ASCENSION	INCLINATION ANGLE	SEMI-MAJOR AXIS	ECCENTRICITY	ARGUMENT OF PERIGEE
<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	km <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

FOR EACH SATELLITE IN THE ORBITAL PLANE PROVIDE THE INITIAL PHASE ANGLE

SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE	SATELLITE NUMBER	INITIAL PHASE ANGLE
<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	Degrees <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

MORE ON NEXT PAGE

2. SATELLITE NETWORK CHARACTERISTICS FOR RECEPTION AT THE SPACE STATION

SATELLITE RECEIVING ANTENNA BEAM DETAILS

CHARACTERISTICS OF THE BEAM			ADD / MOD / SUP / REP of the beam <input type="checkbox"/>
B1. RECEIVING BEAM DESIGNATION <input type="text"/>	NOTE: For a steerable beam, the last character of the beam designation shall be "R"	OLD BEAM DESIGNATION (if changed) <input type="text"/>	
B3/B4. ANTENNA CHARACTERISTICS			
3a/3b/4a. MAXIMUM ISOTROPIC GAIN +/- dBi <input type="text"/>	3d. POINTING ACCURACY Degrees +/- <input type="text"/>	3a/3b. ANTENNA GAIN CONTOURS DIAGRAM. SEE ATTACHMENT No. <input type="text"/>	3e/4a/4b. ANTENNA RADIATION PATTERN REFERENCE PATTERN <input type="text"/>
		3f. ANTENNA GAIN VS ORBIT LONGITUDE DIAGRAM. SEE ATTACHMENT No. <input type="text"/>	RADIATION DIAGRAM. SEE ATTACHMENT No. <input type="text"/>
4b. FOR NON-GEOSTATIONARY SATELLITES UNDER RESOLUTION 46 (WRC-95)			
SATELLITE BEAM ORIENTATION			
ANGLE ALPHA Degrees <input type="text"/>	ANGLE BETA Degrees <input type="text"/>	FOR NON-STANDARD ANTENNA PROVIDE	
		Coefficient A dBi <input type="text"/>	Coefficient B dBi <input type="text"/>

INFORMATION COMMON TO THE FOLLOWING GROUPS (LISTS) OF ASSIGNED FREQUENCIES IN THIS BEAM			
A2a. DATE OF BRINGING INTO USE	Day	Month	Year
<input type="text"/>		<input type="text"/>	
A2b. PERIOD OF VALIDITY	<input type="text"/>	Years	
A3a. OPERATING AGENCY OR COMPANY (Refer to Table 12A/12B of the Preface to the IFL & SRS)	<input type="text"/>		
A3b. ADMINISTRATION RESPONSIBLE FOR THE STATION (Refer to Table 12A/12B of the Preface to the IFL & SRS)	<input type="text"/>		
SPECIAL SECTION AR11/A (RR1042) Number		OTHER SPECIAL SECTIONS	
<input type="text"/>		Reference	Number
SPECIAL SECTION AR11/C (RR1060) Number		(1)	<input type="text"/>
<input type="text"/>		(2)	<input type="text"/>
SPECIAL SECTION ART.14 (RR1610) Number		(3)	<input type="text"/>
<input type="text"/>		(4)	<input type="text"/>
		(5)	<input type="text"/>
A5/A6. COORDINATED WITH OR AGREEMENT REACHED WITH			
RR Provision	Symbols of the Administrations concerned		
<input type="text"/>	<input type="text"/>		
<input type="text"/>	<input type="text"/>		
<input type="text"/>	<input type="text"/>		
<input type="text"/>	<input type="text"/>		
<input type="text"/>	<input type="text"/>		
A5/A6. COORDINATION REQUESTED WITH OR AGREEMENT SOUGHT WITH			
RR Provision	Symbols of the Administrations concerned		
<input type="text"/>	<input type="text"/>		
<input type="text"/>	<input type="text"/>		
<input type="text"/>	<input type="text"/>		
<input type="text"/>	<input type="text"/>		
<input type="text"/>	<input type="text"/>		
REMARKS			
<input type="text"/>			

NOTES ON FILLING IN THE NEXT PAGES:
 FOR EACH BEAM YOU MAY PROVIDE ONE OR MORE GROUPS (LISTS) OF ASSIGNED FREQUENCIES, EACH GROUP (LIST) HAVING ONE SET OF COMMON CHARACTERISTICS. THE BOTTOM HALF OF THIS PAGE CONTAINS COMMON DATA THAT IS APPLICABLE TO ONE OR MORE GROUPS (LISTS) OF FREQUENCIES IN THIS BEAM. FOR EACH GROUP (LIST) OF FREQUENCIES IN THIS BEAM, FIRST FILL IN THE SET OF COMMON CHARACTERISTICS, INCLUDING ALL THE ASSOCIATED EARTH (OR SPACE) STATIONS AND THEIR EMISSIONS, FOLLOWED BY THE GROUP (LIST) OF FREQUENCIES TO WHICH THE SET APPLIES. USE AS MANY PAGES AS NECESSARY.

BR IDENTIFICATION NUMBER OF GROUP (LIST) OF FREQUENCIES TO BE MODIFIED / SUPPRESSED / REPLACED ADD / MOD / SUP / REP of the group

CHARACTERISTICS COMMON TO THE FOLLOWING GROUP (LIST) OF ASSIGNED FREQUENCIES

C4a. CLASS OF STATION	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	C6. POLARIZATION TYPE <input type="text"/> if linear, provide angle in degrees <input type="text"/>	C3a. ASSIGNED FREQUENCY BAND <input type="text"/> (kHz)
C4b. NATURE OF SERVICE	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		C5a. RECEIVING SYSTEM NOISE TEMPERATURE <input type="text"/> kelvins
C11a. SERVICE AREA	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	C8g. MAXIMUM AGGREGATE POWER +/- <input type="text"/> dBW
C9c. TYPE OF MODULATION AND MULTIPLE ACCESS DATA . SEE ATTACHMENT No.	<input type="text"/>	C9c. SPECTRUM MASK DIAGRAM SEE ATTACHMENT No.	<input type="text"/>	C11d. AFFECTED REGION SEE ATTACHMENT No.	<input type="text"/>	SERVICE AREA DIAGRAM SEE ATTACHMENT No. <input type="text"/>

TRANSMITTING STATION(S) ASSOCIATED WITH THE FOLLOWING GROUP (LIST) OF ASSIGNED FREQUENCIES

EMISSIONS OF THE ASSOCIATED TRANSMITTING STATION(S)

C7a. DESIGNATION OF EMISSION	C8a1/C8b1. * MAXIMUM PEAK POWER		C8a2/C8b2. * MAXIMUM POWER DENSITY		C8c1. MINIMUM PEAK POWER		C8c2. MINIMUM POWER DENSITY		C8e. C/N objective (total - clear sky)
	+/-	dBW	+/-	dBW/Hz	+/-	dBW	+/-	dBW/Hz	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

* If maximum peak power and maximum power density values are of type C8b, check this box MORE EMISSIONS ON NEXT PAGE Reason for minimum peak power and minimum power density (C8c) values being absent; see attachment No.

EARTH STATION		C10b1. EARTH STATION NAME <input type="text"/>		ADD / MOD / SUP / REP of the station <input type="text"/>		
		OLD EARTH STATION NAME (if changed) <input type="text"/>				
COUNTRY ¹ <input type="text"/>	C10. TYPE OF STATION (Specific/Typical) <input type="text"/>		C10c. ANTENNA CHARACTERISTICS (continued)			
C10b2. GEOGRAPHICAL COORDINATES ¹		4a. RADIATION PATTERN (give reference pattern or provide diagram) <input type="text"/>				
Longitude Degrees E/W Min. Sec.		Latitude Deg. N/S Min. Sec.		4b. ANTENNA RADIATION DIAGRAM. SEE ATTACHMENT No. <input type="text"/>		
		FOR NON-STANDARD ANTENNA PROVIDE:				
		Coefficient A dBi	Coefficient B dBi	Coefficient C dBi	Coefficient D dBi	
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		PH1 Degrees		<input type="text"/>		
C10c1a. CLASS OF STATION <input type="text"/>	C10c. ANTENNA CHARACTERISTICS		SPACE STATION			
C10c1b. NATURE OF SERVICE <input type="text"/>	2. MAXIMUM ISOTROPIC GAIN +/- <input type="text"/> dBi		C10a. SPACE STATION NAME <input type="text"/>			
		3. BEAMWIDTH <input type="text"/> Degrees		OLD SPACE STATION NAME (if changed) <input type="text"/>		
				TRANSMITTING BEAM DESIGNATION <input type="text"/>		
				C10. TYPE OF STATION (GSO/Non-GSO) <input type="text"/>		
				OLD BEAM DESIGNATION (if changed) <input type="text"/>		

GROUP (LIST) OF ASSIGNED FREQUENCIES HAVING THE ABOVE COMMON CHARACTERISTICS

C2a. ASSIGNED FREQUENCY	k/M/G Hz
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

MORE ON NEXT PAGE

3. SATELLITE NETWORK CHARACTERISTICS FOR TRANSMISSION FROM THE SPACE STATION

SATELLITE TRANSMITTING ANTENNA BEAM DETAILS

CHARACTERISTICS OF THE BEAM				ADD / MOD / SUP / REP of the beam <input type="checkbox"/>
B1. TRANSMITTING BEAM DESIGNATION <input type="text"/>		NOTE: For a steerable beam, the last character of the beam designation shall be "R"		OLD BEAM DESIGNATION (if changed) <input type="text"/>
B3/B4. ANTENNA CHARACTERISTICS				
3a/3b/4a. MAXIMUM ISOTROPIC GAIN <input type="text"/> ± <input type="text"/> dBi	3d. POINTING ACCURACY <input type="text"/> Degrees ± <input type="text"/>	3a/3b. ANTENNA GAIN CONTOURS DIAGRAM. SEE ATTACHMENT No. <input type="text"/>	3e/4a/4b. ANTENNA RADIATION PATTERN REFERENCE PATTERN <input type="text"/>	
4b. FOR NON-GEOSTATIONARY SATELLITES UNDER RESOLUTION 46 (WRC-95)		3f. ANTENNA GAIN VS ORBIT LONGITUDE DIAGRAM. SEE ATTACHMENT No. <input type="text"/>		RADIATION DIAGRAM. SEE ATTACHMENT No. <input type="text"/>
SATELLITE BEAM ORIENTATION ANGLE ALPHA <input type="text"/> Degrees ANGLE BETA <input type="text"/> Degrees		GAIN VS ELEVATION ANGLE DIAGRAM. SEE ATTACHMENT No. <input type="text"/>		FOR NON-STANDARD ANTENNA PROVIDE Coefficient A <input type="text"/> dBi Coefficient B <input type="text"/> dBi
MAXIMUM e.i.r.p. AT 4 kHz <input type="text"/> ± <input type="text"/> dBW/4kHz	AVERAGE e.i.r.p. AT 4 kHz <input type="text"/> ± <input type="text"/> dBW/4kHz	MAXIMUM e.i.r.p. AT 1 MHz <input type="text"/> ± <input type="text"/> dBW/1MHz	AVERAGE e.i.r.p. AT 1 MHz <input type="text"/> ± <input type="text"/> dBW/1MHz	SPREADING LOSS DATA. SEE ATTACHMENT No. <input type="text"/>

INFORMATION COMMON TO THE FOLLOWING GROUPS (LISTS) OF ASSIGNED FREQUENCIES IN THIS BEAM									
A2a. DATE OF BRINGING INTO USE		A2b. PERIOD OF VALIDITY							
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 33%;">Day</th> <th style="width: 33%;">Month</th> <th style="width: 33%;">Year</th> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table>		Day	Month	Year	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> Years	
Day	Month	Year							
<input type="text"/>	<input type="text"/>	<input type="text"/>							
A3a. OPERATING AGENCY OR COMPANY		A3b. ADMINISTRATION RESPONSIBLE FOR THE STATION							
(Refer to Table 12A/12B of the Preface to the IFL & SRS) <input type="text"/>		(Refer to Table 12A/12B of the Preface to the IFL & SRS) <input type="text"/>							
SPECIAL SECTION AR11/A (RR1042) Number <input type="text"/> A <input type="text"/> R <input type="text"/> 1 <input type="text"/> / <input type="text"/> A <input type="text"/> / <input type="text"/>		OTHER SPECIAL SECTIONS Reference Number							
SPECIAL SECTION AR11/C (RR1060) Number <input type="text"/> A <input type="text"/> R <input type="text"/> 1 <input type="text"/> / <input type="text"/> C <input type="text"/> / <input type="text"/>		(1) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
SPECIAL SECTION ART.14 (RR1610) Number <input type="text"/> A <input type="text"/> R <input type="text"/> 1 <input type="text"/> 4 <input type="text"/> / <input type="text"/> C <input type="text"/> / <input type="text"/>		(2) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
		(3) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
		(4) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
		(5) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
A5/A6. COORDINATED WITH OR AGREEMENT REACHED WITH									
RR Provision		Symbols of the Administrations concerned							
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>						
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>						
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>						
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>						
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>						
A5/A6. COORDINATION REQUESTED WITH /OR/ AGREEMENT SOUGHT WITH									
RR Provision		Symbols of the Administrations concerned							
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>						
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>						
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>						
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>						
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>						

REMARKS

NOTES ON FILLING IN THE NEXT PAGES:

FOR EACH BEAM YOU MAY PROVIDE ONE OR MORE GROUPS (LISTS) OF ASSIGNED FREQUENCIES, EACH GROUP (LIST) HAVING ONE SET OF COMMON CHARACTERISTICS. THE BOTTOM HALF OF THIS PAGE CONTAINS COMMON DATA THAT IS APPLICABLE TO ONE OR MORE GROUPS (LISTS) OF FREQUENCIES IN THIS BEAM. FOR EACH GROUP (LIST) OF FREQUENCIES IN THIS BEAM, FIRST FILL IN THE SET OF COMMON CHARACTERISTICS, INCLUDING ALL THE ASSOCIATED EARTH (OR SPACE) STATIONS AND THEIR EMISSIONS, FOLLOWED BY THE GROUP (LIST) OF FREQUENCIES TO WHICH THE SET APPLIES. USE AS MANY PAGES AS NECESSARY.

BR IDENTIFICATION NUMBER OF GROUP (LIST) OF FREQUENCIES TO BE MODIFIED / SUPPRESSED / REPLACED

ADD / MOD / SUP / REP of the group

CHARACTERISTICS COMMON TO THE FOLLOWING GROUP (LIST) OF ASSIGNED FREQUENCIES

C4a. CLASS OF STATION	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	C6. POLARIZATION TYPE <input type="text"/> if linear, provide angle in degrees <input type="text"/>	C3a. ASSIGNED FREQUENCY BAND <input type="text"/> (kHz)	C8d. MAXIMUM TOTAL PEAK POWER <input type="text"/> dBW
C4b. NATURE OF SERVICE	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>

C11a. SERVICE AREA OR SERVICE AREA DIAGRAM SEE ATTACHMENT No.

C9c. TYPE OF MODULATION AND MULTIPLE ACCESS DATA. SEE ATTACHMENT No. C9c. SPECTRUM MASK DIAGRAM SEE ATTACHMENT No. C11d. AFFECTED REGION SEE ATTACHMENT No. SERVICE AREA NUMBER

SPACE STATION EMISSIONS AND ASSOCIATED RECEIVING STATION(S) COMMON TO THE FOLLOWING GROUP (LIST) OF ASSIGNED FREQUENCIES

SPACE STATION EMISSIONS

C7a. DESIGNATION OF EMISSION	C8a1/C8b1. * MAXIMUM PEAK POWER		C8a2/C8b2. * MAXIMUM POWER DENSITY		C8c1. MINIMUM PEAK POWER		C8c2. MINIMUM POWER DENSITY		C8e. C/N objective (total - clear sky)
	+/-	dBW	+/-	dBW/Hz	+/-	dBW	+/-	dBW/Hz	dB
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

* If maximum peak power and maximum power density values are of type C8b, check this box MORE EMISSIONS ON NEXT PAGE Reason for minimum peak power and minimum power density (C8c) values being absent; see attachment No.

EARTH STATION

ADD / MOD / SUP / REP of the station

C10b1. EARTH STATION NAME

OLD EARTH STATION NAME (if changed)

COUNTRY¹ C10. TYPE OF STATION (Specific/Typical)

C10b2. GEOGRAPHICAL COORDINATES¹

Longitude				Latitude				C10c5. RECEIVING SYSTEM NOISE TEMPERATURE kelvins
Degrees	E/W	Min.	Sec.	Deg.	N/S	Min.	Sec.	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

C10c. ANTENNA CHARACTERISTICS (continued)

4a. RADIATION PATTERN (give reference pattern or provide diagram)

4b. ANTENNA RADIATION DIAGRAM. SEE ATTACHMENT No.

FOR NON-STANDARD ANTENNA PROVIDE:

Coefficient A	Coefficient B	Coefficient C	Coefficient D	PHI1
dBi	dBi	dBi	dBi	Degrees
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

C10c1a. CLASS OF STATION

C10c1b. NATURE OF SERVICE

C10c. ANTENNA CHARACTERISTICS

2. MAXIMUM ISOTROPIC GAIN +/- dB

3. BEAMWIDTH Degrees

SPACE STATION

ADD / MOD / SUP / REP of the station

C10a. SPACE STATION NAME

OLD SPACE STATION NAME (if changed)

RECEIVING BEAM DESIGNATION C10. TYPE OF STATION (GSO/Non-GSO)

OLD BEAM DESIGNATION (if changed)

GROUP (LIST) OF ASSIGNED FREQUENCIES HAVING THE ABOVE COMMON CHARACTERISTICS

C2a. ASSIGNED FREQUENCY	k/M/G Hz	C2a. ASSIGNED FREQUENCY	k/M/G Hz
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

MORE ON NEXT PAGE

4. OVERALL LINK CHARACTERISTICS

FOR GEOSTATIONARY SPACE STATIONS USING SIMPLE FREQUENCY-CHANGING TRANSPONDERS AND OPERATING WITH EARTH STATIONS

D1. Indicate the strapping (connection) between the uplink and downlink frequency assignments for each intended combination of receiving and transmitting beams

Serial No.	ADD / REP / SUP	BEAM COMBINATION		FREQUENCY COMBINATION			
		UPLINK BEAM	DOWNLINK BEAM	UPLINK ASSIGNED FREQUENCY	k/M/G Hz	DOWNLINK ASSIGNED FREQUENCY	k/M/G Hz
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>

4. OVERALL LINK CHARACTERISTICS (CONT.)

D2. For each entry (or group of entries) in table D1 indicate the following equivalent satellite link noise temperatures and associated transmission gains.

Line Number	ADD / REP / SUP	Reference to Serial No(s). in table D1	a1. LOWEST EQUIVALENT SATELLITE LINK NOISE TEMPERATURE	a2. ASSOCIATED TRANSMITTING GAIN	b1. SATELLITE LINK NOISE TEMPERATURE FOR HIGHEST RATIO OF GAIN/NOISE	b2. ASSOCIATED TRANSMITTING GAIN	ASSOCIATED RECEIVING EARTH STATION NAME
			kelvins	dB	kelvins	dB	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	
	<input type="checkbox"/>			●		●	

MORE ON NEXT PAGE

DATE (Day/Month/Year) <input style="width:100%;" type="text"/>	FORM OF NOTICE EARTH STATION (APPENDIX S4 - ANNEX 2A)	PAGE 1 OF <input style="width:50%;" type="text"/>	ApS4/III
Administration Serial Number <input style="width:100%;" type="text"/>	A1f. NOTIFYING ADMINISTRATION <input style="width:100%;" type="text"/>		NOTIFICATION INTENDED FOR ADDITION <input type="checkbox"/> MODIFICATION <input type="checkbox"/> SUPPRESSION <input type="checkbox"/>
FIRST NOTIFICATION <input type="checkbox"/>	RR1488 Notification <input type="checkbox"/>	RR1107 Request for Coordination <input type="checkbox"/>	RR1610 Agreement under Art. 14 <input type="checkbox"/>
RESUBMISSION <input type="checkbox"/>	RS46 Request for Coordination <input type="checkbox"/>	Request for Assistance of the BR for RR1107 <input type="checkbox"/> and/or RR1610 <input type="checkbox"/>	
BR IDENTIFICATION No. OF STATION TO BE MODIFIED / SUPPRESSED <input style="width:100%;" type="text"/>			

1. CHARACTERISTICS OF THE EARTH STATION

A1e1. TYPE (Specific/Typical) <input type="checkbox"/>	A1e2. NAME OF THE EARTH STATION <input style="width:100%;" type="text"/>		
A1e3a. COUNTRY ¹ <input style="width:50%;" type="text"/>	A1e3b. GEOGRAPHICAL COORDINATES ¹		
		Longitude	Latitude
		Degrees E/W Min. Sec.	Deg. N/S Min. Sec.
		<input style="width:100%;" type="text"/>	<input style="width:100%;" type="text"/>
A4c1. ASSOCIATED SPACE STATION <input style="width:100%;" type="text"/>			
A4c2. NOMINAL ORBITAL LONGITUDE (if geostationary)	Degrees	E/W	
	<input style="width:100%;" type="text"/>	<input type="checkbox"/>	
A7a. HORIZON ELEVATION DIAGRAM ¹ SEE ATTACHMENT No. <input style="width:50%;" type="text"/>	A7b. ELEVATION ANGLE ¹	Degrees	A7c. OPERATING AZIMUTHAL ANGLES ¹
	<input style="width:50%;" type="text"/>	<input style="width:100%;" type="text"/>	FROM (Degrees) TO (Degrees)
		<input style="width:100%;" type="text"/>	<input style="width:50%;" type="text"/> <input style="width:50%;" type="text"/>
A7d. ALTITUDE ¹	Metres	A10. COORDINATION AREA DIAGRAMS SEE ATTACHMENT No. <input style="width:50%;" type="text"/>	
	<input style="width:100%;" type="text"/>		

A7a. TABLE OF VALUES FOR THE HORIZON ELEVATION¹

AZIMUTH	ELEVATION ANGLE	AZIMUTH	ELEVATION ANGLE	AZIMUTH	ELEVATION ANGLE	AZIMUTH	ELEVATION ANGLE	AZIMUTH	ELEVATION ANGLE	AZIMUTH	ELEVATION ANGLE
	Degrees		Degrees		Degrees		Degrees		Degrees		Degrees
<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>
<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>
<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>
<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>
<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>
<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>

GENERAL NOTES :

i. This form of notice consists of three parts - 1, 2 and 3 - as indicated below :

- 1 - Characteristics of the earth station
- 2 - Transmitting earth station characteristics and
- 3 - Receiving earth station characteristics.

In each part, each information item/data field includes a number in its label. This number is the same as that used for the same item in Appendix S4 (WRC-95) within the same part. For example, on the page labelled "Form ApS4/III - 2a" (at the bottom), the field "A2a. Date of bringing into use" is the item numbered 2a in Part A of Annex 2A to Appendix S4.

ii. Data items that are related are grouped together in a box. For example, the page labelled "Form ApS4/III - 2b" contains a box "Emissions common to the assigned frequencies listed below". It is possible to specify 12 different emissions (with associated power and power density values) in this box. If there are more emissions, use another page of the same type to provide additional data, after checking (✓) the field labelled "More emissions on next page" on the preceding page. In all cases where there is more information than can fit in a box, follow this

iii. This form can be used to add, modify or suppress an existing station, by entering **A**, **M** or **S** in the box at the top right-hand corner of this page in the area titled "Notification intended for". In the case of a modification of an existing station, where certain data fields are to be added, modified or suppressed, provide ALL the data in the particular box as they would look after the change. In addition, indicate that the corresponding antenna or group of assigned frequencies is being modified by entering **M** or **R** in the field that has been provided for this purpose at these levels.

iv. Certain fields in this notice form have a superscript "1" as part of their labels. This has the following meaning :

¹ This information is not required for the notification of a typical earth station.

2. TRANSMITTING EARTH STATION CHARACTERISTICS

CHARACTERISTICS OF THE ANTENNA		ADD / MOD / SUP / REP of the antenna															
B1. ASSOCIATED SATELLITE RECEIVING BEAM DESIGNATION	<input type="text"/>	NOTE: For a steerable beam, the last character of the beam designation shall be "R" OLD BEAM DESIGNATION (if changed) <input type="text"/>															
B5. EARTH STATION ANTENNA CHARACTERISTICS																	
a. MAXIMUM ISOTROPIC GAIN	<input type="text"/> +/- <input type="text"/> dBi	b. BEAMWIDTH <input type="text"/> Degrees															
c2. RADIATION PATTERN (give reference pattern or provide diagram)		c1. ANTENNA RADIATION PATTERN DIAGRAM. SEE ATTACHMENT No. <input type="text"/>															
<input type="text"/>		FOR NON-STANDARD ANTENNA PROVIDE:															
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 20%;">Coefficient A</th> <th style="width: 20%;">Coefficient B</th> <th style="width: 20%;">Coefficient C</th> <th style="width: 20%;">Coefficient D</th> <th style="width: 20%;">PHI1</th> </tr> <tr> <td style="text-align: center;">dBi</td> <td style="text-align: center;">dBi</td> <td style="text-align: center;">dBi</td> <td style="text-align: center;">dBi</td> <td style="text-align: center;">Degrees</td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table>	Coefficient A	Coefficient B	Coefficient C	Coefficient D	PHI1	dBi	dBi	dBi	dBi	Degrees	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Coefficient A	Coefficient B	Coefficient C	Coefficient D	PHI1													
dBi	dBi	dBi	dBi	Degrees													
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>													

INFORMATION COMMON TO THE FOLLOWING GROUPS (LISTS) OF ASSIGNED FREQUENCIES OF THIS ANTENNA								
A2a. DATE OF BRINGING INTO USE	<table border="1" style="width:100%; border-collapse: collapse;"><tr><th>Day</th><th>Month</th><th>Year</th></tr><tr><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td></tr></table>	Day	Month	Year	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Day	Month	Year						
<input type="text"/>	<input type="text"/>	<input type="text"/>						
A3a. OPERATING AGENCY OR COMPANY (Refer to Table 12A/12B of the Preface to the IFL & SRS)	<input type="text"/>	A3b. ADMINISTRATION RESPONSIBLE FOR THE STATION (Refer to Table 12A/12B of the Preface to the IFL & SRS)						
OTHER SPECIAL SECTIONS								
SPECIAL SECTION AR11/A (RR1042) Number <input type="text"/> A <input type="text"/> R <input type="text"/> 1 <input type="text"/> 1 / <input type="text"/> A / <input type="text"/>	Reference Number (1) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
SPECIAL SECTION AR11/C (RR1060) Number <input type="text"/> A <input type="text"/> R <input type="text"/> 1 <input type="text"/> 1 / <input type="text"/> C / <input type="text"/>	(2) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
SPECIAL SECTION ART. 14 (RR1610) Number <input type="text"/> A <input type="text"/> R <input type="text"/> 1 <input type="text"/> 4 / <input type="text"/> A / <input type="text"/>	(3) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
	(4) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
	(5) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
A6/A7. COORDINATED WITH OR AGREEMENT REACHED WITH								
RR Provision	Symbols of the Administrations concerned							
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>							
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>							
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>							
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>							
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>							
A6/A7. COORDINATION REQUESTED WITH OR AGREEMENT SOUGHT WITH								
RR Provision	Symbols of the Administrations concerned							
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>							
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>							
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>							
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>							
<input type="text"/> R <input type="text"/> R <input type="text"/>	<input type="text"/>							
REMARKS								

NOTES ON FILLING IN THE NEXT PAGES:
 FOR EACH ANTENNA YOU MAY PROVIDE ONE OR MORE GROUPS (LISTS) OF ASSIGNED FREQUENCIES, EACH GROUP (LIST) HAVING ONE SET OF COMMON CHARACTERISTICS. THE BOTTOM HALF OF THIS PAGE CONTAINS COMMON DATA THAT IS APPLICABLE TO ONE OR MORE GROUPS (LISTS) OF FREQUENCIES OF THIS ANTENNA. FOR EACH GROUP (LIST) OF FREQUENCIES OF THIS ANTENNA, FIRST FILL IN THE SET OF COMMON CHARACTERISTICS, FOLLOWED BY THE GROUP (LIST) OF FREQUENCIES TO WHICH THE SET APPLIES. USE AS MANY PAGES AS NECESSARY.

BR IDENTIFICATION NUMBER OF GROUP (LIST) OF FREQUENCIES TO BE MODIFIED / SUPPRESSED / REPLACED

ADD / MOD / SUP / REP of the group

CHARACTERISTICS COMMON TO THE FOLLOWING GROUP (LIST) OF ASSIGNED FREQUENCIES

C4a. CLASS OF STATION	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	C6. POLARIZATION TYPE if linear, provide angle in degrees	C3a. ASSIGNED FREQUENCY BAND kHz <input type="text"/>	C5b. RECEIVING SYSTEM NOISE TEMPERATURE kelvins <input type="text"/>
C4b. NATURE OF SERVICE	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			

EMISSIONS RECEIVED BY THE ASSIGNED FREQUENCIES LISTED BELOW

C7a. DESIGNATION OF EMISSION	C8e. C/N Objective (total - clear sky)
<input type="text"/>	dBi <input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

MORE EMISSIONS ON NEXT PAGE

GROUP (LIST) OF ASSIGNED FREQUENCIES HAVING THE ABOVE COMMON CHARACTERISTICS

C2a. ASSIGNED FREQUENCY	k/M/G Hz	C2a. ASSIGNED FREQUENCY	k/M/G Hz
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

MORE ON NEXT PAGE

3. RECEIVING EARTH STATION CHARACTERISTICS

CHARACTERISTICS OF THE ANTENNA				ADD / MOD / SUP / REP of the antenna
B1. ASSOCIATED SATELLITE TRANSMITTING BEAM DESIGNATION	<input type="text"/>	NOTE: For a steerable beam, the last character of the beam designation shall be "R"	OLD BEAM DESIGNATION (if changed)	<input type="text"/>
B5. EARTH STATION ANTENNA CHARACTERISTICS				
a. MAXIMUM ISOTROPIC GAIN	+/- dBi	b. BEAMWIDTH	Degrees	c1. ANTENNA RADIATION PATTERN DIAGRAM. SEE ATTACHMENT No.
	<input type="text"/>		<input type="text"/>	<input type="text"/>
c2. RADIATION PATTERN (give reference pattern or provide diagram)	FOR NON-STANDARD ANTENNA PROVIDE:			
<input type="text"/>	Coefficient A dBi	Coefficient B dBi	Coefficient C dBi	Coefficient D dBi
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
				PHI1 Degrees
				<input type="text"/>

INFORMATION COMMON TO THE FOLLOWING GROUPS (LISTS) OF ASSIGNED FREQUENCIES OF THIS ANTENNA		
A2a. DATE OF BRINGING INTO USE	Day Month Year	
	<input type="text"/>	
A3a. OPERATING AGENCY OR COMPANY (Refer to Table 12A/12B of the Preface to the IFL & SRS)	<input type="text"/>	A3b. ADMINISTRATION RESPONSIBLE FOR THE STATION (Refer to Table 12A/12B of the Preface to the IFL & SRS)
		<input type="text"/>
OTHER SPECIAL SECTIONS		
	Reference	Number
SPECIAL SECTION AR11/A (RR1042) Number	(1)	<input type="text"/>
A R 1 1 / A / <input type="text"/>	(2)	<input type="text"/>
SPECIAL SECTION AR11/C (RR1060) Number	(3)	<input type="text"/>
A R 1 1 / C / <input type="text"/>	(4)	<input type="text"/>
SPECIAL SECTION ART.14 (RR1610) Number	(5)	<input type="text"/>
A R 1 4 / C / <input type="text"/>		
A6/A7. COORDINATED WITH OR AGREEMENT REACHED WITH		
RR Provision	Symbols of the Administrations concerned	
R R <input type="text"/>	<input type="text"/>	
R R <input type="text"/>	<input type="text"/>	
R R <input type="text"/>	<input type="text"/>	
R R <input type="text"/>	<input type="text"/>	
R R <input type="text"/>	<input type="text"/>	
A6/A7. COORDINATION REQUESTED WITH OR AGREEMENT SOUGHT WITH		
RR Provision	Symbols of the Administrations concerned	
R R <input type="text"/>	<input type="text"/>	
R R <input type="text"/>	<input type="text"/>	
R R <input type="text"/>	<input type="text"/>	
R R <input type="text"/>	<input type="text"/>	
R R <input type="text"/>	<input type="text"/>	
REMARKS		
<input type="text"/>		

NOTES ON FILLING IN THE NEXT PAGES:

FOR EACH ANTENNA YOU MAY PROVIDE ONE OR MORE GROUPS (LISTS) OF ASSIGNED FREQUENCIES, EACH GROUP (LIST) HAVING ONE SET OF COMMON CHARACTERISTICS. THE BOTTOM HALF OF THIS PAGE CONTAINS COMMON DATA THAT IS APPLICABLE TO ONE OR MORE GROUPS (LISTS) OF FREQUENCIES OF THIS ANTENNA. FOR EACH GROUP (LIST) OF FREQUENCIES OF THIS ANTENNA, FIRST FILL IN THE SET OF COMMON CHARACTERISTICS, FOLLOWED BY THE GROUP (LIST) OF FREQUENCIES TO WHICH THE SET APPLIES. USE AS MANY PAGES AS NECESSARY.

BR IDENTIFICATION NUMBER OF GROUP (LIST) OF FREQUENCIES
TO BE MODIFIED / SUPPRESSED / REPLACED

ADD / MOD / SUP / REP
of the group

CHARACTERISTICS COMMON TO THE FOLLOWING GROUP (LIST) OF ASSIGNED FREQUENCIES

C4a. CLASS OF STATION	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	C6. POLARIZATION TYPE	if linear, provide angle in degrees	C3a. ASSIGNED FREQUENCY BAND	C5b. RECEIVING SYSTEM NOISE TEMPERATURE
C4b. NATURE OF SERVICE	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			<input type="text"/>	kHz

EMISSIONS RECEIVED BY THE ASSIGNED FREQUENCIES LISTED BELOW

C7a. DESIGNATION OF EMISSION	C8e. C/N Objective (total - clear sky)
<input type="text"/>	dBi
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

MORE EMISSIONS ON NEXT PAGE

GROUP (LIST) OF ASSIGNED FREQUENCIES HAVING THE ABOVE COMMON CHARACTERISTICS

C2a. ASSIGNED FREQUENCY	k/M/G Hz	C2a. ASSIGNED FREQUENCY	k/M/G Hz
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

MORE ON NEXT PAGE