

Austria

Attachment 1**QUESTIONNAIRE - PART I****(To be completed by both Administrations and Sector members, if relevant)****Specific Questions on National Radio Frequency Spectrum Management**

1. **Information on national radio frequency spectrum allocations: 29.7 - 960 MHz**
 - a) If you have published a National Table of Radio Frequency Spectrum Allocations, please submit a copy (either in electronic, or printed form, or both) of that table along with your responses to the attached questionnaire. *See attachment.*
 - b) If you do not have a national frequency allocations table available, the attached modified extract from Article S.5 of the Radio Regulations may be used to indicate general information on how this range of frequencies is used by your administration within your national borders. *N. A.*

In using the attached modified extract of the International Frequency Allocations table presented in the excerpt from the Radio Regulations Article S.5, you, as a respondent from an administration or industry, are invited to enter the following information. In the column designated "National Allocations", respondents from administrations are requested to enter the name of the radiocommunications service (using the ITU terminology given in Article S1 of the Radio Regulations, such as FIXED, MOBILE, space research, radio astronomy...) that is allocated use of a given frequency band. In the column designated "Remarks", 1) respondents from administrations are invited to enter further technical specifications, if any, that have been established nationally for a given band such as channel spacing, limitations on radiated signal power...; and 2) respondents from industry are invited to enter the operating parameters such as channel spacing, radiated signal power capabilities,...., of products available for operation in a given frequency band.

- 2 **Identification of a focal point regarding correspondence on this questionnaire (Parts I and II)**

Please identify a focal point in your administration/organization who could provide a response to further correspondence regarding this questionnaire (see hereafter).

**FOCAL POINT REGARDING CORRESPONDENCE ON THIS QUESTIONNAIRE
(PARTS I AND II)**

1. Mr./~~MS~~ LEITNER Gerd
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2. Country Austria
3. Name of the Administration/Organization Austria
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QUESTIONNAIRE - PART II
(To be completed by Administrations only)

General Questions on National Spectrum Management

Describe succinctly the problems that your administration is currently experiencing in national spectrum management (for example subject areas in national spectrum management).

Country Austria

Focal point see part I

The following general questions on national spectrum management are based in part on the functional requirements of spectrum management described in the handbook on "National Spectrum Management." If you need additional space to answer the questions please continue on a separate sheet of paper.

- 1. Do you have a national law governing spectrum management? YES NO
- Last date this law was changed or modified? 1997
- Are any actions planned to change this law? YES NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

- 2. Have you published regulations and procedures for national spectrum management (e.g. radio services, license requirements etc.)? YES NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

- 3. Do you have a national radio frequency spectrum allocation table? YES NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

4. Do you have technical specifications for national spectrum use? YES NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

5. Do you have a need for any spectrum redeployment* ? YES NO

* The term "redeployment" is used here to refer to a process of national scope in which an assessment is conducted 1) to determine if portions of spectrum can be identified that are in limited use; and 2) to determine if such spectrum segments can be reallocated for use in delivering radiocommunication services that have expanding spectrum requirements.

- If so, do you have a strategy for achieving this redeployment in respective frequency bands and for given radiocommunication services? YES NO

- Please define the established strategy and describe the nature of the consultation, if any, with users regarding the potential costs resulting from the planned redeployment.

6. What is the total cost of national spectrum management functions performed by your Government (expressed in Swiss francs)? *15 Million p.a.*

- What is the source of the funding required to accomplish these spectrum management functions?

State budget

7. Do you have a method for establishing spectrum users' fees? YES NO

- If so, please give a brief description of the method used in establishing those fees.

The frequency utilisation fees are based on the transmitter output power and the occupied bandwidth of emission of each transmitter.

8. Do you maintain centralized databases for spectrum management? YES NO

- What is the approximate size of your database (expressed in number of records)?

Approx. 250 000

- Do you have a computerized data base management system (DBMS)?

YES NO

- What DBMS system do you use?

Host / Mainframe

- Are these frequency assignment records available to public?

YES NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

9. Do you notify frequency assignments to the ITU?

YES NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

For the electronic notification, more assistance, example files and software support as well as a detailed description of the ITC database would be required.

10. Do you have a policy and planning function for national spectrum management (i.e. a national strategy for future use of the spectrum)?

YES NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

11. Do you perform technical analyses of frequency assignment requests?

YES NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

12. Do you perform radio monitoring?

YES NO

- number of fixed monitoring stations

7

- facilities available at fixed monitoring stations

-- monitoring up to 1300 MHz

-- direction finding up to 1300 MHz

- number of mobile monitoring stations

18

- facilities available at mobile monitoring stations

-- monitoring up to 1300 MHz

-- direction finding up to 1300 MHz

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

13. Do you perform technical analyses of radio frequency interference complaints?

YES NO

- Do you have an established consultation process, involving Government and non-government organization, for resolving these complaints?

YES NO

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

14. What computers and operating systems are in use for national spectrum management?

Type of computers Host ~~and~~ mainframe and PC 586 Pentium 166,

Operating system(s) IBM OS/390 and MS-DOS 4.0

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

15. Number of technical/professional staff in national spectrum management?

15

16. Number of support staff in national spectrum management?

75

17. Describe your country's spectrum management structure (Please enclose a copy of organization chart).

see attachment

18. Do you use the ITU-R Handbooks and Reports on:

- a) National Spectrum Management, version 1995? *yes*
- b) Spectrum Monitoring¹, version 1995? *yes*
- c) Computer-aided Techniques for Spectrum Management, version 1999? *yes*
- d) HF Broadcasting System Design, version 1999? *no*
- e) Report SM.2012, Economic Aspects of Spectrum Management, version 1997²? *no*
- f) Windows Basic Automated Spectrum Management System (WinBASMS) Software Version 1997, Manual Version 1997 *no*

What additional information/handbooks do you need from the ITU?

More frequent updates of a, b, and c.

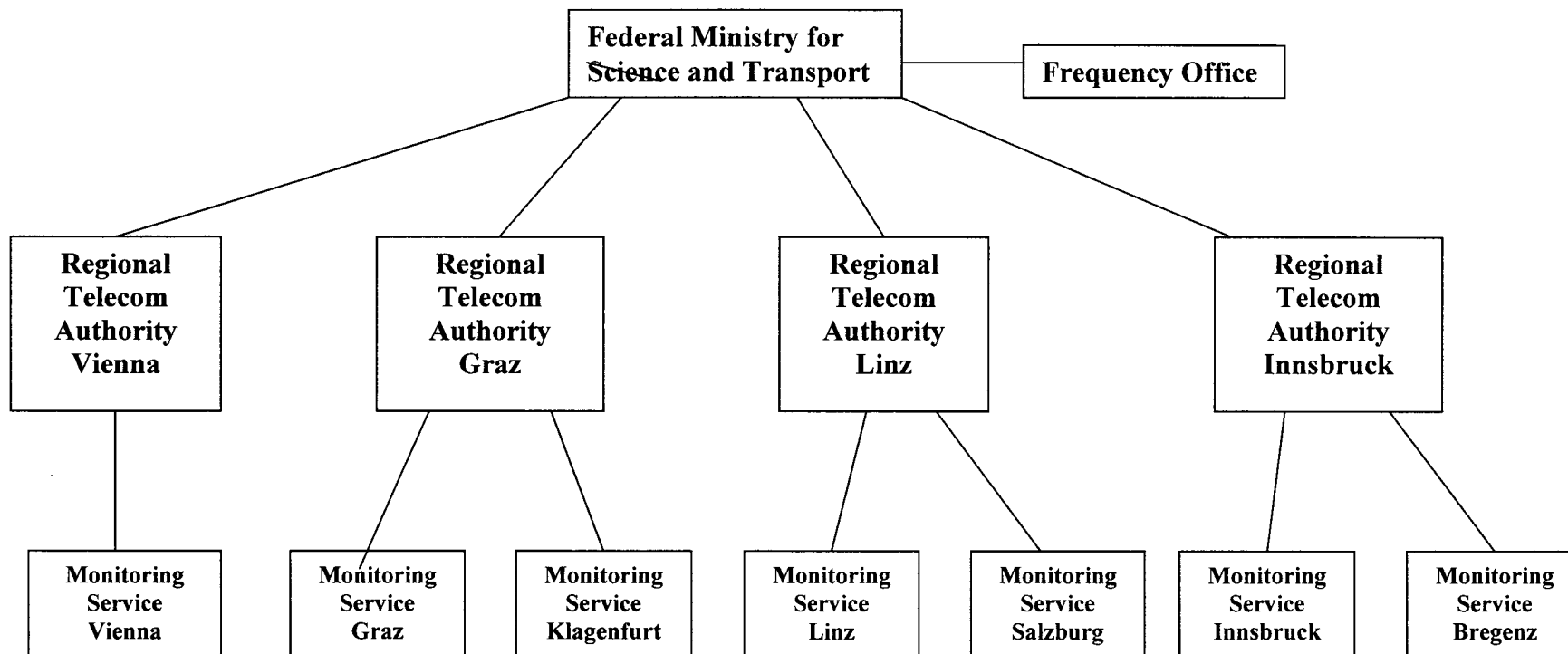
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Fax: +41 22 730 54 84
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THANK YOU FOR YOUR COOPERATION

¹ The Spectrum Monitoring Handbook is currently being updated, therefore, you are urged to contact Mr Jan Verduijn (NL), the designated Rapporteur from ITU-R Study Group 1, Working Party 1C if you have any comments that you wish included in a future version of this Handbook.

² This Report SM.2012 was updated during the ITU-R Study Group 1 meeting in August 1999. This new version is expected to be available in the three working languages by January 2000.

Organization Chart of the Austrian Spectrum Management Structure



**Verordnung des Bundesministers für Wissenschaft und Verkehr betreffend die
Frequenzbereichszuweisung
(Frequenzbereichszuweisungsverordnung-FBZV),
BGBl. II Nr. 149/1998**

Auf Grund des § 47 Abs.2 des Bundesgesetzes betreffend die Telekommunikation, BGBl.I Nr. 100/1997, wird verordnet:

Geltungsbereich

§ 1.(1) Mit dieser Verordnung werden im Frequenzbereich 9 kHz bis 105 GHz einzelnen Funkdiensten Frequenzbereiche zugewiesen.

(2) Durch diese Verordnung bleiben unberührt

1. die Rechte von Funkdiensten, die außerhalb des Bundesgebietes gemäß der einen integrierenden Bestandteil des Internationalen Fernmeldevertrages, BGBl.III Nr. 17/1998, bildenden Vollzugsordnung für den Funkdienst (VOFunk) betrieben werden, und
2. die sich aus der VOFunk ergebenden Verpflichtungen der österreichischen Funkdienste gegenüber ausländischen Funkdiensten, die gemäß der VOFunk betrieben werden.

Begriffsbestimmungen

§ 2. (1) In dieser Verordnung bezeichnet der Begriff

1. „Funkdienst“ (Radiocommunication Service) einen Dienst, der die Übermittlung, die Aussendung und/oder den Empfang von Funkwellen für bestimmte Zwecke des Fernmeldeverkehrs umfaßt; falls nichts Gegenteiliges angegeben ist, bezieht sich jeder in den Tabellen genannte Funkdienst auf den terrestrischen Funkverkehr;
2. „Sicherheitsfunkdienst“ (Safety Service) jeden Funkdienst, der ständig oder vorübergehend wahrgenommen wird, um die Sicherheit des menschlichen Lebens und den Schutz von Sachwerten zu gewährleisten;
3. „Fester Funkdienst“ (Fixed Service) einen Funkdienst zwischen bestimmten festen Punkten;
4. „Fester Funkdienst über Satelliten“ (Fixed-Satellite Service) einen Funkdienst zwischen Erdfunkstellen an bestimmten Standorten, wenn ein oder mehrere Satelliten benutzt werden; der bestimmte Standort kann ein genau bezeichneter fester Punkt oder irgendein fester Punkt innerhalb genau bezeichneter Gebiete sein; in bestimmten Fällen umfaßt dieser Funkdienst Funkverbindungen zwischen Satelliten, wobei diese Funkverbindungen auch im Intersatellitenfunkdienst betrieben werden können; der feste Funkdienst über Satelliten kann auch Speiseverbindungen für andere Weltraumfunkdienste umfassen;
5. „Intersatellitenfunkdienst“ (Inter-Satellite Service) einen Funkdienst für Funkverbindungen zwischen künstlichen Satelliten;

6. „Weltraumfernwirkfunkdienst“ (Space Operation Service) einen Funkdienst, der ausschließlich dem Betrieb der Weltraumfahrzeuge dient, insbesondere der Weltraumbahnverfolgung, dem Weltraumfernmessen und dem Weltraumfernsteuern; diese Aufgaben werden in der Regel innerhalb des Funkdienstes wahrgenommen, in dem die Weltraumfunkstelle arbeitet;
7. „Beweglicher Funkdienst“ (Mobile Service) einen Funkdienst zwischen beweglichen und ortsfesten Funkstellen oder zwischen beweglichen Funkstellen;
8. „Beweglicher Funkdienst über Satelliten“ (Mobile-Satellite Service) einen Funkdienst zwischen beweglichen Erdfunkstellen und einer oder mehreren Weltraumfunkstellen oder zwischen Weltraumfunkstellen, die für diesen Funkdienst benutzt werden oder zwischen beweglichen Erdfunkstellen über eine oder mehrere Weltraumfunkstellen; dieser Funkdienst kann auch die für seine Wahrnehmung erforderlichen Speiseverbindungen umfassen;
9. „Beweglicher Landfunkdienst“ (Land Mobile Service) einen beweglichen Funkdienst zwischen ortsfesten und beweglichen Landfunkstellen oder zwischen beweglichen Landfunkstellen;
10. „Beweglicher Landfunkdienst über Satelliten“ (Land Mobile-Satellite Service) einen beweglichen Funkdienst über Satelliten, bei dem die beweglichen Erdfunkstellen sich an Land befinden;
11. „Beweglicher Seefunkdienst“ (Maritime Mobile Service) einen beweglichen Funkdienst zwischen Küstenfunkstellen und Seefunkstellen oder zwischen Seefunkstellen oder zwischen zugeordneten Funkstellen für den Funkverkehr an Bord; Rettungsgerätfunkstellen und Funkbaken zur Kennzeichnung der Notposition dürfen ebenfalls an diesem Funkdienst teilnehmen;
12. „Beweglicher Seefunkdienst über Satelliten“ (Maritime Mobile-Satellite Service) einen beweglichen Funkdienst über Satelliten, bei dem die beweglichen Erdfunkstellen sich an Bord von Seefahrzeugen befinden; Rettungsgerätfunkstellen und Funkbaken zur Kennzeichnung der Notposition dürfen ebenfalls an diesem Funkdienst teilnehmen;
13. „Beweglicher Flugfunkdienst“ (Aeronautical Mobile Service) einen beweglichen Funkdienst zwischen Bodenfunkstellen und Luftfunkstellen oder zwischen Luftfunkstellen, an dem auch Rettungsgerätfunkstellen teilnehmen dürfen; Funkbaken zur Kennzeichnung der Notposition dürfen auf festgelegten Notfrequenzen ebenfalls an diesem Funkdienst teilnehmen;
14. „Beweglicher Flugfunkdienst (R)“ (Aeronautical Mobile (R) Service) einen beweglichen Flugfunkdienst, der dem die Sicherheit und Regelmäßigkeit der Flüge betreffenden Funkverkehr vorwiegend auf nationalen oder internationalen zivilen Luftverkehrsrouten vorbehalten ist;
15. „Beweglicher Flugfunkdienst (OR)“ (Aeronautical Mobile (OR) Service) einen beweglichen Flugfunkdienst, der für den Funkverkehr, einschließlich des Verkehrs zur Flugkoordination, vorwiegend außerhalb von nationalen oder internationalen zivilen Luftverkehrsrouten vorgesehen ist;

16. „Beweglicher Flugfunkdienst über Satelliten“ (Aeronautical Mobile-Satellite Service) einen beweglichen Funkdienst über Satelliten, bei dem die beweglichen Erdfunkstellen sich an Bord von Luftfahrzeugen befinden; Rettungsgerätfunkstellen und Funkbaken zur Kennzeichnung der Notposition dürfen ebenfalls an diesem Funkdienst teilnehmen;

17. „Beweglicher Flugfunkdienst über Satelliten (R)“ (Aeronautical Mobile-Satellite (R)Service) einen beweglichen Funkdienst über Satelliten, der dem die Sicherheit und Regelmäßigkeit der Flüge betreffenden Funkverkehr vorwiegend auf nationalen oder internationalen zivilen Luftverkehrsrouten vorbehalten ist;

18. „Beweglicher Flugfunkdienst über Satelliten (OR)“ (Aeronautical Mobile-Satellite (OR) Service) einen beweglichen Funkdienst über Satelliten, der für den Funkverkehr, einschließlich des Verkehrs zur Flugkoordinierung, vorwiegend außerhalb von nationalen oder internationalen zivilen Luftverkehrsrouten vorgesehen ist;

19. „Rundfunkdienst“ (Broadcasting Service) einen Funkdienst, dessen Aussendungen zum unmittelbaren Empfang durch die Allgemeinheit bestimmt sind; dieser Funkdienst kann Tonsendungen, Fernsehsendungen oder andere Arten von Sendungen umfassen;

20. „Rundfunkdienst über Satelliten“ (Broadcasting-Satellite Service) einen Funkdienst, bei dem Signale, die von Weltraumfunkstellen ausgesendet oder vermittelt werden, zum unmittelbaren Empfang durch die Allgemeinheit bestimmt sind; im Rundfunkdienst über Satelliten bezieht sich der Begriff "unmittelbarer Empfang" sowohl auf den Einzelempfang als auch auf den Gemeinschaftsempfang;

21. „Ortungsfunkdienst“ (Radiodetermination Service) einen Funkdienst für Zwecke der Funkortung;

22. „Ortungsfunkdienst über Satelliten“ (Radiodetermination-Satellite Service) einen Funkdienst für Zwecke der Funkortung, bei dem eine oder mehrere Weltraumfunkstellen benutzt werden; dieser Funkdienst kann auch die für den eigenen Betrieb erforderlichen Speiseverbindungen umfassen;

23. „Navigationsfunkdienst“ (Radionavigation Service) einen Ortungsfunkdienst für Zwecke der Funknavigation;

24. „Navigationsfunkdienst über Satelliten“ (Radionavigation-Satellite Service) einen Ortungsfunkdienst über Satelliten für Zwecke der Funknavigation; dieser Funkdienst kann auch die für seine Wahrnehmung erforderlichen Speiseverbindungen umfassen;

25. „Seenavigationsfunkdienst“ (Maritime Radionavigation Service) einen Navigationsfunkdienst zum Zwecke des sicheren Führens von Seefahrzeugen;

26. „Seenavigationsfunkdienst über Satelliten“ (Maritime Radionavigation-Satellite Service) einen Navigationsfunkdienst über Satelliten, bei dem die Erdfunkstellen sich an Bord von Seefahrzeugen befinden;

27. „Flugnavigationsfunkdienst“ (Aeronautical Radionavigation Service) einen Navigationsfunkdienst zum Zwecke des sicheren Führens von Luftfahrzeugen;

28. „Flugnavigationfunkdienst über Satelliten“ (Aeronautical Radionavigation-Satellite Service) einen Navigationsfunkdienst über Satelliten, bei dem die Erdfunkstellen sich an Bord von Luftfahrzeugen befinden;

29. „Nichtnavigatorischer Ortungsfunkdienst“ (Radiolocation Service) einen Ortungsfunkdienst für Zwecke der nichtnavigatorischen Funkortung;

30. „Nichtnavigatorischer Ortungsfunkdienst über Satelliten“ (Radiolocation-Satellite Service) einen Ortungsfunkdienst über Satelliten für Zwecke der nichtnavigatorischen Funkortung; dieser Funkdienst kann auch die für seine Wahrnehmung erforderlichen Speiseverbindungen umfassen;

31. „Wetterhilfenfunkdienst“ (Meteorological Aids Service) einen Funkdienst für Beobachtungen und Untersuchungen in der Wetterkunde, einschließlich der Gewässerkunde;

32. „Erderkundungsfunkdienst über Satelliten“ (Earth Exploration-Satellite Service) einen Funkdienst zwischen Erdfunkstellen und einer oder mehreren Weltraumfunkstellen, der auch Funkverbindungen zwischen Weltraumfunkstellen umfassen kann und bei dem

- a) Angaben über Eigenschaften der Erde und Naturerscheinungen derselben, einschließlich Daten über den Zustand der Umwelt, mit Hilfe von aktiven Sensoren oder passiven Sensoren gewonnen werden, die sich an Bord von Erdsatelliten befinden,
- b) ähnliche Angaben mit Hilfe von Sonden gewonnen werden, die sich in Luftfahrzeugen oder auf der Erdoberfläche befinden,
- c) diese Angaben an Erdfunkstellen übermittelt werden können, die zum gleichen Funksystem gehören,
- d) die Sonden auch abgefragt werden können;

dieser Funkdienst kann auch die für seine Wahrnehmung erforderlichen Speiseverbindungen umfassen;

33. „Wetterfunkdienst über Satelliten“ (Meteorological-Satellite Service) einen Erderkundungsfunkdienst über Satelliten für Zwecke des Wetterdienstes;

34. „Normalfrequenz- und Zeitzeichenfunkdienst“ (Standard Frequency and Time Signal Service) einen Funkdienst, bei dem zu wissenschaftlichen, technischen und anderen Zwecken festgelegte Frequenzen, Zeitzeichen oder beide zugleich mit festgelegter hoher Genauigkeit ausgesendet werden und bei dem die Aussendungen für den allgemeinen Empfang bestimmt sind;

35. „Normalfrequenz- und Zeitzeichenfunkdienst über Satelliten“ (Standard Frequency and Time Signal-Satellite Service) einen Funkdienst, der den gleichen Zwecken dient wie der Normalfrequenz- und Zeitzeichenfunkdienst, bei dem für diese Zwecke jedoch Weltraumfunkstellen an Bord von Erdsatelliten benutzt werden; dieser Funkdienst kann auch die für seine Wahrnehmung erforderlichen Speiseverbindungen umfassen;

36. „Weltraumforschungsfunkdienst“ (Space Research Service) einen Funkdienst, bei dem Weltraumfahrzeuge oder andere Weltraumkörper für die wissenschaftliche oder technische Forschung verwendet werden;

37. „Amateurfunkdienst“ (Amateur Service) einen Funkdienst, der von Funkamateuren für die eigene Ausbildung, für den Verkehr der Funkamateure untereinander und für technische Studien wahrgenommen wird; Funkamateure sind ordnungsgemäß ermächtigte Personen, die sich mit der Funktechnik aus rein persönlicher Neigung und nicht aus wirtschaftlichem Interesse befassen;

38. „Amateurfunkdienst über Satelliten“ (Amateur-Satellite Service) einen Funkdienst, der den gleichen Zwecken dient wie der Amateurfunkdienst, bei dem für diese Zwecke jedoch Weltraumfunkstellen an Bord von Erdsatelliten benutzt werden;

39. „Radioastronomiefunkdienst“ (Radio Astronomy Service) einen Funkdienst für Zwecke der Radioastronomie.

(2) In dieser Verordnung bedeutet die Abkürzung

1. „R“ Linienflüge (route);
2. „OR“ andere Flüge als Linienflüge (off-route).

Frequenzbereichszuweisungsplan

§ 3. (1) Die Frequenzzuweisungen ergeben sich aus Anlage 1 (Frequenzbereichszuweisungsplan).

(2) Der Frequenzbereichszuweisungsplan beinhaltet in

1. Spalte 1 die in der VOFunk beschriebenen Frequenzbereiche, auf die sich die Zuweisungen beziehen,
2. in Spalte 2 die Frequenzbereichszuweisungen gemäß Artikel S5 VOFunk und
3. in Spalte 3 die Frequenzbereichszuweisungen im Bundesgebiet.

(3) Die Reihenfolge, in der die verschiedenen Funkdienste innerhalb der Felder der Spalten 2 und 3 genannt werden, bedeutet keine Rangordnung.

(4) Wenn bei einer Zuweisung in Spalte 3 in Klammern eine zusätzliche Angabe gemacht wird, so ist diese Zuweisung an einen Dienst auf die dort angegebene Betriebsart oder auf den dort angegebenen Frequenzbereich beschränkt.

(5) Wenn im Frequenzbereichszuweisungsplan angegeben ist, daß ein Funkdienst in einem bestimmten Frequenzbereich unter der Bedingung wahrgenommen werden darf, daß er keine schädlichen Störungen verursacht, so bedeutet dies auch, daß dieser Funkdienst keinen Schutz gegen schädliche Störungen durch andere Funkdienste, denen der Bereich zugewiesen ist, beanspruchen kann.

Fußnoten des Frequenzbereichszuweisungsplans

§ 4. (1) Die Fußnoten des Frequenzbereichszuweisungsplans ergeben sich aus Anlage 2. In Anlage 2 können auch Voraussetzungen für die Zuteilung von Frequenzen enthalten sein.

(2) Die im Frequenzbereichszuweisungsplan aufscheinenden Fußnoten beziehen sich entweder auf die Fußnoten in Artikel S5 VO Funk (Beispiel: S5.150) oder auf zusätzliche Fußnoten, die spezielle Frequenzzuweisungen für Österreich angeben (Beispiel: A01).

(3) Fußnoten, die im Frequenzbereichszuweisungsplan am unteren Rand eines Feldes unter den Namen der Funkdienste angegeben sind, gelten für die gesamte betreffende Frequenzzuweisung.

(4) Fußnoten, die rechts neben dem Namen eines Funkdienstes angegeben sind, gelten nur für diesen Funkdienst.

(5) Wenn in einer Fußnote nichts Gegenteiliges gesagt ist, schließt der Begriff "Fester Funkdienst" nicht die Systeme ein, welche die ionosphärische Streuenausbreitung anwenden.

Primäre und sekundäre Funkdienste

§ 5.(1) Wenn in einem Feld des Frequenzbereichszuweisungsplans ein Frequenzbereich mehreren Funkdiensten zugewiesen ist, sind diese Funkdienste in folgender Reihenfolge aufgeführt:

- a) Funkdienste, deren Namen in Großbuchstaben (Beispiel: FESTER FUNKDIENST) gedruckt sind; diese Dienste werden als "primäre Funkdienste" bezeichnet;
- b) Funkdienste, deren Namen in gewöhnlichen Buchstaben (Beispiel: Beweglicher Funkdienst) gedruckt sind; diese Dienste werden als "sekundäre Funkdienste" bezeichnet.

(2) Zusatzerläuterungen werden in gewöhnlichen Buchstaben gedruckt (Beispiel: BEWEGLICHER FUNKDIENST außer beweglicher Flugfunkdienst).

(3) Funkstellen eines sekundären Funkdienstes

- a) dürfen keine schädlichen Störungen bei den Funkstellen der primären Funkdienste verursachen, denen Frequenzen bereits zugeteilt sind oder später zugeteilt werden könnten;
- b) können keinen Schutz gegen schädliche Störungen durch Funkstellen der primären Funkdienste verlangen, denen Frequenzen bereits zugeteilt sind oder später zugeteilt werden könnten;
- c) können jedoch Schutz gegen schädliche Störungen durch Funkstellen des gleichen sekundären Funkdienstes oder anderer sekundären Funkdienste verlangen, denen später Frequenzen zugeteilt werden könnten.

(4) Wenn eine Fußnote des Frequenzbereichszuweisungsplans die Angabe enthält, daß ein Frequenzbereich einem Funkdienst in einem Gebiet oder in einem bestimmten Land auf "sekundärer Basis" zugewiesen ist, handelt es sich dabei um einen sekundären Funkdienst nur in diesem Gebiet oder Land.

(5) Wenn eine Fußnote des Frequenzbereichszuweisungsplans die Angabe enthält, daß ein Frequenzbereich einem Funkdienst in einem Gebiet oder in einem bestimmten Land auf "primärer Basis" zugewiesen ist, handelt es sich dabei um einen primären Funkdienst nur in diesem Gebiet oder Land.

Zusätzliche Zuweisungen

§ 6. (1) Wenn eine Fußnote der Frequenzzuweisungstabelle gemäß Artikel S5 VO Funk die Angabe enthält, daß ein Frequenzbereich außer anderen Funkdiensten in einem Gebiet oder in einem bestimmten Land einem weiteren Funkdienst "zusätzlich zugewiesen" ist, handelt es sich dabei um eine zusätzliche Zuweisung, d.h. um eine Zuweisung, die in diesem Gebiet oder Land dem oder den in der Frequenzzuweisungstabelle gemäß Artikel S5 VO Funk aufgeführten Funkdienst oder Funkdiensten hinzugefügt wird.

(2) Wenn die Fußnote in bezug auf einen oder mehrere der genannten Funkdienste keine andere Einschränkung enthält als die, daß er bzw. sie nur in einem bestimmten Gebiet oder Land wahrgenommen werden darf bzw. dürfen, haben Funkstellen dieses Dienstes oder dieser Dienste die gleichen Rechte wie die Funkstellen des anderen primären Dienstes oder der anderen primären Dienste, deren Namen in der Frequenzzuweisungstabelle gemäß Artikel S5 VO Funk angegeben sind.

(3) Wenn einer zusätzlichen Zuweisung zu der Einschränkung, daß sie nur in einem bestimmten Gebiet oder Land benutzt werden darf, weitere Einschränkungen auferlegt sind, ist dies in der Fußnote der Frequenzzuweisungstabelle gemäß Artikel S5 VO Funk angegeben.

Alternative Zuweisungen

§ 7. (1) Wenn eine Fußnote der Frequenzzuweisungstabelle gemäß Artikel S5 VO Funk die Angabe enthält, daß ein Frequenzbereich einem oder mehreren Funkdiensten in einem Gebiet oder in einem bestimmten Land zugewiesen ist, handelt es sich dabei um eine "alternative" Zuweisung, d.h. um eine Zuweisung, die in diesem Gebiet oder Land die in der Frequenzzuweisungstabelle gemäß Artikel S5 VO Funk angegebene Zuweisung ersetzt.

(2) Wenn die Fußnote in bezug auf Funkstellen eines oder mehrerer der genannten Funkdienste keine andere Einschränkung enthält als die, daß sie nur in einem bestimmten Gebiet oder Land betrieben werden dürfen, haben diese Funkstellen dieses Dienstes oder dieser Dienste die gleichen Rechte wie die Funkstellen des primären Dienstes oder der primären Dienste, die in der Frequenzzuweisungstabelle gemäß Artikel S5 VO Funk angegeben sind und denen der Frequenzbereich in anderen Gebieten oder Ländern zugewiesen ist.

(3) Wenn den Funkstellen eines Dienstes, der eine alternative Zuweisung erhalten hat, zu der Einschränkung, daß sie nur in einem bestimmten Gebiet oder Land betrieben werden dürfen, weitere Einschränkungen auferlegt sind, ist dies in der Fußnote der Frequenzzuweisungstabelle gemäß Artikel S5 VO Funk angegeben.

Anlage 1

Frequenzbereichszuweisungsplan

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzuweisung in Österreich und relevante Fußnoten
9 - 14 kHz	RADIONAVIGATION	RADIONAVIGATION
14 - 19.95 kHz	FIXED MARITIME MOBILE S5.57 S5.55 S5.56	FIXED MARITIME MOBILE S5.57 S5.56
19.95 - 20.05 kHz	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)
20.05 - 70 kHz	FIXED MARITIME MOBILE S5.57 S5.56 S5.58	FIXED MARITIME MOBILE S5.57 S5.56
70 - 72 kHz	RADIONAVIGATION S5.60	RADIONAVIGATION S5.60
72 - 84 kHz	FIXED MARITIME MOBILE S5.57 RADIONAVIGATION S5.60 S5.56	FIXED MARITIME MOBILE S5.57 RADIONAVIGATION S5.60 S5.56
84 - 86 kHz	RADIONAVIGATION S5.60	RADIONAVIGATION S5.60
86 - 90 kHz	FIXED MARITIME MOBILE S5.57 RADIONAVIGATION S5.56	FIXED MARITIME MOBILE S5.57 RADIONAVIGATION S5.56
90 - 110 kHz	RADIONAVIGATION S5.62 Fixed S5.63 S5.64	RADIONAVIGATION S5.62 Fixed S5.64
110 - 112 kHz	FIXED MARITIME MOBILE RADIONAVIGATION S5.64	FIXED MARITIME MOBILE RADIONAVIGATION S5.64

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
112 - 115 kHz	RADIONAVIGATION S5.60	RADIONAVIGATION S5.60
115 - 117.6 kHz	RADIONAVIGATION S5.60 Fixed Maritime Mobile S5.64 S5.66	RADIONAVIGATION S5.60 Fixed Maritime Mobile S5.64
117.6 - 126 kHz	FIXED MARITIME MOBILE RADIONAVIGATION S5.60 S5.64	FIXED MARITIME MOBILE RADIONAVIGATION S5.60 S5.64
126 - 129 kHz	RADIONAVIGATION S5.60	RADIONAVIGATION S5.60
129 - 130 kHz	FIXED MARITIME MOBILE RADIONAVIGATION S5.60 S5.64	FIXED MARITIME MOBILE RADIONAVIGATION S5.60 S5.64
130 - 148.5 kHz	FIXED MARITIME MOBILE S5.64 S5.67	FIXED MARITIME MOBILE S5.64
148.5 - 255 kHz	BROADCASTING S5.68 S5.69 S5.70	BROADCASTING
255 - 283.5 kHz	BROADCASTING AERONAUTICAL RADIONAVIGATION S5.70 S5.71	BROADCASTING AERONAUTICAL RADIONAVIGATION
283.5 - 315 kHz	AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons) S5.73 S5.72 S5.74	AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons) S5.73 S5.74

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
315 - 325 kHz	AERONAUTICAL RADIONAVIGATION Maritime Radionavigation (radiobeacons) S5.73 S5.72 S5.75	AERONAUTICAL RADIONAVIGATION Maritime Radionavigation (radiobeacons) S5.73
325 - 405 kHz	AERONAUTICAL RADIONAVIGATION S5.72	AERONAUTICAL RADIONAVIGATION
405 - 415 kHz	RADIONAVIGATION S5.76 S5.72	RADIONAVIGATION S5.76
415 - 435 kHz	MARITIME MOBILE S5.79 AERONAUTICAL RADIONAVIGATION S5.72	MARITIME MOBILE S5.79 AERONAUTICAL RADIONAVIGATION S5.72
435 - 495 kHz	MARITIME MOBILE S5.79 Aeronautical Radionavigation S5.72 S5.81 S5.82	MARITIME MOBILE S5.79 Aeronautical Radionavigation S5.81 S5.82
495 - 505 kHz	MOBILE (distress and calling) S5.83	MOBILE (distress and calling) S5.83
505 - 526.5 kHz	MARITIME MOBILE S5.79 AERONAUTICAL RADIONAVIGATION S5.72 S5.81 S5.84	MARITIME MOBILE S5.79 AERONAUTICAL RADIONAVIGATION S5.81 S5.84
526.5 - 1606.5 kHz	BROADCASTING S5.87	BROADCASTING
1606.5 - 1625 kHz	FIXED MARITIME MOBILE S5.90 LAND MOBILE S5.92	FIXED MARITIME MOBILE S5.90 LAND MOBILE S5.92

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
1625 - 1635 kHz	RADIOLOCATION S5.93	RADIOLOCATION
1635 - 1800 kHz	FIXED MARITIME MOBILE S5.90 LAND MOBILE S5.92 S5.96	FIXED MARITIME MOBILE S5.90 LAND MOBILE S5.92
1800 - 1810 kHz	RADIOLOCATION S5.93	RADIOLOCATION
1810 - 1850 kHz	AMATEUR S5.98 S5.99 S5.100 S5.101	FIXED S5.98 Amateur S5.100
1850 - 2000 kHz	FIXED MOBILE except aeronautical mobile S5.92 S5.96 S5.103	FIXED MOBILE except aeronautical mobile Amateur (1850 - 1950 kHz) A03 S5.92 S5.103
2000 - 2025 kHz	FIXED MOBILE except aeronautical mobile (R) S5.92 S5.103	FIXED MOBILE except aeronautical mobile (R) S5.92 S5.103
2025 - 2045 kHz	FIXED MOBILE except aeronautical mobile (R) Meteorological Aids S5.104 S5.92 S5.103	FIXED MOBILE except aeronautical mobile (R) Meteorological Aids S5.104 S5.92 S5.103
2045 - 2160 kHz	FIXED MARITIME MOBILE LAND MOBILE S5.92	FIXED MARITIME MOBILE LAND MOBILE S5.92
2160 - 2170 kHz	RADIOLOCATION S5.93 S5.107	RADIOLOCATION

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
2170 - 2173.5 kHz	MARITIME MOBILE	MARITIME MOBILE
2173.5 - 2190.5 kHz	MOBILE (distress and calling) S5.108 S5.109 S5.110 S5.111	MOBILE (distress and calling) S5.108 S5.109 S5.110 S5.111
2190.5 - 2194 kHz	MARITIME MOBILE	MARITIME MOBILE
2194 - 2300 kHz	FIXED MOBILE except aeronautical mobile (R) S5.92 S5.103 S5.112	FIXED MOBILE except aeronautical mobile (R) S5.92 S5.103
2300 - 2498 kHz	FIXED MOBILE except aeronautical mobile (R) BROADCASTING S5.113 S5.103	FIXED MOBILE except aeronautical mobile (R) S5.103
2498 - 2501 kHz	STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)
2501 - 2502 kHz	STANDARD FREQUENCY AND TIME SIGNAL Space Research	STANDARD FREQUENCY AND TIME SIGNAL Space Research
2502 - 2625 kHz	FIXED MOBILE except aeronautical mobile (R) S5.92 S5.103 S5.114	FIXED MOBILE except aeronautical mobile (R) S5.92 S5.103
2625 - 2650 kHz	MARITIME MOBILE MARITIME RADIONAVIGATION S5.92	MARITIME MOBILE MARITIME RADIONAVIGATION S5.92
2650 - 2850 kHz	FIXED MOBILE except aeronautical mobile (R) S5.92 S5.103	FIXED MOBILE except aeronautical mobile (R) S5.92 S5.103

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
2850 - 3025 kHz	AERONAUTICAL MOBILE (R) S5.111 S5.115	AERONAUTICAL MOBILE (R) S5.111 S5.115
3025 - 3155 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)
3155 - 3200 kHz	FIXED MOBILE except aeronautical mobile (R) S5.116 S5.117	FIXED MOBILE except aeronautical mobile (R) S5.116
3200 - 3230 kHz	FIXED MOBILE except aeronautical mobile (R) BROADCASTING S5.113 S5.116	FIXED MOBILE except aeronautical mobile (R) S5.116
3230 - 3400 kHz	FIXED MOBILE except aeronautical mobile BROADCASTING S5.113 S5.116 S5.118	FIXED MOBILE except Aeronautical Mobile S5.116
3400 - 3500 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)
3500 - 3800 kHz	AMATEUR S5.120 FIXED MOBILE except aeronautical mobile S5.92	AMATEUR S5.120 Fixed Mobile except Aeronautical Mobile S5.92
3800 - 3900 kHz	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE
3900 - 3950 kHz	AERONAUTICAL MOBILE (OR) S5.123	AERONAUTICAL MOBILE (OR)
3950 - 4000 kHz	FIXED BROADCASTING	FIXED

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
4000 - 4063 kHz	FIXED MARITIME MOBILE S5.127 S5.126	FIXED MARITIME MOBILE S5.127
4063 - 4438 kHz	MARITIME MOBILE S5.109 S5.110 S5.130 S5.131 S5.132 S5.128 S5.129	MARITIME MOBILE S5.109 S5.110 S5.130 S5.131 S5.132 S5.129
4438 - 4650 kHz	FIXED MOBILE except Aeronautical Mobile (R)	FIXED MOBILE except Aeronautical Mobile (R)
4650 - 4700 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)
4700 - 4750 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)
4750 - 4850 kHz	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE BROADCASTING S5.113	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE
4850 - 4995 kHz	FIXED LAND MOBILE BROADCASTING S5.113	FIXED LAND MOBILE
4995 - 5003 kHz	STANDARD FREQUENCY AND TIME SIGNAL (5000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (5000 kHz)
5003 - 5005 kHz	STANDARD FREQUENCY AND TIME SIGNAL Space Research	STANDARD FREQUENCY AND TIME SIGNAL Space Research
5005 - 5060 kHz	FIXED BROADCASTING S5.113	FIXED
5060 - 5250 kHz	FIXED Mobile except aeronautical mobile S5.133	FIXED Mobile except aeronautical mobile
5250 - 5450 kHz	FIXED MOBILE except aeronautical mobile	FIXED MOBILE except aeronautical mobile

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
5450 - 5480 kHz	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE
5480 - 5680 kHz	AERONAUTICAL MOBILE (R) S5.111 S5.115	AERONAUTICAL MOBILE (R) S5.111 S5.115
5680 - 5730 kHz	AERONAUTICAL MOBILE (OR) S5.111 S5.115	AERONAUTICAL MOBILE (OR) S5.111 S5.115
5730 - 5900 kHz	FIXED LAND MOBILE	FIXED LAND MOBILE
5900 - 5950 kHz	BROADCASTING S5.134 S5.135 S5.136	FIXED LAND MOBILE Broadcasting A03 S5.136
5950 - 6200 kHz	BROADCASTING	BROADCASTING
6200 - 6525 kHz	MARITIME MOBILE S5.109 S5.110 S5.130 S5.132 S5.137	MARITIME MOBILE S5.109 S5.110 S5.130 S5.132 S5.137
6525 - 6685 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)
6685 - 6765 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)
6765 - 7000 kHz	FIXED Land Mobile S5.139 S5.138	FIXED Land Mobile S5.138
7000 - 7100 kHz	AMATEUR S5.120 AMATEUR-SATELLITE S5.140 S5.141	AMATEUR S5.120 AMATEUR-SATELLITE
7100 - 7300 kHz	BROADCASTING	BROADCASTING
7300 - 7350 kHz	BROADCASTING S5.134 S5.135 S5.143	FIXED S5.143 Land Mobile S5.143 Broadcasting A03

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
7350 - 8100 kHz	FIXED Land Mobile S5.144	FIXED Land Mobile
8100 - 8195 kHz	FIXED MARITIME MOBILE	FIXED MARITIME MOBILE
8195 - 8815 kHz	MARITIME MOBILE S5.109 S5.110 S5.132 S5.145 S5.111	MARITIME MOBILE S5.109 S5.110 S5.132 S5.145 S5.111
8815 - 8965 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)
8965 - 9040 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)
9040 - 9400 kHz	FIXED	FIXED
9400 - 9500 kHz	BROADCASTING S5.134 S5.135 S5.146	FIXED S5.146 Broadcasting A03
9500 - 9900 kHz	BROADCASTING S5.147 S5.148	BROADCASTING Fixed (9775 - 9900 kHz) S5.147 S5.148
9900 - 9995 kHz	FIXED	FIXED
9995 - 10003 kHz	STANDARD FREQUENCY AND TIME SIGNAL (10000 kHz) S5.111	STANDARD FREQUENCY AND TIME SIGNAL (10000 kHz) S5.111
10003 - 10005 kHz	STANDARD FREQUENCY AND TIME SIGNAL Space Research S5.111	STANDARD FREQUENCY AND TIME SIGNAL Space Research S5.111
10005 - 10100 kHz	AERONAUTICAL MOBILE (R) S5.111	AERONAUTICAL MOBILE (R) S5.111
10100 - 10150 kHz	FIXED Amateur S5.120	FIXED Amateur S5.120

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
10150 - 11175 kHz	FIXED Mobile except aeronautical mobile (R)	FIXED Mobile except aeronautical mobile (R)
11175 - 11275 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)
11275 - 11400 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)
11400 - 11600 kHz	FIXED	FIXED
11600 - 11650 kHz	BROADCASTING S5.134 S5.135 S5.146	FIXED S5.146
11650 - 12050 kHz	BROADCASTING S5.147 S5.148	BROADCASTING Fixed (11650 - 11700 kHz) S5.147 S5.148 Fixed (11975 - 12050 kHz) S5.147 S5.148
12050 - 12100 kHz	BROADCASTING S5.134 S5.135 S5.146	FIXED S5.146
12100 - 12230 kHz	FIXED	FIXED
12230 - 13200 kHz	MARITIME MOBILE S5.109 S5.110 S5.132 S5.145	MARITIME MOBILE S5.109 S5.110 S5.132 S5.145
13200 - 13260 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)
13260 - 13360 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)
13360 - 13410 kHz	FIXED RADIO ASTRONOMY S5.149	FIXED S5.149
13410 - 13570 kHz	FIXED Mobile except aeronautical mobile (R) S5.150	FIXED Mobile except aeronautical mobile (R) S5.150

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
13570 - 13600 kHz	BROADCASTING S5.134 S5.135 S5.151	FIXED S5.151 Mobile except aeronautical mobile (R) S5.151
13600 - 13800 kHz	BROADCASTING S5.148	BROADCASTING S5.148
13800 - 13870 kHz	BROADCASTING S5.134 S5.135 S5.151	FIXED S5.151 Mobile except aeronautical mobile (R) S5.151
13870 - 14000 kHz	FIXED Mobile except aeronautical mobile (R)	FIXED Mobile except aeronautical mobile (R)
14000 - 14250 kHz	AMATEUR S5.120 AMATEUR-SATELLITE	AMATEUR S5.120 AMATEUR-SATELLITE
14250 - 14350 kHz	AMATEUR S5.120 S5.152	AMATEUR S5.120 S5.152
14350 - 14990 kHz	FIXED Mobile except aeronautical mobile (R)	FIXED Mobile except aeronautical mobile (R)
14990 - 15005 kHz	STANDARD FREQUENCY AND TIME SIGNAL (15000 kHz) S5.111	STANDARD FREQUENCY AND TIME SIGNAL (15000 kHz) S5.111
15005 - 15010 kHz	STANDARD FREQUENCY AND TIME SIGNAL Space Research	STANDARD FREQUENCY AND TIME SIGNAL Space Research
15010 - 15100 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)
15100 - 15600 kHz	BROADCASTING S5.148	BROADCASTING S5.148
15600 - 15800 kHz	BROADCASTING S5.134 S5.135 S5.146	FIXED S5.146

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
15800 - 16360 kHz	FIXED S5.153	FIXED
16360 - 17410 kHz	MARITIME MOBILE S5.109 S5.110 S5.132 S5.145	MARITIME MOBILE S5.109 S5.110 S5.132 S5.145
17410 - 17480 kHz	FIXED	FIXED
17480 - 17550 kHz	BROADCASTING S5.134 S5.135 S5.146	FIXED S5.146
17550 - 17900 kHz	BROADCASTING S5.148	BROADCASTING S5.148
17900 - 17970 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)
17970 - 18030 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)
18030 - 18052 kHz	FIXED	FIXED
18052 - 18068 kHz	FIXED Space Research	FIXED
18068 - 18168 kHz	AMATEUR S5.120 AMATEUR-SATELLITE S5.154	AMATEUR S5.120 AMATEUR-SATELLITE
18168 - 18780 kHz	FIXED Mobile except aeronautical mobile	FIXED Mobile except aeronautical mobile
18780 - 18900 kHz	MARITIME MOBILE	MARITIME MOBILE
18900 - 19020 kHz	BROADCASTING S5.134 S5.135 S5.146	FIXED S5.146
19020 - 19680 kHz	FIXED	FIXED

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
19680 - 19800 kHz	MARITIME MOBILE S5.132	MARITIME MOBILE S5.132
19800 - 19990 kHz	FIXED	FIXED
19990 - 19995 kHz	STANDARD FREQUENCY AND TIME SIGNAL Space Research S5.111	STANDARD FREQUENCY AND TIME SIGNAL Space Research S5.111
19995 - 20010 kHz	STANDARD FREQUENCY AND TIME SIGNAL (20000 kHz) S5.111	STANDARD FREQUENCY AND TIME SIGNAL (20000 kHz) S5.111
20010 - 21000 kHz	FIXED Mobile	FIXED Mobile
21000 - 21450 kHz	AMATEUR S5.120 AMATEUR-SATELLITE	AMATEUR S5.120 AMATEUR-SATELLITE
21450 - 21850 kHz	BROADCASTING S5.148	BROADCASTING S5.148
21850 - 21870 kHz	FIXED S5.155A S5.155	FIXED
21870 - 21924 kHz	FIXED S5.155B	FIXED S5.155B
21924 - 22000 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)
22000 - 22855 kHz	MARITIME MOBILE 1 S5.132 S5.156	MARITIME MOBILE S5.132
22855 - 23000 kHz	FIXED S5.156	FIXED S5.156

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
23000 - 23200 kHz	FIXED Mobile except aeronautical mobile (R) S5.156	FIXED Mobile except aeronautical mobile (R)
23200 - 23350 kHz	FIXED S5.156A AERONAUTICAL MOBILE (OR)	FIXED S5.156A AERONAUTICAL MOBILE (OR)
23350 - 24000 kHz	FIXED MOBILE except aeronautical mobile S5.157	FIXED MOBILE except aeronautical mobile S5.157
24000 - 24890 kHz	FIXED LAND MOBILE	FIXED LAND MOBILE
24890 - 24990 kHz	AMATEUR S5.120 AMATEUR-SATELLITE	AMATEUR S5.120 AMATEUR-SATELLITE
24990 - 25005 kHz	STANDARD FREQUENCY AND TIME SIGNAL (25000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (25000 kHz)
25005 - 25010 kHz	STANDARD FREQUENCY AND TIME SIGNAL Space Research	STANDARD FREQUENCY AND TIME SIGNAL Space Research
25010 - 25070 kHz	FIXED MOBILE except aeronautical mobile	FIXED MOBILE except aeronautical mobile
25070 - 25210 kHz	MARITIME MOBILE	MARITIME MOBILE
25210 - 25550 kHz	FIXED MOBILE except aeronautical mobile	FIXED MOBILE except aeronautical mobile
25550 - 25670 kHz	RADIO ASTRONOMY S5.149	RADIO ASTRONOMY S5.149
25670 - 26100 kHz	BROADCASTING	BROADCASTING
26100 - 26175 kHz	MARITIME MOBILE S5.132	MARITIME MOBILE S5.132

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
26175 - 27500 kHz	FIXED MOBILE except aeronautical mobile S5.150	FIXED MOBILE except aeronautical mobile S5.150
27.5 - 28 MHz	METEOROLOGICAL AIDS FIXED MOBILE	METEOROLOGICAL AIDS FIXED MOBILE
28 - 29.7 MHz	AMATEUR AMATEUR-SATELLITE	AMATEUR AMATEUR-SATELLITE
29.7 - 30.005 MHz	FIXED MOBILE	MOBILE
30.005 - 30.01 MHz	SPACE OPERATION (satellite identification) FIXED MOBILE SPACE RESEARCH	MOBILE
30.01 - 37.5 MHz	FIXED MOBILE	MOBILE
37.5 - 38.25 MHz	FIXED MOBILE Radio Astronomy S5.149	MOBILE S5.149
38.25 - 39.986 MHz	FIXED MOBILE	MOBILE
39.986 - 40.02 MHz	FIXED MOBILE Space Research	MOBILE
40.02 - 40.98 MHz	FIXED MOBILE S5.150	MOBILE S5.150
40.98 - 41.015 MHz	FIXED MOBILE Space Research S5.160 S5.161	MOBILE

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
41.015 - 44 MHz	FIXED MOBILE S5.160 S5.161	MOBILE
44 - 47 MHz	FIXED MOBILE S5.162	MOBILE (44 - 46.4 MHz) A01 MOBILE except aeronautical mobile (46.4 - 47 MHz) A01
47 - 68 MHz	BROADCASTING S5.163 S5.164 S5.165 S5.169 S5.171	BROADCASTING LAND MOBILE S5.164 Amateur (50 - 52 MHz) A01
68 - 74.8 MHz	FIXED MOBILE except aeronautical mobile S5.149 S5.174 S5.175 S5.177 S5.179	MOBILE (68 - 70.450 MHz) A01 MOBILE except aeronautical mobile (70.450 - 74.8 MHz) A01 S5.149
74.8 - 75.2 MHz	AERONAUTICAL RADIONAVIGATION S5.180 S5.181	AERONAUTICAL RADIONAVIGATION S5.180
75.2 - 87.5 MHz	FIXED MOBILE except aeronautical mobile S5.175 S5.179 S5.184 S5.187	MOBILE except aeronautical mobile
87.5 - 100 MHz	BROADCASTING S5.190	BROADCASTING
100 - 108 MHz	BROADCASTING S5.192 S5.194	BROADCASTING
108 - 117.975 MHz	AERONAUTICAL RADIONAVIGATION S5.197	AERONAUTICAL RADIONAVIGATION

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
117.975-136 MHz	AERONAUTICAL MOBILE (R) S5.111 S5.198 S5.199 S5.200 S5.201	AERONAUTICAL MOBILE (R) MOBILE-SATELLITE (Earth-space) (121.45 - 121.55 MHz) S5.199 S5.111 S5.200
136 - 137 MHz	AERONAUTICAL MOBILE (R) Fixed Mobile except aeronautical mobile (R) S5.198 S5.202 S5.203	AERONAUTICAL MOBILE (R)
137 - 137.025 MHz	SPACE OPERATION (space-Earth) METEOROLOGICAL-SATELLITE (space-Earth) MOBILE-SATELLITE (space-Earth) S5.208A S5.209 SPACE RESEARCH (space-Earth) Fixed Mobile except aeronautical mobile (R) S5.204 S5.205 S5.206 S5.207 S5.208	AERONAUTICAL MOBILE (OR) S5.206 METEOROLOGICAL-SATELLITE (space-Earth) MOBILE-SATELLITE (space-Earth) S5.208A S5.209 S5.208
137.025 - 137.175 MHz	SPACE OPERATION (space-Earth) METEOROLOGICAL-SATELLITE (space-Earth) SPACE RESEARCH (space-Earth) Fixed Mobile-Satellite (space-Earth) S5.208A S5.209 Mobile except aeronautical mobile (R) S5.204 S5.205 S5.206 S5.207 S5.208	AERONAUTICAL MOBILE (OR) S5.206 METEOROLOGICAL-SATELLITE (space-Earth) Mobile-Satellite (space-Earth) S5.208A S5.209 S5.208

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
137.175 - 137.825 MHz	SPACE OPERATION (space-Earth) METEOROLOGICAL-SATELLITE (space-Earth) MOBILE-SATELLITE (space-Earth) S5.208A S5.209 SPACE RESEARCH (space-Earth) Fixed Mobile except aeronautical mobile (R) S5.204 S5.205 S5.206 S5.207 S5.208	AERONAUTICAL MOBILE (OR) S5.206 METEOROLOGICAL-SATELLITE (space-Earth) MOBILE-SATELLITE (space-Earth) S5.208A S5.209 S5.208
137.825 - 138 MHz	SPACE OPERATION (space-Earth) METEOROLOGICAL-SATELLITE (space-Earth) SPACE RESEARCH (space-Earth) Fixed Mobile-Satellite (space-Earth) S5.208A S5.209 Mobile except aeronautical mobile (R) S5.204 S5.205 S5.206 S5.207 S5.208	AERONAUTICAL MOBILE (OR) S5.206 METEOROLOGICAL-SATELLITE (space-Earth) Mobile-Satellite (space-Earth) S5.208A S5.209 S5.208
138 - 143.6 MHz	AERONAUTICAL MOBILE (OR) S5.210 S5.211 S5.212 S5.214	AERONAUTICAL MOBILE (OR) LAND MOBILE (142 - 142.35 MHz) A01
143.6 - 143.65 MHz	AERONAUTICAL MOBILE (OR) SPACE RESEARCH (space-Earth) S5.211 S5.212 S5.214	AERONAUTICAL MOBILE (OR)
143.65 - 144 MHz	AERONAUTICAL MOBILE (OR) S5.210 S5.211 S5.212 S5.214	AERONAUTICAL MOBILE (OR)
144 - 146 MHz	AMATEUR S5.120 AMATEUR-SATELLITE S5.216	AMATEUR S5.120 AMATEUR-SATELLITE
146 - 148 MHz	FIXED MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
148 - 149.9 MHz	FIXED MOBILE except aeronautical mobile (R) MOBILE-SATELLITE (Earth-space) S5.209 S5.218 S5.219 S5.221	MOBILE except aeronautical mobile (R) MOBILE-SATELLITE (Earth-space) S5.209 S5.221 S5.219
149.9 - 150.05 MHz	LAND MOBILE-SATELLITE (Earth- space) S5.209 S5.224 RADIONAVIGATION-SATELLITE S5.220 S5.222 S5.223	MOBILE-SATELLITE (Earth-space) S5.209 A01 S5.220 S5.222 S5.223
150.05 - 153 MHz	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY S5.149	MOBILE except aeronautical mobile S5.149
153 - 154 MHz	FIXED MOBILE except aeronautical mobile (R) Meteorological Aids	MOBILE except aeronautical mobile (R)
154 - 156.7625 MHz	FIXED MOBILE except aeronautical mobile (R) S5.226 S5.227	MOBILE except aeronautical mobile (R) S5.226 S5.227
156.7625 - 156.8375 MHz	MARITIME MOBILE (distress and calling) S5.111 S5.226	MARITIME MOBILE (distress and calling) S5.111 S5.226
156.8375 - 174 MHz	FIXED MOBILE except aeronautical mobile S5.226 S5.229	MOBILE except aeronautical mobile S5.226
174 - 223 MHz	BROADCASTING S5.235 S5.237 S5.243 S5.244	BROADCASTING

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
223 - 230 MHz	BROADCASTING Fixed Mobile S5.243 S5.244 S5.246 S5.247	BROADCASTING
230 - 235 MHz	FIXED MOBILE S5.244 S5.247 S5.251 S5.252	MOBILE
235 - 267 MHz	FIXED MOBILE S5.111 S5.199 S5.252 S5.254 S5.256	MOBILE AERONAUTICAL MOBILE (242.950 - 243.050 MHz) S5.256 MOBILE-SATELLITE (Earth-space) (242.950 - 243.050 MHz) S5.199 S5.111 S5.254
267 - 272 MHz	FIXED MOBILE Space Operation (space-Earth) S5.254 S5.257	MOBILE S5.254
272 - 273 MHz	SPACE OPERATION (space-Earth) FIXED MOBILE S5.254	MOBILE S5.254
273 - 312 MHz	FIXED MOBILE S5.254	MOBILE S5.254
312 - 315 MHz	FIXED MOBILE Mobile-Satellite (Earth-space) S5.254 S5.255	MOBILE S5.254 S5.255
315 - 322 MHz	FIXED MOBILE S5.254	MOBILE S5.254

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
322 - 328.6 MHz	FIXED MOBILE RADIO ASTRONOMY S5.149	MOBILE S5.149
328.6 - 335.4 MHz	AERONAUTICAL RADIONAVIGATION S5.258 S5.259	AERONAUTICAL RADIONAVIGATION Mobile S5.259 S5.258
335.4 - 387 MHz	FIXED MOBILE S5.254	FIXED MOBILE S5.254
387 - 390 MHz	FIXED MOBILE Mobile-Satellite (space-Earth) S5.208A S5.254 S5.255	MOBILE S5.254 S5.255
390 - 399.9 MHz	FIXED MOBILE S5.254	MOBILE S5.254
399.9 - 400.05 MHz	LAND MOBILE-SATELLITE (Earth- space) S5.209 RADIONAVIGATION-SATELLITE S5.222 S5.260 S5.220 S5.224	LAND MOBILE-SATELLITE (Earth- space) S5.209 S5.220
400.05 - 400.15 MHz	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz) S5.261 S5.262	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz) S5.261

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
400.15 - 401 MHz	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-Earth) MOBILE-SATELLITE (space-Earth) S5.208A S5.209 SPACE RESEARCH (space-Earth) S5.263 Space Operation (space-Earth) S5.262 S5.264	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-Earth) MOBILE-SATELLITE (space-Earth) S5.208A S5.209 S5.264
401 - 402 MHz	METEOROLOGICAL AIDS SPACE OPERATION (space-Earth) Earth Exploration-Satellite (Earth- space) Fixed Meteorological-Satellite (Earth-space) Mobile except aeronautical mobile	METEOROLOGICAL AIDS
402 - 403 MHz	METEOROLOGICAL AIDS Earth Exploration-Satellite (Earth- space) Fixed Meteorological-Satellite (Earth-space) Mobile except aeronautical mobile	METEOROLOGICAL AIDS
403 - 406 MHz	METEOROLOGICAL AIDS Fixed Mobile except aeronautical mobile	METEOROLOGICAL AIDS
406 - 406.1 MHz	MOBILE-SATELLITE (Earth-space) S5.266 S5.267	MOBILE-SATELLITE (Earth-space) S5.266 S5.267
406.1 - 410 MHz	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY S5.149	LAND MOBILE A01 S5.149
410 - 420 MHz	FIXED MOBILE except aeronautical mobile Space Research (space-space) S5.268	FIXED MOBILE except aeronautical mobile

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
420 - 430 MHz	FIXED MOBILE except aeronautical mobile Radiolocation S5.269 S5.270 S5.271	FIXED MOBILE except aeronautical mobile
430 - 440 MHz	AMATEUR RADIOLOCATION S5.138 S5.271 S5.272 S5.273 S5.274 S5.275 S5.276 S5.277 S5.280 S5.281 S5.282 S5.283	AMATEUR MOBILE (439.1 - 440 MHz) S5.283 Amateur-Satellite (435 - 438 MHz) S5.282 S5.280 (433.05 - 434.79 MHz: ISM)
440 - 450 MHz	FIXED MOBILE except aeronautical mobile Radiolocation S5.269 S5.270 S5.271 S5.284 S5.285 S5.286	FIXED MOBILE except aeronautical mobile
450 - 455 MHz	FIXED MOBILE S5.271 S5.286	MOBILE
455 - 456 MHz	FIXED MOBILE S5.271 S5.286B	MOBILE
456 - 459 MHz	FIXED MOBILE S5.271 S5.287 S5.288	MOBILE S5.287
459 - 460 MHz	FIXED MOBILE S5.271 S5.286B	MOBILE
460 - 470 MHz	FIXED MOBILE Meteorological-Satellite (space-Earth) S5.287 S5.288 S5.289 S5.290	MOBILE S5.287

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
470 - 790 MHz	BROADCASTING S5.149 S5.294 S5.296 S5.300 S5.302 S5.304 S5.306 S5.311 S5.312	BROADCASTING Land Mobile S5.296 S5.149 S5.311
790 - 862 MHz	FIXED BROADCASTING S5.312 S5.313 S5.314 S5.315 S5.316 S5.319 S5.321	BROADCASTING Land Mobile S5.314
862 - 890 MHz	FIXED MOBILE except aeronautical mobile BROADCASTING S5.322 S5.319 S5.323	MOBILE except aeronautical mobile
890 - 942 MHz	FIXED MOBILE except aeronautical mobile BROADCASTING...S5.322 Radiolocation S5.323	MOBILE except aeronautical mobile
942 - 960 MHz	FIXED MOBILE except aeronautical mobile BROADCASTING...S5.322 S5.323	MOBILE except aeronautical mobile
960 - 1215 MHz	AERONAUTICAL RADIONAVIGATION S5.328	AERONAUTICAL RADIONAVIGATION S5.328
1215 - 1240 MHz	RADIOLOCATION RADIONAVIGATION-SATELLITE (space-Earth) S5.329 S5.330 S5.331 S5.333	RADIOLOCATION RADIONAVIGATION-SATELLITE (space-Earth) S5.329 RADIONAVIGATION S5.331 S5.333

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
1240 - 1260 MHz	RADIOLOCATION RADIONAVIGATION-SATELLITE (space-Earth) S5.329 Amateur S5.330 S5.331 S5.333 S5.334	RADIOLOCATION RADIONAVIGATION S5.331 Radionavigation-Satellite (space-Earth) S5.329 A01 Amateur S5.333
1260 - 1300 MHz	RADIOLOCATION Amateur S5.282 S5.330 S5.331 S5.333 S5.334	RADIOLOCATION RADIONAVIGATION S5.331 Amateur Amateur-Satellite (Earth-space) (1260 - 1270 MHz) S5.282 S5.333
1300 - 1350 MHz	AERONAUTICAL RADIONAVIGATION S5.337 Radiolocation S5.149	AERONAUTICAL RADIONAVIGATION S5.337 RADIOLOCATION A01 S5.149
1350 - 1400 MHz	FIXED MOBILE RADIOLOCATION S5.149 S5.338 S5.339	FIXED MOBILE (1375 - 1400 MHz) RADIOLOCATION S5.149
1400 - 1427 MHz	EARTH EXPLORATION SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340 S5.341	EARTH EXPLORATION SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340
1427 - 1429 MHz	SPACE OPERATION (Earth-space) FIXED MOBILE except aeronautical mobile S5.341	FIXED
1429 - 1452 MHz	FIXED MOBILE except aeronautical mobile S5.341 S5.342	FIXED

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
1452 - 1492 MHz	FIXED MOBILE except aeronautical mobile BROADCASTING S5.345 S5.347 BROADCASTING-SATELLITE S5.345 S5.347 S5.341 S5.342	FIXED BROADCASTING (1452 - 1467.5 MHz) S5.345 BROADCASTING-SATELLITE (1467.5 - 1492 MHz) S5.345
1492 - 1525 MHz	FIXED MOBILE except aeronautical mobile S5.341 S5.342	FIXED
1525 - 1530 MHz	SPACE OPERATION (space-Earth) FIXED MARITIME MOBILE-SATELLITE (space-Earth) Earth Exploration-Satellite Mobile except aeronautical mobile S5.349 Land Mobile-Satellite (space-Earth) S5.352 S5.341 S5.342 S5.350 S5.351 S5.354	FIXED Land Mobile-Satellite (space-Earth) S5.352 S5.351 S5.354
1530 - 1533 MHz	SPACE OPERATION (space-Earth) MARITIME MOBILE-SATELLITE (space-Earth) LAND MOBILE-SATELLITE (space- Earth) Earth Exploration-Satellite Fixed Mobile except aeronautical mobile S5.341 S5.342 S5.351 S5.354	MOBILE-SATELLITE (space-Earth) A02 S5.351 S5.354
1533 - 1535 MHz	SPACE OPERATION (space-Earth) MARITIME MOBILE-SATELLITE (space-Earth) Earth Exploration-Satellite Fixed Mobile except aeronautical mobile Land Mobile-Satellite (space-Earth) S5.352 S5.341 S5.342 S5.351 S5.354	MOBILE-SATELLITE (space-Earth) S5.352 A02 S5.351 S5.354

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
1535 - 1544 MHz	MARITIME MOBILE-SATELLITE (space-Earth) Land Mobile-Satellite (space-Earth) S5.352 S5.341 S5.351 S5.353 S5.354 S5.355	MOBILE-SATELLITE (space-Earth) S5.352 A02 S5.351 S5.354
1544 - 1545 MHz	MOBILE-SATELLITE (space-Earth) S5.341 S5.354 S5.355 S5.356	MOBILE-SATELLITE (space-Earth) S5.354 S5.356
1545 - 1555 MHz	AERONAUTICAL MOBILE- SATELLITE (R) (space-Earth) S5.341 S5.351 S5.354 S5.355 S5.357 S5.358 S5.359	AERONAUTICAL MOBILE- SATELLITE (R) (space-Earth) S5.351 S5.354 S5.357 S5.358
1555 - 1559 MHz	LAND MOBILE-SATELLITE (space- Earth) S5.341 S5.351 S5.354 S5.355 S5.359 S5.360 S5.361 S5.362	LAND MOBILE-SATELLITE (space-Earth) S5.351 S5.354 S5.360
1559 - 1610 MHz	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-Earth) S5.341 S5.355 S5.359 S5.363	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-Earth)
1610 - 1610.6 MHz	MOBILE-SATELLITE (Earth-space) AERONAUTICAL RADIONAVIGATION S5.341 S5.355 S5.359 S5.363 S5.364 S5.366 S5.367 S5.368 S5.369 S5.371 S5.372	MOBILE-SATELLITE (Earth-space) AERONAUTICAL RADIONAVIGATION S5.364 S5.366 S5.367 S5.368 S5.372
1610.6 - 1613.8 MHz	MOBILE-SATELLITE (Earth-space) RADIO ASTRONOMY AERONAUTICAL RADIONAVIGATION S5.149 S5.341 S5.355 S5.359 S5.363 S5.364 S5.366 S5.367 S5.368 S5.369 S5.371 S5.372	MOBILE-SATELLITE (Earth-space) AERONAUTICAL RADIONAVIGATION S5.149 S5.364 S5.366 S5.367 S5.368 S5.372

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
1613.8 - 1626.5 MHz	MOBILE-SATELLITE (Earth-space) AERONAUTICAL RADIONAVIGATION Mobile-Satellite (space-Earth) S5.341 S5.355 S5.359 S5.363 S5.364 S5.365 S5.366 S5.367 S5.368 S5.369 S5.371 S5.372	MOBILE-SATELLITE (Earth-space) AERONAUTICAL RADIONAVIGATION Mobile-Satellite (space-Earth) S5.364 5.365 S5.366 S5.367 S5.368 S5.372
1626.5 - 1631.5 MHz	MARITIME MOBILE-SATELLITE (Earth-space) Land Mobile-Satellite (Earth-space) S5.352 S5.341 S5.351 S5.354 S5.355 S5.359	MOBILE-SATELLITE (Earth-space) S5.352 A02 S5.351 S5.354
1631.5 - 1634.5 MHz	MARITIME MOBILE-SATELLITE (Earth- space) LAND MOBILE-SATELLITE (Earth-space) S5.341 S5.351 S5.353 S5.354 S5.355 S5.359 S5.374	MOBILE-SATELLITE (Earth-space) A02 S5.351 S5.354 S5.374
1634.5 - 1645.5 MHz	MARITIME MOBILE-SATELLITE (Earth-space) Land Mobile-Satellite (Earth-space) S5.352 S5.341 S5.351 S5.353 S5.354 S5.355 S5.359	MOBILE-SATELLITE (Earth-space) S5.352 A02 S5.351 S5.354
1645.5 - 1646.5 MHz	MOBILE-SATELLITE (Earth-space) S5.341 S5.354 S5.375	MOBILE-SATELLITE (Earth-space) S5.354 S5.375
1646.5 - 1656.5 MHz	AERONAUTICAL MOBILE- SATELLITE (R) (Earth-space) S5.341 S5.351 S5.354 S5.355 S5.358 S5.359 S5.376	AERONAUTICAL MOBILE- SATELLITE (R) (Earth-space) S5.351 S5.354 S5.358 S5.376

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
1656.5 - 1660 MHz	LAND MOBILE-SATELLITE (Earth-space) S5.341 S5.351 S5.354 S5.355 S5.359 S5.360 S5.361 S5.362 S5.374	LAND MOBILE-SATELLITE (Earth-space) S5.351 S5.354 S5.360 S5.374
1660 - 1660.5 MHz	LAND MOBILE-SATELLITE (Earth-space) RADIO ASTRONOMY S5.149 S5.341 S5.351 S5.354 S5.360 S5.361 S5.362	LAND MOBILE-SATELLITE (Earth-space) S5.149 S5.351 S5.354 5.360
1660.5 - 1668.4 MHz	RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile S5.149 S5.341 S5.379 S5.379A	RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile S5.149 S5.379A
1668.4 - 1670 MHz	METEOROLOGICAL AIDS FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY S5.149 S5.341	METEOROLOGICAL AIDS FIXED S5.149
1670 - 1675 MHz	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-Earth) MOBILE S5.380 S5.341	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-Earth) MOBILE S5.380 Fixed A01
1675 - 1690 MHz	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-Earth) MOBILE except aeronautical mobile S5.341	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-Earth)

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
1690 - 1700 MHz	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-Earth) Fixed Mobile except aeronautical mobile S5.289 S5.341 S5.382	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-Earth) FIXED S5.382 S5.289
1700 - 1710 MHz	FIXED METEOROLOGICAL-SATELLITE (space-Earth) MOBILE except aeronautical mobile S5.289 S5.341	FIXED METEOROLOGICAL-SATELLITE (space-Earth) S5.289
1710 - 1930 MHz	FIXED MOBILE S5.380 S5.149 S5.341 S5.385 S5.386 S5.387 S5.388	MOBILE S5.380 FIXED (1920 - 1930 MHz) S5.149 S5.388
1930 - 1970 MHz	FIXED MOBILE S5.388	FIXED MOBILE S5.388
1970 - 1980 MHz	FIXED MOBILE S5.388	FIXED MOBILE S5.388
1980 - 2010 MHz	FIXED MOBILE MOBILE-SATELLITE (Earth-space) S5.388 S5.389A S5.389B S5.389F	FIXED MOBILE MOBILE-SATELLITE (Earth-space) S5.388 S5.389A
2010 - 2025 MHz	FIXED MOBILE S5.388	FIXED MOBILE S5.388

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
2025 - 2110 MHz	SPACE OPERATION (Earth-space) (space-Earth) EARTH EXPLORATION SATELLITE (Earth-space) (space-space) FIXED MOBILE S5.391 SPACE RESEARCH (Earth-space) (space-space) S5.392	FIXED MOBILE S5.391
2110 - 2120 MHz	FIXED MOBILE SPACE RESEARCH (deep space) (Earth-space) S5.388	FIXED MOBILE S5.388
2120 - 2160 MHz	FIXED MOBILE S5.388	FIXED MOBILE S5.388
2160 - 2170 MHz	FIXED MOBILE S5.388 S5.392A	FIXED MOBILE S5.388
2170 - 2200 MHz	FIXED MOBILE MOBILE-SATELLITE (space-Earth) S5.388 S5.389A S5.389F S5.392A	FIXED MOBILE MOBILE-SATELLITE (space-Earth) S5.388 S5.389A
2200 - 2290 MHz	SPACE OPERATION (space-Earth) (space-space) EARTH EXPLORATION SATELLITE (space-Earth) (space-space) FIXED MOBILE S5.391 SPACE RESEARCH (space-Earth) (space-space) S5.392	FIXED MOBILE S5.391

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
2290 - 2300 MHz	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-Earth)	FIXED MOBILE except aeronautical mobile
2300 - 2450 MHz	FIXED MOBILE Amateur Radiolocation S5.150 S5.282 S5.395	FIXED MOBILE Amateur (2320 - 2322 MHz) Amateur-Satellite (2400 - 2450 MHz) S5.282 S5.150
2450 - 2483.5 MHz	FIXED MOBILE Radiolocation S5.150 S5.397	FIXED MOBILE S5.150
2483.5 - 2500 MHz	FIXED MOBILE MOBILE-SATELLITE (space-Earth) Radiolocation S5.150 S5.371 S5.397 S5.398 S5.399 S5.400 S5.402	FIXED MOBILE MOBILE-SATELLITE (space-Earth) S5.150 S5.402
2500 - 2520 MHz	FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile MOBILE-SATELLITE (space-Earth) S5.403 S5.405 S5.407 S5.408 S5.412 S5.414	FIXED MOBILE-SATELLITE (space-Earth) Mobile except aeronautical mobile A01 S5.403 S5.407 S5.414
2520 - 2655 MHz	FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 S5.339 S5.403 S5.405 S5.408 S5.412 S5.417 S5.418	FIXED MOBILE except aeronautical mobile S5.403

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
2655 - 2670 MHz	FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile BROADCASTING-SATELLITE S5.413 S5.416 Earth Exploration-Satellite (passive) Radio Astronomy Space Research (passive) S5.149 S5.412 S5.417 S5.420	FIXED MOBILE except aeronautical mobile S5.149
2670 - 2690 MHz	FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-space) Earth Exploration-Satellite (passive) Radio Astronomy Space Research (passive) S5.149 S5.419 S5.420	MOBILE-SATELLITE (Earth-space) FIXED Mobile except aeronautical mobile A01 S5.149 S5.419 S5.420
2690 - 2700 MHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340 S5.421 S5.422	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) FIXED (2690 - 2695 MHz) S5.421 S5.340
2700 - 2900 MHz	AERONAUTICAL RADIONAVIGATION S5.337 Radiolocation S5.423 S5.424	AERONAUTICAL RADIONAVIGATION S5.337 Radiolocation S5.423
2900 - 3100 MHz	RADIONAVIGATION S5.426 Radiolocation S5.425 S5.427	RADIONAVIGATION S5.426 Radiolocation S5.425 S5.427
3100 - 3300 MHz	RADIOLOCATION S5.149 S5.333 S5.428	RADIOLOCATION S5.149
3300 - 3400 MHz	RADIOLOCATION S5.149 S5.429 S5.430	RADIOLOCATION S5.149

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
3400 - 3600 MHz	FIXED FIXED-SATELLITE (space-Earth) Mobile Radiolocation S5.431 S5.434	FIXED (3500 - 3600 MHz) FIXED-SATELLITE (space-Earth) RADIOLOCATION (3400 - 3500 MHz) A03
3600 - 4200 MHz	FIXED FIXED-SATELLITE (space-Earth) Mobile	FIXED FIXED-SATELLITE (space-Earth)
4200 - 4400 MHz	AERONAUTICAL RADIONAVIGATION S5.438 S5.437 S5.439 S5.440	AERONAUTICAL RADIONAVIGATION S5.438 S5.440
4400 - 4500 MHz	FIXED MOBILE	FIXED MOBILE
4500 - 4800 MHz	FIXED FIXED-SATELLITE (space-Earth) S5.441 MOBILE	FIXED FIXED-SATELLITE (space-Earth) S5.441 MOBILE
4800 - 4990 MHz	FIXED MOBILE S5.442 Radio Astronomy S5.149 S5.339 S5.443	FIXED MOBILE except aeronautical mobile A01 S5.149
4990 - 5000 MHz	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY Space Research (passive) S5.149	FIXED MOBILE except aeronautical mobile S5.149
5000 - 5150 MHz	AERONAUTICAL RADIONAVIGATION S5.367 S5.444 S5.444A	AERONAUTICAL RADIONAVIGATION S5.444

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
5150 – 5250 MHz	AERONAUTICAL RADIONAVIGATION FIXED-SATELLITE (Earth-space) S5.447A S5.446 S5.447 S5.447B S5.447C	MOBILE S5.447
5250 - 5255 MHz	RADIOLOCATION Space Research S5.333 S5.448	RADIOLOCATION RADIONAVIGATION S5.448 Mobile A01
5255 - 5350 MHz	RADIOLOCATION S5.333 S5.448	RADIOLOCATION RADIONAVIGATION S5.448 Mobile A01
5350 - 5460 MHz	AERONAUTICAL RADIONAVIGATION S5.449 Radiolocation	AERONAUTICAL RADIONAVIGATION S5.449 Radiolocation
5460 - 5470 MHz	RADIONAVIGATION S5.449 Radiolocation	RADIONAVIGATION S5.449 Radiolocation
5470 - 5650 MHz	MARITIME RADIONAVIGATION Radiolocation S5.450 S5.451 S5.452	AERONAUTICAL RADIONAVIGATION S5.450 Radiolocation S5.452
5650 - 5725 MHz	RADIOLOCATION Amateur Space Research (deep space) S5.282 S5.451 S5.453 S5.454 S5.455	RADIOLOCATION Amateur Amateur-Satellite (Earth-space) (5650 - 5670 MHz) S5.282
5725 - 5830 MHz	FIXED-SATELLITE (Earth-space) RADIOLOCATION Amateur S5.150 S5.451 S5.453 S5.455 S5.456	FIXED-SATELLITE (Earth-space) RADIOLOCATION Amateur Mobile A01 S5.150

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
5830 - 5850 MHz	FIXED-SATELLITE (Earth-space) RADIOLOCATION Amateur Amateur-Satellite (space-Earth) S5.150 S5.451 S5.453 S5.455 S5.456	FIXED-SATELLITE (Earth-space) RADIOLOCATION Amateur Amateur-Satellite (space-Earth) Mobile A01 S5.150
5850 - 5925 MHz	FIXED FIXED-SATELLITE (Earth-space) MOBILE S5.150	FIXED FIXED-SATELLITE (Earth-space) MOBILE S5.150
5925 - 6700 MHz	FIXED FIXED-SATELLITE (Earth-space) MOBILE S5.149 S5.440 S5.458	FIXED FIXED-SATELLITE (Earth-space) S5.149 S5.440
6700 - 7075 MHz	FIXED FIXED-SATELLITE (Earth-space) (space-Earth) S5.441 MOBILE S5.458 S5.458A S5.458B S5.458C	FIXED FIXED-SATELLITE (Earth-space) (space- Earth) S5.441 S5.458A S5.458B S5.458C
7075 - 7250 MHz	FIXED MOBILE S5.458 S5.459 S5.460	FIXED S5.458
7250 - 7300 MHz	FIXED FIXED-SATELLITE (space-Earth) MOBILE S5.461	FIXED FIXED-SATELLITE (space-Earth)
7300 - 7450 MHz	FIXED FIXED-SATELLITE (space-Earth) MOBILE except aeronautical mobile S5.461	FIXED FIXED-SATELLITE (space-Earth)

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
7450 - 7550 MHz	FIXED FIXED-SATELLITE (space-Earth) METEOROLOGICAL-SATELLITE (space-Earth) MOBILE except aeronautical mobile	FIXED FIXED-SATELLITE (space-Earth) METEOROLOGICAL-SATELLITE (space-Earth)
7550 - 7750 MHz	FIXED FIXED-SATELLITE (space-Earth) MOBILE except aeronautical mobile	FIXED FIXED-SATELLITE (space-Earth)
7750 - 7900 MHz	FIXED MOBILE except aeronautical mobile	FIXED MOBILE except aeronautical mobile
7900 - 8025 MHz	FIXED FIXED-SATELLITE (Earth-space) MOBILE S5.461	FIXED FIXED-SATELLITE (Earth-space) MOBILE
8025 - 8175 MHz	FIXED FIXED-SATELLITE (Earth-space) MOBILE Earth Exploration-Satellite (space- Earth) S5.462 S5.464	FIXED FIXED-SATELLITE (Earth-space) S5.462
8175 - 8215 MHz	FIXED FIXED-SATELLITE (Earth-space) MOBILE METEOROLOGICAL-SATELLITE (Earth-space) Earth Exploration-Satellite (space- Earth) S5.462 S5.464	FIXED FIXED-SATELLITE (Earth-space) METEOROLOGICAL-SATELLITE (Earth-space) S5.462
8215 - 8400 MHz	FIXED FIXED-SATELLITE (Earth-space) MOBILE Earth Exploration-Satellite (space- Earth) S5.462 S5.464	FIXED FIXED-SATELLITE (Earth-space) S5.462

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
8400 - 8500 MHz	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-Earth) S5.465 S5.466 S5.467	FIXED Radiolocation A01
8500 - 8750 MHz	RADIOLOCATION S5.333 S5.468 S5.469	RADIOLOCATION S5.333
8750 - 8850 MHz	RADIOLOCATION AERONAUTICAL RADIONAVIGATION S5.470 S5.471	RADIOLOCATION AERONAUTICAL RADIONAVIGATION S5.470
8850 - 9000 MHz	RADIOLOCATION MARITIME RADIONAVIGATION S5.472 S5.473	RADIOLOCATION RADIONAVIGATION S5.473
9000 - 9200 MHz	AERONAUTICAL RADIONAVIGATION S5.337 Radiolocation S5.471	AERONAUTICAL RADIONAVIGATION S5.337 Radiolocation
9200 - 9300 MHz	RADIOLOCATION MARITIME RADIONAVIGATION S5.472 S5.473 S5.474	RADIOLOCATION RADIONAVIGATION S5.473 S5.474
9300 - 9500 MHz	RADIONAVIGATION S5.476 Radiolocation S5.427 S5.474 S5.475	RADIONAVIGATION S5.476 Radiolocation S5.427 S5.474 S5.475
9500 - 9800 MHz	RADIOLOCATION RADIONAVIGATION S5.333	RADIOLOCATION S5.333

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
9800 - 10000 MHz	RADIOLOCATION Fixed S5.477 S5.478 S5.479	RADIOLOCATION FIXED S5.477
10 - 10.45 GHz	FIXED MOBILE RADIOLOCATION Amateur S5.479	FIXED MOBILE Amateur (10.368 - 10.370 GHz and 10.4 - 10.450 GHz)
10.45 - 10.5 GHz	RADIOLOCATION Amateur Amateur-Satellite S5.481	FIXED A01 RADIOLOCATION Mobile A01 Amateur Amateur-Satellite
10.5 - 10.55 GHz	FIXED MOBILE Radiolocation	FIXED MOBILE Radiolocation
10.55 - 10.6 GHz	FIXED MOBILE except aeronautical mobile Radiolocation	FIXED MOBILE except aeronautical mobile Radiolocation
10.6 - 10.68 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Radiolocation S5.149 S5.482	FIXED MOBILE except aeronautical mobile Radiolocation (10.6 - 10.65 GHz) A01 S5.149 S5.482
10.68 - 10.7 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340 S5.483	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
10.7 - 11.7 GHz	FIXED FIXED-SATELLITE (space-Earth) (Earth-space) S5.441 S5.484 MOBILE except aeronautical mobile	FIXED FIXED-SATELLITE (space-Earth) S5.441 Land Mobile-Satellite (space-Earth) A01 Mobile except aeronautical mobile A01
11.7 - 12.5 GHz	FIXED BROADCASTING BROADCASTING-SATELLITE Mobile except aeronautical mobile S5.487	FIXED BROADCASTING-SATELLITE Mobile except aeronautical mobile S5.487
12.5 - 12.75 GHz	FIXED-SATELLITE (space-Earth) (Earth-space) S5.494 S5.495 S5.496	FIXED-SATELLITE (space-Earth) FIXED S5.496
12.75 - 13.25 GHz	FIXED FIXED-SATELLITE (Earth-space) S5.441 MOBILE Space Research (deep space) (space- Earth)	FIXED FIXED-SATELLITE (Earth-space) S5.441
13.25 - 13.4 GHz	AERONAUTICAL RADIONAVIGATION S5.497 S5.498 S5.499	AERONAUTICAL RADIONAVIGATION S5.497
13.4 - 13.75 GHz	RADIOLOCATION Standard Frequency and Time Signal- Satellite (Earth-space) Space Research S5.333 S5.499 S5.500 S5.501	RADIOLOCATION RADIONAVIGATION S5.501 S5.333
13.75 - 14 GHz	FIXED-SATELLITE (Earth-space) RADIOLOCATION Standard Frequency and Time Signal- Satellite (Earth-space) Space Research S5.333 S5.499 S5.500 S5.501 S5.502 S5.503 S5.503A	FIXED-SATELLITE (Earth-space) RADIOLOCATION RADIONAVIGATION S5.501 S5.333 S5.502 S5.503 S5.503A

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
14 - 14.25 GHz	FIXED-SATELLITE (Earth-space) S5.506 RADIONAVIGATION S5.504 Land Mobile-Satellite (Earth-space) Space Research S5.505	FIXED-SATELLITE (Earth-space) S5.506 Land Mobile-Satellite (Earth-space)
14.25 - 14.3 GHz	FIXED-SATELLITE (Earth-space) S5.506 RADIONAVIGATION S5.504 Land Mobile-Satellite (Earth-space) Space Research S5.505 S5.508 S5.509	FIXED-SATELLITE (Earth-space) S5.506 Land Mobile-Satellite (Earth-space)
14.3 - 14.4 GHz	FIXED FIXED-SATELLITE (Earth-space) S5.506 MOBILE except aeronautical mobile Land Mobile-Satellite (Earth-space) Radionavigation-Satellite	FIXED-SATELLITE (Earth-space) S5.506 Land Mobile-Satellite (Earth-space)
14.4 - 14.47 GHz	FIXED S5.506 MOBILE except aeronautical mobile Land Mobile-Satellite (Earth-space) Space Research (space-Earth)	FIXED-SATELLITE (Earth-space) S5.506 Land Mobile-Satellite (Earth-space)
14.47 - 14.5 GHz	FIXED FIXED-SATELLITE (Earth-space) S5.506 MOBILE except aeronautical mobile Land Mobile-Satellite (Earth-space) Radio Astronomy S5.149	FIXED-SATELLITE (Earth-space) S5.506 Land Mobile-Satellite (Earth-space) S5.149
14.5 - 14.8 GHz	FIXED FIXED-SATELLITE (Earth-space) S5.510 MOBILE Space Research	FIXED MOBILE

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
14.8 - 15.35 GHz	FIXED MOBILE Space Research S5.339	FIXED MOBILE
15.35 - 15.4 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340 S5.511	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340
15.4 - 15.7 GHz	FIXED-SATELLITE (space-Earth) S5.511A S5.511C AERONAUTICAL RADIONAVIGATION S5.511B	AERONAUTICAL RADIONAVIGATION S5.511B
15.7 - 16.6 GHz	RADIOLOCATION S5.512 S5.513	RADIOLOCATION FIXED S5.512 MOBILE S5.512
16.6 - 17.1 GHz	RADIOLOCATION Space Research (deep space) (Earth- space) S5.512 S5.513	RADIOLOCATION FIXED S5.512 MOBILE S5.512
17.1 - 17.2 GHz	RADIOLOCATION S5.512 S5.513	RADIOLOCATION FIXED S5.512 MOBILE S5.512
17.2 - 17.3 GHz	RADIOLOCATION Earth Exploration-Satellite (active) Space Research (active) S5.512 S5.513	RADIOLOCATION FIXED S5.512 MOBILE S5.512
17.3 - 17.7 GHz	FIXED-SATELLITE (Earth-space) S5.516 Radiolocation S5.514	FIXED-SATELLITE (Earth-space) S5.516 FIXED S5.514 A01 Mobile S5.514 Radiolocation

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
17.7 - 18.1 GHz	FIXED FIXED-SATELLITE (space-Earth) (Earth-space) S5.516 MOBILE	FIXED FIXED-SATELLITE (Earth-space) (space- Earth) S5.516
18.1 - 18.4 GHz	FIXED FIXED-SATELLITE (space-Earth) (Earth-space) S5.520 MOBILE S5.519 S5.521	FIXED FIXED-SATELLITE (space-Earth)
18.4 - 18.6 GHz	FIXED FIXED-SATELLITE (space-Earth) MOBILE	FIXED FIXED-SATELLITE (space-Earth)
18.6 - 18.8 GHz	FIXED FIXED-SATELLITE (space-Earth) S5.523 MOBILE except aeronautical mobile Earth Exploration-Satellite (passive) Space Research (passive) S5.522	FIXED FIXED-SATELLITE (space-Earth) S5.523 Earth Exploration-Satellite (passive) S5.522
18.8 - 19.3 GHz	FIXED FIXED-SATELLITE (space-Earth) S5.523A MOBILE	FIXED FIXED-SATELLITE (space-Earth) S5.523A
19.3 - 19.7 GHz	FIXED FIXED-SATELLITE (Earth-space) (space-Earth) S5.523B S5.523D MOBILE S5.523C	FIXED FIXED-SATELLITE (space-Earth) S5.523D S5.523C
19.7 - 20.1 GHz	FIXED-SATELLITE (space-Earth) Mobile-Satellite (space-Earth) S5.524	FIXED-SATELLITE (space-Earth) Mobile-Satellite (space-Earth)

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
20.1 - 20.2 GHz	FIXED-SATELLITE (space-Earth) MOBILE-SATELLITE (space-Earth) S5.524 S5.525 S5.526 S5.527 S5.528	FIXED-SATELLITE (space-Earth) MOBILE-SATELLITE (space-Earth) S5.525 S5.526 S5.527 S5.528
20.2 - 21.2 GHz	FIXED-SATELLITE (space-Earth) MOBILE-SATELLITE (space-Earth) Standard Frequency and Time Signal (space-Earth) S5.524	FIXED-SATELLITE (space-Earth) MOBILE-SATELLITE (space-Earth)
21.2 - 21.4 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)	FIXED MOBILE
21.4 - 22 GHz	FIXED MOBILE BROADCASTING-SATELLITE S5.530	FIXED MOBILE BROADCASTING-SATELLITE S5.530
22 - 22.21 GHz	FIXED MOBILE except aeronautical mobile S5.149	FIXED S5.149
22.21 - 22.5 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) S5.149 S5.532	FIXED S5.149
22.5 - 22.55 GHz	FIXED MOBILE	FIXED
22.55 - 23.55 GHz	FIXED INTER-SATELLITE MOBILE S5.149	FIXED MOBILE S5.149

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
23.55 - 23.6 GHz	FIXED MOBILE	FIXED LAND MOBILE A01
23.6 - 24 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340
24 - 24.05 GHz	AMATEUR AMATEUR-SATELLITE S5.150	AMATEUR AMATEUR-SATELLITE S5.150
24.05 - 24.25 GHz	RADIOLOCATION Amateur Earth Exploration-Satellite (active) S5.150	RADIOLOCATION Amateur Fixed A01 S5.150
24.25 - 24.45 GHz	FIXED	FIXED
24.45 - 24.65 GHz	FIXED INTER-SATELLITE	FIXED MOBILE (24.5 - 24.65 GHz) A01
24.65 - 24.75 GHz	FIXED INTER-SATELLITE	FIXED MOBILE A01
24.75 - 25.25 GHz	FIXED	FIXED MOBILE A01
25.25 - 25.5 GHz	FIXED INTER-SATELLITE S5.536 MOBILE Standard Frequency and Time Signal- Satellite (Earth-space)	FIXED MOBILE
25.5 - 27 GHz	FIXED INTER-SATELLITE S5.536 MOBILE Earth Exploration-Satellite (space- Earth) Standard Frequency and Time Signal- Satellite (Earth-space)	FIXED MOBILE

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
27 - 27.5 GHz	FIXED INTER-SATELLITE S5.536 MOBILE	FIXED MOBILE
27.5 - 28.5 GHz	FIXED FIXED-SATELLITE (Earth-space) S5.539 MOBILE S5.538 S5.540	FIXED FIXED-SATELLITE (Earth-space) (space- Earth) S5.538 S5.539 S5.540
28.5 - 29.1 GHz	FIXED FIXED-SATELLITE (Earth-space) S5.523A S5.539 MOBILE Earth Exploration-Satellite (Earth- space) S5.541 S5.540	FIXED FIXED-SATELLITE (Earth-space) S5.523A S5.539 S5.540
29.1 - 29.5 GHz	FIXED FIXED-SATELLITE (Earth-space) S5.523C S5.535A S5.539 S5.541A MOBILE Earth Exploration-Satellite (Earth-space) S5.541 S5.540	FIXED FIXED-SATELLITE (Earth-space) S5.523C S5.535A S5.539 S5.541A S5.540
29.5 - 29.9 GHz	FIXED-SATELLITE (Earth-space) S5.539 Earth Exploration-Satellite (Earth- space) S5.541 Mobile-Satellite (Earth-space) S5.540 S5.542	FIXED-SATELLITE (Earth-space) S5.539 Mobile-Satellite (Earth-space) S5.540
29.9 - 30 GHz	FIXED-SATELLITE (Earth-space) S5.539 MOBILE-SATELLITE (Earth-space) Earth Exploration-Satellite (Earth- space) S5.541 S5.525 S5.526 S5.527 S5.538 S5.540 S5.542 S5.543	FIXED-SATELLITE (Earth-space) (space- Earth) S5.539 A01 MOBILE-SATELLITE (Earth-space) S5.525 S5.526 S5.527 S5.538 S5.540 S5.543

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
30 - 31 GHz	FIXED-SATELLITE (Earth-space) MOBILE-SATELLITE (Earth-space) Standard Frequency and Time Signal-Satellite (space-Earth) S5.542	FIXED-SATELLITE (Earth-space) (space-Earth) A01 MOBILE-SATELLITE (Earth-space)
31 - 31.3 GHz	FIXED MOBILE Standard Frequency and Time Signal-Satellite (space-Earth) Space Research S5.544 S5.149 S5.545	FIXED MOBILE S5.149
31.3 - 31.5 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340
31.5 - 31.8 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile S5.149 S5.546	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.149
31.8 - 32 GHz	RADIONAVIGATION SPACE RESEARCH (deep space) (space-Earth) S5.548	RADIONAVIGATION S5.548
32 - 32.3 GHz	INTER-SATELLITE RADIONAVIGATION SPACE RESEARCH (deep space) (space-Earth) S5.548	RADIONAVIGATION S5.548

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
32.3 - 33 GHz	INTER-SATELLITE RADIONAVIGATION S5.548	RADIONAVIGATION S5.548
33 - 33.4 GHz	RADIONAVIGATION	RADIONAVIGATION
33.4 - 34.2 GHz	RADIOLOCATION S5.549	RADIOLOCATION
34.2 - 34.7 GHz	RADIOLOCATION SPACE RESEARCH (deep space) (Earth-space) S5.549	RADIOLOCATION
34.7 - 35.2 GHz	RADIOLOCATION Space Research S5.550 S5.549	RADIOLOCATION
35.2 - 36 GHz	METEOROLOGICAL AIDS RADIOLOCATION S5.549 S5.551	METEOROLOGICAL AIDS RADIOLOCATION S5.551
36 - 37 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) S5.149	FIXED MOBILE S5.149
37 - 37.5 GHz	FIXED MOBILE SPACE RESEARCH (space-Earth)	FIXED
37.5 - 38 GHz	FIXED FIXED-SATELLITE (space-Earth) MOBILE SPACE RESEARCH (space-Earth) Earth Exploration-Satellite (space- Earth)	FIXED FIXED-SATELLITE (space-Earth)

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
38 - 39.5 GHz	FIXED FIXED-SATELLITE (space-Earth) MOBILE Earth Exploration-Satellite (space-Earth)	FIXED FIXED-SATELLITE (space-Earth)
39.5 - 40 GHz	FIXED FIXED-SATELLITE (space-Earth) MOBILE MOBILE-SATELLITE (space-Earth) Earth Exploration-Satellite (space-Earth)	FIXED FIXED-SATELLITE (space-Earth) MOBILE MOBILE-SATELLITE (space-Earth)
40 - 40.5 GHz	EARTH EXPLORATION-SATELLITE (Earth-space) FIXED FIXED-SATELLITE (space-Earth) MOBILE MOBILE-SATELLITE (space-Earth) SPACE RESEARCH (Earth-space) Earth Exploration-Satellite (space-Earth)	FIXED FIXED-SATELLITE (space-Earth) MOBILE MOBILE-SATELLITE (space-Earth)
40.5 - 42.5 GHz	BROADCASTING BROADCASTING-SATELLITE Fixed Mobile	BROADCASTING BROADCASTING-SATELLITE FIXED A01
42.5 - 43.5 GHz	FIXED FIXED-SATELLITE (Earth-space) S5.552 MOBILE except aeronautical mobile RADIO ASTRONOMY S5.149	FIXED FIXED-SATELLITE (Earth-space) S5.552 MOBILE except aeronautical mobile S5.149
43.5 - 47 GHz	MOBILE S5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE S5.554	MOBILE S5.553 MOBILE-SATELLITE RADIONAVIGATION (45.5 - 47 GHz) A01 RADIONAVIGATION-SATELLITE (45.5 - 47 GHz) A01 Fixed-Satellite (43.5 - 45.5 GHz) A01 S5.554
47 - 47.2 GHz	AMATEUR AMATEUR-SATELLITE	AMATEUR AMATEUR-SATELLITE

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
47.2 - 50.2 GHz	FIXED FIXED-SATELLITE (Earth-space) S5.552 MOBILE S5.149 S5.340 S5.555	FIXED FIXED-SATELLITE (Earth-space) S5.552 MOBILE (47.2 - 48.5 GHz) A01 S5.149 S5.340
50.2 - 50.4 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)
50.4 - 51.4 GHz	FIXED FIXED-SATELLITE (Earth-space) MOBILE Mobile-Satellite (Earth-space)	FIXED FIXED-SATELLITE (Earth-space) Mobile-Satellite (Earth-space)
51.4 - 54.25 GHz	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) S5.340 S5.556	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY S5.556 SPACE RESEARCH (passive) S5.340
54.25 - 58.2 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE MOBILE S5.558 SPACE RESEARCH (passive) S5.557	FIXED (55.2 - 58.2 GHz) A01 MOBILE (57.2 - 58.2 GHz) S5.558 A01
58.2 - 59 GHz	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) S5.340 S5.556	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) RADIO ASTRONOMY S5.556 A01 FIXED A01 S5.340

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
59 - 64 GHz	FIXED INTER-SATELLITE MOBILE S5.558 RADIOLOCATION S5.559 S5.138	FIXED (59 - 62 GHz) A01 RADIOLOCATION S5.559 MOBILE (62 - 64 GHz) S5.558 A01 S5.138
64 - 65 GHz	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) S5.340 S5.556	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) RADIO ASTRONOMY S5.556 A01 S5.340
65 - 66 GHz	EARTH EXPLORATION-SATELLITE SPACE RESEARCH Fixed Mobile	EARTH EXPLORATION-SATELLITE MOBILE A01 SPACE RESEARCH
66 - 71 GHz	MOBILE S5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE S5.554	MOBILE S5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE S5.554
71 - 74 GHz	FIXED FIXED-SATELLITE (Earth-space) MOBILE MOBILE-SATELLITE (Earth-space) S5.149 S5.556	FIXED FIXED-SATELLITE (Earth-space) MOBILE MOBILE-SATELLITE (Earth-space) S5.149
74 - 75.5 GHz	FIXED FIXED-SATELLITE (Earth-space) MOBILE Space Research (space-Earth)	FIXED FIXED-SATELLITE (Earth-space) MOBILE
75.5 - 76 GHz	AMATEUR AMATEUR-SATELLITE Space Research (space-Earth)	AMATEUR AMATEUR-SATELLITE

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
76 - 81 GHz	RADIOLOCATION Amateur Amateur-Satellite Space Research (space-Earth) S5.560	RADIOLOCATION Amateur Amateur-Satellite Earth Exploration-Satellite (active) (78 - 81 GHz) A01 S5.560
81 - 84 GHz	FIXED FIXED-SATELLITE (space-Earth) MOBILE MOBILE-SATELLITE (space-Earth) Space Research (space-Earth)	FIXED FIXED-SATELLITE (space-Earth) MOBILE MOBILE-SATELLITE (space-Earth)
84 - 86 GHz	FIXED MOBILE BROADCASTING BROADCASTING-SATELLITE S5.561	FIXED MOBILE BROADCASTING BROADCASTING-SATELLITE S5.561
86 - 92 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340
92 - 95 GHz	FIXED FIXED-SATELLITE (Earth-space) MOBILE RADIOLOCATION S5.149 S5.556	FIXED FIXED-SATELLITE (Earth-space) MOBILE RADIOLOCATION S5.149
95 - 100 GHz	MOBILE S5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE Radiolocation S5.149 S5.554 S5.555	MOBILE S5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE Radiolocation S5.149 S5.554

Frequenzbereich	Frequenzzuweisung gemäß Artikel S5 der VO Funk	Frequenzzuweisung in Österreich und relevante Fußnoten
100 - 102 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) S5.341	FIXED MOBILE
102 - 105 GHz	FIXED FIXED-SATELLITE (space-Earth) MOBILE S5.341	FIXED FIXED-SATELLITE (space-Earth) MOBILE

Anlage 2

Fußnoten des Frequenzbereichszuweisungsplans

Footnotes to the Frequency Allocation Table (Column 2 and 3)

and other relevant provisions of the Radio Regulations

I. Footnotes according to Radio Regulations (RR)

- S5.53 Administrations authorizing the use of frequencies below 9 kHz shall ensure that no harmful interference is caused thereby to the services to which the bands above 9 kHz are allocated.
- S5.54 Administrations conducting scientific research using frequencies below 9 kHz are urged to advise other administrations that may be concerned in order that such research may be afforded all practicable protection from harmful interference.
- S5.55 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Moldova, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 14 - 17 kHz is also allocated to the radionavigation service on a primary basis.
- S5.56 The stations of services to which the bands 14 - 19.95 kHz and 20.05 - 70 kHz and in Region 1 also the bands 72 - 84 kHz and 86 - 90 kHz are allocated may transmit standard frequency and time signals. Such stations shall be afforded protection from harmful interference. In Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions.
- S5.57 The use of the bands 14 - 19.95 kHz, 20.05 - 70 kHz and 70 - 90 kHz (72 - 84 kHz and 86 - 90 kHz in Region 1) by the maritime mobile service is limited to coast radiotelegraph stations (A1A and F1B only). Exceptionally, the use of class J2B or J7B emissions is authorized subject to the necessary bandwidth not exceeding that normally used for class A1A or F1B emissions in the band concerned.
- S5.58 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Moldova, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 67 - 70 kHz is also allocated to the radionavigation service on a primary basis.
- S5.59 *Different category of service:* in Bangladesh, the Islamic Republic of Iran and Pakistan, the allocation of the bands 70 - 72 kHz and 84 - 86 kHz to the fixed and maritime mobile service is on a primary basis (see No. **S5.33**).
- S5.60 In the bands 70 - 90 kHz (70 - 86 kHz in Region 1) and 110 - 130 kHz (112 - 130 kHz in Region 1), pulsed radionavigation systems may be used on condition that they do not cause harmful interference to other services to which these bands are allocated.
- S5.61 In Region 2, the establishment and operation of stations in the maritime radionavigation service in the bands 70 - 90 kHz and 110 - 130 kHz shall be subject to agreement obtained under No. **S9.21** with administrations whose services, operating in accordance with the Table, may be affected. However, stations of the fixed, maritime mobile and radiolocation services shall not cause harmful interference to stations in the maritime radionavigation service established under such agreements.
- S5.62 Administrations which operate stations in the radionavigation service in the band 90 - 110 kHz are urged to coordinate technical and operating characteristics in such a way as to avoid harmful interference to the services provided by these stations.
- S5.63 In the band 90 - 110 kHz, the United Kingdom may continue to use its coast radiotelegraph stations in operation on 14 September 1987, on a secondary basis.
- S5.64 Only classes A1A or F1B, A2C, A3C, F1C or F3C emissions are authorized for stations of the fixed service in the bands allocated to this service between 90 kHz and 160

- kHz (148.5 kHz in Region 1) and for stations of the maritime mobile service in the bands allocated to this service between 110 kHz and 160 kHz (148.5 kHz in Region 1). Exceptionally, class J2B or J7B emissions are also authorized in the bands between 110 kHz and 160 kHz (148.5 kHz in Region 1) for stations of the maritime mobile service.
- S5.65 *Different category of service:* in Bangladesh, the Islamic Republic of Iran and Pakistan, the allocation of the bands 112 - 117.6 kHz and 126 - 129 kHz to the fixed and maritime mobile services is on a primary basis (see No. **S5.33**).
- S5.66 *Different category of service:* in Germany, the allocation of the band 115 - 117.6 kHz to the fixed and maritime mobile services is on a primary basis (see No. **S5.33**) and to the radionavigation service on a secondary basis (see No. **S5.32**).
- S5.67 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakhstan, Moldova, Mongolia, Kyrgyzstan, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 130 - 148.5 kHz is also allocated to the radionavigation service on a secondary basis. Within and between these countries this service shall have an equal right to operate.
- S5.68 *Alternative allocation:* in Angola, Botswana, Burundi, the Congo, Malawi, Rwanda, South Africa and Zaire, the band 160 - 200 kHz is allocated to the fixed service on a primary basis.
- S5.69 *Additional allocation:* in Somalia, the band 200 - 255 kHz is also allocated to the aeronautical radionavigation service on a primary basis.
- S5.70 *Alternative allocation:* in Angola, Botswana, Burundi, Cameroon, the Central African Republic, the Congo, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Nigeria, Oman, Rwanda, South Africa, Swaziland, Tanzania, Chad, Zaire, Zambia and Zimbabwe, the band 200 - 283.5 kHz is allocated to the aeronautical radionavigation service on a primary basis.
- S5.71 *Alternative allocation:* in Tunisia, the band 255 - 283.5 kHz is allocated to the broadcasting service on a primary basis.
- S5.72 Norwegian stations of the fixed service situated in northern areas (north of 60° N) subject to auroral disturbances are allowed to continue operation on four frequencies in the bands 283.5 - 490 kHz and 510 - 526.5 kHz.
- S5.73 In the band 285 - 325 kHz (283.5 - 325 kHz in Region 1), in the maritime radionavigation service, radiobeacon stations may also transmit supplementary navigational information using narrow-band techniques, on condition that the prime function of the beacon is not significantly degraded.
- S5.74 *Additional Allocation:* in Region 1, the frequency band 285.3 - 285.7 kHz is also allocated to the maritime radionavigation service (other than radiobeacons) on a primary basis.
- S5.75 *Different category of service:* in Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Moldova, Kyrgyzstan, Russia, Tajikistan, Turkmenistan, Ukraine and the Black Sea areas of Bulgaria and Romania, the allocation of the band 315 - 325 kHz to the maritime radionavigation service is on a primary basis under the condition that in the Baltic Sea area, the assignment of frequencies in this band to new stations in the maritime or aeronautical radionavigation services shall be subject to prior consultation between the administrations concerned.
- S5.76 The frequency 410 kHz is designated for radio direction-finding in the maritime radionavigation service. The other radionavigation services to which the band 405 - 415 kHz is allocated shall not cause harmful interference to radio direction-finding in the band 406.5 - 413.5 kHz.
- S5.77 *Different category of service:* in Australia, China, the French Overseas Territories of Region 3, India, Indonesia, the Islamic Republic of Iran, Japan, Pakistan, Papua New Guinea and Sri Lanka, the allocation of the band 415 - 495 kHz to the aeronautical radionavigation service is on a primary basis. Administrations in these countries shall take all practical steps necessary to ensure that aeronautical radionavigation stations in the band 435 - 495 kHz do not cause interference to reception by coast stations of ship stations transmitting on frequencies designated for ship stations on a worldwide basis (see No. **S52.39**).

- S5.78 *Different category of service:* in Cuba, the United States of America and Mexico, the allocation of the band 415 - 435 kHz to the aeronautical radionavigation service is on a primary basis.
- S5.79 The use of the bands 415 - 495 kHz and 505 - 526.5 kHz (505 - 510 kHz in Region 2) by the maritime mobile service is limited to radiotelegraphy.
- S5.80 In Region 2, the use of the band 435 - 495 kHz by the aeronautical radionavigation service is limited to non-directional beacons not employing voice transmission.
- S5.81 The bands 490 - 495 kHz and 505 - 510 kHz shall be subject to the provisions of Appendix **S13** until the entry into force of the reduced guardband in accordance with Resolution **210 (Mob-87)**.
- S5.82 In the maritime mobile service, the frequency 490 kHz is, from the date of full implementation of the GMDSS (see Resolution **331 (Mob-87)**), to be used exclusively for the transmission by coast stations of navigational and meteorological warnings and urgent information to ships, by means of narrow-band direct-printing telegraphy. The conditions for use of the frequency 490 kHz are prescribed in Articles **S31** and **S52**, and Resolution **339 (WRC-95)**. In using the band 415 - 495 kHz for the aeronautical radionavigation service, administrations are requested to ensure that no harmful interference is caused to the frequency 490 kHz.
- S5.83 The frequency 500 kHz is an international distress and calling frequency for Morse radiotelegraphy. The conditions for its use are prescribed in Articles **S31** and **S52**, and in Appendix **S13**.
- S5.84 The conditions for the use of the frequency 518 kHz by the maritime mobile service are prescribed in Articles **S31** and **S52** and in Appendix **S13** (see Resolution **339 (WRC-95)**).
- S5.85 Not used
- S5.86 In Region 2, in the band 525 - 535 kHz the carrier power of broadcasting stations shall not exceed 1 kW during the day and 250 W at night.
- S5.87 *Additional allocation:* in Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the band 526.5 - 535 kHz is also allocated to the mobile service on a secondary basis.
- S5.88 *Additional allocation:* in China, the band 526.5 - 535 kHz is also allocated to the aeronautical radionavigation service on a secondary basis.
- S5.89 In Region 2, the use of the band 1 605 - 1 705 kHz by stations of the broadcasting service is subject to the Plan established by the Regional Administrative Radio Conference (Rio de Janeiro, 1988).
The examination of frequency assignments to stations of the fixed and mobile services in the band 1 625 - 1 705 kHz shall take account of the allotments appearing in the Plan established by the Regional Administrative Radio Conference (Rio de Janeiro, 1988).
- S5.90 In the band 1 605 - 1 705 kHz, in cases where a broadcasting station of Region 2 is concerned, the service area of the maritime mobile stations in Region 1 shall be limited to that provided by ground-wave propagation.
- S5.91 *Additional allocation:* in Australia, the Philippines, Singapore and Sri Lanka, the band 1 606.5 - 1 705 kHz is also allocated to the broadcasting service on a secondary basis.
- S5.92 Some countries of Region 1 use radiodetermination systems in the bands 1 606.5 - 1 625 kHz, 1 635 - 1 800 kHz, 1 850 - 2 160 kHz, 2 194 - 2 300 kHz, 2 502 - 2 850 kHz and 3 500 - 3 800 kHz, subject to agreement obtained under No. **S9.21**. The radiated mean power of these stations shall not exceed 50 W.
- S5.93 *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Nigeria, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Chad, Turkmenistan and Ukraine, the bands 1 625 - 1 635 kHz, 1 800 - 1 810 kHz and 2 160 - 2 170 kHz are also allocated to the fixed and land mobile services on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.94 and S5.95 Not used

- S5.96 In Germany, Armenia, Azerbaijan, Belarus, Denmark, Estonia, Finland, Georgia, Hungary, Ireland, Israel, Jordan, Kazakstan, Latvia, Lithuania, Malta, Moldova, Norway, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, the United Kingdom, Russia, Sweden, Tajikistan, Turkmenistan and Ukraine, administrations may allocate up to 200 kHz to their amateur service in the bands 1 715 - 1 800 kHz and 1 850 - 2 000 kHz. However, when allocating the bands within this range to their amateur service, administrations shall, after prior consultation with administrations of neighbouring countries, take such steps as may be necessary to prevent harmful interference from their amateur service to the fixed and mobile services of other countries. The mean power of any amateur station shall not exceed 10 W.
- S5.97 In Region 3, the Loran system operates either on 1 850 kHz or 1 950 kHz, the bands occupied being 1 825 - 1 875 kHz and 1 925 - 1 975 kHz respectively. Other services to which the band 1 800 - 2 000 kHz is allocated may use any frequency therein on condition that no harmful interference is caused to the Loran system operating on 1 850 kHz or 1 950 kHz.
- S5.98 *Alternative allocation:* in Angola, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Cameroon, the Congo, Denmark, Egypt, Eritrea, Spain, Ethiopia, France, Georgia, Greece, Italy, Kazakstan, Lebanon, Lithuania, Luxembourg, Malawi, Moldova, Uzbekistan, the Netherlands, Syria, Kyrgyzstan, Russia, Somalia, Tajikistan, Tanzania, Tunisia, Turkmenistan, Turkey and Ukraine, the band 1 810 - 1 830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.99 *Additional allocation:* in Saudi Arabia, Bosnia and Herzegovina, Iraq, The Former Yugoslav Republic of Macedonia, Libya, Slovakia, the Czech Republic, Romania, Slovenia, Chad, Togo and Yugoslavia, the band 1 810 - 1 830 kHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.100 In Region 1, the authorization to use the band 1 810 - 1 830 kHz by the amateur service in countries situated totally or partially north of 40° N shall be given only after consultation with the countries mentioned in Nos. **S5.98** and **S5.99** to define the necessary steps to be taken to prevent harmful interference between amateur stations and stations of other services operating in accordance with Nos. **S5.98** and **S5.99**.
- S5.101 *Alternative allocation:* in Burundi and Lesotho, the band 1 810 - 1 850 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.102 *Alternative allocation:* in Argentina, Bolivia, Chile, Mexico, Paraguay, Peru, Uruguay and Venezuela, the band 1 850 - 2 000 kHz is allocated to the fixed, mobile except aeronautical mobile, radiolocation and radionavigation services on a primary basis.
- S5.103 In Region 1, in making assignments to stations in the fixed and mobile services in the bands 1 850 - 2 045 kHz, 2 194 - 2 498 kHz, 2 502 - 2 625 kHz and 2 650 - 2 850 kHz, administrations should bear in mind the special requirements of the maritime mobile service.
- S5.104 In Region 1, the use of the band 2 025 - 2 045 kHz by the meteorological aids service is limited to oceanographic buoy stations.
- S5.105 In Region 2, except in Greenland, coast stations and ship stations using radiotelephony in the band 2 065 - 2 107 kHz shall be limited to class J3E emissions and to a peak envelope power not exceeding 1 kW. Preferably, the following carrier frequencies should be used: 2 065.0 kHz, 2 079.0 kHz, 2 082.5 kHz, 2 086.0 kHz, 2 093.0 kHz, 2 096.5 kHz, 2 100.0 kHz and 2 103.5 kHz. In Argentina and Uruguay, the carrier frequencies 2 068.5 kHz and 2 075.5 kHz are also used for this purpose, while the frequencies within the band 2 072 - 2 075.5 kHz are used as provided in No. **S52.165**.
- S5.106 In Regions 2 and 3, provided no harmful interference is caused to the maritime mobile service, the frequencies between 2 065 kHz and 2 107 kHz may be used by stations of the fixed service communicating only within national borders and whose mean power does not exceed 50 W. In notifying the frequencies, the attention of the Bureau should be drawn to these provisions.
- S5.107 *Additional allocation:* in Saudi Arabia, Botswana, Eritrea, Ethiopia, Iraq, Lesotho, Libya, Malawi, Somalia, Swaziland and Zambia, the band 2 160 - 2 170 kHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis. The mean power of stations in these services shall not exceed 50 W.

- S5.108 The carrier frequency 2 182 kHz is an international distress and calling frequency for radiotelephony. The conditions for the use of the band 2 173.5 - 2 190.5 kHz are prescribed in Articles **S31** and **S52** and in Appendix **S13**.
- S5.109 The frequencies 2 187.5 kHz, 4 207.5 kHz, 6 312 kHz, 8 414.5 kHz, 12 577 kHz and 16 804.5 kHz are international distress frequencies for digital selective calling. The conditions for the use of these frequencies are prescribed in Article **S31**.
- S5.110 The frequencies 2 174.5 kHz, 4 177.5 kHz, 6 268 kHz, 8 376.5 kHz, 12 520 kHz and 16 695 kHz are international distress frequencies for narrow-band direct-printing telegraphy. The conditions for the use of these frequencies are prescribed in Article **S31**.
- S5.111 The carrier frequencies 2 182 kHz, 3 023 kHz, 5 680 kHz, 8 364 kHz and the frequencies 121.5 MHz, 156.8 MHz and 243 MHz may also be used, in accordance with the procedures in force for terrestrial radiocommunication services, for search and rescue operations concerning manned space vehicles. The conditions for the use of the frequencies are prescribed in Article **S31** and in Appendix **S13**.
- S5.112 The same applies to the frequencies 10 003 kHz, 14 993 kHz and 19 993 kHz, but in each of these cases emissions must be confined in a band of ± 3 kHz about the frequency.
Alternative allocation: in Belgium, Bosnia and Herzegovina, Cyprus, Denmark, Spain, France, Greece, Iceland, Italy, Malta, Norway, the United Kingdom, Singapore, Sri Lanka, Turkey and Yugoslavia, the band 2 194 - 2 300 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.113 For the conditions for the use of the bands 2 300 - 2 495 kHz (2 498 kHz in Region 1), 3 200 - 3 400 kHz, 4 750 - 4 995 kHz and 5 005 - 5 060 kHz by the broadcasting service, see Nos. **S5.16** to **S5.20**, **S5.21** and **S23.3** to **S23.10**.
- S5.114 *Alternative allocation:* in Belgium, Bosnia and Herzegovina, Cyprus, Denmark, Spain, France, Greece, Iraq, Italy, Malta, Norway, the United Kingdom, Turkey and Yugoslavia, the band 2 502 - 2 625 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.115 The carrier (reference) frequencies 3 023 kHz and 5 680 kHz may also be used, in accordance with Article **S31** and Appendix **S13** by stations of the maritime mobile service engaged in coordinated search and rescue operations.
- S5.116 Administrations are urged to authorize the use of the band 3 155 - 3 195 kHz to provide a common worldwide channel for low power wireless hearing aids. Additional channels for these devices may be assigned by administrations in the bands between 3 155 kHz and 3 400 kHz to suit local needs.
It should be noted that frequencies in the range 3 000 kHz to 4 000 kHz are suitable for hearing aid devices which are designed to operate over short distances within the induction field.
- S5.117 *Alternative allocation:* in Belgium, Bosnia and Herzegovina, Cameroon, Cyprus, Côte d'Ivoire, Denmark, Egypt, Spain, France, Greece, Iceland, Italy, Liberia, Malta, Norway, the United Kingdom, Singapore, Sri Lanka, Togo, Turkey and Yugoslavia, the band 3 155 - 3 200 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.118 *Additional allocation:* in the United States, Japan, Mexico, Peru and Uruguay, the band 3 230 - 3 400 kHz is also allocated to the radiolocation service on a secondary basis.
- S5.119 *Additional allocation:* in Honduras, Mexico, Peru and Venezuela, the band 3 500 - 3 750 kHz is also allocated to the fixed and mobile services on a primary basis.
- S5.120 For the use of the bands allocated to the amateur service at 3.5 MHz, 7.0 MHz, 10.1 MHz, 14.0 MHz, 18.068 MHz, 21.0 MHz, 24.89 MHz and 144 MHz in the event of natural disasters, see Resolution **640**.
- S5.121 Not used
- S5.122 *Alternative allocation:* in Argentina, Bolivia, Chile, Ecuador, Paraguay, Peru and Uruguay, the band 3 750 - 4 000 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.123 *Additional allocation:* in Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the band 3 900 - 3 950 kHz is also

- allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.124 *Additional allocation:* in Canada, the band 3 950 - 4 000 kHz is also allocated to the broadcasting service on a primary basis. The power of broadcasting stations operating in this band shall not exceed that necessary for a national service within the frontier of this country and shall not cause harmful interference to other services operating in accordance with the Table.
- S5.125 *Additional allocation:* in Greenland, the band 3 950 - 4 000 kHz is also allocated to the broadcasting service on a primary basis. The power of the broadcasting stations operating in this band shall not exceed that necessary for a national service and shall in no case exceed 5 kW.
- S5.126 In Region 3, the stations of those services to which the band 3 995 - 4 005 kHz is allocated may transmit standard frequency and time signals.
- S5.127 The use of the band 4 000 - 4 063 kHz by the maritime mobile service is limited to ship stations using radiotelephony (see No. **S52.220** and Appendix **S17**).
- S5.128 In Afghanistan, Argentina, Armenia, Australia, Azerbaijan, Belarus, Botswana, Burkina Faso, Central African Republic, China, Georgia, India, Kazakhstan, Mali, Moldova, Niger, Kyrgyzstan, Russia, Tajikistan, Chad, Turkmenistan and Ukraine, in the bands 4 063 - 4 123 kHz, 4 130 - 4 133 kHz and 4 408 - 4 438 kHz, stations of limited power in the fixed service which are situated at least 600 km from the coast may operate on condition that harmful interference is not caused to the maritime mobile service.
- S5.129 On condition that harmful interference is not caused to the maritime mobile service, the frequencies in the bands 4 063 - 4 123 kHz and 4 130 - 4 438 kHz may be used exceptionally by stations in the fixed service communicating only within the boundary of the country in which they are located with a mean power not exceeding 50 W.
- S5.130 The conditions for the use of the carrier frequencies 4 125 kHz and 6 215 kHz are prescribed in Articles **S31** and **S52** and in Appendix **S13**.
- S5.131 The frequency 4 209.5 kHz is used exclusively for the transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of narrow-band direct-printing techniques (see Resolution **339 WRC-95**).
- S5.132 The frequencies 4 210 kHz, 6 314 kHz, 8 416.5 kHz, 12 579 kHz, 16 806.5 kHz, 19 680.5 kHz, 22 376 kHz and 26 100.5 kHz are the international frequencies for the transmission of Maritime Safety Information (MSI) (see Resolution **333 (Mob-87)** and Appendix **S17**).
- S5.133 *Different category of service:* in Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Latvia, Lithuania, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 5 130 - 5 250 kHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. **S5.33**).
- S5.134 The use of the bands 5 900 - 5 950 kHz, 7 300 - 7 350 kHz, 9 400 - 9 500 kHz, 11 600 - 11 650 kHz, 12 050 - 12 100 kHz, 13 570 - 13 600 kHz, 13 800 - 13 870 kHz, 15 600 - 15 800 kHz, 17 480 - 17 550 kHz and 18 900 - 19 020 kHz by the broadcasting service is limited to single-sideband emissions with the characteristics specified in Appendix **S11** to the Radio Regulations.
- S5.135 The use of the bands 5 900 - 5 950 kHz, 7 300 - 7 350 kHz, 9 400 - 9 500 kHz, 11 600 - 11 650 kHz, 12 050 - 12 100 kHz, 13 570 - 13 600 kHz, 13 800 - 13 870 kHz, 15 600 - 15 800 kHz, 17 480 - 17 550 kHz and 18 900 - 19 020 kHz by the broadcasting service shall be subject to the planning procedures to be drawn up by a competent world radio conference.
- S5.136 The band 5 900 - 5 950 kHz is allocated, until 1 April 2007, to the fixed service on a primary basis, as well as to the following services: in Region 1 to the land mobile service on a primary basis, in Region 2 to the mobile except aeronautical mobile (R) service on a primary basis, and in Region 3 to the mobile except aeronautical mobile (R) service on a secondary basis, subject to application of the procedure referred to in Resolution **21 (Rev.WRC-95)**. After 1 April 2007, frequencies in this band may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which

- they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.
- S5.137 On condition that harmful interference is not caused to the maritime mobile service, the bands 6 200 - 6 213.5 kHz and 6 220.5 - 6 525 kHz may be used exceptionally by stations in the fixed service, communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 W. At the time of notification of these frequencies, the attention of the Bureau will be drawn to the above conditions.
- S5.138 The following bands:
6 765 - 6 795 kHz (centre frequency 6 780 kHz),
433.05 - 434.79 MHz (centre frequency 433.92 MHz) in Region 1 except in the countries mentioned in No. **S5.280**,
61 - 61.5 GHz (centre frequency 61.25 GHz),
122 - 123 GHz (centre frequency 122.5 GHz), and
244 - 246 GHz (centre frequency 245 GHz)
are designated for industrial, scientific and medical (ISM) applications. The use of these frequency bands for ISM applications shall be subject to special authorization by the administration concerned, in agreement with other administrations whose radiocommunication services might be affected. In applying this provision, administrations shall have due regard to the latest relevant ITU-R Recommendations.
- S5.139 *Different category of service:* in Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 6 765 - 7 000 kHz to the land mobile service is on a primary basis (see No. **S5.33**).
- S5.140 *Additional allocation:* in Angola, Iraq, Rwanda, Somalia and Togo, the band 7 000 - 7 050 kHz is also allocated to the fixed service on a primary basis.
- S5.141 *Alternative allocation:* in Egypt, Eritrea, Ethiopia, Guinea, Libya, Madagascar and Malawi, the band 7 000 - 7 050 kHz is allocated to the fixed service on a primary basis.
- S5.142 The use of the band 7 100 - 7 300 kHz in Region 2 by the amateur service shall not impose constraints on the broadcasting service intended for use within Region 1 and Region 3.
- S5.143 The band 7 300 - 7 350 kHz is allocated, until 1 April 2007, to the fixed service on a primary basis and to the land mobile service on a secondary basis, subject to application of the procedure referred to in Resolution **21 (Rev.WRC-95)**. After 1 April 2007, frequencies in this band may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.
- S5.144 In Region 3, the stations of those services to which the band 7 995 - 8 005 kHz is allocated may transmit standard frequency and time signals.
- S5.145 The conditions for the use of the carrier frequencies 8 291 kHz, 12 290 kHz and 16 420 kHz are prescribed in Articles **S31** and **S52** and in Appendix **S13**.
- S5.146 The bands 9 400 - 9 500 kHz, 11 600 - 11 650 kHz, 12 050 - 12 100 kHz, 15 600 - 15 800 kHz, 17 480 - 17 550 kHz and 18 900 - 19 020 kHz are allocated to the fixed service on a primary basis until 1 April 2007, subject to application of the procedure referred to in Resolution **21 (Rev.WRC-95)**. After 1 April 2007, frequencies in these bands may be used by stations in the fixed service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies in the fixed service, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.
- S5.147 On condition that harmful interference is not caused to the broadcasting service, frequencies in the bands 9 775 - 9 900 kHz, 11 650 - 11 700 kHz and 11 975 - 12 050 kHz

may be used by stations in the fixed service communicating only within the boundary of the country in which they are located, each station using a total radiated power not exceeding 24 dBW.

S5.148 The bands 9 775 - 9 900 kHz, 11 650 - 11 700 kHz, 11 975 - 12 050 kHz, 13 600 - 13 800 kHz, 15 450 - 15 600 kHz, 17 550 - 17 700 kHz and 21 750 - 21 850 kHz are allocated to the fixed service on a primary basis subject to the procedure described in Resolution **8**. The use of these bands by the broadcasting service shall be subject to provisions established by the World Administrative Radio Conference for the Planning of the HF Bands Allocated to the Broadcasting Service (see Resolution **508**). The provisions of Resolution **512 (HFBC-87)** also apply. Within these bands, the date of commencement of operations in the broadcasting service on a planned channel shall not be earlier than the date of completion of satisfactory transfer, according to the procedures described in Resolution **8**, of all assignments to stations in the fixed service operating in accordance with the Table and other provisions of the Radio Regulations, which are recorded in the Master Register and which may be affected by broadcasting operations on that channel.

S5.149 In making assignments to stations of other services to which the bands:

13 360 - 13 410 kHz,	4 825 - 4 835 MHz*,	97.88 - 98.08 GHz*,
25 550 - 25 670 kHz,	4 950 - 4 990 MHz,	140.69 - 140.98 GHz*,
37.5 - 38.25 MHz,	4 990 - 5 000 MHz,	144.68 - 144.98 GHz*,
73 - 74.6 MHz in	6 650 - 6 675.2 MHz*,	145.45 - 145.75 GHz*,
Regions 1 and 3,	10.6 - 10.68 GHz,	146.82 - 147.12 GHz*,
79.75 - 80.25 MHz in	14.47 - 14.5 GHz*,	150 - 151 GHz*,
Region 3,	22.01 - 22.21 GHz*,	174.42 - 175.02 GHz*,
150.05 - 153 MHz in	22.21 - 22.5 GHz,	177 - 177.4 GHz*,
Region 1,	22.81 - 22.86 GHz*,	178.2 - 178.6 GHz*,
322 - 328.6 MHz*,	23.07 - 23.12 GHz*,	181 - 181.46 GHz*,
406.1 - 410 MHz,	31.2 - 31.3 GHz,	186.2 - 186.6 GHz*,
608 - 614 MHz in	31.5 - 31.8 GHz in	250 - 251 GHz*,
Regions 1 and 3,	Regions 1 and 3,	257.5 - 258 GHz*,
1 330 - 1 400 MHz*,	36.43 - 36.5 GHz*,	261 - 265 GHz,
1 610.6 - 1 613.8 MHz*,	42.5 - 43.5 GHz,	262.24 - 262.76 GHz*,
1 660 - 1 670 MHz,	42.77 - 42.87 GHz*,	265 - 275 GHz,
1 718.8 - 1 722.2 MHz*,	43.07 - 43.17 GHz*,	265.64 - 266.16 GHz*,
2 655 - 2 690 MHz,	43.37 - 43.47 GHz*,	267.34 - 267.86 GHz*,
3 260 - 3 267 MHz*,	48.94 - 49.04 GHz*,	271.74 - 272.26 GHz*
3 332 - 3 339 MHz*,	72.77 - 72.91 GHz*,	
3 345.8 - 3 352.5 MHz*,	93.07 - 93.27 GHz*,	

are allocated (* indicates radio astronomy use for spectral line observations), administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from spaceborne or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. **S4.5** and **S4.6** and Article **S29**).

S5.150 The following bands:

13 553 - 13 567 kHz	(centre frequency 13 560 kHz),
26 957 - 27 283 kHz	(centre frequency 27 120 kHz),
40.66 - 40.70 MHz	(centre frequency 40.68 MHz),
902 - 928 MHz	in Region 2 (centre frequency 915 MHz),
2 400 - 2 500 MHz	(centre frequency 2 450 MHz),
5 725 - 5 875 MHz	(centre frequency 5 800 MHz), and
24 - 24.25 GHz	(centre frequency 24.125 GHz)

are also designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating within these bands must accept harmful interference which may be caused by these applications. ISM equipment operating in these bands is subject to the provisions of No. **S15.13**.

S5.151 The bands 13 570 - 13 600 kHz and 13 800 - 13 870 kHz are allocated, until 1 April 2007, to the fixed service on a primary basis and to the mobile except aeronautical

- mobile (R) service on a secondary basis, subject to application of the procedure referred to in Resolution 21 (Rev.WRC-95). After 1 April 2007, frequencies in these bands may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies in these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.
- S5.152 *Additional allocation:* in Armenia, Azerbaijan, Belarus, China, Côte d'Ivoire, Georgia, the Islamic Republic of Iran, Kazakstan, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 14 250 - 14 350 kHz is also allocated to the fixed service on a primary basis. Stations of the fixed service shall not use a radiated power exceeding 24 dBW.
- S5.153 In Region 3, the stations of those services to which the band 15 995 - 16 005 kHz is allocated may transmit standard frequency and time signals.
- S5.154 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Georgia, Kazakstan, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 18 068 - 18 168 kHz is also allocated to the fixed service on a primary basis for use within their boundaries, with a peak envelope power not exceeding 1 kW.
- S5.155 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the band 21 850 - 21 870 kHz is also allocated to the aeronautical mobile (R) services on a primary basis.
- S5.155A In Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the use of the band 21 850 - 21 870 kHz by the fixed service is limited to provision of services related to aircraft flight safety.
- S5.155B The band 21 870 - 21 924 kHz is used by the fixed service for provision of services related to aircraft flight safety.
- S5.156 *Additional allocation:* in Nigeria, the band 22 720 - 23 200 kHz is also allocated to the meteorological aids service (radiosondes) on a primary basis.
- S5.156A The use of the band 23 200 - 23 350 kHz by the fixed service is limited to provision of services related to aircraft flight safety.
- S5.157 The use of the band 23 350 - 24 000 kHz by the maritime mobile service is limited to inter-ship radiotelegraphy.
- S5.158 and S5.159 Not used
- S5.160 *Additional allocation:* in Botswana, Burundi, Lesotho, Malawi, Namibia, Rwanda, South Africa, Swaziland and Zaire, the band 41 - 44 MHz is also allocated to the aeronautical radionavigation service on a primary basis.
- S5.161 *Additional allocation:* in the Islamic Republic of Iran and Japan, the band 41 - 44 MHz is also allocated to the radiolocation service on a secondary basis.
- S5.162 *Additional allocation:* in Australia and New Zealand, the band 44 - 47 MHz is also allocated to the broadcasting service on a primary basis.
- S5.163 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Estonia, Georgia, Hungary, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the bands 47 - 48.5 MHz and 56.5 - 58 MHz are also allocated to the fixed and land mobile services on a secondary basis.
- S5.164 *Additional allocation:* in Albania, Germany, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Côte d'Ivoire, Denmark, Spain, Finland, France, Gabon, Greece, Ireland, Israel, Italy, Jordan, Lebanon, Libya, Liechtenstein, Luxembourg, Madagascar, Mali, Malta, Morocco, Mauritania, Monaco, Nigeria, Norway, the Netherlands, Poland, Syria, the United Kingdom, Senegal, Slovenia, Sweden, Switzerland, Swaziland, Togo, Tunisia, Turkey and Yugoslavia, the band 47 - 68 MHz and in Romania, the band 47 - 58 MHz, are also allocated to the land mobile service on a primary basis. However, stations of the land mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, existing

or planned broadcasting stations of countries other than those mentioned in connection with the band.

- S5.165 *Additional allocation:* in Angola, Cameroon, the Congo, Madagascar, Mozambique, Somalia, Sudan, Tanzania and Chad, the band 47 - 68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.166 *Alternative allocation:* in New Zealand, the band 50 - 51 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis; the band 53 - 54 MHz is allocated to the fixed and mobile services on a primary basis.
- S5.167 *Alternative allocation:* in Bangladesh, Brunei Darussalam, India, Indonesia, the Islamic Republic of Iran, Malaysia, Pakistan, Singapore and Thailand, the band 50 - 54 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis.
- S5.168 *Additional allocation:* in Australia, China and the Democratic People's Republic of Korea, the band 50 - 54 MHz is also allocated to the broadcasting service on a primary basis.
- S5.169 *Alternative allocation:* in Botswana, Burundi, Lesotho, Malawi, Namibia, Rwanda, South Africa, Swaziland, Zaire, Zambia and Zimbabwe, the band 50 - 54 MHz is allocated to the amateur service on a primary basis.
- S5.170 *Additional allocation:* in New Zealand, the band 51 - 53 MHz is also allocated to the fixed and mobile services on a primary basis.
- S5.171 *Additional allocation:* in Botswana, Burundi, Lesotho, Malawi, Mali, Namibia, Rwanda, South Africa, Swaziland, Zaire and Zimbabwe, the band 54 - 68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.172 *Different category of service:* in the French Overseas Departments in Region 2, Guyana, Jamaica and Mexico, the allocation of the band 54 - 68 MHz to the fixed and mobile services is on a primary basis (see No. **S5.33**).
- S5.173 *Different category of service:* in the French Overseas Departments in Region 2, Guyana, Jamaica and Mexico, the allocation of the band 68 - 72 MHz to the fixed and mobile services is on a primary basis (see No. **S5.33**).
- S5.174 *Alternative allocation:* in Bulgaria, Hungary, Poland, Romania and Slovakia, the band 68 - 73 MHz is allocated to the broadcasting service on a primary basis and used in accordance with the decisions in the Final Acts of the Special Regional Conference (Geneva, 1960).
- S5.175 *Alternative allocation:* in Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the bands 68 - 73 MHz and 76 - 87.5 MHz are allocated to the broadcasting service on a primary basis. The services to which these bands are allocated in other countries and the broadcasting service in the countries listed above are subject to agreements with the neighbouring countries concerned.
- S5.176 *Additional allocation:* in Australia, China, the Republic of Korea, the Philippines, the Democratic People's Republic of Korea and Western Samoa, the band 68 - 74 MHz is also allocated to the broadcasting service on a primary basis.
- S5.177 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Hungary, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 73 - 74 MHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.178 *Additional allocation:* in Colombia, Costa Rica, Cuba, El Salvador, Guatemala, Guyana, Honduras and Nicaragua, the band 73 - 74.6 MHz is also allocated to the fixed and mobile services on a secondary basis.
- S5.179 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, China, Georgia, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the bands 74.6 - 74.8 MHz and 75.2 - 75.4 MHz are also allocated to the aeronautical radionavigation service, on a primary basis, for ground-based transmitters only.
- S5.180 The frequency 75 MHz is assigned to marker beacons. Administrations shall refrain from assigning frequencies close to the limits of the guardband to stations of other services

which, because of their power or geographical position, might cause harmful interference or otherwise place a constraint on marker beacons.

Every effort should be made to improve further the characteristics of airborne receivers and to limit the power of transmitting stations close to the limits 74.8 MHz and 75.2 MHz.

- S5.181 *Additional allocation:* in Germany, Austria, Belgium, Cyprus, Denmark, Egypt, Spain, France, Greece, Israel, Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, Syria, the United Kingdom, Sweden and Switzerland, the band 74.8 - 75.2 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. **S9.21**.
- S5.182 *Additional allocation:* in Western Samoa, the band 75.4 - 87 MHz is also allocated to the broadcasting service on a primary basis.
- S5.183 *Additional allocation:* in China, the Republic of Korea, Japan, the Philippines and the Democratic People's Republic of Korea, the band 76 - 87 MHz is also allocated to the broadcasting service on a primary basis.
- S5.184 *Additional allocation:* in Bulgaria, Hungary and Romania, the band 76 - 87.5 MHz is also allocated to the broadcasting service on a primary basis and used in accordance with the decisions contained in the Final Acts of the Special Regional Conference (Geneva, 1960).
- S5.185 *Different category of service:* in the United States, the French Overseas Departments in Region 2, Guyana, Jamaica, Mexico and Paraguay, the allocation of the band 76 - 88 MHz to the fixed and mobile services is on a primary basis (see No. **S5.33**).
- S5.186 *Additional allocation:* in Region 3 (except in the Republic of Korea, India, Japan, Malaysia, the Philippines and Singapore), the band 79.75 - 80.25 MHz is also allocated to the radio astronomy service on a primary basis.
- S5.187 *Alternative allocation:* in Albania, the band 81 - 87.5 MHz is allocated to the broadcasting service on a primary basis and used in accordance with the decisions contained in the Final Acts of the Special Regional Conference (Geneva, 1960).
- S5.188 *Additional allocation:* in Australia, the band 85 - 87 MHz is also allocated to the broadcasting service on a primary basis. The introduction of the broadcasting service in Australia is subject to special agreements between the administrations concerned.
- S5.189 Not used
- S5.190 *Additional allocation:* in France, Ireland, Israel, Italy and Monaco, the band 87.5 - 88 MHz is also allocated to the land mobile service on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.191 Not used
- S5.192 *Additional allocation:* in China, the Republic of Korea, the Philippines and Singapore, the band 100 - 108 MHz is also allocated to the fixed and mobile services on a primary basis.
- S5.193 Not used
- S5.194 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Lebanon, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Syria, Russia, Somalia, Tajikistan, Turkmenistan, Turkey and Ukraine, the band 104 - 108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a secondary basis.
- S5.195 and S5.196 Not used
- S5.197 *Additional allocation:* in Germany, Austria, Cyprus, Denmark, Egypt, Spain, France, Israel, Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, Pakistan, Syria, the United Kingdom and Sweden, the band 108 - 111.975 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any

- administration which may be identified in the application of the procedures invoked under No. **S9.21**.
- S5.198 *Additional allocation:* the band 117.975 - 137 MHz is also allocated to the aeronautical mobile-satellite (R) service on a secondary basis, subject to agreement obtained under No. **S9.21**.
- S5.199 The bands 121.45 - 121.55 MHz and 242.95 - 243.05 MHz are also allocated to the mobile-satellite service for the reception on board satellites of emissions from emergency position-indicating radiobeacons transmitting at 121.5 MHz and 243 MHz (see Appendix **S13**).
- S5.200 In the band 117.975 - 136 MHz, the frequency 121.5 MHz is the aeronautical emergency frequency and, where required, the frequency 123.1 MHz is the aeronautical frequency auxiliary to 121.5 MHz. Mobile stations of the maritime mobile service may communicate on these frequencies under the conditions laid down in Article **S31** and Appendix **S13** for distress and safety purposes with stations of the aeronautical mobile service.
- S5.201 *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Hungary, the Islamic Republic of Iran, Iraq, Japan, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Mozambique, Uzbekistan, Papua New Guinea, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 132 - 136 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service.
- S5.202 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Latvia, Lithuania, Moldova, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan, Turkey and Ukraine, the allocation of the band 136 - 137 MHz to the aeronautical mobile (OR) service is on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service.
- S5.203 *Additional allocation:* the band 136 - 137 MHz is also allocated to the space operation service (space-to-Earth), meteorological-satellite service (space-to-Earth) and the space research service (space-to-Earth) on a secondary basis (see Resolution **408 (Mob-87)**).
- S5.204 *Different category of service:* in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, Bosnia and Herzegovina, Brunei Darussalam, China, Cuba, the United Arab Emirates, India, Indonesia, the Islamic Republic of Iran, Iraq, Malaysia, Oman, Pakistan, Philippines, Qatar, Singapore, Sri Lanka, Thailand, Yemen and Yugoslavia, the band 137 - 138 MHz is allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis (see No. **S5.33**).
- S5.205 *Different category of service:* in Israel and Jordan, the allocation of the band 137 - 138 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **S5.33**).
- S5.206 *Different category of service:* in Armenia, Austria, Azerbaijan, Belarus, Bulgaria, Egypt, Finland, France, Georgia, Greece, Hungary, Kazakstan, Lebanon, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Syria, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 137 - 138 MHz to the aeronautical mobile (OR) service is on a primary basis (see No. **S5.33**).
- S5.207 *Additional allocation:* in Australia, the band 137 - 144 MHz is also allocated to the broadcasting service on a primary basis until that service can be accommodated within regional broadcasting allocations.
- S5.208 The use of the band 137 - 138 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**. The power flux-density limit indicated in Annex 2 of Resolution **46 (Rev.WRC-95)/Annex 1** of Appendix **S5** shall apply

- until such time as a competent world radiocommunication conference revises it. Additionally, until that time, the provisions of Resolution **714 (WRC-95)** apply.
- S5.208A In making assignments to space stations in the mobile-satellite service in the bands 137 - 138 MHz, 387 - 390 MHz and 400.15 - 401 MHz, administrations shall take all practicable steps to protect the radio astronomy service in the bands 150.05 - 153 MHz, 322 - 328.6 MHz, 406.1 - 410 MHz and 608 - 614 MHz from harmful interference from unwanted emissions. For information, the threshold levels of interference detrimental to the radio astronomy service to be protected are shown in Table 1 of Recommendation ITU-R RA.769-1.
- S5.209 The use of the bands 137 - 138 MHz, 148 - 149.9 MHz, 400.15 - 401 MHz, 455 - 456 MHz and 459 - 460 MHz by the mobile-satellite service and the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz by the land mobile-satellite service is limited to non-geostationary-satellite systems.
- S5.210 *Additional allocation:* in Austria, Belgium, France, Italy, Liechtenstein, Luxembourg, Slovakia, the Czech Republic, the United Kingdom and Switzerland, the bands 138 - 143.6 MHz and 143.65 - 144 MHz are also allocated to the space research service (space-to-Earth) on a secondary basis.
- S5.211 *Additional allocation:* in Germany, Saudi Arabia, Austria, Bahrain, Belgium, Bosnia and Herzegovina, Denmark, the United Arab Emirates, Spain, Finland, Greece, Ireland, Israel, Kenya, Kuwait, The Former Yugoslav Republic of Macedonia, Liechtenstein, Luxembourg, Mali, Malta, Norway, the Netherlands, Qatar, the United Kingdom, Slovenia, Somalia, Sweden, Switzerland, Tanzania, Tunisia, Turkey and Yugoslavia, the band 138 - 144 MHz is also allocated to the maritime mobile and land mobile services on a primary basis.
- S5.212 *Alternative allocation:* in Angola, Botswana, Burundi, Cameroon, the Central African Republic, the Congo, Gabon, Gambia, Ghana, Guinea, Iraq, Jordan, Lesotho, Liberia, Libya, Malawi, Mozambique, Namibia, Nigeria, Oman, Rwanda, Sierra Leone, South Africa, Swaziland, Chad, Togo, Zaire, Zambia and Zimbabwe, the band 138 - 144 MHz is allocated to the fixed and mobile services on a primary basis.
- S5.213 *Additional allocation:* in China, the band 138 - 144 MHz is also allocated to the radiolocation service on a primary basis.
- S5.214 *Additional allocation:* in Bosnia and Herzegovina, Croatia, Eritrea, Ethiopia, Kenya, The Former Yugoslav Republic of Macedonia, Malta, Slovenia, Somalia, Sudan, Tanzania and Yugoslavia, the band 138 - 144 MHz is also allocated to the fixed service on a primary basis.
- S5.215 Not used
- S5.216 *Additional allocation:* in China, the band 144 - 146 MHz is also allocated to the aeronautical mobile (OR) service on a secondary basis.
- S5.217 *Alternative allocation:* in Afghanistan, Bangladesh, Cuba, Guyana and India, the band 146 - 148 MHz is allocated to the fixed and mobile services on a primary basis.
- S5.218 *Additional allocation:* the band 148 - 149.9 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No. **S9.21**. The bandwidth of any individual transmission shall not exceed ± 25 kHz.
- S5.219 The use of the band 148 - 149.9 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**. The mobile-satellite service shall not constrain the development and use of the fixed, mobile and space operation services in the band 148 - 149.9 MHz.
- S5.220 The use of the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz by the land mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**. The land mobile-satellite service shall not constrain the development and use of the radionavigation-satellite service in the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz.
- S5.221 Stations of the mobile-satellite service in the band 148 - 149.9 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services operating in accordance with the Table of Frequency Allocations in the following countries: Albania, Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Benin, Bosnia and Herzegovina, Brunei Darussalam, Bulgaria,

Burkina Faso, Cameroon, Canada, China, Cyprus, Colombia, Congo, the Republic of Korea, Croatia, Cuba, Denmark, Egypt, the United Arab Emirates, Ecuador, Eritrea, Spain, Estonia, Ethiopia, Finland, France, Gabon, Ghana, Greece, Guinea, Guinea Bissau, Honduras, Hungary, India, Indonesia, the Islamic Republic of Iran, Ireland, Iceland, Israel, Italy, Jamaica, Japan, Jordan, Kazakstan, Kenya, Kuwait, Latvia, The Former Yugoslav Republic of Macedonia, Lebanon, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Moldova, Mongolia, Mozambique, Namibia, Norway, New Zealand, Oman, Uganda, Uzbekistan, Pakistan, Panama, Papua New Guinea, Paraguay, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Kyrgyzstan, Slovakia, Romania, the United Kingdom, Russia, Senegal, Sierra Leone, Singapore, Slovenia, Sri Lanka, South Africa, Sweden, Switzerland, Suriname, Swaziland, Tanzania, Chad, Thailand, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Viet Nam, Yemen, Yugoslavia, Zambia, and Zimbabwe.

S5.222 Emissions of the radionavigation-satellite service in the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz may also be used by receiving earth stations of the space research service.

S5.223 Recognizing that the use of the band 149.9 - 150.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation-satellite service, administrations are urged not to authorize such use in application of No. **S4.4**.

S5.224 In the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz, the allocation to the land mobile-satellite service shall be on a secondary basis until 1 January 1997.

S5.225 *Additional allocation:* in Australia and India, the band 150.05 - 153 MHz is also allocated to the radio astronomy service on a primary basis.

S5.226 The frequency 156.8 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service. The conditions for the use of this frequency are contained in Article **S31** and Appendix **S13**.

In the bands 156 - 156.7625 MHz, 156.8375 - 157.45 MHz, 160.6 - 160.975 MHz and 161.475 - 162.05 MHz, each administration shall give priority to the maritime mobile service on only such frequencies as are assigned to stations of the maritime mobile service by the administration (see Articles **S31** and **S52**, and Appendix **S13**).

Any use of frequencies in these bands by stations of other services to which they are allocated should be avoided in areas where such use might cause harmful interference to the maritime mobile VHF radiocommunication service.

However, the frequency 156.8 MHz and the frequency bands in which priority is given to the maritime mobile service may be used for radiocommunications on inland waterways subject to agreement between interested and affected administrations and taking into account current frequency usage and existing agreements.

S5.227 In the maritime mobile VHF service the frequency 156.525 MHz is to be used exclusively for digital selective calling for distress, safety and calling (see Resolution **323 (Mob-87)**). The conditions for the use of this frequency are prescribed in Articles **S31** and **S52**, and Appendices **S13** and **S18**.

S5.228 Not used

S5.229 *Alternative allocation:* in Morocco, the band 162 - 174 MHz is allocated to the broadcasting service on a primary basis. The use of this band shall be subject to agreement with administrations having services, operating or planned, in accordance with the Table which are likely to be affected. Stations in existence on 1 January 1981, with their technical characteristics as of that date, are not affected by such agreement.

S5.230 *Additional allocation:* in China, the band 163 - 167 MHz is also allocated to the space operation service (space-to-Earth) on a primary basis, subject to agreement obtained under No. **S9.21**.

S5.231 *Additional allocation:* in Afghanistan, China and Pakistan, the band 167 - 174 MHz is also allocated to the broadcasting service on a primary basis. The introduction of the broadcasting service into this band shall be subject to agreement with the neighbouring countries in Region 3 whose services are likely to be affected.

S5.232 *Additional allocation:* in Japan, the band 170 - 174 MHz is also allocated to the broadcasting service on a primary basis.

- S5.233 *Additional allocation:* in China, the band 174 - 184 MHz is also allocated to the space research (space-to-Earth) and the space operation (space-to-Earth) services on a primary basis, subject to agreement obtained under No. **S9.21**. These services shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations.
- S5.234 *Different category of service:* in Mexico, the allocation of the band 174 - 216 MHz to the fixed and mobile services is on a primary basis (see No. **S5.33**).
- S5.235 *Additional allocation:* in Germany, Austria, Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Malta, Monaco, Norway, the Netherlands, the United Kingdom, Sweden and Switzerland, the band 174 - 223 MHz is also allocated to the land mobile service on a primary basis. However, the stations of the land mobile service shall not cause harmful interference to, or claim protection from, broadcasting stations, existing or planned, in countries other than those listed in this footnote.
- S5.236 Not used
- S5.237 *Additional allocation:* in the Congo, Eritrea, Ethiopia, Gambia, Guinea, Libya, Malawi, Mali, Uganda, Senegal, Sierra Leone, Somalia, Tanzania and Zimbabwe, the band 174 - 223 MHz is also allocated to the fixed and mobile services on a secondary basis.
- S5.238 *Additional allocation:* in Bangladesh, India, Pakistan and the Philippines, the band 200 - 216 MHz is also allocated to the aeronautical radionavigation service on a primary basis.
- S5.239 Not used
- S5.240 *Additional allocation:* in China and India, the band 216 - 223 MHz is also allocated to the aeronautical radionavigation service on a primary basis and to the radiolocation service on a secondary basis.
- S5.241 In Region 2, no new stations in the radiolocation service may be authorized in the band 216 - 225 MHz. Stations authorized prior to 1 January 1990 may continue to operate on a secondary basis.
- S5.242 *Additional allocation:* in Canada, the band 216 - 220 MHz is also allocated to the land mobile service on a primary basis.
- S5.243 *Additional allocation:* in Somalia, the band 216 - 225 MHz is also allocated to the aeronautical radionavigation service on a primary basis, subject to not causing harmful interference to existing or planned broadcasting services in other countries.
- S5.244 *Additional allocation:* in Oman, the United Kingdom and Turkey, the band 216 - 235 MHz is also allocated to the radiolocation service on a secondary basis.
- S5.245 *Additional allocation:* in Japan, the band 222 - 223 MHz is also allocated to the aeronautical radionavigation service on a primary basis and to the radiolocation service on a secondary basis.
- S5.246 *Alternative allocation:* in Spain, France, Israel and Monaco, the band 223 - 230 MHz is allocated to the broadcasting and land mobile services on a primary basis (see No. **S5.33**) on the basis that, in the preparation of frequency plans, the broadcasting service shall have prior choice of frequencies; and allocated to the fixed and mobile, except land mobile, services on a secondary basis. However, the stations of the land mobile service shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations in Morocco and Algeria.
- S5.247 *Additional allocation:* in Saudi Arabia, Bahrain, the United Arab Emirates, Jordan, Oman, Qatar and Syria, the band 223 - 235 MHz is also allocated to the aeronautical radionavigation service on a primary basis.
- S5.248 and S5.249 Not used
- S5.250 *Additional allocation:* in China, the band 225 - 235 MHz is also allocated to the radio astronomy service on a secondary basis.
- S5.251 *Additional allocation:* in Nigeria, the band 230 - 235 MHz is also allocated to the aeronautical radionavigation service on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.252 *Alternative allocation:* in Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the bands 230 - 238 MHz and 246 - 254

- MHz are allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.253 Not used
- S5.254 The bands 235 - 322 MHz and 335.4 - 399.9 MHz may be used by the mobile-satellite service, subject to agreement obtained under No. **S9.21**, on condition that stations in this service do not cause harmful interference to those of other services operating or planned to be operated in accordance with the Table of Frequency Allocations.
- S5.255 The bands 312 - 315 MHz (Earth-to-space) and 387 - 390 MHz (space-to-Earth) in the mobile-satellite service may also be used by non-geostationary-satellite systems. Such use is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**.
- S5.256 The frequency 243 MHz is the frequency in this band for use by survival craft stations and equipment used for survival purposes (see Appendix **S13**).
- S5.257 The band 267 - 272 MHz may be used by administrations for space telemetry in their countries on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.258 The use of the band 328.6 - 335.4 MHz by the aeronautical radionavigation service is limited to Instrument Landing Systems (glide path).
- S5.259 *Additional allocation:* in Germany, Austria, Belgium, Cyprus, Denmark, Egypt, Spain, France, Greece, Israel, Italy, Japan, Jordan, Malta, Morocco, Monaco, Norway, the Netherlands, Syria, the United Kingdom, Sweden and Switzerland, the band 328.6 - 335.4 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. **S9.21**.
- S5.260 Recognizing that the use of the band 399.9 - 400.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation satellite service, administrations are urged not to authorize such use in application of No. **S4.4**.
- S5.261 Emissions shall be confined in a band of ± 25 kHz about the standard frequency 400.1 MHz.
- S5.262 *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Bulgaria, Colombia, Costa Rica, Cuba, Egypt, the United Arab Emirates, Ecuador, Estonia, Georgia, Hungary, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kazakstan, Kuwait, Liberia, Malaysia, Moldova, Nigeria, Uzbekistan, Pakistan, the Philippines, Qatar, Syria, Kyrgyzstan, Slovakia, Romania, Russia, Singapore, Somalia, Sri Lanka, Tajikistan, Turkmenistan, Ukraine and Yugoslavia, the band 400.05 - 401 MHz is also allocated to the fixed and mobile services on a primary basis.
- S5.263 The band 400.15 - 401 MHz is also allocated to the space research service in the space-to-space direction for communications with manned space vehicles. In this application, the space research service will not be regarded as a safety service.
- S5.264 The use of the band 400.15 - 401 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**. The power flux-density limit indicated in Annex 2 of Resolution **46 (Rev. WRC-95)/Annex 1 of Appendix S5** shall apply until such time as a competent world radiocommunication conference revises it.
- S5.265 Not used
- S5.266 The use of the band 406 - 406.1 MHz by the mobile-satellite service is limited to low power satellite emergency position-indicating radiobeacons (see also Article **S31** and Appendix **S13**).
- S5.267 Any emission capable of causing harmful interference to the authorized uses of the band 406 - 406.1 MHz is prohibited.
- S5.268 Use of the band 410 - 420 MHz by the space research service is limited to communications within 5 km of an orbiting, manned space vehicle.
- S5.269 *Different category of service:* in Australia, the United States, India, Japan and the United Kingdom, the allocation of the bands 420 - 430 MHz and 440 - 450 MHz to the radiolocation service is on a primary basis (see No. **S5.33**).

- S5.270 *Additional allocation:* in Australia, the United States, Jamaica and the Philippines, the bands 420 - 430 MHz and 440 - 450 MHz are also allocated to the amateur service on a secondary basis.
- S5.271 *Additional allocation:* in Armenia, Azerbaijan, Belarus, China, Estonia, Georgia, India, Kazakstan, Latvia, Lithuania, Moldova, Uzbekistan, Kyrgyzstan, the United Kingdom, Russia, Tajikistan, Turkmenistan and Ukraine, the band 420 - 460 MHz is also allocated to the aeronautical radionavigation service (radio altimeters) on a secondary basis.
- S5.272 *Different category of service:* in France, the allocation of the band 430 - 434 MHz to the amateur service is on a secondary basis (see No. **S5.32**).
- S5.273 *Different category of service:* in Denmark, Libya and Norway, the allocation of the bands 430 - 432 MHz and 438 - 440 MHz to the radiolocation service is on a secondary basis (see No. **S5.32**).
- S5.274 *Alternative allocation:* in Denmark, Norway and Sweden, the bands 430 - 432 MHz and 438 - 440 MHz are allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.275 *Additional allocation:* in Bosnia and Herzegovina, Croatia, Finland, The Former Yugoslav Republic of Macedonia, Libya, Slovenia and Yugoslavia, the bands 430 - 432 MHz and 438 - 440 MHz are also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.276 *Additional allocation:* in Afghanistan, Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burkina Faso, Burundi, Egypt, the United Arab Emirates, Ecuador, Eritrea, Ethiopia, Greece, Guinea, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Italy, Jordan, Kenya, Kuwait, Lebanon, Libya, Liechtenstein, Malaysia, Malta, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Singapore, Somalia, Switzerland, Tanzania, Thailand, Togo, Turkey and Yemen, the band 430 - 440 MHz is also allocated to the fixed service on a primary basis and the bands 430 - 435 MHz and 438 - 440 MHz are also allocated to the mobile, except aeronautical mobile, service on a primary basis.
- S5.277 *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Bulgaria, Cameroon, the Congo, Djibouti, Estonia, Gabon, Georgia, Hungary, Kazakstan, Latvia, Malawi, Mali, Moldova, Mongolia, Niger, Uzbekistan, Pakistan, Poland, Kyrgyzstan, Democratic People's Republic of Korea, Slovakia, the Czech Republic, Romania, Russia, Rwanda, Tajikistan, Chad, Turkmenistan and Ukraine, the band 430 - 440 MHz is also allocated to the fixed service on a primary basis.
- S5.278 *Different category of service:* in Argentina, Colombia, Costa Rica, Cuba, Guyana, Honduras, Panama and Venezuela, the allocation of the band 430 - 440 MHz to the amateur service is on a primary basis (see No. **S5.33**).
- S5.279 *Additional allocation:* in Mexico, the bands 430 - 435 MHz and 438 - 440 MHz are also allocated on a primary basis to the land mobile service, subject to agreement obtained under No. **S9.21**.
- S5.280 In Germany, Austria, Bosnia and Herzegovina, Croatia, The Former Yugoslav Republic of Macedonia, Liechtenstein, Portugal, Slovenia, Switzerland and Yugoslavia, the band 433.05 - 434.79 MHz (centre frequency 433.92 MHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services of these countries operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. **S15.13**.
- S5.281 *Additional allocation:* in the French Overseas Departments in Region 2 and India, the band 433.75 - 434.25 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis. In France and in Brazil, the band is allocated to the same service on a secondary basis.
- S5.282 In the bands 435 - 438 MHz, 1 260 - 1 270 MHz, 2 400 - 2 450 MHz, 3 400 - 3 410 MHz (in Regions 2 and 3 only) and 5 650 - 5 670 MHz, the amateur-satellite service may operate subject to not causing harmful interference to other services operating in accordance with the Table (see No. **S5.43**). Administrations authorizing such use shall ensure that any harmful interference caused by emissions from a station in the amateur-satellite service is immediately eliminated in accordance with the provisions of No. **S25.11**.

- The use of the bands 1 260 - 1 270 MHz and 5 650 - 5 670 MHz by the amateur-satellite service is limited to the Earth-to-space direction.
- S5.283 *Additional allocation:* in Austria, the band 438 - 440 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.284 *Additional allocation:* in Canada, the band 440 - 450 MHz is also allocated to the amateur service on a secondary basis.
- S5.285 *Different category of service:* in Canada, the allocation of the band 440 - 450 MHz to the radiolocation service is on a primary basis (see No. **S5.33**).
- S5.286 The band 449.75 - 450.25 MHz may be used for the space operation service (Earth-to-space) and the space research service (Earth-to-space), subject to agreement obtained under No. **S9.21**.
- S5.286A The use of the bands 455 - 456 MHz and 459 - 460 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A**.
- S5.286B Stations in the mobile-satellite service in the bands 455 - 456 MHz and 459 - 460 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services.
- S5.286C Stations in the mobile-satellite service in the bands 455 - 456 MHz and 459 - 460 MHz shall not constrain the development and use of the fixed and mobile services.
- S5.287 In the maritime mobile service, the frequencies 457.525 MHz, 457.550 MHz, 457.575 MHz, 467.525 MHz, 467.550 MHz and 467.575 MHz may be used by on-board communication stations. The use of these frequencies in territorial waters may be subject to the national regulations of the administration concerned. The characteristics of the equipment used shall conform to those specified in Recommendation ITU-R M.1174.
- S5.288 In the territorial waters of the United States and the Philippines, the preferred frequencies for use by on-board communication stations shall be 457.525 MHz, 457.550 MHz, 457.575 MHz and 457.600 MHz paired, respectively, with 467.750 MHz, 467.775 MHz, 467.800 MHz and 467.825 MHz. The characteristics of the equipment used shall conform to those specified in Recommendation ITU-R M.1174.
- S5.289 Earth exploration-satellite service applications, other than the meteorological-satellite service, may also be used in the bands 460 - 470 MHz and 1 690 - 1 710 MHz for space-to-Earth transmissions subject to not causing harmful interference to stations operating in accordance with the Table.
- S5.290 *Different category of service:* in Afghanistan, Armenia, Azerbaijan, Belarus, Bulgaria, China, Georgia, Japan, Kazakstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 460 - 470 MHz to the meteorological-satellite service (space-to-Earth) is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21**.
- S5.291 *Additional allocation:* in China, the band 470 - 485 MHz is also allocated to the space research (space-to-Earth) and the space operation (space-to-Earth) services on a primary basis subject to agreement obtained under No. **S9.21** and subject to not causing harmful interference to existing and planned broadcasting stations.
- S5.292 *Different category of service:* in Mexico and Venezuela, the allocation of the band 470 - 512 MHz to the fixed and mobile services, and in Argentina and Uruguay to the mobile service, is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21**.
- S5.293 *Different category of service:* in Chile, Colombia, Cuba, the United States, Guyana, Honduras, Jamaica, Mexico and Panama, the allocation of the bands 470 - 512 MHz and 614 - 806 MHz to the fixed and mobile services is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21**.
- S5.294 *Additional allocation:* in Burundi, Cameroon, the Congo, Ethiopia, Israel, Kenya, Lebanon, Libya, Malawi, Senegal, Sudan, Syria, and Yemen, the band 470 - 582 MHz is also allocated to the fixed service on a secondary basis.
- S5.295 Not used
- S5.296 *Additional allocation:* in Germany, Austria, Belgium, Cyprus, Denmark, Spain, Finland, France, Ireland, Israel, Italy, Libya, Malta, Morocco, Monaco, Norway, the Netherlands, Portugal, Syria, the United Kingdom, Sweden, Switzerland, Swaziland, Tunisia

and Turkey, the band 470 -790 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting. Stations of the land mobile service in the countries mentioned in this footnote, shall not cause harmful interference to existing or planned stations operating in accordance with the Table of Frequency Allocations in countries other than those listed in this footnote.

- S5.297 *Additional allocation:* in Costa Rica, Cuba, El Salvador, the United States, Guatemala, Guyana, Honduras, Jamaica, Mexico and Venezuela, the band 512 - 608 MHz is also allocated to the fixed and mobile services on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.298 *Additional allocation:* in India, the band 549.75 - 550.25 MHz is also allocated to the space operation service (space-to-Earth) on a secondary basis.
- S5.299 Not used
- S5.300 *Additional allocation:* in Israel, Libya, Syria and Sudan, the band 582 - 790 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis.
- S5.301 Not used
- S5.302 *Additional allocation:* in the United Kingdom, the band 590 - 598 MHz is also allocated to the aeronautical radionavigation service on a primary basis. All new assignments to stations in the aeronautical radionavigation service, including those transferred from the adjacent bands, shall be subject to coordination with the Administrations of the following countries: Germany, Belgium, Denmark, Spain, France, Ireland, Luxembourg, Morocco, Norway and the Netherlands.
- S5.303 Not used
- S5.304 *Additional allocation:* in the African Broadcasting Area (see Nos. **S5.10** to **S5.13**), the band 606 - 614 MHz is also allocated to the radio astronomy service on a primary basis.
- S5.305 *Additional allocation:* in China, the band 606 - 614 MHz is also allocated to the radio astronomy service on a primary basis.
- S5.306 *Additional allocation:* in Region 1, except in the African Broadcasting Area (see Nos. **S5.10** to **S5.13**), and in Region 3, the band 608 - 614 MHz is also allocated to the radio astronomy service on a secondary basis.
- S5.307 *Additional allocation:* in India, the band 608 - 614 MHz is also allocated to the radio astronomy service on a primary basis.
- S5.308 Not used
- S5.309 *Different category of service:* in Costa Rica, El Salvador and Honduras, the allocation of the band 614 - 806 MHz to the fixed service is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21**.
- S5.310 *Additional allocation:* in Cuba, the band 614 - 890 MHz is also allocated to the radionavigation service on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.311 Within the frequency band 620 - 790 MHz, assignments may be made to television stations using frequency modulation in the broadcasting-satellite service subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected (see Resolutions **33** and **507**). Such stations shall not produce a power flux-density in excess of the value $-129 \text{ dB(W/m}^2\text{)}$ for angles of arrival less than 20° (see Recommendation **705**) within the territories of other countries without the consent of the administrations of those countries.
- S5.312 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 645 - 862 MHz is also allocated to the aeronautical radionavigation service on a primary basis.
- S5.313 *Alternative allocation:* in Spain and France, the band 790 - 830 MHz is allocated to the broadcasting service on a primary basis.
- S5.314 *Additional allocation:* in Austria, Italy, the United Kingdom and Swaziland, the band 790 - 862 MHz is also allocated to the land mobile service on a secondary basis.

- S5.315 *Alternative allocation:* in Greece, Italy, Morocco and Tunisia, the band 790 - 838 MHz is allocated to the broadcasting service on a primary basis.
- S5.316 *Additional allocation:* in Germany, Bosnia and Herzegovina, Burkina Faso, Cameroon, Côte d'Ivoire, Croatia, Denmark, Egypt, Finland, Israel, Kenya, The Former Yugoslav Republic of Macedonia, Libya, Liechtenstein, Monaco, Norway, the Netherlands, Portugal, Sweden, Switzerland and Yugoslavia, the band 790 - 830 MHz, and in these same countries and in Spain, France, Gabon, Malta and Syria, the band 830 - 862 MHz, are also allocated to the mobile, except aeronautical mobile, service on a primary basis. However, stations of the mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, stations of services operating in accordance with the Table in countries other than those mentioned in connection with the band.
- S5.317 *Additional allocation:* in Region 2 (except Brazil and the United States), the band 806 - 890 MHz is also allocated to the mobile-satellite service on a primary basis, subject to agreement obtained under No. **S9.21**. The use of this service is intended for operation within national boundaries.
- S5.318 *Additional allocation:* in Canada, the United States and Mexico, the bands 849 - 851 MHz and 894 - 896 MHz are also allocated to the aeronautical mobile service on a primary basis, for public correspondence with aircraft. The use of the band 849 - 851 MHz is limited to transmissions from aeronautical stations and the use of the band 894 - 896 MHz is limited to transmissions from aircraft stations.
- S5.319 *Additional allocation:* in Belarus, Russia and Ukraine, the bands 806 - 840 MHz (Earth-to-space) and 856 - 890 MHz (space-to-Earth) are also allocated to the mobile-satellite, except aeronautical mobile-satellite (R), service. The use of these bands by this service shall not cause harmful interference to, or claim protection from, services in other countries operating in accordance with the Table of Frequency Allocations and is subject to special agreements between the administrations concerned.
- S5.320 *Additional allocation:* in Region 3, the bands 806 - 890 MHz and 942 - 960 MHz are also allocated to the mobile-satellite, except aeronautical mobile-satellite (R), service on a primary basis, subject to agreement obtained under No. **S9.21**. The use of this service is limited to operation within national boundaries. In seeking such agreement, appropriate protection shall be afforded to services operating in accordance with the Table, to ensure that no harmful interference is caused to such services.
- S5.321 *Alternative allocation:* in Italy, the band 838 - 854 MHz is allocated to the broadcasting service on a primary basis as from 1 January 1995.
- S5.322 In Region 1, in the band 862 - 960 MHz, stations of the broadcasting service shall be operated only in the African Broadcasting Area (see Nos. **S5.10** to **S5.13**) excluding Algeria, Egypt, Spain, Libya and Morocco, subject to agreement obtained under No. **S9.21**.
- S5.323 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 862 - 960 MHz is also allocated to the aeronautical radionavigation service on a primary basis until 1 January 1998. Up to this date, the aeronautical radionavigation service may use the band, subject to agreement obtained under No. **S9.21**. After this date, the aeronautical radionavigation service may continue to operate on a secondary basis.
- S5.324 Not used
- S5.325 *Different category of service:* in the United States, the allocation of the band 890 - 942 MHz to the radiolocation service is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21**.
- S5.326 *Different category of service:* in Chile, the band 903 - 905 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.327 *Different category of service:* in Australia, the allocation of the band 915 - 928 MHz to the radiolocation service is on a primary basis (see No. **S5.33**).

- S5.328 The band 960 - 1 215 MHz is reserved on a worldwide basis for the use and development of airborne electronic aids to air navigation and any directly associated ground-based facilities.
- S5.329 Use of the radionavigation-satellite service in the band 1 215 - 1 260 MHz shall be subject to the condition that no harmful interference is caused to the radionavigation service authorized under No. **S5.331**.
- S5.330 *Additional allocation:* in Angola, Saudi Arabia, Bahrain, Bangladesh, Cameroon, China, the United Arab Emirates, Eritrea, Ethiopia, Guinea, Guyana, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Malawi, Morocco, Mozambique, Nepal, Nigeria, Pakistan, the Philippines, Qatar, Syria, Somalia, Sudan, Sri Lanka, Chad, Thailand, Togo and Yemen, the band 1 215 - 1 300 MHz is also allocated to the fixed and mobile services on a primary basis.
- S5.331 *Additional allocation:* in Algeria, Germany, Austria, Bahrain, Belgium, Benin, Bosnia and Herzegovina, Burundi, Cameroon, China, Croatia, Denmark, the United Arab Emirates, France, Greece, India, the Islamic Republic of Iran, Iraq, Kenya, The Former Yugoslav Republic of Macedonia, Liechtenstein, Luxembourg, Mali, Mauritania, Norway, Oman, Pakistan, the Netherlands, Portugal, Qatar, Senegal, Slovenia, Somalia, Sudan, Sri Lanka, Sweden, Switzerland, Turkey and Yugoslavia, the band 1 215 - 1 300 MHz is also allocated to the radionavigation service on a primary basis.
- S5.332 Not used
- S5.333 In the bands 1 215 - 1 300 MHz, 3 100 - 3 300 MHz, 5 250 - 5 350 MHz, 8 550 - 8 650 MHz, 9 500 - 9 800 MHz and 13.4 - 14.0 GHz, radiolocation stations installed on spacecraft may also be employed for the earth exploration-satellite and space research services on a secondary basis.
- S5.334 *Additional allocation:* in Canada and the United States, the bands 1 240 - 1 300 MHz and 1 350 - 1 370 MHz are also allocated to the aeronautical radionavigation service on a primary basis.
- S5.335 and S5.336 Not used
- S5.337 The use of the bands 1 300 - 1 350 MHz, 2 700 - 2 900 MHz and 9 000 - 9 200 MHz by the aeronautical radionavigation service is restricted to ground-based radars and to associated airborne transponders which transmit only on frequencies in these bands and only when actuated by radars operating in the same band.
- S5.338 In Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Moldova, Mongolia, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the existing installations of the radionavigation service may continue to operate in the band 1 350 - 1 400 MHz.
- S5.339 The bands 1 370 - 1 400 MHz, 2 640 - 2 655 MHz, 4 950 - 4 990 MHz and 15.20 - 15.35 GHz are also allocated to the space research (passive) and earth exploration-satellite (passive) services on a secondary basis.
- S5.340 All emissions are prohibited in the following bands:
- | | |
|---------------------|---|
| 1 400 - 1 427 MHz, | |
| 2 690 - 2 700 MHz | except those provided for by Nos. S5.421 and S5.422 , |
| 10.68 - 10.7 GHz | except those provided for by No. S5.483 , |
| 15.35 - 15.4 GHz | except those provided for by No. S5.511 , |
| 23.6 - 24 GHz, | |
| 31.3 - 31.5 GHz, | |
| 31.5 - 31.8 GHz | in Region 2, |
| 48.94 - 49.04 GHz | from airborne stations, |
| 51.4 - 54.25 GHz, | |
| 58.2 - 59 GHz, | |
| 64 - 65 GHz, | |
| 86 - 92 GHz, | |
| 105 - 116 GHz, | |
| 140.69 - 140.98 GHz | from airborne stations and from space stations in the space-to-Earth direction, |
| 182 - 185 GHz | except those provided for by No. S5.563 , |

- 217 - 231 GHz.
- S5.341 In the bands 1 400 - 1 727 MHz, 101 - 120 GHz and 197 - 220 GHz, passive research is being conducted by some countries in a programme for the search for intentional emissions of extraterrestrial origin.
- S5.342 *Additional allocation:* in Belarus, Russia and Ukraine, the band 1 429 - 1 535 MHz is also allocated to the aeronautical mobile service on a primary basis exclusively for the purposes of aeronautical telemetry within the national territory. As of 1 April 2007, the use of the band 1 452 - 1 492 MHz is subject to agreement between the administrations concerned.
- S5.343 In Region 2, the use of the band 1 435 - 1 535 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile service.
- S5.344 *Alternative allocation:* in the United States, the band 1 452 - 1 525 MHz is allocated to the fixed and mobile services on a primary basis (see also No. **S5.343**).
- S5.345 Use of the band 1 452 - 1 492 MHz by the broadcasting-satellite service, and by the broadcasting service, is limited to digital audio broadcasting and is subject to the provisions of Resolution **528 (WARC-92)**.
- S5.346 Not used
- S5.347 *Different category of service:* in Bangladesh, Bosnia and Herzegovina, Botswana, Bulgaria, Burkina Faso, Colombia, Cuba, Denmark, Egypt, Spain, Greece, Hungary, Ireland, Italy, Jordan, Kenya, The Former Yugoslav Republic of Macedonia, Malawi, Mozambique, Panama, Portugal, Sri Lanka, Sweden, Swaziland, Yemen, Yugoslavia and Zimbabwe, the allocation of the band 1 452 - 1 492 MHz to the broadcasting-satellite service and the broadcasting service is on a secondary basis until 1 April 2007.
- S5.348 The use of the band 1 492 - 1 525 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)/ No. S9.11A**. However, no coordination threshold in Article **S21** for space stations of the mobile-satellite service with respect to terrestrial services shall apply to the situation referred to in No. **S5.343**. With respect to the situation referred to in No. **S5.343**, the requirement for coordination in the band 1 492 - 1 525 MHz will be determined by band overlap.
- S5.348A In the band 1 492 - 1 525 MHz, the coordination threshold in terms of the power flux-density levels at the surface of the Earth in application of Resolution **46 (Rev.WRC-95)/S.9.11A** for space stations in the mobile-satellite (space-to-Earth) service, with respect to the land mobile service use for specialized mobile radios or used in conjunction with public switched telecommunication networks (PSTN) operating within the territory of Japan, shall be $-150 \text{ dB(W/m}^2\text{)}$ in any 4 kHz band for all angles of arrival, instead of those given in Annex 2 to Resolution **46 (Rev.WRC-95)/Table S5-2 of Appendix S5**. The above threshold level of the power flux-density shall apply until it is changed by a competent world radiocommunication conference.
- S5.349 *Different category of service:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Bulgaria, Cameroon, Egypt, the United Arab Emirates, France, Georgia, the Islamic Republic of Iran, Iraq, Israel, Kazakstan, Kuwait, The Former Yugoslav Republic of Macedonia, Lebanon, Morocco, Moldova, Mongolia, Oman, Uzbekistan, Qatar, Syria, Kyrgyzstan, Romania, Russia, Tajikistan, Turkmenistan, Ukraine, Yemen and Yugoslavia, the allocation of the band 1 525 - 1 530 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. **S5.33**).
- S5.350 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Georgia, Kazakstan, Moldova, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 1 525 - 1 530 MHz is also allocated to the aeronautical mobile service on a primary basis.
- S5.351 The bands 1 525 - 1 544 MHz, 1 545 - 1 559 MHz, 1 626.5 - 1 645.5 MHz and 1 646.5 - 1 660.5 MHz shall not be used for feeder links of any service. In exceptional circumstances, however, an earth station at a specified fixed point in any of the mobile-satellite services may be authorized by an administration to communicate via space stations using these bands.

- S5.352 The use of the bands 1 525 - 1 530 MHz, 1 533 - 1 544 MHz, 1 626.5 - 1 631.5 MHz and 1 634.5 - 1 645.5 MHz by the land mobile-satellite service is limited to non-speech low bit-rate data transmissions.
- S5.353 *Additional allocation:* in Argentina, Australia, Brazil, Canada, the United States, Malaysia and Mexico, the band 1 530 - 1 544 MHz is also allocated to the mobile-satellite service (space-to-Earth), and the band 1 631.5 - 1 645.5 MHz is also allocated to the mobile-satellite service (Earth-to-space), on a primary basis subject to the following conditions: maritime mobile-satellite distress and safety communications shall have priority access and immediate availability over all other mobile-satellite communications operating under this provision. Communications of mobile-satellite system stations not participating in the global maritime distress and safety system (GMDSS) shall operate on a secondary basis to distress and safety communications of stations operating in the GMDSS. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services.
- S5.354 The use of the bands 1 525 - 1 559 MHz and 1 626.5 - 1 660.5 MHz by the mobile-satellite services is subject to coordination under Resolution **46 (Rev. WRC-95)/No. S9.11A**.
- S5.355 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, the Congo, Egypt, the United Arab Emirates, Eritrea, Ethiopia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Malta, Morocco, Niger, Oman, Qatar, Syria, Somalia, Sudan, Sri Lanka, Chad, Togo, Yemen and Zambia, the bands 1 540 - 1 645.5 MHz and 1 646.5 - 1 660 MHz are also allocated to the fixed service on a secondary basis.
- S5.356 The use of the band 1 544 - 1 545 MHz by the mobile-satellite service (space-to-Earth) is limited to distress and safety communications (see Article **S31**).
- S5.357 Transmissions in the band 1 545 - 1 555 MHz from terrestrial aeronautical stations directly to aircraft stations, or between aircraft stations, in the aeronautical mobile (R) service are also authorized when such transmissions are used to extend or supplement the satellite-to-aircraft links.
- S5.358 Notwithstanding any other provisions of the Radio Regulations relating to restrictions in the use of the bands allocated to the aeronautical mobile-satellite (R) service for public correspondence, the bands 1 545 - 1 555 MHz and 1 646.5 - 1 656.5 MHz may be authorized by administrations for public correspondence with aircraft earth stations. Such communications must cease immediately, if necessary, to permit transmission of messages with priority 1 to 6 in Article **S44**.
- S5.359 *Additional allocation:* in Germany, Saudi Arabia, Armenia, Austria, Azerbaijan, Belarus, Benin, Bulgaria, Cameroon, Spain, France, Gabon, Georgia, Greece, Guinea, Guinea-Bissau, Hungary, Jordan, Kazakhstan, Kuwait, Latvia, Libya, Mali, Mauritania, Moldova, Mongolia, Nigeria, Uganda, Uzbekistan, Pakistan, Poland, Syria, Kyrgyzstan, the Democratic People's Republic of Korea, Romania, Russia, Senegal, Swaziland, Tajikistan, Tanzania, Turkmenistan, Ukraine, Zambia and Zimbabwe the bands 1 550 - 1 645.5 MHz and 1 646.5 - 1 660 MHz are also allocated to the fixed service on a primary basis. Administrations are urged to make all practicable efforts to avoid the implementation of new fixed-service stations in the bands 1 550 - 1 555 MHz, 1 610 - 1 645.5 MHz and 1 646.5 - 1 660 MHz.
- S5.360 In the bands 1 555 - 1 559 MHz and 1 656.5 - 1 660.5 MHz administrations may also authorize aircraft earth stations and ship earth stations to communicate with space stations in the land mobile-satellite service (see Resolution **208 (Mob-87)**).
- S5.361 *Alternative allocation:* in Australia, Canada and Mexico, the band 1 555 - 1 559 MHz is allocated to the mobile-satellite (space-to-Earth) service, the band 1 656.5 - 1 660 MHz is allocated to the mobile-satellite (Earth-to-space) service, and the band 1 660 - 1 660.5 MHz is allocated to the mobile-satellite (Earth-to-space) and the radio astronomy services, on a primary basis.
- S5.362 *Alternative allocation:* in Argentina and the United States, the band 1 555 - 1 559 MHz is allocated to the mobile-satellite (space-to-Earth) service, the band 1 656.5 - 1 660 MHz is allocated to the mobile-satellite (Earth-to-space) service, and the band 1 660 - 1 660.5 MHz is allocated to the mobile-satellite (Earth-to-space) and radio astronomy services, on a primary basis subject to the following conditions: the aeronautical mobile-

satellite (R) service shall have priority access and immediate availability over all other mobile-satellite communications within a network operating under this provision; mobile-satellite systems shall be interoperable with the aeronautical mobile-satellite (R) service; account shall be taken of the priority of safety-related communications in the other mobile-satellite services.

- S5.363 *Alternative allocation:* in Sweden, the band 1 590 - 1 626.5 MHz is allocated to the aeronautical radionavigation service on a primary basis.
- S5.364 The use of the band 1 610 - 1 626.5 MHz by the mobile-satellite service (Earth-to-space) and by the radiodetermination-satellite service (Earth-to-space) is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**. A mobile earth station operating in either of the services in this band shall not produce a peak e.i.r.p. density in excess of -15 dB(W/4 kHz) in the part of the band used by systems operating in accordance with the provisions of No. **S5.366** (to which No. **S4.10** applies), unless otherwise agreed by the affected administrations. In the part of the band where such systems are not operating, the mean e.i.r.p. density of a mobile earth station shall not exceed -3 dB(W/4 kHz). Stations of the mobile-satellite service shall not claim protection from stations in the aeronautical radionavigation service, stations operating in accordance with the provisions of No. **S5.366** and stations in the fixed service operating in accordance with the provisions of No. **S5.359**. Administrations responsible for the coordination of mobile-satellite networks shall make all practicable efforts to ensure protection of stations operating in accordance with the provisions of No. **S5.366**.
- S5.365 The use of the band 1 613.8 - 1 626.5 MHz by the mobile-satellite service (space-to-Earth) is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**.
- S5.366 The band 1 610 - 1 626.5 MHz is reserved on a worldwide basis for the use and development of airborne electronic aids to air navigation and any directly associated ground-based or satellite-borne facilities. Such satellite use is subject to agreement obtained under No. **S9.21**.
- S5.367 *Additional allocation:* the bands 1 610 - 1 626.5 MHz and 5 000 - 5 150 MHz are also allocated to the aeronautical mobile-satellite (R) service on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.368 With respect to the radiodetermination-satellite and mobile-satellite services the provisions of No. **S4.10** do not apply in the band 1 610 - 1 626.5 MHz, with the exception of the aeronautical radionavigation-satellite service.
- S5.369 *Different category of service:* in Angola, Australia, Burundi, Côte d'Ivoire, Eritrea, Ethiopia, India, the Islamic Republic of Iran, Israel, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syria, Senegal, Sudan, Swaziland, Togo, Zaire and Zambia the allocation of the band 1 610 - 1 626.5 MHz to the radiodetermination-satellite service (Earth-to-space) is on a primary basis (see No. **S5.33**) subject to agreement obtained under No. **S9.21** from countries not listed in this provision.
- S5.370 *Different category of service:* in Venezuela, the allocation to the radiodetermination-satellite service in the band 1 610 - 1 626.5 MHz (Earth-to-space) is on a secondary basis.
- S5.371 *Additional allocation:* in Region 1, the bands 1 610 - 1 626.5 MHz (Earth-to-space) and 2 483.5 - 2 500 MHz (space-to-Earth) are also allocated to the radiodetermination-satellite service on a secondary basis, subject to agreement obtained under No. **S9.21**.
- S5.372 Harmful interference shall not be caused to stations of the radio astronomy service using the band 1 610.6 - 1 613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services (No. **S29.13** applies).
- S5.373 Not used
- S5.373A In Argentina and the United States, the use of the band 1 626.5 - 1 631.5 MHz by the mobile-satellite service is subject to the conditions of No. **S5.353**.
- S5.374 Land earth stations and ship earth stations in the mobile-satellite service operating in the bands 1 631.5 - 1 634.5 MHz and 1 656.5 - 1 660 MHz shall not cause harmful interference to the stations in the fixed service operating in the countries listed in No. **S5.359**.

- S5.375 The use of the band 1 645.5 - 1 646.5 MHz by the mobile-satellite service (Earth-to-space) and for inter-satellite links is limited to distress and safety communications (see Article **S31**).
- S5.376 Transmissions in the band 1 646.5 - 1 656.5 MHz from aircraft stations in the aeronautical mobile (R) service directly to terrestrial aeronautical stations, or between aircraft stations, are also authorized when such transmissions are used to extend or supplement the aircraft-to-satellite links.
- S5.377 In the band 1 675 - 1 710 MHz, stations in the mobile-satellite service shall not cause harmful interference to, nor constrain the development of, the meteorological-satellite and meteorological aids services (see Resolution **213 (Rev.WRC-95)**) and the use of this band shall be subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**.
- S5.378 Not used
- S5.379 *Additional allocation:* in Bangladesh, India, Indonesia, Nigeria and Pakistan, the band 1 660.5 - 1 668.4 MHz is also allocated to the meteorological aids service on a secondary basis.
- S5.379A Administrations are urged to give all practicable protection in the band 1 660.5 - 1 668.4 MHz for future research in radio astronomy, particularly by eliminating air-to-ground transmissions in the meteorological aids service in the band 1 664.4 - 1 668.4 MHz as soon as practicable.
- S5.380 The bands 1 670 - 1 675 MHz and 1 800 - 1 805 MHz are intended for use, on a worldwide basis, by administrations wishing to implement aeronautical public correspondence. The use of the band 1 670 - 1 675 MHz by stations in the systems for public correspondence with aircraft is limited to transmissions from aeronautical stations and the use of the band 1 800 - 1 805 MHz is limited to transmissions from aircraft stations.
- S5.381 *Additional allocation:* in Afghanistan, Costa Rica, Cuba, India, the Islamic Republic of Iran, Malaysia, Pakistan, Singapore and Sri Lanka, the band 1 690 - 1 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.382 *Different category of service:* in Saudi Arabia, Armenia, Austria, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Bulgaria, the Congo, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Georgia, Guinea, Hungary, Iraq, Israel, Jordan, Kazakstan, Kenya, Kuwait, The Former Yugoslav Republic of Macedonia, Lebanon, Mauritania, Moldova, Mongolia, Oman, Uzbekistan, Poland, Qatar, Syria, Kyrgyzstan, Romania, Russia, Somalia, Tajikistan, Tanzania, Turkmenistan, Ukraine, Yemen and Yugoslavia, the allocation of the band 1 690 - 1 700 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **S5.33**).
- S5.383 Not used
- S5.384 *Additional allocation:* in India, Indonesia, Japan and Thailand, the band 1 700 - 1 710 MHz is also allocated to the space research service (space-to-Earth) on a primary basis.
- S5.385 *Additional allocation:* the bands 1 718.8 - 1 722.2 MHz, 150 - 151 GHz, 174.42 - 175.02 GHz, 177 - 177.4 GHz, 178.2 - 178.6 GHz, 181 - 181.46 GHz, 186.2 - 186.6 GHz and 257.5 - 258 GHz are also allocated to the radio astronomy service on a secondary basis for spectral line observations.
- S5.386 *Additional allocation:* the band 1 750 - 1 850 MHz is also allocated to the space operation (Earth-to-space) and space research (Earth-to-space) services in Region 2, in Australia, India, Indonesia and Japan on a primary basis, subject to agreement obtained under No. **S9.21**, having particular regard to troposcatter systems.
- S5.387 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Mali, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 1 770 - 1 790 MHz is also allocated to the meteorological-satellite service on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.388 The bands 1 885 - 2 025 MHz and 2 110 - 2 200 MHz are intended for use, on a worldwide basis, by administrations wishing to implement the future public land mobile telecommunication systems (FPLMTS). Such use does not preclude the use of these bands

by other services to which these bands are allocated. The bands should be made available for FPLMTS in accordance with Resolution **212 (Rev.WRC-95)**.

- S5.389 Not used
- S5.389A The use of the bands 1 980 - 2 010 MHz and 2 170 - 2 200 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A** and to the provisions of Resolution **716 (WRC-95)**. The use of these bands shall not commence before 1 January 2000; however the use of the band 1 980 - 1 990 MHz in Region 2 shall not commence before 1 January 2005.
- S5.389B The use of the band 1 980 - 1 990 MHz by the mobile-satellite service shall not cause harmful interference to or constrain the development of the fixed and mobile services in Argentina, Brazil, Canada, Chile, Ecuador, the United States, Honduras, Jamaica, Mexico, Peru, Suriname, Trinidad and Tobago, Uruguay and Venezuela.
- S5.389C The use of the bands 2 010 - 2 025 MHz and 2 160 - 2 170 MHz in Region 2 by the mobile-satellite service shall not commence before 1 January 2005 and is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A** and to the provisions of Resolution **716 (WRC-95)**.
- S5.389D In Canada and the United States the use of the bands 2 010 - 2 025 MHz and 2 160 - 2 170 MHz by the mobile-satellite service shall not commence before 1 January 2000.
- S5.389E The use of the bands 2 010 - 2 025 MHz and 2 160 - 2 170 MHz by the mobile-satellite service in Region 2 shall not cause harmful interference to or constrain the development of the fixed and mobile services in Regions 1 and 3.
- S5.389F In Algeria, Benin, Cape Verde, Egypt, Mali, Syria and Tunisia, the use of the bands 1 980 - 2 010 MHz and 2 170 - 2 200 MHz by the mobile-satellite service shall neither cause harmful interference to the fixed and mobile services, nor hamper the development of those services prior to 1 January 2005, nor shall the former service request protection from the latter services.
- S5.390 Not used
- S5.391 In making assignments to the mobile service in the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz, administrations shall take into account Resolution **211 (WARC-92)**.
- S5.392 Administrations are urged to take all practicable measures to ensure that space-to-space transmissions between two or more non-geostationary satellites, in the space research, space operations and Earth exploration-satellite services in the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz, shall not impose any constraints on Earth-to-space, space-to-Earth and other space-to-space transmissions of those services and in those bands between geostationary and non-geostationary satellites.
- S5.392A *Additional allocation:* in Russia, the band 2 160 - 2 200 MHz is also allocated to the space research service (space-to-Earth) on a primary basis until 1 January 2005. Stations in the space research service shall not cause harmful interference to, or claim protection from, stations in the fixed and mobile services operating in this frequency band.
- S5.393 *Additional allocation:* in the United States and India, the band 2 310 - 2 360 MHz is also allocated to the broadcasting-satellite service (sound) and complementary terrestrial sound broadcasting service on a primary basis. Such use is limited to digital audio broadcasting and is subject to the provisions of Resolution **528 (WARC-92)**.
- S5.394 In the United States, the use of the band 2 300 - 2 390 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile services. In Canada, the use of the band 2 300 - 2 483.5 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile services.
- S5.395 In France, the use of the band 2 310 - 2 360 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile service.
- S5.396 Space stations of the broadcasting-satellite service in the band 2 310 - 2 360 MHz operating in accordance with No. **S5.393** that may affect the services to which this band is allocated in other countries shall be coordinated and notified in accordance with Resolution **33**. Complementary terrestrial broadcasting stations shall be subject to bilateral coordination with neighbouring countries prior to their bringing into use.

- S5.397 *Different category of service:* in France, the band 2 450 - 2 500 MHz is allocated on a primary basis to the radiolocation service (see No. **S5.33**). Such use is subject to agreement with administrations having services operating or planned to operate in accordance with the Table of Frequency Allocations which may be affected.
- S5.398 In respect of the radiodetermination-satellite service in the band 2 483.5 - 2 500 MHz, the provisions of No. **S4.10** do not apply.
- S5.399 In Region 1, in countries other than those listed in No. **S5.400**, harmful interference shall not be caused to, or protection shall not be claimed from, stations of the radiolocation service by stations of the radiodetermination satellite service.
- S5.400 *Different category of service:* in Angola, Australia, Bangladesh, Burundi, China, Côte d'Ivoire, Eritrea, Ethiopia, India, the Islamic Republic of Iran, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syria, Senegal, Sudan, Swaziland, Togo, Zaire and Zambia, the allocation of the band 2 483.5 - 2 500 MHz to the radiodetermination-satellite service (space-to-Earth) is on a primary basis (see No. **S5.33**) subject to agreement obtained under No. **S9.21** from countries not listed in this provision.
- S5.401 Not used
- S5.402 The use of the band 2 483.5 - 2 500 MHz by the mobile-satellite and the radiodetermination-satellite services is subject to the coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**. Administrations are urged to take all practicable steps to prevent harmful interference to the radio astronomy service from emissions in the 2 483.5 - 2 500 MHz band, especially those caused by second-harmonic radiation that would fall into the 4 990 -5 000 MHz band allocated to the radio astronomy service worldwide.
- S5.403 Subject to agreement obtained under No. **S9.21**, the band 2 520 - 2 535 MHz (until 1 January 2005 the band 2 500 - 2 535 MHz) may also be used for the mobile-satellite (space-to-Earth), except aeronautical mobile-satellite, service for operation limited to within national boundaries. The provisions of Resolution **46 (Rev.WRC-95)/No. S9.11A** apply.
- S5.404 *Additional allocation:* in India and the Islamic Republic of Iran, the band 2 500 - 2 516.5 MHz may also be used for the radiodetermination-satellite service (space-to-Earth) for operation limited to within national boundaries, subject to agreement obtained under No. **S9.21**.
- S5.405 *Additional allocation:* in France, the band 2 500 - 2 550 MHz is also allocated to the radiolocation service on a primary basis. Such use is subject to agreement with the administrations having services operating or planned to operate in accordance with the Table which may be affected.
- S5.406 Not used
- S5.407 In the band 2 500 - 2 520 MHz, the power flux-density at the surface of the Earth from space stations operating in the mobile-satellite (space-to-Earth) service shall not exceed $-152 \text{ dB(W/m}^2/4 \text{ kHz)}$ in Argentina, unless otherwise agreed by the administrations concerned.
- S5.408 *Additional allocation:* in the United Kingdom, the band 2 500 - 2 600 MHz is also allocated to the radiolocation service on a secondary basis.
- S5.409 Administrations shall make all practicable efforts to avoid developing new tropospheric scatter systems in the band 2 500 - 2 690 MHz.
- S5.410 The band 2 500 - 2 690 MHz may be used for tropospheric scatter systems in Region 1, subject to agreement obtained under No. **S9.21**.
- S5.411 When planning new tropospheric scatter radio-relay links in the band 2 500 - 2 690 MHz, all possible measures shall be taken to avoid directing the antennae of these links towards the geostationary-satellite orbit.
- S5.412 *Alternative allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakhstan, Moldova, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 2 500 - 2 690 MHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.413 In the design of systems in the broadcasting-satellite service in the bands between 2 500 MHz and 2 690 MHz, administrations are urged to take all necessary steps to protect the radio astronomy service in the band 2 690 - 2 700 MHz.

- S5.414 The allocation of the frequency band 2 500 - 2 520 MHz to the mobile-satellite service (space-to-Earth) shall be effective on 1 January 2005 and is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**.
- S5.415 The use of the bands 2 500 - 2 690 MHz in Region 2 and 2 500 - 2 535 MHz and 2 655 - 2 690 MHz in Region 3 by the fixed-satellite service is limited to national and regional systems, subject to agreement obtained under No. **S9.21**, giving particular attention to the broadcasting-satellite service in Region 1. In the direction space-to-Earth, the power flux-density at the Earth's surface shall not exceed the values given in Article **S21**, Table S21-4.
- S5.416 The use of the band 2 520 - 2 670 MHz by the broadcasting-satellite service is limited to national and regional systems for community reception, subject to agreement obtained under No. **S9.21**. The power flux-density at the Earth's surface shall not exceed the values given in Article **S21**, Table S21-4.
- S5.417 *Alternative allocation:* in Germany and Greece, the band 2 520 - 2 670 MHz is allocated to the fixed service on a primary basis.
- S5.418 *Additional allocation:* in Bangladesh, Belarus, China, Rep. of Korea, India, Japan, Pakistan, Russia, Singapore, Sri Lanka, Thailand and Ukraine the band 2 535 - 2 655 MHz is also allocated to the broadcasting-satellite service (sound) and complementary terrestrial broadcasting service on a primary basis. Such use is limited to digital audio broadcasting and is subject to provisions of Resolution **528 (WARC-92)**. The provisions of No. **S5.416** and Article **S21**, Table S21-4, do not apply to this additional allocation.
- S5.419 The allocation of the frequency band 2 670 - 2 690 MHz to the mobile-satellite service shall be effective from 1 January 2005. When introducing systems of the mobile-satellite service in this band, administrations shall take all necessary steps to protect the satellite systems operating in this band prior to 3 March 1992. The coordination of mobile-satellite systems in the band shall be in accordance with Resolution **46 (Rev.WRC-95)/No. S9.11A**.
- S5.420 The band 2 655 - 2 670 MHz (until 1 January 2005 the band 2 655 - 2 690 MHz) may also be used for the mobile-satellite (Earth-to-space), except aeronautical mobile-satellite, service for operation limited to within national boundaries, subject to agreement obtained under No. **S9.21**. The coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A** applies.
- S5.421 *Additional allocation:* in Germany and Austria, the band 2 690 - 2 695 MHz is also allocated to the fixed service on a primary basis. Such use is limited to equipment in operation by 1 January 1985.
- S5.422 *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Brunei Darussalam, Bulgaria, Cameroon, the Central African Republic, the Congo, Côte d'Ivoire, Cuba, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Georgia, Guinea, Guinea-Bissau, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kazakstan, Lebanon, Lithuania, Malaysia, Malawi, Mali, Morocco, Mauritania, Moldova, Mongolia, Nigeria, Oman, Uzbekistan, Pakistan, the Philippines, Qatar, Syria, Kyrgyzstan, Romania, Russia, Singapore, Somalia, Tajikistan, Thailand, Tunisia, Turkmenistan, Ukraine, Yemen, Yugoslavia, Zaire and Zambia, the band 2 690 - 2 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985.
- S5.423 In the band 2 700 - 2 900 MHz, ground-based radars used for meteorological purposes are authorized to operate on a basis of equality with stations of the aeronautical radionavigation service.
- S5.424 *Additional allocation:* in Canada, the band 2 850 - 2 900 MHz is also allocated to the maritime radionavigation service, on a primary basis, for use by shore-based radars.
- S5.425 In the band 2 900 - 3 100 MHz, the use of the shipborne interrogator-transponder system (SIT) shall be confined to the sub-band 2 930 - 2 950 MHz.
- S5.426 The use of the band 2 900 - 3 100 MHz by the aeronautical radionavigation service is limited to ground-based radars.

- S5.427 In the bands 2 900 - 3 100 MHz and 9 300 - 9 500 MHz, the response from radar transponders shall not be capable of being confused with the response from radar beacons (racons) and shall not cause interference to ship or aeronautical radars in the radionavigation service, having regard, however, to No. **S4.9** of these Regulations.
- S5.428 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Cuba, Georgia, Kazakhstan, Moldova, Mongolia, Poland, Kyrgyzstan, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 3 100 - 3 300 MHz is also allocated to the radionavigation service on a primary basis.
- S5.429 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, China, the Congo, the United Arab Emirates, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Malaysia, Oman, Pakistan, Qatar, Syria, Democratic People's Republic of Korea, Singapore and Yemen, the band 3 300 - 3 400 MHz is also allocated to the fixed and mobile services on a primary basis. The countries bordering the Mediterranean shall not claim protection for their fixed and mobile services from the radiolocation service.
- S5.430 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Cuba, Georgia, Kazakhstan, Moldova, Mongolia, Poland, Kyrgyzstan, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 3 300 - 3 400 MHz is also allocated to the radionavigation service on a primary basis.
- S5.431 *Additional allocation:* in Germany, Israel, Nigeria and the United Kingdom, the band 3 400 - 3 475 MHz is also allocated to the amateur service on a secondary basis.
- S5.432 *Different category of service:* in Indonesia, Japan and Pakistan, the allocation of the band 3 400 - 3 500 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. **S5.33**).
- S5.433 In Regions 2 and 3, in the band 3 400 - 3 600 MHz the radiolocation service is allocated on a primary basis. However, all administrations operating radiolocation systems in this band are urged to cease operations by 1985. Thereafter, administrations shall take all practicable steps to protect the fixed-satellite service and coordination requirements shall not be imposed on the fixed-satellite service.
- S5.434 In Denmark, Norway and the United Kingdom, the fixed, radiolocation and fixed-satellite services operate on a basis of equality of rights in the band 3 400 - 3 600 MHz. However, these Administrations operating radiolocation systems in this band are urged to cease operations by 1985. After this date, these Administrations shall take all practicable steps to protect the fixed-satellite service and coordination requirements shall not be imposed on the fixed-satellite service.
- S5.435 In Japan, in the band 3 620 - 3 700 MHz, the radiolocation service is excluded.
- S5.436 Not used
- S5.437 *Additional allocation:* in Germany, Denmark and Norway, the band 4 200 - 4 210 MHz is also allocated to the fixed service on a secondary basis.
- S5.438 Use of the band 4 200 - 4 400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground. However, passive sensing in the earth exploration-satellite and space research services may be authorized in this band on a secondary basis (no protection is provided by the radio altimeters).
- S5.439 *Additional allocation:* in China, the Islamic Republic of Iran, Libya and the Philippines, the band 4 200 - 4 400 MHz is also allocated to the fixed service on a secondary basis.
- S5.440 The standard frequency and time signal-satellite service may be authorized to use the frequency 4 202 MHz for space-to-Earth transmissions and the frequency 6 427 MHz for Earth-to-space transmissions. Such transmissions shall be confined within the limits of ± 2 MHz of these frequencies, subject to agreement obtained under No. **S9.21**.
- S5.441 The use of the bands 4 500 - 4 800 MHz (space-to-Earth), 6 725 - 7 025 MHz (Earth-to-space), 10.7 - 10.95 GHz (space-to-Earth), 11.2 - 11.45 GHz (space-to-Earth) and 12.75 - 13.25 GHz (Earth-to-space) by the fixed-satellite service shall be in accordance with the provisions of Appendix **S30B**.

- S5.442 In the bands 4 825 - 4 835 MHz and 4 950 - 4 990 MHz, the allocation to the mobile service is restricted to the mobile, except aeronautical mobile, service.
- S5.443 *Different category of service:* in Argentina, Australia and Canada, the allocation of the bands 4 825 - 4 835 MHz and 4 950 - 4 990 MHz to the radio astronomy service is on a primary basis (see No. **S5.33**).
- S5.444 The band 5 000 - 5 150 MHz is to be used for the operation of the international standard system (microwave landing system) for precision approach and landing. The requirements of this system shall take precedence over other uses of this band. For the use of this band, No. **S5.444A** and Resolution **114 (WRC-95)** apply.
- S5.444A *Additional allocation:* the band 5 091 - 5 150 MHz is also allocated to the fixed-satellite service (Earth-to-space) on a primary basis. This allocation is limited to feeder links of non-geostationary mobile-satellite systems and is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**.
- In the band 5 091 - 5 150 MHz, the following conditions also apply:
- prior to 1 January 2010, the use of the band 5 091 - 5 150 MHz by feeder links of non-geostationary-satellite systems in the mobile-satellite service shall be made in accordance with Resolution **114 (WRC-95)**;
 - prior to 1 January 2010, the requirements of existing and planned international standard systems for the aeronautical radionavigation service which cannot be met in the 5 000 - 5 091 MHz band, shall take precedence over other uses of this band;
 - after 1 January 2008, no new assignments shall be made to stations providing feeder links of non-geostationary mobile-satellite systems;
 - after 1 January 2010, the fixed-satellite service will become secondary to the aeronautical radionavigation service.
- S5.445 Not used
- S5.446 *Additional allocation:* in the countries listed in Nos. **S5.369** and **S5.400**, the band 5 150 - 5 216 MHz is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis, subject to agreement obtained under No. **S9.21**. In Region 2, the band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis. In Regions 1 and 3, except those countries listed in Nos. **S5.369** and **S5.400**, the band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a secondary basis. The use by the radiodetermination-satellite service is limited to feeder links in conjunction with the radiodetermination-satellite service operating in the bands 1 610 - 1 626.5 MHz and/or 2 483.5 - 2 500 MHz. The total power flux-density at the Earth's surface shall in no case exceed -159 dBW/m^2 in any 4 kHz band for all angles of arrival.
- S5.447 *Additional allocation:* in Germany, Austria, Belgium, Denmark, Spain, Finland, France, Greece, Israel, Italy, Japan, Jordan, Lebanon, Liechtenstein, Luxembourg, Malta, Morocco, Norway, Pakistan, the Netherlands, Portugal, Syria, the United Kingdom, Sweden, Switzerland and Tunisia, the band 5 150 - 5 250 MHz is also allocated to the mobile service, on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.447A The allocation to the fixed-satellite service (Earth-to-space) is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to coordination under Resolution **46 (Rev.WRC-95)/ No. S9.11A**.
- S5.447B *Additional allocation:* the band 5 150 - 5 216 MHz is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis. This allocation is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to provisions of Resolution **46 (Rev.WRC-95)/ No. S9.11A**. The power flux-density at the Earth's surface produced by space stations of the fixed-satellite service operating in the space-to-Earth direction in the band 5 150 - 5 216 MHz shall in no case exceed $-164 \text{ dB(W/m}^2)$ in any 4 kHz band for all angles of arrival.
- S5.447C Administrations responsible for fixed-satellite service networks in the band 5 150 - 5 250 MHz operated under Nos. **S5.447A** and **S5.447B** shall coordinate on an equal basis in accordance with Resolution **46 (Rev.WRC-95)/No. S9.11A** with administrations responsible for non-geostationary-satellite networks operated under No. **S5.446** and brought

into use prior to 17 November 1995. Satellite networks operated under No. **S5.446** brought into use after 17 November 1995 shall not claim protection from, and shall not cause harmful interference to, stations of the fixed-satellite service operated under Nos. **S5.447A** and **S5.447B**.

- S5.448 *Additional allocation:* in Armenia, Austria, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Libya, Moldova, Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 5 250 - 5 350 MHz is also allocated to the radionavigation service on a primary basis.
- S5.449 The use of the band 5 350 - 5 470 MHz by the aeronautical radionavigation service is limited to airborne radars and associated airborne beacons.
- S5.450 *Additional allocation:* in Armenia, Austria, Azerbaijan, Belarus, Bulgaria, Georgia, the Islamic Republic of Iran, Kazakstan, Moldova, Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 5 470 - 5 650 MHz is also allocated to the aeronautical radionavigation service on a primary basis.
- S5.451 *Additional allocation:* in the United Kingdom, the band 5 470 - 5 850 MHz is also allocated to the land mobile service on a secondary basis. The power limits specified in Nos. **S21.2**, **S21.3**, **S21.4** and **S21.5** shall apply in the band 5 725 - 5 850 MHz.
- S5.452 Between 5 600 MHz and 5 650 MHz, ground-based radars used for meteorological purposes are authorized to operate on a basis of equality with stations of the maritime radionavigation service.
- S5.453 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Central African Republic, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guinea, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Madagascar, Malaysia, Malawi, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Democratic People's Republic of Korea, Singapore, Swaziland, Tanzania, Chad, and Yemen, the band 5 650 - 5 850 MHz is also allocated to the fixed and mobile services on a primary basis.
- S5.454 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 5 670 - 5 725 MHz to the space research service is on a primary basis (see No. **S5.33**).
- S5.455 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Cuba, Georgia, Hungary, Kazakstan, Latvia, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, Russia, Tajikistan, Turkmenistan and Ukraine, the band 5 670 - 5 850 MHz is also allocated to the fixed service on a primary basis.
- S5.456 *Additional allocation:* in Germany and in Cameroon, the band 5 755 - 5 850 MHz is also allocated to the fixed service on a primary basis.
- S5.457 Not used
- S5.458 In the band 6 425 - 7 075 MHz, passive microwave sensor measurements are carried out over the oceans. In the band 7 075 - 7 250 MHz, passive microwave sensor measurements are carried out. Administrations should bear in mind the needs of the Earth exploration-satellite (passive) and space research (passive) services in their future planning of the bands 6 425 - 7 025 MHz and 7 075 - 7 250 MHz.
- S5.458A In making assignments in the band 6 700 - 7 075 MHz to space stations of the fixed-satellite service, administrations are urged to take all practicable steps to protect spectral line observations of the radio astronomy service in the band 6 650 - 6 675.2 MHz from harmful interference from unwanted emissions.
- S5.458B The space-to-Earth allocation to the fixed-satellite service in the band 6 700 - 7 075 MHz is limited to feeder links for non-geostationary satellite systems of the mobile-satellite service and is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**. The use of the band 6 700 - 7 075 MHz (space-to-Earth) by feeder links for non-geostationary satellite systems in the mobile-satellite service is not subject to No. **S22.2**.
- S5.458C Administrations making submissions in the band 7 025 - 7 075 MHz (Earth-to-space) for geostationary-satellite systems in the fixed-satellite service after 17 November 1995 shall consult on the basis of relevant ITU-R Recommendations with the administrations that have notified and brought into use non-geostationary-satellite systems in

this frequency band before 18 November 1995 upon request of the latter administrations. This consultation shall be with a view to facilitating shared operation of both geostationary-satellite systems in the fixed-satellite service and non-geostationary-satellite systems in this band.

- S5.459 *Additional allocation:* in Region 2, the band 7 125 - 7 155 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.460 *Additional allocation:* the band 7 145 - 7 235 MHz is also allocated to the space research (Earth-to-space) service on a primary basis, subject to agreement obtained under No. **S9.21**. The use of the band 7 145 - 7 190 MHz is restricted to deep space; no emissions to deep space shall be effected in the band 7 190 - 7 235 MHz.
- S5.461 *Additional allocation:* the bands 7 250 - 7 375 MHz (space-to-Earth) and 7 900 - 8 025 MHz (Earth-to-space) are also allocated to the mobile-satellite service on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.462 In the band 8 025 - 8 400 MHz, the power flux-density limits specified in Article **S21**, Table S21-4, shall apply in Regions 1 and 3 to the earth exploration-satellite service.
- S5.463 In Region 2, aircraft stations are not permitted to transmit in the band 8 025 - 8 400 MHz.
- S5.464 *Different category of service:* in Bangladesh, Benin, Burkina Faso, Cameroon, China, the Central African Republic, Côte d'Ivoire, Egypt, France, Guinea, India, the Islamic Republic of Iran, Italy, Japan, Libya, Mali, Niger, Pakistan, Senegal, Somalia, Sudan, Sweden, Tanzania, Zaire and Zambia, the allocation of the band 8 025 - 8 400 MHz to the Earth exploration-satellite service (space-to-Earth) is on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.465 In the space research service, the use of the band 8 400 - 8 450 MHz is limited to deep space.
- S5.466 *Different category of service:* in Belgium, Israel, Luxembourg, Malaysia, Singapore and Sri Lanka, the allocation of the band 8 400 - 8 500 MHz to the space research service is on a secondary basis (see No. **S5.32**).
- S5.467 *Alternative allocation:* in the United Kingdom, the band 8 400 - 8 500 MHz is allocated to the radiolocation and space research services on a primary basis.
- S5.468 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burundi, Cameroon, China, the Congo, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guinea, Guyana, Indonesia, the Islamic Republic of Iran, Iraq, Jamaica, Jordan, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, Qatar, Syria, Democratic People's Republic of Korea, Senegal, Singapore, Somalia, Swaziland, Tanzania, Chad, Thailand, Togo, Tunisia and Yemen, the band 8 500 - 8 750 MHz is also allocated to the fixed and mobile services on a primary basis.
- S5.469 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Lithuania, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 8 500 - 8 750 MHz is also allocated to the land mobile and radionavigation services on a primary basis.
- S5.470 The use of the band 8 750 - 8 850 MHz by the aeronautical radionavigation service is limited to airborne Doppler navigation aids on a centre frequency of 8 800 MHz.
- S5.471 *Additional allocation:* in Algeria, Germany, Bahrain, Belgium, China, the United Arab Emirates, France, Greece, Indonesia, the Islamic Republic of Iran, Libya, the Netherlands, Qatar and Sudan, the bands 8 825 - 8 850 MHz and 9 000 - 9 200 MHz are also allocated to the maritime radionavigation service, on a primary basis, for use by shore-based radars only.
- S5.472 In the bands 8 850 - 9 000 MHz and 9 200 - 9 225 MHz, the maritime radionavigation service is limited to shore-based radars.
- S5.473 *Additional allocation:* in Armenia, Austria, Azerbaijan, Belarus, Bulgaria, Cuba, Georgia, Hungary, Kazakstan, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the

- bands 8 850 - 9 000 MHz and 9 200 - 9 300 MHz are also allocated to the radionavigation service on a primary basis.
- S5.474 In the band 9 200 - 9 500 MHz, search and rescue transponders (SART) may be used, having due regard to the appropriate ITU-R Recommendation (see also Article **S31**).
- S5.475 The use of the band 9 300 - 9 500 MHz by the aeronautical radionavigation service is limited to airborne weather radars and ground-based radars. In addition, ground-based radar beacons in the aeronautical radionavigation service are permitted in the band 9 300 - 9 320 MHz on condition that harmful interference is not caused to the maritime radionavigation service. In the band 9 300 - 9 500 MHz, ground-based radars used for meteorological purposes have priority over other radiolocation devices.
- S5.476 In the band 9 300 - 9 320 MHz in the radionavigation service, the use of shipborne radars, other than those existing on 1 January 1976, is not permitted until 1 January 2001.
- S5.477 *Different category of service:* in Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, the Islamic Republic of Iran, Iraq, Jamaica, Japan, Jordan, Kuwait, Lebanon, Liberia, Malaysia, Nigeria, Oman, Pakistan, Qatar, Singapore, Somalia, Sudan, Sweden, Thailand, Trinidad and Tobago, and Yemen, the allocation of the band 9 800 - 10 000 MHz to the fixed service is on a primary basis (see No. **S5.33**).
- S5.478 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Moldova, Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 9 800 - 10 000 MHz is also allocated to the radionavigation service on a primary basis.
- S5.479 The band 9 975 - 10 025 MHz is also allocated to the meteorological-satellite service on a secondary basis for use by weather radars.
- S5.480 *Additional allocation:* in Costa Rica, Ecuador, Guatemala and Honduras, the band 10 - 10.45 GHz is also allocated to the fixed and mobile services on a primary basis.
- S5.481 *Additional allocation:* in Germany, Angola, China, Ecuador, Spain, Japan, Morocco, Nigeria, Oman, Democratic People's Republic of Korea, Sweden, Tanzania and Thailand, the band 10.45 - 10.5 GHz is also allocated to the fixed and mobile services on a primary basis.
- S5.482 In the band 10.6 - 10.68 GHz, stations of the fixed and mobile, except aeronautical mobile, services shall be limited to a maximum equivalent isotropically radiated power of 40 dBW and the power delivered to the antenna shall not exceed -3 dBW. These limits may be exceeded subject to agreement obtained under No. **S9.21**. However, in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Bangladesh, Belarus, China, the United Arab Emirates, Georgia, India, Indonesia, the Islamic Republic of Iran, Iraq, Japan, Kazakstan, Kuwait, Latvia, Lebanon, Moldova, Nigeria, Uzbekistan, Pakistan, the Philippines, Qatar, Syria, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the restrictions on the fixed and mobile, except aeronautical mobile, services are not applicable.
- S5.483 *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Bulgaria, Cameroon, China, Colombia, the Republic of Korea, Costa Rica, Cuba, Egypt, the United Arab Emirates, Georgia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kazakstan, Kuwait, Latvia, Lebanon, Moldova, Mongolia, Uzbekistan, Pakistan, Qatar, Kyrgyzstan, Democratic People's Republic of Korea, Romania, Russia, Tajikistan, Turkmenistan, Ukraine, Yemen and Yugoslavia, the band 10.68 - 10.7 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985.
- S5.484 In Region 1, the use of the band 10.7 - 11.7 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service.
- S5.485 In Region 2, in the band 11.7 - 12.2 GHz, transponders on space stations in the fixed-satellite service may be used additionally for transmissions in the broadcasting-satellite service, provided that such transmissions do not have a maximum e.i.r.p. greater than 53 dBW per television channel and do not cause greater interference or require more protection from interference than the coordinated fixed-satellite service frequency

- assignments. With respect to the space services, this band shall be used principally for the fixed-satellite service.
- S5.486 *Different category of service:* in Mexico and the United States, the allocation of the band 11.7 - 12.1 GHz to the fixed service is on a secondary basis (see No. **S5.32**).
- S5.487 In the band 11.7 - 12.5 GHz in Regions 1 and 3, the fixed, fixed-satellite, mobile, except aeronautical mobile, and broadcasting services, in accordance with their respective allocations, shall not cause harmful interference to broadcasting-satellite stations operating in accordance with the provisions of Appendix **S30**.
- S5.488 The use of the bands 11.7 - 12.2 GHz by the fixed-satellite service in Region 2 and 12.2 - 12.7 GHz by the broadcasting-satellite service in Region 2 is limited to national and subregional systems. The use of the band 11.7 - 12.2 GHz by the fixed-satellite service in Region 2 is subject to previous agreement between the administrations concerned and those having services, operating or planned to operate in accordance with the Table, which may be affected (see Articles **S9** and **S11**). For the use of the band 12.2 - 12.7 GHz by the broadcasting-satellite service in Region 2, see Appendix **S30**.
- S5.489 *Additional allocation:* in Peru, the band 12.1 - 12.2 GHz is also allocated to the fixed service on a primary basis.
- S5.490 In Region 2, in the band 12.2 - 12.7 GHz, existing and future terrestrial radiocommunication services shall not cause harmful interference to the space services operating in conformity with the Broadcasting-Satellite Plan for Region 2 contained in Appendix **S30**.
- S5.491 *Additional allocation:* in Region 3, the band 12.2 - 12.5 GHz is also allocated to the fixed-satellite (space-to-Earth) service on a primary basis, limited to national and sub-regional systems. The power flux-density limits in Article **S21**, Table S21-4 shall apply to this frequency band. The introduction of the service in relation to the broadcasting-satellite service in Region 1 shall follow the procedures specified in Article 7 of Appendix **S30**, with the applicable frequency band extended to cover 12.2 - 12.5 GHz.
- S5.492 In Region 2, in the band 12.2 - 12.7 GHz, assignments to stations of the broadcasting-satellite service in the Plan for Region 2 contained in Appendix **S30** may also be used for transmissions in the fixed-satellite service (space-to-Earth), provided that such transmissions do not cause more interference or require more protection from interference than the broadcasting-satellite service transmissions operating in conformity with the Region 2 Plan. With respect to the space services, this band shall be used principally for the broadcasting-satellite service.
- S5.493 The broadcasting-satellite service in the band 12.5 - 12.75 GHz in Region 3 is limited to community reception with a power flux-density not exceeding $-111 \text{ dB(W/m}^2\text{)}$ as defined in Annex 5 of Appendix **S30**. See also Resolution **34**.
- S5.494 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Cameroon, the Central African Republic, the Congo, Côte d'Ivoire, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Madagascar, Mali, Morocco, Mongolia, Niger, Nigeria, Qatar, Syria, Senegal, Somalia, Sudan, Chad, Togo, Yemen and Zaire, the band 12.5 - 12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.495 *Additional allocation:* in Belgium, Bosnia and Herzegovina, Croatia, Denmark, Spain, France, Greece, The Former Yugoslav Republic of Macedonia, Liechtenstein, Luxembourg, Monaco, Norway, Uganda, Portugal, Romania, Slovenia, Switzerland, Tanzania, Tunisia and Yugoslavia, the band 12.5 - 12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis.
- S5.496 *Additional allocation:* in Armenia, Austria, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 12.5 - 12.75 GHz is also allocated to the fixed service and the mobile, except aeronautical mobile, service on a primary basis. However, stations in these services shall not cause harmful interference to fixed-satellite service earth stations of countries in Region 1 other than those mentioned in this footnote. Coordination of these earth stations is not required with stations of the fixed and mobile services of the countries mentioned in this

footnote. The power flux-density limit at the Earth's surface given in Article **S21**, Table S21-4 for the fixed-satellite service shall apply on the territory of the countries mentioned in this footnote.

- S5.497 The use of the band 13.25 - 13.4 GHz by the aeronautical radionavigation service is limited to Doppler navigation aids.
- S5.498 The band 13.25 - 13.4 GHz may also be used in the space research service (Earth-to-space) on a secondary basis, subject to agreement obtained under No. **S9.21**.
- S5.499 *Additional allocation:* in Bangladesh, India and Pakistan, the band 13.25 -14 GHz is also allocated to the fixed service on a primary basis.
- S5.500 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guinea, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, the Lebanon, Madagascar, Malaysia, Malawi, Mali, Malta, Morocco, Mauritania, Niger, Nigeria, Pakistan, Qatar, Syria, Senegal, Singapore, Sudan, Chad and Tunisia, the band 13.4 - 14 GHz is also allocated to the fixed and mobile services on a primary basis.
- S5.501 *Additional allocation:* in Armenia, Austria, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Japan, Kazakhstan, Moldova, Mongolia, Kyrgyzstan, Romania, the United Kingdom, Russia, Tajikistan, Turkmenistan and Ukraine, the band 13.4 - 14 GHz is also allocated to the radionavigation service on a primary basis.
- S5.502 In the band 13.75 - 14 GHz, the e.i.r.p. of any emission from an earth station in the fixed-satellite service shall be at least 68 dBW, and should not exceed 85 dBW, with a minimum antenna diameter of 4.5 metres. In addition the e.i.r.p., averaged over one second, radiated by a station in the radiolocation or radionavigation services towards the geostationary-satellite orbit shall not exceed 59 dBW.
- S5.503 In the band 13.75 - 14 GHz, geostationary space stations in the space research service for which information for advance publication has been received by the Bureau prior to 31 January 1992 shall operate on an equal basis with stations in the fixed-satellite service; after that date, new geostationary space stations in the space research service will operate on a secondary basis. The e.i.r.p. density of emissions from any earth station in the fixed-satellite service shall not exceed 71 dBW in any 6 MHz band in the frequency range 13.772 - 13.778 GHz until those geostationary space stations in the space research service for which information for advance publication has been received by the Bureau prior to 31 January 1992 cease to operate in this band. Automatic power control may be used to increase the e.i.r.p. density above 71 dBW in any 6 MHz band in this frequency range to compensate for rain attenuation, to the extent that the power-flux density at the fixed-satellite service space station does not exceed the value resulting from use of an e.i.r.p. of 71 dBW in any 6 MHz band in clear sky conditions.
- S5.503A Until 1 January 2000, stations in the fixed-satellite service shall not cause harmful interference to non-geostationary space stations in the space research and Earth exploration-satellite services. After that date, these non-geostationary space stations will operate on a secondary basis in relation to the fixed-satellite service. Additionally, when planning earth stations in the fixed-satellite service to be brought into service between 1 January 2000 and 1 January 2001, in order to accommodate the needs of spaceborne precipitation radars operating in the band 13.793 - 13.805 GHz, advantage should be taken of the consultation process and the information given in Recommendation ITU-R SA.1071.
- S5.504 The use of the band 14 - 14.3 GHz by the radionavigation service shall be such as to provide sufficient protection to space stations of the fixed-satellite service (see Recommendation **708***).
- S5.505 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Australia, Bahrain, Bangladesh, Botswana, Brunei Darussalam, Cameroon, China, the Congo, the Republic of

* Recommendation 708 was abrogated by WARC-92.

Korea, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lesotho, Lebanon, Malaysia, Malawi, Mali, Morocco, Mauritania, Niger, Oman, Pakistan, the Philippines, Qatar, Syria, the Democratic People's Republic of Korea, Senegal, Singapore, Somalia, Sudan, Swaziland, Tanzania, Chad and Yemen, the band 14 - 14.3 GHz is also allocated to the fixed service on a primary basis.

- S5.506 The band 14 - 14.5 GHz may be used, within the fixed-satellite service (Earth-to-space), for feeder links for the broadcasting-satellite service, subject to coordination with other networks in the fixed-satellite service. Such use of feeder links is reserved for countries outside Europe.
- S5.508 *Additional allocation:* in Germany, Austria, Belgium, Bosnia and Herzegovina, Denmark, Spain, France, Greece, Ireland, Iceland, Italy, The Former Yugoslav Republic of Macedonia, Libya, Liechtenstein, Luxembourg, Norway, Portugal, the United Kingdom, Slovenia, Switzerland, Turkey and Yugoslavia, the band 14.25 - 14.3 GHz is also allocated to the fixed service on a primary basis.
- S5.509 *Additional allocation:* in Japan and Pakistan the band 14.25 - 14.3 GHz is also allocated to the mobile, except aeronautical mobile, service on a primary basis.
- S5.510 The use of the band 14.5 - 14.8 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. This use is reserved for countries outside Europe.
- S5.511 *Additional allocation:* in Saudi Arabia, Bahrain, Bosnia and Herzegovina, Cameroon, Egypt, the United Arab Emirates, Guinea, the Islamic Republic of Iran, Iraq, Israel, Kuwait, The Former Yugoslav Republic of Macedonia, Lebanon, Libya, Pakistan, Qatar, Syria, Slovenia, Somalia and Yugoslavia, the band 15.35 - 15.4 GHz is also allocated to the fixed and mobile services on a secondary basis.
- S5.511A Use of the band 15.4 - 15.7 GHz by the fixed-satellite service (space-to-Earth) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**. Emissions from a non-geostationary space station shall not exceed the power flux-density limits at the Earth's surface of -146 dB(W/m²/MHz) in the bands 15.4 - 15.45 GHz and 15.65 - 15.7 GHz, and -111 dB(W/m²/MHz) in the band 15.45 - 15.65 GHz, for all angles of arrival. These limits relate to the power flux-density which would be obtained under assumed free-space propagation conditions. In the band 15.45 - 15.65 GHz, where an administration plans emissions from a non-geostationary space station that exceed -146 dB(W/m²/MHz) for all angles of arrival, it shall coordinate with affected administrations. Moreover, harmful interference shall not be caused to stations of the radio astronomy service using the band 15.35 - 15.4 GHz. The threshold levels of interference and associated power flux-density limits which are detrimental to the radio astronomy service are given in Recommendation ITU-R RA.769. The power flux-density limits and coordination threshold in this footnote shall apply, subject to review by ITU-R and based on the studies referred to in Resolution **116 (WRC-95)**, until changed by a future competent world radiocommunication conference.
- S5.511B Aircraft stations are not permitted to transmit in the band 15.45 - 15.65 GHz.
- S5.511C *Additional allocation:* the band 15.45 - 15.65 GHz is also allocated to the fixed-satellite service (Earth-to-space) on a primary basis. Such use is limited to feeder links of non-geostationary systems in the mobile-satellite service and is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**. Until such time as the studies called for in Resolution **117 (WRC-95)** are completed: 1) administrations operating stations in the aeronautical radionavigation service are urged to limit the average e.i.r.p. to 42 dBW; 2) stations in the fixed-satellite service shall not cause harmful interference to stations in the aeronautical radionavigation service (No. **S4.10** applies).
- S5.512 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Bosnia and Herzegovina, Brunei Darussalam, Cameroon, the Congo, Costa Rica, Egypt, El Salvador, the United Arab Emirates, Finland, Guatemala, India, Indonesia, the Islamic Republic of Iran, Jordan, Kuwait, The Former Yugoslav Republic of Macedonia,

- Libya, Malaysia, Malawi, Morocco, Mozambique, Nepal, Nicaragua, Oman, Pakistan, Qatar, Singapore, Slovenia, Somalia, Sudan, Sweden, Swaziland, Tanzania, Chad, Thailand, Yemen and Yugoslavia, the band 15.7 - 17.3 GHz is also allocated to the fixed and mobile services on a primary basis.
- S5.513 *Additional allocation:* in Israel, the band 15.7 - 17.3 GHz is also allocated to the fixed and mobile services on a primary basis. These services shall not claim protection from or cause harmful interference to services operating in accordance with the Table in countries other than those included in No. **S5.512**.
- S5.514 *Additional allocation:* in Algeria, Germany, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Bosnia and Herzegovina, Cameroon, Costa Rica, El Salvador, the United Arab Emirates, Finland, Guatemala, Honduras, India, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, The Former Yugoslav Republic of Macedonia, Libya, Nepal, Nicaragua, Oman, Pakistan, Qatar, Slovenia, Sudan, Sweden, and Yugoslavia, the band 17.3 - 17.7 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits given in Nos. **S21.3** and **S21.5** shall apply.
- S5.515 In the band 17.3 - 17.8 GHz, sharing between the fixed-satellite service (Earth-to-space) and the broadcasting-satellite service shall also be in accordance with the provisions of section 1 of Annex 4 of Appendix **S30A**.
- S5.516 The use of the band 17.3 - 18.1 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. For the use of the band 17.3 - 17.8 GHz in Region 2 by the feeder links for the broadcasting-satellite service in the band 12.2 - 12.7 GHz, see Article **S11**.
- S5.517 In Region 2, the allocation to the broadcasting-satellite service in the band 17.3 - 17.8 GHz shall come into effect on 1 April 2007. After that date, use of the fixed-satellite (space-to-Earth) service in the band 17.7 - 17.8 GHz shall not claim protection from and shall not cause harmful interference to operating systems in the broadcasting-satellite service.
- S5.518 *Different category of service:* in Region 2, the allocation of the band 17.7 - 17.8 GHz to the mobile service is on a primary basis until 31 March 2007.
- S5.519 *Additional allocation:* the band 18.1 - 18.3 GHz is also allocated to the meteorological-satellite service (space-to-Earth) on a primary basis. Its use is limited to geostationary satellites and shall be in accordance with the provisions of Article **S21**, Table S21-4.
- S5.520 The use of the band 18.1 - 18.4 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service.
- S5.521 *Alternative allocation:* in Germany, Denmark, the United Arab Emirates, Greece, Poland, Slovakia, the Czech Republic and the United Kingdom, the band 18.1 - 18.4 GHz is allocated to the fixed, fixed-satellite (space-to-Earth) and mobile services on a primary basis. The provisions of No. **S5.519** also apply.
- S5.522 In making assignments to stations in the fixed and mobile services, administrations are invited to take account of passive sensors in the earth-exploration satellite and space research services operating in the band 18.6 - 18.8 GHz. In this band, administrations should endeavour to limit as far as possible both the power delivered by the transmitter to the antenna and the e.i.r.p. in order to reduce the risk of interference to passive sensors to the minimum.
- S5.523 In assigning frequencies to stations in the fixed-satellite service in the direction space-to-Earth, administrations are requested to limit as far as practicable the power flux-density at the Earth's surface in the band 18.6 - 18.8 GHz, in order to reduce the risk of interference to passive sensors in the earth exploration-satellite and space research services.
- S5.523A The use of the bands 18.8 - 19.3 GHz and 28.6 - 29.1 GHz by the FSS shall be in accordance with Resolution **118 (WRC-95)**.
- S5.523B The use of the band 19.3 - 19.6 GHz (Earth-to-space) by the FSS is limited to feeder links for non-GSO systems in the MSS. Such use is subject to the application of the provisions of Resolution **46 (Rev.WRC-95)/No. S9.11A**, and No. **S22.2** does not apply.
- S5.523C The use of the bands 19.3 - 19.7 GHz and 29.1 - 29.5 GHz by the FSS shall be in accordance with Resolution **120 (WRC-95)**.

- S5.523D The use of the band 19.3 - 19.6 GHz (space-to-Earth) by GSO/FSS systems and by the feeder links for non-geostationary satellite systems in the MSS is subject to the application of the provisions of Resolution **46 (Rev.WRC-95)/No. S9.11A**, but not subject to the provisions of No. **S22.2**. The use of this band for other non-GSO/FSS systems is not subject to the provisions of Resolution **46 (Rev.WRC-95)/No. S9.11A** and shall continue to be subject to Articles **S9** (except No. **S9.11A**) and **S11** procedures, and to the provisions of No. **S22.2**.
- S5.524 *Additional allocation:* in Afghanistan, Algeria, Angola, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Singapore, Somalia, Sudan, Tanzania, Chad, Thailand, Togo, Tunisia and Zaire, the band 19.7 - 21.2 GHz is also allocated to the fixed and mobile services on a primary basis. This additional use shall not impose any limitation on the power flux-density of space stations in the fixed-satellite service in the band 19.7 - 21.2 GHz and of space stations in the mobile-satellite service in the band 19.7 - 20.2 GHz where such allocation to the mobile-satellite service is on a primary basis in the latter band.
- S5.525 In order to facilitate interregional coordination between networks in the mobile-satellite and fixed-satellite services, carriers in the mobile-satellite service that are most susceptible to interference shall, to the extent practicable, be located in the higher parts of the bands 19.7 - 20.2 GHz and 29.5 - 30 GHz.
- S5.526 In the bands 19.7 - 20.2 GHz and 29.5 - 30 GHz in Region 2, and in the bands 20.1 - 20.2 GHz and 29.9 - 30 GHz in Regions 1 and 3, networks which are both in the fixed-satellite service and in the mobile-satellite service may include links between earth stations at specified or unspecified points or while in motion, through one or more satellites for point-to-point and point-to-multipoint communications.
- S5.527 In the bands 19.7 - 20.2 GHz and 29.5 - 30 GHz, the provisions of No. **S4.10** do not apply with respect to the mobile-satellite service.
- S5.528 The allocation to the mobile-satellite service is intended for use by networks which use narrow spot-beam antennas and other advanced technology at the space stations. Administrations operating systems in the mobile-satellite service in the band 19.7 - 20.1 GHz in Region 2 and in the band 20.1 - 20.2 GHz shall take all practicable steps to ensure the continued availability of these bands for administrations operating fixed and mobile systems in accordance with the provisions of No. **S5.524**.
- S5.529 The use of the bands 19.7 - 20.1 GHz and 29.5 - 29.9 GHz by the mobile-satellite service in Region 2 is limited to satellite networks which are both in the fixed-satellite service and in the mobile-satellite service as described in No. **S5.526**.
- S5.530 In Regions 1 and 3, the allocation to the broadcasting-satellite service in the band 21.4 - 22 GHz shall come into effect on 1 April 2007. The use of this band by the broadcasting-satellite service after that date and on an interim basis prior to that date is subject to the provisions of Resolution **525 (WARC-92)**.
- S5.531 *Additional allocation:* in Japan, the band 21.4 - 22 GHz is also allocated to the broadcasting service on a primary basis.
- S5.532 The use of the band 22.21 - 22.5 GHz by the earth exploration-satellite (passive) and space research (passive) services shall not impose constraints upon the fixed and mobile, except aeronautical mobile, services.
- S5.533 The inter-satellite service shall not claim protection from harmful interference from airport surface detection equipment stations of the radionavigation service.
- S5.534 *Additional allocation:* in Japan, the band 24.65 - 25.25 GHz is also allocated to the radionavigation service on a primary basis until 2008.
- S5.535 In the band 24.75 - 25.25 GHz, feeder links to stations of the broadcasting-satellite service shall have priority over other uses in the fixed-satellite service (Earth-to-space). Such other uses shall protect and shall not claim protection from existing and future operating feeder-link networks to such broadcasting satellite stations.

- S5.535A The use of the band 29.1 - 29.4 GHz (Earth-to-space) by the FSS is limited to GSO satellite systems and feeder links to non-GSO satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of Resolution **46 (Rev.WRC-95)/No. S9.11A**, but not subject to the provisions of No. **S22.2**.
- S5.536 Use of the 25.25 - 27.5 GHz band by the inter-satellite service is limited to space research and Earth exploration-satellite applications, and also transmissions of data originating from industrial and medical activities in space.
- S5.537 Space services using non-geostationary satellites operating in the inter-satellite service in the band 27 - 27.5 GHz are exempt from the provisions of No. **S22.2**.
- S5.538 *Additional allocation:* the bands 27.500 - 27.501 GHz and 29.999 - 30.000 GHz are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis for the beacon transmissions intended for up-link power control. Such space-to-Earth transmissions shall not exceed an equivalent isotropically radiated power (e.i.r.p.) of +10 dBW in the direction of adjacent satellites on the geostationary-satellite orbit. In the band 27.500 - 27.501 GHz, such space-to-Earth transmissions shall not produce a power flux-density in excess of the values specified in Article **S21**, Table S21-4 on the Earth's surface.
- S5.539 The band 27.5 - 30 GHz may be used by the fixed-satellite service (Earth-to-space) for the provision of feeder links for the broadcasting-satellite service.
- S5.540 *Additional allocation:* the band 27.501 - 29.999 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a secondary basis for beacon transmissions intended for up-link power control.
- S5.541 In the band 28.5 - 30 GHz, the earth exploration-satellite service is limited to the transfer of data between stations and not to the primary collection of information by means of active or passive sensors.
- S5.541A Feeder links of non-GSO/MSS networks and GSO/FSS networks operating in the band 29.1 - 29.4 GHz (Earth-to-space) shall employ uplink adaptive power control or other methods of fade compensation, such that the earth station transmissions shall be conducted at the power level required to meet the desired link performance while reducing the level of mutual interference between both networks. These methods shall apply to networks for which Appendix **S4** coordination information is considered as having been received by the Bureau after 17 May 1996 and until it is changed by a future competent world radiocommunication conference. Administrations submitting Appendix **S4** information for coordination before this date are encouraged to utilize these techniques to the extent practicable. These methods are also subject to review by the ITU-R (see Resolution **121 (WRC-95)**).
- S5.542 *Additional allocation:* in Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guinea, India, the Islamic Republic of Iran, Iraq, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Pakistan, Qatar, Syria, Singapore, Somalia, Sudan, Sri Lanka, Chad and Thailand, the band 29.5 - 31 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits specified in Nos. **S21.3** and **S21.5** shall apply.
- S5.543 The band 29.95 - 30 GHz may be used for space-to-space links in the earth exploration-satellite service for telemetry, tracking, and control purposes, on a secondary basis.
- S5.544 In the band 31 - 31.3 GHz the power flux-density limits specified in Article **S21**, Table S21-4 shall apply to the space research service.
- S5.545 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakhstan, Moldova, Mongolia, Poland, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 31 - 31.3 GHz to the space research service is on a primary basis (see No. **S5.33**).
- S5.546 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Egypt, Georgia, Kazakhstan, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 31.5 - 31.8 GHz to

- the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **S5.33**).
- S5.547 Not used
- S5.548 In designing systems for the inter-satellite and radionavigation services in the band 32 - 33 GHz, and for the space research service (deep space) in the band 31.8 - 32.3 GHz, administrations shall take all necessary measures to prevent harmful interference between these services, bearing in mind the safety aspects of the radionavigation service (see Recommendation **707**).
- S5.549 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Egypt, the United Arab Emirates, Spain, Gabon, Guinea, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malaysia, Malawi, Mali, Malta, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Senegal, Singapore, Somalia, Sudan, Sri Lanka, Tanzania, Thailand, Togo, Tunisia, Yemen and Zaire, the band 33.4 - 36 GHz is also allocated to the fixed and mobile services on a primary basis.
- S5.550 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 34.7 - 35.2 GHz to the space research service is on a primary basis (see No. **S5.33**).
- S5.551 Radars located on spacecraft may be operated on a primary basis in the band 35.5 - 35.6 GHz.
- S5.552 The allocation of the spectrum for the fixed-satellite service in the bands 42.5 - 43.5 GHz and 47.2 - 50.2 GHz for Earth-to-space transmission is greater than that in the band 37.5 - 39.5 GHz for space-to-Earth transmission in order to accommodate feeder links to broadcasting satellites. Administrations are urged to take all practicable steps to reserve the band 47.2 - 49.2 GHz for feeder links for the broadcasting-satellite service operating in the band 40.5 - 42.5 GHz.
- S5.553 In the bands 43.5 - 47 GHz, 66 - 71 GHz, 95 - 100 GHz, 134 - 142 GHz, 190 - 200 GHz and 252 - 265 GHz, stations in the land mobile service may be operated subject to not causing harmful interference to the space radiocommunication services to which these bands are allocated (see No. **S5.43**).
- S5.554 In the bands 43.5 - 47 GHz, 66 - 71 GHz, 95 -100 GHz, 134 - 142 GHz, 190 - 200 GHz and 252 - 265 GHz, satellite links connecting land stations at specified fixed points are also authorized when used in conjunction with the mobile-satellite service or the radionavigation-satellite service.
- S5.555 *Additional allocation:* the bands 48.94 - 49.04 GHz, 97.88 - 98.08 GHz, 140.69 - 140.98 GHz, 144.68 - 144.98 GHz, 145.45 - 145.75 GHz, 146.82 - 147.12 GHz, 250 - 251 GHz and 262.24 - 262.76 GHz are also allocated to the radio astronomy service on a primary basis.
- S5.556 In the bands 51.4 - 54.25 GHz, 58.2 - 59 GHz, 64 - 65 GHz, 72.77 - 72.91 GHz and 93.07 - 93.27 GHz, radio astronomy observations may be carried out under national arrangements.
- S5.557 *Additional allocation:* in Japan and the United Kingdom, the band 54.25 - 58.2 GHz is also allocated to the radiolocation service on a primary basis.
- S5.558 In the bands 54.25 - 58.2 GHz, 59 - 64 GHz, 116 - 134 GHz, 170 - 182 GHz and 185 - 190 GHz, stations in the aeronautical mobile service may be operated subject to not causing harmful interference to the inter-satellite service (see No. **S5.43**).
- S5.559 In the bands 59 - 64 GHz and 126 - 134 GHz, airborne radars in the radiolocation service may be operated subject to not causing harmful interference to the inter-satellite service (see No. **S5.43**).
- S5.560 In the band 78 - 79 GHz radars located on space stations may be operated on a primary basis in the earth exploration-satellite service and in the space research service.
- S5.561 In the band 84 - 86 GHz, stations in the fixed, mobile and broadcasting services shall not cause harmful interference to broadcasting-satellite stations operating in accordance with the decisions of the appropriate frequency assignment planning conference for the broadcasting-satellite service.

II. National footnotes

- A01 Additional allocation according to the European Common Allocations Table. The provisions of RR Articles S4.4 and S8.5 apply.
- A02 Allocation according to the result of WRC-97.
- A03 Alternative allocation for Austria. The provisions of RR Articles S4.4 and S8.5 apply.

III. Other relevant provisions of the Radio Regulations

Article S4.4

Administrations of the Members shall not assign to a station any frequency in derogation of either the Table of Frequency Allocations in this Chapter or the other provisions of these Regulations, except on the express condition that such a station shall not cause harmful interference to, and shall not claim protection from harmful interference caused by, a station operating in accordance with the provisions of the Constitution, the Convention and these Regulations.

Article S8.5

If harmful interference to the reception of any station whose assignment is in accordance with No. S11.31 is actually caused by the use of a frequency assignment which is not in conformity with No. S11.31, the station using the latter frequency assignment must, upon receipt of advice thereof, immediately eliminate this harmful interference.