



National Table of Frequency Allocations Consultation Document

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Commission**

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1 Introduction

The Telecommunications Commission (the “Commission”) is hereby initiating a consultation process to review the National Table of Frequency Allocations (NTFA) in the Turks and Caicos Islands (“TCI”). All operators who are licensed to use spectrum are directly affected by and, therefore, considered parties to this consultation process.

1.1 Background

Radio waves that are transmitted by telecommunications networks ignore borders and can result in interference. The problem of interference is growing as the use of spectrum becomes more intense. Consequently, international coordination of spectrum use is necessary. The ITU is the main forum which coordinates the use of spectrum at the international level. This is achieved by means of the ITU’s Radio Regulations which are updated every few years at the ITU’s World Radiocommunication Conferences (WRCs). The Radio Regulations determine how the radio frequency spectrum is shared between different services, how satellite orbits are to be used, and how equipment and systems must operate to avoid interference with each other.

The Radio Regulations also play an important role in determining which spectrum bands telecommunications hardware manufacturers will use when developing handsets and new telecommunications networking equipment. Manufacturers are more likely to develop the necessary hardware if spectrum is allocated in a sufficiently large number of countries, on a sufficiently large overall scale, and in a manner, which will support the development of the necessary ecosystem for services that would use the hardware.

The ITU divides the world in to 3 regions for the purposes of the Radio Regulations. The Turks and Caicos Islands are in Region 2. A map at the end of this consultation document illustrates the 3 Regions.

1.2 Key Changes at WRC 2019 Most Relevant to TCI

The full frequency allocation table combined with the associated footnotes mean that the full NTFA is a very large document. We are therefore highlighting in this section some of the main changes to the Radio Regulations that took place in terms of allocating new spectrum during WRCs since the last TCI NTFA was published. Please note the convention for writing numbers in the thousands e.g. one thousand MHz is written as 1 000 MHz and without a comma in order to avoid confusion due to different national approaches to the use of comma separators.

1.2.1 Additional bands identified to enable 5G deployment

Frequency bands 24.25-27.5 GHz, 37-43.5 GHz, 45.5-47 GHz, 47.2-48.2 and 66-71 GHz were identified for the deployment of 5G networks. Measures were introduced to protect Earth-exploration satellite services, including meteorological and other passive services in adjacent bands.

WRC-19 led to over 8 times more spectrum for IMT being identified than was identified for IMT before the conference. 17.25 GHz of spectrum in total was identified for IMT following the conference, in comparison with 1.9 GHz of spectrum that had been identified beforehand.

1.2.2 HAPS

Allocations to the fixed service in the frequency bands 31-31.3 GHz, 38-39.5 GHz were identified worldwide for use by HAPS. Bands 21.4-22 GHz and 24.25-27.5 GHz were allocated for use by HAPS in the fixed service in Region 2. In addition, there were worldwide identifications for HAPS in the bands 47.2-47.5 GHz and 47.9-48.2 GHz.

1.2.3 NGSOs and Mega-constellations

Regulatory procedures were established for the deployment of non-geostationary satellite (NGSO) systems, including mega-constellations in low-Earth orbit. Mega-constellations can for example be used to provide extensive low-latency broadband coverage.

1.2.4 Earth Stations in Motion (ESIMs)

Earth stations in motion (ESIM) can be found on aircraft, land vehicles and ships and are designed to provide connection to people in order to promote their safety, security and comfort while on the move.

Typical data rates currently provided by terminals operating in networks serving ESIM are around 100 Mbps and the demand for radio-frequency that can be used for ESIM has been increasing.

WRC-19 determined the conditions under which frequency bands 17.7-19.7 GHz and 27.5-29.5 GHz can be used by ESIM communicating with geostationary-satellite orbit (GSO) space stations in the fixed-satellite service (FSS) in order to avoid interference with existing terrestrial and space services using those bands.

1.3 Key Changes at WRC 2015 Most Relevant to TCI

1.3.1 IMT

Identifications for IMT were made for 1 427-1 518 MHz (Regions 2 and 3 and most countries in Region 1) and 3 400-3 600 MHz (Region 2).

1.3.2 Maritime-Mobile Satellite Service (MMSS)

A new allocation was made to MMSS in 7 375-7 750 MHz in the space-to-Earth direction.

1.3.3 Global Flight Tracking (GFT)

Recognising the need for continuous aircraft surveillance 1087.7-1092.3 MHz was allocated on a primary basis for satellite reception of Automatic Dependent Surveillance-Broadcast (ADS-B) messages.

1.3.4 Earth Exploration-Satellite Service (EESS)

A new allocation was made to the EESS up-link service for tracking, telemetry and command (TT&C) in the 7 190-7 250MHz band and new EESS (active) allocations were made in the 9 200-9 300 MHz, 9 900-10 000 MHz and 10-10.4 GHz bands.

1.3.5 Earth Stations in Motion (ESIM)

Conditions were established to enable ESIM communications with GSO FSS space stations in the bands 19.7-20.2 GHz and 29.5-30 GHz in Region 2.

1.4 Key Changes at WRC 2012 Most Relevant to TCI

The following bands were identified for IMT: 450-470 MHz, most of 698-960 MHz, 1 710-2 025 MHz, 2 110-2 200 MHz, 2 300-2 400 MHz and 2 500-2 690 MHz.

1.5 Previous NTFA Review

The Commission previously reviewed the NTFA in 2011. The NTFA needs to be updated to take in to account the outcomes of the ITU's World Radiocommunication Conferences (WRCs) as well as decisions that have been made by the Commission since 2011.

The Commission has engaged the services of consultants to assist it with the review of the NTFA.

1.6 Consultation Process

Pursuant to sections 31 and 40 of the Telecommunications Ordinance 2014, and section 4 of the Frequency Management Regulations 2005, the Commission is initiating this consultation process to seek comment on the Proposals. The Commission invites interested parties ("Respondents") to provide their input and comments ("Responses") with respect to the issues raised in this Consultation Document, including the Proposals. At the conclusion of this consultation process, the Commission shall issue a Decision.

This Consultation Document, along with all referenced Government and Commission documents, is available on the Commission's website at <http://www.telecommission.tc/sitemap.html>.

Respondents who wish to provide comment on this Consultation Document are invited to do so in written form. Responses should, ideally, be submitted to the Commission in electronic form to facilitate further distribution and posting on the Commission's website.

The filing deadlines for Initial Responses and Reply Responses are as follows:

- Responses must be received by the Commission no later than 3:30 p.m. local time on **May 4, 2021**.

Responses to this Consultation Document may be submitted to one or more of the following addresses:

- a) E-mail to: consultations@tcitelecommission.tc
- b) Delivery (paper and electronic copy) by hand or by courier is also possible to:
Mr. Kenva Williams,
Director General,
Turks and Caicos Islands Telecommunications Commission,
Business Solutions Complex,
Leeward Highway,
Providenciales,
Turks and Caicos Islands

The Commission welcomes all Responses on the Consultation Document. The Commission:

- invites Respondents to provide responses to the specific numbered questions set out in this Consultation Document (the “Consultation Questions”) and any other issues Respondents consider relevant;
- encourages Respondents to support all Responses with relevant data, analysis, and information based on the national situation or on the experience of other countries to support their comments;
- may give greater weight to Responses supported by appropriate evidence.

In providing their comments, Respondents:

- are requested to indicate the number of the Consultation Question(s) to which each comment relates;
- are not required to comment on all Consultation Questions.

The Commission is under no obligation to implement Respondents’ proposals.

Copies of all Responses submitted will be published on the Commission’s website. In order to make the consultation process as transparent as possible the Commission encourages Respondents to avoid the use of confidential information if possible.

Respondents should submit Responses that include information in respect of which confidentiality is claimed in two formats as follows:

- **Redacted Response** - In this document any confidential information would be excluded. All other comments and information would be included. This document would be posted on the Commission’s website.
- **Confidential Response** - This document would be identical to the Redacted Response except that it would also include the confidential information. This document would not be published and all confidential information would be held in strict confidence by the Commission and its Consultants.

Claims of confidentiality will be determined by the Commission on a case-by-case basis, and in compliance with the requirements set out in section 19 of the Administrative Regulations.

Table 1 summarizes the timeline for this consultation process, including the estimated timing of the related Commission decision implementation process.

Table 1: Timeline for Consultation Process	
Event	Date
Commission issues Consultation Document	April 20, 2021
Responses from Respondents	May 4, 2021
Commission Recommendation to Government	May 10, 2021
Publication of revised NTFA	May 24, 2021

1.7 Consultation questions

1. Please comment on the Turks and Caicos Islands NTFA, including the ITU Footnotes identified as applicable to the Turks and Caicos Islands.
2. Please comment on the separate Footnotes specific to the Turks and Caicos Islands.
3. Please indicate any additional frequency bands that could be identified in a Footnote for future public telecommunications services.
4. Please indicate any additional frequency bands that could be identified in a Footnote for licence exempt use.
5. Please indicate any specific frequency bands that could be identified for other uses.
6. Please identify any additional frequency bands for which a band plan could be required.

2 National Table of Frequency Allocations (NTFA)

The NTFA below is divided into two columns. The left hand column indicates the current ITU-R Region 2 frequency allocations and the right hand column illustrates the current TCI frequency allocations. This table has been updated to include modifications to the ITU-R table as a result of previous WRCs.

Services in each band are categorised to indicate whether those services have priority or whether they must avoid interfering with other services

2.1 Primary Services

The highest priority category is primary services. These are indicated in the table in capital letters. For example: “FIXED”. Primary services are allocated on a Primary Basis which means that when frequencies are subsequently assigned at a national level to a particular assignee that the assignee of the primary service is entitled to protection from:

- harmful interference caused by any other spectrum user who may be authorized to use the same spectrum on a secondary basis; and
- claims of harmful interference by any other spectrum user.

2.2 Secondary Services

The Radio Regulations also have a category of secondary services. These are indicated in the table in sentence case. For example: “Mobile”.

Stations of a secondary service:

- may not cause harmful interference to stations of primary services to which frequencies are already assigned, or to which frequencies may be assigned at a later date;
- cannot claim protection from harmful interference from stations of a primary service to which frequencies are already assigned or may be assigned at a later date;
- can claim protection, however, from harmful interference from stations of the same or other secondary service(s) to which frequencies may be assigned at a later date

Turks and Caicos Islands Table of Frequency Allocations

ITU Region 2 Allocations	Turks and Caicos Allocations
kHz	
Below 8.3 (Not allocated) 5.53 5.54	Below 8.3 (Not allocated) 5.53 5.54
8.3-9 METEOROLOGICAL AIDS 5.54A 5.54B 5.54C	8.3-9 METEOROLOGICAL AIDS 5.54A 5.54B 5.54C
9-11.3 METEOROLOGICAL AIDS 5.54A RADIONAVIGATION	9-11.3 METEOROLOGICAL AIDS 5.54A RADIONAVIGATION
11.3-14 RADIONAVIGATION	11.3-14 RADIONAVIGATION
14-19.95 FIXED MARITIME MOBILE 5.57 5.55 5.56	14-19.95 FIXED MARITIME MOBILE 5.57 5.55 5.56
19.95-20.05 STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)	19.95-20.05 STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)
20.05-70 FIXED MARITIME MOBILE 5.57 5.56 5.58	20.05-70 FIXED MARITIME MOBILE 5.57 5.56 5.58
70-90 FIXED MARITIME MOBILE 5.57 MARITIME RADIO-NAVIGATION 5.60 Radiolocation	70-90 FIXED MARITIME MOBILE 5.57 MARITIME RADIO-NAVIGATION 5.60 Radiolocation
90-110 RADIONAVIGATION 5.62 Fixed 5.64	90-110 RADIONAVIGATION 5.62 Fixed 5.64
110-130 FIXED MARITIME MOBILE MARITIME RADIO- NAVIGATION 5.60 Radiolocation 5.61 5.64	110-130 FIXED MARITIME MOBILE MARITIME RADIO- NAVIGATION 5.60 Radiolocation 5.61 5.64
130-135.7 FIXED MARITIME MOBILE 5.64	130-135.7 FIXED MARITIME MOBILE 5.64
135.7-137.8 FIXED MARITIME MOBILE Amateur 5.67A 5.64	135.7-137.8 FIXED MARITIME MOBILE Amateur 5.67A 5.64
137.8-160 FIXED MARITIME MOBILE 5.64	137.8-160 FIXED MARITIME MOBILE 5.64

ITU Region 2 Allocations	Turks and Caicos Allocations
kHz	
160-190 FIXED	160-190 FIXED
190-200 AERONAUTICAL RADIONAVIGATION	190-200 AERONAUTICAL RADIONAVIGATION
200-275 AERONAUTICAL RADIONAVIGATION Aeronautical mobile	200-275 AERONAUTICAL RADIONAVIGATION Aeronautical mobile
275-285 AERONAUTICAL RADIONAVIGATION Aeronautical mobile Maritime radionavigation (radiobeacons)	275-285 AERONAUTICAL RADIONAVIGATION Aeronautical mobile Maritime radionavigation (radiobeacons)
285-315 AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons) 5.73	285-315 AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons) 5.73
315-325 MARITIME RADIONAVIGATION (radiobeacons) 5.73 Aeronautical radionavigation	315-325 MARITIME RADIONAVIGATION (radiobeacons) 5.73 Aeronautical radionavigation
325-335 AERONAUTICAL RADIONAVIGATION Aeronautical mobile Maritime radionavigation (radiobeacons)	325-335 AERONAUTICAL RADIONAVIGATION Aeronautical mobile Maritime radionavigation (radiobeacons)
335-405 AERONAUTICAL RADIONAVIGATION Aeronautical mobile	335-405 AERONAUTICAL RADIONAVIGATION Aeronautical mobile
405-415 RADIONAVIGATION 5.76 Aeronautical mobile	405-415 RADIONAVIGATION 5.76 Aeronautical mobile
415-472 MARITIME MOBILE 5.79 Aeronautical radionavigation 5.77 5.80 5.78 5.82	415-472 MARITIME MOBILE 5.79 Aeronautical radionavigation 5.77 5.80 5.78 5.82
472-479 MARITIME MOBILE 5.79 Amateur 5.80A Aeronautical radionavigation 5.77 5.80 5.80B 5.82	472-479 MARITIME MOBILE 5.79 Amateur 5.80A Aeronautical radionavigation 5.77 5.80 5.80B 5.82
479-495 MARITIME MOBILE 5.79 5.79A Aeronautical radionavigation 5.77 5.80 5.82	479-495 MARITIME MOBILE 5.79 5.79A Aeronautical radionavigation 5.77 5.80 5.82
495-505 MARITIME MOBILE 5.82C	495-505 MARITIME MOBILE 5.82C
505-510 MARITIME MOBILE 5.79	505-510 MARITIME MOBILE 5.79
510-525 MARITIME MOBILE 5.79A 5.84 AERONAUTICAL RADIONAVIGATION	510-525 MARITIME MOBILE 5.79A 5.84 AERONAUTICAL RADIONAVIGATION
525-535 BROADCASTING 5.86 AERONAUTICAL RADIONAVIGATION	525-535 BROADCASTING 5.86 AERONAUTICAL RADIONAVIGATION

ITU Region 2 Allocations	Turks and Caicos Allocations
kHz	
535-1 605 BROADCASTING	535-1 605 BROADCASTING
1 605-1 625 BROADCASTING 5.89 5.9	1 605-1 625 BROADCASTING 5.89 5.9
1 625-1 705 FIXED MOBILE BROADCASTING 5.89 Radiolocation 5.9	1 625-1 705 FIXED MOBILE BROADCASTING 5.89 Radiolocation 5.9
1 705-1 800 FIXED MOBILE RADIOLOCATION AERONAUTICAL RADIONAVIGATION	1 705-1 800 FIXED MOBILE RADIOLOCATION AERONAUTICAL RADIONAVIGATION
1 800-1 850 AMATEUR	1 800-1 850 AMATEUR
1 850-2 000 AMATEUR FIXED MOBILE except aeronautical mobile RADIOLOCATION RADIONAVIGATION 5.102	1 850-2 000 AMATEUR FIXED MOBILE except aeronautical mobile RADIOLOCATION RADIONAVIGATION 5.102
2 000-2 065 FIXED MOBILE	2 000-2 065 FIXED MOBILE
2 065-2 107 MARITIME MOBILE 5.105 5.106	2 065-2 107 MARITIME MOBILE 5.105 5.106
2 107-2 170 FIXED MOBILE	2 107-2 170 FIXED MOBILE
2 170-2 173.5 MARITIME MOBILE	2 170-2 173.5 MARITIME MOBILE
2 173.5-2 190.5 MOBILE (distress and calling) 5.108 5.109 5.110 5.111	2 173.5-2 190.5 MOBILE (distress and calling) 5.108 5.109 5.110 5.111
2 190.5-2 194 MARITIME MOBILE	2 190.5-2 194 MARITIME MOBILE

ITU Region 2 Allocations	Turks and Caicos Allocations
kHz	
2 194-2 300 FIXED MOBILE 5.112	2 194-2 300 FIXED MOBILE 5.112
2 300-2 495 FIXED MOBILE BROADCASTING 5.113	2 300-2 495 FIXED MOBILE BROADCASTING 5.113
2 495-2 501 STANDARD FREQUENCY AND TIME SIGNAL (2 500 kHz)	2 495-2 501 STANDARD FREQUENCY AND TIME SIGNAL (2 500 kHz)
2 501-2 502 STANDARD FREQUENCY AND TIME SIGNAL Space Research	2 501-2 502 STANDARD FREQUENCY AND TIME SIGNAL Space Research
2 502-2 505 STANDARD FREQUENCY AND TIME SIGNAL	2 502-2 505 STANDARD FREQUENCY AND TIME SIGNAL
2 505-2 850 FIXED MOBILE	2 505-2 850 FIXED MOBILE
2 850-3 025 AERONAUTICAL MOBILE (R) 5.111 5.115	2 850-3 025 AERONAUTICAL MOBILE (R) 5.111 5.115
3 025-3 155 AERONAUTICAL MOBILE (OR)	3 025-3 155 AERONAUTICAL MOBILE (OR)
3 155-3 200 FIXED MOBILE except aeronautical mobile (R) 5.116 5.117	3 155-3 200 FIXED MOBILE except aeronautical mobile (R) 5.116 5.117
3 200-3 230 FIXED MOBILE except aeronautical mobile (R) BROADCASTING 5.113 5.116	3 200-3 230 FIXED MOBILE except aeronautical mobile (R) BROADCASTING 5.113 5.116
3 230-3 400 FIXED MOBILE except aeronautical mobile BROADCASTING 5.113 5.116 5.118	3 230-3 400 FIXED MOBILE except aeronautical mobile BROADCASTING 5.113 5.116 5.118
3 400-3 500 AERONAUTICAL MOBILE (R)	3 400-3 500 AERONAUTICAL MOBILE (R)
3 500-3 750 AMATEUR 5.119	3 500-3 750 AMATEUR 5.119
3 750-4 000 AMATEUR FIXED MOBILE except aeronautical mobile (R) 5.122 5.125	3 750-4 000 AMATEUR FIXED MOBILE except aeronautical mobile (R) 5.122 5.125

ITU Region 2 Allocations	Turks and Caicos Allocations
kHz	
4 000-4 063 FIXED MARITIME MOBILE 5.127 5.126	4 000-4 063 FIXED MARITIME MOBILE 5.127 5.126
4 063-4 438 MARITIME MOBILE 5.79A 5.109 5.110 5.130 5.131 5.132 5.128	4 063-4 438 MARITIME MOBILE 5.79A 5.109 5.110 5.130 5.131 5.132 5.128
4 438-4 488 FIXED MOBILE except aeronautical mobile (R) RADIOLOCATION 5.132A	4 438-4 488 FIXED MOBILE except aeronautical mobile (R) RADIOLOCATION 5.132A
4 488-4 650 FIXED MOBILE except aeronautical mobile (R)	4 488-4 650 FIXED MOBILE except aeronautical mobile (R)
4 650-4 700 AERONAUTICAL MOBILE (R)	4 650-4 700 AERONAUTICAL MOBILE (R)
4 700-4 750 AERONAUTICAL MOBILE (OR)	4 700-4 750 AERONAUTICAL MOBILE (OR)
4 750-4 850 FIXED MOBILE except aeronautical mobile (R) BROADCASTING 5.113	4 750-4 850 FIXED MOBILE except aeronautical mobile (R) BROADCASTING 5.113
4 850-4 995 FIXED LAND MOBILE BROADCASTING 5.113	4 850-4 995 FIXED LAND MOBILE BROADCASTING 5.113
4 995-5 003 STANDARD FREQUENCY AND TIME SIGNAL (5 000 kHz)	4 995-5 003 STANDARD FREQUENCY AND TIME SIGNAL (5 000 kHz)
5 003-5 005 STANDARD FREQUENCY AND TIME SIGNAL Space research	5 003-5 005 STANDARD FREQUENCY AND TIME SIGNAL Space research
5 005-5 060 FIXED BROADCASTING 5.113	5 005-5 060 FIXED BROADCASTING 5.113
5 060-5 250 FIXED Mobile except aeronautical mobile 5.133	5 060-5 250 FIXED Mobile except aeronautical mobile 5.133
5 250-5 275 FIXED MOBILE except aeronautical mobile RADIOLOCATION 5.132A	5 250-5 275 FIXED MOBILE except aeronautical mobile RADIOLOCATION 5.132A
5 275-5 351.5 FIXED MOBILE except aeronautical mobile	5 275-5 351.5 FIXED MOBILE except aeronautical mobile
5 351.5-5 366.5 FIXED MOBILE except aeronautical mobile Amateur 5.133B	5 351.5-5 366.5 FIXED MOBILE except aeronautical mobile Amateur 5.133B
5 366.5-5 450 FIXED MOBILE except aeronautical mobile	5 366.5-5 450 FIXED MOBILE except aeronautical mobile

ITU Region 2 Allocations	Turks and Caicos Allocations
kHz	
5 450-5 480 AERONAUTICAL MOBILE (R)	5 450-5 480 AERONAUTICAL MOBILE (R)
5 480-5 680 AERONAUTICAL MOBILE (R) 5.111 5.115	5 480-5 680 AERONAUTICAL MOBILE (R) 5.111 5.115
5 680-5 730 AERONAUTICAL MOBILE (OR) 5.111 5.115	5 680-5 730 AERONAUTICAL MOBILE (OR) 5.111 5.115
5 730-5 900 FIXED MOBILE except aeronautical mobile (R)	5 730-5 900 FIXED MOBILE except aeronautical mobile (R)
5 900-5 950 BROADCASTING 5.134 5.136	5 900-5 950 BROADCASTING 5.134 5.136
5 950-6 200 BROADCASTING	5 950-6 200 BROADCASTING
6 200-6 525 MARITIME MOBILE 5.109 5.110 5.130 5.132 5.137	6 200-6 525 MARITIME MOBILE 5.109 5.110 5.130 5.132 5.137
6 525-6 685 AERONAUTICAL MOBILE (R)	6 525-6 685 AERONAUTICAL MOBILE (R)
6 685-6 765 AERONAUTICAL MOBILE (OR)	6 685-6 765 AERONAUTICAL MOBILE (OR)
6 765-7 000 FIXED MOBILE except aeronautical mobile (R) 5.138	6 765-7 000 FIXED MOBILE except aeronautical mobile (R) 5.138
7 000-7 100 AMATEUR AMATEUR-SATELLITE 5.140 5.141 5.141A	7 000-7 100 AMATEUR AMATEUR-SATELLITE 5.140 5.141 5.141A
7 100-7 200 AMATEUR 5.141A 5.141B	7 100-7 200 AMATEUR 5.141A 5.141B
7 200-7 300 AMATEUR 5.142	7 200-7 300 AMATEUR 5.142
7 300-7 400 BROADCASTING 5.134 5.143 5.143A 5.143B 5.143C 5.143D	7 300-7 400 BROADCASTING 5.134 5.143 5.143A 5.143B 5.143C 5.143D
7 400-7 450 FIXED MOBILE except aeronautical mobile (R)	7 400-7 450 FIXED MOBILE except aeronautical mobile (R)
7 450-8 100 FIXED MOBILE except aeronautical mobile (R) 5.144	7 450-8 100 FIXED MOBILE except aeronautical mobile (R) 5.144
8 100-8 195 FIXED MARITIME MOBILE	8 100-8 195 FIXED MARITIME MOBILE
8 195-8 815 MARITIME MOBILE 5.109 5.110 5.132 5.145 5.111	8 195-8 815 MARITIME MOBILE 5.109 5.110 5.132 5.145 5.111

ITU Region 2 Allocations	Turks and Caicos Allocations
kHz	
8 815-8 965 AERONAUTICAL MOBILE (R)	8 815-8 965 AERONAUTICAL MOBILE (R)
8 965-9 040 AERONAUTICAL MOBILE (OR)	8 965-9 040 AERONAUTICAL MOBILE (OR)
9 040-9 400 FIXED	9 040-9 400 FIXED
9 400-9 500 BROADCASTING 5.134 5.146	9 400-9 500 BROADCASTING 5.134 5.146
9 500-9 900 BROADCASTING 5.147	9 500-9 900 BROADCASTING 5.147
9 900-9 995 FIXED	9 900-9 995 FIXED
9 995-10 003 STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz) 5.111	9 995-10 003 STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz) 5.111
10 003-10 005 STANDARD FREQUENCY AND TIME SIGNAL Space research 5.111	10 003-10 005 STANDARD FREQUENCY AND TIME SIGNAL Space research 5.111
10 005-10 100 AERONAUTICAL MOBILE (R) 5.111	10 005-10 100 AERONAUTICAL MOBILE (R) 5.111
10 100-10 150 FIXED Amateur	10 100-10 150 FIXED Amateur
10 150-11 175 FIXED Mobile except aeronautical mobile (R)	10 150-11 175 FIXED Mobile except aeronautical mobile (R)
11 175-11 275 AERONAUTICAL MOBILE (OR)	11 175-11 275 AERONAUTICAL MOBILE (OR)
11 275-11 400 AERONAUTICAL MOBILE (R)	11 275-11 400 AERONAUTICAL MOBILE (R)
11 400-11 600 FIXED	11 400-11 600 FIXED
11 600-11 650 kHz BROADCASTING 5.134 5.146	11 600-11 650 BROADCASTING 5.134 5.146
11 650-12 050 BROADCASTING 5.147	11 650-12 050 BROADCASTING 5.147
12 050-12 100 BROADCASTING 5.134 5.146	12 050-12 100 BROADCASTING 5.134 5.146
12 100-12 230 FIXED	12 100-12 230 FIXED

ITU Region 2 Allocations	Turks and Caicos Allocations
kHz	
12 230-13 200 MARITIME MOBILE 5.109 5.110 5.132 5.145	12 230-13 200 MARITIME MOBILE 5.109 5.110 5.132 5.145
13 200-13 260 AERONAUTICAL MOBILE (OR)	13 200-13 260 AERONAUTICAL MOBILE (OR)
13 260-13 360 AERONAUTICAL MOBILE (R)	13 260-13 360 AERONAUTICAL MOBILE (R)
13 360-13 410 FIXED RADIO ASTRONOMY 5.149	13 360-13 410 FIXED RADIO ASTRONOMY 5.149
13 410-13 450 FIXED Mobile except aeronautical mobile (R)	13 410-13 450 FIXED Mobile except aeronautical mobile (R)
13 450-13 550 FIXED Mobile except aeronautical mobile (R) Radiolocation 5.132A	13 450-13 550 FIXED Mobile except aeronautical mobile (R) Radiolocation 5.132A
13 550-13 570 FIXED Mobile except aeronautical mobile (R) 5.150	13 550-13 570 FIXED Mobile except aeronautical mobile (R) 5.150
13 570-13 600 BROADCASTING 5.134 5.151	13 570-13 600 BROADCASTING 5.134 5.151
13 600-13 800 BROADCASTING	13 600-13 800 BROADCASTING
13 800-13 870 BROADCASTING 5.134 5.151	13 800-13 870 BROADCASTING 5.134 5.151
13 870-14 000 FIXED Mobile except aeronautical mobile (R)	13 870-14 000 FIXED Mobile except aeronautical mobile (R)
14 000-14 250 AMATEUR AMATEUR-SATELLITE	14 000-14 250 AMATEUR AMATEUR-SATELLITE
14 250-14 350 AMATEUR 5.152	14 250-14 350 AMATEUR 5.152
14 350-14 990 FIXED Mobile except aeronautical mobile (R)	14 350-14 990 FIXED Mobile except aeronautical mobile (R)
14 990-15 005 STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz) 5.111	14 990-15 005 STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz) 5.111
15 005-15 010 STANDARD FREQUENCY AND TIME SIGNAL Space research	15 005-15 010 STANDARD FREQUENCY AND TIME SIGNAL Space research

ITU Region 2 Allocations	Turks and Caicos Allocations
kHz	
15 010-15 100 AERONAUTICAL MOBILE (OR)	15 010-15 100 AERONAUTICAL MOBILE (OR)
15 100-15 600 BROADCASTING	15 100-15 600 BROADCASTING
15 600-15 800 BROADCASTING 5.134 5.146	15 600-15 800 BROADCASTING 5.134 5.146
15 800-16 100 FIXED 5.153	15 800-16 100 FIXED 5.153
16 100-16 200 FIXED RADIOLOCATION 5.145A	16 100-16 200 FIXED RADIOLOCATION 5.145A
16 200-16 360 FIXED	16 200-16 360 FIXED
16 360-17 410 MARITIME MOBILE 5.109 5.110 5.132 5.145	16 360-17 410 MARITIME MOBILE 5.109 5.110 5.132 5.145
17 410-17 480 FIXED	17 410-17 480 FIXED
17 480-17 550 BROADCASTING 5.134 5.146	17 480-17 550 BROADCASTING 5.134 5.146
17 550-17 900 BROADCASTING	17 550-17 900 BROADCASTING
17 900-17 970 AERONAUTICAL MOBILE (R)	17 900-17 970 AERONAUTICAL MOBILE (R)
17 970-18 030 AERONAUTICAL MOBILE (OR)	17 970-18 030 AERONAUTICAL MOBILE (OR)
18 030-18 052 FIXED	18 030-18 052 FIXED
18 052-18 068 FIXED Space research	18 052-18 068 FIXED Space research
18 068-18 168 AMATEUR AMATEUR-SATELLITE 5.154	18 068-18 168 AMATEUR AMATEUR-SATELLITE 5.154
18 168-18 780 FIXED Mobile except aeronautical mobile	18 168-18 780 FIXED Mobile except aeronautical mobile
18 780-18 900 MARITIME MOBILE	18 780-18 900 MARITIME MOBILE
18 900-19 020 BROADCASTING 5.134 5.146	18 900-19 020 BROADCASTING 5.134 5.146

ITU Region 2 Allocations	Turks and Caicos Allocations
kHz	
19 020-19 680 FIXED	19 020-19 680 FIXED
19 680-19 800 MARITIME MOBILE 5.132	19 680-19 800 MARITIME MOBILE 5.132
19 800-19 990 FIXED	19 800-19 990 FIXED
19 990-19 995 STANDARD FREQUENCY AND TIME SIGNAL Space research 5.111	19 990-19 995 STANDARD FREQUENCY AND TIME SIGNAL Space research 5.111
19 995-20 010 STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz) 5.111	19 995-20 010 STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz) 5.111
20 010-21 000 FIXED Mobile	20 010-21 000 FIXED Mobile
21 000-21 450 AMATEUR AMATEUR-SATELLITE	21 000-21 450 AMATEUR AMATEUR-SATELLITE
21 450-21 850 BROADCASTING	21 450-21 850 BROADCASTING
21 850-21 870 FIXED 5.155A 5.155	21 850-21 870 FIXED 5.155A 5.155
21 870-21 924 FIXED 5.155B	21 870-21 924 FIXED 5.155B
21 924-22 000 AERONAUTICAL MOBILE (R)	21 924-22 000 AERONAUTICAL MOBILE (R)
22 000-22 855 MARITIME MOBILE 5.132 5.156	22 000-22 855 MARITIME MOBILE 5.132 5.156
22 855-23 000 FIXED 5.156	22 855-23 000 FIXED 5.156
23 000-23 200 FIXED Mobile except aeronautical mobile (R) 5.156	23 000-23 200 FIXED Mobile except aeronautical mobile (R) 5.156
23 200-23 350 FIXED 5.156A AERONAUTICAL MOBILE (OR)	23 200-23 350 FIXED 5.156A AERONAUTICAL MOBILE (OR)
23 350-24 000 FIXED MOBILE except aeronautical mobile 5.157	23 350-24 000 FIXED MOBILE except aeronautical mobile 5.157

ITU Region 2 Allocations	Turks and Caicos Allocations
kHz	
24 000-24 450 FIXED LAND MOBILE	24 000-24 450 FIXED LAND MOBILE
24 450-24 650 FIXED LAND MOBILE RADIOLOCATION 5.132A	24 450-24 650 FIXED LAND MOBILE RADIOLOCATION 5.132A
24 650-24 890 FIXED LAND MOBILE	24 650-24 890 FIXED LAND MOBILE
24 890-24 990 AMATEUR AMATEUR-SATELLITE	24 890-24 990 AMATEUR AMATEUR-SATELLITE
24 990-25 005 STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)	24 990-25 005 STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)
25 005-25 010 STANDARD FREQUENCY AND TIME SIGNAL Space research	25 005-25 010 STANDARD FREQUENCY AND TIME SIGNAL Space research
25 010-25 070 FIXED MOBILE except aeronautical mobile	25 010-25 070 FIXED MOBILE except aeronautical mobile
25 070-25 210 MARITIME MOBILE	25 070-25 210 MARITIME MOBILE
25 210-25 550 FIXED MOBILE except aeronautical mobile	25 210-25 550 FIXED MOBILE except aeronautical mobile
25 550-25 670 RADIO ASTRONOMY	25 550-25 670 RADIO ASTRONOMY
5.149	5.149
25 670-26 100 BROADCASTING	25 670-26 100 BROADCASTING
26 100-26 175 MARITIME MOBILE 5.132	26 100-26 175 MARITIME MOBILE 5.132
26 175-26 200 FIXED MOBILE except aeronautical mobile	26 175-26 200 FIXED MOBILE except aeronautical mobile
26 200-26 420 FIXED MOBILE except aeronautical mobile RADIOLOCATION 5.132A	26 200-26 420 FIXED MOBILE except aeronautical mobile RADIOLOCATION 5.132A
26 420-27 500 FIXED MOBILE except aeronautical mobile	26 420-27 500 FIXED MOBILE except aeronautical mobile
5.15	5.15

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
27.5-28 METEOROLOGICAL AIDS FIXED MOBILE	27.5-28 METEOROLOGICAL AIDS FIXED MOBILE
28-29.7 AMATEUR AMATEUR-SATELLITE	28-29.7 AMATEUR AMATEUR-SATELLITE
29.7-30.005 FIXED MOBILE	29.7-30.005 FIXED MOBILE
30.005-30.01 SPACE OPERATION (satellite identification) FIXED MOBILE SPACE RESEARCH	30.005-30.01 SPACE OPERATION (satellite identification) FIXED MOBILE SPACE RESEARCH
30.01-37.5 FIXED MOBILE	30.01-37.5 FIXED MOBILE
37.5-38.25 FIXED MOBILE Radio astronomy 5.149	37.5-38.25 FIXED MOBILE Radio astronomy 5.149
38.25-39.986 FIXED MOBILE	38.25-39.986 FIXED MOBILE
39.986-40.02 FIXED MOBILE Space research	39.986-40.02 FIXED MOBILE Space research
40.02-40.98 FIXED MOBILE 5.150	40.02-40.98 FIXED MOBILE 5.150
40.98-41.015 FIXED MOBILE Space research 5.160 5.161	40.98-41.015 FIXED MOBILE Space research 5.160 5.161
41.015-42 FIXED MOBILE 5.160 5.161 5.161A	41.015-42 FIXED MOBILE 5.160 5.161 5.161A
42-42.5 FIXED MOBILE 5.161	42-42.5 FIXED MOBILE 5.161
42.5-44 FIXED MOBILE 5.160 5.161 5.161A	42.5-44 FIXED MOBILE 5.160 5.161 5.161A
44-47 FIXED MOBILE 5.162 5.162A	44-47 FIXED MOBILE 5.162 5.162A

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
47-50 FIXED MOBILE	47-50 FIXED MOBILE
50-54 AMATEUR 5.162A 5.167 5.167A 5.168 5.170	50-54 AMATEUR 5.162A 5.167 5.167A 5.168 5.170
54-68 BROADCASTING Fixed Mobile 5.172	54-68 BROADCASTING Fixed Mobile 5.172
68-72 BROADCASTING Fixed Mobile 5.173	68-72 BROADCASTING Fixed Mobile 5.173
72-73 FIXED MOBILE	72-73 FIXED MOBILE
73-74.6 RADIO ASTRONOMY 5.178	73-74.6 RADIO ASTRONOMY 5.178
74.6-74.8 FIXED MOBILE	74.6-74.8 FIXED MOBILE
74.8-75.2 AERONAUTICAL RADIONAVIGATION 5.180 5.181	74.8-75.2 AERONAUTICAL RADIONAVIGATION 5.180 5.181
75.2-75.4 FIXED MOBILE 5.179	75.2-75.4 FIXED MOBILE 5.179
75.4-76 FIXED MOBILE	75.4-76 FIXED MOBILE
76-88 BROADCASTING Fixed Mobile 5.185	76-88 BROADCASTING Fixed Mobile 5.185
88-100 BROADCASTING	88-100 BROADCASTING
100-108 BROADCASTING 5.192 5.194	100-108 BROADCASTING 5.192 5.194
108-117.975 AERONAUTICAL RADIONAVIGATION 5.197 5.197A	108-117.975 AERONAUTICAL RADIONAVIGATION 5.197 5.197A
117.975-137 AERONAUTICAL MOBILE (R) 5.111 5.200 5.201 5.202	117.975-137 AERONAUTICAL MOBILE (R) 5.111 5.200 5.201 5.202

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
137-137.025 SPACE OPERATION (space-to-Earth) 5.203C METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R) 5.204 5.205 5.206 5.207 5.208	137-137.025 SPACE OPERATION (space-to-Earth) 5.203C METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R) 5.204 5.205 5.206 5.207 5.208
137.025-137.175 SPACE OPERATION (space-to-Earth) 5.203C METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R) Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209 5.204 5.205 5.206 5.207 5.208	137.025-137.175 SPACE OPERATION (space-to-Earth) 5.203C METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R) Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209 5.204 5.205 5.206 5.207 5.208
137.175-137.825 SPACE OPERATION (space-to-Earth) 5.203C 5.209A METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R) 5.204 5.205 5.206 5.207 5.208	137.175-137.825 SPACE OPERATION (space-to-Earth) 5.203C 5.209A METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R) 5.204 5.205 5.206 5.207 5.208
137.825-138 SPACE OPERATION (space-to-Earth) 5.203C METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R) Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209 5.204 5.205 5.206 5.207 5.208	137.825-138 SPACE OPERATION (space-to-Earth) 5.203C METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R) Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209 5.204 5.205 5.206 5.207 5.208
138-143.6 FIXED MOBILE RADIOLOCATION Space research (space-to-Earth)	138-143.6 FIXED MOBILE RADIOLOCATION Space research (space-to-Earth)
143.6-143.65 FIXED MOBILE RADIOLOCATION SPACE RESEARCH (space-to-Earth)	143.6-143.65 FIXED MOBILE RADIOLOCATION SPACE RESEARCH (space-to-Earth)

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
143.65-144 FIXED MOBILE RADIOLOCATION Space research (space-to-Earth)	143.65-144 FIXED MOBILE RADIOLOCATION Space research (space-to-Earth)
144-146 AMATEUR AMATEUR-SATELLITE 5.216	144-146 AMATEUR AMATEUR-SATELLITE 5.216
146-148 AMATEUR 5.217	146-148 AMATEUR 5.217
148-149.9 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.209 5.218 5.218A 5.219 5.221	148-149.9 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.209 5.218 5.218A 5.219 5.221
149.9-150.05 MOBILE-SATELLITE (Earth-to-space) 5.209 5.220	149.9-150.05 MOBILE-SATELLITE (Earth-to-space) 5.209 5.220
150.05-154 FIXED MOBILE 5.225	150.05-154 FIXED MOBILE 5.225
154-156.4875 FIXED MOBILE 5.226	154-156.4875 FIXED MOBILE 5.226
156.4875-156.5625 MARITIME MOBILE (distress and calling via DSC) 5.111 5.226 5.227	156.4875-156.5625 MARITIME MOBILE (distress and calling via DSC) 5.111 5.226 5.227
156.5625-156.7625 FIXED MOBILE 5.226	156.5625-156.7625 FIXED MOBILE 5.226
156.7625-156.7875 MARITIME MOBILE MOBILE-SATELLITE (Earth-to-space) 5.111 5.226 5.228	156.7625-156.7875 MARITIME MOBILE MOBILE-SATELLITE (Earth-to-space) 5.111 5.226 5.228
156.7875-156.8125 MARITIME MOBILE (distress and calling) 5.111 5.226	156.7875-156.8125 MARITIME MOBILE (distress and calling) 5.111 5.226
156.8125-156.8375 MARITIME MOBILE MOBILE-SATELLITE (Earth-to-space) 5.111 5.226 5.228	156.8125-156.8375 MARITIME MOBILE MOBILE-SATELLITE (Earth-to-space) 5.111 5.226 5.228
156.8375-157.1875 FIXED MOBILE 5.226	156.8375-157.1875 FIXED MOBILE 5.226

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
157.1875-157.3375 FIXED MOBILE Maritime mobile-satellite 5.208A 5.208B 5.228AB 5.228AC 5.226	157.1875-157.3375 FIXED MOBILE Maritime mobile-satellite 5.208A 5.208B 5.228AB 5.228AC 5.226
157.3375-161.7875 FIXED MOBILE 5.226	157.3375-161.7875 FIXED MOBILE 5.226
161.7875-161.9375 FIXED MOBILE Maritime mobile-satellite 5.208A 5.208B 5.228AB 5.228AC 5.226	161.7875-161.9375 FIXED MOBILE Maritime mobile-satellite 5.208A 5.208B 5.228AB 5.228AC 5.226
161.9375-161.9625 FIXED MOBILE Maritime mobile-satellite (Earth-to-space) 5.228AA 5.226	161.9375-161.9625 FIXED MOBILE Maritime mobile-satellite (Earth-to-space) 5.228AA 5.226
161.9625-161.9875 AERONAUTICAL MOBILE (OR) MARITIME MOBILE MOBILE-SATELITE (Earth-to- space) 5.228C 5.228D	161.9625-161.9875 AERONAUTICAL MOBILE (OR) MARITIME MOBILE MOBILE-SATELITE (Earth-to-space) 5.228C 5.228D
161.9875-162.0125 FIXED MOBILE Maritime mobile-satellite (Earth-to-space) 5.228AA 5.226	161.9875-162.0125 FIXED MOBILE Maritime mobile-satellite (Earth-to-space) 5.228AA 5.226
162.0125-162.0375 AERONAUTICAL MOBILE (OR) MARITIME MOBILE MOBILE-SATELITE (Earth-to- space) 5.228C 5.228D	162.0125-162.0375 AERONAUTICAL MOBILE (OR) MARITIME MOBILE MOBILE-SATELITE (Earth-to- space) 5.228C 5.228D
162.0375-174 FIXED MOBILE 5.226 5.230 5.231	162.0375-174 FIXED MOBILE 5.226 5.230 5.231 T8
174-216 BROADCASTING Fixed Mobile	174-216 BROADCASTING Fixed Mobile
216-220 FIXED MARITIME MOBILE Radiolocation 5.241 5.242	216-220 FIXED MARITIME MOBILE Radiolocation 5.241 5.242
220-225 AMATEUR FIXED MOBILE Radiolocation 5.241	220-225 AMATEUR FIXED MOBILE Radiolocation 5.241

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
225-235 FIXED MOBILE	225-235 FIXED MOBILE
235-267 FIXED MOBILE 5.111 5.252 5.254 5.256 5.256A	235-267 FIXED MOBILE 5.111 5.252 5.254 5.256 5.256A
267-272 FIXED MOBILE Space operation (space-to-Earth) 5.254 5.257	267-272 FIXED MOBILE Space operation (space-to-Earth) 5.254 5.257
272-273 SPACE OPERATION (space-to-Earth) FIXED MOBILE 5.254	272-273 SPACE OPERATION (space-to-Earth) FIXED MOBILE 5.254
273-312 FIXED MOBILE 5.254	273-312 FIXED MOBILE 5.254
312-315 FIXED MOBILE Mobile-satellite (Earth-to-space) 5.254 5.255	312-315 FIXED MOBILE Mobile-satellite (Earth-to-space) 5.254 5.255
315-322 FIXED MOBILE 5.254	315-322 FIXED MOBILE 5.254
322-328.6 FIXED MOBILE RADIO ASTRONOMY 5.149	322-328.6 FIXED MOBILE RADIO ASTRONOMY 5.149
328.6-335.4 AERONAUTICAL RADIONAVIGATION 5.258 5.259	328.6-335.4 AERONAUTICAL RADIONAVIGATION 5.258 5.259
335.4-387 FIXED MOBILE 5.254	335.4-387 FIXED MOBILE 5.254
387-390 FIXED MOBILE Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.254 5.255	387-390 FIXED MOBILE Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.254 5.255
390-399.9 FIXED MOBILE 5.254	390-399.9 FIXED MOBILE 5.254
399.9-400.05 MOBILE-SATELLITE (Earth-to-space) 5.209 5.220 5.260A 5.260B	399.9-400.05 MOBILE-SATELLITE (Earth-to-space) 5.209 5.220 5.260A 5.260B

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
400.05-400.15 STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz) 5.261 5.262	400.05-400.15 STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz) 5.261 5.262
400.15-401 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B SPACE RESEARCH (space-to-Earth) 5.263 Space operation (space-to-Earth) 5.262 5.264	400.15-401 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B SPACE RESEARCH (space-to-Earth) 5.263 Space operation (space-to-Earth) 5.262 5.264
401-402 METEOROLOGICAL AIDS SPACE OPERATION (space-to-Earth) EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) Fixed Mobile except aeronautical mobile 5.264A 5.264B	401-402 METEOROLOGICAL AIDS SPACE OPERATION (space-to-Earth) EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) Fixed Mobile except aeronautical mobile 5.264A 5.264B
402-403 METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) Fixed Mobile except aeronautical mobile 5.264A 5.264B	402-403 METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) Fixed Mobile except aeronautical mobile 5.264A 5.264B
403-406 METEOROLOGICAL AIDS Fixed Mobile except aeronautical mobile 5.265	403-406 METEOROLOGICAL AIDS Fixed Mobile except aeronautical mobile 5.265
406-406.1 MOBILE-SATELLITE (Earth-to-space) 5.265 5.266 5.267	406-406.1 MOBILE-SATELLITE (Earth-to-space) 5.265 5.266 5.267
406.1-410 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149 5.265	406.1-410 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149 5.265
410-420 FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to-space) 5.268	410-420 FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to-space) 5.268
420-430 FIXED MOBILE except aeronautical mobile Radiolocation 5.269 5.270 5.271	420-430 FIXED MOBILE except aeronautical mobile Radiolocation 5.269 5.270 5.271
430-432 RADIOLOCATION Amateur 5.271 5.276 5.278 5.279	430-432 RADIOLOCATION Amateur 5.271 5.276 5.278 5.279

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
432-438 RADIOLOCATION Amateur Earth exploration-satellite (active) 5.279A 5.271 5.276 5.278 5.279 5.281 5.282	432-438 RADIOLOCATION Amateur Earth exploration-satellite (active) 5.279A 5.271 5.276 5.278 5.279 5.281 5.282
438-440 RADIOLOCATION Amateur 5.271 5.276 5.278 5.279	438-440 RADIOLOCATION Amateur 5.271 5.276 5.278 5.279
440-450 FIXED MOBILE except aeronautical mobile Radiolocation 5.269 5.270 5.271 5.284 5.285 5.286	440-450 FIXED MOBILE except aeronautical mobile Radiolocation 5.269 5.270 5.271 5.284 5.285 5.286
450-455 FIXED MOBILE 5.286AA 5.209 5.271 5.286 5.286A 5.286B 5.286C 5.286D 5.286E	450-455 FIXED MOBILE 5.286AA 5.209 5.271 5.286 5.286A 5.286B 5.286C 5.286D 5.286E
450-455 FIXED MOBILE 5.286AA 5.209 5.271 5.286 5.286A 5.286B 5.286C 5.286D 5.286E	450-455 FIXED MOBILE 5.286AA 5.209 5.271 5.286 5.286A 5.286B 5.286C 5.286D 5.286E T8
455-456 FIXED MOBILE 5.286AA MOBILE-SATELLITE (Earth-to-space) 5.209 5.286A 5.286B 5.286C	455-456 FIXED MOBILE 5.286AA MOBILE-SATELLITE (Earth-to-space) 5.209 5.286A 5.286B 5.286C T8
456-459 FIXED MOBILE 5.286AA 5.271 5.287 5.288	456-459 FIXED MOBILE 5.286AA 5.271 5.287 5.288 T8
459-460 FIXED MOBILE 5.286AA MOBILE-SATELLITE (Earth-to-space) 5.209 5.286A 5.286B 5.286C	459-460 FIXED MOBILE 5.286AA MOBILE-SATELLITE (Earth-to-space) 5.209 5.286A 5.286B 5.286C
460-470 FIXED MOBILE 5.286AA Meteorological-satellite (space-to-Earth) 5.287 5.288 5.289 5.290	460-470 FIXED MOBILE 5.286AA Meteorological-satellite (space-to-Earth) 5.287 5.288 5.289 5.290
470-512 BROADCASTING Fixed Mobile 5.292 5.293 5.295	470-512 BROADCASTING Fixed Mobile 5.292 5.293 5.295

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
512-608 BROADCASTING 5.295 5.297	512-608 BROADCASTING 5.295 5.297
608-614 RADIO ASTRONOMY Mobile-satellite except aeronautical mobile-satellite (Earth-to-space)	608-614 RADIO ASTRONOMY Mobile-satellite except aeronautical mobile-satellite (Earth-to-space)
614-698 BROADCASTING Fixed Mobile 5.293 5.308 5.308A 5.309	614-698 BROADCASTING Fixed Mobile 5.293 5.308 5.308A 5.309
698-806 MOBILE 5.317A BROADCASTING Fixed 5.293 5.309	698-806 MOBILE 5.317A BROADCASTING Fixed 5.293 5.309 T12
806-890 FIXED MOBILE 5.317A BROADCASTING 5.317 5.318	806-890 FIXED MOBILE 5.317A BROADCASTING 5.317 5.318 T1
890-902 FIXED MOBILE except aeronautical mobile 5.317A Radiolocation 5.318 5.325	890-902 FIXED MOBILE except aeronautical mobile 5.317A Radiolocation 5.318 5.325 T1 T2
902-928 FIXED Amateur Mobile except aeronautical mobile 5.325A Radiolocation 5.150 5.325 5.326	902-928 FIXED Amateur Mobile except aeronautical mobile 5.325A Radiolocation 5.150 5.325 5.326 T2 T9 T10 T11
928-942 FIXED MOBILE except aeronautical mobile 5.317A Radiolocation 5.325	928-942 FIXED MOBILE except aeronautical mobile 5.317A Radiolocation 5.325 T2
942-960 FIXED MOBILE 5.317A	942-960 FIXED MOBILE 5.317A T2

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
960-1 164 AERONAUTICAL MOBILE (R) 5.327A AERONAUTICAL RADIONAVIGATION 5.328 5.328AA	960-1 164 AERONAUTICAL MOBILE (R) 5.327A AERONAUTICAL RADIONAVIGATION 5.328 5.328AA
1 164-1 215 AERONAUTICAL RADIONAVIGATION 5.328 RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.328A	1 164-1 215 AERONAUTICAL RADIONAVIGATION 5.328 RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.328A
1 215-1 240 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A SPACE RESEARCH (active) 5.330 5.331 5.332	1 215-1 240 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A SPACE RESEARCH (active) 5.330 5.331 5.332
1 240-1 300 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A SPACE RESEARCH (active) Amateur 5.282 5.330 5.331 5.332 5.335 5.335A	1 240-1 300 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A SPACE RESEARCH (active) Amateur 5.282 5.330 5.331 5.332 5.335 5.335A
1 300-1 350 RADIOLOCATION AERONAUTICAL RADIONAVIGATION 5.337 RADIONAVIGATION-SATELLITE (Earth-to-space) 5.149 5.337A	1 300-1 350 RADIOLOCATION AERONAUTICAL RADIONAVIGATION 5.337 RADIONAVIGATION-SATELLITE (Earth-to-space) 5.149 5.337A
1 350-1 400 RADIOLOCATION 5.338A 5.149 5.334 5.339	1 350-1 400 RADIOLOCATION 5.338A 5.149 5.334 5.339
1 400-1 427 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341	1 400-1 427 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341
1 427-1 429 SPACE OPERATION (Earth-to-space) FIXED MOBILE except aeronautical mobile 5.341A 5.341B 5.341C 5.338A 5.341	1 427-1 429 SPACE OPERATION (Earth-to-space) FIXED MOBILE except aeronautical mobile 5.341A 5.341B 5.341C 5.338A 5.341
1 429-1 452 FIXED MOBILE 5.341B 5.341C 5.343 5.338A 5.341	1 429-1 452 FIXED MOBILE 5.341B 5.341C 5.343 5.338A 5.341
1 452-1 492 FIXED MOBILE 5.341B 5.343 5.346A BROADCASTING BROADCASTING-SATELLITE 5.208B 5.341 5.344 5.345	1 452-1 492 FIXED MOBILE 5.341B 5.343 5.346A BROADCASTING BROADCASTING-SATELLITE 5.208B 5.341 5.344 5.345

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
I 492-1 518 FIXED MOBILE 5.341B 5.343 <div style="text-align: right;">5.341 5.344</div>	I 492-1 518 FIXED MOBILE 5.341B 5.343 <div style="text-align: right;">5.341 5.344</div>
I 518-1 525 FIXED MOBILE 5.343 MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A <div style="text-align: right;">5.341 5.344</div>	I 518-1 525 FIXED MOBILE 5.343 MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A <div style="text-align: right;">5.341 5.344</div>
I 525-1 530 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A Earth exploration-satellite Fixed Mobile 5.343 <div style="text-align: right;">5.341 5.351 5.354</div>	I 525-1 530 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A Earth exploration-satellite Fixed Mobile 5.343 <div style="text-align: right;">5.341 5.351 5.354</div>
I 530-1 535 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.353A Earth exploration-satellite Fixed Mobile 5.343 <div style="text-align: right;">5.341 5.351 5.354</div>	I 530-1 535 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.353A Earth exploration-satellite Fixed Mobile 5.343 <div style="text-align: right;">5.341 5.351 5.354</div>
I 535-1 559 MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A <div style="text-align: right;">5.341 5.351 5.353A 5.354 5.355 5.356 5.357 5.357A 5.359 5.362A</div>	I 535-1 559 MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A <div style="text-align: right;">5.341 5.351 5.353A 5.354 5.355 5.356 5.357 5.357A 5.359 5.362A</div>
I 559-1 610 AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.208B 5.328B 5.329A <div style="text-align: right;">5.341</div>	I 559-1 610 AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.208B 5.328B 5.329A <div style="text-align: right;">5.341</div>
I 610-1 610.6 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) <div style="text-align: right;">5.341 5.364 5.366 5.367 5.368 5.370 5.372</div>	I 610-1 610.6 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) <div style="text-align: right;">5.341 5.364 5.366 5.367 5.368 5.370 5.372</div>

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
I 610.6-1 613.8 MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) <div style="text-align: right;">5.149 5.341 5.364 5.366 5.367 5.368 5.370 5.372</div>	I 610.6-1 613.8 MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) <div style="text-align: right;">5.149 5.341 5.364 5.366 5.367 5.368 5.370 5.372</div>
I 613.8-1 621.35 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) Mobile-satellite (space-to-Earth) 5.208B <div style="text-align: right;">5.341 5.364 5.365 5.366 5.367 5.368 5.370 5.372</div>	I 613.8-1 621.35 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) Mobile-satellite (space-to-Earth) 5.208B <div style="text-align: right;">5.341 5.364 5.365 5.366 5.367 5.368 5.370 5.372</div>
I 621.35-1 626.5 MARITIME MOBILE-SATELLITE (space-to-Earth) 5.373 5.373A MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) Mobile-satellite (space-to-Earth) except maritime mobile satellite (space-to-Earth) <div style="text-align: right;">5.208B 5.341 5.364 5.365 5.366 5.367 5.368 5.370 5.372</div>	I 621.35-1 626.5 MARITIME MOBILE-SATELLITE (space-to-Earth) 5.373 5.373A MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) Mobile-satellite (space-to-Earth) except maritime mobile satellite (space-to-Earth) <div style="text-align: right;">5.208B 5.341 5.364 5.365 5.366 5.367 5.368 5.370 5.372</div>
I 626.5-1 660 MOBILE-SATELLITE (Earth-to-space) 5.351A <div style="text-align: right;">5.341 5.351 5.353A 5.354 5.355 5.357A 5.359 5.362A 5.374 5.375 5.376</div>	I 626.5-1 660 MOBILE-SATELLITE (Earth-to-space) 5.351A <div style="text-align: right;">5.341 5.351 5.353A 5.354 5.355 5.357A 5.359 5.362A 5.374 5.375 5.376</div>

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
I 660-1 660.5 MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY 5.149 5.341 5.351 5.354 5.362A 5.376A	I 660-1 660.5 MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY 5.149 5.341 5.351 5.354 5.362A 5.376A
I 660.5-1 668 RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379 5.379A	I 660.5-1 668 RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379 5.379A
I 668-1 668.4 MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379 5.379A	I 668-1 668.4 MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379 5.379A
I 668.4-1 670 METEOROLOGICAL AIDS FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C RADIO ASTRONOMY 5.149 5.341 5.379D 5.379E	I 668.4-1 670 METEOROLOGICAL AIDS FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C RADIO ASTRONOMY 5.149 5.341 5.379D 5.379E
I 670-1 675 METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.341 5.379D 5.379E 5.380A	I 670-1 675 METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.341 5.379D 5.379E 5.380A
I 675-1 690 METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.341	I 675-1 690 METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.341
I 690-1 700 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) 5.289 5.341 5.381	I 690-1 700 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) 5.289 5.341 5.381
I 700-1 710 FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.289 5.341	I 700-1 710 FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.289 5.341
I 710-1 930 FIXED MOBILE 5.384A 5.388A 5.388B 5.149 5.341 5.385 5.386 5.387 5.388	I 710-1 930 FIXED MOBILE 5.384A 5.388A 5.388B 5.149 5.341 5.385 5.386 5.387 5.388 T3 T4 T5

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
1 930-1 970 FIXED MOBILE 5.388A 5.388B Mobile-satellite (Earth-to-space) 5.388	1 930-1 970 FIXED MOBILE 5.388A 5.388B Mobile-satellite (Earth-to-space) 5.388 T4 T5
1 970-1 980 FIXED MOBILE 5.388A 5.388B 5.388	1 970-1 980 FIXED MOBILE 5.388A 5.388B 5.388 T4
T1 980-2 010 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.351A 5.388 5.389A 5.389B 5.389F	1 980-2 010 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.351A 5.388 5.389A 5.389B 5.389F T4
2 010-2 025 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.388 5.389C 5.389E	2 010-2 025 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.388 5.389C 5.389E
2 025-2 110 SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (Earth-to-space) (space-to-space) 5.392	2 025-2 110 SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (Earth-to-space) (space-to-space) 5.392
2 110-2 120 FIXED MOBILE 5.388A 5.388B SPACE RESEARCH (deep space) (Earth-to-space) 5.388	2 110-2 120 FIXED MOBILE 5.388A 5.388B SPACE RESEARCH (deep space) (Earth-to-space) 5.388 T3 T5
2 120-2 160 FIXED MOBILE 5.388A 5.388B Mobile-satellite (space-to-Earth) 5.388	2 120-2 160 FIXED MOBILE 5.388A 5.388B Mobile-satellite (space-to-Earth) 5.388 T5
2 160-2 170 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.388 5.389C 5.389E	2 160-2 170 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.388 5.389C 5.389E

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
2 170-2 200 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A 5.388 5.389A 5.389F	2 170-2 200 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A 5.388 5.389A 5.389F
2 200-2 290 SPACE OPERATION (space-to-Earth) (space-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (space-to-Earth) (space-to-space) 5.392	2 200-2 290 SPACE OPERATION (space-to-Earth) (space-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (space-to-Earth) (space-to-space) 5.392
2 290-2 300 FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth)	2 290-2 300 FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth)
2 300-2 450 FIXED MOBILE 5.384A RADIOLOCATION Amateur 5.150 5.282 5.393 5.394	2 300-2 450 FIXED MOBILE 5.384A RADIOLOCATION Amateur 5.150 5.282 5.393 5.394 T6 T9 T10 T11
2 450-2 483.5 FIXED MOBILE RADIOLOCATION 5.150	2 450-2 483.5 FIXED MOBILE RADIOLOCATION 5.150 T9 T10 T11
2 483.5-2 500 FIXED MOBILE MOBILE-SATELLITE(space-to-Earth) 5.351A RADIOLOCATION RADIODETERMINATION-SATELLITE (space-to-Earth) 5.398 5.150 5.402	2 483.5-2 500 FIXED MOBILE MOBILE-SATELLITE(space-to-Earth) 5.351A RADIOLOCATION RADIODETERMINATION-SATELLITE (space-to-Earth) 5.398 5.150 5.402
2 500-2 520 FIXED 5.410 FIXED-SATELLITE (space-to-Earth) 5.415 MOBILE except aeronautical mobile 5.384A	2 500-2 520 FIXED 5.410 FIXED-SATELLITE (space-to-Earth) 5.415 MOBILE except aeronautical mobile 5.384A T13

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
2 520-2 655 FIXED 5.410 FIXED-SATELLITE (space-to-Earth) 5.415 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416 5.339 5.418B 5.418C	2 520-2 655 FIXED 5.410 FIXED-SATELLITE (space-to-Earth) 5.415 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416 5.339 5.418B 5.418C T13
2 655-2 670 FIXED 5.410 FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.415 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416 Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149 5.208B	2 655-2 670 FIXED 5.410 FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.415 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416 Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149 5.208B T13
2 670-2 690 FIXED 5.410 FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.208B 5.415 MOBILE except aeronautical mobile 5.384A Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149	2 670-2 690 FIXED 5.410 FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.208B 5.415 MOBILE except aeronautical mobile 5.384A Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149 T13
2 690-2 700 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.422	2 690-2 700 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.422
2 700-2 900 AERONAUTICAL RADIONAVIGATION 5.337 Radiolocation 5.423 5.424	2 700-2 900 AERONAUTICAL RADIONAVIGATION 5.337 Radiolocation 5.423 5.424
2 900-3 100 RADIOLOCATION 5.424A RADIONAVIGATION 5.426 5.425 5.427	2 900-3 100 RADIOLOCATION 5.424A RADIONAVIGATION 5.426 5.425 5.427

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
3 100-3 300 RADIOLOCATION Earth exploration-satellite (active) Space research (active) 5.149 5.428	3 100-3 300 RADIOLOCATION Earth exploration-satellite (active) Space research (active) 5.149 5.428
3 300-3 400 RADIOLOCATION Amateur Fixed Mobile 5.149 5.429C 5.429D	3 300-3 400 RADIOLOCATION Amateur Fixed Mobile 5.149 5.429C 5.429D
3 400-3 500 FIXED FIXED-SATELLITE (space-to- Earth) MOBILE except aeronautical mobile 5.431A 5.431B Amateur Radiolocation 5.433 5.282	3 400-3 500 FIXED FIXED-SATELLITE (space-to- Earth) MOBILE except aeronautical mobile 5.431A 5.431B Amateur Radiolocation 5.433 5.282 T7 T8
3 500-3 600 FIXED FIXED-SATELLITE (space-to- Earth) MOBILE except aeronautical mobile 5.431B Radiolocation 5.433	3 500-3 600 FIXED FIXED-SATELLITE (space-to- Earth) MOBILE except aeronautical mobile 5.431B Radiolocation 5.433 T7 T8
3 600-3 700 FIXED FIXED-SATELLITE (space-to- Earth) MOBILE except aeronautical mobile 5.434 Radiolocation 5.433	3 600-3 700 FIXED FIXED-SATELLITE (space-to- Earth) MOBILE except aeronautical mobile 5.434 Radiolocation 5.433
3 700-4 200 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile	3 700-4 200 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile
4 200-4 400 AERONAUTICAL MOBILE (R) 5.436 AERONAUTICAL RADIONAVIGATION 5.438 5.437 5.439 5.440	4 200-4 400 AERONAUTICAL MOBILE (R) 5.436 AERONAUTICAL RADIONAVIGATION 5.438 5.437 5.439 5.440
4 400-4 500 FIXED MOBILE 5.440A	4 400-4 500 FIXED MOBILE 5.440A
4 500-4 800 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 MOBILE 5.440A	4 500-4 800 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 MOBILE 5.440A

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
4 800-4 990 FIXED MOBILE 5.440A 5.441A 5.441B 5.442 Radio astronomy 5.149 5.339 5.443	4 800-4 990 FIXED MOBILE 5.440A 5.441A 5.441B 5.442 Radio astronomy 5.149 5.339 5.443
4 990-5 000 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY Space research (passive) 5.149	4 990-5 000 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY Space research (passive) 5.149
5 000-5 010 AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (Earth-to-space)	5 000-5 010 AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (Earth-to-space)
5 010-5 030 AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.443B	5 010-5 030 AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.443B
5 030-5 091 AERONAUTICAL MOBILE (R) 5.443C AERONAUTICAL MOBILE-SATELLITE (R) 5.443D AERONAUTICAL RADIONAVIGATION 5.444	5 030-5 091 AERONAUTICAL MOBILE (R) 5.443C AERONAUTICAL MOBILE-SATELLITE (R) 5.443D AERONAUTICAL RADIONAVIGATION 5.444
5 091-5 150 FIXED-SATELLITE (Earth-to-space) 5.444A AERONAUTICAL MOBILE 5.444B AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA AERONAUTICAL RADIONAVIGATION 5.444	5 091-5 150 FIXED-SATELLITE (Earth-to-space) 5.444A AERONAUTICAL MOBILE 5.444B AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA AERONAUTICAL RADIONAVIGATION 5.444
5 150-5 250 FIXED-SATELLITE (Earth-to-space) 5.447A MOBILE except aeronautical mobile 5.446A 5.446B AERONAUTICAL RADIONAVIGATION 5.446 5.446C 5.446D 5.447 5.447B 5.447C	5 150-5 250 FIXED-SATELLITE (Earth-to-space) 5.447A MOBILE except aeronautical mobile 5.446A 5.446B AERONAUTICAL RADIONAVIGATION 5.446 5.446C 5.446D 5.447 5.447B 5.447C T9
5 250-5 255 EARTH EXPLORATION-SATELLITE (active) MOBILE except aeronautical mobile 5.446A 5.447F RADIOLOCATION SPACE RESEARCH 5.447D 5.447E 5.448 5.448A	5 250-5 255 EARTH EXPLORATION-SATELLITE (active) MOBILE except aeronautical mobile 5.446A 5.447F RADIOLOCATION SPACE RESEARCH 5.447D 5.447E 5.448 5.448A T9
5 255-5 350 EARTH EXPLORATION-SATELLITE (active) MOBILE except aeronautical mobile 5.446A 5.447F RADIOLOCATION SPACE RESEARCH (active) 5.447E 5.448 5.448A	5 255-5 350 EARTH EXPLORATION-SATELLITE (active) MOBILE except aeronautical mobile 5.446A 5.447F RADIOLOCATION SPACE RESEARCH (active) 5.447E 5.448 5.448A T9

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
5 350-5 460 EARTH EXPLORATION-SATELLITE (active) 5.448B RADIOLOCATION 5.448D AERONAUTICAL RADIONAVIGATION 5.449 SPACE RESEARCH (active) 5.448C	5 350-5 460 EARTH EXPLORATION-SATELLITE (active) 5.448B RADIOLOCATION 5.448D AERONAUTICAL RADIONAVIGATION 5.449 SPACE RESEARCH (active) 5.448C
5 460-5 470 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION 5.448D RADIONAVIGATION 5.449 SPACE RESEARCH (active) 5.448B	5 460-5 470 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION 5.448D RADIONAVIGATION 5.449 SPACE RESEARCH (active) 5.448B
5 470-5 570 EARTH EXPLORATION-SATELLITE (active) MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION 5.450B MARITIME RADIONAVIGATION SPACE RESEARCH (active) 5.448B 5.450 5.451	5 470-5 570 EARTH EXPLORATION-SATELLITE (active) MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION 5.450B MARITIME RADIONAVIGATION SPACE RESEARCH (active) 5.448B 5.450 5.451 T9
5 570-5 650 MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION 5.450B MARITIME RADIONAVIGATION 5.450 5.451 5.452	5 570-5 650 MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION 5.450B MARITIME RADIONAVIGATION 5.450 5.451 5.452 T9
5 650-5 725 MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION Amateur Space research (deep space) 5.282 5.451 5.453 5.454 5.455	5 650-5 725 MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION Amateur Space research (deep space) 5.282 5.451 5.453 5.454 5.455 T9
5 725-5 830 RADIOLOCATION Amateur 5.150 5.453 5.455	5 725-5 830 RADIOLOCATION Amateur 5.150 5.453 5.455 T9 T10 T11
5 830-5 850 RADIOLOCATION Amateur Amateur-satellite (space-to-Earth) 5.150 5.453 5.455	5 830-5 850 RADIOLOCATION Amateur Amateur-satellite (space-to-Earth) 5.150 5.453 5.455 T9 T10 T11
5 850-5 925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Amateur Radiolocation 5.150	5 850-5 925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Amateur Radiolocation 5.150
5 925-6 700 FIXED 5.457 FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B MOBILE 5.457C 5.149 5.440 5.458	5 925-6 700 FIXED 5.457 FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B MOBILE 5.457C 5.149 5.440 5.458

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
6 700-7 075 FIXED FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.441 MOBILE 5.458 5.458A 5.458B	6 700-7 075 FIXED FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.441 MOBILE 5.458 5.458A 5.458B
7 075-7 145 FIXED MOBILE 5.458 5.459	7 075-7 145 FIXED MOBILE 5.458 5.459
7 145-7 190 FIXED MOBILE SPACE RESEARCH (deep space) (Earth-to-space) 5.458 5.459	7 145-7 190 FIXED MOBILE SPACE RESEARCH (deep space) (Earth-to-space) 5.458 5.459
7 190-7 235 EARTH EXPLORATION-SATELLITE (Earth-to-space) 5.460A 5.460B FIXED MOBILE SPACE RESEARCH (Earth-to-space) 5.460 5.458 5.459	7 190-7 235 EARTH EXPLORATION-SATELLITE (Earth-to-space) 5.460A 5.460B FIXED MOBILE SPACE RESEARCH (Earth-to-space) 5.460 5.458 5.459
7 235-7 250 EARTH EXPLORATION-SATELLITE (Earth-to-space) 5.460A FIXED MOBILE 5.458	7 235-7 250 EARTH EXPLORATION-SATELLITE (Earth-to-space) 5.460A FIXED MOBILE 5.458
7 250-7 300 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE 5.461	7 250-7 300 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE 5.461
7 300-7 375 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.461	7 300-7 375 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.461
7 375-7 450 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile MARITIME MOBILE-SATELLITE (space-to-Earth) 5.461AA 5.461AB	7 375-7 450 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile MARITIME MOBILE-SATELLITE (space-to-Earth) 5.461AA 5.461AB
7 450-7 550 FIXED FIXED-SATELLITE (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile MARITIME MOBILE-SATELLITE (space-to-Earth) 5.461AA 5.461AB 5.461A	7 450-7 550 FIXED FIXED-SATELLITE (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile MARITIME MOBILE-SATELLITE (space-to-Earth) 5.461AA 5.461AB 5.461A

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
7 550-7 750 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile MARITIME MOBILE-SATELLITE (space-to-Earth) 5.461AA 5.461AB	7 550-7 750 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile MARITIME MOBILE-SATELLITE (space-to-Earth) 5.461AA 5.461AB
7 750-7 900 FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) 5.461B MOBILE except aeronautical mobile	7 750-7 900 FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) 5.461B MOBILE except aeronautical mobile
7 900-8 025 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.461	7 900-8 025 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.461
8 025-8 175 EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.463 5.462A	8 025-8 175 EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.463 5.462A
8 175-8 215 EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) MOBILE 5.463 5.462A	8 175-8 215 EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) MOBILE 5.463 5.462A
8 215-8 400 EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.463 5.462A	8 215-8 400 EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.463 5.462A
8 400-8 500 FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to-Earth) 5.465 5.466	8 400-8 500 FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to-Earth) 5.465 5.466
8 500-8 550 RADIOLOCATION 5.468 5.469	8 500-8 550 RADIOLOCATION 5.468 5.469
8 550-8 650 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.468 5.469 5.469A	8 550-8 650 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.468 5.469 5.469A

ITU Region 2 Allocations	Turks and Caicos Allocations
MHz	
8 650-8 750 RADIOLOCATION 5.468 5.469	8 650-8 750 RADIOLOCATION 5.468 5.469
8 750-8 850 RADIOLOCATION AERONAUTICAL RADIONAVIGATION 5.470 5.471	8 750-8 850 RADIOLOCATION AERONAUTICAL RADIONAVIGATION 5.470 5.471
8 850-9 000 RADIOLOCATION MARITIME RADIONAVIGATION 5.472 5.473	8 850-9 000 RADIOLOCATION MARITIME RADIONAVIGATION 5.472 5.473
9 000-9 200 RADIOLOCATION AERONAUTICAL RADIONAVIGATION 5.337 5.471 5.473A	9 000-9 200 RADIOLOCATION AERONAUTICAL RADIONAVIGATION 5.337 5.471 5.473A
9 200-9 300 EARTH EXPLORATION-SATELLITE (active) 5.474A 5.474B 5.474C RADIOLOCATION MARITIME RADIONAVIGATION 5.472 5.473 5.474 5.474D	9 200-9 300 EARTH EXPLORATION-SATELLITE (active) 5.474A 5.474B 5.474C RADIOLOCATION MARITIME RADIONAVIGATION 5.472 5.473 5.474 5.474D
9 300-9 500 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION 5.475 SPACE RESEARCH (active) 5.427 5.474 5.475A 5.475B 5.476A	9 300-9 500 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION 5.475 SPACE RESEARCH (active) 5.427 5.474 5.475A 5.475B 5.476A
9 500-9 800 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION SPACE RESEARCH (active) 5.476A	9 500-9 800 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION SPACE RESEARCH (active) 5.476A
9 800-9 900 RADIOLOCATION Earth exploration-satellite (active) Fixed Space research (active) 5.477 5.478 5.478A 5.478B	9 800-9 900 RADIOLOCATION Earth exploration-satellite (active) Fixed Space research (active) 5.477 5.478 5.478A 5.478B
9 900-10 000 EARTH EXPLORATION-SATELLITE (active) 5.474A 5.474B 5.474C RADIOLOCATION Fixed 5.474D 5.477 5.478 5.479	9 900-10 000 EARTH EXPLORATION-SATELLITE (active) 5.474A 5.474B 5.474C RADIOLOCATION Fixed 5.474D 5.477 5.478 5.479

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
10-10.4 EARTH EXPLORATION- SATELLITE (active) 5.474A 5.474B 5.474C RADIOLOCATION Amateur 5.474D 5.479 5.480	10-10.4 EARTH EXPLORATION- SATELLITE (active) 5.474A 5.474B 5.474C RADIOLOCATION Amateur 5.474D 5.479 5.480
10.4-10.45 RADIOLOCATION Amateur 5.480	10.4-10.45 RADIOLOCATION Amateur 5.480
10.45-10.5 RADIOLOCATION Amateur Amateur-satellite 5.481	10.45-10.5 RADIOLOCATION Amateur Amateur-satellite 5.481
10.5-10.55 FIXED MOBILE RADIOLOCATION	10.5-10.55 FIXED MOBILE RADIOLOCATION
10.55-10.6 FIXED MOBILE except aeronautical mobile Radiolocation	10.55-10.6 FIXED MOBILE except aeronautical mobile Radiolocation
10.6-10.68 EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Radiolocation 5.149 5.482 5.482A	10.6-10.68 EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Radiolocation 5.149 5.482 5.482A
10.68-10.7 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.483	10.68-10.7 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.483
10.7-10.95 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 MOBILE except aeronautical mobile	10.7-10.95 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 MOBILE except aeronautical mobile
10.95-11.2 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B MOBILE except aeronautical mobile	10.95-11.2 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B MOBILE except aeronautical mobile

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
11.2-11.45 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 MOBILE except aeronautical mobile	11.2-11.45 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 MOBILE except aeronautical mobile
11.45-11.7 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B MOBILE except aeronautical mobile	11.45-11.7 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B MOBILE except aeronautical mobile
11.7-12.1 FIXED 5.486 FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.488 Mobile except aeronautical mobile	11.7-12.1 FIXED 5.486 FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.488 Mobile except aeronautical mobile
5.485	5.485
12.1-12.2 FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.488	12.1-12.2 FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.488
5.485 5.489	5.485 5.489
12.2-12.7 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE 5.492	12.2-12.7 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE 5.492
5.487A 5.488 5.490	5.487A 5.488 5.490
12.7-12.75 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE except aeronautical mobile	12.7-12.75 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE except aeronautical mobile
12.75-13.25 FIXED FIXED-SATELLITE (Earth-to-space) 5.441 MOBILE Space research (deep space) (space-to-Earth)	12.75-13.25 FIXED FIXED-SATELLITE (Earth-to-space) 5.441 MOBILE Space research (deep space) (space-to-Earth)
13.25-13.4 EARTH EXPLORATION-SATELLITE (active) AERONAUTICAL RADIONAVIGATION 5.497 SPACE RESEARCH (active)	13.25-13.4 EARTH EXPLORATION-SATELLITE (active) AERONAUTICAL RADIONAVIGATION 5.497 SPACE RESEARCH (active)
5.498A 5.499	5.498A 5.499
13.4-13.65 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH 5.499C 5.499D Standard frequency and time signal-satellite (Earth-to-space)	13.4-13.65 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH 5.499C 5.499D Standard frequency and time signal-satellite (Earth-to-space)
5.499 5.500 5.501 5.501B	5.499 5.500 5.501 5.501B

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
13.65-13.75 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH 5.501A Standard frequency and time signal-satellite (Earth-to-space) 5.499 5.500 5.501 5.501B	13.65-13.75 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH 5.501A Standard frequency and time signal-satellite (Earth-to-space) 5.499 5.500 5.501 5.501B
13.75-14 FIXED-SATELLITE (Earth-to-space) 5.484A RADIOLOCATION Earth exploration-satellite Standard frequency and time signal-satellite (Earth-to-space) Space research 5.499 5.500 5.501 5.502 5.503	13.75-14 FIXED-SATELLITE (Earth-to-space) 5.484A RADIOLOCATION Earth exploration-satellite Standard frequency and time signal-satellite (Earth-to-space) Space research 5.499 5.500 5.501 5.502 5.503
14-14.25 FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.504B 5.504C 5.506A Space research 5.504A 5.505	14-14.25 FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.504B 5.504C 5.506A Space research 5.504A 5.505
14.25-14.3 FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.508A Space research 5.504A 5.505 5.508	14.25-14.3 FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.508A Space research 5.504A 5.505 5.508
14.3-14.4 FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.484B 5.506 5.506B Mobile-satellite (Earth-to-space) 5.506A Radionavigation-satellite 5.504A	14.3-14.4 FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.484B 5.506 5.506B Mobile-satellite (Earth-to-space) 5.506A Radionavigation-satellite 5.504A
14.4-14.47 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Space research (space-to-Earth) 5.504A	14.4-14.47 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Space research (space-to-Earth) 5.504A

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
14.47-14.5 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Radio astronomy 5.149 5.504A	14.47-14.5 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Radio astronomy 5.149 5.504A
14.5-14.75 GHz FIXED FIXED-SATELLITE (Earth-to-space) 5.509B 5.509C 5.509D 5.509E 5.509F 5.510 MOBILE Space research 5.509G	14.5-14.75 GHz FIXED FIXED-SATELLITE (Earth-to-space) 5.509B 5.509C 5.509D 5.509E 5.509F 5.510 MOBILE Space research 5.509G
14.75-14.8 FIXED FIXED-SATELLITE (Earth-to-space) 5.510 MOBILE Space research 5.509G	14.75-14.8 FIXED FIXED-SATELLITE (Earth-to-space) 5.510 MOBILE Space research 5.509G
14.8-15.35 FIXED MOBILE Space research 5.339	14.8-15.35 FIXED MOBILE Space research 5.339
15.35-15.4 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.511	15.35-15.4 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.511
15.4-15.43 RADIOLOCATION 5.511E 5.511F AERONAUTICAL RADIONAVIGATION	15.4-15.43 RADIOLOCATION 5.511E 5.511F AERONAUTICAL RADIONAVIGATION
15.43-15.63 FIXED-SATELLITE (Earth-to-space) 5.511A RADIOLOCATION 5.511E 5.511F AERONAUTICAL RADIONAVIGATION 5.511C	15.43-15.63 FIXED-SATELLITE (Earth-to-space) 5.511A RADIOLOCATION 5.511E 5.511F AERONAUTICAL RADIONAVIGATION 5.511C
15.63-15.7 RADIOLOCATION 5.511E 5.511F AERONAUTICAL RADIONAVIGATION	15.63-15.7 RADIOLOCATION 5.511E 5.511F AERONAUTICAL RADIONAVIGATION
15.7-16.6 RADIOLOCATION 5.512 5.513	15.7-16.6 RADIOLOCATION 5.512 5.513
16.6-17.1 RADIOLOCATION Space research (deep space) (Earth-to-space) 5.512 5.513	16.6-17.1 RADIOLOCATION Space research (deep space) (Earth-to-space) 5.512 5.513

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
17.1-17.2 RADIOLOCATION 5.512 5.513	17.1-17.2 RADIOLOCATION 5.512 5.513
17.2-17.3 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.512 5.513 5.513A	17.2-17.3 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.512 5.513 5.513A
17.3-17.7 FIXED-SATELLITE (Earth-to-space) 5.516 BROADCASTING-SATELLITE Radiolocation 5.514 5.515	17.3-17.7 FIXED-SATELLITE (Earth-to-space) 5.516 BROADCASTING-SATELLITE Radiolocation 5.514 5.515
17.7-17.8 FIXED FIXED-SATELLITE (space-to-Earth) 5.517 5.517A (Earth-to-space) 5.516 BROADCASTING-SATELLITE Mobile 5.515	17.7-17.8 FIXED FIXED-SATELLITE (space-to-Earth) 5.517 5.517A (Earth-to-space) 5.516 BROADCASTING-SATELLITE Mobile 5.515
17.8-18.1 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.517A (Earth-to-space) 5.516 MOBILE 5.519	17.8-18.1 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.517A (Earth-to-space) 5.516 MOBILE 5.519
18.1-18.4 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B 5.517A (Earth-to-space) 5.520 MOBILE 5.519 5.521	18.1-18.4 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B 5.517A (Earth-to-space) 5.520 MOBILE 5.519 5.521
18.4-18.6 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B 5.517A MOBILE	18.4-18.6 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B 5.517A MOBILE
18.6-18.8 EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.517A 5.522B MOBILE except aeronautical mobile SPACE RESEARCH (passive) 5.522A	18.6-18.8 EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.517A 5.522B MOBILE except aeronautical mobile SPACE RESEARCH (passive) 5.522A

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
18.8-19.3 FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.517A 5.523A MOBILE	18.8-19.3 FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.517A 5.523A MOBILE
19.3-19.7 FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 5.517A 5.523B 5.523C 5.523D 5.523E MOBILE	19.3-19.7 FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 5.517A 5.523B 5.523C 5.523D 5.523E MOBILE
19.7-20.1 FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.516B 5.527A MOBILE-SATELLITE (space-to-Earth) 5.524 5.525 5.526 5.527 5.528 5.529	19.7-20.1 FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.516B 5.527A MOBILE-SATELLITE (space-to-Earth) 5.524 5.525 5.526 5.527 5.528 5.529
20.1-20.2 FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.516B 5.527A MOBILE-SATELLITE (space-to-Earth) 5.524 5.525 5.526 5.527 5.528	20.1-20.2 FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.516B 5.527A MOBILE-SATELLITE (space-to-Earth) 5.524 5.525 5.526 5.527 5.528
20.2-21.2 FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) Standard frequency and time signal-satellite (space-to-Earth) 5.524	20.2-21.2 FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) Standard frequency and time signal-satellite (space-to-Earth) 5.524
21.2-21.4 EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)	21.2-21.4 EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)
21.4-22 FIXED 5.530E MOBILE 5.530A	21.4-22 FIXED 5.530E MOBILE 5.530A
22-22.21 FIXED MOBILE except aeronautical mobile 5.149	22-22.21 FIXED MOBILE except aeronautical mobile 5.149
22.21-22.5 EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) 5.149 5.532	22.21-22.5 EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) 5.149 5.532

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
22.5-22.55 FIXED MOBILE	22.5-22.55 FIXED MOBILE
22.55-23.15 FIXED INTER-SATELLITE 5.338A MOBILE SPACE RESEARCH (Earth-to-space) 5.532A 5.149	22.55-23.15 FIXED INTER-SATELLITE 5.338A MOBILE SPACE RESEARCH (Earth-to-space) 5.532A 5.149
23.15-23.55 FIXED INTER-SATELLITE 5.338A MOBILE	23.15-23.55 FIXED INTER-SATELLITE 5.338A MOBILE
23.55-23.6 FIXED MOBILE	23.55-23.6 FIXED MOBILE
23.6-24 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.34	23.6-24 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.34
24-24.05 AMATEUR AMATEUR-SATELLITE 5.15	24-24.05 AMATEUR AMATEUR-SATELLITE 5.15
24.05-24.25 RADIOLOCATION Amateur Earth exploration-satellite (active) 5.150	24.05-24.25 RADIOLOCATION Amateur Earth exploration-satellite (active) 5.150
24.25-24.45 FIXED 5.532AA MOBILE except aeronautical mobile 5.338A 5.532AB RADIONAVIGATION	24.25-24.45 FIXED 5.532AA MOBILE except aeronautical mobile 5.338A 5.532AB RADIONAVIGATION
24.45-24.65 FIXED 5.532AA INTER-SATELLITE MOBILE except aeronautical mobile 5.338A 5.532AB RADIONAVIGATION 5.533	24.45-24.65 FIXED 5.532AA INTER-SATELLITE MOBILE except aeronautical mobile 5.338A 5.532AB RADIONAVIGATION 5.533
24.65-24.75 FIXED 5.532AA INTER-SATELLITE MOBILE except aeronautical mobile 5.338A 5.532AB RADIOLOCATION- SATELLITE (Earth-to-space)	24.65-24.75 FIXED 5.532AA INTER-SATELLITE MOBILE except aeronautical mobile 5.338A 5.532AB RADIOLOCATION- SATELLITE (Earth-to-space)

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
24.75-25.25 FIXED 5.532AA FIXED-SATELLITE (Earth-to-space) 5.535 MOBILE except aeronautical mobile 5.338A 5.532AB	24.75-25.25 FIXED 5.532AA FIXED-SATELLITE (Earth-to-space) 5.535 MOBILE except aeronautical mobile 5.338A 5.532AB
25.25-25.5 FIXED 5.534A INTER-SATELLITE 5.536 MOBILE 5.338A 5.532AB Standard frequency and time signal-satellite (Earth-to-space)	25.25-25.5 FIXED 5.534A INTER-SATELLITE 5.536 MOBILE 5.338A 5.532AB Standard frequency and time signal-satellite (Earth-to-space)
25.5-27 EARTH EXPLORATION-SATELLITE (space-to-Earth) 5.536B FIXED 5.534A INTER-SATELLITE 5.536 MOBILE 5.338A 5.532AB SPACE RESEARCH (space-to-Earth) 5.536C Standard frequency and time signal-satellite (Earth-to-space) 5.536A	25.5-27 EARTH EXPLORATION-SATELLITE (space-to-Earth) 5.536B FIXED 5.534A INTER-SATELLITE 5.536 MOBILE 5.338A 5.532AB SPACE RESEARCH (space-to-Earth) 5.536C Standard frequency and time signal-satellite (Earth-to-space) 5.536A
27-27.5 FIXED 5.534A FIXED-SATELLITE (Earth-to-space) INTER-SATELLITE 5.536 5.537 MOBILE 5.338A 5.532AB	27-27.5 FIXED 5.534A FIXED-SATELLITE (Earth-to-space) INTER-SATELLITE 5.536 5.537 MOBILE 5.338A 5.532AB
27.5-28.5 FIXED 5.537A FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.517A 5.539 MOBILE 5.538 5.540	27.5-28.5 FIXED 5.537A FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.517A 5.539 MOBILE 5.538 5.540
28.5-29.1 FIXED FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.517A 5.523A 5.539 MOBILE Earth exploration-satellite (Earth-to-space) 5.541 5.54	28.5-29.1 FIXED FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.517A 5.523A 5.539 MOBILE Earth exploration-satellite (Earth-to-space) 5.541 5.54
29.1-29.5 FIXED FIXED-SATELLITE (Earth-to-space) 5.516B 5.517A 5.523C 5.523E 5.535A 5.539 5.541A MOBILE Earth exploration-satellite (Earth-to-space) 5.541 5.540	29.1-29.5 FIXED FIXED-SATELLITE (Earth-to-space) 5.516B 5.517A 5.523C 5.523E 5.535A 5.539 5.541A MOBILE Earth exploration-satellite (Earth-to-space) 5.541 5.540
29.5-29.9 FIXED-SATELLITE (Earth-to-space) 5.484A 5.484B 5.516B 5.527A 5.539 MOBILE-SATELLITE (Earth-to-space) Earth exploration-satellite (Earth-to-space) 5.541 5.525 5.526 5.527 5.529 5.540	29.5-29.9 FIXED-SATELLITE (Earth-to-space) 5.484A 5.484B 5.516B 5.527A 5.539 MOBILE-SATELLITE (Earth-to-space) Earth exploration-satellite (Earth-to-space) 5.541 5.525 5.526 5.527 5.529 5.540

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
29.9-30 FIXED-SATELLITE (Earth-to-space) 5.484A 5.484B 5.516B 5.527A 5.539 MOBILE-SATELLITE (Earth-to-space) Earth exploration-satellite (Earth-to-space) 5.541 5.543 5.525 5.526 5.527 5.538 5.540 5.542	29.9-30 FIXED-SATELLITE (Earth-to-space) 5.484A 5.484B 5.516B 5.527A 5.539 MOBILE-SATELLITE (Earth-to-space) Earth exploration-satellite (Earth-to-space) 5.541 5.543 5.525 5.526 5.527 5.538 5.540 5.542
30-31 FIXED-SATELLITE (Earth-to-space) 5.338A MOBILE-SATELLITE (Earth-to-space) Standard frequency and time signal-satellite (space-to-Earth) 5.542	30-31 FIXED-SATELLITE (Earth-to-space) 5.338A MOBILE-SATELLITE (Earth-to-space) Standard frequency and time signal-satellite (space-to-Earth) 5.542
31-31.3 FIXED 5.338A 5.543B MOBILE Standard frequency and time signal-satellite (space-to-Earth) Space research 5.544 5.545 5.149	31-31.3 FIXED 5.338A 5.543B MOBILE Standard frequency and time signal-satellite (space-to-Earth) Space research 5.544 5.545 5.149
31.3-31.5 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	31.3-31.5 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340
31.5-31.8 EARTH EXPLORATION- SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	31.5-31.8 EARTH EXPLORATION- SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340
31.8-32 FIXED 5.547A RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) 5.547 5.547B 5.548	31.8-32 FIXED 5.547A RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) 5.547 5.547B 5.548
32-32.3 FIXED 5.547A RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) 5.547 5.547C 5.548	32-32.3 FIXED 5.547A RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) 5.547 5.547C 5.548

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
32.3-33 FIXED 5.547A INTER-SATELLITE RADIONAVIGATION 5.547 5.547D 5.548	32.3-33 FIXED 5.547A INTER-SATELLITE RADIONAVIGATION 5.547 5.547D 5.548
33-33.4 FIXED 5.547A RADIONAVIGATION 5.547 5.547E	33-33.4 FIXED 5.547A RADIONAVIGATION 5.547 5.547E
33.4-34.2 RADIOLOCATION 5.549	33.4-34.2 RADIOLOCATION 5.549
34.2-34.7 RADIOLOCATION SPACE RESEARCH (deep space) (Earth-to-space) 5.549	34.2-34.7 RADIOLOCATION SPACE RESEARCH (deep space) (Earth-to-space) 5.549
34.7-35.2 RADIOLOCATION Space research 5.550 5.549	34.7-35.2 RADIOLOCATION Space research 5.550 5.549
35.2-35.5 METEOROLOGICAL AIDS RADIOLOCATION 5.549	35.2-35.5 METEOROLOGICAL AIDS RADIOLOCATION 5.549
35.5-36 METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.549 5.549A	35.5-36 METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.549 5.549A
36-37 EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) 5.149 5.550A	36-37 EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) 5.149 5.550A
37-37.5 FIXED MOBILE except aeronautical mobile 5.550B SPACE RESEARCH (space-to-Earth) 5.547	37-37.5 FIXED MOBILE except aeronautical mobile 5.550B SPACE RESEARCH (space-to-Earth) 5.547

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
37.5-38 FIXED FIXED-SATELLITE (space-to-Earth) 5.550C MOBILE except aeronautical mobile 5.550B SPACE RESEARCH (space-to-Earth) Earth exploration-satellite (space-to-Earth) 5.547	37.5-38 FIXED FIXED-SATELLITE (space-to-Earth) 5.550C MOBILE except aeronautical mobile 5.550B SPACE RESEARCH (space-to-Earth) Earth exploration-satellite (space-to-Earth) 5.547
38-39.5 FIXED 5.550D FIXED-SATELLITE (space-to-Earth) 5.550C MOBILE 5.550B Earth exploration-satellite (space-to-Earth) 5.547	38-39.5 FIXED 5.550D FIXED-SATELLITE (space-to-Earth) 5.550C MOBILE 5.550B Earth exploration-satellite (space-to-Earth) 5.547
39.5-40 FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.550C MOBILE 5.550B MOBILE-SATELLITE (space-to-Earth) Earth exploration-satellite (space-to-Earth) 5.547 5.550E	39.5-40 FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.550C MOBILE 5.550B MOBILE-SATELLITE (space-to-Earth) Earth exploration-satellite (space-to-Earth) 5.547 5.550E
40-40.5 EARTH EXPLORATION-SATELLITE (Earth-to-space) FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.550C MOBILE 5.550B MOBILE-SATELLITE (space-to-Earth) SPACE RESEARCH (Earth-to-space) Earth exploration-satellite (space-to-Earth) 5.550E	40-40.5 EARTH EXPLORATION-SATELLITE (Earth-to-space) FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.550C MOBILE 5.550B MOBILE-SATELLITE (space-to-Earth) SPACE RESEARCH (Earth-to-space) Earth exploration-satellite (space-to-Earth) 5.550E
40.5-41 FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.550C LAND MOBILE 5.550B BROADCASTING BROADCASTING-SATELLITE Aeronautical mobile Maritime mobile Mobile-satellite (space-to-Earth) 5.547	40.5-41 FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.550C LAND MOBILE 5.550B BROADCASTING BROADCASTING-SATELLITE Aeronautical mobile Maritime mobile Mobile-satellite (space-to-Earth) 5.547
41-42.5 FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.550C LAND MOBILE 5.550B BROADCASTING BROADCASTING-SATELLITE Aeronautical mobile Maritime mobile 5.547 5.551F 5.551H 5.551I	41-42.5 FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.550C LAND MOBILE 5.550B BROADCASTING BROADCASTING-SATELLITE Aeronautical mobile Maritime mobile 5.547 5.551F 5.551H 5.551I

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
42.5-43.5 FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE except aeronautical mobile 5.550B RADIO ASTRONOMY 5.149 5.547	42.5-43.5 FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE except aeronautical mobile 5.550B RADIO ASTRONOMY 5.149 5.547
43.5-47 MOBILE 5.553 5.553A MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554	43.5-47 MOBILE 5.553 5.553A MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554
47-47.2 AMATEUR AMATEUR-SATELLITE	47-47.2 AMATEUR AMATEUR-SATELLITE
47.2-47.5 FIXED FIXED-SATELLITE (Earth-to-space) 5.550C 5.552 MOBILE 5.553B 5.552A	47.2-47.5 FIXED FIXED-SATELLITE (Earth-to-space) 5.550C 5.552 MOBILE 5.553B 5.552A
47.5-47.9 FIXED FIXED-SATELLITE (Earth-to-space) 5.550C 5.552 MOBILE 5.553B	47.5-47.9 FIXED FIXED-SATELLITE (Earth-to-space) 5.550C 5.552 MOBILE 5.553B
47.9-48.2 FIXED FIXED-SATELLITE (Earth-to-space) 5.550C 5.552 MOBILE 5.553B 5.552A	47.9-48.2 FIXED FIXED-SATELLITE (Earth-to-space) 5.550C 5.552 MOBILE 5.553B 5.552A
48.2-50.2 FIXED FIXED-SATELLITE (Earth-to-space) 5.338A 5.516B 5.550C 5.552 MOBILE 5.149 5.340 5.555	48.2-50.2 FIXED FIXED-SATELLITE (Earth-to-space) 5.338A 5.516B 5.550C 5.552 MOBILE 5.149 5.340 5.555
50.2-50.4 EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	50.2-50.4 EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340
50.4-51.4 FIXED FIXED-SATELLITE (Earth-to-space) 5.338A 5.550C MOBILE Mobile-satellite (Earth-to-space)	50.4-51.4 FIXED FIXED-SATELLITE (Earth-to-space) 5.338A 5.550C MOBILE Mobile-satellite (Earth-to-space)
51.4-52.4 FIXED FIXED-SATELLITE (Earth-to-space) 5.555C MOBILE 5.338A 5.547 5.556	51.4-52.4 FIXED FIXED-SATELLITE (Earth-to-space) 5.555C MOBILE 5.338A 5.547 5.556

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
52.4-52.6 FIXED 5.338A MOBILE 5.547 5.556	52.4-52.6 FIXED 5.338A MOBILE 5.547 5.556
52.6-54.25 EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340 5.556	52.6-54.25 EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340 5.556
54.25-55.78 EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.556A SPACE RESEARCH (passive) 5.556B	54.25-55.78 EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.556A SPACE RESEARCH (passive) 5.556B
55.78-56.9 EARTH EXPLORATION-SATELLITE (passive) FIXED 5.557A INTER-SATELLITE 5.556A MOBILE 5.558 SPACE RESEARCH (passive) 5.547 5.557	55.78-56.9 EARTH EXPLORATION-SATELLITE (passive) FIXED 5.557A INTER-SATELLITE 5.556A MOBILE 5.558 SPACE RESEARCH (passive) 5.547 5.557
56.9-57 EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.558A MOBILE 5.558 SPACE RESEARCH (passive) 5.547 5.557	56.9-57 EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.558A MOBILE 5.558 SPACE RESEARCH (passive) 5.547 5.557
57-58.2 EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.556A MOBILE 5.558 SPACE RESEARCH (passive) 5.547 5.557	57-58.2 EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.556A MOBILE 5.558 SPACE RESEARCH (passive) 5.547 5.557
58.2-59 EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) 5.547 5.556	58.2-59 EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) 5.547 5.556
59-59.3 EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.556A MOBILE 5.558 RADIOLOCATION 5.559 SPACE RESEARCH (passive)	59-59.3 EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.556A MOBILE 5.558 RADIOLOCATION 5.559 SPACE RESEARCH (passive)

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
59.3-64 FIXED INTER-SATELLITE MOBILE 5.558 RADIOLOCATION 5.559 5.138	59.3-64 FIXED INTER-SATELLITE MOBILE 5.558 RADIOLOCATION 5.559 5.138
64-65 FIXED INTER-SATELLITE MOBILE except aeronautical mobile 5.547 5.556	64-65 FIXED INTER-SATELLITE MOBILE except aeronautical mobile 5.547 5.556
65-66 EARTH EXPLORATION-SATELLITE FIXED INTER-SATELLITE MOBILE except aeronautical mobile SPACE RESEARCH 5.547	65-66 EARTH EXPLORATION-SATELLITE FIXED INTER-SATELLITE MOBILE except aeronautical mobile SPACE RESEARCH 5.547
66-71 INTER-SATELLITE MOBILE 5.553 5.558 5.559AA MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554	66-71 INTER-SATELLITE MOBILE 5.553 5.558 5.559AA MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554
71-74 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth)	71-74 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth)
74-76 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE BROADCASTING BROADCASTING-SATELLITE Space research (space-to-Earth) 5.561	74-76 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE BROADCASTING BROADCASTING-SATELLITE Space research (space-to-Earth) 5.561
76-77.5 RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite Space research (space-to-Earth) 5.149	76-77.5 RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite Space research (space-to-Earth) 5.149

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
77.5-78 AMATEUR AMATEUR-SATELLITE RADIOLOCATION 5.559B Radio astronomy Space research (space-to-Earth) 5.149	77.5-78 AMATEUR AMATEUR-SATELLITE RADIOLOCATION 5.559B Radio astronomy Space research (space-to-Earth) 5.149
78-79 RADIOLOCATION Amateur Amateur-satellite Radio astronomy Space research (space-to-Earth) 5.149 5.560	78-79 RADIOLOCATION Amateur Amateur-satellite Radio astronomy Space research (space-to-Earth) 5.149 5.560
79-81 RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite Space research (space-to-Earth) 5.149	79-81 RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite Space research (space-to-Earth) 5.149
81-84 FIXED 5.338A FIXED-SATELLITE (Earth-to-space) MOBILE MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY Space research (space-to-Earth) 5.149 5.561A	81-84 FIXED 5.338A FIXED-SATELLITE (Earth-to-space) MOBILE MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY Space research (space-to-Earth) 5.149 5.561A
84-86 FIXED 5.338A FIXED-SATELLITE (Earth-to-space) 5.561B MOBILE RADIO ASTRONOMY 5.149	84-86 FIXED 5.338A FIXED-SATELLITE (Earth-to-space) 5.561B MOBILE RADIO ASTRONOMY 5.149
86-92 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	86-92 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340
92-94 FIXED 5.338A MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149	92-94 FIXED 5.338A MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
94-94.1 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) Radio astronomy 5.562 5.562A	94-94.1 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) Radio astronomy 5.562 5.562A
94.1-95 FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149	94.1-95 FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149
95-100 FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.149 5.554	95-100 FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.149 5.554
100-102 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341	100-102 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341
102-105 FIXED MOBILE RADIO ASTRONOMY 5.149 5.341	102-105 FIXED MOBILE RADIO ASTRONOMY 5.149 5.341
105-109.5 FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341	105-109.5 FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341
109.5-111.8 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341	109.5-111.8 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341
111.8-114.25 FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341	111.8-114.25 FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
114.25-116 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341	114.25-116 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341
116-119.98 EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562C SPACE RESEARCH (passive) 5.341	116-119.98 EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562C SPACE RESEARCH (passive) 5.341
119.98-122.25 EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562C SPACE RESEARCH (passive) 5.138 5.341	119.98-122.25 EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562C SPACE RESEARCH (passive) 5.138 5.341
122.25-123 FIXED INTER-SATELLITE MOBILE 5.558 Amateur 5.138	122.25-123 FIXED INTER-SATELLITE MOBILE 5.558 Amateur 5.138
123-130 FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) RADIONAVIGATION RADIONAVIGATION-SATELLITE Radio astronomy 5.562D 5.149 5.554	123-130 FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) RADIONAVIGATION RADIONAVIGATION-SATELLITE Radio astronomy 5.562D 5.149 5.554
130-134 EARTH EXPLORATION-SATELLITE (active) 5.562E FIXED INTER-SATELLITE MOBILE 5.558 RADIO ASTRONOMY 5.149 5.562A	130-134 EARTH EXPLORATION-SATELLITE (active) 5.562E FIXED INTER-SATELLITE MOBILE 5.558 RADIO ASTRONOMY 5.149 5.562A
134-136 AMATEUR AMATEUR-SATELLITE Radio astronomy	134-136 AMATEUR AMATEUR-SATELLITE Radio astronomy
136-141 RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite 5.149	136-141 RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite 5.149

ITU Region 2 Allocations	Turks and Caicos Allocations
GHz	
141-148.5 FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149	141-148.5 FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149
148.5-151.5 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	148.5-151.5 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340
151.5-155.5 FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149	151.5-155.5 FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149
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3 Footnotes from the Radio Regulations

Number	Footnote
5.43	Administrations authorizing the use of frequencies below 8.3 kHz shall ensure that no harmful interference is caused to services to which the bands above 8.3 kHz are allocated. (WRC-12)
5.44	Administrations conducting scientific research using frequencies below 8.3 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. (WRC-12)
5.54A	Use of the 8.3-11.3 kHz frequency band by stations in the meteorological aids service is limited to passive use only. In the band 9-11.3 kHz, meteorological aids stations shall not claim protection from stations of the radionavigation service submitted for notification to the Bureau prior to 1 January 2013. For sharing between stations of the meteorological aids service and stations in the radionavigation service submitted for notification after this date, the most recent version of Recommendation ITU-R RS.1881 should be applied. (WRC-12)
5.54B	Additional allocation: in Algeria, Saudi Arabia, Bahrain, Egypt, the United Arab Emirates, the Russian Federation, Iran (Islamic Republic of), Iraq, Kuwait, Lebanon, Morocco, Qatar, the Syrian Arab Republic, Sudan and Tunisia, the frequency band 8.3-9 kHz is also allocated to the radionavigation, fixed and mobile services on a primary basis. (WRC-15)
5.54C	Additional allocation: in China, the frequency band 8.3-9 kHz is also allocated to the maritime radionavigation and maritime mobile services on a primary basis. (WRC-12)
5.55	Additional allocation: in Armenia, the Russian Federation, Georgia, Kyrgyzstan, Tajikistan and Turkmenistan, the frequency band 14-17 kHz is also allocated to the radionavigation service on a primary basis. (WRC-15)
5.56	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, the Russian Federation, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan, the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions. (WRC-12)
5.57	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.
5.58	Additional allocation: in Armenia, Azerbaijan, the Russian Federation, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan, the band 67-70 kHz is also allocated to the radionavigation service on a primary basis. (WRC-2000)
5.59	Different category of service: in Bangladesh and Pakistan, the allocation of the bands 70-72 kHz and 84-86 kHz to the fixed and maritime mobile services is on a primary basis (see No. 5.33). (WRC-2000)
5.60	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.
5.61	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. 9.21 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.
5.62	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.
5.63	(SUP - WRC-97)

5.64	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.
5.65	Different category of service: in Bangladesh, 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. 5.33). (WRC-2000)
5.66	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. 5.33) and to the radionavigation service on a secondary basis (see No. 5.32).
5.67	Additional allocation: in Kyrgyzstan and Turkmenistan, the frequency 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. (WRC-19)
5.67A	Stations in the amateur service using frequencies in the band 135.7-137.8 kHz shall not exceed a maximum radiated power of 1 W (e.i.r.p.) and shall not cause harmful interference to stations of the radionavigation service operating in countries listed in No. 5.67. (WRC-07)
5.67B	The use of the frequency band 135.7-137.8 kHz in Algeria, Egypt, Iraq, Lebanon, Syrian Arab Republic, Sudan, South Sudan and Tunisia is limited to the fixed and maritime mobile services. The amateur service shall not be used in the above-mentioned countries in the frequency band 135.7-137.8 kHz, and this should be taken into account by the countries authorizing such use. (WRC-19)
5.68	Alternative allocation: in Congo (Rep. of the), the Dem. Rep. of the Congo and South Africa, the frequency band 160-200 kHz is allocated to the fixed service on a primary basis. (WRC-15)
5.69	Additional allocation: in Somalia, the band 200-255 kHz is also allocated to the aeronautical radionavigation service on a primary basis.
5.70	Alternative allocation: in Angola, Botswana, Burundi, the Central African Rep., Congo (Rep. of the), Eswatini, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Nigeria, Oman, the Dem. Rep. of the Congo, South Africa, Tanzania, Chad, Zambia and Zimbabwe, the frequency band 200-283.5 kHz is allocated to the aeronautical radionavigation service on a primary basis. (WRC-19)
5.71	(SUP - WRC-19)
5.72	(SUP - WRC-12)
5.73	The band 285-325 kHz (283.5-325 kHz in Region 1) in the maritime radionavigation service may be used to transmit supplementary navigational information using narrow-band techniques, on condition that no harmful interference is caused to radiobeacon stations operating in the radionavigation service. (WRC-97)
5.74	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.
5.75	Different category of service: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Moldova, Kyrgyzstan, Tajikistan, Turkmenistan, Ukraine and the Black Sea areas of 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. (WRC-07)
5.76	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.

5.77	Different category of service: in Australia, China, the French overseas communities of Region 3, Korea (Rep. of), India, Iran (Islamic Republic of), Japan, Pakistan, Papua New Guinea, the Dem. People's Rep. of Korea and Sri Lanka, the allocation of the frequency band 415-495 kHz to the aeronautical radionavigation service is on a primary basis. In Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Latvia, Uzbekistan and Kyrgyzstan, the allocation of the frequency band 435-495 kHz to the aeronautical radionavigation service is on a primary basis. Administrations in all the aforementioned countries shall take all practical steps necessary to ensure that aeronautical radionavigation stations in the frequency band 435-495 kHz do not cause interference to reception by coast stations of transmissions from ship stations on frequencies designated for ship stations on a worldwide basis. (WRC-19)
5.78	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.
5.79	In the maritime mobile service, the frequency bands 415-495 kHz and 505-526.5 kHz are limited to radiotelegraphy and may also be used for the NAVDAT system in accordance with the most recent version of Recommendation ITU-R M.2010, subject to agreement between interested and affected administrations. NAVDAT transmitting stations are limited to coast stations. (WRC-19)
5.79A	When establishing coast stations in the NAVTEX service on the frequencies 490 kHz, 518 kHz and 4 209.5 kHz, administrations are strongly recommended to coordinate the operating characteristics in accordance with the procedures of the International Maritime Organization (IMO) (see Resolution 339 (Rev.WRC-07)). (WRC-07)
5.80	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.
5.80A	The maximum equivalent isotropically radiated power (e.i.r.p.) of stations in the amateur service using frequencies in the band 472-479 kHz shall not exceed 1 W. Administrations may increase this limit of e.i.r.p. to 5 W in portions of their territory which are at a distance of over 800 km from the borders of Algeria, Saudi Arabia, Azerbaijan, Bahrain, Belarus, China, Comoros, Djibouti, Egypt, United Arab Emirates, the Russian Federation, Iran (Islamic Republic of), Iraq, Jordan, Kazakhstan, Kuwait, Lebanon, Libya, Morocco, Mauritania, Oman, Uzbekistan, Qatar, Syrian Arab Republic, Kyrgyzstan, Somalia, Sudan, Tunisia, Ukraine and Yemen. In this frequency band, stations in the amateur service shall not cause harmful interference to, or claim protection from, stations of the aeronautical radionavigation service. (WRC-12)
5.80B	The use of the frequency band 472-479 kHz in Algeria, Saudi Arabia, Azerbaijan, Bahrain, Belarus, China, Comoros, Djibouti, Egypt, United Arab Emirates, the Russian Federation, Iraq, Jordan, Kazakhstan, Kuwait, Lebanon, Libya, Mauritania, Oman, Uzbekistan, Qatar, Syrian Arab Republic, Kyrgyzstan, Somalia, Sudan, Tunisia and Yemen is limited to the maritime mobile and aeronautical radionavigation services. The amateur service shall not be used in the above-mentioned countries in this frequency band, and this should be taken into account by the countries authorizing such use. (WRC-12)
5.81	(SUP - WRC-2000)
5.82	In the maritime mobile service, the frequency 490 kHz is 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 31 and 52. In using the frequency 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. In using the frequency band 472-479 kHz for the amateur service, administrations shall ensure that no harmful interference is caused to the frequency 490 kHz. (WRC-12)
5.82A	(SUP - WRC-12)
5.82B	(SUP - WRC-12)
5.82 C	The frequency band 495-505 kHz is used for the international NAVDAT system as described in the most recent version of Recommendation ITU-R M.2010. NAVDAT transmitting stations are limited to coast stations. (WRC-19)
5.83	(SUP - WRC-07)
5.84	The conditions for the use of the frequency 518 kHz by the maritime mobile service are prescribed in Articles 31 and 52. (WRC-07)

5.85	Not used.
5.86	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.
5.87	Additional allocation: in Angola, Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia and Niger, the frequency band 526.5-535 kHz is also allocated to the mobile service on a secondary basis. (WRC-19)
5.87A	Additional allocation: in Uzbekistan, the band 526.5-1 606.5 kHz is also allocated to the radionavigation service on a primary basis. Such use is subject to agreement obtained under No. 9.21 with administrations concerned and limited to ground-based radiobeacons in operation on 27 October 1997 until the end of their lifetime. (WRC-97)
5.88	Additional allocation: in China, the band 526.5-535 kHz is also allocated to the aeronautical radionavigation service on a secondary basis.
5.89	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).
5.90	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.
5.91	Additional allocation: in the Philippines and Sri Lanka, the band 1 606.5-1 705 kHz is also allocated to the broadcasting service on a secondary basis. (WRC-97)
5.92	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. 9.21. The radiated mean power of these stations shall not exceed 50 W.
5.93	Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Hungary, Kazakhstan, Latvia, Lithuania, Mongolia, Nigeria, Uzbekistan, Poland, Kyrgyzstan, Slovakia, Tajikistan, Chad, Turkmenistan and Ukraine, the frequency 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. 9.21. (WRC-15)
5.94 and 5.95	Not used.
5.96	In Germany, Armenia, Austria, Azerbaijan, Belarus, Croatia, Denmark, Estonia, the Russian Federation, Finland, Georgia, Hungary, Ireland, Iceland, Israel, Kazakhstan, Latvia, Liechtenstein, Lithuania, Malta, Moldova, Norway, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., the United Kingdom, Sweden, Switzerland, Tajikistan, Turkmenistan and Ukraine, administrations may allocate up to 200 kHz to their amateur service in the frequency bands 1 715-1 800 kHz and 1 850-2 000 kHz. However, when allocating the frequency 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. (WRC-15)
5.97	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.
5.98	Alternative allocation: in Armenia, Azerbaijan, Belarus, Belgium, Cameroon, Congo (Rep. of the), Denmark, Egypt, Eritrea, Spain, Ethiopia, the Russian Federation, Georgia, Greece, Italy, Kazakhstan, Lebanon, Lithuania, the Syrian Arab Republic, Kyrgyzstan, Somalia, Tajikistan, Tunisia, Turkmenistan and Turkey, the frequency band 1 810-1 830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-15)

5.99	Additional allocation: in Saudi Arabia, Austria, Iraq, Libya, Uzbekistan, Slovakia, Romania, Slovenia, Chad, and Togo, the band 1 810-1 830 kHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-12)
5.100	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. 5.98 and 5.99 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. 5.98 and 5.99.
5.101	(SUP - WRC-12)
5.102	Alternative allocation: in Bolivia, Chile, Paraguay and Peru, the frequency band 1 850-2 000 kHz is allocated to the fixed, mobile except aeronautical mobile, radiolocation and radionavigation services on a primary basis. (WRC-15)
5.103	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.
5.104	In Region 1, the use of the band 2 025-2 045 kHz by the meteorological aids service is limited to oceanographic buoy stations.
5.105	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. 52.165.
5.106	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.
5.107	Additional allocation: in Saudi Arabia, Eritrea, Eswatini, Ethiopia, Iraq, Libya and Somalia, the frequency 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. (WRC-19)
5.108	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 31 and 52. (WRC-07)
5.109	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 31.
5.110	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 31.
5.111	The carrier frequencies 2 182 kHz, 3 023 kHz, 5 680 kHz, 8 364 kHz and the frequencies 121.5 MHz, 156.525 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 31. 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. (WRC-07)
5.112	Alternative allocation: in Sri Lanka, the frequency band 2 194-2 300 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)
5.113	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. 5.16 to 5.20, 5.21 and 23.3 to 23.10.
5.114	Alternative allocation: in Iraq, the frequency band 2 502-2 625 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)

5.115	The carrier (reference) frequencies 3 023 kHz and 5 680 kHz may also be used, in accordance with Article 31, by stations of the maritime mobile service engaged in coordinated search and rescue operations. (WRC-07)
5.116	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.
5.117	Alternative allocation: in Côte d'Ivoire, Egypt, Liberia, Sri Lanka and Togo, the frequency band 3 155-3 200 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)
5.118	Additional allocation: in the United States, Mexico and Peru, the frequency band 3 230-3 400 kHz is also allocated to the radiolocation service on a secondary basis. (WRC-19)
5.119	Additional allocation: in Peru, the frequency band 3 500-3 750 kHz is also allocated to the fixed and mobile services on a primary basis. (WRC-15)
5.120	(SUP - WRC-2000)
5.121	Not used.
5.122	Alternative allocation: in Bolivia, Chile, Ecuador, Paraguay and Peru, the frequency band 3 750-4 000 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-15)
5.123	Additional allocation: in Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe, the frequency band 3 900-3 950 kHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. 9.21. (WRC-19)
5.124	(SUP - WRC-2000)
5.125	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.
5.126	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.
5.127	The use of the band 4 000-4 063 kHz by the maritime mobile service is limited to ship stations using radiotelephony (see No. 52.220 and Appendix 17).
5.128	Frequencies in the frequency 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, on condition that harmful interference is not caused to the maritime mobile service. In addition, in Afghanistan, Argentina, Armenia, Belarus, Botswana, Burkina Faso, the Central African Rep., China, the Russian Federation, Georgia, India, Kazakhstan, Mali, Niger, Pakistan, Kyrgyzstan, Tajikistan, Chad, Turkmenistan and Ukraine, in the frequency bands 4 063-4 123 kHz, 4 130-4 133 kHz and 4 408-4 438 kHz, stations in the fixed service, with a mean power not exceeding 1 kW, can be operated on condition that they are situated at least 600 km from the coast and that harmful interference is not caused to the maritime mobile service. (WRC-19)
5.129	(SUP - WRC-07)
5.130	The conditions for the use of the carrier frequencies 4 125 kHz and 6 215 kHz are prescribed in Articles 31 and 52. (WRC-07)
5.131	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. (WRC-97)
5.132	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 Appendix 17).

5.132A	Stations in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the fixed or mobile services. Applications of the radiolocation service are limited to oceanographic radars operating in accordance with Resolution 612 (Rev.WRC-12). (WRC-12)
5.132B	Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency band 4 438- 4 488 kHz is allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis. (WRC-19)
5.133	Different category of service: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Latvia, Lithuania, Niger, Uzbekistan, Kyrgyzstan, 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. 5.33). (WRC-12)
5.133A	Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency bands 5 250- 5 275 kHz and 26 200-26 350 kHz are allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)
5.133B	Stations in the amateur service using the frequency band 5 351.5-5 366.5 kHz shall not exceed a maximum radiated power of 15 W (e.i.r.p.). However, in Region 2 in Mexico, stations in the amateur service using the frequency band 5 351.5-5 366.5 kHz shall not exceed a maximum radiated power of 20 W (e.i.r.p.). In the following Region 2 countries: Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Dominica, El Salvador, Ecuador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Saint Lucia, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela, as well as the overseas countries and territories within the Kingdom of the Netherlands in Region 2, stations in the amateur service using the frequency band 5 351.5-5 366.5 kHz shall not exceed a maximum radiated power of 25 W (e.i.r.p.). (WRC-19)
5.134	The use of the frequency 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 subject to the application of the procedure of Article 12. Administrations are encouraged to use these frequency bands to facilitate the introduction of digitally modulated emissions in accordance with the provisions of Resolution 517 (Rev.WRC-19). (WRC-19)
5.135	(SUP - WRC-97)
5.136	Additional allocation: frequencies in the band 5 900-5 950 kHz may be used by stations in the following services, communicating only within the boundary of the country in which they are located: fixed service (in all three Regions), land mobile service (in Region 1), mobile except aeronautical mobile (R) service (in Regions 2 and 3), 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. (WRC-07)
5.137	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.

5.138	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. 5.280, 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.
5.138 A	(SUP - WRC-12)
5.139	(SUP - WRC-12)
5.140	Additional allocation: in Angola, Iraq, Somalia and Togo, the frequency band 7 000-7 050 kHz is also allocated to the fixed service on a primary basis. (WRC-15)
5.141	Alternative allocation: in Egypt, Eritrea, Ethiopia, Guinea, Libya, Madagascar and Niger, the band 7 000-7 050 kHz is allocated to the fixed service on a primary basis. (WRC-12)
5.141A	Additional allocation: in Uzbekistan and Kyrgyzstan, the bands 7 000-7 100 kHz and 7 100-7 200 kHz are also allocated to the fixed and land mobile services on a secondary basis. (WRC-03)
5.141B	Additional allocation: in Algeria, Saudi Arabia, Australia, Bahrain, Botswana, Brunei Darussalam, China, Comoros, Korea (Rep. of), Diego Garcia, Djibouti, Egypt, United Arab Emirates, Eritrea, Guinea, Indonesia, Iran (Islamic Republic of), Japan, Jordan, Kuwait, Libya, Mali, Morocco, Mauritania, Niger, New Zealand, Oman, Papua New Guinea, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Sudan, South Sudan, Tunisia, Viet Nam and Yemen, the frequency band 7 100-7 200 kHz is also allocated to the fixed and the mobile, except aeronautical mobile (R), services on a primary basis. (WRC-19)
5.141C	(SUP - WRC-12)
5.142	The use of the band 7 200-7 300 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. (WRC-12)
5.143	Additional allocation: frequencies in the band 7 300-7 350 kHz may be used by stations in the fixed service and in the land mobile 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 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. (WRC-07)
5.143A	In Region 3, frequencies in the band 7 350-7 450 kHz may be used by stations in the fixed service on a primary basis and land mobile service on a secondary basis, 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. (WRC-12)
5.143B	In Region 1, frequencies in the band 7 350-7 450 kHz may be used by stations in the fixed and land mobile 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. The total radiated power of each station shall not exceed 24 dBW. (WRC-12)
5.143C	Additional allocation: in Algeria, Saudi Arabia, Bahrain, Comoros, Djibouti, Egypt, United Arab Emirates, Iran (Islamic Republic of), Jordan, Kuwait, Libya, Morocco, Mauritania, Niger, Oman, Qatar, the Syrian Arab Republic, Sudan, South Sudan, Tunisia and Yemen, the bands 7 350-7 400 kHz and 7 400-7 450 kHz are also allocated to the fixed service on a primary basis. (WRC-12)
5.143D	In Region 2, frequencies in the band 7 350-7 400 kHz may be used by stations in the fixed service and in the land mobile 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 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. (WRC-12)

5.143E	(SUP - WRC-12)
5.144	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.
5.145	The conditions for the use of the carrier frequencies 8 291 kHz, 12 290 kHz and 16 420 kHz are prescribed in Articles 31 and 52. (WRC-07)
5.145A	Stations in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the fixed service. Applications of the radiolocation service are limited to oceanographic radars operating in accordance with Resolution 612 (Rev.WRC-12). (WRC-12)
5.145B	Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency bands 9 305- 9 355 kHz and 16 100-16 200 kHz are allocated to the fixed service on a primary basis. (WRC-19)
5.146	Additional allocation: frequencies in 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 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. (WRC-07)
5.147	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.
5.148	(SUP - WRC-97)
5.149	In making assignments to stations of other services to which the bands: 13 360-13 410 kHz, 25 550-25 670 kHz, 37.5-38.25 MHz, 73-74.6 MHz in Regions 1 and 3, 150.05-153 MHz in Region 1, 322-328.6 MHz, 406.1-410 MHz, 608-614 MHz in Regions 1 and 3, 1 330-1 400 MHz, 1 610.6-1 613.8 MHz, 1 660-1 670 MHz, 1 718.8-1 722.2 MHz, 2 655-2 690 MHz, 3 260-3 267 MHz, 3 332-3 339 MHz, 3 345.8-3 352.5 MHz, 4 825-4 835 MHz, 4 950-4 990 MHz, 4 990-5 000 MHz, 6 650-6 675.2 MHz, 10.6-10.68 GHz, 14.47-14.5 GHz, 22.01-22.21 GHz, 22.21-22.5 GHz, 22.81-22.86 GHz, 23.07-23.12 GHz, 31.2-31.3 GHz, 31.5-31.8 GHz in Regions 1 and 3, 36.43-36.5 GHz, 42.5-43.5 GHz, 48.94-49.04 GHz, 76-86 GHz, 92-94 GHz, 94.1-100 GHz, 102-109.5 GHz, 111.8-114.25 GHz, 128.33-128.59 GHz, 129.23-129.49 GHz, 130-134 GHz, 136-148.5 GHz, 151.5-158.5 GHz, 168.59-168.93 GHz, 171.11-171.45 GHz, 172.31-172.65 GHz, 173.52-173.85 GHz, 195.75-196.15 GHz, 209-226 GHz, 241-250 GHz, 252-275 GHz are allocated, 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. 4.5 and 4.6 and Article 29). (WRC-07)
5.149A	Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency band 13 450- 13 550 kHz is allocated to the fixed service on a primary basis and to the mobile, except aeronautical mobile (R), service on a secondary basis. (WRC-19)
5.150	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. 15.13.
5.151	Additional allocation: frequencies in the bands 13 570-13 600 kHz and 13 800-13 870 kHz may be used by stations in the fixed service and in the mobile except aeronautical mobile (R) service, 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. (WRC-07)

5.152	Additional allocation: in Armenia, Azerbaijan, China, Côte d'Ivoire, the Russian Federation, Georgia, Iran (Islamic Republic of), Kazakhstan, Uzbekistan, Kyrgyzstan, 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. (WRC-03)
5.153	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.
5.154	Additional allocation: in Armenia, Azerbaijan, the Russian Federation, Georgia, Kazakhstan, Kyrgyzstan, 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. (WRC-03)
5.155	Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, Tajikistan, Turkmenistan and Ukraine, the band 21 850-21 870 kHz is also allocated to the aeronautical mobile (R) service on a primary basis. (WRC-07)
5.155A	In Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, 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. (WRC-07)
5.155 B	The band 21 870-21 924 kHz is used by the fixed service for provision of services related to aircraft flight safety.
5.156	Additional allocation: in Nigeria, the band 22 720-23 200 kHz is also allocated to the meteorological aids service (radiosondes) on a primary basis.
5.156A	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.
5.157	The use of the band 23 350-24 000 kHz by the maritime mobile service is limited to inter-ship radiotelegraphy.
5.158	Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency band 24 450- 24 600 kHz is allocated to the fixed and land mobile services on a primary basis. (WRC-19)
5.159	Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency band 39-39.5 MHz is allocated to the fixed and mobile services on a primary basis. (WRC-19)
5.160	Additional allocation: in Botswana, Burundi, Dem. Rep. of the Congo and Rwanda, the band 41-44 MHz is also allocated to the aeronautical radionavigation service on a primary basis. (WRC-12)
5.161	Additional allocation: in Iran (Islamic Republic of) and Japan, the band 41-44 MHz is also allocated to the radiolocation service on a secondary basis.
5.161A	Additional allocation: in Korea (Rep. of), the United States and Mexico, the frequency bands 41.015- 41.665 MHz and 43.35-44 MHz are also allocated to the radiolocation service on a primary basis. Stations in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the fixed or mobile services. Applications of the radiolocation service are limited to oceanographic radars operating in accordance with Resolution 612 (Rev.WRC-12). (WRC-19)
5.161B	Alternative allocation: in Albania, Germany, Armenia, Austria, Belarus, Belgium, Bosnia and Herzegovina, Cyprus, Vatican, Croatia, Denmark, Spain, Estonia, Finland, France, Greece, Hungary, Ireland, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Malta, Moldova, Monaco, Montenegro, Norway, Uzbekistan, Netherlands, Portugal, Kyrgyzstan, Slovakia, Czech Rep., Romania, United Kingdom, San Marino, Slovenia, Sweden, Switzerland, Turkey and Ukraine, the frequency band 42-42.5 MHz is allocated to the fixed and mobile services on a primary basis. (WRC-19)
5.162	Additional allocation: in Australia, the band 44-47 MHz is also allocated to the broadcasting service on a primary basis. (WRC-12)
5.162A	Additional allocation: in Germany, Austria, Belgium, Bosnia and Herzegovina, China, Vatican, Denmark, Spain, Estonia, the Russian Federation, Finland, France, Ireland, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Monaco, Montenegro, Norway, the Netherlands, Poland, Portugal, the Czech Rep., the United Kingdom, Serbia, Slovenia, Sweden and Switzerland the frequency band 46-68 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution 217 (WRC-97). (WRC-19)
5.163	Additional allocation: in Armenia, Belarus, the Russian Federation, Georgia, Kazakhstan, Latvia, Moldova, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the frequency bands 47-48.5 MHz and 56.5-58 MHz are also allocated to the fixed and land mobile services on a secondary basis. (WRC-19)
5.164	Additional allocation: in Albania, Algeria, Germany, Austria, Belgium, Bosnia and Herzegovina, Botswana, Bulgaria, Côte d'Ivoire, Croatia, Denmark, Spain, Estonia, Eswatini, Finland, France, Gabon, Greece, Hungary, Ireland, Israel, Italy, Jordan, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, Madagascar, Mali, Malta, Morocco, Mauritania, Monaco, Montenegro, Nigeria, Norway, the Netherlands, Poland, Syrian Arab Republic, Slovakia, Czech Rep., Romania, the United Kingdom, Serbia, Slovenia, Sweden, Switzerland, Chad, Togo, Tunisia and Turkey, the frequency band 47-68 MHz, in South Africa the frequency band 47-50 MHz, and in Latvia the frequency bands 48.5-56.5 MHz and 58-68 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 frequency 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 frequency band. (WRC-19)

5.165	Additional allocation: in Angola, Cameroon, Congo (Rep. of the), Egypt, Madagascar, Mozambique, Niger, Somalia, Sudan, South Sudan, Tanzania and Chad, the frequency band 47-68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)
5.166	(SUP - WRC-15)
5.166A	Different category of service: in Austria, Cyprus, the Vatican, Croatia, Denmark, Spain, Finland, Hungary, Latvia, the Netherlands, the Czech Republic, the United Kingdom, Slovakia and Slovenia, the frequency band 50.0-50.5 MHz is allocated to the amateur service on a primary basis. Stations in the amateur service in these countries shall not cause harmful interference to, or claim protection from, stations of the broadcasting, fixed and mobile services operating in accordance with the Radio Regulations in the frequency band 50.0-50.5 MHz in the countries not listed in this provision. For a station of these services, the protection criteria in No. 5.169B shall also apply. In Region 1, with the exception of those countries listed in No. 5.169, wind profiler radars operating in the radiolocation service under No. 5.162A are authorized to operate on the basis of equality with stations in the amateur service in the frequency band 50.0-50.5 MHz. (WRC-19)
5.166B	In Region 1, stations in the amateur service operating on a secondary basis shall not cause harmful interference to, or claim protection from, stations of the broadcasting service. The field strength generated by an amateur station in Region 1 in the frequency band 50-52 MHz shall not exceed a calculated value of +6 dB(μ V/m) at a height of 10 m above ground for more than 10% of time along the border of a country with operational analogue broadcasting stations in Region 1 and of neighbouring countries with broadcasting stations in Region 3 listed in Nos. 5.167 and 5.168. (WRC-19)
5.166C	In Region 1, stations in the amateur service in the frequency band 50-52 MHz, with the exception of those countries listed in No. 5.169, shall not cause harmful interference to, or claim protection from, wind profiler radars operating in the radiolocation service under No. 5.162A. (WRC-19)
5.166D	Different category of service: in Lebanon, the frequency band 50-52 MHz is allocated to the amateur service on a primary basis. Stations in the amateur service in Lebanon shall not cause harmful interference to, or claim protection from, stations of the broadcasting, fixed and mobile services operating in accordance with the Radio Regulations in the frequency band 50-52 MHz in the countries not listed in this provision. (WRC-19)
5.166E	In the Russian Federation, only the frequency band 50.080-50.280 MHz is allocated to the amateur service on a secondary basis. The protection criteria for the other services in the countries not listed in this provision are specified in Nos. 5.166B and 5.169B. (WRC-19)
5.167	Alternative allocation: in Bangladesh, Brunei Darussalam, India, Iran (Islamic Republic of), Pakistan and Singapore, the frequency band 50-54 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis. (WRC-15)
5.167A	Additional allocation: in Indonesia and Thailand, the frequency band 50-54 MHz is also allocated to the fixed, mobile and broadcasting services on a primary basis. (WRC-15)

5.168	Additional allocation: in Australia, China and the Dem. People's Rep. of Korea, the band 50-54 MHz is also allocated to the broadcasting service on a primary basis.
5.169	Alternative allocation: in Botswana, Eswatini, Lesotho, Malawi, Namibia, Rwanda, South Africa, Zambia and Zimbabwe, the frequency band 50-54 MHz is allocated to the amateur service on a primary basis. In Senegal, the frequency band 50-51 MHz is allocated to the amateur service on a primary basis. (WRC-19)
5.169A	Alternative allocation: in the following countries in Region 1: Angola, Saudi Arabia, Bahrain, Burkina Faso, Burundi, the United Arab Emirates, Gambia, Jordan, Kenya, Kuwait, Mauritius, Mozambique, Oman, Uganda, Qatar, South Sudan and Tanzania, the frequency band 50-54 MHz is allocated to the amateur service on a primary basis. In Guinea-Bissau, the frequency band 50.0-50.5 MHz is allocated to the amateur service on a primary basis. In Djibouti, the frequency band 50-52 MHz is allocated to the amateur service on a primary basis. With the exception of those countries listed in No. 5.169, stations in the amateur service operating in Region 1 under this footnote, in all or part of the frequency band 50-54 MHz, shall not cause harmful interference to, or claim protection from, stations of other services operating in accordance with the Radio Regulations in Algeria, Egypt, Iran (Islamic Republic of), Iraq, Israel, Libya, Palestine*, the Syrian Arab Republic, the Dem. People's Republic of Korea, Sudan and Tunisia. The field strength generated by an amateur station in the frequency band 50-54 MHz shall not exceed a value of +6 dB(μ V/m) at a height of 10 m above ground for more than 10% of time along the borders of listed countries requiring protection. (WRC-19)
5.169B	Except countries listed under No. 5.169, stations in the amateur service used in Region 1, in all or part of the 50-54 MHz frequency band, shall not cause harmful interference to, or claim protection from, stations of other services used in accordance with the Radio Regulations in Algeria, Armenia, Azerbaijan, Belarus, Egypt, Russian Federation, Iran (Islamic Republic of), Iraq, Kazakhstan, Kyrgyzstan, Libya, Uzbekistan, Palestine*, the Syrian Arab Republic, Sudan, Tunisia and Ukraine. The field strength generated by an amateur station in the frequency band 50-54 MHz shall not exceed a value of +6 dB(μ V/m) at a height of 10 m above ground for more than 10% of time along the borders of the countries listed in this provision. (WRC-19) * Pursuant to Resolution 99 (Rev. Dubai, 2018) and taking into account the Israeli-Palestinian Interim Agreement of 28 September 1995.
5.170	Additional allocation: in New Zealand, the frequency band 51-54 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-15)
5.171	Additional allocation: in Botswana, Eswatini, Lesotho, Malawi, Mali, Namibia, Dem. Rep. of the Congo, Rwanda, South Africa, Zambia and Zimbabwe, the frequency band 54-68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)
5.172	Different category of service: in the French overseas departments and communities in Region 2 and Guyana, the allocation of the frequency band 54-68 MHz to the fixed and mobile services is on a primary basis (see No. 5.33). (WRC-15)
5.173	Different category of service: in the French overseas departments and communities in Region 2 and Guyana, the allocation of the frequency band 68-72 MHz to the fixed and mobile services is on a primary basis (see No. 5.33). (WRC-15)
5.174	(SUP - WRC-07)
5.175	Alternative allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Moldova, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the bands 68-73 MHz and 76-87.5 MHz are allocated to the broadcasting service on a primary basis. In Latvia and Lithuania, the bands 68-73 MHz and 76-87.5 MHz are allocated to the broadcasting and mobile, except aeronautical mobile, services 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. (WRC-07)

5.176	Additional allocation: in Australia, China, Korea (Rep. of), the Philippines, the Dem. People's Rep. of Korea and Samoa, the band 68-74 MHz is also allocated to the broadcasting service on a primary basis. (WRC-07)
5.177	Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Uzbekistan, Kyrgyzstan, 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. 9.21. (WRC-07)
5.178	Additional allocation: in Colombia, 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. (WRC-12)
5.179	Additional allocation: in Armenia, Azerbaijan, Belarus, China, the Russian Federation, Georgia, Kazakhstan, Lithuania, Mongolia, Kyrgyzstan, 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. (WRC-12)
5.180	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.
5.181	Additional allocation: in Egypt, Israel and the Syrian Arab Republic, the band 74.8-75.2 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. 9.21. 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. 9.21. (WRC-03)
5.182	Additional allocation: in Western Samoa, the band 75.4-87 MHz is also allocated to the broadcasting service on a primary basis.
5.183	Additional allocation: in China, Korea (Rep. of), Japan, the Philippines and the Dem. People's Rep. of Korea, the band 76-87 MHz is also allocated to the broadcasting service on a primary basis.
5.184	(SUP - WRC-07)
5.185	Different category of service: in the United States, the French overseas departments and communities in Region 2, Guyana and Paraguay, the allocation of the frequency band 76-88 MHz to the fixed and mobile services is on a primary basis (see No. 5.33). (WRC-15)
5.186	(SUP - WRC-97)
5.187	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).
5.188	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.
5.189	Not used.
5.190	Additional allocation: in 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. 9.21. (WRC-97)
5.191	Not used.
5.192	Additional allocation: in China and Korea (Rep. of), the band 100-108 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-97)
5.193	Not used.
5.194	Additional allocation: in Kyrgyzstan, Somalia and Turkmenistan, the frequency band 104-108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a secondary basis. (WRC-19)

5.195 and 5.196	Not used.
5.197	Additional allocation: in the Syrian Arab Republic, the band 108-111.975 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. 9.21. 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. 9.21. (WRC-12)
5.197A	Additional allocation: the band 108-117.975 MHz is also allocated on a primary basis to the aeronautical mobile (R) service, limited to systems operating in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution 413 (Rev.WRC-07)*. The use of the band 108-112 MHz by the aeronautical mobile (R) service shall be limited to systems composed of ground-based transmitters and associated receivers that provide navigational information in support of air navigation functions in accordance with recognized international aeronautical standards. (WRC-07) * Note by the Secretariat: This Resolution was revised by WRC-12.
5.198	(SUP - WRC-07)
5.199	(SUP - WRC-07)
5.200	In the band 117.975-137 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 31 for distress and safety purposes with stations of the aeronautical mobile service. (WRC-07)
5.201	Additional allocation: in Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, the Russian Federation, Georgia, Hungary, Iran (Islamic Republic of), Iraq (Republic of), Japan, Kazakhstan, Mali, Mongolia, Mozambique, Uzbekistan, Papua New Guinea, Poland, Kyrgyzstan, Romania, Senegal, Tajikistan, Turkmenistan and Ukraine, the frequency 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. (WRC-19)
5.202	Additional allocation: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bulgaria, the United Arab Emirates, the Russian Federation, Georgia, Iran (Islamic Republic of), Jordan, Mali, Oman, Uzbekistan, Poland, the Syrian Arab Republic, Kyrgyzstan, Romania, Senegal, Tajikistan, Turkmenistan and Ukraine, the frequency band 136- 137 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. (WRC-19)
5.203	(SUP - WRC-07)
5.203A	(SUP - WRC-07)
5.203B	(SUP - WRC-07)
5.203C	The use of the space operation service (space-to-Earth) with non-geostationary satellite short-duration mission systems in the frequency band 137-138 MHz is subject to Resolution 660 (WRC-19). Resolution 32 (WRC-19) applies. These systems shall not cause harmful interference to, or claim protection from, the existing services to which the frequency band is allocated on a primary basis. (WRC-19)
5.204	Different category of service: in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, China, Cuba, the United Arab Emirates, India, Indonesia, Iran (Islamic Republic of), Iraq, Kuwait, Montenegro, Oman, Pakistan, the Philippines, Qatar, Singapore, Thailand and Yemen, the frequency band 137-138 MHz is allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis (see No. 5.33). (WRC-19)
5.205	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. 5.33).

5.206	Different category of service: in Armenia, Azerbaijan, Belarus, Bulgaria, Egypt, the Russian Federation, Finland, France, Georgia, Greece, Kazakhstan, Lebanon, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, the Syrian Arab Republic, Slovakia, the Czech Rep., Romania, 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. 5.33). (WRC-2000)
5.207	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.
5.208	The use of the band 137-138 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. (WRC-97)
5.208A	In making assignments to space stations in the mobile-satellite service in the frequency bands 137- 138 MHz, 387-390 MHz and 400.15-401 MHz and in the maritime mobile-satellite service (space-to-Earth) in the frequency bands 157.1875-157.3375 MHz and 161.7875-161.9375 MHz, administrations shall take all practicable steps to protect the radio astronomy service in the frequency bands 150.05-153 MHz, 322-328.6 MHz, 406.1-410 MHz and 608-614 MHz from harmful interference from unwanted emissions as shown in the most recent version of Recommendation ITU-R RA.769. (WRC-19)
5.208B*	In the frequency bands:137-138 MHz,157.1875-157.3375 MHz,161.7875-161.9375 MHz,387-390 MHz,400.15-401MHz,1 452-1 492 MHz,1 525-1 610 MHz,1 613.8-1 626.5 MHz,2 655-2 690 MHz,21.4-22 GHz,Resolution739 (Rev.WRC-19) applies. (WRC-19) * This provision was previously numbered as No. 5.347A. It was renumbered to preserve the sequential order.
5.209	The use of the bands 137-138 MHz, 148-150.05 MHz, 399.9-400.05 MHz, 400.15-401 MHz,454-456 MHz and 459-460 MHz by the mobile-satellite service is limited to non-geostationary-satellite systems. (WRC-97)
5.209A	The use of the frequency band 137.175-137.825 MHz by non-geostationary-satellite systems in the space operation service identified as short-duration mission in accordance with Appendix 4 is not subject to No. 9.11A. (WRC-19)
5.210	Additional allocation: in Italy, the Czech Rep. and the United Kingdom, 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. (WRC-07)
5.211	Additional allocation: in Germany, Saudi Arabia, Austria, Bahrain, Belgium, Denmark, the United Arab Emirates, Spain, Finland, Greece, Guinea, Ireland, Israel, Kenya, Kuwait, Lebanon, Liechtenstein, Luxembourg, North Macedonia, Mali, Malta, Montenegro, Norway, the Netherlands, Qatar, Slovakia, the United Kingdom, Serbia, Slovenia, Somalia, Sweden, Switzerland, Tanzania, Tunisia and Turkey, the frequency band 138-144 MHz is also allocated to the maritime mobile and land mobile services on a primary basis. (WRC-19)
5.212	Alternative allocation: in Angola, Botswana, Cameroon, the Central African Rep., Congo (Rep. of the), Eswatini, Gabon, Gambia, Ghana, Guinea, Iraq, Jordan, Lesotho, Liberia, Libya, Malawi, Mozambique, Namibia, Niger, Oman, Uganda, Syrian Arab Republic, the Dem. Rep. of the Congo, Rwanda, Sierra Leone, South Africa, Chad, Togo, Zambia and Zimbabwe, the frequency band 138-144 MHz is allocated to the fixed and mobile services on a primary basis. (WRC-19)
5.213	Additional allocation: in China, the band 138-144 MHz is also allocated to the radiolocation service on a primary basis.
5.214	Additional allocation: in Eritrea, Ethiopia, Kenya, North Macedonia, Montenegro, Serbia, Somalia, Sudan, South Sudan and Tanzania, the frequency band 138-144 MHz is also allocated to the fixed service on a primary basis. (WRC-19)
5.215	Not used.
5.216	Additional allocation: in China, the band 144-146 MHz is also allocated to the aeronautical mobile (OR) service on a secondary basis.
5.217	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.
5.218	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. 9.21. The bandwidth of any individual transmission shall not exceed ± 25 kHz.

5.218A	The frequency band 148-149.9 MHz in the space operation service (Earth-to-space) may be used by non- geostationary-satellite systems with short-duration missions. Non-geostationary-satellite systems in the space operation service used for a short-duration mission in accordance with Resolution 32 (WRC-19) of the Radio Regulations are not subject to agreement under No. 9.21. At the stage of coordination, the provisions of Nos. 9.17 and 9.18 also apply. In the frequency band 148-149.9 MHz, non-geostationary-satellite systems with short-duration missions shall not cause unacceptable interference to, or claim protection from, existing primary services within this frequency band, or impose additional constraints on the space operation and mobile-satellite services. In addition, earth stations in non-geostationary-satellite systems in the space operation service with short-duration missions in the frequency band 148-149.9 MHz shall ensure that the power flux-density does not exceed $-149 \text{ dB(W/(m}^2 \cdot 4 \text{ kHz))}$ for more than 1% of time at the border of the territory of the following countries: Armenia, Azerbaijan, Belarus, China, Korea (Rep. of), Cuba, Russian Federation, India, Iran (Islamic Republic of), Japan, Kazakhstan, Malaysia, Uzbekistan, Kyrgyzstan, Thailand and Viet Nam. In case this power flux-density limit is exceeded, agreement under No. 9.21 is required to be obtained from countries mentioned in this footnote. (WRC-19)
5.219	The use of the frequency band 148-149.9 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. The mobile-satellite service shall not constrain the development and use of the fixed, mobile and space operation services in the frequency band 148-149.9 MHz. The use of the frequency band 148-149.9 MHz by non- geostationary-satellite systems in the space operation service identified as short-duration mission is not subject to No. 9.11A. (WRC-19)
5.220	The use of the frequency bands 149.9-150.05 MHz and 399.9-400.05 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. (WRC-15)
5.221	Stations of the mobile-satellite service in the frequency 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, Botswana, Brunei Darussalam, Bulgaria, Cameroon, China, Cyprus, Congo (Rep. of the), Korea (Rep. of), Côte d'Ivoire, Croatia, Cuba, Denmark, Djibouti, Egypt, the United Arab Emirates, Eritrea, Spain, Estonia, Eswatini, Ethiopia, the Russian Federation, Finland, France, Gabon, Georgia, Ghana, Greece, Guinea, Guinea Bissau, Hungary, India, Iran (Islamic Republic of), Ireland, Iceland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Lesotho, Latvia, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Malaysia, Mali, Malta, Mauritania, Moldova, Mongolia, Montenegro, Mozambique, Namibia, Norway, New Zealand, Oman, Uganda, Uzbekistan, Pakistan, Panama, Papua New Guinea, Paraguay, the Netherlands, the Philippines, Poland, Portugal, Qatar, the Syrian Arab Republic, Kyrgyzstan, Dem. People's Rep. of Korea, Slovakia, Romania, the United Kingdom, Senegal, Serbia, Sierra Leone, Singapore, Slovenia, Sudan, Sri Lanka, South Africa, Sweden, Switzerland, Tanzania, Chad, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Viet Nam, Yemen, Zambia and Zimbabwe. (WRC-19)
5.222	(SUP - WRC-15)
5.223	(SUP - WRC-15)
5.224	(SUP - WRC-97)
5.224A	(SUP - WRC-15)
5.224B	(SUP - WRC-15)
5.225	Additional allocation: in Australia and India, the band 150.05-153 MHz is also allocated to the radio astronomy service on a primary basis.

5.225A	<p>Additional allocation: in Algeria, Armenia, Azerbaijan, Belarus, China, the Russian Federation, France, Iran (Islamic Republic of), Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan, Ukraine and Viet Nam, the frequency band 154-156 MHz is also allocated to the radiolocation service on a primary basis. The usage of the frequency band 154-156 MHz by the radiolocation service shall be limited to space-object detection systems operating from terrestrial locations. The operation of stations in the radiolocation service in the frequency band 154-156 MHz shall be subject to agreement obtained under No. 9.21. For the identification of potentially affected administrations in Region 1, the instantaneous field-strength value of 12 dB(μV/m) for 10% of the time produced at 10 m above ground level in the 25 kHz reference frequency band at the border of the territory of any other administration shall be used. For the identification of potentially affected administrations in Region 3, the interference-to-noise ratio (I/N) value of -6 dB (N = -161 dBW/4 kHz), or -10 dB for applications with greater protection requirements, such as public protection and disaster relief (PPDR (N = -161 dBW/4 kHz)), for 1% of the time produced at 60 m above ground level at the border of the territory of any other administration shall be used. In the frequency bands 156.7625-156.8375 MHz, 156.5125-156.5375 MHz, 161.9625-161.9875 MHz, 162.0125-162.0375 MHz, out-of-band e.i.r.p. of space surveillance radars shall not exceed -16 dBW. Frequency assignments to the radiolocation service under this allocation in Ukraine shall not be used without the agreement of Moldova. (WRC-12)</p>
5.226	<p>The frequency 156.525 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service using digital selective calling (DSC). The conditions for the use of this frequency and the band 156.4875-156.5625 MHz are contained in Articles 31 and 52, and in Appendix 18.</p> <p>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 and the band 156.7625-156.8375 MHz are contained in Article 31 and Appendix 18.</p> <p>In the bands 156-156.4875 MHz, 156.5625-156.7625 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 31 and 52, and Appendix 18).</p> <p>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.</p> <p>However, the frequencies 156.8 MHz and 156.525 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. (WRC-07)</p>
5.227	<p>Additional allocation: the bands 156.4875-156.5125 MHz and 156.5375-156.5625 MHz are also allocated to the fixed and land mobile services on a primary basis. The use of these bands by the fixed and land mobile services shall not cause harmful interference to nor claim protection from the maritime mobile VHF radiocommunication service. (WRC-07)</p>
5.227A	(SUP - WRC-12)
5.228	<p>The use of the frequency bands 156.7625-156.7875 MHz and 156.8125-156.8375 MHz by the mobile- satellite service (Earth-to-space) is limited to the reception of automatic identification system (AIS) emissions of long- range AIS broadcast messages (Message 27, see the most recent version of Recommendation ITU-R M.1371). With the exception of AIS emissions, emissions in these frequency bands by systems operating in the maritime mobile service for communications shall not exceed 1 W. (WRC-12)</p>

5.228AB	The use of the frequency bands 157.1875-157.3375 MHz and 161.7875-161.9375 MHz by the maritime mobile-satellite service (Earth-to-space) is limited to non-geostationary-satellite systems operating in accordance with Appendix 18. (WRC-19)
5.228AC	The use of the frequency bands 157.1875-157.3375 MHz and 161.7875-161.9375 MHz by the maritime mobile-satellite service (space-to-Earth) is limited to non-geostationary-satellite systems operating in accordance with Appendix 18. Such use is subject to agreement obtained under No. 9.21 with respect to the terrestrial services in Azerbaijan, Belarus, China, Korea (Rep. of), Cuba, the Russian Federation, the Syrian Arab Republic, the Dem. People's Rep. of Korea, South Africa and Viet Nam. (WRC-19)
5.228A	The frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz may be used by aircraft stations for the purpose of search and rescue operations and other safety-related communications. (WRC-12)
5.228AA	The use of the frequency bands 161.9375-161.9625 MHz and 161.9875-162.0125 MHz by the maritime mobile-satellite (Earth-to-space) service is limited to the systems which operate in accordance with Appendix 18. (WRC-15)
5.228B	The use of the frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz by the fixed and land mobile services shall not cause harmful interference to, or claim protection from, the maritime mobile service. (WRC-12)
5.228C	The use of the frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz by the maritime mobile service and the mobile-satellite (Earth-to-space) service is limited to the automatic identification system (AIS). The use of these frequency bands by the aeronautical mobile (OR) service is limited to AIS emissions from search and rescue aircraft operations. The AIS operations in these frequency bands shall not constrain the development and use of the fixed and mobile services operating in the adjacent frequency bands. (WRC-12)
5.228D	The frequency bands 161.9625-161.9875 MHz (AIS 1) and 162.0125-162.0375 MHz (AIS 2) may continue to be used by the fixed and mobile services on a primary basis until 1 January 2025, at which time this allocation shall no longer be valid. Administrations are encouraged to make all practicable efforts to discontinue the use of these bands by the fixed and mobile services prior to the transition date. During this transition period, the maritime mobile service in these frequency bands has priority over the fixed, land mobile and aeronautical mobile services. (WRC-12)
5.228E	The use of the automatic identification system in the frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz by the aeronautical mobile (OR) service is limited to aircraft stations for the purpose of search and rescue operations and other safety-related communications. (WRC-12)
5.228F	The use of the frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz by the mobile- satellite service (Earth-to-space) is limited to the reception of automatic identification system emissions from stations operating in the maritime mobile service. (WRC-12)
5.229	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.
5.230	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. 9.21.
5.231	Additional allocation: in Afghanistan and China, 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. (WRC-12)
5.232	(SUP - WRC-15)
5.233	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. 9.21. These services shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations.

5.234	(SUP - WRC-15)
5.235	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.
5.236	Not used.
5.237	Additional allocation: in Congo (Rep. of the), Egypt, Eritrea, Ethiopia, Gambia, Guinea, Libya, Mali, Sierra Leone, Somalia and Chad, the band 174-223 MHz is also allocated to the fixed and mobile services on a secondary basis. (WRC-12)
5.238	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.
5.239	Not used.
5.240	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.
5.241	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.
5.242	Additional allocation: in Canada and Mexico, the frequency band 216-220 MHz is also allocated to the land mobile service on a primary basis. (WRC-19)
5.243	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.
5.244	(SUP - WRC-97)
5.245	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.
5.246	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. 5.33) 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.
5.247	Additional allocation: in Saudi Arabia, Bahrain, the United Arab Emirates, Jordan, Oman, Qatar and Syrian Arab Republic, the band 223-235 MHz is also allocated to the aeronautical radionavigation service on a primary basis.
5.248 and 5.249	Not used.
5.250	Additional allocation: in China, the band 225-235 MHz is also allocated to the radio astronomy service on a secondary basis.
5.251	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. 9.21.
5.252	Alternative allocation: in Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe, the frequency bands 230-238 MHz and 246-254 MHz are allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. 9.21. (WRC-19)
5.253	Not used.
5.254	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. 9.21, 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 except for the additional allocation made in footnote No. 5.256A. (WRC-03)

5.255	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 No. 9.11A.
5.256	The frequency 243 MHz is the frequency in this band for use by survival craft stations and equipment used for survival purposes. (WRC-07)
5.256A	Additional allocation: in China, the Russian Federation and Kazakhstan, the frequency band 258-261 MHz is also allocated to the space research service (Earth-to-space) and space operation service (Earth-to-space) on a primary basis. Stations in the space research service (Earth-to-space) and space operation service (Earth-to-space) shall not cause harmful interference to, or claim protection from, or constrain the use and development of, the mobile service systems and mobile-satellite service systems operating in the frequency band. Stations in space research service (Earth-to-space) and space operation service (Earth-to-space) shall not constrain the future development of fixed service systems of other countries. (WRC-15)
5.257	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. 9.21.
5.258	The use of the band 328.6-335.4 MHz by the aeronautical radionavigation service is limited to Instrument Landing Systems (glide path).
5.259	Additional allocation: in Egypt and the Syrian Arab Republic, the band 328.6-335.4 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. 9.21. 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. 9.21. (WRC-12)
5.260A	In the frequency band 399.9-400.05 MHz, the maximum e.i.r.p. of any emission of earth stations in the mobile-satellite service shall not exceed 5 dBW in any 4 kHz band and the maximum e.i.r.p. of each earth station in the mobile-satellite service shall not exceed 5 dBW in the whole 399.9-400.05 MHz frequency band. Until 22 November 2022, this limit shall not apply to satellite systems for which complete notification information has been received by the Radiocommunication Bureau by 22 November 2019 and that have been brought into use by that date. After 22 November 2022, these limits shall apply to all systems within the mobile-satellite service operating in this frequency band. In the frequency band 399.99-400.02 MHz, the e.i.r.p. limits as specified above shall apply after 22 November 2022 to all systems within the mobile-satellite service. Administrations are requested that their mobile- satellite service satellite links in the 399.99-400.02 MHz frequency band comply with the e.i.r.p. limits as specified above, after 22 November 2019. (WRC-19)
5.260B	In the frequency band 400.02-400.05 MHz, the provisions of No. 5.260A are not applicable for telecommand uplinks within the mobile-satellite service. (WRC-19)
5.261	Emissions shall be confined in a band of ± 25 kHz about the standard frequency 400.1 MHz.
5.262	Additional allocation: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Botswana, Colombia, Cuba, Egypt, the United Arab Emirates, Ecuador, the Russian Federation, Georgia, Hungary, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kazakhstan, Kuwait, Liberia, Malaysia, Moldova, Oman, Uzbekistan, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, Kyrgyzstan, Singapore, Somalia, Tajikistan, Chad, Turkmenistan and Ukraine, the band 400.05-401 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-12)
5.263	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.
5.264	The use of the band 400.15-401 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. The power flux-density limit indicated in Annex 1 of Appendix 5 shall apply until such time as a competent world radiocommunication conference revises it.

5.264A	<p>In the frequency band 401-403 MHz, the maximum e.i.r.p. of any emission of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 22 dBW in any 4 kHz band for geostationary-satellite systems and non-geostationary-satellite systems with an orbit of apogee equal or greater than 35 786 km.</p> <p>The maximum e.i.r.p. of any emission of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 7 dBW in any 4 kHz band for non-geostationary-satellite systems with an orbit of apogee lower than 35 786 km.</p> <p>The maximum e.i.r.p. of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 22 dBW for geostationary-satellite systems and non-geostationary-satellite systems with an orbit of apogee equal or greater than 35 786 km in the whole 401-403 MHz frequency band. The maximum e.i.r.p. of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 7 dBW for non-geostationary-satellite systems with an orbit of apogee lower than 35 786 km in the whole 401-403 MHz frequency band.</p> <p>Until 22 November 2029, these limits shall not apply to satellite systems for which complete notification information has been received by the Radiocommunication Bureau by 22 November 2019 and that have been brought into use by that date. After 22 November 2029, these limits shall apply to all systems within the meteorological-satellite service and the Earth exploration-satellite service operating in this frequency band. (WRC-19)</p>
5.264B	<p>Non-geostationary-satellite systems in the meteorological-satellite service and the Earth exploration-satellite service for which complete notification information has been received by the Radiocommunication Bureau before 28 April 2007 are exempt from provisions of No. 5.264A and may continue to operate in the frequency band 401.898-402.522 MHz on a primary basis without exceeding a maximum e.i.r.p. level of 12 dBW. (WRC-19)</p>
5.265	<p>In the frequency band 403-410 MHz, Resolution 205 (Rev.WRC-19) applies. (WRC-19)</p>
5.266	<p>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 31). (WRC-07)</p>
5.267	<p>Any emission capable of causing harmful interference to the authorized uses of the band 406-406.1 MHz is prohibited.</p>
5.268	<p>Use of the frequency band 410-420 MHz by the space research service is limited to space-to-space communication links with an orbiting, manned space vehicle. The power flux-density at the surface of the Earth produced by emissions from transmitting stations of the space research service (space-to-space) in the frequency band 410-420 MHz shall not exceed -153 dB(W/m²) for 0° ≤ θ ≤ 5°, -153 + 0.077 (θ - 5) dB(W/m²) for 5° ≤ θ ≤ 70° and -148 dB(W/m²) for 70° ≤ θ ≤ 90°, where θ is the angle of arrival of the radio-frequency wave and the reference bandwidth is 4 kHz. In this frequency band, stations of the space research service (space-to-space) shall not claim protection from, nor constrain the use and development of, stations of the fixed and mobile services. No. 4.10 does not apply. (WRC-15)</p>
5.269	<p>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. 5.33).</p>
5.270	<p>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.</p>
5.271	<p>Additional allocation: in Belarus, China, India, Kyrgyzstan and Turkmenistan, the band 420-460 MHz is also allocated to the aeronautical radionavigation service (radio altimeters) on a secondary basis. (WRC-07)</p>
5.272	<p>(SUP - WRC-12)</p>
5.273	<p>(SUP - WRC-12)</p>

5.274	Alternative allocation: in Denmark, Norway, Sweden and Chad, the bands 430-432 MHz and 438-440 MHz are allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-12)
5.275	Additional allocation: in Croatia, Estonia, Finland, Libya, North Macedonia, Montenegro and Serbia, the frequency bands 430-432 MHz and 438-440 MHz are also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)
5.276	Additional allocation: in Afghanistan, Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burkina Faso, Djibouti, Egypt, the United Arab Emirates, Ecuador, Eritrea, Ethiopia, Greece, Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Jordan, Kenya, Kuwait, Libya, Malaysia, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Somalia, Sudan, Switzerland, Thailand, Togo, Turkey and Yemen, the frequency band 430-440 MHz is also allocated to the fixed service on a primary basis and the frequency bands 430-435 MHz and 438-440 MHz are also allocated, except in Ecuador, to the mobile, except aeronautical mobile, service on a primary basis. (WRC-15)
5.277	Additional allocation: in Angola, Armenia, Azerbaijan, Belarus, Cameroon, Congo (Rep. of the), Djibouti, the Russian Federation, Georgia, Hungary, Israel, Kazakhstan, Mali, Uzbekistan, Poland, the Dem. Rep. of the Congo, Kyrgyzstan, Slovakia, Romania, Rwanda, Tajikistan, Chad, Turkmenistan and Ukraine, the frequency band 430-440 MHz is also allocated to the fixed service on a primary basis. (WRC-19)
5.278	Different category of service: in Argentina, Brazil, Colombia, Costa Rica, Cuba, Guyana, Honduras, Panama, Paraguay, Uruguay and Venezuela, the allocation of the frequency band 430-440 MHz to the amateur service is on a primary basis (see No. 5.33). (WRC-19)
5.279	Additional allocation: in Mexico, the frequency bands 430-435 MHz and 438-440 MHz are also allocated on a primary basis to the mobile, except aeronautical mobile, service, and on a secondary basis to the fixed service, subject to agreement obtained under No. 9.21. (WRC-19)
5.279A	The use of the frequency band 432-438 MHz by sensors in the Earth exploration-satellite service (active) shall be in accordance with Recommendation ITU-R RS.1260-2. Additionally, the Earth exploration-satellite service (active) in the frequency band 432-438 MHz shall not cause harmful interference to the aeronautical radionavigation service in China. The provisions of this footnote in no way diminish the obligation of the Earth exploration-satellite service (active) to operate as a secondary service in accordance with Nos. 5.29 and 5.30. (WRC-19)
5.280	In Germany, Austria, Bosnia and Herzegovina, Croatia, Liechtenstein, North Macedonia, Montenegro, Portugal, Serbia, Slovenia and Switzerland, the frequency 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 frequency band must accept harmful interference which may be caused by these applications. ISM equipment operating in this frequency band is subject to the provisions of No. 15.13. (WRC-19)
5.281	Additional allocation: in the French overseas departments and communities 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.
5.282	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. 5.43). 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. 25.11. 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.
5.283	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.
5.284	Additional allocation: in Canada, the band 440-450 MHz is also allocated to the amateur service on a secondary basis.

5.285	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. 5.33).
5.286	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. 9.21.
5.286A	The use of the bands 454-456 MHz and 459-460 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. (WRC-97)
5.286AA	The frequency band 450-470 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) - see Resolution 224 (Rev.WRC-19). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-19)
5.286B	The use of the band 454-455 MHz in the countries listed in No. 5.286D, 455-456 MHz and 459-460 MHz in Region 2, and 454-456 MHz and 459-460 MHz in the countries listed in No. 5.286E, by stations in the mobile-satellite service, 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. (WRC-97)
5.286C	The use of the band 454-455 MHz in the countries listed in No. 5.286D, 455-456 MHz and 459-460 MHz in Region 2, and 454-456 MHz and 459-460 MHz in the countries listed in No. 5.286E, by stations in the mobile-satellite service, shall not constrain the development and use of the fixed and mobile services operating in accordance with the Table of Frequency Allocations. (WRC-97)
5.286D	Additional allocation: in Canada, the United States and Panama, the band 454-455 MHz is also allocated to the mobile-satellite service (Earth-to-space) on a primary basis. (WRC-07)
5.286E	Additional allocation: in Cape Verde, Nepal and Nigeria, the bands 454-456 MHz and 459-460 MHz are also allocated to the mobile-satellite (Earth-to-space) service on a primary basis. (WRC-07)
5.287	Use of the frequency bands 457.5125-457.5875 MHz and 467.5125-467.5875 MHz by the maritime mobile service is limited to on-board communication stations. The characteristics of the equipment and the channelling arrangement shall be in accordance with Recommendation ITU-R M.1174-4. The use of these frequency bands in territorial waters is subject to the national regulations of the administration concerned. (WRC-19)
5.288	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.1174-4. (WRC-19)
5.289	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.
5.290	Different category of service: in Afghanistan, Azerbaijan, Belarus, China, the Russian Federation, Japan, Kyrgyzstan, Tajikistan and Turkmenistan, the allocation of the band 460-470 MHz to the meteorological-satellite service (space-to-Earth) is on a primary basis (see No. 5.33), subject to agreement obtained under No. 9.21. (WRC-12)
5.291	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. 9.21 and subject to not causing harmful interference to existing and planned broadcasting stations.
5.291A	Additional allocation: in Germany, Austria, Denmark, Estonia, Liechtenstein, the Czech Rep., Serbia and Switzerland, the frequency band 470-494 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution 217 (WRC-97). (WRC-15)
5.292	Different category of service: in Argentina, Uruguay and Venezuela, the allocation of the frequency band 470-512 MHz to the mobile service is on a primary basis (see No. 5.33), subject to agreement obtained under No. 9.21. (WRC-15)

5.293	Different category of service: in Canada, Chile, Cuba, the United States, Guyana, Jamaica and Panama, the allocation of the frequency bands 470-512 MHz and 614-806 MHz to the fixed service is on a primary basis (see No. 5.33), subject to agreement obtained under No. 9.21. In the Bahamas, Barbados, Canada, Chile, Cuba, the United States, Guyana, Jamaica, Mexico and Panama, the allocation of the frequency bands 470-512 MHz and 614-698 MHz to the mobile service is on a primary basis (see No. 5.33), subject to agreement obtained under No. 9.21. In Argentina and Ecuador, the allocation of the frequency band 470-512 MHz to the fixed and mobile services is on a primary basis (see No. 5.33), subject to agreement obtained under No. 9.21. (WRC-15)
5.294	Additional allocation: in Saudi Arabia, Cameroon, Côte d'Ivoire, Egypt, Ethiopia, Israel, Libya, the Syrian Arab Republic, Chad and Yemen, the frequency band 470-582 MHz is also allocated to the fixed service on a secondary basis. (WRC-15)
5.295	In the Bahamas, Barbados, Canada, the United States and Mexico, the frequency band 470-608 MHz, or portions thereof, is identified for International Mobile Telecommunications (IMT) - see Resolution 224 (Rev.WRC-19). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. Mobile service stations of the IMT system within the frequency band are subject to agreement obtained under No. 9.21 and shall not cause harmful interference to, or claim protection from, the broadcasting service of neighbouring countries. Nos. 5.43 and 5.43A apply. (WRC-19)
5.296	Additional allocation: in Albania, Germany, Angola, Saudi Arabia, Austria, Bahrain, Belgium, Benin, Bosnia and Herzegovina, Botswana, Bulgaria, Burkina Faso, Burundi, Cameroon, Vatican, Congo (Rep. of the), Côte d'Ivoire, Croatia, Denmark, Djibouti, Egypt, United Arab Emirates, Spain, Estonia, Eswatini, Finland, France, Gabon, Georgia, Ghana, Hungary, Iraq, Ireland, Iceland, Israel, Italy, Jordan, Kenya, Kuwait, Lesotho, Latvia, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Malawi, Mali, Malta, Morocco, Mauritius, Mauritania, Moldova, Monaco, Mozambique, Namibia, Niger, Nigeria, Norway, Oman, Uganda, the Netherlands, Poland, Portugal, Qatar, the Syrian Arab Republic, Slovakia, the Czech Republic, Romania, the United Kingdom, Rwanda, San Marino, Serbia, Sudan, South Africa, Sweden, Switzerland, Tanzania, Chad, Togo, Tunisia, Turkey, Ukraine, Zambia and Zimbabwe, the frequency band 470-694 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting and programme-making. Stations of the land mobile service in the countries listed in this footnote shall not cause harmful interference to existing or planned stations operating in accordance with the Table in countries other than those listed in this footnote. (WRC-19)
5.296A	In Micronesia, the Solomon Islands, Tuvalu and Vanuatu, the frequency band 470-698 MHz, or portions thereof, and in Bangladesh, Maldives and New Zealand, the frequency band 610-698 MHz, or portions thereof, are identified for use by these administrations wishing to implement International Mobile Telecommunications (IMT) - see Resolution 224 (Rev.WRC-19). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. The mobile allocation in this frequency band shall not be used for IMT systems unless subject to agreement obtained under No. 9.21 and shall not cause harmful interference to, or claim protection from, the broadcasting service of neighbouring countries. Nos. 5.43 and 5.43A apply. (WRC-19)
5.297	Additional allocation: in Canada, Costa Rica, Cuba, El Salvador, the United States, Guatemala, Guyana and Jamaica, the frequency band 512-608 MHz is also allocated to the fixed and mobile services on a primary basis, subject to agreement obtained under No. 9.21. In the Bahamas, Barbados and Mexico, the frequency band 512-608 MHz is also allocated to the mobile service on a primary basis, subject to agreement obtained under No. 9.21. In Mexico, the frequency band 512-608 MHz is also allocated on a secondary basis to the fixed service (see No. 5.32). (WRC-19)
5.298	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.
5.299	Not used.

5.300	Additional allocation: in Saudi Arabia, Cameroon, Egypt, United Arab Emirates, Israel, Jordan, Libya, Oman, Qatar, the Syrian Arab Republic and Sudan, the frequency band 582-790 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis. (WRC-15)
5.301	Not used.
5.302	(SUP - WRC-12)
5.303	Not used.
5.304	Additional allocation: in the African Broadcasting Area (see Nos. 5.10 to 5.13), the band 606-614 MHz is also allocated to the radio astronomy service on a primary basis.
5.305	Additional allocation: in China, the band 606-614 MHz is also allocated to the radio astronomy service on a primary basis.
5.306	Additional allocation: in Region 1, except in the African Broadcasting Area (see Nos. 5.10 to 5.13), and in Region 3, the band 608-614 MHz is also allocated to the radio astronomy service on a secondary basis.
5.307	Additional allocation: in India, the band 608-614 MHz is also allocated to the radio astronomy service on a primary basis.
5.308	Additional allocation: in Belize, Colombia and Guatemala, the frequency band 614-698 MHz is also allocated to the mobile service on a primary basis. Stations of the mobile service within the frequency band are subject to agreement obtained under No. 9.21. (WRC-19)
5.308A	In the Bahamas, Barbados, Belize, Canada, Colombia, the United States, Guatemala and Mexico, the frequency band 614-698 MHz, or portions thereof, is identified for International Mobile Telecommunications (IMT) - see Resolution 224 (Rev.WRC-19). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. Mobile service stations of the IMT system within the frequency band are subject to agreement obtained under No. 9.21 and shall not cause harmful interference to, or claim protection from, the broadcasting service of neighbouring countries. Nos. 5.43 and 5.43A apply. (WRC-19)
5.309	Different category of service: in El Salvador, the allocation of the frequency band 614-806 MHz to the fixed service is on a primary basis (see No. 5.33), subject to agreement obtained under No. 9.21. (WRC-15)
5.310	(SUP - WRC-97)
5.311	(SUP - WRC-07)
5.311A	(SUP - WRC-19)
5.312	Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the frequency band 645-862 MHz, and in Bulgaria the frequency bands 646-686 MHz, 726-753 MHz, 778-811 MHz and 822-852 MHz, are also allocated to the aeronautical radionavigation service on a primary basis. (WRC-19)
5.312A	In Region 1, the use of the frequency band 694-790 MHz by the mobile, except aeronautical mobile, service is subject to the provisions of Resolution 760 (Rev.WRC-19). See also Resolution 224 (Rev.WRC-19). (WRC-19)
5.313	(SUP - WRC-97)
5.313A	The frequency band, or portions of the frequency band 698-790 MHz, in Australia, Bangladesh, Brunei Darussalam, Cambodia, China, Korea (Rep. of), Fiji, India, Indonesia, Japan, Kiribati, Lao P.D.R., Malaysia, Myanmar (Union of), New Zealand, Pakistan, Papua New Guinea, the Philippines, the Dem. People's Rep. of Korea, Solomon Islands, Samoa, Singapore, Thailand, Tonga, Tuvalu, Vanuatu and Viet Nam, are identified for use by these administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-19)
5.313B	(SUP - WRC-15)
5.314	(SUP - WRC-15)
5.315	(SUP - WRC-15)

5.316	(SUP - WRC-15)
5.316A	(SUP - WRC-15)
5.316B	In Region 1, the allocation to the mobile, except aeronautical mobile, service in the frequency band 790-862 MHz is subject to agreement obtained under No. 9.21 with respect to the aeronautical radionavigation service in countries mentioned in No. 5.312. For countries party to the GE06 Agreement, the use of stations of the mobile service is also subject to the successful application of the procedures of that Agreement. Resolutions 224 (Rev.WRC-19) and 749 (Rev.WRC-19) shall apply, as appropriate. (WRC-19)
5.317	Additional allocation: in Region 2 (except Brazil, the United States and Mexico), the frequency band 806-890 MHz is also allocated to the mobile-satellite service on a primary basis, subject to agreement obtained under No. 9.21. The use of this service is intended for operation within national boundaries. (WRC-15)
5.317A	The parts of the frequency band 698-960 MHz in Region 2 and the frequency bands 694-790 MHz in Region 1 and 790-960 MHz in Regions 1 and 3 which are allocated to the mobile service on a primary basis are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) - see Resolutions 224 (Rev.WRC-19), 760 (Rev.WRC-19) and 749 (Rev.WRC-19), where applicable. This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-19)
5.318	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.
5.319	Additional allocation: in Belarus, the Russian Federation 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.
5.320	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. 9.21. 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.
5.321	(SUP - WRC-07)
5.322	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. 5.10 to 5.13) excluding Algeria, Burundi, Egypt, Spain, Lesotho, Libya, Morocco, Malawi, Namibia, Nigeria, South Africa, Tanzania, Zimbabwe and Zambia, subject to agreement obtained under No. 9.21. (WRC-12)
5.323	Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the frequency band 862-960 MHz, in Bulgaria the frequency bands 862-880 MHz and 915-925 MHz, and in Romania the frequency bands 862-880 MHz and 915-925 MHz, are also allocated to the aeronautical radionavigation service on a primary basis. Such use is subject to agreement obtained under No. 9.21 with administrations concerned and limited to ground-based radiobeacons in operation on 27 October 1997 until the end of their lifetime. (WRC-19)
5.324	Not used.
5.325	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. 5.33), subject to agreement obtained under No. 9.21.

5.325A	Different category of service: in Argentina, Brazil, Costa Rica, Cuba, Dominican Republic, El Salvador, Ecuador, the French overseas departments and communities in Region 2, Guatemala, Paraguay, Uruguay and Venezuela, the frequency band 902-928 MHz is allocated to the land mobile service on a primary basis. In Mexico, the frequency band 902-928 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis. In Colombia, the frequency band 902-905 MHz is allocated to the land mobile service on a primary basis. (WRC-19)
5.326	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. 9.21.
5.327	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. 5.33).
5.327A	The use of the frequency band 960-1 164 MHz by the aeronautical mobile (R) service is limited to systems that operate in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution 417 (Rev.WRC-15). (WRC-15)
5.328	The use of the band 960-1 215 MHz by the aeronautical radionavigation service is reserved on a worldwide basis for the operation and development of airborne electronic aids to air navigation and any directly associated ground- based facilities. (WRC-2000)
5.328A	Stations in the radionavigation-satellite service in the band 1 164-1 215 MHz shall operate in accordance with the provisions of Resolution 609 (Rev.WRC-07) and shall not claim protection from stations in the aeronautical radionavigation service in the band 960-1 215 MHz. No. 5.43A does not apply. The provisions of No. 21.18 shall apply. (WRC-07)
5.328AA	The frequency band 1 087.7-1 092.3 MHz is also allocated to the aeronautical mobile-satellite (R) service (Earth-to-space) on a primary basis, limited to the space station reception of Automatic Dependent Surveillance-Broadcast (ADS-B) emissions from aircraft transmitters that operate in accordance with recognized international aeronautical standards. Stations operating in the aeronautical mobile-satellite (R) service shall not claim protection from stations operating in the aeronautical radionavigation service. Resolution 425 (Rev.WRC-19) shall apply. (WRC-19)
5.328B	The use of the bands 1 164-1 300 MHz, 1 559-1 610 MHz and 5 010-5 030 MHz by systems and networks in the radionavigation-satellite service for which complete coordination or notification information, as appropriate, is received by the Radiocommunication Bureau after 1 January 2005 is subject to the application of the provisions of Nos. 9.12, 9.12A and 9.13. Resolution 610 (WRC-03)* shall also apply; however, in the case of radionavigation-satellite service (space-to-space) networks and systems, Resolution 610 (WRC-03)* shall only apply to transmitting space stations. In accordance with No. 5.329A, for systems and networks in the radionavigation-satellite service (space-to- space) in the bands 1 215-1 300 MHz and 1 559-1 610 MHz, the provisions of Nos. 9.7, 9.12, 9.12A and 9.13 shall only apply with respect to other systems and networks in the radionavigation-satellite service (space-to-space). (WRC-07) * Note by the Secretariat: This Resolution was revised by WRC-19.
5.329	Use of the radionavigation-satellite service in the frequency band 1 215-1 300 MHz shall be subject to the condition that no harmful interference is caused to, and no protection is claimed from, the radionavigation service authorized under No. 5.331. Furthermore, the use of the radionavigation-satellite service in the frequency band 1 215- 1 300 MHz shall be subject to the condition that no harmful interference is caused to the radiolocation service. No. 5.43 shall not apply in respect of the radiolocation service. Resolution 608 (Rev.WRC-19) shall apply. (WRC-19)
5.329A	Use of systems in the radionavigation-satellite service (space-to-space) operating in the bands 1 215-1 300 MHz and 1 559-1 610 MHz is not intended to provide safety service applications, and shall not impose any additional constraints on radionavigation-satellite service (space-to-Earth) systems or on other services operating in accordance with the Table of Frequency Allocations. (WRC-07)
5.330	Additional allocation: in Angola, Saudi Arabia, Bahrain, Bangladesh, Cameroon, China, Djibouti, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Japan, Jordan, Kuwait, Nepal, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, Somalia, Sudan, South Sudan, Chad, Togo and Yemen, the band 1 215-1 300 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-12)

5.331	Additional allocation: in Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Belarus, Belgium, Benin, Bosnia and Herzegovina, Brazil, Burkina Faso, Burundi, Cameroon, China, Korea (Rep. of), Croatia, Denmark, Egypt, the United Arab Emirates, Estonia, the Russian Federation, Finland, France, Ghana, Greece, Guinea, Equatorial Guinea, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Ireland, Israel, Jordan, Kenya, Kuwait, Lesotho, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Madagascar, Mali, Mauritania, Montenegro, Nigeria, Norway, Oman, Pakistan, the Kingdom of the Netherlands, Poland, Portugal, Qatar, the Syrian Arab Republic, Dem. People's Rep. of Korea, Slovakia, the United Kingdom, Serbia, Slovenia, Somalia, Sudan, South Sudan, Sri Lanka, South Africa, Sweden, Switzerland, Thailand, Togo, Turkey, Venezuela and Viet Nam, the frequency band 1 215-1 300 MHz is also allocated to the radionavigation service on a primary basis. In Canada and the United States, the frequency band 1 240-1 300 MHz is also allocated to the radionavigation service, and use of the radionavigation service shall be limited to the aeronautical radionavigation service. (WRC-19)
5.332	In the band 1 215-1 260 MHz, active spaceborne sensors in the Earth exploration-satellite and space research services shall not cause harmful interference to, claim protection from, or otherwise impose constraints on operation or development of the radiolocation service, the radionavigation-satellite service and other services allocated on a primary basis. (WRC-2000)
5.333	(SUP - WRC-97)
5.334	Additional allocation: in Canada and the United States, the band 1 350-1 370 MHz is also allocated to the aeronautical radionavigation service on a primary basis. (WRC-03)
5.335	In Canada and the United States in the band 1 240-1 300 MHz, active spaceborne sensors in the Earth exploration-satellite and space research services shall not cause interference to, claim protection from, or otherwise impose constraints on operation or development of the aeronautical radionavigation service. (WRC-97)
5.335A	In the band 1 260-1 300 MHz, active spaceborne sensors in the Earth exploration-satellite and space research services shall not cause harmful interference to, claim protection from, or otherwise impose constraints on operation or development of the radiolocation service and other services allocated by footnotes on a primary basis. (WRC-2000)
5.336	Not used.
5.337	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.
5.337A	The use of the band 1 300-1 350 MHz by earth stations in the radionavigation-satellite service and by stations in the radiolocation service shall not cause harmful interference to, nor constrain the operation and development of, the aeronautical-radionavigation service. (WRC-2000)
5.338	In Kyrgyzstan, Slovakia and Turkmenistan, existing installations of the radionavigation service may continue to operate in the band 1 350-1 400 MHz. (WRC-12)
5.338A	In the frequency bands 1 350-1 400 MHz, 1 427-1 452 MHz, 22.55-23.55 GHz, 24.25-27.5 GHz, 30-31.3 GHz, 49.7-50.2 GHz, 50.4-50.9 GHz, 51.4-52.4 GHz, 52.4-52.6 GHz, 81-86 GHz and 92-94 GHz, Resolution 750 (Rev. WRC-19) applies. (WRC-19)
5.339	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.
5.339A	(SUP - WRC-07)
5.340	All emissions are prohibited in the following bands: 1 400-1 427 MHz, 2690-2700 MHz, except those provided for by No. 5.422, 10.68-10.7 GHz, except those provided for by No. 5.483, 15.35-15.4 GHz, except those provided for by No. 5.511, 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 50.2-50.4 GHz, 52.6-54.25 GHz, 100-102 GHz, 109.5-111.8 GHz, 114.25-116 GHz, 148.5-151.5 GHz, 164-167 GHz, 182-185 GHz, 190-191.8 GHz, 200-209 GHz, 226-231.5 GHz, 250-252 GHz. (WRC-03) 5.340.1 The allocation to the Earth exploration-satellite service (passive) and the space research service (passive) in the band 50.2-50.4 GHz should not impose undue constraints on the use of the adjacent bands by the primary allocated services in those bands. (WRC-97)
5.341	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.

5.341A	In Region 1, the frequency bands 1 427-1 452 MHz and 1 492-1 518 MHz are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-15)*. This identification does not preclude the use of these frequency bands by any other application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of IMT stations is subject to agreement obtained under No. 9.21 with respect to the aeronautical mobile service used for aeronautical telemetry in accordance with No. 5.342. (WRC-15) * Note by the Secretariat: This Resolution was revised by WRC-19.
5.341B	In Region 2, the frequency band 1 427-1 518 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-15)*. This identification does not preclude the use of this frequency band by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-15)
5.341C	The frequency bands 1 427-1 452 MHz and 1 492-1 518 MHz are identified for use by administrations in Region 3 wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-15)*. The use of these frequency bands by the above administrations for the implementation of IMT in the frequency bands 1 429-1 452 MHz and 1 492-1 518 MHz is subject to agreement obtained under No. 9.21 from countries using stations of the aeronautical mobile service. This identification does not preclude the use of these frequency bands by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-15) * Note by the Secretariat: This Resolution was revised by WRC-19.
5.342	Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Uzbekistan, Kyrgyzstan and Ukraine, the frequency 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 frequency band 1 452-1 492 MHz is subject to agreement between the administrations concerned. (WRC-15)
5.343	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.
5.344	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. 5.343).
5.345	Use of the frequency 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 (Rev.WRC-19). (WRC-19)
5.346	In Algeria, Angola, Saudi Arabia, Bahrain, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Congo (Rep. of the), Côte d'Ivoire, Djibouti, Egypt, United Arab Emirates, Eswatini, Gabon, Gambia, Ghana, Guinea, Iraq, Jordan, Kenya, Kuwait, Lesotho, Lebanon, Liberia, Madagascar, Malawi, Mali, Morocco, Mauritius, Mauritania, Mozambique, Namibia, Niger, Nigeria, Oman, Uganda, Palestine**, Qatar, Dem. Rep. of the Congo, Rwanda, Senegal, Seychelles, Sudan, South Sudan, South Africa, Tanzania, Chad, Togo, Tunisia, Zambia, and Zimbabwe, the frequency band 1 452-1 492 MHz is identified for use by administrations listed above wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-19). This identification does not preclude the use of this frequency band by any other application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of this frequency band for the implementation of IMT is subject to agreement obtained under No. 9.21 with respect to the aeronautical mobile service used for aeronautical telemetry in accordance with No. 5.342. See also Resolution 761 (Rev.WRC-19). (WRC-19) ** The use by Palestine of the allocation to the mobile service in the frequency band 1 452-1 492 MHz identified for IMT is noted, pursuant to Resolution 99 (Rev. Dubai, 2018) and taking into account the Israeli-Palestinian Interim Agreement of 28 September 1995.

5.346A	The frequency band 1 452-1 492 MHz is identified for use by administrations in Region 3 wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-19) and Resolution 761 (Rev.WRC-19). The use of this frequency band by the above administrations for the implementation of IMT is subject to agreement obtained under No. 9.21 from countries using stations of the aeronautical mobile service. This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-19)
5.347	(SUP - WRC-07)
5.347A*	(SUP - WRC-07) * Note by the Secretariat: This provision has been modified by WRC-07, and subsequently renumbered No. 5.208B in order to preserve the sequential order.
5.348	The use of the band 1 518-1 525 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. In the band 1 518-1 525 MHz stations in the mobile-satellite service shall not claim protection from the stations in the fixed service. No. 5.43A does not apply. (WRC-03)
5.348A	In the band 1 518-1 525 MHz, the coordination threshold in terms of the power flux-density levels at the surface of the Earth in application of No. 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 dB(W/m ²) in any 4 kHz band for all angles of arrival, instead of those given in Table 5-2 of Appendix 5. In the band 1 518-1 525 MHz stations in the mobile-satellite service shall not claim protection from stations in the mobile service in the territory of Japan. No. 5.43A does not apply. (WRC-03)
5.348B	In the band 1 518-1 525 MHz, stations in the mobile-satellite service shall not claim protection from aeronautical mobile telemetry stations in the mobile service in the territory of the United States (see Nos. 5.343 and 5.344) and in the countries listed in No. 5.342. No. 5.43A does not apply. (WRC-03)
5.348 C	(SUP - WRC-07)
5.349	Different category of service: in Saudi Arabia, Azerbaijan, Bahrain, Cameroon, Egypt, Iran (Islamic Republic of), Iraq, Israel, Kazakhstan, Kuwait, Lebanon, North Macedonia, Morocco, Qatar, Syrian Arab Republic, Kyrgyzstan, Turkmenistan and Yemen, the allocation of the frequency band 1 525-1 530 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. 5.33). (WRC-19)
5.350	Additional allocation: in Kyrgyzstan and Turkmenistan, the frequency band 1 525-1 530 MHz is also allocated to the aeronautical mobile service on a primary basis. (WRC-19)
5.351	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.
5.351A	For the use of the bands 1 518-1 544 MHz, 1 545-1 559 MHz, 1 610-1 645.5 MHz, 1 646.5-1 660.5 MHz, 1 668-1 675 MHz, 1 980-2 010 MHz, 2 170-2 200 MHz, 2 483.5-2 520 MHz and 2 670-2 690 MHz by the mobile-satellite service, see Resolutions 212 (Rev.WRC-07)* and 225 (Rev.WRC-07)**. (WRC-07) * Note by the Secretariat: This Resolution was revised by WRC-15 and WRC-19. ** Note by the Secretariat: This Resolution was revised by WRC-12.
5.352	(SUP - WRC-97)
5.352 A	In the frequency band 1 525-1 530 MHz, stations in the mobile-satellite service, except stations in the maritime mobile-satellite service, shall not cause harmful interference to, or claim protection from, stations of the fixed service in Algeria, Saudi Arabia, Egypt, Guinea, India, Israel, Italy, Jordan, Kuwait, Mali, Morocco, Mauritania, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syrian Arab Republic, Viet Nam and Yemen notified prior to 1 April 1998. (WRC-19)
5.353	(SUP - WRC-97)

5.353A	<p>In applying the procedures of Section II of Article 9 to the mobile-satellite service in the bands 1 530-1 544 MHz and 1 626.5-1 645.5 MHz, priority shall be given to accommodating the spectrum requirements for distress, urgency and safety communications of the Global Maritime Distress and Safety System (GMDSS). Maritime mobile-satellite distress, urgency and safety communications shall have priority access and immediate availability over all other mobile satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, distress, urgency and safety communications of the GMDSS. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (The provisions of Resolution 222 (WRC-2000)* shall apply.) (WRC-2000)</p> <p>* Note by the Secretariat: This Resolution was revised by WRC-07 and WRC-12.</p>
5.354	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 No. 9.11A.
5.355	Additional allocation: in Bahrain, Bangladesh, Congo (Rep. of the), Djibouti, Egypt, Eritrea, Iraq, Israel, Kuwait, Qatar, Syrian Arab Republic, Somalia, Sudan, South Sudan, Chad, Togo and Yemen, the bands 1 540- 1 559 MHz, 1 610-1 645.5 MHz and 1 646.5-1 660 MHz are also allocated to the fixed service on a secondary basis. (WRC-12)
5.356	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 31).
5.357	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.
5.357A	In applying the procedures of Section II of Article 9 to the mobile-satellite service in the frequency bands 1 545-1 555 MHz and 1 646.5-1 656.5 MHz, priority shall be given to accommodating the spectrum requirements of the aeronautical mobile-satellite (R) service providing transmission of messages with priority 1 to 6 in Article 44. Aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article 44 shall have priority access and immediate availability, by pre-emption if necessary, over all other mobile-satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article 44. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (The provisions of Resolution 222 (Rev.WRC-12)* shall apply.) (WRC-12)
5.358	(SUP - WRC-97)
5.359	Additional allocation: in Germany, Saudi Arabia, Armenia, Azerbaijan, Belarus, Cameroon, the Russian Federation, Georgia, Guinea, Guinea-Bissau, Jordan, Kazakhstan, Kuwait, Lithuania, Mauritania, Uganda, Uzbekistan, Pakistan, Poland, the Syrian Arab Republic, Kyrgyzstan, the Dem. People's Rep. of Korea, Romania, Tajikistan, Tunisia, Turkmenistan and Ukraine, the frequency bands 1 550-1 559 MHz, 1 610-1 645.5 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 these frequency bands. (WRC-19)
5.360 to 5.362	(SUP - WRC-97)
5.362A	In the United States, in the bands 1 555-1 559 MHz and 1 656.5-1 660.5 MHz, the aeronautical mobile- satellite (R) service shall have priority access and immediate availability, by pre-emption if necessary, over all other mobile-satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article 44. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (WRC-97)
5.362B	(SUP - WRC-15)
5.362C	(SUP - WRC-15)

5.363	(SUP - WRC-07)
5.364	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 No. 9.11A. 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. 5.366 (to which No. 4.10 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. 5.366 and stations in the fixed service operating in accordance with the provisions of No. 5.359. 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. 5.366.
5.365	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 No. 9.11A.
5.366	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. 9.21.
5.367	Additional allocation: The frequency band 1 610-1 626.5 MHz is also allocated to the aeronautical mobile- satellite (R) service on a primary basis, subject to agreement obtained under No. 9.21. (WRC-12)
5.368	The provisions of No. 4.10 do not apply with respect to the radiodetermination-satellite and mobile-satellite services in the frequency band 1 610-1 626.5 MHz. However, No. 4.10 applies in the frequency band 1 610-1 626.5 MHz with respect to the aeronautical radionavigation-satellite service when operating in accordance with No. 5.366, the aeronautical mobile satellite (R) service when operating in accordance with No. 5.367, and in the frequency band 1 621.35-1 626.5 MHz with respect to the maritime mobile-satellite service when used for GMDSS. (WRC-19)
5.369	Different category of service: in Angola, Australia, China, Eritrea, Ethiopia, India, Iran (Islamic Republic of), Israel, Lebanon, Liberia, Madagascar, Mali, Pakistan, Papua New Guinea, Syrian Arab Republic, the Dem. Rep. of the Congo, Sudan, South Sudan, Togo 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. 5.33), subject to agreement obtained under No. 9.21 from countries not listed in this provision. (WRC-12)
5.370	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.
5.371	Additional allocation: in Region 1, the band 1 610-1 626.5 MHz (Earth-to-space) is also allocated to the radiodetermination-satellite service on a secondary basis, subject to agreement obtained under No. 9.21. (WRC-12)
5.372	Harmful interference shall not be caused to stations of the radio astronomy service using the frequency band 1 610.6-1 613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services (No. 29.13 applies). The equivalent power flux-density (epfd) produced in the frequency band 1 610.6-1 613.8 MHz by all space stations of a non-geostationary-satellite system in the mobile-satellite service (space-to-Earth) operating in frequency band 1 613.8-1 626.5 MHz shall be in compliance with the protection criteria provided in Recommendations ITU-R RA.769-2 and ITU-R RA.1513-2, using the methodology given in Recommendation ITU-R M.1583-1, and the radio astronomy antenna pattern described in Recommendation ITU-R RA.1631-0. (WRC-19)
5.373	Maritime mobile earth stations receiving in the frequency band 1 621.35-1 626.5 MHz shall not impose additional constraints on earth stations operating in the maritime mobile-satellite service or maritime earth stations of the radiodetermination-satellite service operating in accordance with the Radio Regulations in the frequency band 1 610- 1 621.35 MHz or on earth stations operating in the maritime mobile-satellite service operating in accordance with the Radio Regulations in the frequency band 1 626.5-1 660.5 MHz, unless otherwise agreed between the notifying administrations. (WRC-19)

5.373A	Maritime mobile earth stations receiving in the frequency band 1 621.35-1 626.5 MHz shall not impose constraints on the assignments of earth stations of the mobile-satellite service (Earth-to-space) and the radiodetermination- satellite service (Earth-to-space) in the frequency band 1 621.35-1 626.5 MHz in networks for which complete coordination information has been received by the Radiocommunication Bureau before 28 October 2019. (WRC-19)
5.374	Mobile 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 stations in the fixed service operating in the countries listed in No. 5.359. (WRC-97)
5.375	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 31).
5.376	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.
5.376A	Mobile earth stations operating in the band 1 660-1 660.5 MHz shall not cause harmful interference to stations in the radio astronomy service. (WRC-97)
5.377	(SUP - WRC-03)
5.378	Not used.
5.379	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.
5.379A	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.
5.379B	The use of the band 1 668-1 675 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. In the band 1 668-1 668.4 MHz, Resolution 904 (WRC-07) shall apply. (WRC-07)
5.379C	In order to protect the radio astronomy service in the band 1 668-1 670 MHz, the aggregate power flux- density values produced by mobile earth stations in a network of the mobile-satellite service operating in this band shall not exceed -181 dB(W/m ²) in 10 MHz and -194 dB(W/m ²) in any 20 kHz at any radio astronomy station recorded in the Master International Frequency Register, for more than 2% of integration periods of 2 000 s. (WRC-03)
5.379D	For sharing of the band 1 668.4-1 675 MHz between the mobile-satellite service and the fixed and mobile services, Resolution 744 (Rev.WRC-07) shall apply. (WRC-07)
5.379E	In the band 1 668.4-1 675 MHz, stations in the mobile-satellite service shall not cause harmful interference to stations in the meteorological aids service in China, Iran (Islamic Republic of), Japan and Uzbekistan. In the band 1 668.4-1 675 MHz, administrations are urged not to implement new systems in the meteorological aids service and are encouraged to migrate existing meteorological aids service operations to other bands as soon as practicable. (WRC-03)
5.380	(SUP - WRC-07)
5.380A	In the band 1 670-1 675 MHz, stations in the mobile-satellite service shall not cause harmful interference to, nor constrain the development of, existing earth stations in the meteorological-satellite service notified before 1 January 2004. Any new assignment to these earth stations in this band shall also be protected from harmful interference from stations in the mobile-satellite service. (WRC-07)
5.381	Additional allocation: in Afghanistan, Cuba, India, Iran (Islamic Republic of) and Pakistan, the band 1 690-1 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-12)

5.382	Different category of service: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Congo (Rep. of the), Egypt, the United Arab Emirates, Eritrea, Ethiopia, the Russian Federation, Guinea, Iraq, Israel, Jordan, Kazakhstan, Kuwait, Lebanon, North Macedonia, Mauritania, Moldova, Mongolia, Oman, Uzbekistan, Poland, Qatar, the Syrian Arab Republic, Kyrgyzstan, Somalia, Tajikistan, Turkmenistan, Ukraine and Yemen, the allocation of the frequency band 1 690-1 700 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. 5.33), and in the Dem. People's Rep. of Korea, the allocation of the frequency band 1 690-1 700 MHz to the fixed service is on a primary basis (see No. 5.33) and to the mobile, except aeronautical mobile, service on a secondary basis. (WRC-19)
5.383	Not used.
5.384	Additional allocation: in India, Indonesia and Japan, the band 1 700-1 710 MHz is also allocated to the space research service (space-to-Earth) on a primary basis. (WRC-97)
5.384A	The frequency bands 1 710-1 885 MHz, 2 300-2 400 MHz and 2 500-2 690 MHz, or portions thereof, are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-15)*. This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-15) * Note by the Secretariat: This Resolution was revised by WRC-19.
5.385	Additional allocation: the band 1 718.8-1 722.2 MHz is also allocated to the radio astronomy service on a secondary basis for spectral line observations. (WRC-2000)
5.386	Additional allocation: the frequency 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 (except in Mexico), in Australia, Guam, India, Indonesia and Japan on a primary basis, subject to agreement obtained under No. 9.21, having particular regard to troposcatter systems. (WRC-15)
5.387	Additional allocation: in Belarus, Georgia, Kazakhstan, Kyrgyzstan, Romania, Tajikistan and Turkmenistan, 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. 9.21. (WRC-12)
5.388	The frequency 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 International Mobile Telecommunications (IMT). Such use does not preclude the use of these frequency bands by other services to which they are allocated. The frequency bands should be made available for IMT in accordance with Resolution 212 (Rev.WRC-15)* (see also Resolution 223 (Rev.WRC-15)*). (WRC-15) * Note by the Secretariat: This Resolution was revised by WRC-19.
5.388A	In Regions 1 and 3, the bands 1 885-1 980 MHz, 2 010-2 025 MHz and 2 110-2 170 MHz and, in Region 2, the bands 1 885-1 980 MHz and 2 110-2 160 MHz may be used by high altitude platform stations as base stations to provide International Mobile Telecommunications (IMT), in accordance with Resolution 221 (Rev.WRC-07). Their use by IMT applications using high altitude platform stations as base stations does not preclude the use of these bands by any station in the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-12)
5.388B	In Algeria, Saudi Arabia, Bahrain, Benin, Burkina Faso, Cameroon, Comoros, Côte d'Ivoire, China, Cuba, Djibouti, Egypt, United Arab Emirates, Eritrea, Ethiopia, Gabon, Ghana, India, Iran (Islamic Republic of), Israel, Jordan, Kenya, Kuwait, Lebanon, Libya, Mali, Morocco, Mauritania, Nigeria, Oman, Uganda, Pakistan, Qatar, the Syrian Arab Republic, Senegal, Singapore, Sudan, South Sudan, Tanzania, Chad, Togo, Tunisia, Yemen, Zambia and Zimbabwe, for the purpose of protecting fixed and mobile services, including IMT mobile stations, in their territories from co-channel interference, a high altitude platform station (HAPS) operating as an IMT base station in neighbouring countries, in the frequency bands referred to in No. 5.388A, shall not exceed a co-channel power flux-density of -127 dB(W/(m ² · MHz)) at the Earth's surface outside a country's borders unless explicit agreement of the affected administration is provided at the time of the notification of HAPS. (WRC-19)

5.389	Not used.
5.389A	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 No. 9.11A and to the provisions of Resolution 716 (Rev.WRC-2000)**. (WRC-07) ** the Secretariat: This Resolution was revised by WRC-12.
5.389B	The use of the frequency 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, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay and Venezuela. (WRC-19)
5.389C	The use of the bands 2 010-2 025 MHz and 2 160-2 170 MHz in Region 2 by the mobile-satellite service is subject to coordination under No. 9.11A and to the provisions of Resolution 716 (Rev.WRC-2000)**. (WRC-07)
5.389D	(SUP - WRC-03)
5.389E	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.
5.389F	In Algeria, Cape Verde, Egypt, Iran (Islamic Republic of), Mali, Syrian Arab Republic and Tunisia, the use of the frequency 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. (WRC-19)
5.390	(SUP - WRC-07)
5.391	In making assignments to the mobile service in the frequency bands 2 025-2 110 MHz and 2 200-2 290 MHz, administrations shall not introduce high-density mobile systems, as described in Recommendation ITU-R SA.1154-0, and shall take that Recommendation into account for the introduction of any other type of mobile system. (WRC-15)
5.392	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.
5.392A	(SUP - WRC-07)
5.393	Additional allocation: in Canada, the United States and India, the frequency 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 (Rev.WRC-19), with the exception of resolves 3 in regard to the limitation on broadcasting-satellite systems in the upper 25 MHz. Complementary terrestrial sound broadcasting stations shall be subject to bilateral coordination with neighbouring countries prior to their bringing into use. (WRC-19)
5.394	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 2 360-2 400 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile services. (WRC-07)
5.395	In France and Turkey, 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. (WRC-03)
5.396	(SUP - WRC-19)
5.397	(SUP - WRC-12)
5.398	In respect of the radiodetermination-satellite service in the band 2 483.5-2 500 MHz, the provisions of No. 4.10 do not apply.

5.398A	Different category of service: in Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan and Ukraine, the band 2 483.5-2 500 MHz is allocated on a primary basis to the radiolocation service. The radiolocation stations in these countries shall not cause harmful interference to, or claim protection from, stations of the fixed, mobile and mobile-satellite services operating in accordance with the Radio Regulations in the frequency band 2 483.5-2 500 MHz. (WRC-12)
5.399	Except for cases referred to in No. 5.401, stations of the radiodetermination-satellite service operating in the frequency band 2 483.5-2 500 MHz for which notification information is received by the Bureau after 17 February 2012, and the service area of which includes Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan and Ukraine, shall not cause harmful interference to, and shall not claim protection from stations of the radiolocation service operating in these countries in accordance with No. 5.398A. (WRC-12)
5.400	(SUP - WRC-12)
5.401	In Angola, Australia, Bangladesh, China, Eritrea, Eswatini, Ethiopia, India, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Syrian Arab Republic, Dem. Rep. of the Congo, Sudan, Togo and Zambia, the frequency band 2 483.5-2 500 MHz was already allocated on a primary basis to the radiodetermination- satellite service before WRC-12, subject to agreement obtained under No. 9.21 from countries not listed in this provision. Systems in the radiodetermination-satellite service for which complete coordination information has been received by the Radiocommunication Bureau before 18 February 2012 will retain their regulatory status, as of the date of receipt of the coordination request information. (WRC-19)
5.402	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 No. 9.11A. 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.
5.403	Subject to agreement obtained under No. 9.21, the band 2 520-2 535 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 No. 9.11A apply. (WRC-07)
5.404	Additional allocation: in India and Iran (Islamic Republic of), 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. 9.21.
5.405	(SUP - WRC-12)
5.406	Not used.
5.407	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 dB(W/(m ² · 4 kHz)) in Argentina, unless otherwise agreed by the administrations concerned.
5.408	(SUP - WRC-2000)
5.409	(SUP - WRC-07)
5.410	The band 2500-2 690 MHz may be used for tropospheric scatter systems in Region 1, subject to agreement obtained under No. 9.21. No. 9.21 does not apply to tropospheric scatter links situated entirely outside Region 1. Administrations shall make all practicable efforts to avoid developing new tropospheric scatter systems in this band. When planning new tropospheric scatter radio-relay links in this band, all possible measures shall be taken to avoid directing the antennas of these links towards the geostationary-satellite orbit. (WRC-12)
5.411	(SUP - WRC-07)
5.412	Alternative allocation: in Kyrgyzstan and Turkmenistan, the band 2 500-2 690 MHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-12)
5.413	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.

5.414	The allocation of the frequency band 2 500-2 520 MHz to the mobile-satellite service (space-to-Earth) is subject to coordination under No. 9.11A. (WRC-07)
5.414A	<p>In Japan and India, the use of the bands 2 500-2 520 MHz and 2 520-2 535 MHz, under No. 5.403, by a satellite network in the mobile-satellite service (space-to-Earth) is limited to operation within national boundaries and subject to the application of No. 9.11A. The following pfd values shall be used as a threshold for coordination under No. 9.11A, for all conditions and for all methods of modulation, in an area of 1 000 km around the territory of the administration notifying the mobile-satellite service network:</p> <p>-136dB(W/(m² · MHz))for 0° ≤ θ ≤ 5°</p> <p>-135.55 (8- 5) dB(W/(m² · MHz))for 5° < θ ≤ 25°</p> <p>-125dB(W/(m² · MHz))for 25° < θ ≤ 90°</p> <p>where θ is the angle of arrival of the incident wave above the horizontal plane, in degrees. Outside this area Table 21-4 of Article 21 shall apply. Furthermore, the coordination thresholds in Table 5-2 of Annex 1 to Appendix 5 of the Radio Regulations (Edition of 2004), in conjunction with the applicable provisions of Articles 9 and 11 associated with No. 9.11A, shall apply to systems for which complete notification information has been received by the Radiocommunication Bureau by 14 November 2007 and that have been brought into use by that date. (WRC-07)</p>
5.415	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. 9.21, giving particular attention to the broadcasting-satellite service in Region 1. (WRC-07)
5.415A	Additional allocation: in India and Japan, subject to agreement obtained under No. 9.21, the band 2 515-2 535 MHz may also be used for the aeronautical mobile-satellite service (space-to-Earth) for operation limited to within their national boundaries. (WRC-2000)
5.416	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. 9.21. The provisions of No. 9.19 shall be applied by administrations in this band in their bilateral and multilateral negotiations. (WRC-07)
5.417	(SUP - WRC-2000)
5.417A	(SUP - WRC-15)
5.417B	(SUP - WRC-15)
5.417C	(SUP - WRC-15)
5.417D	(SUP - WRC-15)

5.418	<p>Additional allocation: in India, the frequency 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 the provisions of Resolution 528 (Rev.WRC-19). The provisions of No. 5.416 and Table 21-4 of Article 21 do not apply to this additional allocation. Use of non-geostationary-satellite systems in the broadcasting-satellite service (sound) is subject to Resolution 539 (Rev.WRC-19). Geostationary broadcasting-satellite service (sound) systems for which complete Appendix 4 coordination information has been received after 1 June 2005 are limited to systems intended for national coverage. The power flux-density at the Earth's surface produced by emissions from a geostationary broadcasting-satellite service (sound) space station operating in the frequency band 2 630- 2 655 MHz, and for which complete Appendix 4 coordination information has been received after 1 June 2005, shall not exceed the following limits, for all conditions and for all methods of modulation: $-130\text{dB(W/(m}^2 \cdot \text{MHz))}$ for $0^\circ \leq \theta \leq 5^\circ$, $-129.6(8-5) \text{ dB(W/(m}^2 \cdot \text{MHz))}$ for $5^\circ < \theta \leq 25^\circ$, $-122\text{dB(W/(m}^2 \cdot \text{MHz))}$ for $25^\circ < \theta \leq 90^\circ$ where θ is the angle of arrival of the incident wave above the horizontal plane, in degrees. These limits may be exceeded on the territory of any country whose administration has so agreed. As an exception to the limits above, the pfd value of $-122 \text{ dB(W/(m}^2 \cdot \text{MHz))}$ shall be used as a threshold for coordination under No. 9.11 in an area of 1 500 km around the territory of the administration notifying the broadcasting-satellite service (sound) system.</p> <p>In addition, an administration listed in this provision shall not have simultaneously two overlapping frequency assignments, one under this provision and the other under No. 5.416 for systems for which complete Appendix 4 coordination information has been received after 1 June 2005. (WRC-19)</p>
5.418A	<p>In certain Region 3 countries listed in No. 5.418, use of the band 2 630-2 655 MHz by non-geostationary- satellite systems in the broadcasting-satellite service (sound) for which complete Appendix 4 coordination information, or notification information, has been received after 2 June 2000, is subject to the application of the provisions of No. 9.12A, in respect of geostationary-satellite networks for which complete Appendix 4 coordination information, or notification information, is considered to have been received after 2 June 2000, and No. 22.2 does not apply. No. 22.2 shall continue to apply with respect to geostationary-satellite networks for which complete Appendix 4 coordination information, or notification information, is considered to have been received before 3 June 2000. (WRC-03)</p>
5.418B	<p>Use of the band 2 630-2 655 MHz by non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. 5.418, for which complete Appendix 4 coordination information, or notification information, has been received after 2 June 2000, is subject to the application of the provisions of No. 9.12. (WRC-03)</p>
5.418C	<p>Use of the band 2 630-2 655 MHz by geostationary-satellite networks for which complete Appendix 4 coordination information, or notification information, has been received after 2 June 2000 is subject to the application of the provisions of No. 9.13 with respect to non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. 5.418 and No. 22.2 does not apply. (WRC-03)</p>
5.419	<p>When introducing systems of the mobile-satellite service in the band 2 670-2 690 MHz, 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 No. 9.11A. (WRC-07)</p>
5.420	<p>The band 2 655-2 670 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. 9.21. The coordination under No. 9.11A applies. (WRC-07)</p>
5.420A	<p>(SUP - WRC-07)</p>
5.421	<p>(SUP - WRC-03)</p>

5.422	Additional allocation: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Brunei Darussalam, Congo (Rep. of the), Côte d'Ivoire, Cuba, Djibouti, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Georgia, Guinea, Guinea-Bissau, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kuwait, Lebanon, Mauritania, Mongolia, Montenegro, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syrian Arab Republic, Kyrgyzstan, the Dem. Rep. of the Congo, Romania, Somalia, Tajikistan, Tunisia, Turkmenistan, Ukraine and Yemen, 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. (WRC-12)
5.423	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.
5.424	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.
5.424A	In the band 2 900-3 100 MHz, stations in the radiolocation service shall not cause harmful interference to, nor claim protection from, radar systems in the radionavigation service.(WRC-03)
5.425	In the band 2 900-3 100 MHz, the use of the shipborne interrogator-transponder (SIT) system shall be confined to the sub-band 2 930 -2 950 MHz.
5.426	The use of the band 2 900-3 100 MHz by the aeronautical radionavigation service is limited to ground- based radars.
5.427	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. 4.9.
5.428	Additional allocation: in Kyrgyzstan and Turkmenistan, the frequency band 3 100-3 300 MHz is also allocated to the radionavigation service on a primary basis. (WRC-19)
5.429	Additional allocation: in Saudi Arabia, Bahrain, Bangladesh, Benin, Brunei Darussalam, Cambodia, Cameroon, China, Congo (Rep. of the), Korea (Rep. of), Côte d'Ivoire, Egypt, the United Arab Emirates, India, Indonesia, Iran (Islamic Republic of), Iraq, Japan, Jordan, Kenya, Kuwait, Lebanon, Libya, Malaysia, New Zealand, Oman, Uganda, Pakistan, Qatar, the Syrian Arab Republic, the Dem. Rep. of the Congo, the Dem. People's Rep. of Korea, Sudan and Yemen, the frequency band 3 300-3 400 MHz is also allocated to the fixed and mobile services on a primary basis. New Zealand and the countries bordering the Mediterranean shall not claim protection for their fixed and mobile services from the radiolocation service. (WRC-19)
5.429A	Additional allocation: in Angola, Benin, Botswana, Burkina Faso, Burundi, Djibouti, Eswatini, Ghana, Guinea, Guinea-Bissau, Lesotho, Liberia, Malawi, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sudan, South Sudan, South Africa, Tanzania, Chad, Togo, Zambia and Zimbabwe, the frequency band 3 300-3 400 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis. Stations in the mobile service operating in the frequency band 3 300-3 400 MHz shall not cause harmful interference to, or claim protection from, stations operating in the radiolocation service. (WRC-19)
5.429B	In the following countries of Region 1 south of 30° parallel north: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Congo (Rep. of the), Côte d'Ivoire, Egypt, Eswatini, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Malawi, Mauritania, Mozambique, Namibia, Niger, Nigeria, Uganda, the Dem. Rep. of the Congo, Rwanda, Sudan, South Sudan, South Africa, Tanzania, Chad, Togo, Zambia and Zimbabwe, the frequency band 3 300- 3 400 MHz is identified for the implementation of International Mobile Telecommunications (IMT). The use of this frequency band shall be in accordance with Resolution 223 (Rev.WRC-19). The use of the frequency band 3 300- 3 400 MHz by IMT stations in the mobile service shall not cause harmful interference to, or claim protection from, systems in the radiolocation service, and administrations wishing to implement IMT shall obtain the agreement of neighbouring countries to protect operations within the radiolocation service. This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-19)

5.429C	Different category of service: in Argentina, Belize, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, El Salvador, Ecuador, Guatemala, Mexico, Paraguay and Uruguay, the frequency band 3 300-3 400 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis. In Argentina, Brazil, the Dominican Republic, Guatemala, Mexico, Paraguay and Uruguay, the frequency band 3 300-3 400 MHz is also allocated to the fixed service on a primary basis. Stations in the fixed and mobile services operating in the frequency band 3 300-3 400 MHz shall not cause harmful interference to, or claim protection from, stations operating in the radiolocation service. (WRC-19)
5.429D	In the following countries in Region 2: Argentina, Belize, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, El Salvador, Ecuador, Guatemala, Mexico, Paraguay and Uruguay, the use of the frequency band 3 300-3 400 MHz is identified for the implementation of International Mobile Telecommunications (IMT). Such use shall be in accordance with Resolution 223 (Rev.WRC-19). This use in Argentina, Paraguay and Uruguay is subject to the application of No. 9.21. The use of the frequency band 3 300-3 400 MHz by IMT stations in the mobile service shall not cause harmful interference to, or claim protection from, systems in the radiolocation service, and administrations wishing to implement IMT shall obtain the agreement of neighbouring countries to protect operations within the radiolocation service. This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-19)
5.429E	Additional allocation: in Papua New Guinea, the frequency band 3 300-3 400 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis. Stations in the mobile service operating in the frequency band 3 300-3 400 MHz shall not cause harmful interference to, or claim protection from, stations operating in the radiolocation service. (WRC-15)
5.429F	In the following countries in Region 3: Cambodia, India, Indonesia, Lao P.D.R., Pakistan, the Philippines and Viet Nam, the use of the frequency band 3 300-3 400 MHz is identified for the implementation of International Mobile Telecommunications (IMT). Such use shall be in accordance with Resolution 223 (Rev.WRC-19). The use of the frequency band 3 300-3 400 MHz by IMT stations in the mobile service shall not cause harmful interference to, or claim protection from, systems in the radiolocation service. Before an administration brings into use a base or mobile station of an IMT system in this frequency band, it shall seek agreement under No. 9.21 with neighbouring countries to protect the radiolocation service. This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-19)
5.430	Additional allocation: in Kyrgyzstan and Turkmenistan, the frequency band 3 300-3 400 MHz is also allocated to the radionavigation service on a primary basis. (WRC-19)
5.430A	The allocation of the frequency band 3 400-3 600 MHz to the mobile, except aeronautical mobile, service is subject to agreement obtained under No. 9.21. This frequency band is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. The provisions of Nos. 9.17 and 9.18 shall also apply in the coordination phase. Before an administration brings into use a (base or mobile) station of the mobile service in this frequency band, it shall ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed $-154.5 \text{ dB(W/(m}^2 \cdot 4 \text{ kHz))}$ for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, the calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station) and with the assistance of the Bureau if so requested. In case of disagreement, calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service in the frequency band 3 400-3 600 MHz shall not claim more protection from space stations than that provided in Table 21-4 of the Radio Regulations (Edition of 2004). (WRC-15)

5.431	Additional allocation: in Germany, the frequency band 3 400-3 475 MHz is also allocated to the amateur service on a secondary basis. (WRC-19)
5.431A	In Region 2, the allocation of the frequency band 3 400-3 500 MHz to the mobile, except aeronautical mobile, service on a primary basis is subject to agreement obtained under No. 9.21. (WRC-15)
5.431B	In Region 2, the frequency band 3 400-3 600 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. At the stage of coordination the provisions of Nos. 9.17 and 9.18 also apply. Before an administration brings into use a base or mobile station of an IMT system, it shall seek agreement under No. 9.21 with other administrations and ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed $-154.5 \text{ dB(W/(m}^2 \cdot 4 \text{ kHz))}$ for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, the calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station), with the assistance of the Bureau if so requested. In case of disagreement, the calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service, including IMT systems, in the frequency band 3 400-3 600 MHz shall not claim more protection from space stations than that provided in Table 21-4 of the Radio Regulations (Edition of 2004). (WRC-15)
5.432	Different category of service: in Korea (Rep. of), Japan, Pakistan and the Dem. People's Rep. of Korea, the allocation of the frequency band 3 400-3 500 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. 5.33). (WRC-19)
5.432A	In Korea (Rep. of), Japan, Pakistan and the Dem. People's Rep. of Korea, the frequency band 3 400- 3 500 MHz is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. At the stage of coordination the provisions of Nos. 9.17 and 9.18 also apply. Before an administration brings into use a (base or mobile) station of the mobile service in this frequency band it shall ensure that the power flux- density (pfd) produced at 3 m above ground does not exceed $-154.5 \text{ dB(W/(m}^2 \cdot 4 \text{ kHz))}$ for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, the calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station), with the assistance of the Bureau if so requested. In case of disagreement, the calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service in the frequency band 3 400-3 500 MHz shall not claim more protection from space stations than that provided in Table 21-4 of the Radio Regulations (Edition of 2004). (WRC-19)

5.432B	<p>Different category of service: in Australia, Bangladesh, Brunei Darussalam, China, French overseas communities of Region 3, India, Indonesia, Iran (Islamic Republic of), Malaysia, New Zealand, the Philippines, Singapore and Thailand, the frequency band 3 400-3 500 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis, subject to agreement obtained under No. 9.21 with other administrations and is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. At the stage of coordination the provisions of Nos. 9.17 and 9.18 also apply. Before an administration brings into use a (base or mobile) station of the mobile service in this frequency band it shall ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed $-154.5 \text{ dB(W/(m}^2 \cdot 4 \text{ kHz))}$ for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, the calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station), with the assistance of the Bureau if so requested. In case of disagreement, the calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service in the frequency band 3 400-3 500 MHz shall not claim more protection from space stations than that provided in Table 21-4 of the Radio Regulations (Edition of 2004). (WRC-19)</p>
5.433	<p>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.</p>
5.433A	<p>In Australia, Bangladesh, Brunei Darussalam, China, French overseas communities of Region 3, Korea (Rep. of), India, Indonesia, Iran (Islamic Republic of), Japan, New Zealand, Pakistan, the Philippines and the Dem. People's Rep. of Korea, the frequency band 3 500-3 600 MHz is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. At the stage of coordination the provisions of Nos. 9.17 and 9.18 also apply. Before an administration brings into use a (base or mobile) station of the mobile service in this frequency band it shall ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed $-154.5 \text{ dB(W/(m}^2 \cdot 4 \text{ kHz))}$ for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, the calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station), with the assistance of the Bureau if so requested. In case of disagreement, the calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service in the frequency band 3 500-3 600 MHz shall not claim more protection from space stations than that provided in Table 21-4 of the Radio Regulations (Edition of 2004). (WRC-19)</p>

5.434	In Canada, Chile, Colombia, Costa Rica, El Salvador, the United States and Paraguay, the frequency band 3 600-3 700 MHz, or portions thereof, is identified for use by these administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. At the stage of coordination the provisions of Nos. 9.17 and 9.18 also apply. Before an administration brings into use a base or mobile station of an IMT system, it shall seek agreement under No. 9.21 with other administrations and ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed $-154.5 \text{ dB(W/(m}^2 \cdot 4 \text{ kHz))}$ for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, the calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station), with the assistance of the Bureau if so requested. In case of disagreement, the calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service, including IMT systems, in the frequency band 3 600-3 700 MHz shall not claim more protection from space stations than that provided in Table 21-4 of the Radio Regulations (Edition of 2004). (WRC-19)
5.435	In Japan, in the band 3 620-3 700 MHz, the radiolocation service is excluded.
5.436	Use of the frequency band 4 200-4 400 MHz by stations in the aeronautical mobile (R) service is reserved exclusively for wireless avionics intra-communication systems that operate in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution 424 (WRC-15). (WRC-15)
5.437	Passive sensing in the Earth exploration-satellite and space research services may be authorized in the frequency band 4 200-4 400 MHz on a secondary basis. (WRC-15)
5.438	Use of the frequency 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. (WRC-15)
5.439	Additional allocation: in Iran (Islamic Republic of), the band 4 200-4 400 MHz is also allocated to the fixed service on a secondary basis. (WRC-12)
5.440	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 $\pm 2 \text{ MHz}$ of these frequencies, subject to agreement obtained under No. 9.21.
5.440A	In Region 2 (except Brazil, Cuba, French overseas departments and communities, Guatemala, Paraguay, Uruguay and Venezuela), and in Australia, the band 4 400-4 940 MHz may be used for aeronautical mobile telemetry for flight testing by aircraft stations (see No. 1.83). Such use shall be in accordance with Resolution 416 (WRC-07) and shall not cause harmful interference to, nor claim protection from, the fixed-satellite and fixed services. Any such use does not preclude the use of this band by other mobile service applications or by other services to which this band is allocated on a co-primary basis and does not establish priority in the Radio Regulations. (WRC-07)

5.441	The use of the bands 4 500-4 800 MHz (space-to-Earth), 6 725-7 025 MHz (Earth-to-space) by the fixed- satellite service shall be in accordance with the provisions of Appendix 30B. The use of the bands 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 geostationary-satellite systems in the fixed-satellite service shall be in accordance with the provisions of Appendix 30B. The use of the bands 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 a non-geostationary-satellite system in the fixed-satellite service is subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed- satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)
5.441A	In Brazil, Paraguay and Uruguay, the frequency band 4 800-4 900 MHz, or portions thereof, is identified for the implementation of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of this frequency band for the implementation of IMT is subject to agreement obtained with neighbouring countries, and IMT stations shall not claim protection from stations of other applications of the mobile service. Such use shall be in accordance with Resolution 223 (Rev.WRC-19). (WRC-19)
5.441B	In Angola, Armenia, Azerbaijan, Benin, Botswana, Brazil, Burkina Faso, Burundi, Cambodia, Cameroon, China, Côte d'Ivoire, Djibouti, Eswatini, Russian Federation, Gambia, Guinea, Iran (Islamic Republic of), Kazakhstan, Kenya, Lao P.D.R., Lesotho, Liberia, Malawi, Mauritius, Mongolia, Mozambique, Nigeria, Uganda, Uzbekistan, the Dem. Rep. of the Congo, Kyrgyzstan, the Dem. People's Rep. of Korea, Sudan, South Africa, Tanzania, Togo, Viet Nam, Zambia and Zimbabwe, the frequency band 4 800-4 990 MHz, or portions thereof, is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of IMT stations is subject to agreement obtained under No. 9.21 with concerned administrations, and IMT stations shall not claim protection from stations of other applications of the mobile service. In addition, before an administration brings into use an IMT station in the mobile service, it shall ensure that the power flux-density (pfd) produced by this station does not exceed $-155 \text{ dB(W/(m}^2 \cdot 1 \text{ MHz))}$ produced up to 19 km above sea level at 20 km from the coast, defined as the low-water mark, as officially recognized by the coastal State. This pfd criterion is subject to review at WRC-23. Resolution 223 (Rev.WRC-19) applies. This identification shall be effective after WRC-19. (WRC-19)
5.442	In the frequency 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. In Region 2 (except Brazil, Cuba, Guatemala, Mexico, Paraguay, Uruguay and Venezuela), and in Australia, the frequency band 4 825-4 835 MHz is also allocated to the aeronautical mobile service, limited to aeronautical mobile telemetry for flight testing by aircraft stations. Such use shall be in accordance with Resolution 416 (WRC-07) and shall not cause harmful interference to the fixed service. (WRC-15)
5.443	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. 5.33).
5.443A	(SUP - WRC-03)
5.443AA	In the frequency bands 5 000-5 030 MHz and 5 091-5 150 MHz, the aeronautical mobile-satellite (R) service is subject to agreement obtained under No. 9.21. The use of these bands by the aeronautical mobile-satellite (R) service is limited to internationally standardized aeronautical systems. (WRC-12)

5.443B	In order not to cause harmful interference to the microwave landing system operating above 5 030 MHz, the aggregate power flux-density produced at the Earth's surface in the frequency band 5 030-5 150 MHz by all the space stations within any radionavigation-satellite service system (space-to-Earth) operating in the frequency band 5 010-5 030 MHz shall not exceed -124.5 dB(W/m ²) in a 150 kHz band. In order not to cause harmful interference to the radio astronomy service in the frequency band 4 990-5 000 MHz, radionavigation-satellite service systems operating in the frequency band 5 010-5 030 MHz shall comply with the limits in the frequency band 4 990-5 000 MHz defined in Resolution 741 (Rev.WRC-15). (WRC-15)
5.443C	The use of the frequency band 5 030-5 091 MHz by the aeronautical mobile (R) service is limited to internationally standardized aeronautical systems. Unwanted emissions from the aeronautical mobile (R) service in the frequency band 5 030-5 091 MHz shall be limited to protect RNSS system downlinks in the adjacent 5 010-5 030 MHz band. Until such time that an appropriate value is established in a relevant ITU-R Recommendation, the e.i.r.p. density limit of -75 dBW/MHz in the frequency band 5 010-5 030 MHz for any AM(R)S station unwanted emission should be used. (WRC-12)
5.443D	In the frequency band 5 030-5 091 MHz, the aeronautical mobile-satellite (R) service is subject to coordination under No. 9.11A. The use of this frequency band by the aeronautical mobile-satellite (R) service is limited to internationally standardized aeronautical systems. (WRC-12)
5.444	The frequency band 5 030-5 150 MHz is to be used for the operation of the international standard system (microwave landing system) for precision approach and landing. In the frequency band 5 030-5 091 MHz, the requirements of this system shall have priority over other uses of this frequency band. For the use of the frequency band 5 091-5 150 MHz, No. 5.444A and Resolution 114 (Rev.WRC-15) apply. (WRC-15)
5.444A	The use of the allocation to the fixed-satellite service (Earth-to-space) in the frequency band 5 091-5 150 MHz is limited to feeder links of non-geostationary satellite systems in the mobile-satellite service and is subject to coordination under No. 9.11A. The use of the frequency band 5 091-5 150 MHz by feeder links of non-geostationary satellite systems in the mobile-satellite service shall be subject to application of Resolution 114 (Rev.WRC-15). Moreover, to ensure that the aeronautical radionavigation service is protected from harmful interference, coordination is required for feeder-link earth stations of the non-geostationary satellite systems in the mobile-satellite service which are separated by less than 450 km from the territory of an administration operating ground stations in the aeronautical radionavigation service. (WRC-15)
5.444B	The use of the frequency band 5 091-5 150 MHz by the aeronautical mobile service is limited to: <ul style="list-style-type: none"> - systems operating in the aeronautical mobile (R) service and in accordance with international aeronautical standards, limited to surface applications at airports. Such use shall be in accordance with Resolution 748 (Rev.WRC-19); - aeronautical telemetry transmissions from aircraft stations (see No. 1.83) in accordance with Resolution 418 (Rev.WRC-19). (WRC-19)
5.445	Not used.
5.446	Additional allocation: in the countries listed in No. 5.369, the frequency 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. 9.21. In Region 2 (except in Mexico), the frequency 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 No. 5.369 and Bangladesh, the frequency 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 frequency 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 dB(W/m ²) in any 4 kHz band for all angles of arrival. (WRC-15)

5.446A	The use of the frequency bands 5 150-5 350 MHz and 5 470-5 725 MHz by the stations in the mobile, except aeronautical mobile, service shall be in accordance with Resolution 229 (Rev.WRC-19). (WRC-19)
5.446B	In the band 5 150-5 250 MHz, stations in the mobile service shall not claim protection from earth stations in the fixed-satellite service. No. 5.43A does not apply to the mobile service with respect to fixed-satellite service earth stations. (WRC-03)
5.446C	Additional allocation: in Region 1 (except in Algeria, Saudi Arabia, Bahrain, Egypt, United Arab Emirates, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Syrian Arab Republic, Sudan, South Sudan and Tunisia), the frequency band 5 150-5 250 MHz is also allocated to the aeronautical mobile service on a primary basis, limited to aeronautical telemetry transmissions from aircraft stations (see No. 1.83), in accordance with Resolution 418 (Rev.WRC-19). These stations shall not claim protection from other stations operating in accordance with Article 5. No. 5.43A does not apply. (WRC-19)
5.446D	Additional allocation: in Brazil, the band 5 150-5 250 MHz is also allocated to the aeronautical mobile service on a primary basis, limited to aeronautical telemetry transmissions from aircraft stations (see No. 1.83), in accordance with Resolution 418 (Rev.WRC-19). (WRC-19)
5.447	Additional allocation: in Côte d'Ivoire, Egypt, Lebanon, the Syrian Arab Republic and Tunisia, the frequency band 5 150-5 250 MHz is also allocated to the mobile service, on a primary basis, subject to agreement obtained under No. 9.21. In this case, the provisions of Resolution 229 (Rev.WRC-19) do not apply. (WRC-19)
5.447A	The allocation to the fixed-satellite service (Earth-to-space) in the band 5 150-5 250 MHz is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to coordination under No. 9.11A.
5.447B	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 No. 9.11A. 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 dB(W/m ²) in any 4 kHz band for all angles of arrival.
5.447C	Administrations responsible for fixed-satellite service networks in the band 5 150-5 250 MHz operated under Nos. 5.447A and 5.447B shall coordinate on an equal basis in accordance with No. 9.11A with administrations responsible for non-geostationary-satellite networks operated under No. 5.446 and brought into use prior to 17 November 1995. Satellite networks operated under No. 5.446 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. 5.447A and 5.447B.
5.447D	The allocation of the band 5 250-5 255 MHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis. (WRC-97)
5.447E	Additional allocation: The frequency band 5 250-5 350 MHz is also allocated to the fixed service on a primary basis in the following countries in Region 3: Australia, Korea (Rep. of), India, Indonesia, Iran (Islamic Republic of), Japan, Malaysia, Papua New Guinea, the Philippines, Dem. People's Rep. of Korea, Sri Lanka, Thailand and Viet Nam. The use of this frequency band by the fixed service is intended for the implementation of fixed wireless access systems and shall comply with Recommendation ITU-R F.1613-0. In addition, the fixed service shall not claim protection from the radiodetermination, Earth exploration-satellite (active) and space research (active) services, but the provisions of No. 5.43A do not apply to the fixed service with respect to the Earth exploration-satellite (active) and space research (active) services. After implementation of fixed wireless access systems in the fixed service with protection for the existing radiodetermination systems, no more stringent constraints should be imposed on the fixed wireless access systems by future radiodetermination implementations. (WRC-15)

5.447F	In the frequency band 5 250-5 350 MHz, stations in the mobile service shall not claim protection from the radiolocation service, the Earth exploration-satellite service (active) and the space research service (active). The radiolocation service, the Earth exploration-satellite service (active) and the space research service (active) shall not impose more stringent conditions upon the mobile service than those stipulated in Resolution 229 (Rev.WRC-19). (WRC-19)
5.448	Additional allocation: in Kyrgyzstan, Romania and Turkmenistan, the frequency band 5 250-5 350 MHz is also allocated to the radionavigation service on a primary basis. (WRC-19)
5.448A	The Earth exploration-satellite (active) and space research (active) services in the frequency band 5 250-5 350 MHz shall not claim protection from the radiolocation service. No. 5.43A does not apply. (WRC-03)
5.448B	The Earth exploration-satellite service (active) operating in the band 5 350-5 570 MHz and space research service (active) operating in the band 5 460-5 570 MHz shall not cause harmful interference to the aeronautical radionavigation service in the band 5 350-5 460 MHz, the radionavigation service in the band 5 460-5 470 MHz and the maritime radionavigation service in the band 5 470-5 570 MHz. (WRC-03)
5.448C	The space research service (active) operating in the band 5 350-5 460 MHz shall not cause harmful interference to nor claim protection from other services to which this band is allocated. (WRC-03)
5.448D	In the frequency band 5 350-5 470 MHz, stations in the radiolocation service shall not cause harmful interference to, nor claim protection from, radar systems in the aeronautical radionavigation service operating in accordance with No. 5.449. (WRC-03)
5.449	The use of the band 5 350-5 470 MHz by the aeronautical radionavigation service is limited to airborne radars and associated airborne beacons.
5.450	Additional allocation: in Austria, Azerbaijan, Iran (Islamic Republic of), Kyrgyzstan, Romania, Turkmenistan and Ukraine, the band 5 470-5 650 MHz is also allocated to the aeronautical radionavigation service on a primary basis. (WRC-12)
5.450A	In the frequency band 5 470-5 725 MHz, stations in the mobile service shall not claim protection from radiodetermination services. The radiodetermination services shall not impose more stringent conditions upon the mobile service than those stipulated in Resolution 229 (Rev.WRC-19). (WRC-19)
5.450B	In the frequency band 5 470-5 650 MHz, stations in the radiolocation service, except ground-based radars used for meteorological purposes in the band 5 600-5 650 MHz, shall not cause harmful interference to, nor claim protection from, radar systems in the maritime radionavigation service. (WRC-03)
5.451	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. 21.2, 21.3, 21.4 and 21.5 shall apply in the band 5 725-5 850 MHz.
5.452	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.
5.453	Additional allocation: in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, Congo (Rep. of the), Korea (Rep. of), Côte d'Ivoire, Djibouti, Egypt, the United Arab Emirates, Eswatini, Gabon, Guinea, Equatorial Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Japan, Jordan, Kenya, Kuwait, Lebanon, Libya, Madagascar, Malaysia, Niger, Nigeria, Oman, Uganda, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Sri Lanka, Tanzania, Chad, Thailand, Togo, Viet Nam and Yemen, the frequency band 5 650-5 850 MHz is also allocated to the fixed and mobile services on a primary basis. In this case, the provisions of Resolution 229 (Rev.WRC-19) do not apply. In addition, in Afghanistan, Angola, Benin, Bhutan, Botswana, Burkina Faso, Burundi, Dem. Rep. of the Congo, Fiji, Ghana, Kiribati, Lesotho, Malawi, Maldives, Mauritius, Micronesia, Mongolia, Mozambique, Myanmar, Namibia, Nauru, New Zealand, Papua New Guinea, Rwanda, Solomon Islands, South Sudan, South Africa, Tonga, Vanuatu, Zambia and Zimbabwe, the frequency band 5 725-5 850 MHz is allocated to the fixed service on a primary basis, and stations operating in the fixed service shall not cause harmful interference to and shall not claim protection from other primary services in the frequency band. (WRC-19)

5.454	Different category of service: in Azerbaijan, the Russian Federation, Georgia, Kyrgyzstan, Tajikistan and Turkmenistan, the allocation of the band 5 670-5 725 MHz to the space research service is on a primary basis (see No. 5.33). (WRC-12)
5.455	Additional allocation: in Armenia, Azerbaijan, Belarus, Cuba, the Russian Federation, Georgia, Hungary, Kazakhstan, Moldova, Uzbekistan, Kyrgyzstan, Romania, Tajikistan, Turkmenistan and Ukraine, the frequency band 5 670-5 850 MHz is also allocated to the fixed service on a primary basis. (WRC-19)
5.456	(SUP - WRC-15)
5.457	In Australia, Burkina Faso, Cote d'Ivoire, Mali and Nigeria, the allocation to the fixed service in the bands 6 440-6 520 MHz (HAPS-to-ground direction) and 6 560-6 640 MHz (ground-to-HAPS direction) may also be used by gateway links for high-altitude platform stations (HAPS) within the territory of these countries. Such use is limited to operation in HAPS gateway links and shall not cause harmful interference to, and shall not claim protection from, existing services, and shall be in compliance with Resolution 150 (WRC-12). Existing services shall not be constrained in future development by HAPS gateway links. The use of HAPS gateway links in these bands requires explicit agreement with other administrations whose territories are located within 1 000 kilometres from the border of an administration intending to use the HAPS gateway links. (WRC-12)
5.457A	In the frequency bands 5 925-6 425 MHz and 14-14.5 GHz, earth stations located on board vessels may communicate with space stations of the fixed-satellite service. Such use shall be in accordance with Resolution 902 (WRC-03). In the frequency band 5 925-6 425 MHz, earth stations located on board vessels and communicating with space stations of the fixed-satellite service may employ transmit antennas with minimum diameter of 1.2 m and operate without prior agreement of any administration if located at least 330 km away from the low-water mark as officially recognized by the coastal State. All other provisions of Resolution 902 (WRC-03) shall apply. (WRC-15)
5.457B	In the frequency bands 5 925-6 425 MHz and 14-14.5 GHz, earth stations located on board vessels may operate with the characteristics and under the conditions contained in Resolution 902 (WRC-03) in Algeria, Saudi Arabia, Bahrain, Comoros, Djibouti, Egypt, United Arab Emirates, Jordan, Kuwait, Libya, Morocco, Mauritania, Oman, Qatar, the Syrian Arab Republic, Sudan, Tunisia and Yemen, in the maritime mobile-satellite service on a secondary basis. Such use shall be in accordance with Resolution 902 (WRC-03). (WRC-15)
5.457C	In Region 2 (except Brazil, Cuba, French overseas departments and communities, Guatemala, Mexico, Paraguay, Uruguay and Venezuela), the frequency band 5 925-6 700 MHz may be used for aeronautical mobile telemetry for flight testing by aircraft stations (see No. 1.83). Such use shall be in accordance with Resolution 416 (WRC-07) and shall not cause harmful interference to, or claim protection from, the fixed-satellite and fixed services. Any such use does not preclude the use of this frequency band by other mobile service applications or by other services to which this frequency band is allocated on a co-primary basis and does not establish priority in the Radio Regulations. (WRC-15)
5.458	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 6 425-7 075 MHz and 7 075-7 250 MHz.
5.458A	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.
5.458B	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 No. 9.11A. 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. 22.2.

5.458C	(SUP - WRC-15)
5.459	Additional allocation: in the Russian Federation, the frequency bands 7 100-7 155 MHz and 7 190-7 235 MHz are also allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No. 9.21. In the frequency band 7 190-7 235 MHz, with respect to the Earth exploration- satellite service (Earth-to-space), No. 9.21 does not apply. (WRC-15)
5.460	No emissions from space research service (Earth-to-space) systems intended for deep space shall be effected in the frequency band 7 190-7 235 MHz. Geostationary satellites in the space research service operating in the frequency band 7 190-7 235 MHz shall not claim protection from existing and future stations of the fixed and mobile services and No. 5.43A does not apply. (WRC-15)
5.460A	The use of the frequency band 7 190-7 250 MHz (Earth-to-space) by the Earth exploration-satellite service shall be limited to tracking, telemetry and command for the operation of spacecraft. Space stations operating in the Earth exploration-satellite service (Earth-to-space) in the frequency band 7 190-7 250 MHz shall not claim protection from existing and future stations in the fixed and mobile services, and No. 5.43A does not apply. No. 9.17 applies. Additionally, to ensure protection of the existing and future deployment of fixed and mobile services, the location of earth stations supporting spacecraft in the Earth exploration-satellite service in non-geostationary orbits or geostationary orbit shall maintain a separation distance of at least 10 km and 50 km, respectively, from the respective border(s) of neighbouring countries, unless a shorter distance is otherwise agreed between the corresponding administrations. (WRC-15)
5.460B	Space stations on the geostationary orbit operating in the Earth exploration-satellite service (Earth-to-space) in the frequency band 7 190-7 235 MHz shall not claim protection from existing and future stations of the space research service, and No. 5.43A does not apply. (WRC-15)
5.461	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. 9.21.
5.461A	The use of the band 7 450-7 550 MHz by the meteorological-satellite service (space-to-Earth) is limited to geostationary-satellite systems. Non-geostationary meteorological-satellite systems in this band notified before 30 November 1997 may continue to operate on a primary basis until the end of their lifetime. (WRC-97)
5.461AA	The use of the frequency band 7 375-7 750 MHz by the maritime mobile-satellite service is limited to geostationary-satellite networks. (WRC-15)
5.461AB	In the frequency band 7 375-7 750 MHz, earth stations in the maritime mobile-satellite service shall not claim protection from, nor constrain the use and development of, stations in the fixed and mobile, except aeronautical mobile, services. No. 5.43A does not apply. (WRC-15)
5.461B	The use of the band 7 750-7 900 MHz by the meteorological-satellite service (space-to-Earth) is limited to non-geostationary satellite systems. (WRC-12)
5.462	(SUP - WRC-97)
5.462A	In Regions 1 and 3 (except for Japan), in the band 8 025-8 400 MHz, the Earth exploration-satellite service using geostationary satellites shall not produce a power flux-density in excess of the following values for angles of arrival (θ), without the consent of the affected administration: -135 dB(W/m ²) in a 1 MHz band for $0 \leq \theta < 5^\circ$ -134.5(8 - 5) dB(W/m ²) in a 1 MHz band for $5 \leq \theta < 25^\circ$ -125 dB(W/m ²) in a 1 MHz band for $25 \leq \theta \leq 90^\circ$ (WRC-12)
5.463	Aircraft stations are not permitted to transmit in the band 8 025-8 400 MHz. (WRC-97)
5.464	(SUP - WRC-97)
5.465	In the space research service, the use of the band 8 400-8 450 MHz is limited to deep space.
5.466	Different category of service: in 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. 5.32). (WRC-12)

5.467	(SUP - WRC-03)
5.468	Additional allocation: in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burundi, Cameroon, China, Congo (Rep. of the), Djibouti, Egypt, the United Arab Emirates, Eswatini, Gabon, Guyana, Indonesia, Iran (Islamic Republic of), Iraq, Jamaica, Jordan, Kenya, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, Nigeria, Oman, Uganda, Pakistan, Qatar, Syrian Arab Republic, the Dem. People's Rep. of Korea, Senegal, Singapore, Somalia, Sudan, Chad, Togo, Tunisia and Yemen, the frequency band 8 500-8 750 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-19)
5.469	Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Hungary, Lithuania, Mongolia, Uzbekistan, Poland, Kyrgyzstan, the Czech Rep., Romania, 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. (WRC-12)
5.469A	In the band 8 550-8 650 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, or constrain the use and development of, stations of the radiolocation service. (WRC-97)
5.470	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.
5.471	Additional allocation: in Algeria, Germany, Bahrain, Belgium, China, Egypt, the United Arab Emirates, France, Greece, Indonesia, Iran (Islamic Republic of), Libya, the Netherlands, Qatar and Sudan, the frequency 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. (WRC-15)
5.472	In the bands 8 850-9 000 MHz and 9 200-9 225 MHz, the maritime radionavigation service is limited to shore-based radars.
5.473	Additional allocation: in Armenia, Austria, Azerbaijan, Belarus, Cuba, the Russian Federation, Georgia, Hungary, Uzbekistan, Poland, Kyrgyzstan, Romania, Tajikistan, Turkmenistan and Ukraine, the frequency bands 8 850-9 000 MHz and 9 200-9 300 MHz are also allocated to the radionavigation service on a primary basis. (WRC-19)
5.473A	In the band 9 000-9 200 MHz, stations operating in the radiolocation service shall not cause harmful interference to, nor claim protection from, systems identified in No. 5.337 operating in the aeronautical radionavigation service, or radar systems in the maritime radionavigation service operating in this band on a primary basis in the countries listed in No. 5.471. (WRC-07)
5.474	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 31).
5.474A	The use of the frequency bands 9 200-9 300 MHz and 9 900-10 400 MHz by the Earth exploration-satellite service (active) is limited to systems requiring necessary bandwidth greater than 600 MHz that cannot be fully accommodated within the frequency band 9 300-9 900 MHz. Such use is subject to agreement to be obtained under No. 9.21 from Algeria, Saudi Arabia, Bahrain, Egypt, Indonesia, Iran (Islamic Republic of), Lebanon and Tunisia. An administration that has not replied under No. 9.52 is considered as not having agreed to the coordination request. In this case, the notifying administration of the satellite system operating in the Earth exploration-satellite service (active) may request the assistance of the Bureau under Sub-Section IID of Article 9. (WRC-15)
5.474B	Stations operating in the Earth exploration-satellite (active) service shall comply with Recommendation ITU-R RS.2066-0. (WRC-15)
5.474C	Stations operating in the Earth exploration-satellite (active) service shall comply with Recommendation ITU-R RS.2065-0. (WRC-15)
5.474D	Stations in the Earth exploration-satellite service (active) shall not cause harmful interference to, or claim protection from, stations of the maritime radionavigation and radiolocation services in the frequency band 9 200-9 300 MHz, the radionavigation and radiolocation services in the frequency band 9 900-10 000 MHz and the radiolocation service in the frequency band 10.0-10.4 GHz. (WRC-15)

5.475	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. (WRC-07)
5.475A	The use of the band 9 300-9 500 MHz by the Earth exploration-satellite service (active) and the space research service (active) is limited to systems requiring necessary bandwidth greater than 300 MHz that cannot be fully accommodated within the 9 500-9 800 MHz band. (WRC-07)
5.475B	In the band 9 300-9 500 MHz, stations operating in the radiolocation service shall not cause harmful interference to, nor claim protection from, radars operating in the radionavigation service in conformity with the Radio Regulations. Ground-based radars used for meteorological purposes have priority over other radiolocation uses. (WRC-07)
5.476	(SUP - WRC-07)
5.476A	In the band 9 300-9 800 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, nor claim protection from, stations of the radionavigation and radiolocation services. (WRC-07)
5.477	Different category of service: in Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, Djibouti, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, Iran (Islamic Republic of), Iraq, Jamaica, Japan, Jordan, Kuwait, Lebanon, Liberia, Malaysia, Nigeria, Oman, Uganda, Pakistan, Qatar, Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Somalia, Sudan, South Sudan, Trinidad and Tobago, and Yemen, the allocation of the frequency band 9 800-10 000 MHz to the fixed service is on a primary basis (see No. 5.33). (WRC-15)
5.478	Additional allocation: in Azerbaijan, Kyrgyzstan, Romania, Turkmenistan and Ukraine, the frequency band 9 800-10 000 MHz is also allocated to the radionavigation service on a primary basis. (WRC-19)
5.478A	The use of the band 9 800-9 900 MHz by the Earth exploration-satellite service (active) and the space research service (active) is limited to systems requiring necessary bandwidth greater than 500 MHz that cannot be fully accommodated within the 9 300-9 800 MHz band. (WRC-07)
5.478B	In the band 9 800-9 900 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, nor claim protection from stations of the fixed service to which this band is allocated on a secondary basis. (WRC-07)
5.479	The band 9 975-10 025 MHz is also allocated to the meteorological-satellite service on a secondary basis for use by weather radars.
5.480	Additional allocation: in Argentina, Brazil, Chile, Cuba, El Salvador, Ecuador, Guatemala, Honduras, Paraguay, the overseas countries and territories within the Kingdom of the Netherlands in Region 2, Peru and Uruguay, the frequency band 10-10.45 GHz is also allocated to the fixed and mobile services on a primary basis. In Colombia, Costa Rica, Mexico and Venezuela, the frequency band 10-10.45 GHz is also allocated to the fixed service on a primary basis. (WRC-19)
5.481	Additional allocation: in Algeria, Germany, Angola, Brazil, China, Côte d'Ivoire, Egypt, El Salvador, Ecuador, Spain, Guatemala, Hungary, Japan, Kenya, Morocco, Nigeria, Oman, Uzbekistan, Pakistan, Paraguay, Peru, the Dem. People's Rep. of Korea, Romania, Tunisia and Uruguay, the frequency band 10.45-10.5 GHz is also allocated to the fixed and mobile services on a primary basis. In Costa Rica, the frequency band 10.45-10.5 GHz is also allocated to the fixed service on a primary basis. (WRC-19)
5.482	In the band 10.6-10.68 GHz, the power delivered to the antenna of stations of the fixed and mobile, except aeronautical mobile, services shall not exceed -3 dBW. This limit may be exceeded, subject to agreement obtained under No. 9.21. However, in Algeria, Saudi Arabia, Armenia, Azerbaijan, Bahrain, Bangladesh, Belarus, Egypt, United Arab Emirates, Georgia, India, Indonesia, Iran (Islamic Republic of), Iraq, Jordan, Kazakhstan, Kuwait, Lebanon, Libya, Morocco, Mauritania, Moldova, Nigeria, Oman, Uzbekistan, Pakistan, Philippines, Qatar, Syrian Arab Republic, Kyrgyzstan, Singapore, Tajikistan, Tunisia, Turkmenistan and Viet Nam, this restriction on the fixed and mobile, except aeronautical mobile, services is not applicable. (WRC-07)

5.482A	For sharing of the band 10.6-10.68 GHz between the Earth exploration-satellite (passive) service and the fixed and mobile, except aeronautical mobile, services, Resolution 751 (WRC-07) applies.(WRC-07)
5.483	Additional allocation: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, China, Colombia, Korea (Rep. of), Egypt, the United Arab Emirates, Georgia, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kazakhstan, Kuwait, Lebanon, Mongolia, Qatar, Kyrgyzstan, the Dem. People's Rep. of Korea, Tajikistan, Turkmenistan and Yemen, the frequency 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. (WRC-19)
5.484	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.
5.484A	The use of the bands 10.95-11.2 GHz (space-to-Earth), 11.45-11.7 GHz (space-to-Earth), 11.7-12.2 GHz (space-to-Earth) in Region 2, 12.2-12.75 GHz (space-to-Earth) in Region 3, 12.5-12.75 GHz (space-to-Earth) in Region 1, 13.75-14.5 GHz (Earth-to-space), 17.8-18.6 GHz (space-to-Earth), 19.7-20.2 GHz (space-to-Earth), 27.5-28.6 GHz (Earth-to-space), 29.5-30 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)
5.484B	Resolution 155 (WRC-15)* shall apply. (WRC-15) * Note by the Secretariat: This Resolution was revised by WRC-19.
5.485	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.
5.486	Different category of service: in the United States, the allocation of the frequency band 11.7-12.1 GHz to the fixed service is on a secondary basis (see No. 5.32). (WRC-15)
5.487	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, or claim protection from, broadcasting-satellite stations operating in accordance with the Regions 1 and 3 Plan in Appendix 30. (WRC-03)
5.487A	Additional allocation: in Region 1, the band 11.7-12.5 GHz, in Region 2, the band 12.2-12.7 GHz and, in Region 3, the band 11.7-12.2 GHz, are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis, limited to non-geostationary systems and subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the broadcasting-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-03)

5.488	The use of the band 11.7-12.2 GHz by geostationary-satellite networks in the fixed-satellite service in Region 2 is subject to application of the provisions of No. 9.14 for coordination with stations of terrestrial services in Regions 1, 2 and 3. For the use of the band 12.2-12.7 GHz by the broadcasting-satellite service in Region 2, see Appendix 30. (WRC-03)
5.489	Additional allocation: in Peru, the band 12.1-12.2 GHz is also allocated to the fixed service on a primary basis.
5.490	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 30.
5.491	(SUP - WRC-03)
5.492	Assignments to stations of the broadcasting-satellite service which are in conformity with the appropriate regional Plan or included in the Regions 1 and 3 List in Appendix 30 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 Plan or the List, as appropriate. (WRC-2000)
5.493	The broadcasting-satellite service in the band 12.5-12.75 GHz in Region 3 is limited to a power flux-density not exceeding $-111 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$ for all conditions and for all methods of modulation at the edge of the service area. (WRC-97)
5.494	Additional allocation: in Algeria, Saudi Arabia, Bahrain, Cameroon, the Central African Rep., Congo (Rep. of the), Côte d'Ivoire, Djibouti, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Madagascar, Mali, Morocco, Mongolia, Nigeria, Oman, Qatar, the Syrian Arab Republic, the Dem. Rep. of the Congo, Somalia, Sudan, South Sudan, Chad, Togo and Yemen, the frequency band 12.5-12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-15)
5.495	Additional allocation: in Greece, Monaco, Montenegro, Uganda and Tunisia, the frequency band 12.5-12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis. (WRC-19)
5.496	Additional allocation: in Austria, Azerbaijan, Kyrgyzstan and Turkmenistan, 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 listed in this footnote. Coordination of these earth stations is not required with stations of the fixed and mobile services of the countries listed in this footnote. The power flux-density limit at the Earth's surface given in Table 21-4 of Article 21, for the fixed-satellite service shall apply on the territory of the countries listed in this footnote. (WRC-2000)
5.497	The use of the band 13.25-13.4 GHz by the aeronautical radionavigation service is limited to Doppler navigation aids.
5.498	(SUP - WRC-97)
5.498A	The Earth exploration-satellite (active) and space research (active) services operating in the band 13.25-13.4 GHz shall not cause harmful interference to, or constrain the use and development of, the aeronautical radionavigation service. (WRC-97)
5.499	Additional allocation: in Bangladesh and India, the band 13.25-14 GHz is also allocated to the fixed service on a primary basis. In Pakistan, the band 13.25-13.75 GHz is allocated to the fixed service on a primary basis. (WRC-12)
5.499A	The use of the frequency band 13.4-13.65 GHz by the fixed-satellite service (space-to-Earth) is limited to geostationary-satellite systems and is subject to agreement obtained under No. 9.21 with respect to satellite systems operating in the space research service (space-to-space) to relay data from space stations in the geostationary-satellite orbit to associated space stations in non-geostationary satellite orbits for which advance publication information has been received by the Bureau by 27 November 2015. (WRC-15)

5.499B	Administrations shall not preclude the deployment and operation of transmitting earth stations in the standard frequency and time signal-satellite service (Earth-to-space) allocated on a secondary basis in the frequency band 13.4-13.65 GHz due to the primary allocation to FSS (space-to-Earth). (WRC-15)
5.499C	The allocation of the frequency band 13.4-13.65 GHz to the space research service on a primary basis is limited to: satellite systems operating in the space research service (space-to-space) to relay data from space stations in the geostationary-satellite orbit to associated space stations in non-geostationary satellite orbits for which advance publication information has been received by the Bureau by 27 November 2015, active spaceborne sensors, satellite systems operating in the space research service (space-to-Earth) to relay data from space stations in the geostationary-satellite orbit to associated earth stations. Other uses of the frequency band by the space research service are on a secondary basis. (WRC-15)
5.499D	In the frequency band 13.4-13.65 GHz, satellite systems in the space research service (space-to-Earth) and/or the space research service (space-to-space) shall not cause harmful interference to, nor claim protection from, stations in the fixed, mobile, radiolocation and Earth exploration-satellite (active) services. (WRC-15)
5.499E	In the frequency band 13.4-13.65 GHz, geostationary-satellite networks in the fixed-satellite service (space-to-Earth) shall not claim protection from space stations in the Earth exploration-satellite service (active) operating in accordance with these Regulations, and No. 5.43A does not apply. The provisions of No. 22.2 do not apply to the Earth exploration-satellite service (active) with respect to the fixed-satellite service (space-to-Earth) in this frequency band. (WRC-15)
5.500	Additional allocation: in Algeria, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, Egypt, the United Arab Emirates, Gabon, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kuwait, Lebanon, Madagascar, Malaysia, Mali, Morocco, Mauritania, Niger, Nigeria, Oman, Qatar, the Syrian Arab Republic, Singapore, Sudan, South Sudan, Chad and Tunisia, the frequency band 13.4-14 GHz is also allocated to the fixed and mobile services on a primary basis. In Pakistan, the frequency band 13.4-13.75 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-15)
5.501	Additional allocation: in Azerbaijan, Hungary, Japan, Kyrgyzstan, Romania and Turkmenistan, the band 13.4-14 GHz is also allocated to the radionavigation service on a primary basis. (WRC-12)
5.501A	The allocation of the frequency band 13.65-13.75 GHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the frequency band by the space research service are on a secondary basis. (WRC-15)
5.501B	In the band 13.4-13.75 GHz, the Earth exploration-satellite (active) and space research (active) services shall not cause harmful interference to, or constrain the use and development of, the radiolocation service. (WRC-97)

5.502	<p>In the band 13.75-14 GHz, an earth station of a geostationary fixed-satellite service network shall have a minimum antenna diameter of 1.2 m and an earth station of a non-geostationary fixed-satellite service system shall have a minimum antenna diameter of 4.5 m. In addition, the e.i.r.p., averaged over one second, radiated by a station in the radiolocation or radionavigation services shall not exceed 59 dBW for elevation angles above 2° and 65 dBW at lower angles. Before an administration brings into use an earth station in a geostationary-satellite network in the fixed-satellite service in this band with an antenna diameter smaller than 4.5 m, it shall ensure that the power flux-density produced by this earth station does not exceed:</p> <p>-115 dB(W/(m² · 10 MHz)) for more than 1% of the time produced at 36 m above sea level at the low water mark, as officially recognized by the coastal State;</p> <p>-115 dB(W/(m² · 10 MHz)) for more than 1% of the time produced 3 m above ground at the border of the territory of an administration deploying or planning to deploy land mobile radars in this band, unless prior agreement has been obtained.</p> <p>For earth stations within the fixed-satellite service having an antenna diameter greater than or equal to 4.5 m, the e.i.r.p. of any emission should be at least 68 dBW and should not exceed 85 dBW. (WRC-03)</p>
5.503	<p>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. 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:- in the band 13.77-13.78 GHz, the e.i.r.p. density of emissions from any earth station in the fixed- satellite service operating with a space station in geostationary-satellite orbit shall not exceed: i) $4.7D + 28$ dB(W/40 kHz), where D is the fixed-satellite service earth station antenna diameter (m) for antenna diameters equal to or greater than 1.2 m and less than 4.5 m; ii) $49.2 + 20 \log(D/4.5)$ dB(W/40 kHz), where D is the fixed-satellite service earth station antenna diameter (m) for antenna diameters equal to or greater than 4.5 m and less than 31.9 m; iii) 66.2 dB(W/40 kHz) for any fixed-satellite service earth station for antenna diameters (m) equal to or greater than 31.9 m; iv) 56.2 dB(W/4 kHz) for narrow-band (less than 40 kHz of necessary bandwidth) fixed-satellite service earth station emissions from any fixed-satellite service earth station having an antenna diameter of 4.5 m or greater;</p> <p>the e.i.r.p. density of emissions from any earth station in the fixed-satellite service operating with a space station in non-geostationary-satellite orbit shall not exceed 51 dBW in the 6 MHz band from 13.772 to 13.778 GHz.</p> <p>Automatic power control may be used to increase the e.i.r.p. density in these frequency ranges 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 by an earth station of an e.i.r.p. meeting the above limits in clear-sky conditions. (WRC-03)</p>
5.503A	(SUP - WRC-03)
5.504	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.
5.504A	In the band 14-14.5 GHz, aircraft earth stations in the secondary aeronautical mobile-satellite service may also communicate with space stations in the fixed-satellite service. The provisions of Nos. 5.29, 5.30 and 5.31 apply. (WRC-03)
5.504B	Aircraft earth stations operating in the aeronautical mobile-satellite service in the frequency band 14-14.5 GHz shall comply with the provisions of Annex 1, Part C of Recommendation ITU-R M.1643-0, with respect to any radio astronomy station performing observations in the 14.47-14.5 GHz frequency band located on the territory of Spain, France, India, Italy, the United Kingdom and South Africa. (WRC-15)

5.504C	In the frequency band 14-14.25 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Bahrain, Botswana, Côte d'Ivoire, Egypt, Guinea, India, Iran (Islamic Republic of), Kuwait, Nigeria, Oman, the Syrian Arab Republic and Tunisia by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU-R M.1643-0, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. 5.29. (WRC-15)
5.505	Additional allocation: in Algeria, Saudi Arabia, Bahrain, Botswana, Brunei Darussalam, Cameroon, China, Congo (Rep. of the), Korea (Rep. of), Djibouti, Egypt, the United Arab Emirates, Eswatini, Gabon, Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Oman, the Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Somalia, Sudan, South Sudan, Chad, Viet Nam and Yemen, the frequency band 14-14.3 GHz is also allocated to the fixed service on a primary basis. (WRC-19)
5.506	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.
5.506A	In the band 14-14.5 GHz, ship earth stations with an e.i.r.p. greater than 21 dBW shall operate under the same conditions as earth stations located on board vessels, as provided in Resolution 902 (WRC-03). This footnote shall not apply to ship earth stations for which the complete Appendix 4 information has been received by the Bureau prior to 5 July 2003. (WRC-03)
5.506B	Earth stations located on board vessels communicating with space stations in the fixed-satellite service may operate in the frequency band 14-14.5 GHz without the need for prior agreement from Cyprus and Malta, within the minimum distance given in Resolution 902 (WRC-03) from these countries. (WRC-15)
5.507	Not used.
5.508	Additional allocation: in Germany, France, Italy, Libya, North Macedonia and the United Kingdom, the frequency band 14.25-14.3 GHz is also allocated to the fixed service on a primary basis. (WRC-19)
5.508A	In the frequency band 14.25-14.3 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Bahrain, Botswana, China, Côte d'Ivoire, Egypt, France, Guinea, India, Iran (Islamic Republic of), Italy, Kuwait, Nigeria, Oman, the Syrian Arab Republic, the United Kingdom and Tunisia by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU-R M.1643-0, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. 5.29. (WRC-15)
5.509	(SUP - WRC-07)
5.509A	In the frequency band 14.3-14.5 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Bahrain, Botswana, Cameroon, China, Côte d'Ivoire, Egypt, France, Gabon, Guinea, India, Iran (Islamic Republic of), Italy, Kuwait, Morocco, Nigeria, Oman, the Syrian Arab Republic, the United Kingdom, Sri Lanka, Tunisia and Viet Nam by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU-R M.1643-0, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. 5.29. (WRC-15)
5.509B	The use of the frequency bands 14.5-14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.5-14.8 GHz in countries listed in Resolution 164 (WRC-15) by the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service is limited to geostationary-satellites. (WRC-15)

5.509C	For the use of the frequency bands 14.5-14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.5-14.8 GHz in countries listed in Resolution 164 (WRC-15) by the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service, the fixed-satellite service earth stations shall have a minimum antenna diameter of 6 m and a maximum power spectral density of -44.5 dBW/Hz at the input of the antenna. The earth stations shall be notified at known locations on land. (WRC-15)
5.509D	Before an administration brings into use an earth station in the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service in the frequency bands 14.5-14.75 GHz (in countries listed in Resolution 163 (WRC-15)) and 14.5-14.8 GHz (in countries listed in Resolution 164 (WRC-15)), it shall ensure that the power flux-density produced by this earth station does not exceed -151.5 dB(W/(m ² · 4 kHz)) produced at all altitudes from 0 m to 19 000 m above sea level at 22 km seaward from all coasts, defined as the low-water mark, as officially recognized by each coastal State. (WRC-15)
5.509E	In the frequency bands 14.50-14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.50-14.8 GHz in countries listed in Resolution 164 (WRC-15), the location of earth stations in the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service shall maintain a separation distance of at least 500 km from the border(s) of other countries unless shorter distances are explicitly agreed by those administrations. No. 9.17 does not apply. When applying this provision, administrations should consider the relevant parts of these Regulations and the latest relevant ITU-R Recommendations. (WRC-15)
5.509F	In the frequency bands 14.50-14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.50-14.8 GHz in countries listed in Resolution 164 (WRC-15), earth stations in the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service shall not constrain the future deployment of the fixed and mobile services. (WRC-15)
5.509G	The frequency band 14.5-14.8 GHz is also allocated to the space research service on a primary basis. However, such use is limited to the satellite systems operating in the space research service (Earth-to-space) to relay data to space stations in the geostationary-satellite orbit from associated earth stations. Stations in the space research service shall not cause harmful interference to, or claim protection from, stations in the fixed and mobile services and in the fixed-satellite service limited to feeder links for the broadcasting-satellite service and associated space operations functions using the guardbands under Appendix 30A and feeder links for the broadcasting-satellite service in Region 2. Other uses of this frequency band by the space research service are on a secondary basis. (WRC-15)
5.510	Except for use in accordance with Resolution 163 (WRC-15) and Resolution 164 (WRC-15), the use of the frequency 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. Uses other than feeder links for the broadcasting-satellite service are not authorized in Regions 1 and 2 in the frequency band 14.75-14.8 GHz. (WRC-15)
5.511	Additional allocation: in Saudi Arabia, Bahrain, Cameroon, Egypt, the United Arab Emirates, Guinea, Iran (Islamic Republic of), Iraq, Israel, Kuwait, Lebanon, Oman, Pakistan, Qatar, the Syrian Arab Republic and Somalia, the band 15.35-15.4 GHz is also allocated to the fixed and mobile services on a secondary basis. (WRC-12)
5.511A	Use of the frequency band 15.43-15.63 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under No. 9.11A. (WRC-15)
5.511B	(SUP - WRC-97)
5.511C	Stations operating in the aeronautical radionavigation service shall limit the effective e.i.r.p. in accordance with Recommendation ITU-R S.1340-0. The minimum coordination distance required to protect the aeronautical radionavigation stations (No. 4.10 applies) from harmful interference from feeder-link earth stations and the maximum e.i.r.p. transmitted towards the local horizontal plane by a feeder-link earth station shall be in accordance with Recommendation ITU-R S.1340-0. (WRC-15)
5.511D	(SUP - WRC-15)

5.511E	In the frequency band 15.4-15.7 GHz, stations operating in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the aeronautical radionavigation service. (WRC-12)
5.511F	In order to protect the radio astronomy service in the frequency band 15.35-15.4 GHz, radiolocation stations operating in the frequency band 15.4-15.7 GHz shall not exceed the power flux-density level of -156 dB(W/m ²) in a 50 MHz bandwidth in the frequency band 15.35-15.4 GHz, at any radio astronomy observatory site for more than 2 per cent of the time. (WRC-12)
5.512	Additional allocation: in Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, Congo (Rep. of the), Egypt, El Salvador, the United Arab Emirates, Eritrea, Finland, Guatemala, India, Indonesia, Iran (Islamic Republic of), Jordan, Kenya, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Montenegro, Nepal, Nicaragua, Niger, Oman, Pakistan, Qatar, Syrian Arab Republic, the Dem. Rep. of the Congo, Singapore, Somalia, Sudan, South Sudan, Chad, Togo and Yemen, the frequency band 15.7-17.3 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-15)
5.513	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. 5.512.
5.513A	Spaceborne active sensors operating in the band 17.2-17.3 GHz shall not cause harmful interference to, or constrain the development of, the radiolocation and other services allocated on a primary basis. (WRC-97)
5.514	Additional allocation: in Algeria, Saudi Arabia, Bahrain, Bangladesh, Cameroon, El Salvador, the United Arab Emirates, Guatemala, India, Iran (Islamic Republic of), Iraq, Israel, Italy, Japan, Jordan, Kuwait, Libya, Lithuania, Nepal, Nicaragua, Nigeria, Oman, Uzbekistan, Pakistan, Qatar, Kyrgyzstan, Sudan and South Sudan, the frequency 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. 21.3 and 21.5 shall apply. (WRC-15)
5.515	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 § 1 of Annex 4 of Appendix 30A.
5.516	The use of the band 17.3-18.1 GHz by geostationary-satellite systems in the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. The use of the band 17.3-17.8 GHz in Region 2 by systems in the fixed-satellite service (Earth-to-space) is limited to geostationary satellites. For the use of the band 17.3-17.8 GHz in Region 2 by feeder links for the broadcasting-satellite service in the band 12.2-12.7 GHz, see Article 11. The use of the bands 17.3-18.1 GHz (Earth-to-space) in Regions 1 and 3 and 17.8-18.1 GHz (Earth-to-space) in Region 2 by non-geostationary-satellite systems in the fixed-satellite service is subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)
5.516A	In the band 17.3-17.7 GHz, earth stations of the fixed-satellite service (space-to-Earth) in Region 1 shall not claim protection from the broadcasting-satellite service feeder-link earth stations operating under Appendix 30A, nor put any limitations or restrictions on the locations of the broadcasting-satellite service feeder-link earth stations anywhere within the service area of the feeder link. (WRC-03)
5.516B	The following bands are identified for use by high-density applications in the fixed-satellite service: 17.3-17.7 GHz(space-to-Earth) in Region 1, 18.3-19.3 GHz (space-to-Earth) in Region 2, 19.7-20.2 GHz(space-to-Earth) in all Regions, 39.5-40 GHz(space-to-Earth) in Region 1, 40-40.5 GHz(space-to-Earth) in all Regions, 40.5-42 GHz(space-to-Earth) in Region 2, 47.5-47.9 GHz (space-to-Earth) in Region 1, 48.2-48.54GHz (space-to-Earth) in Region 1, 49.44-50.2GHz (space-to-Earth) in Region 1, and 27.5-27.82GHz (Earth-to-space) in Region 1, 28.35-28.45 GHz (Earth-to-space) in Region 2, 28.45-28.94 GHz(Earth-to-space) in all Regions, 28.94-29.1 GHz(Earth-to-space) in Region 2 and 29.25-29.46 GHz (Earth-to-space) in Region 2, 29.46-30 GHz(Earth-to-space) in all Regions, 48.2-50.2 GHz(Earth-to-space) in Region 2. This identification does not preclude the use of these frequency bands by other fixed-satellite service applications or by other services to which these frequency bands are allocated on a co-primary basis and does not establish priority in these Radio Regulations among users of the frequency bands. Administrations should take this into account when considering regulatory provisions in relation to these frequency bands. See Resolution 143 (Rev. WRC-19). (WRC-19)

5.517	In Region 2, use of the fixed-satellite (space-to-Earth) service in the band 17.7-17.8 GHz shall not cause harmful interference to nor claim protection from assignments in the broadcasting-satellite service operating in conformity with the Radio Regulations. (WRC-07)
5.517A	The operation of earth stations in motion communicating with geostationary fixed-satellite service space stations within the frequency bands 17.7-19.7 GHz (space-to-Earth) and 27.5-29.5 GHz (Earth-to-space) shall be subject to the application of Resolution 169 (WRC-19). (WRC-19)
5.518	(SUP - WRC-07)
5.519	Additional allocation: the bands 18-18.3 GHz in Region 2 and 18.1-18.4 GHz in Regions 1 and 3 are also allocated to the meteorological-satellite service (space-to-Earth) on a primary basis. Their use is limited to geostationary satellites. (WRC-07)
5.520	The use of the band 18.1-18.4 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links of geostationary-satellite systems in the broadcasting-satellite service. (WRC-2000)
5.521	Alternative allocation: in the United Arab Emirates and Greece, the frequency band 18.1-18.4 GHz is allocated to the fixed, fixed-satellite (space-to-Earth) and mobile services on a primary basis (see No. 5.33). The provisions of No. 5.519 also apply. (WRC-15)
5.522	(SUP - WRC-2000)
5.522A	The emissions of the fixed service and the fixed-satellite service in the band 18.6-18.8 GHz are limited to the values given in Nos. 21.5A and 21.16.2, respectively. (WRC-2000)
5.522B	The use of the band 18.6-18.8 GHz by the fixed-satellite service is limited to geostationary systems and systems with an orbit of apogee greater than 20 000 km. (WRC-2000)
5.522C	In the band 18.6-18.8 GHz, in Algeria, Saudi Arabia, Bahrain, Egypt, the United Arab Emirates, Jordan, Lebanon, Libya, Morocco, Oman, Qatar, the Syrian Arab Republic, Tunisia and Yemen, fixed-service systems in operation at the date of entry into force of the Final Acts of WRC-2000 are not subject to the limits of No. 21.5A. (WRC-2000)
5.523	(SUP - WRC-2000)
5.523A	The use of the bands 18.8-19.3 GHz (space-to-Earth) and 28.6-29.1 GHz (Earth-to-space) by geostationary and non-geostationary fixed-satellite service networks is subject to the application of the provisions of No. 9.11A and No. 22.2 does not apply. Administrations having geostationary-satellite networks under coordination prior to 18 November 1995 shall cooperate to the maximum extent possible to coordinate pursuant to No. 9.11A with non-geostationary-satellite networks for which notification information has been received by the Bureau prior to that date, with a view to reaching results acceptable to all the parties concerned. Non-geostationary-satellite networks shall not cause unacceptable interference to geostationary fixed-satellite service networks for which complete Appendix 4 notification information is considered as having been received by the Bureau prior to 18 November 1995. (WRC-97)
5.523B	The use of the band 19.3-19.6 GHz (Earth-to-space) by the fixed-satellite service is limited to feeder links for non-geostationary-satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of No. 9.11A, and No. 22.2 does not apply.

5.523C	No. 22.2 shall continue to apply in the bands 19.3-19.6 GHz and 29.1-29.4 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite service networks for which complete Appendix 4 coordination information, or notification information, is considered as having been received by the Bureau prior to 18 November 1995. (WRC-97)
5.523D	The use of the band 19.3-19.7 GHz (space-to-Earth) by geostationary fixed-satellite service systems and by feeder links for non-geostationary-satellite systems in the mobile-satellite service is subject to the application of the provisions of No. 9.11A, but not subject to the provisions of No. 22.2. The use of this band for other non-geostationary fixed-satellite service systems, or for the cases indicated in Nos. 5.523C and 5.523E, is not subject to the provisions of No. 9.11A and shall continue to be subject to Articles 9 (except No. 9.11A) and 11 procedures, and to the provisions of No. 22.2. (WRC-97)
5.523E	No. 22.2 shall continue to apply in the bands 19.6-19.7 GHz and 29.4-29.5 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite service networks for which complete Appendix 4 coordination information, or notification information, is considered as having been received by the Bureau by 21 November 1997. (WRC-97)
5.524	Additional allocation: in Afghanistan, Algeria, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, China, Congo (Rep. of the), Costa Rica, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Iran (Islamic Republic of), Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Nigeria, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. Rep. of the Congo, the Dem. People's Rep. of Korea, Singapore, Somalia, Sudan, South Sudan, Chad, Togo and Tunisia, the frequency 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 frequency band 19.7-21.2 GHz and of space stations in the mobile-satellite service in the frequency band 19.7-20.2 GHz where the allocation to the mobile-satellite service is on a primary basis in the latter frequency band. (WRC-15)
5.525	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.
5.526	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.
5.527	In the bands 19.7-20.2 GHz and 29.5-30 GHz, the provisions of No. 4.10 do not apply with respect to the mobile-satellite service.
5.527A	The operation of earth stations in motion communicating with the FSS is subject to Resolution 156 (WRC-15). (WRC-15)
5.528	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. 5.524.
5.529	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. 5.526.
5.53	(SUP - WRC-12)
5.530A	Unless otherwise agreed between the administrations concerned, any station in the fixed or mobile services of an administration shall not produce a power flux-density in excess of -120.4 dB(W/(m ² · MHz)) at 3 m above the ground of any point of the territory of any other administration in Regions 1 and 3 for more than 20% of the time. In conducting the calculations, administrations should use the most recent version of Recommendation ITU-R P.452 (see also the most recent version of Recommendation ITU-R BO.1898). (WRC-15)

5.530B	In the band 21.4-22 GHz, in order to facilitate the development of the broadcasting-satellite service, administrations in Regions 1 and 3 are encouraged not to deploy stations in the mobile service and are encouraged to limit the deployment of stations in the fixed service to point-to-point links. (WRC-12)
5.530C	(SUP - WRC-15)
5.530D	(SUP - WRC-19)
5.530E	The allocation to the fixed service in the frequency band 21.4-22 GHz is identified for use in Region 2 by high-altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which it is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation by HAPS is limited to the HAPS-to-ground direction, and shall be in accordance with the provisions of Resolution 165 (WRC-19). (WRC-19)
5.531	Additional allocation: in Japan, the band 21.4-22 GHz is also allocated to the broadcasting service on a primary basis.
5.532	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.
5.532A	The location of earth stations in the space research service shall maintain a separation distance of at least 54 km from the respective border(s) of neighbouring countries to protect the existing and future deployment of fixed and mobile services unless a shorter distance is otherwise agreed between the corresponding administrations. Nos. 9.17 and 9.18 do not apply. (WRC-12)
5.532AA	The allocation to the fixed service in the frequency band 24.25-25.25 GHz is identified for use in Region 2 by high-altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which this frequency band is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation by HAPS is limited to the HAPS- to-ground direction and shall be in accordance with the provisions of Resolution 166 (WRC-19). (WRC-19)
5.532AB	The frequency band 24.25-27.5 GHz is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Resolution 242 (WRC-19) applies. (WRC-19)
5.532B	Use of the band 24.65-25.25 GHz in Region 1 and the band 24.65-24.75 GHz in Region 3 by the fixed- satellite service (Earth-to-space) is limited to earth stations using a minimum antenna diameter of 4.5 m. (WRC-12)
5.533	The inter-satellite service shall not claim protection from harmful interference from airport surface detection equipment stations of the radionavigation service.
5.534	(SUP - WRC-03)
5.534A	The allocation to the fixed service in the frequency band 25.25-27.5 GHz is identified in Region 2 for use by high-altitude platform stations (HAPS) in accordance with the provisions of Resolution 166 (WRC-19). Such use of the fixed-service allocation by HAPS shall be limited to the ground-to-HAPS direction in the frequency band 25.25-27.0 GHz and to the HAPS-to-ground direction in the frequency band 27.0-27.5 GHz. Furthermore, the use of the frequency band 25.5-27.0 GHz by HAPS shall be limited to gateway links. This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which this band is allocated on a co- primary basis, and does not establish priority in the Radio Regulations. (WRC-19)
5.535	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.

5.535A	The use of the band 29.1-29.5 GHz (Earth-to-space) by the fixed-satellite service is limited to geostationary- satellite systems and feeder links to non-geostationary-satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of No. 9.11A, but not subject to the provisions of No. 22.2, except as indicated in Nos. 5.523C and 5.523E where such use is not subject to the provisions of No. 9.11A and shall continue to be subject to Articles 9 (except No. 9.11A) and 11 procedures, and to the provisions of No. 22.2. (WRC-97)
5.536	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.
5.536A	Administrations operating earth stations in the Earth exploration-satellite service or the space research service shall not claim protection from stations in the fixed and mobile services operated by other administrations. In addition, earth stations in the Earth exploration-satellite service or in the space research service should be operated taking into account the most recent version of Recommendation ITU-R SA.1862. Resolution 242 (WRC-19) applies. (WRC-19)
5.536B	In Algeria, Saudi Arabia, Austria, Bahrain, Belgium, Brazil, China, Korea (Rep. of), Denmark, Egypt, United Arab Emirates, Estonia, Finland, Hungary, India, Iran (Islamic Republic of), Iraq, Ireland, Israel, Italy, Jordan, Kenya, Kuwait, Lebanon, Libya, Lithuania, Moldova, Norway, Oman, Uganda, Pakistan, the Philippines, Poland, Portugal, Qatar, the Syrian Arab Republic, Dem. People's Rep. of Korea, Slovakia, the Czech Rep., Romania, the United Kingdom, Singapore, Slovenia, Sudan, Sweden, Tanzania, Turkey, Viet Nam and Zimbabwe, earth stations operating in the Earth exploration-satellite service in the frequency band 25.5-27 GHz shall not claim protection from, or constrain the use and deployment of, stations of the fixed and mobile services. Resolution 242 (WRC-19) applies. (WRC-19)
5.536C	In Algeria, Saudi Arabia, Bahrain, Botswana, Brazil, Cameroon, Comoros, Cuba, Djibouti, Egypt, United Arab Emirates, Estonia, Finland, Iran (Islamic Republic of), Israel, Jordan, Kenya, Kuwait, Lithuania, Malaysia, Morocco, Nigeria, Oman, Qatar, Syrian Arab Republic, Somalia, Sudan, South Sudan, Tanzania, Tunisia, Uruguay, Zambia and Zimbabwe, earth stations operating in the space research service in the band 25.5-27 GHz shall not claim protection from, or constrain the use and deployment of, stations of the fixed and mobile services. (WRC-12)
5.537	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. 22.2.
5.537A	In Bhutan, Cameroon, China, Korea (Rep. of), the Russian Federation, India, Indonesia, Iran (Islamic Republic of), Iraq, Japan, Kazakhstan, Malaysia, Maldives, Mongolia, Myanmar, Uzbekistan, Pakistan, the Philippines, Kyrgyzstan, the Dem. People's Rep. of Korea, Sudan, Sri Lanka, Thailand and Viet Nam, the allocation to the fixed service in the frequency band 27.9-28.2 GHz may also be used by high altitude platform stations (HAPS) within the territory of these countries. Such use of 300 MHz of the fixed-service allocation by HAPS in the above countries is further limited to operation in the HAPS-to-ground direction and shall not cause harmful interference to, nor claim protection from, other types of fixed-service systems or other co-primary services. Furthermore, the development of these other services shall not be constrained by HAPS. See Resolution 145 (Rev.WRC-19). (WRC-19)
5.538	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. (WRC-07)
5.539	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.
5.540	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.
5.541	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.

5.541A	Feeder links of non-geostationary networks in the mobile-satellite service and geostationary networks in the fixed-satellite service operating in the band 29.1-29.5 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 4 coordination information is considered as having been received by the Bureau after 17 May 1996 and until they are changed by a future competent world radiocommunication conference. Administrations submitting Appendix 4 information for coordination before this date are encouraged to utilize these techniques to the extent practicable. (WRC-2000)
5.542	Additional allocation: in Algeria, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, China, Congo (Rep. of the), Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guinea, India, Iran (Islamic Republic of), Iraq, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Oman, Pakistan, Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Somalia, Sudan, South Sudan, Sri Lanka and Chad, 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. 21.3 and 21.5 shall apply. (WRC-12)
5.543	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.
5.543A	(SUP - WRC-19)
5.543B	The allocation to the fixed service in the frequency band 31-31.3 GHz is identified for worldwide use by high-altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which this frequency band is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation by HAPS shall be in accordance with the provisions of Resolution 167 (WRC-19). (WRC-19)
5.544	In the band 31-31.3 GHz the power flux-density limits specified in Article 21, Table 21-4 shall apply to the space research service.
5.545	Different category of service: in Armenia, Georgia, Kyrgyzstan, Tajikistan and Turkmenistan, the allocation of the band 31-31.3 GHz to the space research service is on a primary basis (see No. 5.33). (WRC-12)
5.546	Different category of service: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Egypt, the United Arab Emirates, Spain, Estonia, the Russian Federation, Georgia, Hungary, Iran (Islamic Republic of), Israel, Jordan, Lebanon, Moldova, Mongolia, Oman, Uzbekistan, Poland, the Syrian Arab Republic, Kyrgyzstan, Romania, the United Kingdom, South Africa, Tajikistan, Turkmenistan and Turkey, the allocation of the frequency band 31.5-31.8 GHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. 5.33). (WRC-19)
5.547	The bands 31.8-33.4 GHz, 37-40 GHz, 40.5-43.5 GHz, 51.4-52.6 GHz, 55.78-59 GHz and 64-66 GHz are available for high-density applications in the fixed service (see Resolution 75 (WRC-2000)*). Administrations should take this into account when considering regulatory provisions in relation to these bands. Because of the potential deployment of high-density applications in the fixed-satellite service in the bands 39.5-40 GHz and 40.5-42 GHz (see No. 5.516B), administrations should further take into account potential constraints to high-density applications in the fixed service, as appropriate. (WRC-07) * Note by the Secretariat: This Resolution was revised by WRC-12.
5.547A	Administrations should take practical measures to minimize the potential interference between stations in the fixed service and airborne stations in the radionavigation service in the 31.8-33.4 GHz band, taking into account the operational needs of the airborne radar systems. (WRC-2000)
5.547B	Alternative allocation: in the United States, the band 31.8-32 GHz is allocated to the radionavigation and space research (deep space) (space-to-Earth) services on a primary basis. (WRC-97)
5.547C	Alternative allocation: in the United States, the band 32-32.3 GHz is allocated to the radionavigation and space research (deep space) (space-to-Earth) services on a primary basis. (WRC-03)

5.547D	Alternative allocation: in the United States, the band 32.3-33 GHz is allocated to the inter-satellite and radionavigation services on a primary basis. (WRC-97)
5.547E	Alternative allocation: in the United States, the band 33-33.4 GHz is allocated to the radionavigation service on a primary basis. (WRC-97)
5.548	In designing systems for the inter-satellite service in the band 32.3-33 GHz, for the radionavigation service 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). (WRC-03)
5.549	Additional allocation: in Saudi Arabia, Bahrain, Bangladesh, Egypt, the United Arab Emirates, Gabon, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, Nigeria, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. Rep. of the Congo, Singapore, Somalia, Sudan, South Sudan, Sri Lanka, Togo, Tunisia and Yemen, the band 33.4-36 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-12)
5.549A	In the band 35.5-36.0 GHz, the mean power flux-density at the Earth's surface, generated by any spaceborne sensor in the Earth exploration-satellite service (active) or space research service (active), for any angle greater than 0.8° from the beam centre shall not exceed -73.3 dB(W/m ²) in this band. (WRC-03)
5.550	Different category of service: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kyrgyzstan, Tajikistan and Turkmenistan, the allocation of the band 34.7-35.2 GHz to the space research service is on a primary basis (see No. 5.33). (WRC-12)
5.550A	For sharing of the band 36-37 GHz between the Earth exploration-satellite (passive) service and the fixed and mobile services, Resolution 752 (WRC-07) shall apply. (WRC-07)
5.550B	The frequency band 37-43.5 GHz, or portions thereof, is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Because of the potential deployment of FSS earth stations within the frequency range 37.5-42.5 GHz and high-density applications in the fixed-satellite service in the frequency bands 39.5-40 GHz in Region 1, 40-40.5 GHz in all Regions and 40.5-42 GHz in Region 2 (see No. 5.516B), administrations should further take into account potential constraints to IMT in these frequency bands, as appropriate. Resolution 243 (WRC-19) applies. (WRC-19)
5.550C	The use of the frequency bands 37.5-39.5 GHz (space-to-Earth), 39.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to the application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service but not with non-geostationary-satellite systems in other services. Resolution 770 (WRC-19) shall also apply, and No. 22.2 shall continue to apply. (WRC-19)
5.550D	The allocation to the fixed service in the frequency band 38-39.5 GHz is identified for worldwide use by administrations wishing to implement high-altitude platform stations (HAPS). In the HAPS-to-ground direction, the HAPS ground station shall not claim protection from stations in the fixed, mobile and fixed-satellite services; and No. 5.43A does not apply. This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which this frequency band is allocated on a co-primary basis and does not establish priority in the Radio Regulations. Furthermore, the development of the fixed-satellite, fixed and mobile services shall not be unduly constrained by HAPS. Such use of the fixed-service allocation by HAPS shall be in accordance with the provisions of Resolution 168 (WRC-19). (WRC-19)

5.550E	The use of the frequency bands 39.5-40 GHz and 40-40.5 GHz by non-geostationary-satellite systems in the mobile-satellite service (space-to-Earth) and by non-geostationary-satellite systems in the fixed-satellite service (space-to-Earth) is subject to the application of the provisions of No. 9.12 for coordination with other non-geostationary- satellite systems in the fixed-satellite and mobile-satellite services but not with non-geostationary-satellite systems in other services. No. 22.2 shall continue to apply for non-geostationary-satellite-systems. (WRC-19)
5.551	(SUP - WRC-97)
5.551A	(SUP - WRC-03)
5.551AA	(SUP - WRC-03)
5.551B	(SUP - WRC-2000)
5.551C	(SUP - WRC-2000)
5.551D	(SUP - WRC-2000)
5.551E	(SUP - WRC-2000)
5.551F	Different category of service: in Japan, the allocation of the band 41.5-42.5 GHz to the mobile service is on a primary basis (see No. 5.33). (WRC-97)
5.551G	(SUP - WRC-03)
5.551H	<p>The equivalent power flux-density (epfd) produced in the frequency band 42.5-43.5 GHz by all space stations in any non-geostationary-satellite system in the fixed-satellite service (space-to-Earth), or in the broadcasting- satellite service operating in the frequency band 42-42.5 GHz, shall not exceed the following values at the site of any radio astronomy station for more than 2% of the time: -230 dB(W/m²) in 1 GHz and -246 dB(W/m²) in any 500 kHz of the frequency band 42.5-43.5 GHz at the site of any radio astronomy station registered as a single-dish telescope; and -209 dB(W/m²) in any 500 kHz of the frequency band 42.5-43.5 GHz at the site of any radio astronomy station registered as a very long baseline interferometry station. These epfd values shall be evaluated using the methodology given in Recommendation ITU-R S.1586-1 and the reference antenna pattern and the maximum gain of an antenna in the radio astronomy service given in Recommendation ITU-R RA.1631-0 and shall apply over the whole sky and for elevation angles higher than the minimum operating angle 8min of the radiotelescope (for which a default value of 5° should be adopted in the absence of notified information).</p> <p>These values shall apply at any radio astronomy station that either: was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or was notified before the date of receipt of the complete Appendix 4 information for coordination or notification, as appropriate, for the space station to which the limits apply. Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. In Region 2, Resolution 743 (WRC-03) shall apply. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed. (WRC-15)</p>
5.551I	<p>The power flux-density in the band 42.5-43.5 GHz produced by any geostationary space station in the fixed- satellite service (space-to-Earth), or the broadcasting-satellite service operating in the 42-42.5 GHz band, shall not exceed the following values at the site of any radio astronomy station: -137 dB(W/m²) in 1 GHz and -153 dB(W/m²) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a single-dish telescope; and -116 dB(W/m²) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a very long baseline interferometry station. These values shall apply at the site of any radio astronomy station that either: was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or was notified before the date of receipt of the complete Appendix 4 information for coordination or notification, as appropriate, for the space station to which the limits apply. Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. In Region 2, Resolution 743 (WRC-03) shall apply. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed. (WRC-03)</p>

5.552	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.
5.552A	The allocation to the fixed service in the frequency bands 47.2-47.5 GHz and 47.9-48.2 GHz is identified for use by high-altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation in the frequency bands 47.2-47.5 GHz and 47.9-48.2 GHz by HAPS shall be in accordance with the provisions of Resolution 122 (Rev.WRC-19). (WRC-19)
5.553	In the bands 43.5-47 GHz and 66-71 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. 5.43). (WRC-2000)
5.553A	In Algeria, Angola, Bahrain, Belarus, Benin, Botswana, Brazil, Burkina Faso, Cabo Verde, Korea (Rep. of), Côte d'Ivoire, Croatia, United Arab Emirates, Estonia, Eswatini, Gabon, Gambia, Ghana, Greece, Guinea, Guinea-Bissau, Hungary, Iran (Islamic Republic of), Iraq, Jordan, Kuwait, Lesotho, Latvia, Liberia, Lithuania, Madagascar, Malawi, Mali, Morocco, Mauritius, Mauritania, Mozambique, Namibia, Niger, Nigeria, Oman, Qatar, Senegal, Seychelles, Sierra Leone, Slovenia, Sudan, South Africa, Sweden, Tanzania, Togo, Tunisia, Zambia and Zimbabwe, the frequency band 45.5-47 GHz is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT), taking into account No. 5.553. With respect to the aeronautical mobile service and radionavigation service, the use of this frequency band for the implementation of IMT is subject to agreement obtained under No. 9.21 with concerned administrations and shall not cause harmful interference to, or claim protection from these services. This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Resolution 244 (WRC-19) applies. (WRC-19)
5.553B	In Region 2 and Algeria, Angola, Saudi Arabia, Australia, Bahrain, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Rep., Comoros, Congo (Rep. of the), Korea (Rep. of), Côte d'Ivoire, Djibouti, Egypt, United Arab Emirates, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Equatorial Guinea, India, Iran (Islamic Republic of), Iraq, Japan, Jordan, Kenya, Kuwait, Lesotho, Liberia, Libya, Lithuania, Madagascar, Malaysia, Malawi, Mali, Morocco, Mauritius, Mauritania, Mozambique, Namibia, Niger, Nigeria, Oman, Uganda, Qatar, the Syrian Arab Republic, the Dem. Rep. of the Congo, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Singapore, Slovenia, Somalia, Sudan, South Sudan, South Africa, Sweden, Tanzania, Chad, Togo, Tunisia, Zambia and Zimbabwe, the frequency band 47.2-48.2 GHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated, and does not establish any priority in the Radio Regulations. Resolution 243 (WRC-19) applies. (WRC-19)
5.554	In the bands 43.5-47 GHz, 66-71 GHz, 95-100 GHz, 123-130 GHz, 191.8-200 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. (WRC-2000)
5.554A	The use of the bands 47.5-47.9 GHz, 48.2-48.54 GHz and 49.44-50.2 GHz by the fixed-satellite service (space-to-Earth) is limited to geostationary satellites.(WRC-03)
5.555	Additional allocation: the band 48.94-49.04 GHz is also allocated to the radio astronomy service on a primary basis.(WRC-2000)
5.555A	(SUP - WRC-03)
5.555B	The power flux-density in the band 48.94-49.04 GHz produced by any geostationary space station in the fixed-satellite service (space-to-Earth) operating in the bands 48.2-48.54 GHz and 49.44-50.2 GHz shall not exceed -151.8 dB(W/m ²) in any 500 kHz band at the site of any radio astronomy station. (WRC-03)

5.555C	The use of the frequency band 51.4-52.4 GHz by the fixed-satellite service (Earth-to-space) is limited to geostationary-satellite networks. The earth stations shall be limited to gateway earth stations with a minimum antenna diameter of 2.4 metres. (WRC-19)
5.556	In the bands 51.4-54.25 GHz, 58.2-59 GHz and 64-65 GHz, radio astronomy observations may be carried out under national arrangements.(WRC-2000)
5.556A	Use of the bands 54.25-56.9 GHz, 57-58.2 GHz and 59-59.3 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density at all altitudes from 0 km to 1 000 km above the Earth's surface produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, shall not exceed -147 dB(W/(m ² · 100 MHz)) for all angles of arrival. (WRC-97)
5.556B	Additional allocation: in Japan, the band 54.25-55.78 GHz is also allocated to the mobile service on a primary basis for low-density use. (WRC-97)
5.557	Additional allocation: in Japan, the band 55.78-58.2 GHz is also allocated to the radiolocation service on a primary basis.(WRC-97)
5.557A	In the band 55.78-56.26 GHz, in order to protect stations in the Earth exploration-satellite service (passive), the maximum power density delivered by a transmitter to the antenna of a fixed service station is limited to -26 dB(W/MHz). (WRC-2000)
5.558	In the bands 55.78-58.2 GHz, 59-64 GHz, 66-71 GHz, 122.25-123 GHz, 130-134 GHz, 167-174.8 GHz and 191.8-200 GHz, stations in the aeronautical mobile service may be operated subject to not causing harmful interference to the inter-satellite service (see No. 5.43). (WRC-2000)
5.558A	Use of the band 56.9-57 GHz by inter-satellite systems is limited to links between satellites in geostationary- satellite orbit and to transmissions from non-geostationary satellites in high-Earth orbit to those in low-Earth orbit. For links between satellites in the geostationary-satellite orbit, the single entry power flux-density at all altitudes from 0 km to 1 000 km above the Earth's surface, for all conditions and for all methods of modulation, shall not exceed-147 dB(W/(m ² · 100 MHz)) for all angles of arrival. (WRC-97)
5.559	In the band 59-64 GHz, airborne radars in the radiolocation service may be operated subject to not causing harmful interference to the inter-satellite service (see No. 5.43). (WRC-2000)
5.559A	(SUP - WRC-07)
5.559AA	The frequency band 66-71 GHz is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which this frequency band is allocated and does not establish priority in the Radio Regulations. Resolution 241 (WRC-19) applies. (WRC-19)
5.559B	The use of the frequency band 77.5-78 GHz by the radiolocation service shall be limited to short-range radar for ground-based applications, including automotive radars. The technical characteristics of these radars are provided in the most recent version of Recommendation ITU-R M.2057. The provisions of No. 4.10 do not apply. (WRC-15)
5.560	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.
5.561	In the band 74-76 GHz, stations in the fixed, mobile and broadcasting services shall not cause harmful interference to stations of the fixed-satellite service or stations of the broadcasting-satellite service operating in accordance with the decisions of the appropriate frequency assignment planning conference for the broadcasting-satellite service. (WRC-2000)
5.561A	The 81-81.5 GHz band is also allocated to the amateur and amateur-satellite services on a secondary basis.(WRC-2000)
5.561B	In Japan, use of the band 84-86 GHz, by the fixed-satellite service (Earth-to-space) is limited to feeder links in the broadcasting-satellite service using the geostationary-satellite orbit. (WRC-2000)

5.562	The use of the band 94-94.1 GHz by the Earth exploration-satellite (active) and space research (active) services is limited to spaceborne cloud radars.(WRC-97)
5.562A	In the bands 94-94.1 GHz and 130-134 GHz, transmissions from space stations of the Earth exploration- satellite service (active) that are directed into the main beam of a radio astronomy antenna have the potential to damage some radio astronomy receivers. Space agencies operating the transmitters and the radio astronomy stations concerned should mutually plan their operations so as to avoid such occurrences to the maximum extent possible. (WRC-2000)
5.562B	In the frequency bands 105-109.5 GHz, 111.8-114.25 GHz and 217-226 GHz, the use of this allocation is limited to space-based radio astronomy only. (WRC-19)
5.562C	Use of the band 116-122.25 GHz by the inter-satellite service is limited to satellites in the geostationary- satellite orbit. The single-entry power flux-density produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, at all altitudes from 0 km to 1 000 km above the Earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed -148 dB(W/(m ² · MHz)) for all angles of arrival. (WRC-2000)
5.562D	Additional allocation: In Korea (Rep. of), the frequency bands 128-130 GHz, 171-171.6 GHz, 172.2-172.8 GHz and 173.3-174 GHz are also allocated to the radio astronomy service on a primary basis. Radio astronomy stations in Korea (Rep. of) operating in the frequency bands referred to in this footnote shall not claim protection from, or constrain the use and development of, services in other countries operating in accordance with the Radio Regulations. (WRC-15)
5.562E	The allocation to the Earth exploration-satellite service (active) is limited to the band 133.5-134 GHz.
5.562F	(SUP - WRC-19)
5.562G	(SUP - WRC-19)
5.562H	Use of the bands 174.8-182 GHz and 185-190 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, at all altitudes from 0 to 1 000 km above the Earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed -144 dB(W/(m ² · MHz)) for all angles of arrival. (WRC-2000)
5.563	(SUP - WRC-03)
5.563A	In the bands 200-209 GHz, 235-238 GHz, 250-252 GHz and 265-275 GHz, ground-based passive atmospheric sensing is carried out to monitor atmospheric constituents. (WRC-2000)
5.563B	The band 237.9-238 GHz is also allocated to the Earth exploration-satellite service (active) and the space research service (active) for spaceborne cloud radars only. (WRC-2000)
5.564	(SUP - WRC-2000)

5.564A	<p>For the operation of fixed and land mobile service applications in frequency bands in the range 275- 450 GHz:</p> <p>The frequency bands 275-296 GHz, 306-313 GHz, 318-333 GHz and 356-450 GHz are identified for use by administrations for the implementation of land mobile and fixed service applications, where no specific conditions are necessary to protect Earth exploration-satellite service (passive) applications.</p> <p>The frequency bands 296-306 GHz, 313-318 GHz and 333-356 GHz may only be used by fixed and land mobile service applications when specific conditions to ensure the protection of Earth exploration-satellite service (passive) applications are determined in accordance with Resolution 731 (Rev.WRC-19).</p> <p>In those portions of the frequency range 275-450 GHz where radio astronomy applications are used, specific conditions (e.g. minimum separation distances and/or avoidance angles) may be necessary to ensure protection of radio astronomy sites from land mobile and/or fixed service applications, on a case-by-case basis in accordance with Resolution 731 (Rev.WRC-19).</p> <p>The use of the above-mentioned frequency bands by land mobile and fixed service applications does not preclude use by, and does not establish priority over, any other applications of radio services in the range of 275-450 GHz. (WRC-19)</p>
5.565	<p>The following frequency bands in the range 275-1 000 GHz are identified for use by administrations for passive service applications:radio astronomyservice:275-323 GHz,327-371 GHz,388-424 GHz,453-510 GHz, 623-711 GHz, 795-909 GHz and 926-945 GHz;Earth exploration-satellite service (passive) and space research service (passive): 275-286 GHz, 296-306 GHz, 313-356 GHz, 361-365 GHz, 369-392 GHz, 397-399 GHz, 409-411 GHz, 416-434 GHz, 439-467 GHz, 477-502 GHz, 523-527 GHz, 538-581 GHz, 611-630 GHz, 634-654 GHz, 657-692 GHz, 713-718 GHz, 729-733 GHz, 750-754 GHz, 771-776 GHz, 823-846 GHz, 850-854 GHz, 857-862 GHz, 866-882 GHz, 905-928 GHz, 951-956 GHz, 968-973 GHz and 985-990 GHz.The use of the range 275-1 000 GHz by the passive services does not preclude use of this range by active services. Administrations wishing to make frequencies in the 275-1 000 GHz range available for active service applications are urged to take all practicable steps to protect these passive services from harmful interference until the date when the Table of Frequency Allocations is established in the above-mentioned 275-1 000 GHz frequency range.All frequencies in the range 1 000-3 000 GHz may be used by both active and passive services. (WRC-12)</p>

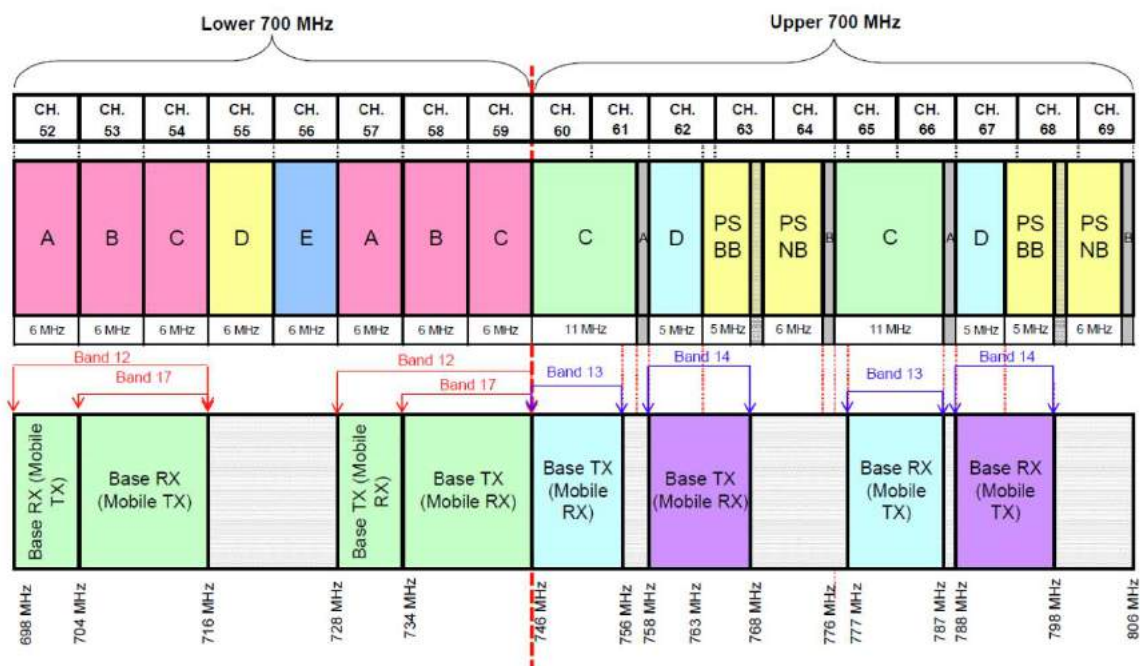
4 TCI Specific Footnotes

Footnote Ref.	TCI Specific Footnotes
T1	The bands 824 - 847.4 MHz and 869 - 892.4 MHz are designated for public telecommunications services. See Channelling Plans. See also International Footnote 5.317A.
T2	The bands 894.6 - 904.4 MHz and 939.6 - 949.4 MHz are designated for public telecommunications services. See Channelling Plans. See also International Footnote 5.317A.
T3	The bands 1710 - 1725 MHz and 2110 - 2115 MHz are designated for public telecommunications services. See Channelling Plans. See also International Footnote 5.384A, 5.388A.
T4	The bands 1865 - 1905.2 MHz and 1945 - 1985.2 MHz are designated for public telecommunications services. See Channelling Plans. See also International Footnotes 5.384A, 5.388A.
T5	The bands 1 920 - 1 950 MHz and 2 110 - 2 140 MHz are designated for implementation of third-generation public telecommunications services. See Channelling Plans. See also International Footnote 5.388.
T6	The band 2 300 - 2 450 MHz is designated for Wireless Communications Systems Applications and may include point to point applications.
T7	Fixed wireless access systems, including WiMAX, may be licensed in the frequency range 3 400 - 3 600 MHz
T8	The bands 163 -173 MHz, 453 - 458 MHz, 3 480 - 3 500 MHz and 3580 - 3600 MHz have been identified for Public Safety and Government use. Additional bands may be included on an as needed basis.
T9	The bands 905 - 928 MHz, 2 400 - 2 483.5 MHz, 5 150 - 5 250, 5 250 - 5 350, 5 470 - 5 725 and 5 725 - 5 850 MHz have been identified for industrial, scientific and medical (ISM) and Unlicensed National Information Infrastructure (UNII) applications and have been designated in the plan to be operated by certain low power and short-range devices. See ISM and UNII radiator limits. Note that the Commission reserves the right to alter the radiation limits following consultation. Further note that the commercial use of these bands may be subject to regulatory intervention in cases where harmful or disruptive interference is caused to other networks or services.
T10	The spectrum bands referred to in T9 are allocated to point to multipoint broadband services. Mobility is permitted as long as there is no handover of services between base stations.
T11	In the bands referred to in T9, cellular mobile services are prohibited

Footnote Ref.	TCI Specific Footnotes
T12	The bands 777 - 788 MHz, 746 - 757 MHz, 704 - 716 MHz, 734 - 746 MHz are designated for public telecommunications services. See also International Footnote 5.317A.
T13	<p>Licences for assignment of spectrum in the 2.5GHz Band (2500MHz - 2690MHz) contain the following conditions:</p> <p>1/ The licensee must commercially deploy advanced LTE mobile broadband services within 18 months of the issuance of the spectrum licence.</p> <p>2/ The licensee must cover 98% of the population of TCI with advance LTE-based mobile broadband services within 36 months of the issuance of the spectrum licence.</p> <p>3/ The licensee must file an LTE mobile broadband service deployment status report with the Commission after 18 months, 36 months and every 2 years following the issuance of the spectrum licence.</p> <p>A cap of 40MHz bandwidth is established for assignments of spectrum to each applicant in the 2.5GHz band.</p> <p>FDD and TDD technology usage is permitted in accordance with the channel plan.</p>

5 TCI Band Plans

5.1 Band Plan for 700 MHz Public Telecommunications Services



700 MHz Spectrum Block Designations (698 - 806 MHz) ¹				
Reserved for Future Use				
Block	Designation	Pairing	Frequency	Total MHz
Public Safety	Reserved *	Paired	763-775 MHz/793-805 MHz	12 + 12 = 24 MHz
Upper D	Reserved **	Paired	758-763 MHz/788-793 MHz	5 + 5 = 10 MHz
Guardbands	Reserved	Unpaired	757-758, 775-776, 787-788, 805-806 MHz	4 MHz
Sub-Total				38 MHz
Available for Commercial Use				
Block	Designation	Pairing	Frequency	Total MHz
Lower A	Non-Prime	Paired	698-704 MHz/728-734 MHz	6 + 6 = 12 MHz
Lower B	Prime	Paired	704-710 MHz/734-740 MHz	6 + 6 = 12 MHz
Lower C	Prime	Paired	710-716 MHz/740-746 MHz	6 + 6 = 12 MHz
Lower D	Non-Prime	Unpaired	716-722 MHz	6 MHz
Lower E	Non-Prime	Unpaired	722-728 MHz	6 MHz
Upper C	Prime	Paired	746-757 MHz/777-788 MHz	11 + 11 = 22 MHz
Sub-Total				70 MHz
TOTAL				108 MHz

¹ Note that the term "prime" spectrum category corresponds to the 700 MHz spectrum blocks for which 4G LTE terminal devices and network equipment were available at relatively affordable prices (i.e., the Lower A and B and Upper C blocks) at the time that the policy for 700MHz was finalised in 2012. The remaining commercial use blocks, where this was not the case, were designated as "non-prime" spectrum (i.e., the Lower A and unpaired Lower D and E blocks).

Currently, the following 700MHz spectrum has been assigned: LTE bands 13 and 17.

Band 13

Base transmit: 746 - 756 MHz
Mobile transmit: 777 - 787 MHz

Band 17

Base transmit: 734 - 746 MHz
Mobile transmit: 704 - 716 MHz

5.2 Band Plan for 850 MHz Public Telecommunications Services

The band plan for 850 MHz is based on the North American cellular band plan modified to permit operation of the European GSM900 band in the same geographic area. The frequency ranges are as follows:

Base transmit: 869 - 892.4 MHz
Mobile transmit: 824 - 847.4 MHz

5.3 Band Plan for 900 MHz Public Telecommunications Services

The band plan for 900 MHz is based on the European GSM band plan, while avoiding operation in most of the 902-928 MHz band where ISM devices as well as unlicensed radios operate in ITU Region 2 (the Americas). The frequency ranges are as follows:

Base transmit: 939.6 - 949.4 MHz
Mobile transmit: 894.6 - 904.4 MHz

5.4 Band Plan for 1800 MHz Public Telecommunications Services

The band plan for 1800 MHz is based on the GSM1800 band plan, as used in Europe and many other parts of the world. The plan avoids overlap with the PCS band plan, while still providing 40+40 MHz of spectrum. The frequency ranges are as follows:

Base transmit: 1805 to 1 845 MHz
Mobile transmit: 1710 to 1750 MHz

5.5 Band Plan for 1900 MHz Public Telecommunications Services

The band plan for 1900 MHz is based on the North American PCS plan. The frequency ranges are as follows:

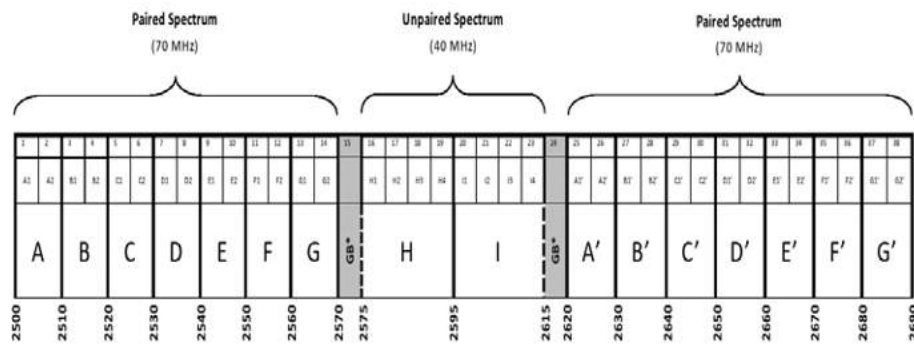
Base transmit: 1945 - 1985.2 MHz
Mobile transmit: 1865 - 1905.2 MHz

5.6 Band Plan for 2000 MHz Public Telecommunications Services

The band plan for 2000 MHz is based on the UMTS plan adopted in Europe and in other parts of the world for third generation mobile telecommunications services. The frequency ranges are as follows:

Base transmit: 2110 - 2125 MHz
 Mobile transmit: 1710 - 1725 MHz

5.7 Band Plan for 2.5GHz Band (2500MHz - 2690MHz) Public Telecommunications Services



*GB - Guard Band

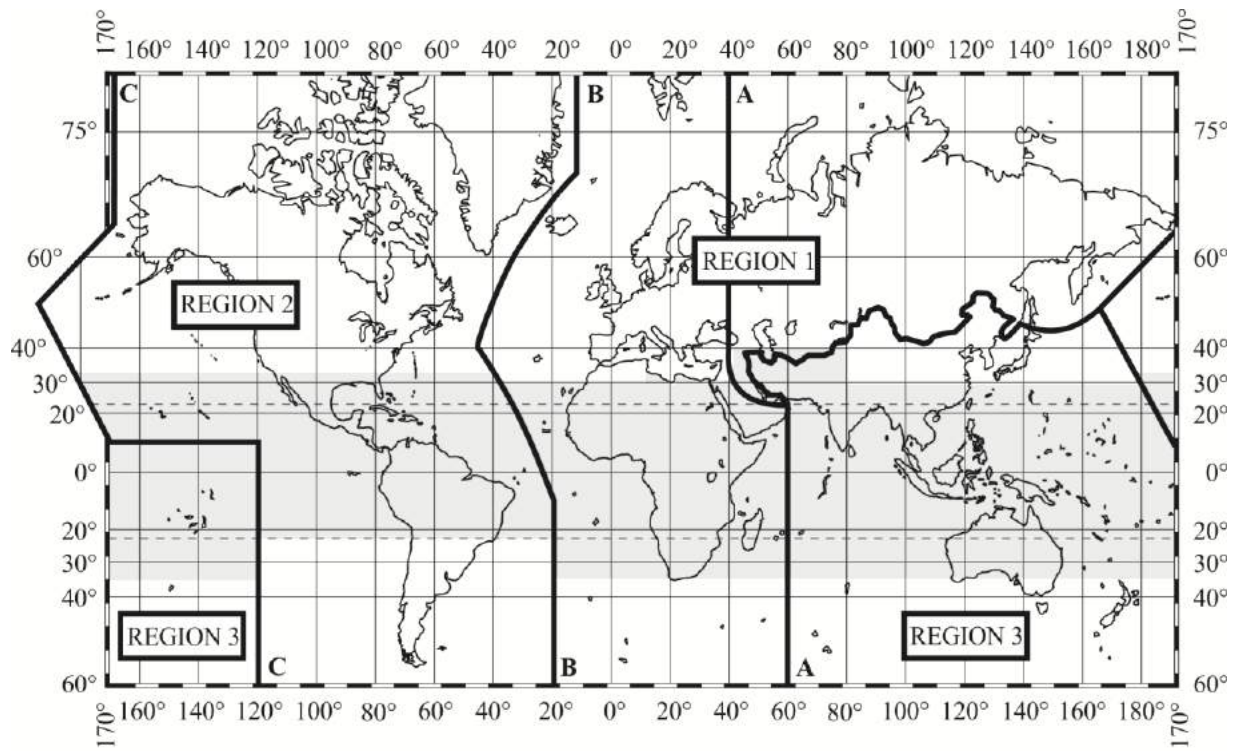
2.5 GHz (2500MHz- 2690MHz) Channel Plan		
Block(s)	Total Spectrum	Pairing
A+A'	10+10=20 MHz	Paired
B + B'	10+10=20 MHz	Paired
C + C'	10+10=20 MHz	Paired
D + D'	10+10=20 MHz	Paired
E + E'	10+10=20 MHz	Paired
F + F'	10+10=20 MHz	Paired
G + G'	10+10=20 MHz	Paired
H	20 MHz	Unpaired
I	20 MHz	Unpaired

6 ISM and UNII Radiator Limits

Band Name	Frequency Range	Bandwidth	Emission Limits (the following is a summary but full details can be found at 15.247 and 15.407 of the United States Electronic Code of Federal Regulations)
ISM	905 - 928 MHz	26 MHz	<p>For frequency hopping systems: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels.</p> <p>For systems using digital modulation: 1 Watt.</p> <p>Note that the ECFR identifies 902 - 905 MHz also but currently that part of the range will not be identified for ISM in the TCI.</p>
ISM	2 400 - 2 483.5 MHz	83.5 MHz	<p>For frequency hopping systems employing at least 75 non-overlapping hopping channels: 1 watt. For all other frequency hopping systems: 0.125 watts.</p> <p>For systems using digital modulation: 1 Watt.</p> <p>Systems used exclusively for fixed, point-to-point operations may use transmitting antennas with directional gain greater than 6 dBi if the maximum conducted output power is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.</p>
UNII - 1	5 150 - 5 250 GHz	100 MHz	<p>1 W for access points; 250 mW for client devices if gain does not exceed 6dBi</p> <p>If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).</p> <p>For an indoor access point the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum</p>

			power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
UNII - 2	5 250 - 5 350 GHz	100 MHz	Power shall not exceed the lesser of 250 mW or 11 dBm $10 \log B$, where B is the 26 dB emission bandwidth in megahertz
UNII - New	5 470 - 5 725 GHz	255 MHz	Power shall not exceed the lesser of 250 mW or 11 dBm $10 \log B$, where B is the 26 dB emission bandwidth in megahertz
UNII - 3	5 725 - 5 850 GHz	125 MHz	<p>1 W (frequency hopping and digital modulation systems) and 1 dB reduction in power required for every 1 dB that antenna gain exceeds 6 dBi</p> <p>For systems using digital modulation: 1 Watt.</p> <p>Systems used exclusively for fixed, point-to-point operations may use transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter power.</p>

Annex 1: ITU Regions



5-01

Annex 2: Definitions

The definitions below are contained in the ITU's Radio Regulations.

Assigned Frequency: The centre of the frequency band assigned to a station.

Accepted Interference: Interference at a higher level than that defined as permissible interference and which has been agreed upon between two or more administrations without prejudice to other administrations.

Aeronautical Mobile Service: A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radio beacon stations may also participate in this service on designed distress and emergency frequencies.

Aeronautical Mobile (Route) Service: An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.

Aeronautical Mobile (Off Route) Service: An aeronautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes.

Aeronautical Mobile Satellite Service: A mobile service in which mobile earth stations are located on board aircraft; survival craft stations and Emergency Positioning-Indicating Radio Beacon may also participate in this service.

Aeronautical Mobile Satellite (Route) Service: An aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flights, primarily along national and international civil air routes.

Aeronautical Mobile-Satellite (Off Route) Service: An aeronautical mobile-satellite service intended for communications, including those relating to flight coordination, primarily outside national and international civil routes.

Amateur Service: A radiocommunications service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, duly authorised persons interested in radio techniques solely with a personal aim and without pecuniary interest.

Amateur-Satellite Service: A radiocommunications service using space stations on earth for the same purposes as those of the amateur service.

Aeronautical Radionavigation: A radionavigation service intended for the benefit and for the safe operation of aircraft.

Allocation (of a frequency band): Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space radiocommunication services or the radio astronomy service under specified conditions. This term shall also be applied to the frequency band concerned.

Allotment (of a radio frequency or radio frequency channel): Entry of a designated frequency channel in an agreed plan, adopted by a competent conference, for use by one or more administrations for a terrestrial or space radiocommunication service in one or more identified countries or geographical areas and under specified conditions.

Assignment (of a radio frequency or radio frequency channel): Authorization given by an administration for a radio station to use a radio frequency or radio frequency channel under specified conditions.

Broadcasting Service: A radiocommunications service in which the transmissions are intended for direct reception by the general public. This service may include sound transmissions, television transmissions or other types of transmission.

Broadcasting Satellite Service: A radiocommunications service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public.

Earth Exploration-Satellite Service: A radiocommunications service between earth stations and one or more space stations' which may include links between space stations.

Fixed Service: A radiocommunications service between specified fixed points.

Harmful Interference: Interference which endangers the functioning of a radionavigation service or of other safety services or severely degrades, obstructs, or repeatedly interrupts a radiocommunications service operating in accordance with the Regulations.

Industrial Scientific and Medical (ISM) applications (of radio frequency energy): Operation of equipment or appliances designed to generate and use locally radio frequency energy for industrial, scientific, medical, domestic or similar purposes, excluding applications in the field of telecommunications.

Inter-Satellite Service: A radiocommunications service providing links between artificial earth satellites.

Land Mobile Service: A mobile service between a base station and a land-mobile station, or between mobile land stations.

Land Mobile Satellite Service: A mobile-satellite service in which mobile earth stations are located on land.

Land Mobile Station: A mobile station in the land mobile service capable of surface movement within the geographical limits of a country or continent.

Metrological-Satellite Service: An earth exploration-satellite service for meteorological purposes.

Maritime Radionavigation Service: A mobile-satellite intended for the benefit and for the safe operation of ships.

Maritime Mobile-Satellite Service: A mobile-satellite in which mobile earth stations are

located on board ships; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.

Maritime Mobile Service: A mobile service between coast stations and ship stations, or between ship stations, or between associated on-board communication stations; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.

Maritime Radionavigation-Satellite Service: A radionavigation-satellite service in which earth stations are located on board ships.

Mobile-Satellite Service: A radiocommunication service:

- between mobile earth stations and one or more space stations, or between space stations used by this service; or
- between mobile earth stations by means of one or more space stations;

This service may also include feeder links necessary for its operation.

Mobile Service: A radiocommunications service between mobile and land stations, or between mobile stations.

Meteorological Aids Service: A radiocommunications service used for meteorological, including hydrological, observations and exploration.

Radiocommunications: Telecommunications by means of radio waves.

Radiodetermination: The determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of radio waves.

Radionavigation: Radiodetermination used for the purposes of navigation, including obstruction warning.

Radiolocation: Radiodetermination used for the purposes other than those of radionavigation.

Radio Astronomy: Astronomy based on the reception of radio waves of cosmic origin.

Radionavigation-Satellite Service: A radiodetermination-satellite service used for the purpose of radionavigation. This service may also include feeder links necessary for its operation.

Standard Frequency and Time Signal Service: A radiocommunications service for scientific, technical and other purposes, providing the transmission of specified frequencies, time signals, or both of stated high precision, intended for general reception.

Space Research Service: A radiocommunications service in which spacecraft or other objects in space are used for scientific or technological research purposes.

Space Radiocommunication: Any radiocommunication involving the use of one or more space stations or the use of one or more reflecting satellites or other objects in space.

Terrestrial Radiocommunication: Any radiocommunication other than space radiocommunication or radio astronomy.

Telecommunication: Any transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.