

KEPUTUSAN MENTERI PERHUBUNGAN

NOMOR : KM.5 TAHUN 2001

TENTANG

PENYEMPURNAAN TABEL ALOKASI SPEKTRUM FREKUENSI RADIO INDONESIA

MENTERI PERHUBUNGAN,

- Menimbang : a. bahwa spektrum frekuensi radio merupakan sumber daya alam yang terbatas yang mempunyai nilai strategis dalam penyelenggaraan telekomunikasi dan dikuasai oleh negara;
- b. bahwa pemanfaatan spektrum frekuensi radio sebagai sumber daya alam tersebut perlu dilakukan secara tertib, efisien dan sesuai dengan peruntukannya sehingga tidak menimbulkan gangguan yang merugikan;
- c. bahwa sehubungan dengan hal tersebut di atas perlu ditetapkan Keputusan Menteri Perhubungan tentang Penyempurnaan Tabel Alokasi Spektrum Frekuensi Radio Indonesia;
- Mengingat : 1. Undang-undang Nomor : 36 tahun 1999 tentang Telekomunikasi;
2. Peraturan Pemerintah Nomor. 52 Tahun 2000 tentang Penyelenggaraan Telekomunikasi;
3. Peraturan Pemerintah Republik Indonesia Nomor 53 Tahun 2000 tentang Penggunaan Spektrum Frekuensi Radio Dan Orbit Satelit;
4. Keputusan Presiden Republik Indonesia Nomor 18 Tahun 1996 tentang Pengesahan Constiution and Convention of The International Telecommunication Union, Geneva, 1992 (Konstitusi dan Konvensi Perhimpunan Telekomunikasi Internasional, Jenewa, 1992), beserta Instrumen Amandemennya, Kyoto, 1994 (Lembaran Negara Republik Indonesia Tahun 1996 Nomor 29);
5. Keputusan Menteri Pariwisata, Pos dan Telekomunikasi Nomor : KM.103/PT.102/MPPT/1996 tentang Alokasi Spektrum Frekuensi Radio Indonesia;
- Memperhatikan : (1) Hasil Final Act World Radiocommunication Conference (WRC) 1997;

MEMUTUSKAN :

- Menetapkan : KEPUTUSAN MENTERI PERHUBUNGAN TENTANG PENYEMPURNAAN TABEL ALOKASI SPEKTRUM FREKUENSI RADIO INDONESIA

BAB I

KETENTUAN UMUM

Pasal 1

Dalam Peraturan Pemerintah ini yang dimaksud dengan :

1. Telekomunikasi adalah setiap pemancaran, pengiriman, atau penerimaan tiap jenis tanda, gambar, suara dan informasi dalam bentuk apapun melalui sistem kawat, optik, radio atau sistem elektromagnetik lainnya.
2. Spektrum Frekuensi Radio adalah susunan pita frekuensi radio yang mempunyai frekuensi lebih kecil dari 3000 GHz sebagai satuan getaran gelombang elektromagnetik yang merambat dan terdapat dalam dirgantara (ruang udara dan antariksa).
3. Alokasi Spektrum Frekuensi Radio adalah pencantuman pita frekuensi radio tertentu dengan maksud untuk penggunaan oleh satu atau lebih dinas komunikasi radio terrestrial atau dinas komunikasi radio ruang angkasa atau dinas astronomi berdasarkan persyaratan tertentu.
4. Dinas Komunikasi Radio adalah suatu dinas sebagaimana diatur dalam Peraturan Radio yang ditetapkan oleh Himpunan Telekomunikasi Internasional (ITU) meliputi pemancaran, emisi-emisi dan atau penerimaan gelombang-gelombang radio untuk tujuan telekomunikasi tertentu.
5. Kepentingan Negara adalah kepentingan Pertahanan dan Keamanan Negara, pelaksanaan tugas khusus instansi pemerintah tertentu;
6. Menteri adalah Menteri yang bertanggung jawab di bidang telekomunikasi dan bertindak sebagai penanggung jawab Administrasi Telekomunikasi Indonesia;
7. Dirjen adalah Direktur Jenderal Pos dan Telekomunikasi;
8. UPT Balmon adalah Unit Pelaksana Teknis Balai Monitoring Spektrum Frekuensi dan Orbit Satelit;

BAB II

ALOKASI SPEKTRUM FREKUENSI RADIO

Pasal 2

- (1) Alokasi spektrum frekuensi radio Indonesia ditetapkan dengan mengacu kepada alokasi spektrum frekuensi radio internasional untuk wilayah 3 (region 3) sesuai Peraturan Radio yang ditetapkan oleh Himpunan Telekomunikasi Internasional (ITU);
- (2) Alokasi spektrum frekuensi radio Indonesia ditetapkan sebagaimana dimaksud dalam Lampiran I dan Lampiran II Keputusan ini.

Pasal 4

- (1) Penggunaan frekuensi radio dilakukan atas dasar alokasi spektrum frekuensi radio Indonesia sebagaimana dimaksud dalam Pasal 2 ayat (2).
- (2) Penetapan atas penggunaan frekuensi radio sebagaimana dimaksud dalam ayat (1) dilakukan oleh Dirjen.

BAB VI KETENTUAN PENUTUP

Pasal 5

Hal-hal yang memerlukan pengaturan pelaksanaan dari Keputusan ini ditetapkan lebih lanjut oleh Dirjen.

Pasal 6

Keputusan ini mulai berlaku pada tanggal ditetapkan.

Ditetapkan di : J A K A R T A

Pada tanggal :

MENTERI PERHUBUNGAN

ttd

AGUM GUMELAR

LAMPIRAN I : KEPUTUSAN MENTERI PERHUBUNGAN
NOMOR : KM. /PT.102/MENHUB/2000
TANGGAL : SEPTEMBER 2000

TABEL ALOKASI SPEKTRUM FREKUENSI RADIO INDONESIA

Lampiran Keputusan Menteri Perhubungan KM. /PT.102/MENHUB/2000 tentang Tabel Alokasi Spektrum Frekuensi Radio Indonesia ini merupakan penyempurnaan dari Lampiran Keputusan Menparpostel KM.103/PT.102/MPPT-96 mengenai tabel alokasi spektrum frekuensi radio Indonesia. Tabel alokasi frekuensi nasional Indonesia ini disusun berdasarkan hasil Final Act World Radiocommunication Conference-1997, yang berlangsung di Jenewa, pada bulan Nopember 1997.

Susunan buku ini terdiri dari beberapa bagian, yaitu :

1. Istilah dan Definisi
2. Alokasi Frekuensi
3. Catatan Kaki (Foot Note)

Istilah dan Definisi diambil dari referensi-referensi sebagai berikut :

- *Article S1, Terms and Definitions, Radio Regulations* edisi 1998, *International Telecommunication Union (ITU)*;
- *Article S2, Nomenclature, Radio Regulation* edisi 1998, *International Telecommunication Union (ITU)*;
- *Article S5, Frequency Allocation, Radio Regulation* edisi 1998, *International Telecommunication Union (ITU)*.

Alokasi Frekuensi diambil dari referensi-referensi berikut ini :

- *Article S5, Frequency Allocation, Radio Regulation* edisi 1998, *International Telecommunication Union (ITU)*;
- Tabel Alokasi Spektrum Frekuensi Radio Indonesia, edisi pertama, 1996;
- Penetapan Frekuensi Maritim, Penerbangan, dan Siaran di Indonesia;
- Penetapan Frekuensi Dinas Tetap di Indonesia;
- Database AFMS (Automated Frequency Management System).

Catatan Kaki (Footnote) diambil dari referensi-referensi berikut ini :

- *Article S5, Frequency Allocation, Radio Regulation* dan *Final Act-World Radiocommunication Conference (WRC)-1997, International Telecommunication Union (ITU)*, Section IV. Table of Frequency Allocations, Art. S5.53 s/d Art S5.565, di dalam Bahasa Inggris.

1. ISTILAH DAN DEFINISI

Istilah dan Definisi diambil dari referensi-referensi sebagai berikut :

- *Article S1, Terms and Definitions, Radio Regulations* edisi 1998.
- *Article S2, Nomenclature, Radio Regulations* edisi 1998, *International Telecommunication Union (ITU)*.
- *Article S5, Frequency Allocation, Radio Regulation* edisi 1998

Istilah dan definisi yang tidak terdapat di dalam buku ini, dapat dilihat di dalam *Radio Regulations* edisi 1998, *International Telecommunication Union (ITU)*.

ARTIKEL S1

Istilah dan Definisi

Pendahuluan

- S.1.1** Untuk keperluan Peraturan Radio ini, istilah-istilah berikut mempunyai pengertian di bawah ini. Istilah dan definisi tersebut, tidak perlu diterapkan untuk tujuan lain. Definisi yang sama dengan definisi yang terdapat di dalam *Annex to the Constitution* atau *the Annex to the Convention of the International Telecommunication Union* (Geneva, 1992) yang ditandai dengan tanda "(CS)" atau "(CV)" berturut-turut.

Catatan : Jika, di dalam teks dari definisi di bawah ini, sebuah istilah ditulis huruf miring, berarti istilah tersebut didefinisikan di dalam Artikel S1 tersebut.

Bagian I. Istilah Umum

- S.1.2** *Administrasi*: Setiap departemen atau dinas pemerintah yang bertanggungjawab terhadap kewajiban yang terdapat di dalam Konstitusi dari International Telecommunication Union (ITU), di dalam Konvensi dan di dalam Regulasi Administratif (CS 1002).
- S.1.3** *Telekomunikasi*: setiap transmisi, *emisi* atau penerimaan isyarat, sinyal-sinyal, tulisan, gambar-gambar dan suara atau pernyataan pikiran apapun melalui kawat, *radio*, optik atau sistem elektromagnetik lainnya (CV).
- S.1.4** *Radio*: istilah umum yang dipakai dalam penggunaan *gelombang radio*.
- S.1.5** *Gelombang Radio atau Gelombang Hertz*: gelombang elektromagnetik dengan frekuensi yang lebih rendah dari 3 000 GHz, yang merambat dalam ruang angkasa tanpa sarana penghantar buatan.
- S.1.6** *Komunikasi radio*: *telekomunikasi* dengan perantara *gelombang radio*(CS)(CV).
- S.1.7** *Komunikasi radio terrestrial*: Setiap *komunikasi radio* selain *komunikasi radio ruang angkasa* atau *radio astronomi*.
- S.1.8** *Komunikasi radio ruang angkasa*: Setiap *komunikasi radio* yang mencakup penggunaan satu atau lebih *stasiun ruang angkasa*, atau penggunaan satu atau lebih *satelit pemantul* ataupun objek lain yang ada di ruang angkasa.
- S.1.9** *Radio penentu*: Penentuan posisi, kecepatan dan/atau karakteristik lain dari suatu objek, atau untuk mendapatkan keterangan yang berkaitan dengan parameter-parameter tersebut, yang menggunakan sifat-sifat rambatan *gelombang radio*.
- S.1.10** *Navigasi radio*: *Radio penentu* yang digunakan untuk keperluan navigasi, termasuk pemberitahuan sebagai adanya peringatan tentang benda yang menghalangi..

- S.1.11** *Radio lokasi: Radio penentu* yang dipergunakan keperluan-keperluan selain untuk *navigasi radio*.
- S.1.12** *Radio pencari-arrah: Radio penentu* yang menggunakan penerimaan *gelombang radio* untuk keperluan menentukan arah dari suatu *stasiun* atau objek.
- S.1.13** *Radio Astronomi: Astronomi* yang berdasarkan penerimaan *gelombang radio* yang berasal dari kosmos.
- S.1.14** *Waktu Standar Internasional (UTC):* Skala waktu, yang berdasarkan pada ukuran detik (SI), sebagaimana didefinisikan di dalam Rekomendasi ITU-R TF.460-4.
- Untuk tujuan penggunaan praktis yang berhubungan dengan *Radio Regulation*, UTC adalah sama dengan waktu saat matahari tepat pada meridian utama (garis bujur 0°), yang semula dinyatakan dengan GMT.
- S.1.15** *Aplikasi Industri, Scientific dan Medis (ISM)* (dari energi frekuensi radio): adalah operasi dari suatu alat atau perangkat yang dirancang untuk membangkitkan atau menggunakan energi frekuensi radio secara lokal untuk keperluan Industri, Ilmiah, Medis alat-alat rumah tangga atau sejenisnya yang tidak termasuk penggunaan dalam bidang *telekomunikasi*.

Bagian II. Istilah Khusus berkaitan dengan Manajemen Frekuensi

- S.1.16** *Alokasi* (dari suatu pita frekuensi): Pencantuman pita (band) frekuensi tertentu dalam Daftar Alokasi Frekuensi dengan maksud untuk penggunaan oleh satu atau lebih *dinas komunikasi radio terrestrial* atau *dinas komunikasi radio ruang angkasa* atau *dinas radio astronomi* berdasarkan persyaratan tertentu. Istilah alokasi ini juga harus berlaku untuk pembagian lebih lanjut pita frekuensi di atas untuk setiap jenis pitanya.
- S.1.17** *Allotment* (Penjatahan dari frekuensi radio atau kanal frekuensi radio) : Pencantuman kanal frekuensi-frekuensi tertentu dalam suatu rencana yang disetujui dan disahkan oleh suatu konferensi yang berwenang untuk dipergunakan oleh satu atau lebih administrasi untuk *dinas komunikasi radio terrestrial* atau *dinas komunikasi radio ruang angkasa* dalam satu atau lebih negara atau daerah geografis yang tercantum dalam rencana tersebut di atas dan berdasarkan persyaratan tertentu.
- S.1.18** *Assignment* (penetapan frekuensi radio atau kanal frekuensi radio) : Otorisasi yang diberikan oleh suatu administrasi kepada suatu *stasiun* radio untuk menggunakan frekuensi radio atau kanal frekuensi radio berdasarkan persyaratan tertentu.

Bagian III. Dinas Radio

- S1.19** *Dinas komunikasi radio: Dinas* yang didefinisikan dalam bagian ini yang mencakup transmisi, *emisi* dan/atau penerimaan dari *gelombang-gelombang radio* untuk tujuan *telekomunikasi* tertentu.

Yang dimaksud dengan *dinas komunikasi radio* di dalam *Peraturan Radio* ini adalah *komunikasi radio terrestrial*, kecuali bila dinyatakan lain.

- S1.20** *Dinas Tetap: Dinas komunikasi radio* antara tempat-tempat tetap tertentu.
- S1.21** *Dinas Tetap Satelit: Dinas komunikasi radio* antara stasiun-stasiun bumi pada tempat-tempat tetap yang tertentu dengan menggunakan satu atau lebih satelit; dan dalam beberapa kasus, dinas ini mencakup hubungan satelit-ke-satelit, yang dapat juga dioperasikan pada *dinas antar-satelit*; *dinas tetap-satelit* mencakup juga hubungan pencatu (*feeder link*) untuk *dinas komunikasi-radio ruang angkasa* lain;
- S1.22** *Dinas Antar Satelit: Dinas komunikasi radio* yang menyediakan hubungan antara *satelit-satelit* bumi buatan.
- S1.23** *Dinas Operasi Ruang Angkasa: Dinas komunikasi radio* yang dikhususkan untuk operasi *kendaraan ruang angkasa*, terutama untuk *penjejakan ruang angkasa*, *telemetri* dan *telekomando ruang angkasa*.
Biasanya fungsi-fungsi tersebut telah dicakup dalam dinas radio di mana stasiun ruang angkasa tersebut beroperasi.
- S1.24** *Dinas Bergerak: Dinas komunikasi radio* antara stasiun bergerak dan stasiun darat, atau antar stasiun-stasiun bergerak.
- S1.25** *Dinas Bergerak Satelit: Dinas komunikasi radio:*
- antara stasiun bumi bergerak dengan satu atau lebih stasiun ruang angkasa atau antara stasiun ruang angkasa yang digunakan oleh dinas ini; atau
 - antara stasiun bumi bergerak dengan menggunakan satu atau lebih stasiun ruang angkasa.
- Dinas ini juga dapat mencakup hubungan pencatu yang diperlukannya.
- S1.26** *Dinas Bergerak Darat: Dinas bergerak* antara stasiun induk dengan stasiun-stasiun bergerak darat, atau antara stasiun bergerak darat.
- S1.27** *Dinas Bergerak Darat-Satelit: Dinas bergerak satelit* yang stasiun-stasiun bumi bergeraknya terletak di darat.
- S1.28** *Dinas Bergerak Maritim: Dinas bergerak* antara stasiun-stasiun pantai dengan stasiun kapal laut, atau antar stasiun kapal laut atau antar stasiun-stasiun komunikasi pelengkap di kapal; stasiun-stasiun kendaraan penyelamat dan stasiun-stasiun rambu radio (*radio beacon*) penunjuk posisi darurat dapat juga beroperasi dalam dinas ini.
- S1.29** *Dinas Bergerak Maritim-Satelit: Dinas bergerak satelit* yang stasiun-stasiun bumi bergeraknya terletak di kapal; stasiun-stasiun kendaraan penyelamat dan stasiun-stasiun rambu radio (*radio beacon*) penunjuk posisi darurat dapat juga beroperasi dalam dinas ini.
- S1.30** *Dinas Operasi Pelabuhan: Dinas bergerak maritim* di dalam atau dekat sebuah pelabuhan, antara stasiun pantai dan stasiun kapal laut, di mana pesan-pesan dibatasi untuk hal-hal yang berhubungan dengan penanganan operasional, pergerakan dan keamanan kapal laut dan di dalam hal darurat, untuk keselamatan manusia.
Pesan-pesan yang termasuk "*berkaitan dengan umum (public correspondence)*" tidak termasuk dinas ini.

- S1.31** *Dinas Pergerakan Kapal Laut : Dinas keselamatan di dalam dinas bergerak maritim selain dinas operasi pelabuhan, antara stasiun pantai dan stasiun kapal laut, atau antara stasiun kapal laut, di mana pesan-pesan dibatasi untuk hal-hal yang berhubungan dengan pergerakan kapal laut.*
- Pesan-pesan yang termasuk "*berkaitan dengan umum (public correspondence)*" tidak termasuk dinas ini.
- S1.32** *Dinas Bergerak Penerbangan: Dinas bergerak antara stasiun-stasiun penerbangan dengan stasiun-stasiun pesawat udara, atau antara stasiun-stasiun pesawat udara, yang juga dapat mencakup stasiun-stasiun kendaraan penyelamat; stasiun-stasiun rambu radio (radio beacon) penunjuk-posisi darurat juga boleh beroperasi di dalam dinas ini pada frekuensi-frekuensi yang ditentukan untuk marabahaya dan keadaan darurat.*
- S1.33** *Dinas Bergerak Penerbangan (R)*: Dinas bergerak penerbangan yang digunakan untuk komunikasi yang berhubungan dengan keselamatan dan pengaturan penerbangan, terutama jalur-jalur penerbangan sipil nasional atau internasional.*
- S1.34** *Dinas Bergerak Penerbangan (OR)** : Dinas bergerak penerbangan yang bertujuan untuk komunikasi, termasuk komunikasi-komunikasi yang berhubungan dengan koordinasi penerbangan, terutama di luar jalur-jalur penerbangan nasional dan internasional.*
- S1.35** *Dinas Bergerak Penerbangan-Satelit: Dinas bergerak-satelit di mana stasiun bergerak-bumi ditempatkan pada pesawat terbang; stasiun penyelamat dan stasiun-stasiun rambu radio (radio beacon) penunjuk-posisi dapat beroperasi di dalam dinas ini.*
- S1.36** *Dinas Bergerak Penerbangan-Satelit (R)*: Dinas bergerak penerbangan-satelit digunakan untuk komunikasi yang berhubungan dengan keselamatan dan pengaturan penerbangan, terutama jalur-jalur penerbangan sipil nasional atau internasional.*
- S1.37** *Dinas Bergerak Penerbangan-Satelit (OR)** : Dinas bergerak penerbangan-satelit yang bertujuan untuk komunikasi, termasuk komunikasi-komunikasi yang berhubungan dengan koordinasi penerbangan, terutama di luar jalur-jalur penerbangan nasional dan internasional.*
- S1.38** *Dinas Siaran: Dinas komunikasi radio yang transmisinya dimaksudkan untuk penerimaan langsung oleh masyarakat umum. Dinas ini dapat meliputi transmisi suara, transmisi televisi atau jenis-jenis transmisi lainnya (CS).*
- S1.39** *Dinas Siaran-Satelit: Dinas komunikasi radio yang sinyalnya dipancarkan atau dipancarkan ulang oleh stasiun ruang angkasa dan dimaksudkan untuk penerimaan langsung oleh masyarakat umum.*
- S1.40** *Dinas Radio Penentu: Dinas komunikasi radio untuk keperluan radio penentu.*

* (R): route.

** (OR): off-route

- S1.41** *Dinas Radio Penentu-Satelit: Dinas komunikasi radio untuk keperluan radio penentu yang menggunakan satu atau lebih stasiun-stasiun ruang angkasa.*
- S1.42** *Dinas Navigasi Radio: Dinas radio penentu yang dipergunakan untuk keperluan navigasi radio.*
- S1.43** *Dinas Navigasi Radio-Satelit: Dinas radio penentu-satelit yang dipergunakan untuk keperluan navigasi radio. Dinas ini juga dapat mencakup feeder links yang diperlukannya.*
- S1.44** *Dinas Navigasi Radio Maritim: Dinas navigasi radio yang dimaksudkan untuk kemanfaatan dan keselamatan operasi kapal-kapal.*
- S1.45** *Dinas Navigasi Radio Maritim-Satelit: Dinas navigasi radio-satelit yang stasiun-stasiun buminya terletak di kapal.*
- S1.46** *Dinas Navigasi Radio Penerbangan: Dinas navigasi radio yang dimaksudkan untuk kemanfaatan dan keselamatan operasi pesawat udara.*
- S1.47** *Dinas Navigasi Radio Penerbangan-Satelit: Dinas navigasi-radio-satelit yang stasiun-stasiun buminya terletak di pesawat udara.*
- S1.48** *Dinas Radio Lokasi : Dinas radio penentu untuk keperluan radiolokasi.*
- S1.49** *Dinas Radio Lokasi-Satelit: Dinas radio penentu-satelit yang digunakan untuk tujuan radiolokasi..*
- S1.50** *Dinas Bantuan Meteorologi: Dinas komunikasi-radio yang dipergunakan untuk observasi dan eksplorasi dalam bidang meteorologi termasuk hidrologi.*
- S1.51** *Dinas Eksplorasi Bumi-Satelit: Dinas komunikasi-radio antara stasiun-stasiun bumi dengan satu atau lebih stasiun-stasiun ruang angkasa, yang dapat juga mencakup hubungan antar stasiun-stasiun ruang angkasa, di mana :*
- informasi yang berhubungan dengan karakteristik-karakteristik bumi dan gejala-gejala alamnya, diperoleh dari *pengindera aktif* atau *pasif* yang ditempatkan pada *satelit-satelit bumi*;
 - informasi yang serupa diperoleh dari *airborne* atau *platform* di Bumi;
 - informasi tersebut boleh didistribusikan ke *stasiun-stasiun bumi* dalam sistim yang bersangkutan;
 - *Platform interrogation* dapat termasuk dalam dinas ini.
- Dinas ini juga dapat mencakup hubungan-hubungan pencatu (*feeder link*) yang diperlukannya.
- S1.52** *Dinas Meteorologi Satelit: Dinas eksplorasi bumi-satelit untuk keperluan-keperluan meteorologi.*
- S1.53** *Dinas Frekuensi dan Tanda Waktu Standar: Dinas komunikasi radio untuk tujuan-tujuan ilmiah, teknik dan lain-lain, yang memancarkan frekuensi-frekuensi tertentu, tanda-tanda waktu, atau kedua-duanya dengan ketelitian yang tinggi, ditujukan bagi penerimaan masyarakat umum.*
- S1.54** *Dinas Frekuensi dan Tanda Waktu Standar-Satelit: Dinas komunikasi-radio yang menggunakan stasiun-stasiun ruang angkasa pada satelit-satelit*

bumi untuk tujuan yang sama dengan tujuan dari *dinas standar waktu dan frekuensi*. Dinas ini juga mencakup hubungan-hubungan pencatu yang diperlukannya.

S1.55

Dinas Penelitian Ruang Angkasa: Dinas komunikasi radio di mana pesawat ruang angkasa atau benda lain di ruang angkasa digunakan untuk tujuan riset teknologi.

S1.56

Dinas Amatir: Dinas komunikasi radio untuk tujuan melatih diri sendiri, saling berkomunikasi dan penyelidikan teknis yang dilakukan oleh para amatir, yaitu mereka yang telah mendapat izin dan berminat dalam bidang teknik radio semata-mata untuk tujuan pribadi tanpa tujuan komersial.

S1.57

Dinas Amatir Satelit: Dinas komunikasi radio yang menggunakan stasiun ruang angkasa pada satelit-satelit bumi untuk tujuan yang sama dengan tujuan *dinas amatir*.

S1.58

Dinas Radio Astronomi: Dinas yang mencakup penggunaan *radio astronomi*.

S1.59

Dinas Penyelamatan: Setiap dinas komunikasi-radio, yang dipergunakan secara tetap atau sementara untuk penyelamatan jiwa manusia dan harta benda.

S1.60

Dinas Khusus: Dinas komunikasi-radio, yang tidak didefinisikan dalam bagian ini, yang diselenggarakan khusus untuk kebutuhan-kebutuhan yang tertentu bagi kepentingan umum, tetapi tidak boleh digunakan sebagai *sarana telekomunikasi untuk umum*.

ARTIKEL S2

Sistem Penamaan

Pita Frekuensi dan Panjang Gelombang

S2.1

Spektrum radio dibagi menjadi sembilan pita frekuensi, yang disusun dalam tabel berikut ini. Dengan menggunakan satuan frekuensi yaitu hertz (Hz), frekuensi dapat ditulis sebagai berikut :

- di dalam kilohertz (kHz), sampai dengan dan termasuk 3 000 kHz;
- di dalam megahertz (MHz), lebih besar dari 3 MHz, sampai dengan dan termasuk 3 000 MHz;
- di dalam gigahertz (GHz), lebih besar dari 3 GHz, sampai dengan dan termasuk 3 000 GHz.

Bagaimanapun, kita tidak selalu harus mengikuti aturan ini secara kaku, sebagai contoh di dalam hubungan dengan notifikasi dan registrasi dari frekuensi, daftar frekuensi dan hal-hal yang berhubungan, cara penamaan yang berbeda dapat dilakukan.

Nomor Pita	Simbol	Cakupan Frekuensi (batas bawah tidak termasuk, batas atas termasuk)	Pembagian panjang gelombang yang bersesuaian	Singkatan panjang gelombang
4	VLF	3 s/d 30 kHz	Gelombang Myriametrik	B.Mam
5	LF	30 s/d 300 kHz	Gelombang Kilometrik	B.km
6	MF	300 s/d 3 000 kHz	Gelombang Hectometrik	B.hm
7	HF	3 s/d 30 MHz	Gelombang Decametrik	B.dam
8	VHF	30 s/d 300 MHz	Gelombang Metrik	B.m
9	UHF	300 s/d 3 000 MHz	Gelombang Desimetrik	B.dm
10	SHF	3 s/d 30 GHz	Gelombang Sentimetrik	B.cm
11	EHF	30 s/d 300 GHz	Gelombang Milimetrik	B.mm
12		300 s/d 3 000 GHz	Gelombang Desimilimetrik	

Catatan 1: "Pita N" (N = Nomor pita) berlaku dari 0.3×10^N Hz s/d 3×10^N Hz.

Catatan 2: Awalan: k = kilo (10^3), M = mega (10^6), G = giga (10^9).

ARTIKEL S5

Alokasi Frekuensi

Pendahuluan

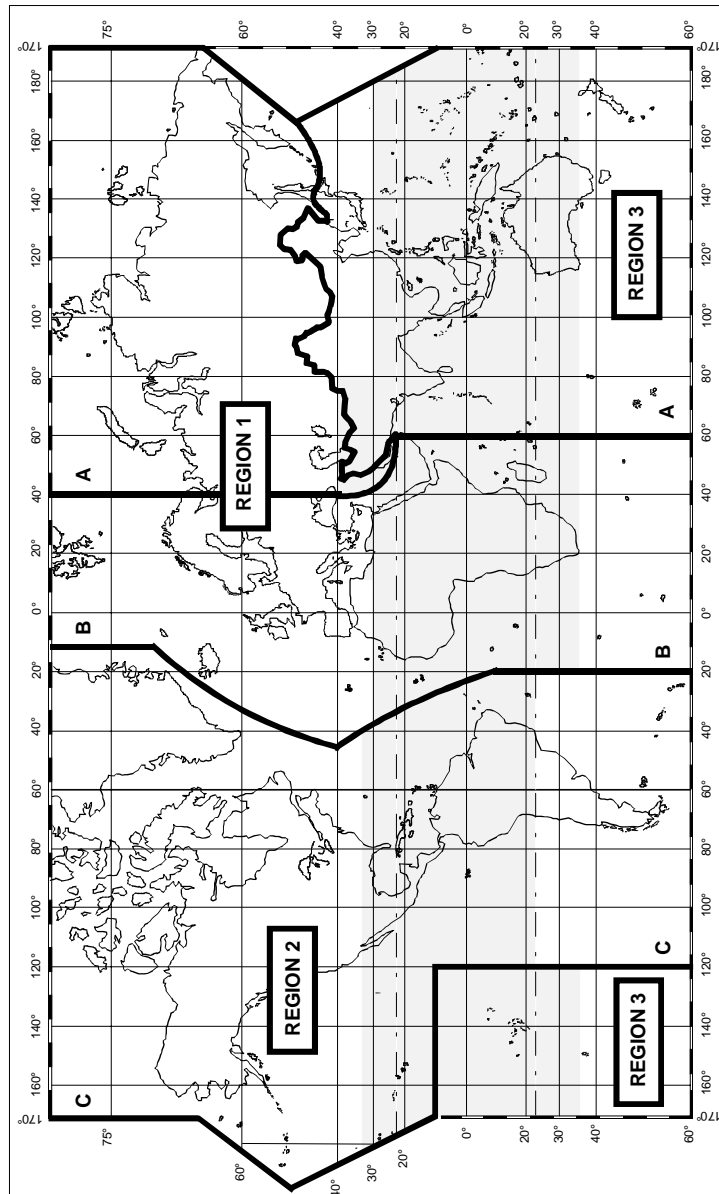
S5.1

Distribusi Frekuensi untuk	Bahasa Inggris	Bahasa Indonesia
Dinas	Allocation (to allocate)	Alokasi
Wilayah atau negara	Allotment (to allot)	Penjataan
Stasiun	Assignment (to assign)	Penetapan

Bagian I. *Region* dan Wilayah

S5.2 Untuk alokasi frekuensi, dunia telah dibagi menjadi tiga *Region*¹ yang dapat dilihat pada peta berikut dan dijelaskan di **S5.3** sampai dengan **S5.9**:

S5.2.1 ¹Perlu dicatat bahwa di mana kata "*region*" atau "regional" tidak memakai huruf besar "R" di dalam Regulasi ini, perkataan tersebut tidak berkaitan dengan tiga *Region* yang didefinisikan untuk tujuan alokasi frekuensi.



The shaded area represents the Territorial Zones as defined in Nos. CE 12 to CE 30 and CE 31

S5.3

Region 1:

Region 1 meliputi wilayah yang dibatasi di sebelah timur oleh garis A (garis A,B dan C akan didefinisikan pada bagian berikutnya) dan di sebelah barat oleh garis B, kecuali sebagian wilayah teritorial Republik Islam Iran, yang terdapat di antara batasan tersebut. Region 1 ini juga meliputi keseluruhan wilayah teritorial Armenia, Azerbaijan, Georgia, Kazakstan, Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan, Turki dan Ukraina dan wilayah sebelah utara Rusia yang terletak antara garis A dan C.

S5.4

Region 2:

Region 2 meliputi wilayah yang dibatasi di sebelah timur oleh garis B dan di sebelah barat oleh garis C.

- S5.5** *Region 3:*
Region 3 meliputi wilayah yang dibatasi di sebelah timur oleh garis C dan di sebelah barat oleh garis A, kecuali wilayah teritorial dari Armenia, Azerbaijan, Georgia, Kazakstan, Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan, Turki dan Ukraina dan wilayah sebelah utara Russia. *Region* ini juga meliputi bagian wilayah teritorial dari Republik Islam Iran yang terletak di luar batasan tersebut di atas.
- S5.6** Garis A, B dan C didefinisikan sebagai berikut :
- S5.7** *Garis A:*
 Garis A ialah garis yang ditarik dari Kutub Utara melalui garis lintang 40° Bujur Timur dari Greenwich sampai 40° Lintang Utara; kemudian dilanjutkan dengan busur lingkaran besar menuju perpotongan dari garis 60° Bujur Timur dan daerah *Tropic of Cancer*; kemudian dilanjutkan mengikuti garis 60° Bujur Timur menuju ke Kutub Selatan.
- S5.8** *Garis B:*
 Garis B ialah garis yang ditarik dari Kutub Utara mengikuti 10° Bujur Barat dari Greenwich menuju perpotongan dengan garis 72° Lintang Utara; kemudian dilanjutkan dengan busur lingkaran besar menuju perpotongan garis 50° Bujur Barat dan garis 40° Lintang Utara; kemudian dilanjutkan dengan busur lingkaran besar menuju perpotongan garis 20° Bujur Barat dan garis 10° Lintang Selatan; dan seterusnya mengikuti garis 20° Bujur Barat menuju ke Kutub Selatan.
- S5.9** *Garis C:*
 Garis C ialah garis yang ditarik dari Kutub Utara dengan busur lingkaran besar menuju ke perpotongan garis 65° 30' Lintang Utara dengan perbatasan internasional di Selat Bering; kemudian dilanjutkan dengan busur lingkaran besar ke perpotongan dari garis 165° Bujur Timur dari Greenwich dan garis 50° Lintang Utara; kemudian dilanjutkan dengan busur lingkaran besar ke perpotongan antara garis 170° Bujur Barat dan garis parallel 10° Lintang Utara; kemudian mengikuti garis 10° Lintang Utara ke perpotongannya dengan garis to 120° Bujur Timur; kemudian dilanjutkan mengikuti garis 120° Bujur Barat menuju ke Kutub Selatan.

Bagian II. Kategori Dinas dan Alokasi

- S5.23** *Dinas Primer dan Sekunder*
- S5.24** (1) Apabila di dalam suatu kotak pada Tabel Alokasi Frekuensi ini dialokasikan untuk lebih dari satu dinas, baik berlaku di seluruh dunia maupun secara regional, maka dinas-dinas tersebut ditulis sebagai berikut :
- S5.25** a) nama dinas yang ditulis dengan "huruf besar" (contoh: TETAP); dinas tersebut mempunyai kategori "primer";

- S5.26** b) dinas yang ditulis dengan "huruf biasa" (contoh: Bergerak); dinas tersebut mempunyai kategori "sekunder" (lihat **S5.28** s/d **S5.31**).
- S5.27** (2) Catatan tambahan harus ditulis dengan "huruf biasa" (contoh: BERGERAK kecuali bergerak penerbangan).
- S5.28** (3) Stasiun dari dinas sekunder:
- S5.29** a) tidak boleh menyebabkan *harmful interference* kepada stasiun dinas primer yang frekuensinya telah ditetapkan atau frekuensi tersebut akan ditetapkan di kemudian hari.
- S5.30** b) tidak dapat mengajukan perlindungan dari *harmful interference* dari stasiun dinas primer yang frekuensinya telah ditetapkan atau akan ditetapkan di kemudian hari.;
- S5.31** c) dapat mengajukan perlindungan, *harmful interference* dari stasiun yang mempunyai dinas sekunder yang sama atau dinas sekunder yang lain yang telah ditetapkan atau akan ditetapkan di kemudian hari.
- S5.32** (4) Jika sebuah pita frekuensi ditandai dengan adanya sebuah catatan kaki pada Tabel dan dialokasikan pada suatu dinas "*on secondary basis*" di daerah yang lebih kecil dari sebuah Region, atau pada negara tertentu, dinas tersebut merupakan dinas sekunder. (lihat **S5.28** s/d **S5.31**).
- S5.33** (5) Jika sebuah pita ditandai dengan catatan kaki pada Tabel Where a band is indicated in a footnote of the Table dan dialokasikan pada dinas yang dialokasikan pada suatu dinas "*on a primary basis*", di wilayah yang lebih kecil dari sebuah Region, atau pada negara tertentu, dinas tersebut merupakan dinas primer pada wilayah atau negara tersebut saja.
- S5.34** *Alokasi Tambahan*
- S5.35** (1) Jika suatu pita ditandai di dalam sebuah catatan kaki (*footnote*) pada Tabel sebagai "also allocated" kepada suatu dinas di daerah yang lebih kecil dari Region, atau di suatu negara, dinas tersebut mempunyai alokasi "tambahan", yaitu suatu alokasi dinas yang ditambahkan pada wilayah atau negara tersebut dari dinas atau dinas-dinas yang sudah ada di dalam Tabel tersebut (Lihat **S5.36**).
- S5.36** (2) Jika catatan kaki tidak mencakup batasan apapun terhadap dinas atau dinas-dinas yang dimaksud, selain batasan untuk beroperasi hanya di daerah atau negara tertentu saja, stasiun pada dinas tersebut mempunyai hak yang sama untuk beroperasi dengan stasiun dari dinas atau dinas-dinas primer yang telah ada di dalam Tabel tersebut.
- S5.37** (3) Jika batasan diberlakukan di dalam alokasi tambahan sebagai tambahan terhadap batasan untuk beroperasi hanya di daerah dan negara tertentu, hal tersebut ditandai dengan sebuah catatan kaki pada Tabel tersebut.
- S5.38** *Alokasi Alternatif*
- S5.39** (1) Jika suatu pita ditandai dengan catatan kaki pada Tabel dan dialokasikan kepada satu atau lebih dinas di daerah yang lebih kecil dari

Region, atau di negara tertentu, hal tersebut merupakan alokasi "alternatif", yaitu alokasi yang mengganti, di daerah atau negara tersebut, alokasi yang terdapat pada Tabel (Lihat **S5.40**).

S5.40 (2) Jika catatan kaki tidak mencakup batasan apapun terhadap stasiun dari dinas atau dinas yang dimaksud, selain dari batasan untuk beroperasi hanya di daerah atau negara tertentu, stasiun-stasiun dari dinas atau dinas tersebut mempunyai hak yang sama untuk beroperasi dengan stasiun-stasiun dari dinas atau dinas-dinas lain, seperti tercantum di Tabel, yang dialokasikan untuk daerah atau negara lainnya.

S5.41 (3) Jika batasan diberlakukan pada stasiun dari dinas-dinas di mana alokasi alternatif dibuat, sebagai tambahan terhadap batasan untuk beroperasi hanya di negara atau daerah tertentu saja, hal tersebut ditandai oleh catatan kaki.

S5.42 *Aturan Tambahan*

S5.43 (1) Jika ditandai di dalam Regulasi ini bahwa dinas dapat beroperasi pada pita frekuensi tertentu dengan tanpa menyebabkan "*harmful interference*", hal ini berarti bahwa dinas tersebut tidak dapat mengajukan proteksi dari "*harmful interference*" yang disebabkan oleh dinas lain pada pita yang dialokasikan di bawah Bab **SII** dari Radio Regulations.

S5.44 (2) Kecuali jika ditentukan pada catatan kaki, istilah "dinas tetap", ketika muncul di Bagian IV dari Artikel ini, tidak termasuk sistem yang menggunakan propagasi hamburan ionosfir.

S5.45 Tidak digunakan.

Bagian III. Deskripsi dari Tabel Alokasi Frekuensi

S5.46 (1) Judul dari Tabel pada Bagian IV dari Artikel ini terdiri dari tiga kolom, di mana setiap kolom mewakili masing-masing Region (lihat **S5.2**). Jika suatu alokasi mencakup keseluruhan lebar Tabel, maka alokasi tersebut berlaku di seluruh dunia; jika suatu alokasi mencakup hanya satu atau dua dari tiga kolom, maka alokasi tersebut berlaku merupakan alokasi Regional.

S5.47 (2) Pita frekuensi yang dimaksud di setiap alokasi ditempatkan di sudut kiri atas dari bagian Tabel yang dimaksud.

S5.48 (3) Di dalam setiap kategori yang ditentukan di dalam **S5.25** dan **S5.26**, dinas-dinas ditulis di dalam urutan alphabet berdasarkan bahasa Perancis. Urutan dari daftar tidak menunjukkan prioritas relatif di dalam setiap kategori..

S5.49 (4) Di dalam kasus di mana terdapat tambahan "*parentetical*" terhadap alokasi di dalam Tabel, alokasi dinas tersebut, alokasi dinas dibatasi terhadap jenis operasi yang ditentukan.

- S5.50** (5) Catatan kaki yang muncul di dalam Tabel, terdapat di bawah dinas atau dinas-dinas yang dialokasikan, berlaku bagi seluruh alokasi yang dimaksud.
- S5.51** (6) Catatan kaki yang terletak di sebelah kanan nama dinas hanya berlaku bagi dinas tersebut saja..
- S5.52** (7) Di dalam kasus tertentu, nama negara-negara yang muncul di dalam catatan kaki telah disingkat untuk mempersingkat teks.

II. ALOKASI SPEKTRUM FREKUENSI RADIO INDONESIA

Alokasi Frekuensi diambil dari referensi-referensi berikut ini :

- Artikel S5, *Frequency Allocation, Radio Regulation dan Final Act-World Radiocommunication Conference (WRC)-1997, International Telecommunication Union (ITU)*, Tabel Alokasi telah diterjemahkan ke dalam Bahasa Indonesia.
- Tabel Alokasi Spektrum Frekuensi Radio Indonesia, edisi pertama, 1996.
- Penetapan Frekuensi Maritim, Penerbangan dan Siaran di Indonesia.
- Penetapan Frekuensi Dinas Tetap di Indonesia.
- Database AFMS (*Automated Frequency Management System*).

Sebagai catatan bahwa pada tabel ini tidak mencakup penggunaan spektrum frekuensi radio untuk kepentingan militer.

Pada halaman genap, tabel dibagi menjadi tiga kolom, yaitu kolom Region 1, Region 2 dan Region 3. Definisi dan batasan dari Region 1, Region 2 dan Region 3 dapat dilihat di Bagian 1, Istilah dan Definisi. Sedangkan Indonesia termasuk di dalam Region 3.

Pada halaman ganjil, tabel dibagi menjadi dua kolom. Kolom sebelah kiri ialah alokasi frekuensi Indonesia (*allotment*). Sedangkan kolom sebelah kanan ialah penggunaan frekuensi di Indonesia.

Keterangan lebih lanjut mengenai kebijakan penggunaan frekuensi di pita frekuensi tertentu di Indonesia akan diterjemahkan lebih lanjut lagi di dalam dokumen "*Band Plan*" (Perencanaan Pita Frekuensi) yang akan disusun berikutnya.

Bagian kaki (*footnote*) yang ada di dalam kolom tabel alokasi frekuensi dapat dilihat di Bagian III, Catatan Kaki (*footnote*).

kHz
9 – 126

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
Di bawah 9 (tidak dialokasikan)	S5.53 S5.54	
9 – 14	NAVIGASI RADIO	
14 – 19.95	TETAP BERGERAK MARITIM S5.57 S5.55 S5.56	
19.95 – 20.05	FREKUENSI DAN WAKTU STANDAR (20 kHz)	
20.05 – 70	TETAP BERGERAK MARITIM S5.57 S5.56 S5.58	
70 – 72 NAVIGASI RADIO S5.60	70 – 90 TETAP BERGERAK MARITIM S5.57 NAVIGASI RADIO MARITIM S5.60 Radiolokasi	70 – 72 NAVIGASI RADIO S5.60 Tetap Bergerak Maritim S5.57 S5.59
72 – 84 TETAP BERGERAK MARITIM S5.57 NAVIGASI RADIO S5.60 S5.56		72 – 84 TETAP BERGERAK MARITIM S5.57 NAVIGASI RADIO S5.60
84 – 86 NAVIGASI RADIO S5.60		84 – 86 NAVIGASI RADIO S5.60 Tetap Bergerak Maritim S5.57 S5.59
86 – 90 TETAP BERGERAK MARITIM S5.57 NAVIGASI RADIO S5.56	S5.61	86 – 90 TETAP BERGERAK MARITIM S5.57 NAVIGASI RADIO S5.60
90 – 110	NAVIGASI RADIO S5.62 Tetap S5.63 S5.64	
110 – 112 TETAP BERGERAK MARITIM NAVIGASI RADIO S5.64	110 – 130 TETAP BERGERAK MARITIM NAVIGASI RADIO MARITIM S5.60 Radiolokasi	110 – 112 TETAP BERGERAK MARITIM NAVIGASI RADIO S5.60 S5.64
112 – 115 NAVIGASI RADIO S5.60		112 – 117.6 NAVIGASI RADIO S5.60 Tetap Bergerak Maritim
115 – 117.6 NAVIGASI RADIO S5.60 Tetap Bergerak Maritim S5.64 S5.66		S5.64 S5.65
117.6 – 126 TETAP BERGERAK MARITIM NAVIGASI RADIO S5.60 S5.64		117.6 – 126 TETAP BERGERAK MARITIM NAVIGASI RADIO S5.60 S5.64

kHz
9 – 126

Alokasi untuk Indonesia		Penggunaan Frekuensi
Di bawah 9	(tidak dialokasikan) S5.53 S5.54	
9 – 14	NAVIGASI RADIO	
14 – 19.95	TETAP BERGERAK MARITIM S5.57 S5.55 S5.56	
19.95 – 20.05	FREKUENSI DAN TANDA WAKTU STANDAR (20 kHz)	
20.05 – 70	TETAP BERGERAK MARITIM S5.57 S5.56 S5.58	
70 – 72	NAVIGASI RADIO S5.60 Tetap Bergerak Maritim S5.57 S5.59	
72 – 84	TETAP BERGERAK MARITIM S5.57 NAVIGASI RADIO S5.60	
84 – 86	NAVIGASI RADIO S5.60 Tetap Bergerak Maritim S5.57 S5.59	
86 – 90	TETAP BERGERAK MARITIM S5.57 NAVIGASI RADIO S5.60	
90 – 110	NAVIGASI RADIO S5.62 Tetap S5.63 S5.64	
110 – 112	TETAP BERGERAK MARITIM NAVIGASI RADIO S5.60 S5.64	
112 – 117.6	NAVIGASI RADIO S5.60 Tetap Bergerak Maritim S5.64 S5.65	
117.6 – 126	TETAP BERGERAK MARITIM NAVIGASI RADIO S5.60 S5.64	

kHz
126 - 415

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
126 – 129 NAVIGASI RADIO S5.60	110 – 130 TETAP BERGERAK MARITIM NAVIGASI RADIO MARITIM S5.60 Radiolokasi	126 – 129 NAVIGASI RADIO S5.60 Tetap Bergerak Maritim S5.64 S5.65
129 – 130 TETAP BERGERAK MARITIM NAVIGASI RADIO S5.60 S5.64	S5.61 S5.64	129 – 130 TETAP BERGERAK MARITIM NAVIGASI RADIO S5.60 S5.64
130 – 148.5 TETAP BERGERAK MARITIM S5.64 S5.67	130 – 160 TETAP BERGERAK MARITIM	130 – 160 TETAP BERGERAK MARITIM NAVIGASI RADIO S5.64
148.5 – 255 SIARAN	S5.64 160 – 190 TETAP	160 – 190 TETAP Navigasi Radio Penerbangan
	190 – 200 NAVIGASI RADIO PENERBANGAN	
S5.68 S5.69 S5.70 255 – 283.5 SIARAN NAVIGASI RADIO PENERBANGAN	200 – 275 NAVIGASI RADIO PENERBANGAN Bergerak Penerbangan	200 – 285 NAVIGASI RADIO PENERBANGAN Bergerak Penerbangan
S5.70 S5.71 283.5 – 315 NAVIGASI RADIO PENERBANGAN NAVIGASI RADIO MARITIM (radiobeacons) S5.73	275 – 285 NAVIGASI RADIO PENERBANGAN Bergerak Penerbangan Navigasi Radio Maritim (radiobeacons)	
S5.72 S5.74	285 – 315 NAVIGASI RADIO PENERBANGAN NAVIGASI RADIO MARITIM (radiobeacons) S5.73	
315 – 325 NAVIGASI RADIO PENERBANGAN Navigasi Radio Maritim (radiobeacons) S5.73 S5.72 S5.75	315 – 325 NAVIGASI RADIO MARITIM (radiobeacons) S5.73 Navigasi Radio Penerbangan	315 – 325 NAVIGASI RADIO PENERBANGAN NAVIGASI RADIO MARITIM (radiobeacons) S5.73
325 – 405 NAVIGASI RADIO PENERBANGAN	325 – 335 NAVIGASI RADIO PENERBANGAN Bergerak Penerbangan Navigasi Radio Maritim (radiobeacons)	325 – 405 NAVIGASI RADIO PENERBANGAN Bergerak Penerbangan
S5.72	335 – 405 NAVIGASI RADIO PENERBANGAN Bergerak Penerbangan	
405 – 415 NAVIGASI RADIO S5.76 S5.72	405 – 415 NAVIGASI RADIO S5.76 Bergerak Penerbangan	

kHz
126 - 415

Alokasi untuk Indonesia		Penggunaan Frekuensi
126 – 129	NAVIGASI RADIO S5.60 Tetap Bergerak Maritim S5.64 S5.65	
129 – 130	TETAP BERGERAK MARITIM NAVIGASI RADIO S5.60 S5.64	
130 – 160	TETAP BERGERAK MARITIM NAVIGASI RADIO S5.64	
160 – 190	TETAP Navigasi Radio Penerbangan	
190 – 200	NAVIGASI RADIO PENERBANGAN	
200 – 285	NAVIGASI RADIO PENERBANGAN Bergerak Penerbangan	Navigasi Radio Penerbangan Alokasi Frekuensi NDB
285 – 315	NAVIGASI RADIO PENERBANGAN NAVIGASI RADIO MARITIM (radiobeacons) S5.73	Navigasi Radio Penerbangan Alokasi Frekuensi NDB
315 – 325	NAVIGASI RADIO PENERBANGAN NAVIGASI RADIO MARITIM (radiobeacons) S5.73	Navigasi Radio Penerbangan Alokasi Frekuensi NDB
325 – 405	NAVIGASI RADIO PENERBANGAN Bergerak Penerbangan	Navigasi Radio Penerbangan Alokasi Frekuensi NDB
405 – 415	NAVIGASI RADIO S5.76 Bergerak Penerbangan	Navigasi Radio Penerbangan Alokasi Frekuensi NDB

kHz
415 - 2 000

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
415 – 435 BERGERAK MARITIM S5.79 NAVIGASI RADIO PENERBANGAN S5.72	415 – 495 BERGERAK MARITIM S5.79 Navigasi Radio Penerbangan S5.80	
435 – 495 BERGERAK MARITIM S5.79 S5.79A Navigasi Radio Penerbangan S5.72 S5.81 S5.82	S5.77 S5.78 S5.81 S5.82	
495 – 505	BERGERAK (marabahaya dan panggilan) S5.83	
505 – 526.5 BERGERAK MARITIM S5.79 S5.79A S5.84 NAVIGASI RADIO PENERBANGAN S5.72 S5.81	505 – 510 BERGERAK MARITIM S5.79 S5.81 510 – 525 BERGERAK S5.84 NAVIGASI RADIO PENERBANGAN 525 – 535	505 – 526.5 BERGERAK MARITIM S5.79 S5.79A S5.84 NAVIGASI RADIO PENERBANGAN Bergerak Penerbangan Bergerak Darat S5.81
526.5 – 1 606.5 SIARAN	SIARAN S5.86 NAVIGASI RADIO PENERBANGAN 535 – 1 605 SIARAN	526.5 – 535 SIARAN Bergerak S5.88 535 – 1 606.5 SIARAN
S5.87 S5.87A 1 606.5 – 1 625 TETAP BERGERAK MARITIM S5.90 BERGERAK DARAT S5.92	1 605 – 1 625 SIARAN S5.89 S5.90	1 606.5 – 1 800 TETAP BERGERAK RADIOLOKASI NAVIGASI RADIO
1 625 – 1 635 RADIOLOKASI S5.93	1 625 – 1 705 TETAP BERGERAK SIARAN S5.89 Radiolokasi	
1 635 – 1 800 TETAP BERGERAK MARITIM S5.90 BERGERAK DARAT S5.92 S5.96	S5.90 1 705 – 1 800 TETAP BERGERAK RADIOLOKASI NAVIGASI RADIO PENERBANGAN	S5.91
1 800 – 1 810 RADIOLOKASI S5.93	1 800 – 1 850 AMATIR	1 800 – 2 000 AMATIR TETAP BERGERAK kecuali bergerak penerbangan NAVIGASI RADIO Radiolokasi
1 810 – 1 850 AMATIR S5.98 S5.99 S5.100 S5.101		
1 850 – 2 000 TETAP BERGERAK kecuali bergerak penerbangan S5.92 S5.96 S5.103	1 850 – 2 000 AMATIR TETAP BERGERAK kecuali bergerak penerbangan RADIOLOKASI NAVIGASI RADIO S5.102	S5.97

kHz
415 - 2 000

Alokasi untuk Indonesia		Penggunaan Frekuensi
415 – 495	BERGERAK MARITIM S5.79 S5.79A Navigasi Radio Penerbangan S5.80 S5.77 S5.78 S5.81 S5.82	Bergerak Maritim
495 – 505	BERGERAK (marabahaya dan panggilan) S5.83	Bergerak Maritim (marabahaya dan panggilan)
505 – 526.5	BERGERAK MARITIM S5.79 S5.79A S5.84 NAVIGASI RADIO PENERBANGAN Bergerak Penerbangan Bergerak Darat S5.81	Bergerak Maritim (GMDSS)
526.5 – 535	SIARAN Bergerak S5.88	Radio Siaran-MF/AM, (RRI dan Swasta) (526.5 - 1 606.5 kHz)
535 – 1 606.5	SIARAN	
1 606.5 – 1 800	TETAP BERGERAK RADIOLOKASI NAVIGASI RADIO S5.91	Tetap Darat-MF Bergerak Darat-MF
1 800 – 2 000	AMATIR TETAP BERGERAK kecuali bergerak penerbangan NAVIGASI RADIO Radiolokasi S5.97	Amatir -MF (Sharing) Sistem Loran (1 825 - 1 875 kHz) Sistem Loran (1 925 - 1 995 kHz) Tetap Darat-MF Bergerak Darat-MF

kHz
2 000 - 3 025

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
2 000 – 2 025 TETAP BERGERAK kecuali bergerak penerbangan (R) S5.92 S5.103	2 000 – 2 065 TETAP BERGERAK	
2 025 – 2 045 TETAP BERGERAK kecuali bergerak penerbangan (R) Bantuan Meteorologi S5.104 S5.92 S5.103		
2 045 – 2 160 TETAP BERGERAK MARITIM BERGERAK DARAT S5.92	2 065 – 2 107 BERGERAK MARITIM S5.105 S5.106	
2 160 – 2 170 RADIOLOKASI S5.93 S5.107	2 107 – 2 170 TETAP BERGERAK	
2 170 – 2 173.5	BERGERAK MARITIM	
2 173.5 – 2 190.5	BERGERAK (marabahaya dan panggilan) S5.108 S5.109 S5.110 S5.111	
2 190.5 – 2 194	BERGERAK MARITIM	
2 194 – 2 300 TETAP BERGERAK kecuali bergerak penerbangan (R) S5.92 S5.103 S5.112	2 194 – 2 300 TETAP BERGERAK S5.112	
2 300 – 2 498 TETAP BERGERAK kecuali bergerak penerbangan (R) SIARAN S5.113 S5.103		
2 498 – 2 501 FREKUENSI DAN TANDA WAKTU STANDAR (2 500 kHz)	2 495 – 2 501 FREKUENSI DAN TANDA WAKTU STANDAR (2500 kHz)	
2 501 – 2 502	FREKUENSI DAN TANDA WAKTU STANDAR Penelitian Ruang Angkasa	
2 502 – 2 625 TETAP BERGERAK kecuali bergerak penerbangan (R) S5.92 S5.103 S5.114	2 502 – 2 505 FREKUENSI DAN TANDA WAKTU STANDAR	
2 625 – 2 650 BERGERAK MARITIM NAVIGASI RADIO MARITIM S5.92	2 505 – 2 850 TETAP BERGERAK	
2 650 – 2 850 TETAP BERGERAK kecuali bergerak penerbangan (R) S5.92 S5.103		
2 850 – 3 025	BERGERAK PENERBANGAN (R) S5.111 S5.115	

kHz
2 000 - 3 025

Alokasi untuk Indonesia		Penggunaan Frekuensi
2 000 – 2 025	TETAP BERGERAK	
2 065 – 2 107	BERGERAK MARITIM S5.105 S5.106	
2 107 – 2 170	TETAP BERGERAK	Frek. marabahaya internasional untuk narrow band direct printing telegraphy (2 174.5 kHz) Frek. marabahaya internasional untuk Distress Selective-Calling (2 182 kHz) Tetap Darat-MF Bergerak Darat-MF
2 170 – 2 173.5	BERGERAK MARITIM	Bergerak Maritim
2 173.5 – 2 190.5	BERGERAK (marabahaya dan panggilan) S5.108 S5.109 S5.110 S5.111	Search and Rescue (SAR) (2 182.5 kHz) Frek. marabahaya internasional untuk narrow band direct printing telegraphy (2 174.5 kHz) Frek. marabahaya internasional untuk Distress Selective-Calling (2 182 kHz)
2 190.5 – 2 194	BERGERAK MARITIM	
2 194 – 2 300	TETAP BERGERAK S5.112	Tetap Darat-MF Bergerak Darat-MF
2 300 – 2 495	TETAP BERGERAK SIARAN S5.113	Radio Siaran -HF (RRI)
2 495 – 2 501	FREKUENSI DAN TANDA WAKTU STANDAR (2500 kHz)	
2 501 – 2 502	FREKUENSI DAN TANDA WAKTU STANDAR Penelitian Ruang Angkasa	
2 502 – 2 505	FREKUENSI DAN TANDA WAKTU STANDAR	
2 505 – 2 850	TETAP BERGERAK	Bergerak Maritim Tetap Darat-MF Bergerak Darat-MF
2 850 – 3 025	BERGERAK PENERBANGAN (R) S5.111 S5.115	Bergerak Penerbangan (R) RDARA dan MWARA Search and Rescue (SAR) (3 023 kHz)

kHz
3 025 - 5 003

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
3 025 – 3 155	BERGERAK PENERBANGAN (OR)	
3 155 – 3 200	TETAP BERGERAK kecuali bergerak penerbangan (R) S5.116 S5.117	
3 200 – 3 230	TETAP BERGERAK kecuali bergerak penerbangan (R) SIARAN S5.113 S5.116	
3 230 – 3 400	TETAP BERGERAK kecuali bergerak penerbangan SIARAN S5.113 S5.116 S5.118	
3 400 – 3 500	BERGERAK PENERBANGAN (R)	
3 500 – 3 800 AMATIR S5.120 TETAP BERGERAK kecuali bergerak penerbangan S5.92	3 500 – 3 750 AMATIR S5.120 S5.119 3 750 – 4 000 AMATIR S5.120 TETAP BERGERAK kecuali bergerak penerbangan (R)	3 500 – 3 900 AMATIR S5.120 TETAP BERGERAK
3 800 – 3 900 TETAP BERGERAK PENERBANGAN (OR) BERGERAK DARAT		
3 900 – 3 950 BERGERAK PENERBANGAN (OR) S5.123		3 900 – 3 950 BERGERAK PENERBANGAN SIARAN
3 950 – 4 000 TETAP SIARAN		3 950 – 4 000 TETAP SIARAN S5.126
4 000 – 4 063	TETAP BERGERAK MARITIM S5.127 S5.126	
4 063 – 4 438	BERGERAK MARITIM S5.79A S5.109 S5.110 S5.130 S5.131 S5.132 S5.128 S5.129	
4 438 – 4 650	TETAP BERGERAK kecuali bergerak penerbangan (R)	4 438 – 4 650 TETAP BERGERAK kecuali bergerak penerbangan
4 650 – 4 700	BERGERAK PENERBANGAN (R)	
4 700 – 4 750	BERGERAK PENERBANGAN (OR)	
4 750 – 4 850 TETAP BERGERAK PENERBANGAN (OR) BERGERAK DARAT SIARAN S5.113	4 750 – 4 850 TETAP BERGERAK kecuali bergerak penerbangan (R) SIARAN S5.113	4 750 – 4 850 TETAP SIARAN S5.113 Bergerak Darat
4 850 – 4 995	TETAP BERGERAK DARAT SIARAN S5.113	
4 995 – 5 003	FREKUENSI DAN TANDA WAKTU STANDAR (5 000 kHz)	

kHz
3 025 - 5 003

Alokasi untuk Indonesia		Penggunaan Frekuensi
3 025 – 3 155	BERGERAK PENERBANGAN (OR)	
3 155 – 3 200	TETAP BERGERAK kecuali bergerak penerbangan (R) S5.116 S5.117	Tetap Darat-HF Bergerak Darat-HF
3 200 – 3 230	TETAP BERGERAK kecuali bergerak penerbangan (R) SIARAN S5.113 S5.116	Bergerak Maritim
3 230 – 3 400	TETAP BERGERAK kecuali bergerak penerbangan (R) SIARAN S5.113 S5.116 S5.118	Tetap Darat-HF Bergerak Darat-HF
3 400 – 3 500	BERGERAK PENERBANGAN (R)	Bergerak Penerbangan (R) RDARA dan MWARA
3 500 – 3 900	AMATIR S5.120 TETAP BERGERAK	Amatir-HF
3 900 – 3 950	BERGERAK PENERBANGAN SIARAN	Radio Siaran -HF (RRI)
3 950 – 4 000	TETAP SIARAN S5.126	Radio Siaran -HF (RRI)
4 000 – 4 063	TETAP BERGERAK MARITIM S5.127 S5.126	Tetap Darat-HF
4 063 – 4 438	BERGERAK MARITIM S5.79A S5.109 S5.110 S5.130 S5.131 S5.132 S5.128 S5.129	Bergerak Maritim Frek. marabahaya internasional untuk narrow band direct printing telegraphy (4 177.5 kHz) Frek. marabahaya internasional untuk Distress Selective-Calling (4 207.5 kHz)
4 438 – 4 650	TETAP BERGERAK kecuali bergerak penerbangan	Tetap Darat-HF Bergerak Darat-HF
4 650 – 4 700	BERGERAK PENERBANGAN (R)	
4 700 – 4 750	BERGERAK PENERBANGAN (OR)	
4 750 – 4 850	TETAP SIARAN S5.113 Bergerak Darat	Radio Siaran -HF (RRI)
4 850 – 4 995	TETAP BERGERAK DARAT SIARAN S5.113	Tetap Darat-HF Bergerak Darat-HF
4 995 – 5 003	FREKUENSI DAN TANDA WAKTU STANDAR (5 000 kHz)	

kHz
5 003 - 8 965

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
5 003 – 5 005	FREKUENSI DAN TANDA WAKTU STANDAR Penelitian Ruang Angkasa	
5 005 – 5 060	TETAP SIARAN S5.113	
5 060 – 5 250	TETAP Bergerak kecuali bergerak penerbangan S5.133	
5 250 – 5 450	TETAP BERGERAK kecuali bergerak penerbangan	
5 450 – 5 480 TETAP BERGERAK PENERBANGAN (OR) BERGERAK DARAT	5 450 – 5 480 BERGERAK PENERBANGAN (R)	5 450 – 5 480 TETAP BERGERAK PENERBANGAN (OR) BERGERAK DARAT
5 480 – 5 680	BERGERAK PENERBANGAN (R) S5.111 S5.115	
5 680 – 5 730	BERGERAK PENERBANGAN (OR) S5.111 S5.115	
5 730 – 5 900 TETAP BERGERAK DARAT	5 730 – 5 900 TETAP BERGERAK kecuali bergerak penerbangan (R)	5 730 – 5 900 TETAP Bergerak kecuali bergerak penerbangan (R)
5 900 – 5 950	SIARAN S5.134 S5.135 S5.136	
5 950 – 6 200	SIARAN	
6 200 – 6 525	BERGERAK MARITIM S5.109 S5.110 S5.130 S5.132 S5.137	
6 525 – 6 685	BERGERAK PENERBANGAN (R)	
6 685 – 6 765	BERGERAK PENERBANGAN (OR)	
6 765 – 7 000	TETAP Bergerak Darat S5.139 S5.138	
7 000 – 7 100	AMATIR S5.120 AMATIR-SATELIT S5.140 S5.141	
7 100 – 7 300 SIARAN	7 100 – 7 300 AMATIR S5.120 S5.142	7 100 – 7 300 SIARAN
7 300 – 7 350	SIARAN S5.134 S5.135 S5.143	
7 350 – 8 100	TETAP Bergerak Darat S5.144	
8 100 – 8 195	TETAP BERGERAK MARITIM	
8 195 – 8 815	BERGERAK MARITIM S5.109 S5.110 S5.132 S5.145 S5.111	
8 815 – 8 965	BERGERAK PENERBANGAN (R)	

kHz
5 003 - 8 965

Alokasi untuk Indonesia		Penggunaan Frekuensi
5 003 – 5 005	FREKUENSI DAN TANDA WAKTU STANDAR Penelitian Ruang Angkasa	
5 005 – 5 060	TETAP SIARAN S5.113	Radio Siaran -HF (RRI)
5 060 – 5 250	TETAP BERGERAK kecuali bergerak penerbangan S5.133	Tetap Darat-HF Bergerak Darat-HF
5 250 – 5 450	TETAP BERGERAK kecuali bergerak penerbangan	Tetap Darat-HF Bergerak Darat-HF
5 450 – 5 480	TETAP BERGERAK PENERBANGAN (OR) BERGERAK DARAT	Tetap Darat-HF Bergerak Darat-HF
5 480 – 5 680	BERGERAK PENERBANGAN (R) S5.111 S5.115	Bergerak Penerbangan (R) RDARA dan MWARA
5 680 – 5 730	BERGERAK PENERBANGAN (OR) S5.111 S5.115	Search and Rescue (SAR) (5 680 kHz)
5 730 – 5 900	TETAP Bergerak kecuali bergerak penerbangan (R)	Tetap Darat-HF Bergerak Darat-HF
5 900 – 5 950	SIARAN S5.134 S5.135 S5.136	Radio Siaran -HF (RRI)
5 950 – 6 200	SIARAN	
6 200 – 6 525	BERGERAK MARITIM S5.109 S5.110 S5.130 S5.132 S5.137	Bergerak Maritim Frek. marabahaya internasional untuk narrow band direct printing telegraphy (6 268 kHz) Frek. marabahaya internasional untuk Distress Selective-Calling (6 312 kHz)
6 525 – 6 685	BERGERAK PENERBANGAN (R)	Bergerak Penerbangan (R) RDARA dan MWARA
6 685 – 6 765	BERGERAK PENERBANGAN (OR)	
6 765 – 7 000	TETAP Bergerak Darat S5.139 S5.138	ISM (Industry, Scientific dan Medical) (6 765 - 6 795 kHz) Tetap Darat-HF
7 000 – 7 100	AMATIR S5.120 AMATIR-SATELIT S5.140 S5.141	Amatir -HF
7 100 – 7 300	SIARAN	Radio Siaran -HF (RRI)
7 300 – 7 350	SIARAN S5.134 S5.135 S5.143	Radio Siaran -HF (RRI)
7 350 – 8 100	TETAP Bergerak Darat S5.144	Tetap Darat-HF
8 100 – 8 195	TETAP BERGERAK MARITIM	
8 195 – 8 815	BERGERAK MARITIM S5.109 S5.110 S5.132 S5.145 S5.111	Bergerak Maritim Search and Rescue (SAR) (8 364 kHz) Frek. marabahaya internasional untuk narrow band direct printing telegraphy (8 376.5 kHz) Frek. marabahaya internasional untuk Distress Selective-Calling (8 414.5 kHz)
8 815 – 8 965	BERGERAK PENERBANGAN (R)	Bergerak Penerbangan (R) RDARA dan MWARA

kHz
8 965 - 14 990

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
8 965 – 9 040	BERGERAK PENERBANGAN (OR)	
9 040 – 9 400	TETAP	
9 400 – 9 500	SIARAN S5.134 S5.135 S5.146	
9 500 – 9 900	SIARAN S5.147 S5.148	
9 900 – 9 995	TETAP	
9 995 – 10 003	FREKUENSI DAN TANDA WAKTU STANDAR (10 000 kHz)	
	S5.111	
10 003 – 10 005	FREKUENSI DAN TANDA WAKTU STANDAR Penelitian Ruang Angkasa	
	S5.111	
10 005 – 10 100	BERGERAK PENERBANGAN (R) S5.111	
10 100 – 10 150	TETAP Amatir S5.120	
10 150 – 11 175	TETAP Bergerak kecuali bergerak penerbangan (R)	
11 175 – 11 275	BERGERAK PENERBANGAN (OR)	
11 275 – 11 400	BERGERAK PENERBANGAN (R)	
11 400 – 11 600	TETAP	
11 600 – 11 650	SIARAN S5.134 S5.135 S5.146	
11 650 – 12 050	SIARAN S5.147 S5.148	
12 050 – 12 100	SIARAN S5.134 S5.135 S5.146	
12 100 – 12 230	TETAP	
12 230 – 13 200	BERGERAK MARITIM S5.109 S5.110 S5.132 S5.145	
13 200 – 13 260	BERGERAK PENERBANGAN (OR)	
13 260 – 13 360	BERGERAK PENERBANGAN (R)	
13 360 – 13 410	TETAP RADIO ASTRONOMI S5.149	
13 410 – 13 570	TETAP Bergerak kecuali bergerak penerbangan (R)	
	S5.150	
13 570 – 13 600	SIARAN S5.134 S5.135 S5.151	
13 600 – 13 800	SIARAN S5.148	
13 800 – 13 870	SIARAN S5.134 S5.135 S5.151	
13 870 – 14 000	TETAP Bergerak kecuali bergerak penerbangan (R)	
14 000 – 14 250	AMATIR S5.120 AMATIR-SATELIT	
14 250 – 14 350	AMATIR S5.120 S5.152	
14 350 – 14 990	TETAP Bergerak kecuali bergerak penerbangan (R)	

kHz
8 965 - 14 990

Alokasi untuk Indonesia		Penggunaan Frekuensi
8 965 – 9 040	BERGERAK PENERBANGAN (OR)	
9 040 – 9 400	TETAP	
9 400 – 9 500	SIARAN S5.134 S5.135 S5.146	
9 500 – 9 900	SIARAN S5.147 S5.148	Radio Siaran -HF (RRI)
9 900 – 9 995	TETAP	Tetap Darat-HF
9 995 – 10 003	FREKUENSI DAN TANDA WAKTU STANDAR (10 000 kHz) S5.111	
10 003 – 10 005	FREKUENSI DAN TANDA WAKTU STANDAR Penelitian Ruang Angkasa S5.111	
10 005 – 10 100	BERGERAK PENERBANGAN (R) S5.111	Bergerak Penerbangan (R) RDARA dan MWARA
10 100 – 10 150	TETAP Amatir S5.120	Tetap Darat-HF Amatir (HF) (Sekunder)
10 150 – 11 175	TETAP Bergerak kecuali bergerak penerbangan (R)	Tetap Darat-HF
11 175 – 11 275	BERGERAK PENERBANGAN (OR)	
11 275 – 11 400	BERGERAK PENERBANGAN (R)	Bergerak Penerbangan (R) RDARA dan MWARA
11 400 – 11 600	TETAP	Tetap Darat-HF
11 600 – 11 650	SIARAN S5.134 S5.135 S5.146	Radio Siaran -HF (RRI)
11 650 – 12 050	SIARAN S5.147 S5.148	Radio Siaran -HF (RRI)
12 050 – 12 100	SIARAN S5.134 S5.135 S5.146	
12 100 – 12 230	TETAP	Tetap Darat-HF
12 230 – 13 200	BERGERAK MARITIM S5.109 S5.110 S5.132 S5.145	Bergerak Maritim Distress dengan Telegraphy (12 520 kHz) Distress Selective Calling (12 577 kHz)
13 200 – 13 260	BERGERAK PENERBANGAN (OR)	
13 260 – 13 360	BERGERAK PENERBANGAN (R)	Bergerak Penerbangan (R) RDARA dan MWARA
13 360 – 13 410	TETAP RADIO ASTRONOMI S5.149	ISM (Industry, Scientific dan Medical) (13 553 - 13 567 kHz) Tetap Darat-HF
13 410 – 13 570	TETAP Bergerak kecuali bergerak penerbangan (R) S5.150	Tetap Darat-HF Bergerak Darat-HF ISM (Industry, Scientific dan Medical) (13 553 - 13 567 kHz)
13 570 – 13 600	SIARAN S5.134 S5.135 S5.151	
13 600 – 13 800	SIARAN S5.148	
13 800 – 13 870	SIARAN S5.134 S5.135 S5.151	
13 870 – 14 000	TETAP Bergerak kecuali bergerak penerbangan (R)	Tetap Darat-HF Bergerak Darat-HF
14 000 – 14 250	AMATIR S5.120 AMATIR-SATELIT	Amatir-HF
14 250 – 14 350	AMATIR S5.120 S5.152	
14 350 – 14 990	TETAP Bergerak kecuali bergerak penerbangan (R)	Tetap Darat-HF Bergerak Darat-HF

kHz
14 990 - 23 000

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
14 990 – 15 005	FREKUENSI DAN TANDA WAKTU STANDAR (15 000 kHz)	
	S5.111	
15 005 – 15 010	FREKUENSI DAN TANDA WAKTU STANDAR Penelitian Ruang Angkasa	
15 010 – 15 100	BERGERAK PENERBANGAN (OR)	
15 100 – 15 600	SIARAN S5.148	
15 600 – 15 800	SIARAN S5.134 S5.135 S5.146	
15 800 – 16 360	TETAP S5.153	
16 360 – 17 410	BERGERAK MARITIM S5.109 S5.110 S5.132 S5.145	
17 410 – 17 480	TETAP	
17 480 – 17 550	SIARAN S5.134 S5.135 S5.146	
17 550 – 17 900	SIARAN S5.148	
17 900 – 17 970	BERGERAK PENERBANGAN (R)	
17 970 – 18 030	BERGERAK PENERBANGAN (OR)	
18 030 – 18 052	TETAP	
18 052 – 18 068	TETAP Penelitian Ruang Angkasa	
18 068 – 18 168	AMATIR S5.120 AMATIR-SATELIT S5.154	
18 168 – 18 780	TETAP Bergerak kecuali bergerak penerbangan	
18 780 – 18 900	BERGERAK MARITIM	
18 900 – 19 200	SIARAN S5.134 S5.135 S5.146	
19 200 – 19 680	TETAP	
19 680 – 19 800	BERGERAK MARITIM S5.132	
19 800 – 19 990	TETAP	
19 990 – 19 995	FREKUENSI DAN TANDA WAKTU STANDAR Penelitian Ruang Angkasa	
	S5.111	
19 995 – 20 010	FREKUENSI DAN TANDA WAKTU STANDAR (20 000 kHz)	
	S5.111	
20 010 – 21 000	TETAP Bergerak	
21 000 – 21 450	AMATIR S5.120 AMATIR-SATELIT	
21 450 – 21 850	SIARAN S5.148	
21 850 – 21 870	TETAP S5.155A S5.155	
21 870 – 21 924	TETAP S5.155B	
21 924 – 22 000	BERGERAK PENERBANGAN (R)	
22 000 – 22 855	BERGERAK MARITIM S5.132 S5.156	
22 855 – 23 000	TETAP S5.156	

kHz
14 990 - 23 000

Alokasi untuk Indonesia		Penggunaan Frekuensi
14 990 – 15 005	FREKUENSI DAN TANDA WAKTU STANDAR (15 000 kHz) S5.111	
15 005 – 15 010	FREKUENSI DAN TANDA WAKTU STANDAR Penelitian Ruang Angkasa	
15 010 – 15 100	BERGERAK PENERBANGAN (OR)	
15 100 – 15 600	SIARAN S5.148	Radio Siaran -HF (RRI)
15 600 – 15 800	SIARAN S5.134 S5.135 S5.146	
15 800 – 16 360	TETAP S5.153	Tetap Darat-HF
16 360 – 17 410	BERGERAK MARITIM S5.109 S5.110 S5.132 S5.145	Bergerak Maritim Distress dengan Telegraphy (16 695 kHz) Distress Selective Calling (16 804,5 kHz)
17 410 – 17 480	TETAP	
17 480 – 17 550	SIARAN S5.134 S5.135 S5.146	
17 550 – 17 900	SIARAN S5.148	
17 900 – 17 970	BERGERAK PENERBANGAN (R)	Bergerak Penerbangan (R) RDARA dan MWARA
17 970 – 18 030	BERGERAK PENERBANGAN (OR)	
18 030 – 18 052	TETAP	Tetap Darat-HF
18 052 – 18 068	TETAP Penelitian Ruang Angkasa	Tetap Darat-HF
18 068 – 18 168	AMATIR S5.120 AMATIR-SATELIT S5.154	Amatir (HF)
18 168 – 18 780	TETAP Bergerak kecuali bergerak penerbangan	Tetap Darat-HF Bergerak Darat-HF
18 780 – 18 900	BERGERAK MARITIM	
18 900 – 19 200	SIARAN S5.134 S5.135 S5.146	
19 200 – 19 680	TETAP	Tetap Darat-HF
19 680 – 19 800	BERGERAK MARITIM S5.132	
19 800 – 19 990	TETAP	Tetap Darat-HF
19 990 – 19 995	FREKUENSI DAN TANDA WAKTU STANDAR Penelitian Ruang Angkasa S5.111	
19 995 – 20 010	FREKUENSI DAN TANDA WAKTU STANDAR (20 000 kHz) S5.111	
20 010 – 21 000	TETAP Bergerak	Tetap Darat-HF
21 000 – 21 450	AMATIR S5.120 AMATIR-SATELIT	Amatir-HF
21 450 – 21 850	SIARAN S5.148	
21 850 – 21 870	TETAP S5.155A S5.155	Tetap Darat-HF
21 870 – 21 924	TETAP S5.155B	Tetap Darat-HF
21 924 – 22 000	BERGERAK PENERBANGAN (R)	
22 000 – 22 855	BERGERAK MARITIM S5.132 S5.156	Bergerak Maritim
22 855 – 23 000	TETAP S5.156	Tetap Darat-HF

MHz
23 - 40.98

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
23 000 – 23 200	TETAP Bergerak kecuali bergerak penerbangan (R) S5.156	
23 200 – 23 350	TETAP S5.156A BERGERAK PENERBANGAN (OR)	
23 350 – 24 000	TETAP BERGERAK kecuali bergerak penerbangan S5.157	
24 – 24 .89	TETAP BERGERAK DARAT	
24. 89 – 24.99	AMATIR S5.120 AMATIR-SATELIT	
24.99 – 25 .005	FREKUENSI DAN TANDA WAKTU STANDAR (25 000 kHz)	
25.005 – 25.01	FREKUENSI DAN TANDA WAKTU STANDAR Penelitian Ruang Angkasa	
25.01 – 25.07	TETAP BERGERAK kecuali bergerak penerbangan	
25.07 – 25.21	BERGERAK MARITIM	
25.21 – 25.55	TETAP BERGERAK kecuali bergerak penerbangan	
25.55 – 25.67	RADIO ASTRONOMI S5.149	
25.67 – 26.1	SIARAN	
26.1 – 26.175	BERGERAK MARITIM S5.132	
26.175 – 27.5	TETAP BERGERAK kecuali bergerak penerbangan S5.150	
27.5 – 28	BANTUAN METEOROLOGI TETAP BERGERAK	
28 – 29.7	AMATIR AMATIR-SATELIT	
29.7 – 30.005	TETAP BERGERAK	
30.005 – 30.01	OPERASI RUANG ANGKASA (identifikasi satelit) TETAP BERGERAK PENELITIAN RUANG ANGKASA	
30.01 – 37.5	TETAP BERGERAK	
37.5 – 38.25	TETAP BERGERAK Radio Astronomi S5.149	
38.25 – 39.986	TETAP BERGERAK	
39.986 – 40.02	TETAP BERGERAK Penelitian Ruang Angkasa	
40.02 – 40.98	TETAP BERGERAK S5.150	

MHz
23 - 40.98

Alokasi untuk Indonesia		Penggunaan Frekuensi
23 000 – 23 200	TETAP BERGERAK kecuali bergerak penerbangan (R) S5.156	Tetap Darat-HF Bergerak Darat-HF
23 200 – 23 350	TETAP S5.156A BERGERAK PENERBANGAN (OR)	Tetap Darat-HF
23 350 – 24 000	TETAP BERGERAK kecuali bergerak penerbangan S5.157	Tetap Darat-HF Bergerak Darat-HF
24 – 24 .89	TETAP BERGERAK DARAT	Tetap Darat-HF Bergerak Darat-HF
24. 89 – 24.99	AMATIR S5.120 AMATIR-SATELIT	Amatir-HF
24.99 – 25 .005	FREKUENSI DAN TANDA WAKTU STANDAR (25 000 kHz)	
25.005 – 25.01	FREKUENSI DAN TANDA WAKTU STANDAR Penelitian Ruang Angkasa	
25.01 – 25.07	TETAP BERGERAK kecuali bergerak penerbangan	Tetap Darat-HF Bergerak Darat-HF
25.07 – 25.21	BERGERAK MARITIM	
25.21 – 25.55	TETAP BERGERAK kecuali bergerak penerbangan	Tetap Darat-HF Bergerak Darat-HF
25.55 – 25.67	RADIO ASTRONOMI S5.149	
25.67 – 26.1	SIARAN	
26.1 – 26.175	BERGERAK MARITIM S5.132	
26.175 – 27.5	TETAP BERGERAK kecuali bergerak penerbangan S5.150	Komunikasi Radio Antar Penduduk (KRAP) 40 kanal (26 960 - 27 410 kHz) ISM (Industry, Scientific dan Medical) (26 957 - 27 283 kHz) Tetap Darat-HF Bergerak Darat-HF
27.5 – 28	BANTUAN METEOROLOGI TETAP BERGERAK	
28 – 29.7	AMATIR AMATIR-SATELIT	Amatir HF Amatir-Satelit (29.3 - 29.5 MHz)
29.7 – 30.005	TETAP BERGERAK	Tetap Darat-VHF Bergerak Darat-VHF
30.005 – 30.01	OPERASI RUANG ANGKASA (identifikasi satelit) TETAP BERGERAK PENELITIAN RUANG ANGKASA	Tetap Darat-VHF Bergerak Darat-VHF
30.01 – 37.5	TETAP BERGERAK	Tetap Darat-VHF Bergerak Darat-VHF
37.5 – 38.25	TETAP BERGERAK Radio Astronomi S5.149	Tetap Darat-VHF Bergerak Darat-VHF
38.25 – 39.986	TETAP BERGERAK	Tetap Darat-VHF Bergerak Darat-VHF
39.986 – 40.02	TETAP BERGERAK	Tetap Darat-VHF Bergerak Darat-VHF
40.02 – 40.98	TETAP BERGERAK S5.150	ISM (Industry, Scientific dan Medical) (40.66 - 40.7 MHz) Land Fixed-VHF Land Mobile-VHF

MHz
40.98 - 136

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
40.98 – 41.015	TETAP BERGERAK Penelitian Ruang Angkasa S5.160 S5.161	
41.015 – 44	TETAP BERGERAK S5.160 S5.161	
44 – 47	TETAP BERGERAK S5.162 S5.162A	
47 – 68 SIARAN S5.163 S5.164 S5.165 S5.169 S5.171 S5.162A	47 – 50 TETAP BERGERAK	47 – 50 TETAP BERGERAK SIARAN
	50 – 54 AMATIR S5.166 S5.167 S5.168 S5.170	
	54 – 68 SIARAN Tetap Bergerak S5.172	54 – 68 TETAP BERGERAK SIARAN
	68 – 74.8 TETAP BERGERAK kecuali bergerak penerbangan S5.149 S5.174 S5.175 S5.177 S5.179	68 – 72 SIARAN Tetap Bergerak S5.173 72 – 73 TETAP BERGERAK 73 – 74.6 RADIO ASTRONOMI S5.178 74.6 – 74.8 TETAP BERGERAK
74.8 – 75.2	NAVIGASI RADIO PENERBANGAN S5.180 S5.181	
75.2 – 87.5 TETAP BERGERAK kecuali bergerak penerbangan S5.175 S5.179 S5.184 S5.187	75.2 – 75.4 TETAP BERGERAK S5.179	
	75.4 – 76 TETAP BERGERAK	75.4 – 87 TETAP BERGERAK
	76 – 88 SIARAN Tetap Bergerak S5.185	S5.149 S5.182 S5.183 S5.186 S5.188 87 – 100 TETAP
87.5 – 100 SIARAN S5.190	88 – 100 SIARAN	BERGERAK SIARAN
100 – 108	SIARAN S5.192 S5.194	
108 – 117.975	NAVIGASI RADIO PENERBANGAN S5.197	
117.975 – 136	BERGERAK PENERBANGAN (R) S5.111 S5.198 S5.199 S5.200 S5.201	

MHz
40.98 - 136

Alokasi untuk Indonesia		Penggunaan Frekuensi
40.98 – 41.015	TETAP BERGERAK Penelitian Ruang Angkasa S5.160 S5.161	Tetap Darat-VHF Bergerak Darat-VHF
41.015 – 44	TETAP BERGERAK S5.160 S5.161	Tetap Darat-VHF Bergerak Darat-VHF
44 – 47	TETAP BERGERAK S5.162 S5.162A	CT-0 (lokal) (44 - 50 MHz) Tetap Darat-VHF Bergerak Darat-VHF
47 – 50	TETAP BERGERAK SIARAN	CT-0 (lokal) (44 - 50 MHz) Tetap Darat-VHF Bergerak Darat-VHF
50 – 54	TETAP BERGERAK SIARAN S5.166 S5.167 S5.168 S5.170	Amatir-VHF Tetap Darat-VHF Bergerak Darat-VHF
54 – 68	TETAP BERGERAK SIARAN	TV Siaran (TVRI)
68 – 74.8	TETAP BERGERAK S5.149 S5.176 S5.179	
74.8 – 75.2	NAVIGASI RADIO PENERBANGAN S5.180 S5.181	Radio Beacon
75.2 – 75.4	TETAP BERGERAK S5.179	Tetap Darat-VHF Bergerak Darat-VHF
75.4 – 87	TETAP BERGERAK S5.149 S5.182 S5.183 S5.186 S5.188	Tetap Darat-VHF Bergerak Darat-VHF
87 – 100	TETAP BERGERAK SIARAN	Radio Siaran FM (RRI dan Swasta) (spasi 350 kHz) (87 - 108 MHz) kecuali di perbatasan negara (100 - 108 MHz)
100 – 108	SIARAN S5.192 S5.194	
108 – 117.975	NAVIGASI RADIO PENERBANGAN S5.197	Navigasi Radio Penerbangan (Nasional) DVOR/DVME ILS
117.975 – 136	BERGERAK PENERBANGAN (R) S5.111 S5.198 S5.199 S5.200 S5.201	Bergerak Penerbangan (Nasional) Ground to Air Search and Rescue (SAR) (121.5 MHz)

MHz
136 - 143.6

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
136 – 137	BERGERAK PENERBANGAN (R)	
	S5.202 S5.203 S5.203A S5.203B	
137 – 137.025	OPERASI RUANG ANGKASA (angkasa-ke-Bumi) METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) S5.208A S5.209 PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) Tetap Bergerak kecuali bergerak penerbangan (R)	
	S5.204 S5.205 S5.206 S5.207 S5.208	
137.025 – 137.175	OPERASI RUANG ANGKASA (angkasa-ke-Bumi) METEOROLOGI-SATELIT (angkasa-ke-Bumi) PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) Tetap Bergerak-Satelit (angkasa-ke-Bumi) S5.208A S5.209 Bergerak kecuali bergerak penerbangan (R)	
	S5.204 S5.205 S5.206 S5.207 S5.208	
137.175 – 137.825	OPERASI RUANG ANGKASA (angkasa-ke-Bumi) METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) S5.208A S5.209 PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) Tetap Bergerak kecuali bergerak penerbangan (R)	
	S5.204 S5.205 S5.206 S5.207 S5.208	
137.825 – 138	OPERASI RUANG ANGKASA (angkasa-ke-Bumi) METEOROLOGI-SATELIT (angkasa-ke-Bumi) PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) Tetap Bergerak-Satelit (angkasa-ke-Bumi) S5.208A S5.209 Bergerak kecuali bergerak penerbangan (R)	
	S5.204 S5.205 S5.206 S5.207 S5.208	
138 – 143.6 AERONAUTICAL BERGERAK (OR) S5.210 S5.211 S5.212 S5.214	138 – 143.6 TETAP BERGERAK RADIOLOKASI Penelitian Ruang Angkasa (angkasa-ke-Bumi)	138 – 143.6 TETAP BERGERAK Penelitian Ruang Angkasa (angkasa-ke-Bumi) S5.207 S5.213

MHz
136 - 143.6

Alokasi untuk Indonesia	Penggunaan Frekuensi
136 – 137 BERGERAK PENERBANGAN (R) S5.202 S5.203 S5.203A S5.203B	
137 – 137.025 OPERASI RUANG ANGKASA (angkasa-ke-Bumi) METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa- ke-Bumi) S5.208A S5.209 PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) TETAP BERGERAK kecuali bergerak penerbangan (R) S5.204 S5.205 S5.206 S5.207 S5.208	Tetap Darat-VHF Bergerak Darat-VHF
137.025 – 137.175 OPERASI RUANG ANGKASA (angkasa-ke-Bumi) METEOROLOGI-SATELIT (angkasa-ke-Bumi) PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) TETAP BERGERAK kecuali bergerak penerbangan (R) Bergerak-Satelit (angkasa-ke- Bumi) S5.208A S5.209 S5.204 S5.205 S5.206 S5.207 S5.208	Tetap Darat-VHF Bergerak Darat-VHF
137.175 – 137.825 OPERASI RUANG ANGKASA (angkasa-ke-Bumi) METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa- ke-Bumi) S5.208A S5.209 PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) TETAP BERGERAK kecuali bergerak penerbangan (R) Bergerak-Satelit (angkasa-ke- Bumi) S5.208A S5.209 S5.204 S5.205 S5.206 S5.207 S5.208	Land Fixed-VHF Land Mobile-VHF
137.825 – 138 OPERASI RUANG ANGKASA (angkasa-ke-Bumi) METEOROLOGI-SATELIT (angkasa-ke-Bumi) PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) TETAP BERGERAK kecuali bergerak penerbangan (R) Bergerak-Satelit (angkasa-ke- Bumi) S5.208A S5.209 S5.204 S5.205 S5.206 S5.207 S5.208	Land Fixed-VHF Land Mobile-VHF
138 – 143.6 TETAP BERGERAK Penelitian Ruang Angkasa (angkasa-ke-Bumi) S5.207 S5.213	Komunikasi Radio Antar Penduduk (KRAP), 60 kanal (142.0375 - 143.5375 MHz) Land Fixed-VHF Land Mobile-VHF

MHz
143.6 - 174

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
143.6 – 143.65 BERGERAK PENERBANGAN (OR) PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) S5.211 S5.212 S5.214	143.6 – 143.65 TETAP BERGERAK RADIOLOKASI PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi)	143.6 – 143.65 TETAP BERGERAK PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) S5.207 S5.213
143.65 – 144 BERGERAK PENERBANGAN (OR) S5.210 S5.211 S5.212 S5.214	143.65 – 144 TETAP BERGERAK RADIOLOKASI Penelitian Ruang Angkasa (angkasa-ke-Bumi)	143.65 – 144 TETAP BERGERAK Penelitian Ruang Angkasa (angkasa-ke-Bumi) S5.207 S5.213
144 – 146	AMATIR S5.120 AMATIR-SATELIT S5.216	
146 – 148 TETAP BERGERAK kecuali bergerak penerbangan (R)	146 – 148 AMATIR S5.217	146 – 148 AMATIR TETAP BERGERAK S5.217
148 – 149.9 TETAP BERGERAK kecuali bergerak penerbangan (R) BERGERAK-SATELIT (Bumi-ke-angkasa) S5.209 S5.218 S5.219 S5.221	148 – 149.9 TETAP BERGERAK BERGERAK-SATELIT (Bumi-ke-angkasa) S5.209 S5.218 S5.219 S5.221	
149.9 – 150.05	BERGERAK- SATELIT (Bumi-ke-angkasa) S5.209 S5.224A NAVIGASI RADIO-SATELIT S5.224B S5.220 S5.222 S5.223	
150.05 – 153 TETAP BERGERAK kecuali bergerak penerbangan RADIO ASTRONOMI S5.149	150.05 – 156.7625 TETAP BERGERAK S5.225 S5.226 S5.227	
153 – 154 TETAP BERGERAK kecuali bergerak penerbangan (R) Bantuan Meteorologi		
154 – 156.7625 TETAP BERGERAK kecuali bergerak penerbangan (R) S5.226 S5.227		
156.7625 – 156.8375	BERGERAK MARITIM (marabahaya dan panggilan) S5.111 S5.226	
156.8375 – 174 TETAP BERGERAK kecuali bergerak penerbangan S5.226 S5.229	156.8375 – 174 TETAP BERGERAK S5.226 S5.230 S5.231 S5.232	

MHz
143.6 - 174

Alokasi untuk Indonesia		Penggunaan Frekuensi
143.6 – 143.65	TETAP BERGERAK PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) S5.207 S5.213	Tetap Darat-VHF Bergerak Darat-VHF
143.65 – 144	TETAP BERGERAK Penelitian Ruang Angkasa (angkasa-ke-Bumi) S5.207 S5.213	Tetap Darat-VHF Bergerak Darat-VHF
144 – 146	AMATIR S5.120 AMATIR-SATELIT S5.216	Amatir VHF Amatir Satelit (145.8 - 146 MHz)
146 – 148	AMATIR TETAP BERGERAK S5.217	Amatir VHF (Sharing) Tetap Darat-VHF Bergerak Darat-VHF
148 – 149.9	TETAP BERGERAK BERGERAK-SATELIT (Bumi-ke-angkasa) S5.209 S5.218 S5.219 S5.221	Tetap Darat-VHF Bergerak Darat-VHF
149.9 – 150.05	BERGERAK -SATELIT (Bumi-ke-angkasa) S5.209 S5.224A NAVIGASI RADIO-SATELIT S5.224B S5.220 S5.222 S5.223	
150.05 – 156.7625	TETAP BERGERAK S5.225 S5.226 S5.227	Frek. marabahaya internasional untuk Distress Selective-Calling - DSC (156.525 MHz) Tetap Darat-VHF Bergerak Darat-VHF
156.7625 – 156.8375	BERGERAK MARITIM (marabahaya dan panggilan) S5.111 S5.226	Bergerak Maritim (nasional) (frekuensi marabahaya dan panggilan dengan teleponi radio)
156.8375 – 174	TETAP BERGERAK S5.226 S5.230 S5.231 S5.232	Bergerak Maritim (lokal) (161.55 - 162 MHz) Radio Panggil Untuk Umum (RPUU) (160 - 165 MHz dan 169 - 172.5 MHz) Tetap Darat-VHF Bergerak Darat-VHF

MHz
174 - 387

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
174 – 223 SIARAN S5.235 S5.237 S5.243 S5.244	174 – 216 SIARAN Tetap Bergerak S5.234 216 – 220 TETAP BERGERAK MARITIM Radiolocation S5.241 S5.242 220 – 225	174 – 223 TETAP BERGERAK SIARAN S5.233 S5.238 S5.240 S5.245
223 – 230 SIARAN Tetap Bergerak S5.243 S5.244 S5.246 S5.247	AMATIR TETAP BERGERAK Radiolocation S5.241 225 – 235 TETAP BERGERAK	223 – 230 TETAP BERGERAK SIARAN NAVIGASI RADIO PENERBANGAN Radiolokasi S5.250
230 – 235 TETAP BERGERAK S5.244 S5.247 S5.251 S5.252		230 – 235 TETAP BERGERAK NAVIGASI RADIO PENERBANGAN S5.250
235 – 267	TETAP BERGERAK S5.111 S5.199 S5.252 S5.254 S5.256	
267 – 272	TETAP BERGERAK Operasi Ruang Angkasa (angkasa-ke-Bumi) S5.254 S5.257	
272 – 273	OPERASI RUANG ANGKASA (angkasa-ke-Bumi) TETAP BERGERAK S5.254	
273 – 312	TETAP BERGERAK S5.254	
312 – 315	TETAP BERGERAK Bergerak-Satelit (Bumi-ke-angkasa) S5.254 S5.255	
315 – 322	TETAP BERGERAK S5.254	
322 – 328.6	TETAP BERGERAK RADIO ASTRONOMI S5.149	
328.6 – 335.4	NAVIGASI RADIO PENERBANGAN S5.258 S5.259	
335.4 – 387	TETAP BERGERAK S5.254	

MHz
174 - 387

Alokasi untuk Indonesia		Penggunaan Frekuensi
174 – 223	TETAP BERGERAK SIARAN S5.233 S5.238 S5.240 S5.245	TV Siaran (TVRI) , Kanal 4 - 11 VHF (174 - 230 MHz)
223 – 230	TETAP BERGERAK SIARAN NAVIGASI RADIO PENERBANGAN Radiolokasi S5.250	TV Siaran (TVRI) , Kanal 4 - 11 VHF (174 - 230 MHz)
230 – 235	TETAP BERGERAK NAVIGASI RADIO PENERBANGAN S5.250	CT-0 lokal , (230 - 250 MHz) Tetap Darat-VHF Bergerak Darat-VHF
235 – 267	TETAP BERGERAK S5.111 S5.199 S5.252 S5.254 S5.256	Search and Rescue (SAR) (243 MHz) CT-0 lokal , (230 - 250 MHz)
267 – 272	TETAP BERGERAK Operasi Ruang Angkasa (angkasa-ke-Bumi) S5.254 S5.257	Tetap Darat-VHF Bergerak Darat-VHF
272 – 273	OPERASI RUANG ANGKASA (angkasa-ke-Bumi) TETAP BERGERAK S5.254	Tetap Darat-VHF Bergerak Darat-VHF
273 – 312	TETAP BERGERAK S5.254	Radio Panggil Untuk Umum (RPUU) (279 - 281 MHz) Tetap Darat-UHF Bergerak Darat-UHF
312 – 315	TETAP BERGERAK Bergerak-Satelit (Bumi-ke-angkasa) S5.254 S5.255	Tetap Darat-UHF Bergerak Darat-UHF
315 – 322	TETAP BERGERAK S5.254	Tetap Darat-UHF Bergerak Darat-UHF
322 – 328.6	TETAP BERGERAK RADIO ASTRONOMI S5.149	Tetap Darat-UHF Bergerak Darat-UHF
328.6 – 335.4	NAVIGASI RADIO PENERBANGAN S5.258 S5.259	
335.4 – 387	TETAP BERGERAK S5.254	Wireless Lokal Loop (WLL) (343.1 - 345.1 MHz) dan (357.1 - 359.1 MHz) Tetap dan Bergerak Darat-UHF

MHz
387 - 410

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
387 – 390	TETAP BERGERAK Bergerak-Satelit (angkasa-ke-Bumi) S5.208A S5.254 S5.255	
390 – 399.9	TETAP BERGERAK S5.254	
399.9 – 400.05	BERGERAK-SATELIT (Bumi-ke-angkasa) S5.209 S5.224A NAVIGASI RADIO-SATELIT S5.222 S5.260 S5.224B S5.220	
400.05 – 400.15	FREKUENSI DAN TANDA WAKTU STANDAR-SATELIT (400.1 MHz) S5.261 S5.262	
400.15 – 401	BANTUAN METEOROLOGI METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) S5.208A S5.209 PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) S5.263 Operasi Ruang Angkasa (angkasa-ke-Bumi) S5.262 S5.264	
401 – 402	EKSPLORASI BUMI-SATELIT (Bumi-ke-angkasa) BANTUAN METEOROLOGI METEOROLOGI-SATELIT (Bumi-ke-angkasa) OPERASI RUANG ANGKASA (angkasa-ke-Bumi) Tetap Bergerak kecuali bergerak penerbangan	
402 – 403	EKSPLORASI BUMI-SATELIT (Bumi-ke-angkasa) BANTUAN METEOROLOGI METEOROLOGI-SATELIT (Bumi-ke-angkasa) Tetap Bergerak kecuali bergerak penerbangan	
403 – 406	BANTUAN METEOROLOGI Tetap Bergerak kecuali bergerak penerbangan	
406 – 406.1	BERGERAK-SATELIT (Bumi-ke-angkasa) S5.266 S5.267	
406.1 – 410	TETAP BERGERAK kecuali bergerak penerbangan RADIO ASTRONOMI S5.149	

MHz
387 - 410

Alokasi untuk Indonesia		Penggunaan Frekuensi
387 – 390	TETAP BERGERAK Bergerak-Satelit (angkasa-ke-Bumi) S5.208A S5.254 S5.255	Radio Trunking (380 - 399.9 MHz) Tetap Darat-UHF Bergerak Darat-UHF
390 – 399.9	TETAP BERGERAK S5.254	Radio Trunking (380 - 399.9 MHz) Tetap Darat-UHF Bergerak Darat-UHF
399.9 – 400.05	BERGERAK-SATELIT (Bumi -ke- angkasa) S5.209 S5.224A NAVIGASI RADIO-SATELIT S5.222 S5.260 S5.224B S5.220	
400.05 – 400.15	FREKUENSI DAN TANDA WAKTU STANDAR-SATELIT (400.1 MHz) TETAP BERGERAK S5.261 S5.262	Tetap Darat-UHF Bergerak Darat-UHF
400.15 – 401	BANTUAN METEOROLOGI METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke- Bumi) S5.208A S5.209 PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) S5.263 TETAP BERGERAK Operasi Ruang Angkasa (angkasa-ke-Bumi) S5.262 S5.264	Tetap Darat-UHF Bergerak Darat-UHF
401 – 402	EKSPLORASI BUMI- SATELIT (Bumi-ke-angkasa) BANTUAN METEOROLOGI METEOROLOGI-SATELIT (Bumi-ke-angkasa) OPERASI RUANG ANGKASA (angkasa-ke-Bumi) Tetap Bergerak kecuali bergerak penerbangan	
402 – 403	EKSPLORASI BUMI-SATELIT (Bumi-ke-angkasa) BANTUAN METEOROLOGI METEOROLOGI-SATELIT (Bumi-ke-angkasa) Tetap Bergerak kecuali bergerak penerbangan	Tetap Darat-UHF (Sekunder) Bergerak Darat-UHF (Sekunder)
403 – 406	BANTUAN METEOROLOGI Tetap Bergerak kecuali bergerak penerbangan	Tetap Darat-UHF (Sekunder) Bergerak Darat-UHF (Sekunder)
406 – 406.1	BERGERAK-SATELIT (Bumi-ke-angkasa) S5.266 S5.267	
406.1 – 410	TETAP BERGERAK kecuali bergerak penerbangan RADIO ASTRONOMI S5.149	Radio Trunking (lokal) (406.1 - 430 MHz) Tetap Darat-UHF Bergerak Darat-UHF

MHz
410 - 470

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
410 – 420	TETAP BERGERAK kecuali bergerak penerbangan PENELITIAN RUANG ANGKASA (angkasa-ke-angkasa) S5.268	
420 – 430	TETAP BERGERAK kecuali bergerak penerbangan Radiolokasi S5.269 S5.270 S5.271	
430 – 440 AMATIR RADIOLOKASI S5.138 S5.271 S5.272 S5.273 S5.274 S5.275 S5.276 S5.277 S5.280 S5.281 S5.282 S5.283	430 – 440 RADIOLOKASI Amatir S5.271 S5.276 S5.277 S5.278 S5.279 S5.281 S5.282	
440 – 450	TETAP BERGERAK kecuali bergerak penerbangan Radiolokasi S5.269 S5.270 S5.271 S5.284 S5.285 S5.286	
450 – 455	TETAP BERGERAK S5.209 S5.271 S5.286 S5.286A S5.286B S5.286C S5.286D S5.286E	
455 – 456 TETAP BERGERAK S5.209 S5.271 S5.286A S5.286B S5.286C S5.286E	455 – 456 TETAP BERGERAK BERGERAK-SATELIT (Bumi-ke-angkasa) S5.209 S5.271 S5.286A S5.286B S5.286C	455 – 456 TETAP BERGERAK S5.209 S5.271 S5.286A S5.286B S5.286C S5.286E
456 – 459	TETAP BERGERAK S5.271 S5.287 S5.288	
459 – 460 TETAP BERGERAK S5.209 S5.271 S5.286A S5.286B S5.286C S5.286E	459 – 460 TETAP BERGERAK BERGERAK-SATELIT (Bumi-ke-angkasa) S5.209 S5.271 S5.286A S5.286B S5.286C	459 – 460 TETAP BERGERAK S5.209 S5.271 S5.286A S5.286B S5.286C S5.286E
460 – 470	TETAP BERGERAK Meteorologikal-Satelit (angkasa-ke-Bumi) S5.287 S5.288 S5.289 S5.290	

MHz
410 - 470

Alokasi untuk Indonesia		Penggunaan Frekuensi
410 – 420	TETAP BERGERAK kecuali bergerak penerbangan PENELITIAN RUANG ANGKASA (angkasa-ke-angkasa) S5.268	Radio Trunking (lokal) (406.1 - 430 MHz) Wireless Data (rencana) Tetap Darat-UHF Bergerak Darat-UHF
420 – 430	TETAP BERGERAK kecuali bergerak penerbangan Radiolokasi S5.269 S5.270 S5.271	Radio Trunking (lokal) (406.1 - 430 MHz) Wireless Data (rencana) Tetap Darat-UHF Bergerak Darat-UHF
430 – 440	RADILOKASI TETAP BERGERAK Amatir S5.271 S5.276 S5.277 S5.278 S5.279 S5.281 S5.282	Radio Trunking (lokal) (430 - 435 MHz) dan (438 - 440 MHz) Tetap Darat-UHF Bergerak Darat-UHF Amatir-UHF (Sekunder) Amatir Satelit (sharing) (435 - 438 MHz) ISM (433.05 - 434.79 MHz)
440 – 450	TETAP BERGERAK kecuali bergerak penerbangan Radiolokasi S5.269 S5.270 S5.271 S5.284 S5.285 S5.286	Tetap Darat-UHF Bergerak Darat-UHF
450 – 455	TETAP BERGERAK BERGERAK-SATELIT SERVICE (Bumi-ke-angkasa) S5.209 S5.271 S5.286 S5.286A S5.286B S5.286C S5.286D S5.286E	Wireless Local Loop (WLL) (453.3 - 455.3 MHz) dan (458.3 - 460.3 MHz) Mobile-Satellite Service (MSS) (Bumi-ke-angkasa) (454 - 455 MHz) Tetap Darat-UHF Bergerak Darat-UHF
455 – 456	TETAP BERGERAK S5.209 S5.271 S5.286A S5.286B S5.286C S5.286E	Tetap Darat-UHF Bergerak Darat-UHF Wireless Local Loop (WLL) (453.3 - 455.3 MHz)
456 – 459	TETAP BERGERAK S5.271 S5.287 S5.288	Bergerak Maritim pada Kapal Laut Tetap Darat-UHF Bergerak Darat-UHF
459 – 460	TETAP BERGERAK S5.209 S5.271 S5.286A S5.286B S5.286C S5.286E	Wireless Local Loop (WLL) Tetap Darat-UHF Bergerak Darat-UHF
460 – 470	TETAP BERGERAK Meteorologikal-Satelit (angkasa-ke-Bumi) S5.287 S5.288 S5.289 S5.290	Wireless Local Loop (458.3 - 460.3 MHz) Bergerak Maritim pada Kapal Laut (460 - 470 MHz) Tetap Darat-UHF Bergerak Darat-UHF

MHz
470 - 960

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
470 – 790 SIARAN	470 – 512 SIARAN Tetap Bergerak S5.292 S5.293	470 – 585 TETAP BERGERAK SIARAN
	512 – 608	
	SIARAN S5.297	S5.291 S5.298
	608 – 614 RADIO ASTRONOMI Bergerak-Satelit kecuali bergerak penerbangan-satelit (Bumi-ke-angkasa)	585 – 610 TETAP BERGERAK SIARAN NAVIGASI RADIO S5.149 S5.305 S5.306 S5.307
S5.149 S5.294 S5.296 S5.300 S5.302 S5.304 S5.306 S5.311 S5.312 S5.291A	614 – 806 SIARAN Tetap Bergerak	610 – 890 TETAP BERGERAK SIARAN
790 – 862 TETAP SIARAN S5.312 S5.313 S5.314 S5.315 S5.316 S5.319 S5.321	S5.293 S5.309 S5.310 S5.311	
862 – 890 TETAP BERGERAK kecuali bergerak penerbangan SIARAN S5.322 S5.319 S5.323	806 – 890 TETAP BERGERAK SIARAN	
890 – 942 TETAP BERGERAK kecuali bergerak penerbangan SIARAN S5.322 Radiolokasi	S5.310 S5.317 S5.318	S5.149 S5.305 S5.306 S5.307 S5.311
S5.323	890 – 902 TETAP BERGERAK kecuali bergerak penerbangan Radiolokasi S5.318 S5.325	890 – 942 TETAP BERGERAK SIARAN Radiolokasi
	902 – 928 TETAP Amatir Bergerak kecuali bergerak penerbangan Radiolokasi S5.150 S5.325 S5.326	
	928 – 942 TETAP BERGERAK kecuali bergerak penerbangan Radiolokasi S5.325	
942 – 960 TETAP BERGERAK kecuali bergerak penerbangan SIARAN S5.322 S5.323	942 – 960 TETAP BERGERAK	942 – 960 TETAP BERGERAK SIARAN S5.320

MHz
470 - 960

Alokasi untuk Indonesia		Penggunaan Frekuensi
470 – 585	TETAP BERGERAK SIARAN S5.291 S5.298	Komunikasi Radio Antar Penduduk (KRAP) (40 kanal) (476.41 - 477.415 MHz) NMT Cellular Bergerak (lokal) (479 - 483.48 MHz) dan (489 - 493.48 MHz) TV Siaran (nasional) (TVRI dan TV Swasta) (Kanal 22 - 62 UHF) (502 - 814 MHz) Tetap Darat-UHF
585 – 610	TETAP BERGERAK SIARAN NAVIGASI RADIO S5.149 S5.305 S5.306 S5.307	TV Siaran (nasional) (TVRI dan TV Swasta) (Kanal 23 - 63 UHF) (502 - 814 MHz)
610 – 890	TETAP BERGERAK SIARAN S5.149 S5.305 S5.306 S5.307 S5.311	TV Siaran (nasional) (Government dan PrivateTV) (Kanal 23 - 63 UHF) (502 - 814 MHz) Radio Trunking (lokal) (806 - 825 MHz) dan (851 - 870 MHz) Fixed Cellular / Wireless Local Loop (825 - 835 MHz) dan (870 - 880 MHz) AMPS Bergerak Cellular (nasional) (835 - 845 MHz) dan (880 - 890 MHz) CT-2 (lokal) (864.1 - 868.1 MHz) Wireless Data (rencana) Tetap Darat-UHF
890 – 942	TETAP BERGERAK SIARAN Radiolokasi S5.326	GSM Bergerak Cellular (nasional) (890 - 915 MHz) dan (935 - 960 MHz) Radio Panggil Untuk Umum (RPUU) (931 - 937.5 MHz) Wireless Data (rencana) Tetap Darat-UHF
942 – 960	TETAP BERGERAK SIARAN S5.320	GSM Bergerak Cellular (nasional) (935 - 960 MHz) Tetap Darat-UHF Bergerak Darat-UHF

MHz
960 - 1 492

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
960 – 1 215	NAVIGASI RADIO PENERBANGAN	
	S5.328	
1 215 – 1 240	RADIOLOKASI NAVIGASI RADIO-SATELIT (angkasa-ke-Bumi) EKSPLOKASI BUMI-SATELIT (aktif) PENELITIAN RUANG ANGKASA (aktif)	
	S5.329 S5.330 S5.331 S5.332	
1 240 – 1 260	RADIOLOKASI NAVIGASI RADIO-SATELIT (angkasa-ke-Bumi) EKSPLOKASI BUMI-SATELIT (aktif) PENELITIAN RUANG ANGKASA (aktif) Amatir	
	S5.329 S5.330 S5.331 S5.332 S5.334 S5.335	
1 260 – 1 300	RADIOLOKASI Amatir EKSPLOKASI BUMI-SATELIT (aktif) PENELITIAN RUANG ANGKASA (aktif)	
	S5.282 S5.330 S5.331 S5.332 S5.334 S5.335	
1 300 – 1 350	NAVIGASI RADIO PENERBANGAN S5.337 Radiolokasi	
	S5.149	
1 350 – 1 400 TETAP BERGERAK RADIOLOKASI S5.149 S5.338 S5.339	1 350 – 1 400	RADIOLOKASI S5.149 S5.334 S5.339
1 400 – 1 427	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.341	
1 427 – 1 429	OPERASI RUANG ANGKASA (Bumi-ke-angkasa) TETAP BERGERAK kecuali bergerak penerbangan	
	S5.341	
1 429 – 1 452 TETAP BERGERAK kecuali bergerak penerbangan S5.341 S5.342	1 429 – 1 452	TETAP BERGERAK S5.345 S5.341
1 452 – 1 492 TETAP BERGERAK kecuali bergerak penerbangan SIARAN S5.345 S5.347 SIARAN-SATELIT S5.345 S5.347 S5.341 S5.342	1 452 – 1 492	TETAP BERGERAK S5.343 SIARAN S5.345 S5.347 SIARAN-SATELIT S5.345 S5.347 S5.341 S5.344

MHz
960 - 1 492

Alokasi untuk Indonesia		Penggunaan Frekuensi
960 – 1 215	AERONAUTICAL RADIONAVIGATION S5.328	Navigasi Radio Penerbangan (Radar)
1 215 – 1 240	RADIOLOKASI NAVIGASI RADIO-SATELIT (angkasa-ke-Bumi) EKSPLOKASI BUMI- SATELIT (aktif) PENELITIAN RUANG ANGKASA (aktif) TETAP BERGERAK S5.329 S5.330 S5.331 S5.332	Tetap Darat-UHF Bergerak Darat-UHF
1 240 – 1 260	RADIOLOKASI NAVIGASI RADIO-SATELIT (angkasa-ke-Bumi) TETAP BERGERAK Amatir EKSPLOKASI BUMI-SATELIT (aktif) PENELITIAN RUANG ANGKASA (aktif) S5.329 S5.330 S5.331 S5.332 S5.334 S5.335	Tetap Darat-UHF Bergerak Darat-UHF Amatir-UHF (Sekunder) (1 240 - 1 300 MHz)
1 260 – 1 300	RADIOLOKASI TETAP BERGERAK Amatir EKSPLOKASI BUMI-SATELIT (aktif) PENELITIAN RUANG ANGKASA (aktif) S5.282 S5.330 S5.331 S5.332 S5.334 S5.335	Tetap Darat-UHF Bergerak Darat-UHF Amatir-UHF (Sekunder) (1 240 - 1 300 MHz)
1 300 – 1 350	NAVIGASI RADIO PENERBANGAN S5.337 Radiolokasi S5.149	Navigasi Radio Penerbangan (Radar)
1 350 – 1 400	RADIOLOKASI S5.149 S5.334 S5.339	
1 400 – 1 427	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.341	
1 427 – 1 429	OPERASI RUANG ANGKASA (Bumi-ke-angkasa) TETAP BERGERAK kecuali bergerak penerbangan S5.341	Tetap Darat-UHF Bergerak Darat-UHF
1 429 – 1 452	TETAP BERGERAK S5.345 S5.341	Tetap Darat-UHF Bergerak Darat-UHF
1 452 – 1 492	TETAP BERGERAK S5.343 SIARAN S5.345 S5.347 SIARAN-SATELIT S5.345 S5.347 S5.341 S5.344	Broadcasting-Satelit Service (BSS) (Down-Link) Tetap Darat-UHF Bergerak Darat-UHF

MHz
1 492 - 1 610

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
1 492 – 1 525 TETAP BERGERAK kecuali bergerak penerbangan S5.341 S5.342	1 492 – 1 525 TETAP BERGERAK S5.343 BERGERAK-SATELIT (angkasa-ke-Bumi) S5.348A S5.341 S5.344 S5.348	1 492 – 1 525 TETAP BERGERAK S5.341 S5.348A
1 525 – 1 530 OPERASI RUANG ANGKASA (angkasa-ke-Bumi) TETAP BERGERAK-SATELIT (angkasa-ke-Bumi) Eksplorasi Bumi-Satelit Bergerak kecuali bergerak penerbangan S5.349 S5.341 S5.342 S5.350 S5.351 S5.352A S5.354	1 525 – 1 530 OPERASI RUANG ANGKASA (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) Eksplorasi Bumi-Satelit Tetap Bergerak S5.343 S5.341 S5.351 S5.354	1 525 – 1 530 OPERASI RUANG ANGKASA (angkasa-ke-Bumi) TETAP BERGERAK-SATELIT (angkasa-ke-Bumi) Eksplorasi Bumi-Satelit Bergerak S5.349 S5.341 S5.351 S5.352A S5.354
1 530 – 1 533 OPERASI RUANG ANGKASA (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) S5.353A Eksplorasi Bumi-Satelit Tetap Bergerak kecuali bergerak penerbangan S5.341 S5.342 S5.351 S5.354	1 530 – 1 533 OPERASI RUANG ANGKASA (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) S5.353A Eksplorasi Bumi-Satelit Tetap Bergerak S5.343 S5.341 S5.351 S5.354	
1 533 – 1 535 OPERASI RUANG ANGKASA (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) S5.353A Eksplorasi Bumi-Satelit Tetap Bergerak kecuali bergerak penerbangan S5.341 S5.342 S5.351 S5.354	1 533 – 1 535 OPERASI RUANG ANGKASA (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) S5.353A Eksplorasi Bumi-Satelit Tetap Bergerak S5.343 S5.341 S5.351 S5.354	
1 535 – 1 544	BERGERAK-SATELIT (angkasa-ke-Bumi) S5.341 S5.351 S5.353A S5.354 S5.355	
1 544 – 1 545	BERGERAK-SATELIT (angkasa-ke-Bumi) S5.341 S5.354 S5.355 S5.356	
1 545 – 1 555	BERGERAK-SATELIT (angkasa-ke-Bumi) S5.341 S5.351 S5.354 S5.355 S5.357 S5.359 S5.362A	
1 555 – 1 559	BERGERAK-SATELIT (angkasa-ke-Bumi) S5.341 S5.351 S5.354 S5.355 S5.359 S5.362B	
1 559 – 1 610	NAVIGASI RADIO PENERBANGAN NAVIGASI RADIO-SATELIT (angkasa-ke-Bumi)	

MHz
1 492 - 1 610

Alokasi untuk Indonesia		Penggunaan Frekuensi
1 492 – 1 525	TETAP BERGERAK S5.341 S5.348A	Tetap Darat-UHF
1 525 – 1 530	OPERASI RUANG ANGKASA (angkasa-ke-Bumi) TETAP BERGERAK-SATELIT (angkasa-ke-Bumi) Eksplorasi Bumi-Satelit Bergerak S5.349 S5.341 S5.351 5.352A S5.354	Mobile-Satellite Service (MSS) - GSO (Down-Link) (1 525 - 1 559 MHz)
1 530 – 1 533	OPERASI RUANG ANGKASA (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) Eksplorasi Bumi-Satelit Tetap Bergerak S5.343 S5.341 S5.351 S5.354	Mobile-Satellite Service (MSS) - GSO (Down-Link) (1 525 - 1 559 MHz)
1 533 – 1 535	OPERASI RUANG ANGKASA (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) S5.353A Eksplorasi Bumi-Satelit Tetap Bergerak S5.343 S5.341 S5.351 S5.354	Mobile-Satellite Service (MSS) - GSO (Down-Link) (1 525 - 1 559 MHz)
1 535 – 1 544	BERGERAK-SATELIT (angkasa-ke-Bumi) S5.341 S5.351 S5.353A S5.354 S5.355	Mobile-Satellite Service (MSS) - GSO (Down-Link) (1 525 - 1 559 MHz)
1 544 – 1 545	BERGERAK-SATELIT (angkasa-ke-Bumi) S5.341 S5.354 S5.355 S5.356	Mobile-Satellite Service (MSS) - GSO (Down-Link) (1 525 - 1 559 MHz)
1 545 – 1 555	BERGERAK-SATELIT (angkasa-ke-Bumi) S5.341 S5.351 S5.354 S5.355 S5.357 S5.359 S5.362A	Mobile-Satellite Service (MSS) - GSO (Down-Link) (1 525 - 1 559 MHz)
1 555 – 1 559	BERGERAK-SATELIT (angkasa-ke-Bumi) S5.341 S5.351 S5.354 S5.355 S5.359 S5.362B S5.360 S5.361 S5.362	Mobile-Satellite Service (MSS) - GSO (Down-Link) (1 525 - 1 559 MHz)
1 559 – 1 610	NAVIGASI RADIO PENERBANGAN NAVIGASI RADIO-SATELIT (angkasa-ke-Bumi)	

MHz
1 610 -1 660

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
1 610 – 1 610.6 BERGERAK-SATELIT (Bumi-ke-angkasa) NAVIGASI RADIO PENERBANGAN S5.341 S5.355 S5.359 S5.363 S5.364 S5.366 S5.367 S5.368 S5.369 S5.371 S5.372	1 610 – 1 610.6 BERGERAK-SATELIT (Bumi-ke-angkasa) NAVIGASI RADIO PENERBANGAN RADIO PENENTU-SATELIT (Bumi-ke-angkasa) S5.341 S5.364 S5.366 S5.367 S5.368 S5.370 S5.372	1 610 – 1 610.6 BERGERAK-SATELIT (Bumi-ke-angkasa) NAVIGASI RADIO PENERBANGAN Radio penentu-Satelit (Bumi-ke-angkasa) S5.341 S5.355 S5.359 S5.364 S5.366 S5.367 S5.368 S5.369 S5.372
1 610.6 – 1 613.8 BERGERAK-SATELIT (Bumi-ke-angkasa) RADIO ASTRONOMI NAVIGASI RADIO PENERBANGAN S5.149 S5.341 S5.355 S5.359 S5.363 S5.364 S5.366 S5.367 S5.368 S5.369 S5.371 S5.372	1 610.6 – 1 613.8 BERGERAK-SATELIT (Bumi-ke-angkasa) RADIO ASTRONOMI NAVIGASI RADIO PENERBANGAN RADIO PENENTU-SATELIT (Bumi-ke-angkasa) S5.149 S5.341 S5.364 S5.366 S5.367 S5.368 S5.370 S5.372	1 610.6 – 1 613.8 BERGERAK-SATELIT (Bumi-ke-angkasa) RADIO ASTRONOMI NAVIGASI RADIO PENERBANGAN Radio penentu-Satelit (Bumi-ke-angkasa) S5.149 S5.341 S5.355 S5.359 S5.364 S5.366 S5.367 S5.368 S5.369 S5.372
1 613.8 – 1 626.5 BERGERAK-SATELIT (Bumi-ke-angkasa) NAVIGASI RADIO PENERBANGAN Bergerak-Satelit (angkasa-ke-Bumi) S5.341 S5.355 S5.359 S5.363 S5.364 S5.365 S5.366 S5.367 S5.368 S5.369 S5.371 S5.372	1 613.8 – 1 626.5 BERGERAK-SATELIT (Bumi-ke-angkasa) NAVIGASI RADIO PENERBANGAN RADIO PENENTU-SATELIT (Bumi-ke-angkasa) Bergerak-Satelit (angkasa-ke-Bumi) S5.341 S5.364 S5.365 S5.366 S5.367 S5.368 S5.370 S5.372	1 613.8 – 1 626.5 BERGERAK-SATELIT (Bumi-ke-angkasa) NAVIGASI RADIO PENERBANGAN Bergerak-Satelit (angkasa-ke-Bumi) Radio penentu-Satelit (Bumi-ke-angkasa) S5.341 S5.355 S5.359 S5.364 S5.365 S5.366 S5.367 S5.368 S5.369 S5.372
1 626.5 – 1 631.5 BERGERAK-SATELIT (Bumi-ke-angkasa) S5.341 S5.351 S5.354 S5.355 S5.359 S5.353A	1 626.5 – 1 631.5 BERGERAK-SATELIT (Bumi-ke-angkasa) S5.341 S5.351 S5.354 S5.355 S5.353A	
1 631.5 – 1 636.5	BERGERAK-SATELIT (Bumi-ke-angkasa) S5.341 S5.351 S5.353 S5.354 S5.355 S5.359 S5.374 S5.353A	
1 636.5 – 1 645.5	BERGERAK-SATELIT (Bumi-ke-angkasa) S5.341 S5.351 S5.353A S5.354 S5.355 S5.359	
1 645.5 – 1 646.5	BERGERAK-SATELIT (Bumi-ke-angkasa) S5.341 S5.354 S5.375	
1 646.5 – 1 656.5	BERGERAK-SATELIT (Bumi-ke-angkasa) S5.362A S5.341 S5.351 S5.354 S5.355 S5.359 S5.376	
1 656.5 – 1 660	BERGERAK-SATELIT (Bumi-ke-angkasa) S5.341 S5.351 S5.354 S5.355 S5.359 S5.374 S5.362B	

MHz
1 610 -1 660

Alokasi untuk Indonesia		Penggunaan Frekuensi
1 610 – 1 610.6	<p>BERGERAK-SATELIT (Bumi-ke-angkasa) NAVIGASI RADIO PENERBANGAN Radio penentu-Satelit (Bumi-ke-angkasa)</p> <p>S5.341 S5.355 S5.359 S5.364 S5.366 S5.367 S5.368 S5.369 S5.372</p>	<p>Mobile-Satellite Service (MSS) - GSO (Up-Link) (1 610 - 1 660.5 MHz) Penetapan frekuensi MSS GSO perlu dikoordinasikan lebih lanjut</p>
1 610.6 – 1 613.8	<p>BERGERAK-SATELIT (Bumi-ke-angkasa) RADIO ASTRONOMI NAVIGASI RADIO PENERBANGAN Radio penentu-Satelit (Bumi-ke-angkasa)</p> <p>S5.149 S5.341 S5.355 S5.359 S5.364 S5.366 S5.367 S5.368 S5.369 S5.372</p>	<p>Mobile-Satellite Service (MSS) - GSO (Up-Link) (1 610 - 1 660.5 MHz) Mobile-Satellite Service (MSS) - NGSO (1 616 - 1 626.5 MHz) Penetapan frekuensi MSS perlu dikoordinasikan lebih lanjut</p>
1 613.8 – 1 626.5	<p>BERGERAK-SATELIT (Bumi-ke-angkasa) NAVIGASI RADIO PENERBANGAN Bergerak-Satelit (angkasa-ke-Bumi) Radio penentu-Satelit (Bumi-ke-angkasa)</p> <p>S5.341 S5.355 S5.359 S5.364 S5.365 S5.366 S5.367 S5.368 S5.369 S5.372</p>	<p>Mobile-Satellite Service (MSS) - GSO (Up-Link) (1 610 - 1 660.5 MHz) Mobile-Satellite Service (MSS) - NGSO (1 616 - 1 626.5 MHz) Penetapan frekuensi MSS perlu dikoordinasikan lebih lanjut</p>
1 626.5 – 1 631.5	<p>BERGERAK-SATELIT (Bumi-ke-angkasa)</p> <p>S5.341 S5.351 S5.354 S5.355 S5.353A</p>	<p>Mobile-Satellite Service (MSS) - GSO (Up-Link) (1 610 - 1 660.5 MHz) (1 610 - 1 660.5 MHz)</p>
1 631.5 – 1 636.5	<p>BERGERAK-SATELIT (Bumi-ke-angkasa)</p> <p>S5.341 S5.351 S5.353 S5.354 S5.355 S5.359 S5.374 S5.353A</p>	<p>Mobile-Satellite Service (MSS) - GSO (Up-Link) (1 610 - 1 660.5 MHz)</p>
1 636.5 – 1 645.5	<p>BERGERAK-SATELIT (Bumi-ke-angkasa)</p> <p>S5.341 S5.351 S5.353A S5.354 S5.355 S5.359</p>	<p>Mobile-Satellite Service (MSS) - GSO (Up-Link) (1 610 - 1 660.5 MHz)</p>
1 645.5 – 1 646.5	<p>BERGERAK-SATELIT (Bumi-ke-angkasa)</p> <p>S5.341 S5.354 S5.375</p>	<p>Mobile-Satellite Service (MSS) - GSO (Up-Link) (1 610 - 1 660.5 MHz)</p>
1 646.5 – 1 656.5	<p>BERGERAK-SATELIT (Bumi-ke-angkasa) S5.362A</p> <p>S5.341 S5.351 S5.354 S5.355 S5.359 S5.376</p>	<p>Mobile-Satellite Service (MSS) - GSO (Up-Link) (1 610 - 1 660.5 MHz)</p>
1 656.5 – 1 660	<p>BERGERAK-SATELIT (Bumi-ke-angkasa)</p> <p>S5.341 S5.351 S5.354 S5.355 S5.359 S5.374 S5.362B</p>	<p>Mobile-Satellite Service (MSS) - GSO (Up-Link) (1 610 - 1 660.5 MHz)</p>

MHz
1 660 -1 710

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
1 660 – 1 660.5	BERGERAK-SATELIT (Bumi-ke-angkasa) RADIO ASTRONOMI S5.149 S5.341 S5.351 S5.354 S5.376A S5.362B	
1 660.5 – 1 668.4	RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) Tetap Bergerak kecuali bergerak penerbangan S5.149 S5.341 S5.379 S5.379A	
1 668.4 – 1 670	BANTUAN METEOROLOGI TETAP BERGERAK kecuali bergerak penerbangan RADIO ASTRONOMI S5.149 S5.341	
1 670 – 1 675	BANTUAN METEOROLOGI TETAP METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK S5.380 S5.341	
1 675 – 1 690 BANTUAN METEOROLOGI TETAP METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan S5.341	1 675 – 1 690 BANTUAN METEOROLOGI TETAP METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan BERGERAK-SATELIT (Bumi-ke-angkasa) S5.341 S5.377	1 675 – 1 690 BANTUAN METEOROLOGI TETAP METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan S5.341
1 690 – 1 700 BANTUAN METEOROLOGI METEOROLOGI-SATELIT (angkasa-ke-Bumi) Tetap Bergerak kecuali bergerak penerbangan S5.289 S5.341 S5.382	1 690 – 1 700 BANTUAN METEOROLOGI METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK-SATELIT (Bumi-ke-angkasa) S5.289 S5.341 S5.377 S5.381	1 690 – 1 700 BANTUAN METEOROLOGI METEOROLOGI-SATELIT (angkasa-ke-Bumi) S5.289 S5.341 S5.381
1 700 – 1 710 TETAP METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan S5.289 S5.341	1 700 – 1 710 TETAP METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan BERGERAK-SATELIT (Bumi-ke-angkasa) S5.289 S5.341 S5.377	1 700 – 1 710 TETAP METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan S5.289 S5.341 S5.384

MHz
1 660 -1 710

Alokasi untuk Indonesia		Penggunaan Frekuensi
1 660 – 1 660.5	BERGERAK-SATELIT (Bumi-ke-angkasa) RADIO ASTRONOMI S5.149 S5.341 S5.351 S5.354 S5.376A S5.362B	Mobile-Satellite Service (MSS) - GSO (Up-Link) (1 610 - 1 660.5 MHz)
1 660.5 – 1 668.4	RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) Tetap Bergerak kecuali bergerak penerbangan Bantuan Meteorologi S5.149 S5.341 S5.379 S5.379A	
1 668.4 – 1 670	BANTUAN METEOROLOGI TETAP BERGERAK kecuali bergerak penerbangan RADIO ASTRONOMI S5.149 S5.341	Tetap Darat-UHF
1 670 – 1 675	BANTUAN METEOROLOGI TETAP METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK S5.380 S5.341	Tetap Darat-UHF
1 675 – 1 690	BANTUAN METEOROLOGI TETAP METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan S5.341	Tetap Darat-UHF
1 690 – 1 700	BANTUAN METEOROLOGI METEOROLOGI-SATELIT (angkasa-ke-Bumi) S5.289 S5.341 S5.381	
1 700 – 1 710	TETAP METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) S5.289 S5.341 S5.384	Microwave Link (nasional) (1 700 - 2 300 MHz) Tetap Darat-UHF

MHz
1 710 - 2 120

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
1 710 – 1 930	TETAP BERGERAK S5.380	
	S5.149 S5.341 S5.385 S5.386 S5.387 S5.388	
1 930 – 1 970 TETAP BERGERAK S5.388	1 930 – 1 970 TETAP BERGERAK Bergerak-Satelit (Bumi-ke-angkasa) S5.388	1 930 – 1 970 TETAP BERGERAK S5.388
1 970 – 1 980 TETAP BERGERAK S5.388	1 970 – 1 980 TETAP BERGERAK S5.388	1 970 – 1 980 TETAP BERGERAK S5.388
1 980 – 2 010	TETAP BERGERAK BERGERAK-SATELIT (Bumi-ke-angkasa)	
	S5.388 S5.389A S5.389B S5.389F	
2 010 – 2 025 TETAP BERGERAK S5.388	2 010 – 2 025 TETAP BERGERAK BERGERAK-SATELIT (Bumi-ke-angkasa) S5.388 S5.389C S5.389D S5.390 S5.398E	2 010 – 2 025 TETAP BERGERAK S5.388
2 025 – 2 110	OPERASI RUANG ANGKASA (Bumi-ke-angkasa) (angkasa-ke-angkasa) EKSPLOKASI BUMI-SATELIT (Bumi-ke-angkasa) (angkasa-ke-angkasa) TETAP BERGERAK S5.391 PENELITIAN RUANG ANGKASA (Bumi-ke-angkasa) (angkasa-ke-angkasa)	
	S5.392	
2 110 – 2 120	TETAP BERGERAK PENELITIAN RUANG ANGKASA (angkasa dalam) (Bumi-ke-angkasa)	
	S5.388	

MHz
1 710 - 2 120

Alokasi untuk Indonesia		Penggunaan Frekuensi
1 710 – 1 930	TETAP BERGERAK S5.380 OPERASI RUANG ANGKASA (Bumi-ke-angkasa) PENELITIAN RUANG ANGKASA (Bumi-ke-angkasa) S5.149 S5.341 S5.385 S5.386 S5.387 S5.388	Microwave Link (nasional) (1 700 - 2 300 MHz) PCN/DCS (nasional) (1 710 - 1 785 MHz) dan (1 805 - 1 880 MHz) DECT-WLL (lokal) (1 880 - 1900 MHz) PHS (lokal) (1 895 - 1918 MHz) IMT-2000 (1 885 - 2 025 MHz) Tetap Darat-UHF
1 930 – 1 970	TETAP BERGERAK S5.388	Microwave Link (nasional) (1 700 - 2 300 MHz) IMT-2000 (1 885 - 2 025 MHz) Tetap Darat-UHF
1 970 – 1 980	TETAP BERGERAK S5.388	Microwave Link (nasional) (1 700 - 2 300 MHz) IMT-2000 (1 885 - 2 025 MHz) dan (2 110 - 2 200 MHz) Tetap Darat-UHF
1 980 – 2 010	TETAP BERGERAK BERGERAK-SATELIT (Bumi-ke-angkasa) S5.388 S5.389A S5.389B S5.389F	Microwave Link (nasional) (1 700 - 2 300 MHz) IMT-2000 (1 885 - 2 025 MHz) Mobile-Satellite Service (MSS) - GSO (Up-Link) (1 980 - 2 010 MHz) Mobile-Satellite Service (MSS) - NGSO (Up-Link) (1 980 - 2 010 MHz) Tetap Darat-UHF
2 010 – 2 025	TETAP BERGERAK S5.388	Microwave Link (nasional) (1 700 - 2 300 MHz) IMT-2000 (1 885 - 2 025 MHz) Tetap Darat-UHF
2 025 – 2 110	OPERASI RUANG ANGKASA (Bumi-ke-angkasa) (angkasa- ke-angkasa) EKSPLOKORASI BUMI- SATELIT (Bumi-ke-angkasa) (angkasa-ke-angkasa) TETAP BERGERAK S5.391 PENELITIAN RUANG ANGKASA (Bumi-ke-angkasa) (angkasa- ke-angkasa) S5.392	Microwave Link (nasional) (1 700 - 2 300 MHz) Tetap Darat-UHF
2 110 – 2 120	TETAP BERGERAK PENELITIAN RUANG ANGKASA (angkasa dalam) (Bumi-ke-angkasa) S5.388	Microwave Link (nasional) (1 700 - 2 300 MHz) IMT-2000 (2 110 - 2 200 MHz) Tetap Darat-UHF

MHz
2 120 - 2 500

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
2 120 – 2 160 TETAP BERGERAK S5.388	2 120 – 2 160 TETAP BERGERAK Bergerak-Satelit (angkasa-ke-Bumi) S5.388	2 120 – 2 160 TETAP BERGERAK S5.388
2 160 – 2 170 TETAP BERGERAK S5.388 S5.392A	2 160 – 2 170 TETAP BERGERAK BERGERAK-SATELIT (angkasa-ke-Bumi) S5.388 S5.389C S5.389D S5.389E S5.390	2 160 – 2 170 TETAP BERGERAK S5.388
2 170 – 2 200	TETAP BERGERAK BERGERAK-SATELIT (angkasa-ke-Bumi) S5.388 S5.389A S5.389F S5.392A	
2 200 – 2 290	OPERASI RUANG ANGKASA (angkasa-ke-Bumi) (angkasa-ke-angkasa) EKSPLOKASI BUMI-SATELIT (angkasa-ke-Bumi) (angkasa-ke-angkasa) TETAP BERGERAK S5.391 PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) (angkasa-ke-angkasa) S5.392	
2 290 – 2 300	TETAP BERGERAK kecuali bergerak penerbangan PENELITIAN RUANG ANGKASA (angkasa dalam) (angkasa-ke-Bumi)	
2 300 – 2 450 TETAP BERGERAK Amatir Radiolokasi S5.150 S5.282 S5.395	2 300 – 2 450 TETAP BERGERAK RADIOLOKASI Amatir S5.150 S5.282 S5.393 S5.394 S5.396	
2 450 – 2 483.5 TETAP BERGERAK Radiolokasi S5.150 S5.397	2 450 – 2 483.5 TETAP BERGERAK RADIOLOKASI S5.150 S5.394	
2 483.5 – 2 500 TETAP BERGERAK BERGERAK-SATELIT (angkasa-ke-Bumi) Radiolokasi S5.150 S5.371 S5.397 S5.398 S5.399 S5.400 S5.402	2 483.5 – 2 500 TETAP BERGERAK BERGERAK-SATELIT (angkasa-ke-Bumi) RADIOLOKASI RADIO PENENTU-SATELIT (angkasa-ke-Bumi) S5.398 S5.150 S5.402	2 483.5 – 2 500 TETAP BERGERAK BERGERAK-SATELIT (angkasa-ke-Bumi) RADIOLOKASI Radio penentu-Satelit (angkasa-ke-Bumi) S5.398 S5.150 S5.400 S5.402

MHz
2 120 - 2 500

Alokasi untuk Indonesia		Penggunaan Frekuensi
2 120 – 2 160	TETAP BERGERAK S5.388	Microwave Link (nasional) (1 700 - 2 300 MHz) IMT-2000 (2 110 - 2 200 MHz) Tetap Darat-UHF
2 160 – 2 170	TETAP BERGERAK S5.388	Microwave Link (nasional) (1 700 - 2 300 MHz) IMT-2000 (2 110 - 2 200 MHz) Tetap Darat-UHF
2 170 – 2 200	TETAP BERGERAK BERGERAK-SATELIT (angkasa-ke-Bumi) S5.388 S5.389A S5.389F S5.392A	Microwave Link (nasional) (1 700 - 2 300 MHz) IMT-2000 (2 110 - 2 200 MHz) Mobile-Satellite Service (MSS) - GSO (Down-Link) (2 170 - 2 200 MHz) Mobile-Satellite Service (MSS) - NGSO (Down-Link) (2 170 - 2 200 MHz) Tetap Darat-UHF
2 200 – 2 290	OPERASI RUANG ANGKASA (angkasa-ke-Bumi) (angkasa-ke-angkasa) EKSPLOKASI BUMI-SATELIT (angkasa-ke-Bumi) (angkasa-ke-angkasa) TETAP BERGERAK S5.391 PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) (angkasa-ke-angkasa) S5.392	Microwave Link (nasional) (1 700 - 2 300 MHz) Tetap Darat-UHF
2 290 – 2 300	TETAP BERGERAK kecuali bergerak penerbangan PENELITIAN RUANG ANGKASA (angkasa dalam) (angkasa-ke-Bumi)	Microwave Link (nasional) (1 700 - 2 300 MHz) Tetap Darat-UHF
2 300 – 2 450	TETAP BERGERAK RADIOLOKASI Amatir S5.150 S5.282 S5.393 S5.394 S5.396	Microwave Link (nasional) (2 300 - 2 500 MHz) Amatir-UHF (Sekunder) Tetap Darat-UHF
2 450 – 2 483.5	TETAP BERGERAK RADIOLOKASI S5.150 S5.394	Microwave Link (nasional) (2 300 - 2 500 MHz) Tetap Darat-UHF
2 483.5 – 2 500	TETAP BERGERAK BERGERAK-SATELIT (angkasa-ke-Bumi) RADIOLOKASI Radio penentu-Satelit (angkasa-ke-Bumi) S5.398 S5.150 S5.400 S5.402	Microwave Link (nasional) (2 300 - 2 500 MHz) Mobile-Satellite Service (MSS) - GSO (Down-Link) (2 483.5 - 2 500 MHz) Mobile-Satellite Service (MSS) - NGSO (Down-Link) (2 483.5 - 2 500 MHz) Tetap Darat-UHF

MHz
2 500 - 2 690

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
2 500 – 2 520 TETAP S5.409 S5.410 S5.411 BERGERAK kecuali bergerak penerbangan BERGERAK-SATELIT (angkasa-ke-Bumi) S5.403 S5.405 S5.407 S5.408 S5.412 S5.414	2 500 – 2 520 TETAP S5.409 S5.411 TETAP-SATELIT (angkasa-ke-Bumi) S5.415 BERGERAK kecuali bergerak penerbangan BERGERAK-SATELIT (angkasa-ke-Bumi) S5.403 S5.404 S5.407 S5.414	2 500 – 2 520 TETAP S5.409 S5.411 TETAP-SATELIT (angkasa-ke-Bumi) S5.415 BERGERAK kecuali bergerak penerbangan BERGERAK-SATELIT (angkasa-ke-Bumi) S5.403 S5.404 S5.407 S5.414 S5.403A
2 520 – 2 655 TETAP S5.409 S5.410 S5.411 BERGERAK kecuali bergerak penerbangan SIARAN-SATELIT S5.413 S5.416 S5.339 S5.403 S5.405 S5.408 S5.412 S5.417 S5.418	2 520 – 2 655 TETAP S5.409 S5.411 TETAP-SATELIT (angkasa-ke-Bumi) S5.415 BERGERAK kecuali bergerak penerbangan SIARAN-SATELIT S5.413 S5.416 S5.339 S5.403	2 520 – 2 535 TETAP S5.409 S5.411 TETAP-SATELIT (angkasa-ke-Bumi) S5.415 BERGERAK kecuali bergerak penerbangan SIARAN-SATELIT S5.413 S5.416 S5.403 S5.403A 2 535 – 2 655 TETAP S5.409 S5.411 BERGERAK kecuali bergerak penerbangan SIARAN-SATELIT S5.413 S5.416 S5.339 S5.418
2 655 – 2 670 TETAP S5.409 S5.410 S5.411 BERGERAK kecuali bergerak penerbangan SIARAN-SATELIT S5.413 S5.416 Eksplorasi Bumi-Satelit (pasif) Radio Astronomi Penelitian Ruang Angkasa (pasif) S5.149 S5.412 S5.417 S5.420	2 655 – 2 670 TETAP S5.409 S5.411 TETAP-SATELIT (Bumi-ke-angkasa) (angkasa-ke-Bumi) S5.415 BERGERAK kecuali bergerak penerbangan SIARAN-SATELIT S5.413 S5.416 Eksplorasi Bumi-Satelit (pasif) Radio Astronomi Penelitian Ruang Angkasa (pasif) S5.149 S5.420	2 655 – 2 670 TETAP S5.409 S5.411 TETAP-SATELIT (Bumi-ke-angkasa) S5.415 BERGERAK kecuali bergerak penerbangan SIARAN-SATELIT S5.413 S5.416 Eksplorasi Bumi-Satelit (pasif) Radio Astronomi Penelitian Ruang Angkasa (pasif) S5.149 S5.420
2 670 – 2 690 TETAP S5.409 S5.410 S5.411 BERGERAK kecuali bergerak penerbangan BERGERAK-SATELIT (Bumi-ke-angkasa) Eksplorasi Bumi-Satelit (pasif) Radio Astronomi Penelitian Ruang Angkasa (pasif) S5.149 S5.419 S5.420	2 670 – 2 690 TETAP S5.409 S5.411 TETAP-SATELIT (Bumi-ke-angkasa) (angkasa-ke-Bumi) S5.415 BERGERAK kecuali bergerak penerbangan BERGERAK-SATELIT (Bumi-ke-angkasa) Eksplorasi Bumi-Satelit (pasif) Radio Astronomi Penelitian Ruang Angkasa (pasif) S5.149 S5.419 S5.420	2 670 – 2 690 TETAP S5.409 S5.411 TETAP-SATELIT (Bumi-ke-angkasa) S5.415 BERGERAK kecuali bergerak penerbangan BERGERAK-SATELIT (Bumi-ke-angkasa) Eksplorasi Bumi-Satelit (pasif) Radio Astronomi Penelitian Ruang Angkasa (pasif) S5.149 S5.419 S5.420

MHz
2 500 - 2 690

Alokasi untuk Indonesia		Penggunaan Frekuensi
2 500 – 2 520	TETAP S5.409 S5.411 TETAP-SATELIT (angkasa-ke-Bumi) S5.415 BERGERAK kecuali bergerak penerbangan BERGERAK-SATELIT (angkasa-ke-Bumi) S5.403 S5.404 S5.407 S5.414 S5.403A	Tetap Darat-UHF
2 520 – 2 535	TETAP S5.409 S5.411 TETAP-SATELIT (angkasa-ke-Bumi) S5.415 BERGERAK kecuali bergerak penerbangan SIARAN-SATELIT S5.413 S5.416 S5.403 S5.403A	Tetap Darat-UHF Broadcasting Satellite Services (BSS) (2 520 - 2 670 MHz)
2 535 – 2 655	TETAP S5.409 S5.411 BERGERAK kecuali bergerak penerbangan SIARAN- SATELIT S5.413 S5.416 S5.339 S5.418	Tetap Darat-UHF Broadcasting Satellite Services (BSS) (2 520 - 2 670 MHz)
2 655 – 2 670	TETAP S5.409 S5.411 TETAP-SATELIT (Bumi-ke-angkasa) S5.415 BERGERAK kecuali bergerak penerbangan SIARAN-SATELIT S5.413 S5.416 Eksplorasi Bumi-Satelit (pasif) Radio Astronomi Penelitian Ruang Angkasa (pasif) S5.149 S5.420	Tetap Darat-UHF Broadcasting Satellite Services (BSS) (2 520 - 2 670 MHz)
2 670 – 2 690	TETAP S5.409 S5.411 TETAP-SATELIT (Bumi-ke-angkasa) S5.415 BERGERAK kecuali bergerak penerbangan BERGERAK-SATELIT (Bumi-ke-angkasa) Eksplorasi Bumi-Satelit (pasif) Radio Astronomi Penelitian Ruang Angkasa (pasif) S5.149 S5.419 S5.420	Bergerak Satelit Service (MSS) (setelah 1 January 2005) Tetap Darat-UHF

MHz
2 690 - 5 000

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
2 690 – 2 700	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.421 S5.422	
2 700 – 2 900	NAVIGASI RADIO PENERBANGAN S5.337 Radiolokasi S5.423 S5.424	
2 900 – 3 100	NAVIGASI RADIO S5.426 Radiolokasi S5.425 S5.427	
3 100 – 3 300	RADIOLOKASI Eksplorasi Bumi-Satelit (aktif) Penelitian Ruang Angkasa (aktif) S5.149 S5.333 S5.428	
3 300 – 3 400 RADIOLOKASI S5.149 S5.429 S5.430	3 300 – 3 400 RADIOLOKASI Amatir Tetap Bergerak S5.149 S5.430	3 300 – 3 400 RADIOLOKASI Amatir S5.149 S5.429
3 400 – 3 600 TETAP TETAP-SATELIT (angkasa-ke-Bumi) Bergerak Radiolokasi S5.431 S5.434	3 400 – 3 500 TETAP TETAP-SATELIT (angkasa-ke-Bumi) Amatir Bergerak Radiolokasi S5.433 S5.282 S5.432	
3 600 – 4 200 TETAP TETAP-SATELIT (angkasa-ke-Bumi) Bergerak	3 500 – 3 700 TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan Radiolokasi S5.433 S5.435	
	3 700 – 4 200 TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan	
4 200 – 4 400	NAVIGASI RADIO PENERBANGAN S5.438 S5.437 S5.439 S5.440	
4 400 – 4 500	TETAP BERGERAK	
4 500 – 4 800	TETAP TETAP-SATELIT (angkasa-ke-Bumi) S5.441 BERGERAK	
4 800 – 4 990	TETAP BERGERAK S5.442 RADIO ASTRONOMI S5.149 S5.339 S5.443	
4 990 – 5 000	TETAP BERGERAK kecuali bergerak penerbangan RADIO ASTRONOMI Penelitian Ruang Angkasa (pasif) S5.149	

MHz
2 690 - 5 000

Alokasi untuk Indonesia		Penggunaan Frekuensi
2 690 – 2 700	EKSPLORASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.421 S5.422	
2 700 – 2 900	NAVIGASI RADIO PENERBANGAN Radiolokasi S5.423 S5.424	Navigasi Radio Penerbangan (Radar)
2 900 – 3 100	NAVIGASI RADIO Radiolokasi S5.425 S5.427	
3 100 – 3 300	RADIOLOKASI Eksplorasi Bumi-Satelit (aktif) Penelitian Ruang Angkasa (aktif) S5.149 S5.333 S5.428	
3 300 – 3 400	RADIOLOKASI TETAP BERGERAK Amatir S5.149 S5.429	Bergerak Darat-SHF Amatir-SHF (Sekunder) (3 300 - 3 500 MHz)
3 400 – 3 500	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan Amatir Radiolokasi S5.433 S5.282 S5.432	Fixed-Satelit Service (FSS) - GSO (Down-Link) (3 400 - 3 700 MHz) (TT&C) (3 400 - 3 405 MHz) WLL kom. data sharing terbatas dengan FSS - Alokasi sekunder, di perkotaan (Zone 1,2,3) - Alokasi primer, di non-perkotaan (Zone 4,5) (Ketentuan Zone Lihat KM.45 tahun 2000)
3 500 – 3 700	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan Radiolokasi S5.433 S5.435	Fixed-Satelit Service (FSS) - GSO (Down-Link) (3 400 -3 700 MHz) WLL kom. data sharing terbatas dengan FSS - Alokasi sekunder, di perkotaan (Zone 1,2,3) - Alokasi primer, di non-perkotaan (Zone 4,5) (Ketentuan Zone Lihat KM.45 tahun 2000)
3 700 – 4 200	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan	Fixed-Satelit Service (FSS) - GSO (Down-Link) (3 700 - 4 200 MHz) (TT&C) (3 800 - 4 000 MHz)
4 200 – 4 400	NAVIGASI RADIO PENERBANGAN S5.438 S5.437 S5.439 S5.440	
4 400 – 4 500	TETAP BERGERAK	Tetap Darat-SHF
4 500 – 4 800	TETAP TETAP-SATELIT (angkasa-ke-Bumi) S5.441 BERGERAK	Tetap Darat-SHF
4 800 – 4 990	TETAP BERGERAK S5.442 RADIO ASTRONOMI S5.149 S5.339 S5.443	Tetap Darat-SHF
4 990 – 5 000	TETAP BERGERAK kecuali bergerak penerbangan RADIO ASTRONOMI Penelitian Ruang Angkasa (pasif) S5.149	Tetap Darat-SHF

MHz
5 000 - 5 925

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
5 000 – 5 150	NAVIGASI RADIO PENERBANGAN S5.367 S5.444 S5.444A	
5 150 – 5 250	NAVIGASI RADIO PENERBANGAN TETAP-SATELIT (Bumi-ke-angkasa) S5.446 S5.447 S5.447A S5.447B S5.447C	
5 250 – 5 255	RADIOLOKASI PENELITIAN RUANG ANGKASA EKSPLORASI BUMI-SATELIT (aktif) S5.447D S5.448 S5.448A	
5 255 – 5 350	RADIOLOKASI PENELITIAN RUANG ANGKASA EKSPLORASI BUMI-SATELIT (aktif) S5.448 S5.448A	
5 350 – 5 460	NAVIGASI RADIO PENERBANGAN 5.449 EKSPLORASI BUMI-SATELIT (aktif) Radiolokasi S5.448B	
5 460 – 5 470	NAVIGASI RADIO S5.449 Radiolokasi	
5 470 – 5 650	NAVIGASI RADIO MARITIM Radiolokasi S5.450 S5.451 S5.452	
5 650 – 5 725	RADIOLOKASI Amatir Penelitian Ruang Angkasa (angkasa dalam) S5.282 S5.451 S5.453 S5.454 S5.455	
5 725 – 5 830 TETAP-SATELIT (Bumi-ke-angkasa) RADIOLOKASI Amatir S5.150 S5.451 S5.453 S5.455 S5.456	5 725 – 5 830	RADIOLOKASI Amatir S5.150 S5.453 S5.455
5 830 – 5 850 TETAP-SATELIT (Bumi-ke-angkasa) RADIOLOKASI Amatir Amatir-Satelit (angkasa-ke-Bumi) S5.150 S5.451 S5.453 S5.455 S5.456	5 830 – 5 850	RADIOLOKASI Amatir Amatir-Satelit (angkasa-ke-Bumi) S5.150 S5.453 S5.455
5 850 – 5 925 TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK S5.150	5 850 – 5 925 TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK Amatir Radiolokasi S5.150	5 850 – 5 925 TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK Radiolokasi S5.150

MHz
5 000 - 5 925

Alokasi untuk Indonesia	Penggunaan Frekuensi
5 000 – 5 150 NAVIGASI RADIO PENERBANGAN S5.367 S5.444 S5.444A	
5 150 – 5 250 NAVIGASI RADIO PENERBANGAN TETAP-SATELIT (Bumi-ke-angkasa) S5.446 S5.447 S5.447A S5.447B S5.447C	
5 250 – 5 255 RADIOLOKASI PENELITIAN RUANG ANGKASA EKSPLOKASI BUMI-SATELIT (aktif) S5.447D S5.448 S5.448A	
5 255 – 5 350 RADIOLOKASI PENELITIAN RUANG ANGKASA EKSPLOKASI BUMI-SATELIT (aktif) S5.448 S5.448A	
5 350 – 5 460 NAVIGASI RADIO PENERBANGAN S5.449 EKSPLOKASI BUMI-SATELIT (aktif) Radiolokasi S5.448B	
5 460 – 5 470 NAVIGASI RADIO S5.449 Radiolokasi	
5 470 – 5 650 NAVIGASI RADIO MARITIM Radiolokasi S5.450 S5.451 S5.452	
5 650 – 5 725 RADIOLOKASI TETAP BERGERAK Amatir Penelitian Ruang Angkasa (angkasa dalam) S5.282 S5.451 S5.453 S5.454 S5.455	Tetap Darat-SHF Amatir-SHF (Sekunder)
5 725 – 5 830 RADIOLOKASI TETAP BERGERAK Amatir S5.150 S5.453 S5.455	Tetap Darat-SHF Amatir-SHF (Sekunder) Fixed-Satelit Service (FSS) - GSO (TT&C) (5 800 - 6 000 MHz)
5 830 – 5 850 RADIOLOKASI TETAP BERGERAK Amatir Amatir-Satelit (angkasa-ke-Bumi) S5.150 S5.453 S5.455	Tetap Darat-SHF Amatir-SHF (Sekunder) Fixed-Satelit Service (FSS) - GSO (TT&C) (5 800 - 6 000 MHz)
5 850 – 5 925 TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK Radiolokasi S5.150	Fixed-Satelit Service (FSS) - GSO (TT&C) (5 800 - 6 000 MHz)

MHz
5 925 - 8 025

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
5 925 – 6 700	TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK	
	S5.149 S5.440 S5.458	
6 700 – 7 075	TETAP TETAP-SATELIT (Bumi-ke-angkasa) (angkasa-ke-Bumi) BERGERAK	S5.441
	S5.458 S5.458A S5.458B S5.458C	
7 075 – 7 250	TETAP BERGERAK	
	S5.458 S5.459 S5.460	
7 250 – 7 300	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK	
	S5.461	
7 300 – 7 450	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan	
	S5.461	
7 450 – 7 550	TETAP TETAP-SATELIT (angkasa-ke-Bumi) METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan	
	S5.461A	
7 550 – 7 750	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan	
7 750 – 7 850	TETAP BERGERAK kecuali bergerak penerbangan METEOROLOGICAL-SATELIT (angkasa-ke-Bumi)	S5.461B
7 850 – 7 900	TETAP BERGERAK kecuali bergerak penerbangan	
7 900 – 8 025	TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK	
	S5.461	

MHz
5 925 - 8 025

Alokasi untuk Indonesia		Penggunaan Frekuensi
5 925 – 6 700	TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK S5.149 S5.440 S5.458	Fixed-Satelit Service (FSS) - GSO (Up-Link) (5 925 - 6 425 MHz) (TT&C) (5 800 - 6 000 MHz) Fixed-Satelit Service (FSS) - GSO (Up-Link) (6 425 - 6 725 MHz) (TT&C) (6 425 - 6 430 MHz)
6 700 – 7 075	TETAP TETAP-SATELIT (Bumi-ke-angkasa) (angkasa-ke-Bumi) S5.441 BERGERAK S5.458 S5.458A S5.458B S5.458C	Fixed-Satelit Service (FSS) - GSO (Up-Link) (6 425 - 6 725 MHz) Tetap Darat-SHF
7 075 – 7 250	TETAP BERGERAK S5.458 S5.459 S5.460	Tetap Darat-SHF
7 250 – 7 300	TETAP TETAP-SATELIT (angkasa-ke-Bumi) (angkasa-ke-Bumi) BERGERAK S5.461	Tetap Darat-SHF
7 300 – 7 450	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan S5.461	Tetap Darat-SHF
7 450 – 7 550	TETAP TETAP-SATELIT (angkasa-ke-Bumi) METEOROLOGI-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan S5.461A	Tetap Darat-SHF
7 550 – 7 750	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan	Tetap Darat-SHF
7 750 – 7 850	TETAP BERGERAK kecuali bergerak penerbangan METEOROLOGI-SATELIT (angkasa-ke-Bumi) S5.461B	Tetap Darat-SHF
7 850 – 7 900	TETAP BERGERAK kecuali bergerak penerbangan	Tetap Darat-SHF
7 900 – 8 025	TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK S5.461	Tetap Darat-SHF

MHz
8 025 - 8 850

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
8 025 – 8 175	EKSPLOKASI BUMI-SATELIT (angkasa-ke-Bumi) TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK S5.462A S5.463	
8 175 – 8 215	EKSPLOKASI BUMI-SATELIT (angkasa-ke-Bumi) TETAP TETAP-SATELIT (Bumi-ke-angkasa) METEOROLOGI-SATELIT (Bumi-ke-angkasa) BERGERAK S5.462A S5.463	
8 215 – 8 400	EKSPLOKASI BUMI-SATELIT (angkasa-ke-Bumi) TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK S5.462A S5.463	
8 400 – 8 500	TETAP BERGERAK kecuali bergerak penerbangan PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) S5.465 S5.466 S5.467	
8 500 – 8 550	RADIOLOKASI S5.468 S5.469	
8 550 – 8 650	RADIOLOKASI PENELITIAN RUANG ANGKASA (aktif) EKSPLOKASI BUMI-SATELIT (aktif) S5.463A S5.468 S5.469	
8 650 – 8 750	RADIOLOKASI S5.468 S5.469	
8 750 – 8 850	RADIOLOKASI NAVIGASI RADIO PENERBANGAN S5.470 S5.471	

MHz
8 025 - 8 850

Alokasi untuk Indonesia		Penggunaan Frekuensi
8 025 – 8 175	EKSPLOKASI BUMI-SATELIT (angkasa-ke-Bumi) TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK S5.462A S5.463	Broadcasting-Satelit Service (BSS) (Up-link) (8 067 - 8 092 MHz) (Up-link) (8 120 - 8 270 MHz) Tetap Darat-SHF
8 175 – 8 215	EKSPLOKASI BUMI-SATELIT (angkasa-ke-Bumi) TETAP TETAP-SATELIT (Bumi-ke-angkasa) METEOROLOGI-SATELIT (Bumi-ke-angkasa) BERGERAK S5.462A S5.463	Broadcasting-Satelit Service (BSS) (Up-link) (8 120 - 8 270 MHz) Tetap Darat-SHF
8 215 – 8 400	EKSPLOKASI BUMI-SATELIT (angkasa-ke-Bumi) TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK S5.462A S5.463	Microwave Link (8 275 - 8 400 MHz) Broadcasting-Satelit Service (BSS) (Up-link) (8 120 - 8 270 MHz) Tetap Darat-SHF
8 400 – 8 500	TETAP BERGERAK kecuali bergerak penerbangan PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) S5.465 S5.466 S5.467	Tetap Darat-SHF
8 500 – 8 550	RADIOLOKASI TETAP BERGERAK S5.468 S5.469	Tetap Darat-SHF
8 550 – 8 650	RADIOLOKASI PENELITIAN RUANG ANGKASA (aktif) EKSPLOKASI BUMI-SATELIT (aktif) TETAP BERGERAK S5.463A S5.468 S5.469	Tetap Darat-SHF
8 650 – 8 750	RADIOLOKASI TETAP BERGERAK S5.468 S5.469	Tetap Darat-SHF
8 750 – 8 850	RADIOLOKASI NAVIGASI RADIO PENERBANGAN S5.470 NAVIGASI RADIO MARITIM S5.471	Bergerak Maritim, khusus radar pantai (8 825 - 8 850 MHz)

MHz
8 850 - 10 700

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
8 850 – 9 000	RADIOLOKASI NAVIGASI RADIO MARITIM S5.472 S5.473	
9 000 – 9 200	NAVIGASI RADIO PENERBANGAN S5.337 Radiolokasi S5.471	
9 200 – 9 300	RADIOLOKASI NAVIGASI RADIO MARITIM S5.472 S5.473 S5.474	
9 300 – 9 500	NAVIGASI RADIO S5.476 Radiolokasi S5.427 S5.474 S5.475	
9 500 – 9 800	RADIOLOKASI NAVIGASI RADIO PENELITIAN RUANG ANGKASA (aktif) EKSPLOKASI BUMI-SATELIT (aktif) S5.476A	
9 800 – 10 000	RADIOLOKASI Tetap S5.477 S5.478 S5.479	
10 – 10 450 TETAP BERGERAK RADIOLOKASI Amatir S5.479	10 – 10 450 RADIOLOKASI Amatir S5.479 S5.480	10 – 10 450 TETAP BERGERAK RADIOLOKASI Amatir S5.479
10 450 – 10 500	RADIOLOKASI Amatir Amatir-Satelit S5.481	
10 500 – 10 550 TETAP BERGERAK Radiolokasi	10 500 – 10 550	TETAP BERGERAK RADIOLOKASI
10 550 – 10 600	TETAP BERGERAK kecuali bergerak penerbangan Radiolokasi	
10 600 – 10 680	EKSPLOKASI BUMI-SATELIT (pasif) TETAP BERGERAK kecuali bergerak penerbangan RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) Radiolokasi S5.149 S5.482	
10 680 – 10 700	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.483	

MHz
8 850 - 10 700

Alokasi untuk Indonesia		Penggunaan Frekuensi
8 850 – 9 000	RADIOLOKASI NAVIGASI RADIO MARITIM S5.472 S5.473	
9 000 – 9 200	NAVIGASI RADIO PENERBANGAN S5.337 Radiolokasi S5.471	Bergerak Maritim, khusus radar pantai (9 000 -9 200 MHz)
9 200 – 9 300	RADIOLOKASI NAVIGASI RADIO MARITIM S5.472 S5.473 S5.474	
9 300 – 9 500	NAVIGASI RADIO S5.476 Radiolokasi S5.427 S5.474 S5.475	
9 500 – 9 800	RADIOLOKASI NAVIGASI RADIO PENELITIAN RUANG ANGKASA (aktif) EKSPLOKASI BUMI-SATELIT (aktif) S5.476A	
9 800 – 10 000	RADIOLOKASI TETAP S5.477 S5.478 S5.479	Tetap Darat-SHF
10 – 10 450	TETAP BERGERAK RADIOLOKASI Amatir S5.479	Amatir-SHF (Sekunder)
10 450 – 10 500	RADIOLOKASI Amatir Amatir-Satelit S5.481	Amatir-SHF (Sekunder)
10 500 – 10 550	TETAP BERGERAK RADIOLOKASI	Tetap Darat-SHF
10 550 – 10 600	TETAP BERGERAK kecuali bergerak penerbangan Radiolokasi	Tetap Darat-SHF
10 600 – 10 680	EKSPLOKASI BUMI-SATELIT (pasif) TETAP BERGERAK kecuali bergerak penerbangan RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) Radiolokasi S5.149 S5.482	Tetap Darat-SHF
10 680 – 10 700	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.483	Tetap Darat-SHF

GHz
10.7 - 13.75

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
10.7 – 11.7 TETAP TETAP-SATELIT (angkasa-ke-Bumi) (Bumi-ke-angkasa) S5.441 S5.484 BERGERAK kecuali bergerak penerbangan	10.7 – 11.7 TETAP TETAP-SATELIT (angkasa-ke-Bumi) S5.441 BERGERAK kecuali bergerak penerbangan	
11.7 – 12.5 TETAP SIARAN SIARAN-SATELIT Bergerak kecuali bergerak penerbangan	11.7 – 12.1 TETAP S5.486 TETAP-SATELIT (angkasa-ke-Bumi) Bergerak kecuali bergerak penerbangan S5.485 S5.488	11.7 – 12.2 TETAP BERGERAK kecuali bergerak penerbangan SIARAN SIARAN-SATELIT
	12.1 – 12.2 TETAP-SATELIT (angkasa-ke-Bumi) S5.485 S5.488 S5.489	
	12.2 – 12.7 TETAP BERGERAK kecuali bergerak penerbangan SIARAN SIARAN-SATELIT S5.487 S5.487A S5.492	12.2 – 12.5 TETAP BERGERAK kecuali bergerak penerbangan SIARAN TETAP-SATELIT (angkasa-ke-Bumi) S5.487 S5.491
	12.5 – 12.75 TETAP-SATELIT (angkasa-ke-Bumi) (Bumi-ke-angkasa) S5.494 S5.495 S5.496	S5.488 S5.490 S5.492 S5.487A 12.7 – 12.75 TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK kecuali bergerak penerbangan
12.75 – 13.25	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.441 BERGERAK Penelitian Ruang Angkasa (angkasa dalam) (angkasa-ke-Bumi)	
13.25 – 13.4	NAVIGASI RADIO PENERBANGAN S5.497 EKSPLOKASI BUMI-SATELIT (aktif) PENELITIAN RUANG ANGKASA (aktif) S5.498A S5.499	
13.4 – 13.75	RADIOLOKASI EKSPLOKASI BUMI-SATELIT (aktif) PENELITIAN RUANG ANGKASA Frekuensi dan Tanda Waktu Standar-Satelit (Bumi-ke-angkasa) S5.499 S5.500 S5.501 S5.501A S5.501B	

GHz
10.7 - 13.75

Alokasi untuk Indonesia		Penggunaan Frekuensi
10.7 – 11.7	TETAP TETAP-SATELIT (angkasa-ke-Bumi) S5.441 BERGERAK kecuali bergerak penerbangan	Fixed-Satelit Service (FSS) - GSO (Down-Link) (10.95 - 11.7 GHz)
11.7 – 12.2	TETAP BERGERAK kecuali bergerak penerbangan SIARAN SIARAN-SATELIT S5.487 S5.487A S5.492A	Tetap Darat-SHF
12.2 – 12.5	TETAP BERGERAK kecuali bergerak penerbangan SIARAN TETAP-SATELIT (angkasa-ke-Bumi) S5.487 S5.491	Fixed-Satelit Service (FSS) - GSO (Down-Link) (12.201 - 12.681 GHz)
12.5 – 12.75	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK kecuali bergerak penerbangan SIARAN-SATELIT 5.493	Fixed-Satelit Service (FSS) - GSO (Down-Link) (12.201 - 12.681 GHz)
12.75 – 13.25	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.441 BERGERAK Penelitian Ruang Angkasa (angkasa dalam) (angkasa-ke-Bumi)	Tetap Darat-SHF
13.25 – 13.4	NAVIGASI RADIO PENERBANGAN S5.497 EKSPLOKASI BUMI-SATELIT (aktif) PENELITIAN RUANG ANGKASA (aktif) S5.498A S5.499	
13.4 – 13.75	RADIOLOKASI EKSPLOKASI BUMI-SATELIT (aktif) PENELITIAN RUANG ANGKASA TETAP BERGERAK Frekuensi dan Tanda Waktu Standar- Satelit (Bumi-ke-angkasa) S5.499 S5.500 S5.501 S5.501A S5.501B	Tetap Darat-SHF

GHz
13.75 - 14.5

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
13.75 – 14	TETAP-SATELIT (Bumi-ke-angkasa) RADIOLOKASI Frekuensi dan Tanda Waktu Standar-Satelit (Bumi-ke-angkasa) Penelitian Ruang Angkasa S5.499 S5.500 S5.501 S5.502 S5.503 S5.503A	
14 – 14.25	TETAP-SATELIT (Bumi-ke-angkasa) S5.506 NAVIGASI RADIO S5.504 Bergerak-Satelit (Bumi-ke-angkasa) kecuali bergerak penerbangan-satelit Penelitian Ruang Angkasa S5.505	
14.25 – 14.3	TETAP-SATELIT (Bumi-ke-angkasa) S5.506 NAVIGASI RADIO S5.504 Bergerak-Satelit (Bumi-ke-angkasa) kecuali bergerak penerbangan-satelit Penelitian Ruang Angkasa S5.505 S5.508 S5.509	
14.3 – 14.4 TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.506 BERGERAK kecuali bergerak penerbangan Bergerak-Satelit (Bumi-ke-angkasa) Navigasi Radio-Satelit	14.3 – 14.4 TETAP-SATELIT (Bumi-ke-angkasa) S5.506 Bergerak-Satelit (Bumi-ke-angkasa) kecuali bergerak penerbangan-satelit Navigasi Radio-Satelit	14.3 – 14.4 TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.506 Bergerak-Satelit (Bumi-ke-angkasa) kecuali bergerak penerbangan-satelit Navigasi Radio-Satelit
14.4 – 14.47	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.506 BERGERAK kecuali bergerak penerbangan Bergerak-Satelit (Bumi-ke-angkasa) kecuali bergerak penerbangan-satelit Penelitian Ruang Angkasa (angkasa-ke-Bumi)	
14.47 – 14.5	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.506 BERGERAK kecuali bergerak penerbangan Bergerak-Satelit (Bumi-ke-angkasa) kecuali bergerak penerbangan-satelit Radio Astronomi S5.149	

GHz
13.75 - 14.5

Alokasi untuk Indonesia		Penggunaan Frekuensi
13.75 – 14	TETAP-SATELIT (Bumi-ke-angkasa) RADIOLOKASI TETAP BERGERAK Frekuensi dan Tanda Waktu Standar- Satelit (Bumi-ke-angkasa) Penelitian Ruang Angkasa S5.499 S5.500 S5.501 S5.502 S5.503 S5.503A	Fixed-Satelit Service (FSS) - GSO (Up-Link) (13.75 - 14.5 GHz)
14 – 14.25	TETAP-SATELIT (Bumi-ke-angkasa) S5.506 NAVIGASI RADIO S5.504 TETAP Bergerak-Satelit (Bumi-ke-angkasa) kecuali bergerak penerbangan- satelit Penelitian Ruang Angkasa S5.505	Fixed-Satelit Service (FSS) - GSO (Up-Link) (13.75 - 14.5 GHz)
14.25 – 14.3	TETAP-SATELIT (Bumi-ke-angkasa) S5.506 NAVIGASI RADIO S5.504 TETAP Bergerak-Satelit (Bumi-ke-angkasa) kecuali bergerak penerbangan- satelit Penelitian Ruang Angkasa S5.505 S5.508 S5.509	Fixed-Satelit Service (FSS) - GSO (Up-Link) (13.75 - 14.5 GHz)
14.3 – 14.4	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.506 Bergerak-Satelit (Bumi-ke-angkasa) kecuali bergerak penerbangan- satelit Navigasi Radio-Satelit	Fixed-Satelit Service (FSS) - GSO (Up-Link) (13.75 - 14.5 GHz)
14.4 – 14.47	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.506 BERGERAK kecuali bergerak penerbangan Bergerak-Satelit (Bumi-ke-angkasa) kecuali bergerak penerbangan- satelit Penelitian Ruang Angkasa (angkasa-ke-Bumi)	Fixed-Satelit Service (FSS) - GSO (Up-Link) (13.75 - 14.5 GHz)
14.47 – 14.5	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.506 BERGERAK kecuali bergerak penerbangan Bergerak-Satelit (Bumi-ke-angkasa) kecuali bergerak penerbangan- satelit Radio Astronomi S5.149	Fixed-Satelit Service (FSS) - GSO (Up-Link) (13.75 - 14.5 GHz)

GHz
14.5 - 17.7

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
14.5 – 14.8	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.510 BERGERAK Penelitian Ruang Angkasa	
14.8 – 15.35	TETAP BERGERAK Penelitian Ruang Angkasa S5.339	
15.35 – 15.4	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.511	
15.4 – 15.43	NAVIGASI RADIO PENERBANGAN S5.511D	
15.43 – 15.63	TETAP-SATELIT (angkasa-ke-Bumi) (Bumi-ke-angkasa) S5.511A NAVIGASI RADIO PENERBANGAN S5.511C S5.511D	
15.63 – 15.7	NAVIGASI RADIO PENERBANGAN S5.511D	
15.7 – 16.6	RADIOLOKASI S5.512 S5.513	
16.6 – 17.1	RADIOLOKASI Penelitian Ruang Angkasa (angkasa dalam) (Bumi-ke-angkasa) S5.512 S5.513	
17.1 – 17.2	RADIOLOKASI S5.512 S5.513	
17.2 – 17.3	RADIOLOKASI EKSPLOKASI BUMI-SATELIT (aktif) Penelitian Ruang Angkasa (aktif) S5.512 S5.513 S5.513A	
17.3 – 17.7 TETAP-SATELIT (Bumi-ke-angkasa) S5.516 Radiolokasi	17.3 – 17.7 TETAP-SATELIT (Bumi-ke-angkasa) S5.516 SIARAN-SATELIT Radiolokasi	17.3 – 17.7 TETAP-SATELIT (Bumi-ke-angkasa) S5.516 Radiolokasi
S5.514	S5.514 S5.515 S5.517	S5.514

GHz
14.5 - 17.7

Alokasi untuk Indonesia		Penggunaan Frekuensi
14.5 – 14.8	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.510 BERGERAK Penelitian Ruang Angkasa	Tetap Darat-SHF
14.8 – 15.35	TETAP BERGERAK Penelitian Ruang Angkasa S5.339	Tetap Darat-SHF
15.35 – 15.4	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.511	
15.4 – 15.43	NAVIGASI RADIO PENERBANGAN S5.511D	
15.43 – 15.63	TETAP-SATELIT (angkasa-ke-Bumi) (Bumi-ke-angkasa) S5.511A NAVIGASI RADIO PENERBANGAN S5.511C S5.511D	
15.63 – 15.7	NAVIGASI RADIO PENERBANGAN S5.511D	
15.7 – 16.6	RADIOLOKASI TETAP BERGERAK S5.512 S5.513	Tetap Darat-SHF
16.6 – 17.1	RADIOLOKASI TETAP BERGERAK Penelitian Ruang Angkasa (angkasa dalam) (Bumi-ke- angkasa) S5.512 S5.513	Tetap Darat-SHF
17.1 – 17.2	RADIOLOKASI TETAP BERGERAK S5.512 S5.513	Tetap Darat-SHF
17.2 – 17.3	RADIOLOKASI EKSPLOKASI BUMI-SATELIT (aktif) TETAP BERGERAK Penelitian Ruang Angkasa (aktif) S5.512 S5.513 S5.513A	Tetap Darat-SHF
17.3 – 17.7	TETAP-SATELIT (Bumi-ke-angkasa) S5.516 Radiolokasi S5.514	

GHz
17.7 - 20.2

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
17.7 – 18.1 TETAP TETAP-SATELIT (angkasa-ke-Bumi) (Bumi-ke-angkasa) S5.516 BERGERAK	17.7 – 17.8 TETAP TETAP-SATELIT (angkasa-ke-Bumi) (Bumi-ke-angkasa) S5.516 SIARAN-SATELIT Bergerak S5.518 S5.515 S5.517 17.8 – 18.1 TETAP TETAP-SATELIT (angkasa-ke-Bumi) (Bumi-ke-angkasa) S5.516 BERGERAK	17.7 – 18.1 TETAP TETAP-SATELIT (angkasa-ke-Bumi) (Bumi-ke-angkasa) S5.516 BERGERAK
18.1 – 18.4	TETAP TETAP-SATELIT (angkasa-ke-Bumi) (Bumi-ke-angkasa) S5.520 BERGERAK S5.519 S5.521	
18.4 – 18.6	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK	
18.6 – 18.8 TETAP TETAP-SATELIT (angkasa-ke-Bumi) S5.523 BERGERAK kecuali bergerak penerbangan Eksplorasi Bumi-Satelit (pasif) Penelitian Ruang Angkasa (pasif) S5.522	18.6 – 18.8 EKSPLOKASI BUMI-SATELIT (pasif) TETAP TETAP-SATELIT (angkasa-ke-Bumi) S5.523 BERGERAK kecuali bergerak penerbangan PENELITIAN RUANG ANGKASA (pasif) S5.522	18.6 – 18.8 TETAP TETAP-SATELIT (angkasa-ke-Bumi) S5.523 BERGERAK kecuali bergerak penerbangan Eksplorasi Bumi-Satelit (pasif) Penelitian Ruang Angkasa (pasif) S5.522
18.8 – 19.3	TETAP TETAP-SATELIT (angkasa-ke-Bumi) S5.523A BERGERAK	
19.3 – 19.7	TETAP TETAP-SATELIT (angkasa-ke-Bumi) (Bumi-ke-angkasa) S.523B S5.523C S5.523D S5.523E BERGERAK	
19.7 – 20.1 TETAP-SATELIT (angkasa-ke-Bumi) Bergerak-Satelit (angkasa-ke-Bumi) S5.524	19.7 – 20.1 TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) S5.524 S5.525 S5.526 S5.527 S5.528 S5.529	19.7 – 20.1 TETAP-SATELIT (angkasa-ke-Bumi) Bergerak-Satelit (angkasa-ke-Bumi) S5.524
20.1 – 20.2	TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) S5.524 S5.525 S5.526 S5.527 S5.528	

GHz
17.7 - 20.2

Alokasi untuk Indonesia		Penggunaan Frekuensi
17.7 – 18.1	TETAP TETAP-SATELIT (angkasa-ke-Bumi) (Bumi-ke-angkasa) S5.516 BERGERAK	Tetap Darat-SHF
18.1 – 18.4	TETAP TETAP-SATELIT (angkasa-ke-Bumi) (Bumi-ke-angkasa) S5.520 BERGERAK S5.519 S5.521	Tetap Darat-SHF
18.4 – 18.6	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK	Tetap Darat-SHF
18.6 – 18.8	TETAP TETAP-SATELIT (angkasa-ke-Bumi) S5.523 BERGERAK kecuali bergerak penerbangan Eksplorasi Bumi-Satelit (pasif) Penelitian Ruang Angkasa (pasif) S5.522	Tetap Darat-SHF
18.8 – 19.3	TETAP TETAP-SATELIT (angkasa-ke-Bumi) S5.523 BERGERAK	Fixed-Satelit Service (FSS) - GSO (Down-Link) (18.9 - 19.3 GHz) Tetap Darat-SHF
19.3 – 19.7	TETAP TETAP-SATELIT (angkasa-ke-Bumi) (Bumi-ke-angkasa) S.523B S5.523C S5.523D S5.523E BERGERAK	Tetap Darat-SHF
19.7 – 20.1	TETAP-SATELIT (angkasa-ke-Bumi) Bergerak-Satelit (angkasa-ke-Bumi) S5.524	
20.1 – 20.2	TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) S5.524 S5.525 S5.526 S5.527 S5.528	

GHz
20.2 - 24.65

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
20.2 – 21.2	TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) Frekuensi dan Sinyal Waktu Standar-Satelit (angkasa-ke-Bumi) S5.524	
21.2 – 21.4	EKSPLOKASI BUMI-SATELIT (pasif) TETAP BERGERAK PENELITIAN RUANG ANGKASA (pasif)	
21.4 – 22 TETAP BERGERAK SIARAN-SATELIT S5.530	21.4 – 22 TETAP BERGERAK	21.4 – 22 TETAP BERGERAK SIARAN-SATELIT S5.530 S5.531
22 – 22.21	TETAP BERGERAK kecuali bergerak penerbangan S5.149	
22.21 – 22.5	EKSPLOKASI BUMI-SATELIT (pasif) TETAP BERGERAK kecuali bergerak penerbangan RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.149 S5.532	
22.5 – 22.55	TETAP BERGERAK	
22.55 – 23.55	TETAP ANTAR-SATELIT BERGERAK S5.149	
23.55 – 23.6	TETAP BERGERAK	
23.6 – 24	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340	
24 – 24.05	AMATIR AMATIR-SATELIT S5.150	
24.05 – 24.25	RADIOLOKASI Amatir Eksplorasi Bumi-Satelit (aktif) S5.150	
24.25 – 24.45 TETAP	24.25 – 24.45 NAVIGASI RADIO	24.25 – 24.45 NAVIGASI RADIO TETAP BERGERAK
24.45 – 24.65 TETAP ANTAR-SATELIT	24.45 – 24.65 ANTAR-SATELIT NAVIGASI RADIO S5.533	24.45 – 24.65 TETAP ANTAR-SATELIT BERGERAK NAVIGASI RADIO S5.533

GHz
20.2 - 24.65

Alokasi untuk Indonesia		Penggunaan Frekuensi
20.2 – 21.2	TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK-SATELIT (angkasa-ke-Bumi) Frekuensi dan Tanda Waktu Standar-Satelit (angkasa-ke-Bumi) S5.524	
21.2 – 21.4	EKSPLOKASI BUMI-SATELIT (pasif) TETAP BERGERAK PENELITIAN RUANG ANGKASA (pasif)	Tetap Darat-SHF
21.4 – 22	TETAP BERGERAK SIARAN-SATELIT S5.530 S5.531	Tetap Darat-SHF
22 – 22.21	TETAP BERGERAK kecuali bergerak penerbangan S5.149	Tetap Darat-SHF
22.21 – 22.5	EKSPLOKASI BUMI-SATELIT (pasif) TETAP BERGERAK kecuali bergerak penerbangan RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.149 S5.532	Tetap Darat-SHF
22.5 – 22.55	TETAP BERGERAK	Tetap Darat-SHF
22.55 – 23.55	TETAP ANTAR-SATELIT BERGERAK S5.149	Tetap Darat-SHF
23.55 – 23.6	TETAP BERGERAK	Tetap Darat-SHF
23.6 – 24	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340	
24 – 24.05	AMATIR AMATIR-SATELIT S5.150	Amatir-SHF
24.05 – 24.25	RADIOLOKASI Amatir Eksplorasi Bumi-Satelit (aktif) S5.150	Amatir-SHF (Sekunder)
24.25 – 24.45	NAVIGASI RADIO TETAP BERGERAK	
24.45 – 24.65	TETAP ANTAR-SATELIT BERGERAK NAVIGASI RADIO S5.533	

GHz
24.65 - 29.9

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
24.65 – 24.75 TETAP ANTAR-SATELIT	24.65 – 24.75 ANTAR-SATELIT RADIOLOKASI-SATELIT (Bumi-ke-angkasa)	24.65 – 24.75 TETAP ANTAR-SATELIT BERGERAK S5.533 S5.534
24.75 – 25.25 TETAP	24.75 – 25.25 TETAP-SATELIT (Bumi-ke- angkasa) S5.535	24.75 – 25.25 TETAP TETAP-SATELIT (Bumi-ke- angkasa) S5.535 BERGERAK S5.534
25.25 – 25.5	TETAP ANTAR-SATELIT S5.536 BERGERAK Frekuensi dan Sinyal Waktu Standar-Satelit (Bumi-ke-angkasa)	
25.5 – 27	EKSPLOKASI BUMI-SATELIT (angkasa-ke-Bumi) S5.536A S5.536B TETAP ANTAR-SATELIT S5.536 BERGERAK Frekuensi dan Sinyal Waktu Standar-Satelit (Bumi-ke-angkasa)	
27 – 27.5 TETAP ANTAR-SATELIT S5.536 BERGERAK	27 – 27.5 TETAP TETAP-SATELIT (Bumi-ke-angkasa) ANTAR-SATELIT S5.536 S5.537 BERGERAK	
27.5 – 28.5	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.539 BERGERAK S5.538 S5.540	
28.5 – 29.1	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.523A S5.539 BERGERAK Eksplorasi Bumi-Satelit (Bumi-ke-angkasa) S5.541 S5.540	
29.1 – 29.5	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.523C S5.523E S5.535A S5.539 S5.541A BERGERAK Eksplorasi Bumi-Satelit (Bumi-ke-angkasa) S5.541 S5.540	
29.5 – 29.9 TETAP-SATELIT (Bumi-ke-angkasa) S5.539 Eksplorasi Bumi-Satelit (Bumi-ke-angkasa) S5.541 Bergerak-Satelit (Bumi-ke- angkasa) S5.540 S5.542	29.5 – 29.9 TETAP-SATELIT (Bumi-ke-angkasa) S5.539 BERGERAK-SATELIT (Bumi-ke-angkasa) Eksplorasi Bumi-Satelit (Bumi-ke-angkasa) S5.541 S5.525 S5.526 S5.527 S5.529 S5.540 S5.542	29.5 – 29.9 TETAP-SATELIT (Bumi-ke-angkasa) S5.539 Eksplorasi Bumi-Satelit (Bumi-ke-angkasa) S5.541 Bergerak-Satelit (Bumi-ke- angkasa) S5.540 S5.542

GHz
24.65 - 29.9

Alokasi untuk Indonesia		Penggunaan Frekuensi
24.65 – 24.75	TETAP ANTAR-SATELIT BERGERAK S5.533 S5.534	
24.75 – 25.25	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.535 BERGERAK S5.534	
25.25 – 25.5	TETAP ANTAR-SATELIT S5.536 BERGERAK Frekuensi dan Tanda Waktu Standar- Satelit (Bumi-ke-angkasa)	
25.5 – 27	EKSPLORASI BUMI-SATELIT (angkasa-ke-Bumi) S5.536A S5.536B TETAP ANTAR-SATELIT S5.536 BERGERAK Frekuensi dan Tanda Waktu Standar- Satelit (Bumi-ke-angkasa)	
27 – 27.5	TETAP TETAP-SATELIT (Bumi-ke-angkasa) ANTAR-SATELIT S5.536 S5.537 BERGERAK	
27.5 – 28.5	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.539 BERGERAK S5.538 S5.540	
28.5 – 29.1	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.523A S5.539 BERGERAK Eksplorasi Bumi-Satelit (Bumi-ke-angkasa) S5.541 S5.540	Fixed-Satelit Service (FSS) - N-GSO (Up-Link) (28.7 - 29.1 GHz)
29.1 – 29.5	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.523C S5.523E S5.535A S5.539 S5.541A BERGERAK Eksplorasi Bumi-Satelit (Bumi-ke-angkasa) S5.541 S5.540	
29.5 – 29.9	TETAP-SATELIT (Bumi-ke-angkasa) S5.539 Eksplorasi Bumi-Satelit (Bumi-ke-angkasa) S5.541 Bergerak-Satelit (Bumi-ke- angkasa) S5.540 S5.542	

GHz
29.9 - 34.2

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
29.9 – 30	TETAP-SATELIT (Bumi-ke-angkasa) S5.539 BERGERAK-SATELIT (Bumi-ke-angkasa) Eksplorasi Bumi-Satelit (Bumi-ke-angkasa) S5.541 S5.525 S5.526 S5.527 S5.538 S5.540 S5.542 S5.543	
30 – 31	TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK-SATELIT (Bumi-ke-angkasa) Frekuensi dan Sinyal Waktu Standar-Satelit (angkasa-ke-Bumi) S5.542	
31 – 31.3	TETAP BERGERAK Frekuensi dan Sinyal Waktu Standar-Satelit (angkasa-ke-Bumi) Penelitian Ruang Angkasa S5.544 S5.149 S5.545	
31.3 – 31.5	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340	
31.5 – 31.8 EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) Tetap Bergerak kecuali bergerak penerbangan S5.149 S5.546	31.5 – 31.8 EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340	31.5 – 31.8 EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) Tetap Bergerak kecuali bergerak penerbangan S5.149
31.8 – 32	NAVIGASI RADIO TETAP S5.547A PENELITIAN RUANG ANGKASA (angkasa dalam) (angkasa-ke-Bumi) S5.548 S5.547 S5.547B	
32 – 32.3	ANTAR-SATELIT TETAP S5.547A NAVIGASI RADIO PENELITIAN RUANG ANGKASA (angkasa dalam) (angkasa-ke-Bumi) S5.548 S5.547 S5.547C	
32.3 – 33	ANTAR-SATELIT TETAP S5.547A NAVIGASI RADIO S5.548 S5.547 S5.547D	
33 – 33.4	NAVIGASI RADIO TETAP S5.547A S5.547 S5.547E	
33.4 – 34.2	RADILOKASI S5.549	

GHz
29.9 - 34.2

Alokasi untuk Indonesia		Penggunaan Frekuensi
29.9 – 30	TETAP-SATELIT (Bumi-ke-angkasa) S5.539 BERGERAK-SATELIT (Bumi-ke-angkasa) Eksplorasi Bumi-Satelit (Bumi-ke-angkasa) S5.541 S5.525 S5.526 S5.527 S5.538 S5.540 S5.542 S5.543	
30 – 31	TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK-SATELIT (Bumi-ke-angkasa) Frekuensi dan Tanda Waktu Standar-Satelit (angkasa-ke-Bumi) S5.542	
31 – 31.3	TETAP BERGERAK Frekuensi dan Tanda Waktu Standar-Satelit (angkasa-ke-Bumi) Penelitian Ruang Angkasa S5.544 S5.149 S5.545	
31.3 – 31.5	EKSPLORASI BUMI SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340	
31.5 – 31.8	EKSPLORASI BUMI SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) Tetap Bergerak kecuali bergerak penerbangan S5.149	
31.8 – 32	NAVIGASI RADIO TETAP S5.547A PENELITIAN RUANG ANGKASA (angkasa dalam) (angkasa-ke-Bumi) S5.548 S5.547 S5.547B	
32 – 32.3	ANTAR-SATELIT TETAP S5.547A NAVIGASI RADIO PENELITIAN RUANG ANGKASA (angkasa dalam) (angkasa-ke-Bumi) S5.548 S5.547 S5.547C	
32.3 – 33	ANTAR-SATELIT TETAP S5.547A NAVIGASI RADIO S5.548 S5.547 S5.547D	
33 – 33.4	NAVIGASI RADIO TETAP S5.547A S5.547 S5.547E	
33.4 – 34.2	RADIOLOKASI TETAP BERGERAK S5.549	

GHz
34.2 - 40

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
34.2 – 34.7	RADIOLOKASI PENELITIAN RUANG ANGKASA (angkasa dalam) (angkasa-ke-Bumi)	
	S5.549	
34.7 – 35.2	RADIOLOKASI Penelitian Ruang Angkasa S5.550	
	S5.549	
35.2 – 35.5	BANTUAN METEOROLOGI RADIOLOKASI	
	S5.549	
35.2 – 36	EKSPLORASI BUMI-SATELIT (aktif) BANTUAN METEOROLOGI RADIOLOKASI PENELITIAN RUANG ANGKASA (aktif)	
	S5.549 S5.551A	
36 – 37	EKSPLORASI BUMI-SATELIT (pasif) TETAP BERGERAK PENELITIAN RUANG ANGKASA (pasif)	
	S5.149	
37 – 37.5	TETAP BERGERAK PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi)	
37.5 – 38	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) Eksplorasi Bumi-Satelit (angkasa-ke-Bumi)	
38 – 39.5	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK Eksplorasi Bumi-Satelit (angkasa-ke-Bumi)	
39.5 – 40	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK BERGERAK-SATELIT (angkasa-ke-Bumi) Eksplorasi Bumi-Satelit (angkasa-ke-Bumi)	

GHz
34.2 - 40

Alokasi untuk Indonesia	Penggunaan Frekuensi
34.2 – 34.7 RADIOLOKASI PENELITIAN RUANG ANGKASA (angkasa dalam) (angkasa-ke-Bumi) TETAP BERGERAK S5.549	
34.7 – 35.2 RADIOLOKASI Penelitian Ruang Angkasa S5.550 TETAP BERGERAK S5.549	
35.2 – 35.5 BANTUAN METEOROLOGI RADIOLOKASI TETAP BERGERAK S5.549	
35.2 – 36 EKSPLOKASI BUMI-SATELIT (aktif) BANTUAN METEOROLOGI RADIOLOKASI PENELITIAN RUANG ANGKASA (aktif) TETAP BERGERAK S5.549 S5.551A	
36 – 37 EKSPLOKASI BUMI-SATELIT (pasif) TETAP BERGERAK PENELITIAN RUANG ANGKASA (pasif) S5.149	
37 – 37.5 TETAP BERGERAK PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi)	
37.5 – 38 TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK PENELITIAN RUANG ANGKASA (angkasa-ke-Bumi) Eksplorasi Bumi-Satelit (angkasa-ke-Bumi)	
38 – 39.5 TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK Eksplorasi Bumi-Satelit (angkasa-ke-Bumi)	
39.5 – 40 TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK BERGERAK-SATELIT (angkasa-ke-Bumi) Eksplorasi Bumi-Satelit (angkasa-ke-Bumi)	

GHz
40 - 55.78

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
40 – 40.5	EKSPLOKASI BUMI-SATELIT (Bumi-ke-angkasa) TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK BERGERAK-SATELIT (angkasa-ke-Bumi) PENELITIAN RUANG ANGKASA (Bumi-ke-angkasa) Eksplorasi Bumi-Satelit (angkasa-ke-Bumi)	
40.5 – 42.5 SIARAN SIARAN-SATELIT TETAP Bergerak S5.551B S5.551D	40.5 – 42.5 SIARAN SIARAN-SATELIT TETAP Bergerak TETAP-SATELIT (angkasa-ke-Bumi) S5.551B S5.551C	40.5 – 42.5 SIARAN SIARAN-SATELIT TETAP Bergerak TETAP-SATELIT (angkasa-ke-Bumi) S5.551B S5.551E S5.551C S5.551F
42.5 – 43.5	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.552 BERGERAK kecuali bergerak penerbangan RADIO ASTRONOMI S5.149	
43.5 – 47	BERGERAK S5.553 BERGERAK-SATELIT NAVIGASI RADIO NAVIGASI RADIO-SATELIT S5.554	
47 – 47.2	AMATIR AMATIR-SATELIT	
47.2 – 50.2	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.552 BERGERAK S5.149 S5.340 S5.552A S5.555	
50.2 – 50.4	EKSPLOKASI BUMI-SATELIT (pasif) PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.555A	
50.4 – 51.4	TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK Bergerak-Satelit (Bumi-ke-angkasa)	
51.4 – 52.6	TETAP BERGERAK S5.556 S5.547	
52.6 – 54.25	EKSPLOKASI BUMI-SATELIT (pasif) PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.556	
54.25 – 55.78	EKSPLOKASI BUMI-SATELIT (pasif) ANTAR-SATELIT S5.556A PENELITIAN RUANG ANGKASA (pasif) S5.557A	

GHz
40 - 55.78

Alokasi untuk Indonesia	Penggunaan Frekuensi	
40 – 40.5	EKSPLOKASI BUMI-SATELIT (Bumi-ke-angkasa) TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK BERGERAK-SATELIT (angkasa-ke-Bumi) PENELITIAN RUANG ANGKASA (Bumi-ke-angkasa) Eksplorasi Bumi-Satelit (angkasa-ke-Bumi)	
40.5 – 42.5	SIARAN SIARAN-SATELIT TETAP Bergerak TETAP-SATELIT (angkasa-ke-Bumi) S5.551B S5.551E S5.551C S5.551F	
42.5 – 43.5	TETAP TETAP-SATELIT (angkasa-ke-Bumi) S5.552 BERGERAK kecuali bergerak penerbangan RADIO ASTRONOMI S5.149	
43.5 – 47	BERGERAK S5.553 BERGERAK-SATELIT NAVIGASI RADIO NAVIGASI RADIO-SATELIT S5.554	
47 – 47.2	AMATIR AMATIR-SATELIT	Amatir (EHF)
47.2 – 50.2	TETAP TETAP-SATELIT (Bumi-ke-angkasa) S5.552 BERGERAK S5.149 S5.340 S5.552A S5.555	
50.2 – 50.4	EKSPLOKASI BUMI-SATELIT (pasif) PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.555A	
50.4 – 51.4	TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK Bergerak-Satelit (Bumi-ke-angkasa)	
51.4 – 52.6	TETAP BERGERAK S5.556 S5.547	
52.6 – 54.25	EKSPLOKASI BUMI-SATELIT (pasif) PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.556	
54.25 – 55.78	EKSPLOKASI BUMI-SATELIT (pasif) ANTAR-SATELIT S5.556A PENELITIAN RUANG ANGKASA (pasif) S5.557A	

GHz
55.78 - 71

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
55.78 – 56.9	EKSPLORASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT S5.556A BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.557 S5.547	
56.9 – 57	EKSPLORASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT S5.556B BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.557 S5.547	
57 – 58.2	EKSPLORASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT S5.556A BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.557 S5.547	
58.2 – 59	EKSPLORASI BUMI-SATELIT (pasif) PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.556 S5.547	
59 – 59.3	EKSPLORASI BUMI-SATELIT (pasif) PENELITIAN RUANG ANGKASA (pasif) TETAP ANTAR-SATELIT S5.556A BERGERAK S5.558 RADIOLOKASI S5.559 S5.138	
59.3 – 64	TETAP ANTAR-SATELIT BERGERAK S5.558 RADIOLOKASI S5.559 S5.138	
64 – 65	TETAP ANTAR-SATELIT (pasif) BERGERAK kecuali bergerak penerbangan S5.556 S5.547	
65 – 66	EKSPLORASI BUMI-SATELIT PENELITIAN RUANG ANGKASA ANTAR-SATELIT TETAP BERGERAK kecuali bergerak penerbangan S5.547	
66 – 71	BERGERAK S5.553 S5.558 BERGERAK-SATELIT NAVIGASI RADIO NAVIGASI RADIO-SATELIT ANTAR-SATELIT S5.554	

GHz
55.78 - 71

Alokasi untuk Indonesia	Penggunaan Frekuensi
55.78 – 56.9 EKSPLOKASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT S5.556A BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.557 S5.547	
56.9 – 57 EKSPLOKASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT S5.556B BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.557 S5.547	
57 – 58.2 EKSPLOKASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT S5.556A BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.557 S5.547	
58.2 – 59 EKSPLOKASI BUMI-SATELIT (pasif) PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.556 S5.547	
59 – 59.3 EKSPLOKASI BUMI-SATELIT (pasif) PENELITIAN RUANG ANGKASA (pasif) TETAP ANTAR-SATELIT S5.556A BERGERAK S5.558 RADIOLOKASI S5.559 S5.138	
59.3 – 64 TETAP ANTAR-SATELIT BERGERAK S5.558 RADIOLOKASI S5.559 S5.138	
64 – 65 TETAP ANTAR-SATELIT (pasif) BERGERAK kecuali bergerak penerbangan S5.556 S5.547	
65 – 66 EKSPLOKASI BUMI-SATELIT PENELITIAN RUANG ANGKASA ANTAR-SATELIT TETAP BERGERAK kecuali bergerak penerbangan S5.547	
66 – 71 BERGERAK S5.553 S5.558 BERGERAK-SATELIT NAVIGASI RADIO NAVIGASI RADIO-SATELIT ANTAR-SATELIT S5.554	

GHz
55.78 - 71

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
55.78 – 56.9	EKSPLOKASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT S5.556A BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.557 S5.547	
56.9 – 57	EKSPLOKASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT S5.556B BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.557 S5.547	
57 – 58.2	EKSPLOKASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT S5.556A BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.557 S5.547	
58.2 – 59	EKSPLOKASI BUMI-SATELIT (pasif) PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.556 S5.547	
59 – 59.3	EKSPLOKASI BUMI-SATELIT (pasif) PENELITIAN RUANG ANGKASA (pasif) TETAP ANTAR-SATELIT S5.556A BERGERAK S5.558 RADIOLOKASI S5.559 S5.138	
59.3 – 64	TETAP ANTAR-SATELIT BERGERAK S5.558 RADIOLOKASI S5.559 S5.138	
64 – 65	TETAP ANTAR-SATELIT (pasif) BERGERAK kecuali bergerak penerbangan S5.556 S5.547	
65 – 66	EKSPLOKASI BUMI-SATELIT PENELITIAN RUANG ANGKASA ANTAR-SATELIT TETAP BERGERAK kecuali bergerak penerbangan S5.547	
66 – 71	BERGERAK S5.553 S5.558 BERGERAK-SATELIT NAVIGASI RADIO NAVIGASI RADIO-SATELIT ANTAR-SATELIT S5.554	

GHz
55.78 - 71

Alokasi untuk Indonesia		Penggunaan Frekuensi
55.78 – 56.9	EKSPLOKASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT S5.556A BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.557 S5.547	
56.9 – 57	EKSPLOKASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT S5.556B BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.557 S5.547	
57 – 58.2	EKSPLOKASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT S5.556A BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.557 S5.547	
58.2 – 59	EKSPLOKASI BUMI-SATELIT (pasif) PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.556 S5.547	
59 – 59.3	EKSPLOKASI BUMI-SATELIT (pasif) PENELITIAN RUANG ANGKASA (pasif) TETAP ANTAR-SATELIT S5.556A BERGERAK S5.558 RADIOLOKASI S5.559 S5.138	
59.3 – 64	TETAP ANTAR-SATELIT BERGERAK S5.558 RADIOLOKASI S5.559 S5.138	
64 – 65	TETAP ANTAR-SATELIT (pasif) BERGERAK kecuali bergerak penerbangan S5.556 S5.547	
65 – 66	EKSPLOKASI BUMI-SATELIT PENELITIAN RUANG ANGKASA ANTAR-SATELIT TETAP BERGERAK kecuali bergerak penerbangan S5.547	
66 – 71	BERGERAK S5.553 S5.558 BERGERAK-SATELIT NAVIGASI RADIO NAVIGASI RADIO-SATELIT ANTAR-SATELIT S5.554	

GHz
71 - 100

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
71 – 74	TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK BERGERAK-SATELIT (Bumi-ke-angkasa) S5.149 S5.556	
74 – 75.5	TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK Penelitian Ruang Angkasa (angkasa-ke-Bumi)	
75.5 – 76	AMATIR AMATIR-SATELIT Penelitian Ruang Angkasa (angkasa-ke-Bumi)	
76 – 81	RADIOLOKASI Amatir Amatir-Satelit Penelitian Ruang Angkasa (angkasa-ke-Bumi) S5.560	
81 – 84	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK BERGERAK-SATELIT (angkasa-ke-Bumi) Penelitian Ruang Angkasa (angkasa-ke-Bumi)	
84 – 86	TETAP BERGERAK SIARAN SIARAN-SATELIT S5.561	
86 – 92	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340	
92 – 94	TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK RADIOLOKASI S5.149 S5.556	
94 – 94.1	RADIOLOKASI EKSPLOKASI BUMI-SATELIT (aktif) PENELITIAN RUANG ANGKASA (aktif) S5.562	
94.1 – 95	TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK RADIOLOKASI S5.149 S5.556	
95 – 100	BERGERAK S5.553 BERGERAK-SATELIT NAVIGASI RADIO NAVIGASI RADIO-SATELIT Radiolokasi S5.149 S5.554 S5.555	

GHz
71 - 100

Alokasi untuk Indonesia	Penggunaan Frekuensi
71 – 74 TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK BERGERAK-SATELIT (Bumi-ke-angkasa) S5.149 S5.556	
74 – 75.5 TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK Penelitian Ruang Angkasa (angkasa-ke-Bumi)	
75.5 – 76 AMATIR AMATIR-SATELIT Penelitian Ruang Angkasa (angkasa-ke-Bumi)	Amatir (EHF)
76 – 81 RADIOLOKASI Amatir Amatir-Satelit Penelitian Ruang Angkasa (angkasa-ke-Bumi) S5.560	Amatir (EHF) (Sekunder)
81 – 84 TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK BERGERAK-SATELIT (angkasa-ke-Bumi) Penelitian Ruang Angkasa (angkasa-ke-Bumi)	
84 – 86 TETAP BERGERAK SIARAN SIARAN-SATELIT S5.561	
86 – 92 EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340	
92 – 94 TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK RADIOLOKASI S5.149 S5.556	
94 – 94.1 RADIOLOKASI EKSPLOKASI BUMI-SATELIT (aktif) PENELITIAN RUANG ANGKASA (aktif) S5.562	
94.1 – 95 TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK RADIOLOKASI S5.149 S5.556	
95 – 100 BERGERAK S5.553 BERGERAK-SATELIT NAVIGASI RADIO NAVIGASI RADIO-SATELIT Radiolokasi S5.149 S5.554 S5.555	

GHz
100 - 150

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
100 – 102	EKSPLORASI BUMI-SATELIT (pasif) TETAP BERGERAK PENELITIAN RUANG ANGKASA (pasif) S5.341	
102 – 105	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK S5.341	
105 – 116	EKSPLORASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.341	
116 – 119.98	EKSPLORASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.138 S5.341	
119.98 – 120.02	EKSPLORASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) Amatir S5.138 S5.341	
120.02 – 126	EKSPLORASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.138 S5.341	
126 – 134	TETAP ANTAR-SATELIT BERGERAK S5.558 RADIOLOKASI S5.559	
134 – 142	BERGERAK S5.553 BERGERAK-SATELIT NAVIGASI RADIO NAVIGASI RADIO-SATELIT Radiolokasi S5.149 S5.340 S5.554 S5.555	
142 – 144	AMATIR AMATIR-SATELIT	
144 – 149	RADIOLOKASI Amatir Amatir-Satelit S5.149 S5.555	
149 – 150	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK	

GHz
100 - 150

Alokasi untuk Indonesia		Penggunaan Frekuensi
100 – 102	EKSPLORASI BUMI-SATELIT (pasif) TETAP BERGERAK PENELITIAN RUANG ANGKASA (pasif) S5.341	
102 – 105	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK S5.341	
105 – 116	EKSPLORASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.341	
116 – 119.98	EKSPLORASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.138 S5.341	
119.98 – 120.02	EKSPLORASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) Amatir S5.138 S5.341	
120.02 – 126	EKSPLORASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.138 S5.341	
126 – 134	TETAP ANTAR-SATELIT BERGERAK S5.558 RADIOLOKASI S5.559	
134 – 142	BERGERAK S5.553 BERGERAK-SATELIT NAVIGASI RADIO NAVIGASI RADIO-SATELIT Radiolokasi S5.149 S5.340 S5.554 S5.555	
142 – 144	AMATIR AMATIR-SATELIT	Amatir (EHF)
144 – 149	RADIOLOKASI Amatir Amatir-Satelit S5.149 S5.555	Amatir (EHF) (Sekunder)
149 – 150	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK	

GHz
150 - 200

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
150 – 151	EKSPLOKASI BUMI-SATELIT (pasif) TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK PENELITIAN RUANG ANGKASA (pasif)	
	S5.149 S5.385	
151 – 156	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK	
156 – 158	EKSPLOKASI BUMI-SATELIT (pasif) TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK	
158 – 164	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK	
164 – 168	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif)	
168 – 170	TETAP BERGERAK	
170 – 174.5	TETAP ANTAR-SATELIT BERGERAK S5.558 S5.149 S5.385	
174.5 – 176.5	EKSPLOKASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif)	
	S5.149 S5.385	
176.5 – 182	TETAP ANTAR-SATELIT BERGERAK S5.558 S5.149 S5.385	
182 – 185	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif)	
	S5.340 S5.563	
185 – 190	TETAP ANTAR-SATELIT BERGERAK S5.558 S5.149 S5.385	
190 – 200	BERGERAK S5.553 BERGERAK-SATELIT NAVIGASI RADIO NAVIGASI RADIO-SATELIT S5.341 S5.554	

GHz
150 - 200

Alokasi untuk Indonesia		Penggunaan Frekuensi
150 – 151	EKSPLORASI BUMI-SATELIT (pasif) TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK PENELITIAN RUANG ANGKASA (pasif) S5.149 S5.385	
151 – 156	TETAP TETAP-SATELIT (angkasa-ke-Bumi) (angkasa-ke-Bumi) BERGERAK	
156 – 158	EKSPLORASI BUMI-SATELIT (pasif) TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK	
158 – 164	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK	
164 – 168	EKSPLORASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif)	
168 – 170	TETAP BERGERAK	
170 – 174.5	TETAP ANTAR-SATELIT BERGERAK S5.558 S5.149 S5.385	
174.5 – 176.5	EKSPLORASI BUMI-SATELIT (pasif) TETAP ANTAR-SATELIT BERGERAK S5.558 PENELITIAN RUANG ANGKASA (pasif) S5.149 S5.385	
176.5 – 182	TETAP ANTAR-SATELIT BERGERAK S5.558 S5.149 S5.385	
182 – 185	EKSPLORASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.563	
185 – 190	TETAP ANTAR-SATELIT BERGERAK S5.558 S5.149 S5.385	
190 – 200	BERGERAK S5.553 BERGERAK-SATELIT NAVIGASI RADIO NAVIGASI RADIO-SATELIT S5.341 S5.554	

GHz
200 - 400

Alokasi untuk Dinas		
Region 1	Region 2	Region 3
200 – 202	EKSPLOKASI BUMI-SATELIT (pasif) TETAP BERGERAK PENELITIAN RUANG ANGKASA (pasif) S5.341	
202 – 217	TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK S5.341	
217 – 231	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.341	
231 – 235	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK Radiolokasi	
235 – 238	EKSPLOKASI BUMI-SATELIT (pasif) TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK PENELITIAN RUANG ANGKASA (pasif)	
238 – 241	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK Radiolokasi	
241 – 248	RADIOLOKASI Amatir Amatir-Satelit S5.138	
248 – 250	AMATIR AMATIR-SATELIT	
250 – 252	EKSPLOKASI BUMI-SATELIT (pasif) PENELITIAN RUANG ANGKASA (pasif) S5.149 S5.555	
252 – 265	BERGERAK S5.553 BERGERAK-SATELIT NAVIGASI RADIO NAVIGASI RADIO-SATELIT S5.149 S5.385 S5.554 S5.555 S5.564	
265 – 275	TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK RADIO ASTRONOMI S5.149	
275 – 400	(tidak dialokasikan) S5.565	

GHz
200 - 400

Alokasi untuk Indonesia		Penggunaan Frekuensi
200 – 202	EKSPLOKASI BUMI-SATELIT (pasif) TETAP BERGERAK PENELITIAN RUANG ANGKASA (pasif) S5.341	
202 – 217	TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK S5.341	
217 – 231	EKSPLOKASI BUMI-SATELIT (pasif) RADIO ASTRONOMI PENELITIAN RUANG ANGKASA (pasif) S5.340 S5.341	
231 – 235	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK Radiolokasi	
235 – 238	EKSPLOKASI BUMI-SATELIT (pasif) TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK PENELITIAN RUANG ANGKASA (pasif)	
238 – 241	TETAP TETAP-SATELIT (angkasa-ke-Bumi) BERGERAK Radiolokasi	
241 – 248	RADIOLOKASI Amatir Amatir-Satelit S5.138	Amatir (EHF) (Sekunder)
248 – 250	AMATIR AMATIR-SATELIT	Amatir (EHF)
250 – 252	EKSPLOKASI BUMI-SATELIT (pasif) PENELITIAN RUANG ANGKASA (pasif) S5.149 S5.555	
252 – 265	BERGERAK S5.553 BERGERAK-SATELIT NAVIGASI RADIO NAVIGASI RADIO-SATELIT S5.149 S5.385 S5.554 S5.555 S5.564	
265 – 275	TETAP TETAP-SATELIT (Bumi-ke-angkasa) BERGERAK RADIO ASTRONOMI S5.149	
275 – 400	(tidak dialokasikan) S5.565	

III. CATATAN KAKI (FOOTNOTE)

Catatan kaki yang terdapat pada tabel alokasi frekuensi Indonesia mengacu kepada *Article S5, Frequency Allocation, Radio Regulation* edisi 1998, Section IV. Table of Frequency Allocations, Art. S5.53 s/d Art S5.565, di dalam Bahasa Inggris

Section IV. Table of Frequency Allocations (See No. S2.1)

- S5.53** Administrations authorizing the use of frequencies below 9 kHz shall ensure that no harmful interference is caused thereby to the services to which the bands above 9 kHz are allocated.
- S5.54** Administrations conducting scientific research using frequencies below 9 kHz are urged to advise other administrations that may be concerned in order that such research may be afforded all practicable protection from harmful interference.
- S5.55** *Additional allocation:* in Armenia, Azerbaijan, Bulgaria, Russian Federation, Georgia, Kazakstan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the band 14-17 kHz is also allocated to the radionavigation service on a primary basis. (WRC-97)
- S5.56** The stations of services to which the bands 14-19.95 kHz and 20.05-70 kHz and in Region 1 also the bands 72-84 kHz and 86-90 kHz are allocated may transmit standard frequency and time signals. Such stations shall be afforded protection from harmful interference. In Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russian Federation, Tajikistan, Turkmenistan and Ukraine, the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions. (WRC-97)
- S5.57** The use of the bands 14 - 19.95 kHz, 20.05 - 70 kHz and 70 - 90 kHz (72 - 84 kHz and 86 - 90 kHz in Region 1) by the maritime mobile service is limited to coast radiotelegraph stations (A1A and F1B only). Exceptionally, the use of class J2B or J7B emissions is authorized subject to the necessary bandwidth not exceeding that normally used for class A1A or F1B emissions in the band concerned.
- S5.58** *Additional allocation:* in Armenia, Azerbaijan, Bulgaria, Georgia, Kazakstan, Kyrgyzstan, Russian Federation, Tajikistan, Turkmenistan and Ukraine, the band 67-70 kHz is also allocated to the radionavigation service on a primary basis. (WRC-97)
- S5.59** *Different category of service:* in Bangladesh, the Islamic Republic of Iran and Pakistan, the allocation of the bands 70 - 72 kHz and 84 - 86 kHz to the fixed and maritime mobile service is on a primary basis (see No. **S5.33**).

- S5.60** In the bands 70 - 90 kHz (70 - 86 kHz in Region 1) and 110 - 130 kHz (112 - 130 kHz in Region 1), pulsed radionavigation systems may be used on condition that they do not cause harmful interference to other services to which these bands are allocated.
- S5.61** In Region 2, the establishment and operation of stations in the maritime radionavigation service in the bands 70 - 90 kHz and 110 - 130 kHz shall be subject to agreement obtained under No. **S9.21** with administrations whose services, operating in accordance with the Table, may be affected. However, stations of the fixed, maritime mobile and radiolocation services shall not cause harmful interference to stations in the maritime radionavigation service established under such agreements.
- S5.62** Administrations which operate stations in the radionavigation service in the band 90 - 110 kHz are urged to coordinate technical and operating characteristics in such a way as to avoid harmful interference to the services provided by these stations.
- S5.63** (SUP - WRC-97)
- S5.64** Only classes A1A or F1B, A2C, A3C, F1C or F3C emissions are authorized for stations of the fixed service in the bands allocated to this service between 90 kHz and 160 kHz (148.5 kHz in Region 1) and for stations of the maritime mobile service in the bands allocated to this service between 110 kHz and 160 kHz (148.5 kHz in Region 1). Exceptionally, class J2B or J7B emissions are also authorized in the bands between 110 kHz and 160 kHz (148.5 kHz in Region 1) for stations of the maritime mobile service.
- S5.65** *Different category of service:* in Bangladesh, the Islamic Republic of Iran and Pakistan, the allocation of the bands 112 - 117.6 kHz and 126 - 129 kHz to the fixed and maritime mobile services is on a primary basis (see No. **S5.33**).
- S5.66** *Different category of service:* in Germany, the allocation of the band 115 - 117.6 kHz to the fixed and maritime mobile services is on a primary basis (see No. **S5.33**) and to the radionavigation service on a secondary basis (see No. **S5.32**).
- S5.67** *Additional allocation:* in Azerbaijan, Bulgaria, Mongolia, Kyrgyzstan, Romania, Turkmenistan and Ukraine, the band 130-148.5 kHz is also allocated to the radionavigation service on a secondary basis. Within and between these countries this service shall have an equal right to operate. (WRC-97)
- S5.68** *Alternative allocation:* in Angola, Botswana, Burundi, the Congo, Malawi, Rwanda, South Africa and Zaire, the band 160 - 200 kHz is allocated to the fixed service on a primary basis.
- S5.69** *Additional allocation:* in Somalia, the band 200 - 255 kHz is also allocated to the aeronautical radionavigation service on a primary basis.
- S5.70** *Alternative allocation:* in Angola, Botswana, Burundi, Cameroon, the Central African Republic, the Congo, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Nigeria, Oman, Rwanda, South Africa, Swaziland, Tanzania, Chad, Zaire, Zambia and Zimbabwe, the band

200 - 283.5 kHz is allocated to the aeronautical radionavigation service on a primary basis.

S5.71 *Alternative allocation:* in Tunisia, the band 255 - 283.5 kHz is allocated to the broadcasting service on a primary basis.

S5.72 Norwegian stations of the fixed service situated in northern areas (north of 60° N) subject to auroral disturbances are allowed to continue operation on four frequencies in the bands 283.5 - 490 kHz and 510 - 526.5 kHz.

S5.73 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)

S5.74 *Additional Allocation:* in Region 1, the frequency band 285.3 - 285.7 kHz is also allocated to the maritime radionavigation service (other than radiobeacons) on a primary basis.

S5.75 *Different category of service:* in Armenia, Azerbaijan, Belarus, Georgia, Kazakstan, Moldova, Kyrgyzstan, Russia, Tajikistan, Turkmenistan, Ukraine and the Black Sea areas of Bulgaria and Romania, the allocation of the band 315 - 325 kHz to the maritime radionavigation service is on a primary basis under the condition that in the Baltic Sea area, the assignment of frequencies in this band to new stations in the maritime or aeronautical radionavigation services shall be subject to prior consultation between the administrations concerned.

S5.76 The frequency 410 kHz is designated for radio direction-finding in the maritime radionavigation service. The other radionavigation services to which the band 405 - 415 kHz is allocated shall not cause harmful interference to radio direction-finding in the band 406.5 - 413.5 kHz.

S5.77 *Different category of service:* in Australia, China, the French Overseas Territories of Region 3, India, Indonesia, the Islamic Republic of Iran, Japan, Pakistan, Papua New Guinea and Sri Lanka, the allocation of the band 415 - 495 kHz to the aeronautical radionavigation service is on a primary basis. Administrations in these countries shall take all practical steps necessary to ensure that aeronautical radionavigation stations in the band 435 - 495 kHz do not cause interference to reception by coast stations of ship stations transmitting on frequencies designated for ship stations on a worldwide basis (see No. **S52.39**).

S5.78 *Different category of service:* in Cuba, the United States of America and Mexico, the allocation of the band 415 - 435 kHz to the aeronautical radionavigation service is on a primary basis.

S5.79 The use of the bands 415 - 495 kHz and 505 - 526.5 kHz (505 - 510 kHz in Region 2) by the maritime mobile service is limited to radiotelegraphy.

S5.79A When establishing coast stations in the NAVTEX service on the frequencies 490 kHz, 518 kHz and 4209.5 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-97)**). (WRC-97)

S5.80 In Region 2, the use of the band 435 - 495 kHz by the aeronautical radionavigation service is limited to non-directional beacons not employing voice transmission.

S5.81 The bands 490-495 kHz and 505-510 kHz shall be subject to the provisions of Appendix **S13**, § 15 1), Part A2. (WRC-97)

S5.82 In the maritime mobile service, the frequency 490 kHz is, from the date of full implementation of the GMDSS (see Resolution **331 (Rev.WRC-97)**), to be used exclusively for the transmission by coast stations of navigational and meteorological warnings and urgent information to ships, by means of narrow-band direct-printing telegraphy. The conditions for use of the frequency 490 kHz are prescribed in Articles **S31** and **S52**. In using the band 415-495 kHz for the aeronautical radionavigation service, administrations are requested to ensure that no harmful interference is caused to the frequency 490 kHz. (WRC-97)

S5.83 The frequency 500 kHz is an international distress and calling frequency for Morse radiotelegraphy. The conditions for its use are prescribed in Articles **S31** and **S52**, and in Appendix **S13**.

S5.84 The conditions for the use of the frequency 518 kHz by the maritime mobile service are prescribed in Articles **S31** and **S52** and in Appendix **S13**. (WRC-97)

S5.85 Not used

S5.86 In Region 2, in the band 525 - 535 kHz the carrier power of broadcasting stations shall not exceed 1 kW during the day and 250 W at night.

S5.87 *Additional allocation:* in Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the band 526.5 - 535 kHz is also allocated to the mobile service on a secondary basis.

S5.87A *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. **S9.21** with administrations concerned and limited to ground-based radiobeacons in operation on 27 October 1997 until the end of their lifetime. (WRC-97)

S5.88 *Additional allocation:* in China, the band 526.5 - 535 kHz is also allocated to the aeronautical radionavigation service on a secondary basis.

S5.89 In Region 2, the use of the band 1 605 - 1 705 kHz by stations of the broadcasting service is subject to the Plan established by the Regional Administrative Radio Conference (Rio de Janeiro, 1988).

The examination of frequency assignments to stations of the fixed and mobile services in the band 1 625 - 1 705 kHz shall take account of the allotments appearing in the Plan established by the Regional Administrative Radio Conference (Rio de Janeiro, 1988).

- S5.90** In the band 1 605 - 1 705 kHz, in cases where a broadcasting station of Region 2 is concerned, the service area of the maritime mobile stations in Region 1 shall be limited to that provided by ground-wave propagation.
- S5.91** *Additional allocation:* in 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)
- S5.92** Some countries of Region 1 use radiodetermination systems in the bands 1 606.5 - 1 625 kHz, 1 635 - 1 800 kHz, 1 850 - 2 160 kHz, 2 194 - 2 300 kHz, 2 502 - 2 850 kHz and 3 500 - 3 800 kHz, subject to agreement obtained under No. **S9.21**. The radiated mean power of these stations shall not exceed 50 W.
- S5.93** *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Nigeria, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Chad, Turkmenistan and Ukraine, the bands 1 625 - 1 635 kHz, 1 800 - 1 810 kHz and 2 160 - 2 170 kHz are also allocated to the fixed and land mobile services on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.94**
and
S5.95 Not used
- S5.96** In Germany, Armenia, Azerbaijan, Belarus, Denmark, Estonia, Finland, Georgia, Hungary, Ireland, Israel, Jordan, Kazakstan, Latvia, Lithuania, Malta, Moldova, Norway, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, the United Kingdom, Russia, Sweden, Tajikistan, Turkmenistan and Ukraine, administrations may allocate up to 200 kHz to their amateur service in the bands 1 715 - 1 800 kHz and 1 850 - 2 000 kHz. However, when allocating the bands within this range to their amateur service, administrations shall, after prior consultation with administrations of neighbouring countries, take such steps as may be necessary to prevent harmful interference from their amateur service to the fixed and mobile services of other countries. The mean power of any amateur station shall not exceed 10 W.
- S5.97** In Region 3, the Loran system operates either on 1 850 kHz or 1 950 kHz, the bands occupied being 1 825 - 1 875 kHz and 1 925 - 1 975 kHz respectively. Other services to which the band 1 800 - 2 000 kHz is allocated may use any frequency therein on condition that no harmful interference is caused to the Loran system operating on 1 850 kHz or 1 950 kHz.
- S5.98** *Alternative allocation:* in Angola, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Cameroon, the Congo, Denmark, Egypt, Eritrea, Spain, Ethiopia, Georgia, Greece, Italy, Kazakstan, Lebanon, Lithuania, Moldova, the Netherlands, Syria, Kyrgyzstan, Russian Federation, Somalia, Tajikistan, Tunisia, Turkmenistan, Turkey and Ukraine, the band 1 810-1 830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-97)
- S5.99**

Additional allocation: in Saudi Arabia, Bosnia and Herzegovina, Iraq, Libya, Uzbekistan, Slovakia, the Czech Republic, Romania, Slovenia, Chad, Togo and Yugoslavia, the band 1 810-1 830 kHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-97)

S5.100 In Region 1, the authorization to use the band 1 810 - 1 830 kHz by the amateur service in countries situated totally or partially north of 40° N shall be given only after consultation with the countries mentioned in Nos. **S5.98** and **S5.99** to define the necessary steps to be taken to prevent harmful interference between amateur stations and stations of other services operating in accordance with Nos. **S5.98** and **S5.99**.

S5.101 *Alternative allocation:* in Burundi and Lesotho, the band 1 810 - 1 850 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

S5.102 *Alternative allocation:* in Argentina, Bolivia, Chile, Mexico, Paraguay, Peru, Uruguay and Venezuela, the band 1 850 - 2 000 kHz is allocated to the fixed, mobile except aeronautical mobile, radiolocation and radionavigation services on a primary basis.

S5.103 In Region 1, in making assignments to stations in the fixed and mobile services in the bands 1 850 - 2 045 kHz, 2 194 - 2 498 kHz, 2 502 - 2 625 kHz and 2 650 - 2 850 kHz, administrations should bear in mind the special requirements of the maritime mobile service.

S5.104 In Region 1, the use of the band 2 025 - 2 045 kHz by the meteorological aids service is limited to oceanographic buoy stations.

S5.105 In Region 2, except in Greenland, coast stations and ship stations using radiotelephony in the band 2 065 - 2 107 kHz shall be limited to class J3E emissions and to a peak envelope power not exceeding 1 kW. Preferably, the following carrier frequencies should be used: 2 065.0 kHz, 2 079.0 kHz, 2 082.5 kHz, 2 086.0 kHz, 2 093.0 kHz, 2 096.5 kHz, 2 100.0 kHz and 2 103.5 kHz. In Argentina and Uruguay, the carrier frequencies 2 068.5 kHz and 2 075.5 kHz are also used for this purpose, while the frequencies within the band 2 072 - 2 075.5 kHz are used as provided in No. **S52.165**.

S5.106 In Regions 2 and 3, provided no harmful interference is caused to the maritime mobile service, the frequencies between 2 065 kHz and 2 107 kHz may be used by stations of the fixed service communicating only within national borders and whose mean power does not exceed 50 W. In notifying the frequencies, the attention of the Bureau should be drawn to these provisions.

S5.107 *Additional allocation:* in Saudi Arabia, Botswana, Eritrea, Ethiopia, Iraq, Lesotho, Libya, Somalia, Swaziland and Zambia, the band 2 160-2 170 kHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis. The mean power of stations in these services shall not exceed 50 W. (WRC-97)

S5.108 The carrier frequency 2 182 kHz is an international distress and calling frequency for radiotelephony. The conditions for the use of the band

2173.5 - 2190.5 kHz are prescribed in Articles **S31** and **S52** and in Appendix **S13**.

S5.109 The frequencies 2187.5 kHz, 4207.5 kHz, 6312 kHz, 8414.5 kHz, 12577 kHz and 16804.5 kHz are international distress frequencies for digital selective calling. The conditions for the use of these frequencies are prescribed in Article **S31**.

S5.110 The frequencies 2174.5 kHz, 4177.5 kHz, 6268 kHz, 8376.5 kHz, 12520 kHz and 16695 kHz are international distress frequencies for narrow-band direct-printing telegraphy. The conditions for the use of these frequencies are prescribed in Article **S31**.

S5.111 The carrier frequencies 2182 kHz, 3023 kHz, 5680 kHz, 8364 kHz and the frequencies 121.5 MHz, 156.8 MHz and 243 MHz may also be used, in accordance with the procedures in force for terrestrial radiocommunication services, for search and rescue operations concerning manned space vehicles. The conditions for the use of the frequencies are prescribed in Article **S31** and in Appendix **S13**.

The same applies to the frequencies 10003 kHz, 14993 kHz and 19993 kHz, but in each of these cases emissions must be confined in a band of ± 3 kHz about the frequency.

S5.112 *Alternative allocation:* in Bosnia and Herzegovina, Cyprus, Denmark, France, Greece, Iceland, Italy, Malta, Norway, Sri Lanka, Turkey and Yugoslavia, the band 2194-2300 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-97)

S5.113 For the conditions for the use of the bands 2300 - 2495 kHz (2498 kHz in Region 1), 3200 - 3400 kHz, 4750 - 4995 kHz and 5005 - 5060 kHz by the broadcasting service, see Nos. **S5.16** to **S5.20**, **S5.21** and **S23.3** to **S23.10**.

S5.114 *Alternative allocation:* in Bosnia and Herzegovina, Cyprus, Denmark, France, Greece, Iraq, Italy, Malta, Norway, Turkey and Yugoslavia, the band 2502-2625 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-97)

S5.115 The carrier (reference) frequencies 3023 kHz and 5680 kHz may also be used, in accordance with Article **S31** and Appendix **S13** by stations of the maritime mobile service engaged in coordinated search and rescue operations.

S5.116 Administrations are urged to authorize the use of the band 3155 - 3195 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 3155 kHz and 3400 kHz to suit local needs.

It should be noted that frequencies in the range 3000 kHz to 4000 kHz are suitable for hearing aid devices which are designed to operate over short distances within the induction field.

S5.117 *Alternative allocation:* in Bosnia and Herzegovina, Cyprus, Côte d'Ivoire, Denmark, Egypt, France, Greece, Iceland, Italy, Liberia, Malta, Norway, Sri Lanka, Togo, Turkey and Yugoslavia, the band 3155-3200 kHz is

- allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-97)
- S5.118** *Additional allocation:* in the United States, Japan, Mexico, Peru and Uruguay, the band 3 230 - 3 400 kHz is also allocated to the radiolocation service on a secondary basis.
- S5.119** *Additional allocation:* in Honduras, Mexico, Peru and Venezuela, the band 3 500 - 3 750 kHz is also allocated to the fixed and mobile services on a primary basis.
- S5.120** For the use of the bands allocated to the amateur service at 3.5 MHz, 7.0 MHz, 10.1 MHz, 14.0 MHz, 18.068 MHz, 21.0 MHz, 24.89 MHz and 144 MHz in the event of natural disasters, see Resolution **640**.
- S5.121** Not used
- S5.122** *Alternative allocation:* in Argentina, Bolivia, Chile, Ecuador, Paraguay, Peru and Uruguay, the band 3 750 - 4 000 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.123** *Additional allocation:* in Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the band 3 900 - 3 950 kHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.124** *Additional allocation:* in Canada, the band 3 950 - 4 000 kHz is also allocated to the broadcasting service on a primary basis. The power of broadcasting stations operating in this band shall not exceed that necessary for a national service within the frontier of this country and shall not cause harmful interference to other services operating in accordance with the Table.
- S5.125** *Additional allocation:* in Greenland, the band 3 950 - 4 000 kHz is also allocated to the broadcasting service on a primary basis. The power of the broadcasting stations operating in this band shall not exceed that necessary for a national service and shall in no case exceed 5 kW.
- S5.126** In Region 3, the stations of those services to which the band 3 995 - 4 005 kHz is allocated may transmit standard frequency and time signals.
- S5.127** The use of the band 4 000 - 4 063 kHz by the maritime mobile service is limited to ship stations using radiotelephony (see No. **S52.220** and Appendix **S17**).
- S5.128** In Afghanistan, Argentina, Armenia, Azerbaijan, Belarus, Botswana, Burkina Faso, Central African Republic, China, Georgia, India, Kazakhstan, Mali, Niger, Kyrgyzstan, Russian Federation, Tajikistan, Chad, Turkmenistan and Ukraine, in the bands 4 063-4 123 kHz, 4 130-4 133 kHz and 4 408-4 438 kHz, stations of limited power in the fixed service which are situated at least 600 km from the coast may operate on condition that harmful interference is not caused to the maritime mobile service. (WRC-97)
- S5.129** On condition that harmful interference is not caused to the maritime mobile service, the frequencies in the bands 4 063 - 4 123 kHz and 4 130 - 4 438 kHz may be used exceptionally by stations in the fixed service

communicating only within the boundary of the country in which they are located with a mean power not exceeding 50 W.

S5.130 The conditions for the use of the carrier frequencies 4 125 kHz and 6 215 kHz are prescribed in Articles **S31** and **S52** and in Appendix **S13**.

S5.131 The frequency 4 209.5 kHz is used exclusively for the transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of narrow-band direct-printing techniques. (WRC-97)

S5.132 The frequencies 4 210 kHz, 6 314 kHz, 8 416.5 kHz, 12 579 kHz, 16 806.5 kHz, 19 680.5 kHz, 22 376 kHz and 26 100.5 kHz are the international frequencies for the transmission of Maritime Safety Information (MSI) (see Resolution **333 (Mob-87)** and Appendix **S17**).

S5.133 *Different category of service:* in Armenia, Azerbaijan, Belarus, Georgia, Kazakstan, Latvia, Lithuania, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 5 130 - 5 250 kHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. **S5.33**).

S5.134 The use of the bands 5 900-5 950 kHz, 7 300-7 350 kHz, 9 400-9 500 kHz, 11 600-11 650 kHz, 12 050-12 100 kHz, 13 570-13 600 kHz, 13 800-13 870 kHz, 15 600-15 800 kHz, 17 480-17 550 kHz and 18 900-19 020 kHz by the broadcasting service is limited to single-sideband emissions with the characteristics specified in Appendix **S11** or to any other spectrum-efficient modulation techniques recommended by ITU-R. Access to these bands shall be subject to the decisions of a competent conference. (WRC-97)

S5.135 (SUP - WRC-97)

S5.136 The band 5 900 - 5 950 kHz is allocated, until 1 April 2007, to the fixed service on a primary basis, as well as to the following services: in Region 1 to the land mobile service on a primary basis, in Region 2 to the mobile except aeronautical mobile (R) service on a primary basis, and in Region 3 to the mobile except aeronautical mobile (R) service on a secondary basis, subject to application of the procedure referred to in Resolution **21 (Rev.WRC-95)**. After 1 April 2007, frequencies in this band may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

S5.137 On condition that harmful interference is not caused to the maritime mobile service, the bands 6 200 - 6 213.5 kHz and 6 220.5 - 6 525 kHz may be used exceptionally by stations in the fixed service, communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 W. At the time of notification of these frequencies, the attention of the Bureau will be drawn to the above conditions.

S5.138 The following bands:

- 6765 - 6795 kHz (centre frequency 6780 kHz),
 433.05 - 434.79 MHz (centre frequency 433.92 MHz) in Region 1 except
 in the countries mentioned in No. **S5.280**,
 61 - 61.5 GHz (centre frequency 61.25 GHz),
 122 - 123 GHz (centre frequency 122.5 GHz), and
 244 - 246 GHz (centre frequency 245 GHz)

are designated for industrial, scientific and medical (ISM) applications. The use of these frequency bands for ISM applications shall be subject to special authorization by the administration concerned, in agreement with other administrations whose radiocommunication services might be affected. In applying this provision, administrations shall have due regard to the latest relevant ITU-R Recommendations.

S5.139 *Different category of service:* in Armenia, Azerbaijan, Belarus, Georgia, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 6765 - 7000 kHz to the land mobile service is on a primary basis (see No. **S5.33**).

S5.140 *Additional allocation:* in Angola, Iraq, Rwanda, Somalia and Togo, the band 7000 - 7050 kHz is also allocated to the fixed service on a primary basis.

S5.141 *Alternative allocation:* in Egypt, Eritrea, Ethiopia, Guinea, Libya and Madagascar, the band 7000-7050 kHz is allocated to the fixed service on a primary basis. (WRC-97)

S5.142 The use of the band 7100 - 7300 kHz in Region 2 by the amateur service shall not impose constraints on the broadcasting service intended for use within Region 1 and Region 3.

S5.143 The band 7300 - 7350 kHz is allocated, until 1 April 2007, to the fixed service on a primary basis and to the land mobile service on a secondary basis, subject to application of the procedure referred to in Resolution **21 (Rev.WRC-95)**. After 1 April 2007, frequencies in this band may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

S5.144 In Region 3, the stations of those services to which the band 7995 - 8005 kHz is allocated may transmit standard frequency and time signals.

S5.145 The conditions for the use of the carrier frequencies 8291 kHz, 12290 kHz and 16420 kHz are prescribed in Articles **S31** and **S52** and in Appendix **S13**.

S5.146 The bands 9400 - 9500 kHz, 11 600 - 11 650 kHz, 12 050 - 12 100 kHz, 15 600 - 15 800 kHz, 17 480 - 17 550 kHz and 18 900 - 19 020 kHz are allocated

to the fixed service on a primary basis until 1 April 2007, subject to application of the procedure referred to in Resolution **21 (Rev.WRC-95)**. After 1 April 2007, frequencies in these bands may be used by stations in the fixed service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies in the fixed service, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

S5.147 On condition that harmful interference is not caused to the broadcasting service, frequencies in the bands 9 775 - 9 900 kHz, 11 650 - 11 700 kHz and 11 975 - 12 050 kHz may be used by stations in the fixed service communicating only within the boundary of the country in which they are located, each station using a total radiated power not exceeding 24 dBW.

S5.148 (SUP - WRC-97)

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

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

are allocated (* indicates radio astronomy use for spectral line observations), administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from spaceborne or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. **S4.5** and **S4.6** and Article **S29**). (WRC-97)

S5.150 The following bands:

- 13 553 - 13 567 kHz (centre frequency 13 560 kHz),
- 26 957 - 27 283 kHz (centre frequency 27 120 kHz),
- 40.66 - 40.70 MHz (centre frequency 40.68 MHz),
- 902 - 928 MHz in Region 2 (centre frequency 915 MHz),

2 400 - 2 500 MHz (centre frequency 2 450 MHz),
5 725 - 5 875 MHz (centre frequency 5 800 MHz), and
24 - 24.25 GHz (centre frequency 24.125 GHz)

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

S5.151 The bands 13 570 - 13 600 kHz and 13 800 - 13 870 kHz are allocated, until 1 April 2007, to the fixed service on a primary basis and to the mobile except aeronautical mobile (R) service on a secondary basis, subject to application of the procedure referred to in Resolution **21 (Rev.WRC-95)**. After 1 April 2007, frequencies in these bands may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies in these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

S5.152 *Additional allocation:* in Armenia, Azerbaijan, China, Côte d'Ivoire, Georgia, the Islamic Republic of Iran, Kazakstan, Moldova, Uzbekistan, Kyrgyzstan, Russian Federation, 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-97)

S5.153 In Region 3, the stations of those services to which the band 15 995 - 16 005 kHz is allocated may transmit standard frequency and time signals.

S5.154 *Additional allocation:* in Armenia, Azerbaijan, Georgia, Kazakstan, Moldova, Uzbekistan, Kyrgyzstan, Russian Federation, 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-97)

S5.155 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the band 21 850 - 21 870 kHz is also allocated to the aeronautical mobile (R) services on a primary basis.

S5.155A In Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the use of the band 21 850 - 21 870 kHz by the fixed service is limited to provision of services related to aircraft flight safety.

S5.155B The band 21 870 - 21 924 kHz is used by the fixed service for provision of services related to aircraft flight safety.

S5.156

- Additional allocation:* in Nigeria, the band 22 720 - 23 200 kHz is also allocated to the meteorological aids service (radiosondes) on a primary basis.
- S5.156A** The use of the band 23 200 - 23 350 kHz by the fixed service is limited to provision of services related to aircraft flight safety.
- S5.157** The use of the band 23 350 - 24 000 kHz by the maritime mobile service is limited to inter-ship radiotelegraphy.
- S5.158 and S5.159** Not used
- S5.160** *Additional allocation:* in Botswana, Burundi, Lesotho, Malawi, Namibia, Dem. Rep. of the Congo, Rwanda and Swaziland, the band 41-44 MHz is also allocated to the aeronautical radionavigation service on a primary basis. (WRC-97)
- S5.161** *Additional allocation:* in the Islamic Republic of Iran and Japan, the band 41 - 44 MHz is also allocated to the radiolocation service on a secondary basis.
- S5.162** *Additional allocation:* in Australia and New Zealand, the band 44 - 47 MHz is also allocated to the broadcasting service on a primary basis.
- S5.162A** *Additional allocation:* in Germany, Austria, Belgium, Bosnia and Herzegovina, China, Vatican, Denmark, Spain, Estonia, Finland, France, Ireland, Iceland, Italy, Latvia, The Former Yugoslav Republic of Macedonia, Liechtenstein, Lithuania, Luxembourg, Moldova, Monaco, Norway, the Netherlands, Poland, Portugal, Slovakia, the Czech Republic, the United Kingdom, Russian Federation, Sweden, Switzerland and Turkey, the 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-97)
- S5.163** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Estonia, Georgia, Hungary, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the bands 47 - 48.5 MHz and 56.5 - 58 MHz are also allocated to the fixed and land mobile services on a secondary basis.
- S5.164** *Additional allocation:* in Albania, Germany, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Côte d'Ivoire, Denmark, Spain, Finland, France, Gabon, Greece, Ireland, Israel, Italy, Jordan, Lebanon, Libya, Liechtenstein, Luxembourg, Madagascar, Mali, Malta, Morocco, Mauritania, Monaco, Nigeria, Norway, the Netherlands, Poland, Syria, the United Kingdom, Senegal, Slovenia, Sweden, Switzerland, Swaziland, Togo, Tunisia, Turkey and Yugoslavia the band 47-68 MHz, in Romania the band 47-58 MHz and in the Czech Republic the band 66-68 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 band referred to in this footnote shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations of countries other than those mentioned in connection with the band. (WRC-97)

- S5.165** *Additional allocation:* in Angola, Cameroon, the Congo, Madagascar, Mozambique, Somalia, Sudan, Tanzania and Chad, the band 47 - 68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.166** *Alternative allocation:* in New Zealand, the band 50 - 51 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis; the band 53 - 54 MHz is allocated to the fixed and mobile services on a primary basis.
- S5.167** *Alternative allocation:* in Bangladesh, Brunei Darussalam, India, Indonesia, the Islamic Republic of Iran, Malaysia, Pakistan, Singapore and Thailand, the band 50 - 54 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis.
- S5.168** *Additional allocation:* in Australia, China and the Democratic People's Republic of Korea, the band 50 - 54 MHz is also allocated to the broadcasting service on a primary basis.
- S5.169** *Alternative allocation:* in Botswana, Burundi, Lesotho, Malawi, Namibia, Rwanda, South Africa, Swaziland, Zaire, Zambia and Zimbabwe, the band 50 - 54 MHz is allocated to the amateur service on a primary basis.
- S5.170** *Additional allocation:* in New Zealand, the band 51 - 53 MHz is also allocated to the fixed and mobile services on a primary basis.
- S5.171** *Additional allocation:* in Botswana, Burundi, Lesotho, Malawi, Mali, Namibia, Rwanda, South Africa, Swaziland, Zaire and Zimbabwe, the band 54 - 68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.172** *Different category of service:* in the French Overseas Departments in Region 2, Guyana, Jamaica and Mexico, the allocation of the band 54 - 68 MHz to the fixed and mobile services is on a primary basis (see No. **S5.33**).
- S5.173** *Different category of service:* in the French Overseas Departments in Region 2, Guyana, Jamaica and Mexico, the allocation of the band 68 - 72 MHz to the fixed and mobile services is on a primary basis (see No. **S5.33**).
- S5.174** *Alternative allocation:* in Bulgaria, Hungary, Poland and Romania, the band 68-73 MHz is allocated to the broadcasting service on a primary basis and used in accordance with the decisions in the Final Acts of the Special Regional Conference (Geneva, 1960). (WRC-97)
- S5.175** *Alternative allocation:* in Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the bands 68 - 73 MHz and 76 - 87.5 MHz are allocated to the broadcasting service on a primary basis. The services to which these bands are allocated in other countries and the broadcasting service in the countries listed above are subject to agreements with the neighbouring countries concerned.
- S5.176** *Additional allocation:* in Australia, China, the Republic of Korea, the Philippines, the Democratic People's Republic of Korea and Western Samoa,

the band 68 - 74 MHz is also allocated to the broadcasting service on a primary basis.

S5.177 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Russian Federation, Tajikistan, Turkmenistan and Ukraine, the band 73-74 MHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. **S9.21**. (WRC-97)

S5.178 *Additional allocation:* in Colombia, Costa Rica, Cuba, El Salvador, Guatemala, Guyana, Honduras and Nicaragua, the band 73 - 74.6 MHz is also allocated to the fixed and mobile services on a secondary basis.

S5.179 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, China, Georgia, Kazakstan, Latvia, Lithuania, Moldova, Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the bands 74.6 - 74.8 MHz and 75.2 - 75.4 MHz are also allocated to the aeronautical radionavigation service, on a primary basis, for ground-based transmitters only.

S5.180 The frequency 75 MHz is assigned to marker beacons. Administrations shall refrain from assigning frequencies close to the limits of the guardband to stations of other services which, because of their power or geographical position, might cause harmful interference or otherwise place a constraint on marker beacons.

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

S5.181 *Additional allocation:* in Germany, Austria, Cyprus, Denmark, Egypt, France, Greece, Israel, Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, Syria, Sweden and Switzerland, the band 74.8-75.2 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. **S9.21**. (WRC-97)

S5.182 *Additional allocation:* in Western Samoa, the band 75.4 - 87 MHz is also allocated to the broadcasting service on a primary basis.

S5.183 *Additional allocation:* in China, the Republic of Korea, Japan, the Philippines and the Democratic People's Republic of Korea, the band 76 - 87 MHz is also allocated to the broadcasting service on a primary basis.

S5.184 *Additional allocation:* in Bulgaria and Romania, the band 76-87.5 MHz is also allocated to the broadcasting service on a primary basis and used in accordance with the decisions contained in the Final Acts of the Special Regional Conference (Geneva, 1960). (WRC-97)

- S5.185** *Different category of service:* in the United States, the French Overseas Departments in Region 2, Guyana, Jamaica, Mexico and Paraguay, the allocation of the band 76 - 88 MHz to the fixed and mobile services is on a primary basis (see No. **S5.33**).
- S5.186** (SUP - WRC-97)
- S5.187** *Alternative allocation:* in Albania, the band 81 - 87.5 MHz is allocated to the broadcasting service on a primary basis and used in accordance with the decisions contained in the Final Acts of the Special Regional Conference (Geneva, 1960).
- S5.188** *Additional allocation:* in Australia, the band 85 - 87 MHz is also allocated to the broadcasting service on a primary basis. The introduction of the broadcasting service in Australia is subject to special agreements between the administrations concerned.
- S5.189** Not used
- S5.190** *Additional allocation:* in Monaco, the band 87.5-88 MHz is also allocated to the land mobile service on a primary basis, subject to agreement obtained under No. **S9.21**. (WRC-97)
- S5.191** Not used
- S5.192** *Additional allocation:* in China and the Republic of Korea, the band 100-108 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-97)
- S5.193** Not used
- S5.194** *Additional allocation:* in Azerbaijan, Lebanon, Syria, Kyrgyzstan, Somalia and Turkmenistan, the band 104-108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a secondary basis. (WRC-97)
- S5.195**
and
S5.196 Not used
- S5.197** *Additional allocation:* in Germany, Austria, Cyprus, Denmark, Egypt, France, Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, Pakistan, Syria, and Sweden, the band 108-111.975 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedures invoked under No. **S9.21**. (WRC-97)
- S5.198** *Additional allocation:* the band 117.975-136 MHz is also allocated to the aeronautical mobile-satellite (R) service on a secondary basis, subject to agreement obtained under No. **S9.21**. (WRC-97)
- S5.199** The bands 121.45 - 121.55 MHz and 242.95 - 243.05 MHz are also allocated to the mobile-satellite service for the reception on board satellites of

emissions from emergency position-indicating radiobeacons transmitting at 121.5 MHz and 243 MHz (see Appendix **S13**).

- S5.200** In the band 117.975 - 136 MHz, the frequency 121.5 MHz is the aeronautical emergency frequency and, where required, the frequency 123.1 MHz is the aeronautical frequency auxiliary to 121.5 MHz. Mobile stations of the maritime mobile service may communicate on these frequencies under the conditions laid down in Article **S31** and Appendix **S13** for distress and safety purposes with stations of the aeronautical mobile service.
- S5.201** *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Hungary, the Islamic Republic of Iran, Iraq, Japan, Kazakhstan, Latvia, Moldova, Mongolia, Mozambique, Uzbekistan, Papua New Guinea, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russian Federation, Tajikistan, Turkmenistan and Ukraine, the band 132-136 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service. (WRC-97)
- S5.202** *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Belarus, Bulgaria, United Arab Emirates, Georgia, the Islamic Republic of Iran, Jordan, Kazakhstan, Latvia, Moldova, Oman, Uzbekistan, Poland, Syria, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russian Federation, Tajikistan, Turkmenistan, Turkey and Ukraine, the 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-97)
- S5.203** In the band 136-137 MHz, existing operational meteorological satellites may continue to operate, under the conditions defined in No. **S4.4** with respect to the aeronautical mobile service, until 1 January 2002. Administrations shall not authorize new frequency assignments in this band to stations in the meteorological-satellite service. (WRC-97)
- S5.203A** *Additional allocation:* in Israel, Mauritania, Qatar and Zimbabwe, the band 136-137 MHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a secondary basis until 1 January 2005. (WRC-97)
- S5.203B** *Additional allocation:* in Saudi Arabia, United Arab Emirates, Jordan, Oman and Syria, the band 136-137 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis until 1 January 2005. (WRC-97)
- S5.204** *Different category of service:* in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, Bosnia and Herzegovina, Brunei Darussalam, China, Cuba, the United Arab Emirates, India, Indonesia, the Islamic Republic of Iran, Iraq, Malaysia, Oman, Pakistan, Philippines, Qatar, Singapore, Sri Lanka, Thailand, Yemen and Yugoslavia, the band 137 - 138 MHz is allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis (see No. **S5.33**).

- S5.205** *Different category of service:* in Israel and Jordan, the allocation of the band 137 - 138 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **S5.33**).
- S5.206** *Different category of service:* in Armenia, Austria, Azerbaijan, Belarus, Bulgaria, Egypt, Finland, France, Georgia, Greece, Hungary, Kazakstan, Lebanon, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Syria, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 137 - 138 MHz to the aeronautical mobile (OR) service is on a primary basis (see No. **S5.33**).
- S5.207** *Additional allocation:* in Australia, the band 137 - 144 MHz is also allocated to the broadcasting service on a primary basis until that service can be accommodated within regional broadcasting allocations.
- S5.208** The use of the band 137-138 MHz by the mobile-satellite service is subject to coordination under No. **S9.11A**. (WRC-97)
- S5.208A** In making assignments to space stations in the mobile-satellite service in the bands 137-138 MHz, 387-390 MHz and 400.15-401 MHz, administrations shall take all practicable steps to protect the radio astronomy service in the bands 150.05-153 MHz, 322-328.6 MHz, 406.1-410 MHz and 608-614 MHz from harmful interference from unwanted emissions. The threshold levels of interference detrimental to the radio astronomy service are shown in Table 1 of Recommendation ITU-R RA.769-1. (WRC-97)
- S5.209** 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)
- S5.210** *Additional allocation:* in Austria, France, Italy, Liechtenstein, Slovakia, the Czech Republic, the United Kingdom and Switzerland, the bands 138-143.6 MHz and 143.65-144 MHz are also allocated to the space research service (space-to-Earth) on a secondary basis. (WRC-97)
- S5.211** *Additional allocation:* in Germany, Saudi Arabia, Austria, Bahrain, Belgium, Bosnia and Herzegovina, Denmark, the United Arab Emirates, Spain, Finland, Greece, Ireland, Israel, Kenya, Kuwait, The Former Yugoslav Republic of Macedonia, Liechtenstein, Luxembourg, Mali, Malta, Norway, the Netherlands, Qatar, the United Kingdom, Slovenia, Somalia, Sweden, Switzerland, Tanzania, Tunisia, Turkey and Yugoslavia, the band 138 - 144 MHz is also allocated to the maritime mobile and land mobile services on a primary basis.
- S5.212** *Alternative allocation:* in Angola, Botswana, Burundi, Cameroon, the Central African Republic, the Congo, Gabon, Gambia, Ghana, Guinea, Iraq, Jordan, Lesotho, Liberia, Libya, Malawi, Mozambique, Namibia, Nigeria, Oman, Rwanda, Sierra Leone, South Africa, Swaziland, Chad, Togo, Zaire, Zambia and Zimbabwe, the band 138 - 144 MHz is allocated to the fixed and mobile services on a primary basis.
- S5.213** *Additional allocation:* in China, the band 138 - 144 MHz is also allocated to the radiolocation service on a primary basis.

- S5.214** *Additional allocation:* in Bosnia and Herzegovina, Croatia, Eritrea, Ethiopia, Kenya, The Former Yugoslav Republic of Macedonia, Malta, Slovenia, Somalia, Sudan, Tanzania and Yugoslavia, the band 138 - 144 MHz is also allocated to the fixed service on a primary basis.
- S5.215** Not used
- S5.216** *Additional allocation:* in China, the band 144 - 146 MHz is also allocated to the aeronautical mobile (OR) service on a secondary basis.
- S5.217** *Alternative allocation:* in Afghanistan, Bangladesh, Cuba, Guyana and India, the band 146 - 148 MHz is allocated to the fixed and mobile services on a primary basis.
- S5.218** *Additional allocation:* the band 148 - 149.9 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No. **S9.21**. The bandwidth of any individual transmission shall not exceed ± 25 kHz.
- S5.219** The use of the band 148 - 149.9 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-97)/No. S9.11A**. The mobile-satellite service shall not constrain the development and use of the fixed, mobile and space operation services in the band 148 - 149.9 MHz.
- S5.220** The use of the bands 149.9-150.05 MHz and 399.9-400.05 MHz by the mobile-satellite service is subject to coordination under No. **S9.11A**. The mobile-satellite service shall not constrain the development and use of the radionavigation-satellite service in the bands 149.9-150.05 MHz and 399.9-400.05 MHz. (WRC-97)
- S5.221** Stations of the mobile-satellite service in the band 148-149.9 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services operating in accordance with the Table of Frequency Allocations in the following countries: Albania, Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Benin, Bosnia and Herzegovina, Brunei Darussalam, Bulgaria, Cameroon, China, Cyprus, Congo, the Republic of Korea, Croatia, Cuba, Denmark, Egypt, the United Arab Emirates, Eritrea, Spain, Estonia, Ethiopia, Finland, France, Gabon, Ghana, Greece, Guinea, Guinea Bissau, Hungary, India, the Islamic Republic of Iran, Ireland, Iceland, Israel, Italy, Jamaica, Japan, Jordan, Kazakstan, Kenya, Kuwait, Latvia, The Former Yugoslav Republic of Macedonia, Lebanon, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Moldova, Mongolia, Mozambique, Namibia, Norway, New Zealand, Oman, Uganda, Uzbekistan, Pakistan, Panama, Papua New Guinea, Paraguay, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Kyrgyzstan, Slovakia, Romania, the United Kingdom, Russian Federation, Senegal, Sierra Leone, Singapore, Slovenia, Sri Lanka, South Africa, Sweden, Switzerland, Swaziland, Tanzania, Chad, Thailand, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Viet Nam, Yemen, Yugoslavia, Zambia, and Zimbabwe. (WRC-97)
- S5.222** Emissions of the radionavigation-satellite service in the bands 149.9 - 150.05 MHz and 399.9 - 400.05 MHz may also be used by receiving earth stations of the space research service.

- S5.223** Recognizing that the use of the band 149.9 - 150.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation-satellite service, administrations are urged not to authorize such use in application of No. **S4.4**.
- S5.224** (SUP - WRC-97)
- S5.224A** The use of the bands 149.9-150.05 MHz and 399.9-400.05 MHz by the mobile-satellite service (Earth-to-space) is limited to the land mobile-satellite service (Earth-to-space) until 1 January 2015. (WRC-97)
- S5.224B** The allocation of the bands 149.9-150.05 MHz and 399.9-400.05 MHz to the radionavigation-satellite service shall be effective until 1 January 2015. (WRC-97)
- S5.225** *Additional allocation:* in Australia and India, the band 150.05 - 153 MHz is also allocated to the radio astronomy service on a primary basis.
- S5.226** The frequency 156.8 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service. The conditions for the use of this frequency are contained in Article **S31** and Appendix **S13**.
- In the bands 156 - 156.7625 MHz, 156.8375 - 157.45 MHz, 160.6 - 160.975 MHz and 161.475 - 162.05 MHz, each administration shall give priority to the maritime mobile service on only such frequencies as are assigned to stations of the maritime mobile service by the administration (see Articles **S31** and **S52**, and Appendix **S13**).
- Any use of frequencies in these bands by stations of other services to which they are allocated should be avoided in areas where such use might cause harmful interference to the maritime mobile VHF radiocommunication service.
- However, the frequency 156.8 MHz and the frequency bands in which priority is given to the maritime mobile service may be used for radiocommunications on inland waterways subject to agreement between interested and affected administrations and taking into account current frequency usage and existing agreements.
- S5.227** In the maritime mobile VHF service the frequency 156.525 MHz is to be used exclusively for digital selective calling for distress, safety and calling (see Resolution **323 (Mob-87)**). The conditions for the use of this frequency are prescribed in Articles **S31** and **S52**, and Appendices **S13** and **S18**.
- S5.228** Not used
- S5.229** *Alternative allocation:* in Morocco, the band 162 - 174 MHz is allocated to the broadcasting service on a primary basis. The use of this band shall be subject to agreement with administrations having services, operating or planned, in accordance with the Table which are likely to be affected. Stations in existence on 1 January 1981, with their technical characteristics as of that date, are not affected by such agreement.
- S5.230**

- Additional allocation:* in China, the band 163 - 167 MHz is also allocated to the space operation service (space-to-Earth) on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.231** *Additional allocation:* in Afghanistan, China and Pakistan, the band 167 - 174 MHz is also allocated to the broadcasting service on a primary basis. The introduction of the broadcasting service into this band shall be subject to agreement with the neighbouring countries in Region 3 whose services are likely to be affected.
- S5.232** *Additional allocation:* in Japan, the band 170 - 174 MHz is also allocated to the broadcasting service on a primary basis.
- S5.233** *Additional allocation:* in China, the band 174 - 184 MHz is also allocated to the space research (space-to-Earth) and the space operation (space-to-Earth) services on a primary basis, subject to agreement obtained under No. **S9.21**. These services shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations.
- S5.234** *Different category of service:* in Mexico, the allocation of the band 174 - 216 MHz to the fixed and mobile services is on a primary basis (see No. **S5.33**).
- S5.235** *Additional allocation:* in Germany, Austria, Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Malta, Monaco, Norway, the Netherlands, the United Kingdom, Sweden and Switzerland, the band 174 - 223 MHz is also allocated to the land mobile service on a primary basis. However, the stations of the land mobile service shall not cause harmful interference to, or claim protection from, broadcasting stations, existing or planned, in countries other than those listed in this footnote.
- S5.236** Not used
- S5.237** *Additional allocation:* in the Congo, Eritrea, Ethiopia, Gambia, Guinea, Libya, Malawi, Mali, Senegal, Sierra Leone, Somalia, Tanzania and Zimbabwe, the band 174-223 MHz is also allocated to the fixed and mobile services on a secondary basis. (WRC-97)
- S5.238** *Additional allocation:* in Bangladesh, India, Pakistan and the Philippines, the band 200 - 216 MHz is also allocated to the aeronautical radionavigation service on a primary basis.
- S5.239** Not used
- S5.240** *Additional allocation:* in China and India, the band 216 - 223 MHz is also allocated to the aeronautical radionavigation service on a primary basis and to the radiolocation service on a secondary basis.
- S5.241** In Region 2, no new stations in the radiolocation service may be authorized in the band 216 - 225 MHz. Stations authorized prior to 1 January 1990 may continue to operate on a secondary basis.
- S5.242** *Additional allocation:* in Canada, the band 216 - 220 MHz is also allocated to the land mobile service on a primary basis.
- S5.243** *Additional allocation:* in Somalia, the band 216 - 225 MHz is also allocated to the aeronautical radionavigation service on a primary basis, subject

to not causing harmful interference to existing or planned broadcasting services in other countries.

S5.244 (SUP - WRC-97)

S5.245 *Additional allocation:* in Japan, the band 222 - 223 MHz is also allocated to the aeronautical radionavigation service on a primary basis and to the radiolocation service on a secondary basis.

S5.246 *Alternative allocation:* in Spain, France, Israel and Monaco, the band 223 - 230 MHz is allocated to the broadcasting and land mobile services on a primary basis (see No. **S5.33**) on the basis that, in the preparation of frequency plans, the broadcasting service shall have prior choice of frequencies; and allocated to the fixed and mobile, except land mobile, services on a secondary basis. However, the stations of the land mobile service shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations in Morocco and Algeria.

S5.247 *Additional allocation:* in Saudi Arabia, Bahrain, the United Arab Emirates, Jordan, Oman, Qatar and Syria, the band 223 - 235 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

S5.248
and
S5.249 Not used

S5.250 *Additional allocation:* in China, the band 225 - 235 MHz is also allocated to the radio astronomy service on a secondary basis.

S5.251 *Additional allocation:* in Nigeria, the band 230 - 235 MHz is also allocated to the aeronautical radionavigation service on a primary basis, subject to agreement obtained under No. **S9.21**.

S5.252 *Alternative allocation:* in Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the bands 230 - 238 MHz and 246 - 254 MHz are allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. **S9.21**.

S5.253 Not used

S5.254 The bands 235 - 322 MHz and 335.4 - 399.9 MHz may be used by the mobile-satellite service, subject to agreement obtained under No. **S9.21**, on condition that stations in this service do not cause harmful interference to those of other services operating or planned to be operated in accordance with the Table of Frequency Allocations.

S5.255 The bands 312 - 315 MHz (Earth-to-space) and 387 - 390 MHz (space-to-Earth) in the mobile-satellite service may also be used by non-geostationary-satellite systems. Such use is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**.

S5.256 The frequency 243 MHz is the frequency in this band for use by survival craft stations and equipment used for survival purposes (see Appendix **S13**).

S5.257

The band 267 - 272 MHz may be used by administrations for space telemetry in their countries on a primary basis, subject to agreement obtained under No. **S9.21**.

S5.258 The use of the band 328.6 - 335.4 MHz by the aeronautical radionavigation service is limited to Instrument Landing Systems (glide path).

S5.259 *Additional allocation:* in Germany, Austria, Cyprus, the Republic of Korea, Denmark, Egypt, Spain, France, Greece, Israel, Italy, Japan, Jordan, Malta, Morocco, Monaco, Norway, the Netherlands, Syria and Sweden, the band 328.6-335.4 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. **S9.21**. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. **S9.21**. (WRC-97)

S5.260 Recognizing that the use of the band 399.9 - 400.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation satellite service, administrations are urged not to authorize such use in application of No. **S4.4**.

S5.261 Emissions shall be confined in a band of ± 25 kHz about the standard frequency 400.1 MHz.

S5.262 *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Bulgaria, Colombia, Costa Rica, Cuba, Egypt, the United Arab Emirates, Ecuador, Estonia, Georgia, Hungary, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kazakstan, Kuwait, Liberia, Malaysia, Moldova, Nigeria, Uzbekistan, Pakistan, the Philippines, Qatar, Syria, Kyrgyzstan, Slovakia, Romania, Russia, Singapore, Somalia, Sri Lanka, Tajikistan, Turkmenistan, Ukraine and Yugoslavia, the band 400.05 - 401 MHz is also allocated to the fixed and mobile services on a primary basis.

S5.263 The band 400.15 - 401 MHz is also allocated to the space research service in the space-to-space direction for communications with manned space vehicles. In this application, the space research service will not be regarded as a safety service.

S5.264 The use of the band 400.15 - 401 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**. The power flux-density limit indicated in Annex 2 of Resolution **46 (Rev. WRC-95)/Annex 1** of Appendix **S5** shall apply until such time as a competent world radiocommunication conference revises it.

S5.265 Not used

S5.266 The use of the band 406 - 406.1 MHz by the mobile-satellite service is limited to low power satellite emergency position-indicating radiobeacons (see also Article **S31** and Appendix **S13**).

S5.267 Any emission capable of causing harmful interference to the authorized uses of the band 406 - 406.1 MHz is prohibited.

- S5.268** Use of the band 410-420 MHz by the space research service is limited to communications within 5 km of an orbiting, manned space vehicle. The power flux-density at the surface of the Earth produced by emissions from extra-vehicular activities shall not exceed $-153 \text{ dB(W/m}^2\text{)}$ for $0^\circ \leq \delta \leq 5^\circ$, $-153 + 0.077 (\delta - 5) \text{ dB(W/m}^2\text{)}$ for $5^\circ \leq \delta \leq 70^\circ$ and $-148 \text{ dB(W/m}^2\text{)}$ for $70^\circ \leq \delta \leq 90^\circ$, where δ is the angle of arrival of the radio-frequency wave and the reference bandwidth is 4 kHz. No. **S4.10** does not apply to extra-vehicular activities. In this frequency band the space research (space-to-space) service shall not claim protection from, nor constrain the use and development of, stations of the fixed and mobile services. (WRC-97)
- S5.269** *Different category of service:* in Australia, the United States, India, Japan and the United Kingdom, the allocation of the bands 420 - 430 MHz and 440 - 450 MHz to the radiolocation service is on a primary basis (see No. **S5.33**).
- S5.270** *Additional allocation:* in Australia, the United States, Jamaica and the Philippines, the bands 420 - 430 MHz and 440 - 450 MHz are also allocated to the amateur service on a secondary basis.
- S5.271** *Additional allocation:* in Azerbaijan, Belarus, China, Estonia, India, Latvia, Lithuania, Kyrgyzstan, Turkmenistan and Ukraine, the band 420-460 MHz is also allocated to the aeronautical radionavigation service (radio altimeters) on a secondary basis. (WRC-97)
- S5.272** *Different category of service:* in France, the allocation of the band 430 - 434 MHz to the amateur service is on a secondary basis (see No. **S5.32**).
- S5.273** *Different category of service:* in Denmark, Libya and Norway, the allocation of the bands 430 - 432 MHz and 438 - 440 MHz to the radiolocation service is on a secondary basis (see No. **S5.32**).
- S5.274** *Alternative allocation:* in Denmark, Norway and Sweden, the bands 430 - 432 MHz and 438 - 440 MHz are allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- S5.275** *Additional allocation:* in Bosnia and Herzegovina, Croatia, Estonia, Finland, Latvia, The Former Yugoslav Republic of Macedonia, Libya, Slovenia and Yugoslavia, the bands 430-432 MHz and 438-440 MHz are also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-97)
- S5.276** *Additional allocation:* in Afghanistan, Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burkina Faso, Burundi, Egypt, the United Arab Emirates, Ecuador, Eritrea, Ethiopia, Greece, Guinea, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Italy, Jordan, Kenya, Kuwait, Lebanon, Libya, Liechtenstein, Malaysia, Malta, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Democratic People's Republic of Korea, Singapore, Somalia, Switzerland, Tanzania, Thailand, Togo, Turkey and Yemen, the band 430 - 440 MHz is also allocated to the fixed service on a primary basis and the bands 430 - 435 MHz and 438 - 440 MHz are also allocated to the mobile, except aeronautical mobile, service on a primary basis.
- S5.277** *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Cameroon, the Congo, Djibouti, Gabon, Georgia, Hungary, Kazakstan, Latvia,

Mali, Moldova, Mongolia, Uzbekistan, Pakistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russian Federation, Rwanda, Tajikistan, Chad, Turkmenistan and Ukraine, the band 430-440 MHz is also allocated to the fixed service on a primary basis. (WRC-97)

S5.278 *Different category of service:* in Argentina, Colombia, Costa Rica, Cuba, Guyana, Honduras, Panama and Venezuela, the allocation of the band 430 - 440 MHz to the amateur service is on a primary basis (see No. **S5.33**).

S5.279 *Additional allocation:* in Mexico, the bands 430 - 435 MHz and 438 - 440 MHz are also allocated on a primary basis to the land mobile service, subject to agreement obtained under No. **S9.21**.

S5.280 In Germany, Austria, Bosnia and Herzegovina, Croatia, The Former Yugoslav Republic of Macedonia, Liechtenstein, Portugal, Slovenia, Switzerland and Yugoslavia, the band 433.05 - 434.79 MHz (centre frequency 433.92 MHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services of these countries operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. **S15.13**.

S5.281 *Additional allocation:* in the French Overseas Departments in Region 2 and India, the band 433.75 - 434.25 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis. In France and in Brazil, the band is allocated to the same service on a secondary basis.

S5.282 In the bands 435 - 438 MHz, 1 260 - 1 270 MHz, 2 400 - 2 450 MHz, 3 400 - 3 410 MHz (in Regions 2 and 3 only) and 5 650 - 5 670 MHz, the amateur-satellite service may operate subject to not causing harmful interference to other services operating in accordance with the Table (see No. **S5.43**). Administrations authorizing such use shall ensure that any harmful interference caused by emissions from a station in the amateur-satellite service is immediately eliminated in accordance with the provisions of No. **S25.11**. The use of the bands 1 260 - 1 270 MHz and 5 650 - 5 670 MHz by the amateur-satellite service is limited to the Earth-to-space direction.

S5.283 *Additional allocation:* in Austria, the band 438 - 440 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

S5.284 *Additional allocation:* in Canada, the band 440 - 450 MHz is also allocated to the amateur service on a secondary basis.

S5.285 *Different category of service:* in Canada, the allocation of the band 440 - 450 MHz to the radiolocation service is on a primary basis (see No. **S5.33**).

S5.286 The band 449.75 - 450.25 MHz may be used for the space operation service (Earth-to-space) and the space research service (Earth-to-space), subject to agreement obtained under No. **S9.21**.

S5.286A The use of the bands 454-456 MHz and 459-460 MHz by the mobile-satellite service is subject to coordination under No. **S9.11A**. (WRC-97)

S5.286B

The use of the band 454-455 MHz in the countries listed in No. **S5.286D**, 455-456 MHz and 459-460 MHz in Region 2, and 454-456 MHz and 459-460 MHz in the countries listed in No. **S5.286E**, 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)

S5.286C The use of the band 454-455 MHz in the countries listed in No. **S5.286D**, 455-456 MHz and 459-460 MHz in Region 2, and 454-456 MHz and 459-460 MHz in the countries listed in No. **S5.286E**, 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)

S5.286D *Additional allocation:* in Canada, the United States, Mexico and Panama, the band 454-455 MHz is also allocated to the mobile-satellite service (Earth-to-space) on a primary basis. (WRC-97)

S5.286E *Additional allocation:* in Cape Verde, Indonesia, Nepal, Nigeria and Papua New Guinea, 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-97)

S5.287 In the maritime mobile service, the frequencies 457.525 MHz, 457.550 MHz, 457.575 MHz, 467.525 MHz, 467.550 MHz and 467.575 MHz may be used by on-board communication stations. Where needed, equipment designed for 12.5 kHz channel spacing using also the additional frequencies 457.5375 MHz, 457.5625 MHz, 467.5375 MHz and 467.5625 MHz may be introduced for on-board communications. The use of these frequencies in territorial waters may be subject to the national regulations of the administration concerned. The characteristics of the equipment used shall conform to those specified in Recommendation ITU-R M.1174 (see Resolution **341 (WRC-97)**). (WRC-97)

S5.288 In the territorial waters of the United States and the Philippines, the preferred frequencies for use by on-board communication stations shall be 457.525 MHz, 457.550 MHz, 457.575 MHz and 457.600 MHz paired, respectively, with 467.750 MHz, 467.775 MHz, 467.800 MHz and 467.825 MHz. The characteristics of the equipment used shall conform to those specified in Recommendation ITU-R M.1174.

S5.289 Earth exploration-satellite service applications, other than the meteorological-satellite service, may also be used in the bands 460 - 470 MHz and 1 690 - 1 710 MHz for space-to-Earth transmissions subject to not causing harmful interference to stations operating in accordance with the Table.

S5.290 *Different category of service:* in Afghanistan, Armenia, Azerbaijan, Belarus, China, Japan, Kazakstan, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russian Federation, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 460-470 MHz to the meteorological-satellite service (space-to-Earth) is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21**. (WRC-97)

- S5.291** *Additional allocation:* in China, the band 470 - 485 MHz is also allocated to the space research (space-to-Earth) and the space operation (space-to-Earth) services on a primary basis subject to agreement obtained under No. **S9.21** and subject to not causing harmful interference to existing and planned broadcasting stations.
- S5.291A** *Additional allocation:* in Germany, Austria, Denmark, Estonia, Finland, Liechtenstein, Norway, Netherlands, the Czech Republic and Switzerland, the 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-97)
- S5.292** *Different category of service:* in Mexico and Venezuela, the allocation of the band 470 - 512 MHz to the fixed and mobile services, and in Argentina and Uruguay to the mobile service, is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21**.
- S5.293** *Different category of service:* in Chile, Colombia, Cuba, the United States, Guyana, Honduras, Jamaica, Mexico and Panama, the allocation of the bands 470 - 512 MHz and 614 - 806 MHz to the fixed and mobile services is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21**.
- S5.294** *Additional allocation:* in Burundi, Cameroon, the Congo, Ethiopia, Israel, Kenya, Lebanon, Libya, Malawi, Senegal, Sudan, Syria, and Yemen, the band 470 - 582 MHz is also allocated to the fixed service on a secondary basis.
- S5.295** Not used
- S5.296** *Additional allocation:* in Germany, Austria, Belgium, Cyprus, Denmark, Spain, Finland, France, Ireland, Israel, Italy, Libya, Malta, Morocco, Monaco, Norway, the Netherlands, Portugal, Syria, the United Kingdom, Sweden, Switzerland, Swaziland and Tunisia, the band 470-790 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting. Stations of the land mobile service in the countries listed in this footnote shall not cause harmful interference to existing or planned stations operating in accordance with the Table of Frequency Allocations in countries other than those listed in this footnote. (WRC-97)
- S5.297** *Additional allocation:* in Costa Rica, Cuba, El Salvador, the United States, Guatemala, Guyana, Honduras, Jamaica, Mexico and Venezuela, the band 512 - 608 MHz is also allocated to the fixed and mobile services on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.298** *Additional allocation:* in India, the band 549.75 - 550.25 MHz is also allocated to the space operation service (space-to-Earth) on a secondary basis.
- S5.299** Not used
- S5.300** *Additional allocation:* in Israel, Libya, Syria and Sudan, the band 582 - 790 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis.
- S5.301** Not used

- S5.302** *Additional allocation:* in the United Kingdom, the band 590 - 598 MHz is also allocated to the aeronautical radionavigation service on a primary basis. All new assignments to stations in the aeronautical radionavigation service, including those transferred from the adjacent bands, shall be subject to coordination with the Administrations of the following countries: Germany, Belgium, Denmark, Spain, France, Ireland, Luxembourg, Morocco, Norway and the Netherlands.
- S5.303** Not used
- S5.304** *Additional allocation:* in the African Broadcasting Area (see Nos. **S5.10** to **S5.13**), the band 606 - 614 MHz is also allocated to the radio astronomy service on a primary basis.
- S5.305** *Additional allocation:* in China, the band 606 - 614 MHz is also allocated to the radio astronomy service on a primary basis.
- S5.306** *Additional allocation:* in Region 1, except in the African Broadcasting Area (see Nos. **S5.10** to **S5.13**), and in Region 3, the band 608 - 614 MHz is also allocated to the radio astronomy service on a secondary basis.
- S5.307** *Additional allocation:* in India, the band 608 - 614 MHz is also allocated to the radio astronomy service on a primary basis.
- S5.308** Not used
- S5.309** *Different category of service:* in Costa Rica, El Salvador and Honduras, the allocation of the band 614 - 806 MHz to the fixed service is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21**.
- S5.310** (SUP - WRC-97)
- S5.311** Within the frequency band 620 - 790 MHz, assignments may be made to television stations using frequency modulation in the broadcasting-satellite service subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected (see Resolutions **33** and **507**). Such stations shall not produce a power flux-density in excess of the value -129 dB(W/m²) for angles of arrival less than 20° (see Recommendation **705**) within the territories of other countries without the consent of the administrations of those countries.
- S5.312** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Latvia, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russian Federation, Tajikistan, Turkmenistan and Ukraine, the band 645-862 MHz is also allocated to the aeronautical radionavigation service on a primary basis. (WRC-97)
- S5.313** (SUP - WRC-97)
- S5.314** *Additional allocation:* in Austria, Italy, Uzbekistan, the United Kingdom and Swaziland, the band 790-862 MHz is also allocated to the land mobile service on a secondary basis. (WRC-97)
- S5.315** *Alternative allocation:* in Greece, Italy, Morocco and Tunisia, the band 790 - 838 MHz is allocated to the broadcasting service on a primary basis.

- S5.316** *Additional allocation:* in Germany, Bosnia and Herzegovina, Burkina Faso, Cameroon, Côte d'Ivoire, Croatia, Denmark, Egypt, Finland, Israel, Kenya, the Former Yugoslav Republic of Macedonia, Libya, Liechtenstein, Monaco, Norway, the Netherlands, Portugal, Syria, Sweden, Switzerland and Yugoslavia, the band 790-830 MHz, and in these same countries and in Spain, France, Gabon and Malta, the band 830-862 MHz, are also allocated to the mobile, except aeronautical mobile, service on a primary basis. However, stations of the mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, stations of services operating in accordance with the Table in countries other than those mentioned in connection with the band.
(WRC-97)
- S5.317** *Additional allocation:* in Region 2 (except Brazil and the United States), the band 806 - 890 MHz is also allocated to the mobile-satellite service on a primary basis, subject to agreement obtained under No. **S9.21**. The use of this service is intended for operation within national boundaries.
- S5.318** *Additional allocation:* in Canada, the United States and Mexico, the bands 849 - 851 MHz and 894 - 896 MHz are also allocated to the aeronautical mobile service on a primary basis, for public correspondence with aircraft. The use of the band 849 - 851 MHz is limited to transmissions from aeronautical stations and the use of the band 894 - 896 MHz is limited to transmissions from aircraft stations.
- S5.319** *Additional allocation:* in Belarus, Russia and Ukraine, the bands 806 - 840 MHz (Earth-to-space) and 856 - 890 MHz (space-to-Earth) are also allocated to the mobile-satellite, except aeronautical mobile-satellite (R), service. The use of these bands by this service shall not cause harmful interference to, or claim protection from, services in other countries operating in accordance with the Table of Frequency Allocations and is subject to special agreements between the administrations concerned.
- S5.320** *Additional allocation:* in Region 3, the bands 806 - 890 MHz and 942 - 960 MHz are also allocated to the mobile-satellite, except aeronautical mobile-satellite (R), service on a primary basis, subject to agreement obtained under No. **S9.21**. The use of this service is limited to operation within national boundaries. In seeking such agreement, appropriate protection shall be afforded to services operating in accordance with the Table, to ensure that no harmful interference is caused to such services.
- S5.321** *Alternative allocation:* in Italy, the band 838 - 854 MHz is allocated to the broadcasting service on a primary basis as from 1 January 1995.
- S5.322** In Region 1, in the band 862-960 MHz, stations of the broadcasting service shall be operated only in the African Broadcasting Area (see Nos. **S5.10** to **S5.13**) excluding Algeria, Egypt, Spain, Libya, Morocco, Nigeria, South Africa, Tanzania and Zimbabwe, subject to agreement obtained under No. **S9.21**. (WRC-97)
- S5.323** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Hungary, Kazakstan, Latvia, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russian Federation,

Tajikistan, Turkmenistan and Ukraine, the band 862-960 MHz is also allocated to the aeronautical radionavigation service on a primary basis. Such use is subject to agreement obtained under No. **S9.21** with administrations concerned and limited to ground-based radiobeacons in operation on 27 October 1997 until the end of their lifetime. (WRC-97)

- S5.324** Not used
- S5.325** *Different category of service:* in the United States, the allocation of the band 890 - 942 MHz to the radiolocation service is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21**.
- S5.326** *Different category of service:* in Chile, the band 903 - 905 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis, subject to agreement obtained under No. **S9.21**.
- S5.327** *Different category of service:* in Australia, the allocation of the band 915 - 928 MHz to the radiolocation service is on a primary basis (see No. **S5.33**).
- S5.328** The band 960 - 1 215 MHz is reserved on a worldwide basis for the use and development of airborne electronic aids to air navigation and any directly associated ground-based facilities.
- S5.329** Use of the radionavigation-satellite service in the band 1 215 - 1 260 MHz shall be subject to the condition that no harmful interference is caused to the radionavigation service authorized under No. **S5.331**.
- S5.330** *Additional allocation:* in Angola, Saudi Arabia, Bahrain, Bangladesh, Cameroon, China, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Morocco, Mozambique, Nepal, Nigeria, Pakistan, the Philippines, Qatar, Syria, Somalia, Sudan, Sri Lanka, 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-97)
- S5.331** *Additional allocation:* in Algeria, Germany, Austria, Bahrain, Belgium, Benin, Bosnia and Herzegovina, Burundi, Cameroon, China, Croatia, Denmark, the United Arab Emirates, France, Greece, India, the Islamic Republic of Iran, Iraq, Kenya, The Former Yugoslav Republic of Macedonia, Liechtenstein, Luxembourg, Mali, Mauritania, Norway, Oman, Pakistan, the Netherlands, Portugal, Qatar, Senegal, Slovenia, Somalia, Sudan, Sri Lanka, Sweden, Switzerland, Turkey and Yugoslavia, the band 1 215 - 1 300 MHz is also allocated to the radionavigation service on a primary basis.
- S5.332** In the band 1 215-1 300 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, the radionavigation-satellite service and other services allocated on a primary basis. (WRC-97)
- S5.333** (SUP - WRC-97)

- S5.334** *Additional allocation:* in Canada and the United States, the bands 1 240 - 1 300 MHz and 1 350 - 1 370 MHz are also allocated to the aeronautical radionavigation service on a primary basis.
- S5.335** 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)
- S5.337** The use of the bands 1 300 - 1 350 MHz, 2 700 - 2 900 MHz and 9 000 - 9 200 MHz by the aeronautical radionavigation service is restricted to ground-based radars and to associated airborne transponders which transmit only on frequencies in these bands and only when actuated by radars operating in the same band.
- S5.338** In Azerbaijan, Bulgaria, Mongolia, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Turkmenistan and Ukraine, existing installations of the radionavigation service may continue to operate in the band 1 350-1 400 MHz. (WRC-97)
- S5.339** The bands 1 370 - 1 400 MHz, 2 640 - 2 655 MHz, 4 950 - 4 990 MHz and 15.20 - 15.35 GHz are also allocated to the space research (passive) and earth exploration-satellite (passive) services on a secondary basis.
- S5.340** All emissions are prohibited in the following bands:
- 1 400-1 427 MHz,
- 2 690-2 700 MHz, except those provided for by Nos. **S5.421** and **S5.422**,
- 10.68-10.7 GHz, except those provided for by No. **S5.483**,
- 15.35-15.4 GHz, except those provided for by No. **S5.511**,
- 23.6-24 GHz,

31.3-31.5 GHz,
 31.5-31.8 GHz, in Region 2,
 48.94-49.04 GHz, from airborne stations,
 50.2-50.4 GHz², except those provided for by No. **S5.555A**,
 52.6-54.25 GHz,
 86-92 GHz,
 105-116 GHz,
 140.69-140.98 GHz, from airborne stations and from space stations in the
 space-to-Earth direction,
 182-185 GHz, except those provided for by No. **S5.563**,
 217-231 GHz.

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S5.341

¹ The allocation to the earth exploration-satellite services (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.

S5.342

Additional allocation: in Belarus, Russia and Ukraine, the band 1 429 - 1 535 MHz is also allocated to the aeronautical mobile service on a primary basis exclusively for the purposes of aeronautical telemetry within the national territory. As of 1 April 2007, the use of the band 1 452 - 1 492 MHz is subject to agreement between the administrations concerned.

S5.343

In Region 2, the use of the band 1 435 - 1 535 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile service.

S5.344

Alternative allocation: in the United States, the band 1 452 - 1 525 MHz is allocated to the fixed and mobile services on a primary basis (see also No. **S5.343**).

S5.345

Use of the band 1 452 - 1 492 MHz by the broadcasting-satellite service, and by the broadcasting service, is limited to digital audio broadcasting and is subject to the provisions of Resolution **528 (WARC-92)**.

S5.346

Not used

S5.347

Different category of service: in Bangladesh, Bosnia and Herzegovina, Botswana, Bulgaria, Burkina Faso, Cuba, Denmark, Egypt, Greece, Ireland, Italy, Jordan, Kenya, Mozambique, Portugal, Sri Lanka,

² **S5.340.1** 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)

Swaziland, Yemen, Yugoslavia and Zimbabwe, the allocation of the band 1452-1492 MHz to the broadcasting-satellite service and the broadcasting service is on a secondary basis until 1 April 2007. (WRC-97)

S5.348 The use of the band 1 492 - 1 525 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)**/ No. **S9.11A**. However, no coordination threshold in Article **S21** for space stations of the mobile-satellite service with respect to terrestrial services shall apply to the situation referred to in No. **S5.343**. With respect to the situation referred to in No. **S5.343**, the requirement for coordination in the band 1 492 - 1 525 MHz will be determined by band overlap.

S5.348A In the band 1 492 - 1 525 MHz, the coordination threshold in terms of the power flux-density levels at the surface of the Earth in application of Resolution **46 (Rev.WRC-95)/S.9.11A** for space stations in the mobile-satellite (space-to-Earth) service, with respect to the land mobile service use for specialized mobile radios or used in conjunction with public switched telecommunication networks (PSTN) operating within the territory of Japan, shall be $-150 \text{ dB(W/m}^2\text{)}$ in any 4 kHz band for all angles of arrival, instead of those given in Annex 2 to Resolution **46 (Rev.WRC-95)/Table S5-2** of Appendix **S5**. The above threshold level of the power flux-density shall apply until it is changed by a competent world radiocommunication conference.

S5.349 *Different category of service:* in Saudi Arabia, Azerbaijan, Bahrain, Bosnia and Herzegovina, Cameroon, Egypt, the United Arab Emirates, France, the Islamic Republic of Iran, Iraq, Israel, Kazakstan, Kuwait, The Former Yugoslav Republic of Macedonia, Lebanon, Morocco, Mongolia, Oman, Qatar, Syria, Kyrgyzstan, Romania, Turkmenistan, Ukraine, Yemen and Yugoslavia, the allocation of the band 1 525-1 530 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. **S5.33**). (WRC-97)

S5.350 *Additional allocation:* in Azerbaijan, Kyrgyzstan, Turkmenistan and Ukraine, the band 1 525-1 530 MHz is also allocated to the aeronautical mobile service on a primary basis. (WRC-97)

S5.351 The bands 1 525 - 1 544 MHz, 1 545 - 1 559 MHz, 1 626.5 - 1 645.5 MHz and 1 646.5 - 1 660.5 MHz shall not be used for feeder links of any service. In exceptional circumstances, however, an earth station at a specified fixed point in any of the mobile-satellite services may be authorized by an administration to communicate via space stations using these bands.

S5.352 (SUP - WRC-97).

S5.352A In the 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 France and French overseas territories in Region 3, Algeria, Saudi Arabia, Egypt, Guinea, India, Israel, Italy, Jordan, Kuwait, Mali, Malta, Morocco, Mauritania, Nigeria, Oman, Pakistan, Philippines, Qatar, Syria, Tanzania, Viet Nam and Yemen notified prior to 1 April 1998. (WRC-97)

S5.353 Not used.

- S5.353A** In applying the procedures of No. **S9.11A** 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. (See Resolution **218 (WRC-97)**.) (WRC-97)
- S5.354** The use of the bands 1 525 - 1 559 MHz and 1 626.5 - 1 660.5 MHz by the mobile-satellite services is subject to coordination under Resolution **46 (Rev. WRC-95)**/No. **S9.11A**.
- S5.355** *Additional allocation:* in Bahrain, Bangladesh, the Congo, Egypt, the United Arab Emirates, Eritrea, Ethiopia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Malta, Morocco, Oman, Qatar, Syria, Somalia, Sudan, Sri Lanka, Chad, Togo, Yemen and Zambia, the bands 1 540-1 645.5 MHz and 1 646.5-1 660 MHz are also allocated to the fixed service on a secondary basis. (WRC-97)
- S5.356** The use of the band 1 544 - 1 545 MHz by the mobile-satellite service (space-to-Earth) is limited to distress and safety communications (see Article **S31**).
- S5.357** Transmissions in the band 1 545 - 1 555 MHz from terrestrial aeronautical stations directly to aircraft stations, or between aircraft stations, in the aeronautical mobile (R) service are also authorized when such transmissions are used to extend or supplement the satellite-to-aircraft links.
- S5.358** (SUP - WRC-97)
- S5.359** *Additional allocation:* in Germany, Saudi Arabia, Armenia, Austria, Azerbaijan, Belarus, Benin, Bulgaria, Cameroon, Spain, France, Gabon, Georgia, Greece, Guinea, Guinea-Bissau, Hungary, Jordan, Kazakstan, Kuwait, Latvia, Libya, Mali, Mauritania, Moldova, Mongolia, Nigeria, Uganda, Uzbekistan, Pakistan, Poland, Syria, Kyrgyzstan, the Democratic People's Republic of Korea, Romania, Russian Federation, Senegal, Swaziland, Tajikistan, Tanzania, Turkmenistan, Ukraine, Zambia and Zimbabwe the bands 1 550-1 645.5 MHz and 1 646.5-1 660 MHz are also allocated to the fixed service on a primary basis. Administrations are urged to make all practicable efforts to avoid the implementation of new fixed-service stations in the bands 1 550-1 555 MHz, 1 610-1 645.5 MHz and 1 646.5-1 660 MHz.
- S5.360** (SUP - WRC-97)
- S5.361** (SUP - WRC-97)
- S5.362** (SUP - WRC-97)
- S5.362A** 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 **S44**. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (WRC-97)

S5.362B In the United States, in the bands 1 555 - 1 559 MHz and 1 656.5 - 1660.5 MHz, the aeronautical mobile-satellite (R) service (AMS(R)S) 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, AMS(R)S communications with priority 1 to 6 in Article **S44**. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services.

S5.363 *Alternative allocation:* in Sweden, the band 1 590 - 1 626.5 MHz is allocated to the aeronautical radionavigation service on a primary basis.

S5.364 The use of the band 1 610 - 1 626.5 MHz by the mobile-satellite service (Earth-to-space) and by the radiodetermination-satellite service (Earth-to-space) is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**. A mobile earth station operating in either of the services in this band shall not produce a peak e.i.r.p. density in excess of -15 dB(W/4 kHz) in the part of the band used by systems operating in accordance with the provisions of No. **S5.366** (to which No. **S4.10** applies), unless otherwise agreed by the affected administrations. In the part of the band where such systems are not operating, the mean e.i.r.p. density of a mobile earth station shall not exceed -3 dB(W/4 kHz). Stations of the mobile-satellite service shall not claim protection from stations in the aeronautical radionavigation service, stations operating in accordance with the provisions of No. **S5.366** and stations in the fixed service operating in accordance with the provisions of No. **S5.359**. Administrations responsible for the coordination of mobile-satellite networks shall make all practicable efforts to ensure protection of stations operating in accordance with the provisions of No. **S5.366**.

S5.365 The use of the band 1 613.8 - 1 626.5 MHz by the mobile-satellite service (space-to-Earth) is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**.

S5.366 The band 1 610 - 1 626.5 MHz is reserved on a worldwide basis for the use and development of airborne electronic aids to air navigation and any directly associated ground-based or satellite-borne facilities. Such satellite use is subject to agreement obtained under No. **S9.21**.

S5.367 *Additional allocation:* the bands 1 610 - 1 626.5 MHz and 5 000 - 5 150 MHz are also allocated to the aeronautical mobile-satellite (R) service on a primary basis, subject to agreement obtained under No. **S9.21**.

S5.368 With respect to the radiodetermination-satellite and mobile-satellite services the provisions of No. **S4.10** do not apply in the band 1 610 - 1 626.5 MHz, with the exception of the aeronautical radionavigation-satellite service.

S5.369

Different category of service: in Angola, Australia, Burundi, China, Côte d'Ivoire, Eritrea, Ethiopia, India, the Islamic Republic of Iran, Israel, Jordan, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Dem. Rep. of the Congo, Syria, Senegal, Sudan, Swaziland, 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. **S5.33**), subject to agreement obtained under No. **S9.21** from countries not listed in this provision. (WRC-97)

S5.370 *Different category of service:* in Venezuela, the allocation to the radiodetermination-satellite service in the band 1 610 - 1 626.5 MHz (Earth-to-space) is on a secondary basis.

S5.371 *Additional allocation:* in Region 1, the bands 1 610 - 1 626.5 MHz (Earth-to-space) and 2 483.5 - 2 500 MHz (space-to-Earth) are also allocated to the radiodetermination-satellite service on a secondary basis, subject to agreement obtained under No. **S9.21**.

S5.372 Harmful interference shall not be caused to stations of the radio astronomy service using the band 1 610.6 - 1 613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services (No. **S29.13** applies).

S5.373 Not used

S5.373A (SUP - WRC-97)

S5.374 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. **S5.359**. (WRC-97)

S5.375 The use of the band 1 645.5 - 1 646.5 MHz by the mobile-satellite service (Earth-to-space) and for inter-satellite links is limited to distress and safety communications (see Article **S31**).

S5.376 Transmissions in the band 1 646.5 - 1 656.5 MHz from aircraft stations in the aeronautical mobile (R) service directly to terrestrial aeronautical stations, or between aircraft stations, are also authorized when such transmissions are used to extend or supplement the aircraft-to-satellite links.

S5.376A 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)

S5.377 In the band 1 675 - 1 710 MHz, stations in the mobile-satellite service shall not cause harmful interference to, nor constrain the development of, the meteorological-satellite and meteorological aids services (see Resolution **213 (Rev.WRC-95)**) and the use of this band shall be subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**.

S5.378 Not used

S5.379 *Additional allocation:* in Bangladesh, India, Indonesia, Nigeria and Pakistan, the band 1 660.5 - 1 668.4 MHz is also allocated to the meteorological aids service on a secondary basis.

- S5.379A** Administrations are urged to give all practicable protection in the band 1 660.5 - 1 668.4 MHz for future research in radio astronomy, particularly by eliminating air-to-ground transmissions in the meteorological aids service in the band 1 664.4 - 1 668.4 MHz as soon as practicable.
- S5.380** The bands 1 670 - 1 675 MHz and 1 800 - 1 805 MHz are intended for use, on a worldwide basis, by administrations wishing to implement aeronautical public correspondence. The use of the band 1 670 - 1 675 MHz by stations in the systems for public correspondence with aircraft is limited to transmissions from aeronautical stations and the use of the band 1 800 - 1 805 MHz is limited to transmissions from aircraft stations.
- S5.381** *Additional allocation:* in Afghanistan, Costa Rica, Cuba, India, the Islamic Republic of Iran, Malaysia, Pakistan and Sri Lanka, the band 1 690-1 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-97)
- S5.382** *Different category of service:* in Saudi Arabia, Armenia, Austria, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Bulgaria, the Congo, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guinea, Hungary, Iraq, Israel, Jordan, Kazakstan, Kuwait, the Former Yugoslav Republic of Macedonia, Lebanon, Mauritania, Moldova, Mongolia, Oman, Uzbekistan, Poland, Qatar, Syria, Kyrgyzstan, Romania, Russian Federation, Somalia, Tajikistan, Tanzania, Turkmenistan, Ukraine, Yemen and Yugoslavia, the allocation of the band 1 690-1 700 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **S5.33**), and in the Democratic People's Republic of Korea, the allocation of the band 1 690-1 700 MHz to the fixed service is on a primary basis (see No. **S5.33**) and to the mobile, except aeronautical mobile, service on a secondary basis. (WRC-97)
- S5.383** Not used
- S5.384** *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)
- S5.385** *Additional allocation:* the bands 1 718.8 - 1 722.2 MHz, 150 - 151 GHz, 174.42 - 175.02 GHz, 177 - 177.4 GHz, 178.2 - 178.6 GHz, 181 - 181.46 GHz, 186.2 - 186.6 GHz and 257.5 - 258 GHz are also allocated to the radio astronomy service on a secondary basis for spectral line observations.
- S5.386** *Additional allocation:* the band 1 750 - 1 850 MHz is also allocated to the space operation (Earth-to-space) and space research (Earth-to-space) services in Region 2, in Australia, India, Indonesia and Japan on a primary basis, subject to agreement obtained under No. **S9.21**, having particular regard to troposcatter systems.
- S5.387** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Georgia, Kazakstan, Mali, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russian Federation, Tajikistan, Turkmenistan and Ukraine, the band 1 770-1 790 MHz is also allocated to the meteorological-

satellite service on a primary basis, subject to agreement obtained under No. **S9.21**. (WRC-97)

- S5.388** The bands 1 885-2025 MHz and 2 110-2200 MHz are intended for use, on a worldwide basis, by administrations wishing to implement International Mobile Telecommunications-2000 (IMT-2000). Such use does not preclude the use of these bands by other services to which they are allocated. The bands should be made available for IMT-2000 in accordance with Resolution **212 (Rev.WRC-97)**. (WRC-97)
- S5.389** Not used
- S5.389A** The use of the bands 1 980 - 2 010 MHz and 2 170 - 2 200 MHz by the mobile-satellite service is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A** and to the provisions of Resolution **716 (WRC-95)**. The use of these bands shall not commence before 1 January 2000; however the use of the band 1 980 - 1 990 MHz in Region 2 shall not commence before 1 January 2005.
- S5.389B** The use of the band 1 980 - 1 990 MHz by the mobile-satellite service shall not cause harmful interference to or constrain the development of the fixed and mobile services in Argentina, Brazil, Canada, Chile, Ecuador, the United States, Honduras, Jamaica, Mexico, Peru, Suriname, Trinidad and Tobago, Uruguay and Venezuela.
- S5.389C** The use of the bands 2 010-2025 MHz and 2 160-2 170 MHz in Region 2 by the mobile-satellite service shall not commence before 1 January 2002 and is subject to coordination under No. **S9.11A** and to the provisions of Resolution **716 (WRC-95)**. (WRC-97)
- S5.389D** In Canada and the United States the use of the bands 2 010 - 2 025 MHz and 2 160 - 2 170 MHz by the mobile-satellite service shall not commence before 1 January 2000.
- S5.389E** The use of the bands 2 010 - 2 025 MHz and 2 160 - 2 170 MHz by the mobile-satellite service in Region 2 shall not cause harmful interference to or constrain the development of the fixed and mobile services in Regions 1 and 3.
- S5.389F** In Algeria, Benin, Cape Verde, Egypt, Mali, Syria and Tunisia, the use of the bands 1 980 - 2 010 MHz and 2 170 - 2 200 MHz by the mobile-satellite service shall neither cause harmful interference to the fixed and mobile services, nor hamper the development of those services prior to 1 January 2005, nor shall the former service request protection from the latter services.
- S5.390** In Argentina, Brazil, Chile, Colombia, Cuba, Ecuador and Suriname, the use of the bands 2 010-2025 MHz and 2 160-2 170 MHz by the mobile-satellite services shall not cause harmful interference to stations in the fixed and mobile services before 1 January 2005. After this date, the use of these bands is subject to coordination under No. **S9.11A** and to the provisions of Resolution **716 (WRC-95)**. (WRC-97)
- S5.391** In making assignments to the mobile service in the bands 2025-2 110 MHz and 2 200-2 290 MHz, administrations shall not introduce high-density mobile systems, as described in Recommendation ITU-R SA.1154, and

shall take that Recommendation into account for the introduction of any other type of mobile system. (WRC-97)

S5.392 Administrations are urged to take all practicable measures to ensure that space-to-space transmissions between two or more non-geostationary satellites, in the space research, space operations and Earth exploration-satellite services in the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz, shall not impose any constraints on Earth-to-space, space-to-Earth and other space-to-space transmissions of those services and in those bands between geostationary and non-geostationary satellites.

S5.392A *Additional allocation:* in Russia, the band 2 160 - 2 200 MHz is also allocated to the space research service (space-to-Earth) on a primary basis until 1 January 2005. Stations in the space research service shall not cause harmful interference to, or claim protection from, stations in the fixed and mobile services operating in this frequency band.

S5.393 *Additional allocation:* in the United States, India and Mexico, the band 2310-2360 MHz is also allocated to the broadcasting-satellite service (sound) and complementary terrestrial sound broadcasting service on a primary basis. Such use is limited to digital audio broadcasting and is subject to the provisions of Resolution **528 (WARC-92)**. (WRC-97)

S5.394 In the United States, the use of the band 2 300 - 2 390 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile services. In Canada, the use of the band 2 300 - 2 483.5 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile services.

S5.395 In France, the use of the band 2 310 - 2 360 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile service.

S5.396 Space stations of the broadcasting-satellite service in the band 2 310 - 2 360 MHz operating in accordance with No. **S5.393** that may affect the services to which this band is allocated in other countries shall be coordinated and notified in accordance with Resolution **33**. Complementary terrestrial broadcasting stations shall be subject to bilateral coordination with neighbouring countries prior to their bringing into use.

S5.397 *Different category of service:* in France, the band 2 450 - 2 500 MHz is allocated on a primary basis to the radiolocation service (see No. **S5.33**). Such use is subject to agreement with administrations having services operating or planned to operate in accordance with the Table of Frequency Allocations which may be affected.

S5.398 In respect of the radiodetermination-satellite service in the band 2 483.5 - 2 500 MHz, the provisions of No. **S4.10** do not apply.

S5.399 In Region 1, in countries other than those listed in No. **S5.400**, harmful interference shall not be caused to, or protection shall not be claimed from, stations of the radiolocation service by stations of the radiodetermination satellite service.

S5.400 *Different category of service:* in Angola, Australia, Bangladesh, Burundi, China, Eritrea, Ethiopia, India, the Islamic Republic of Iran, Jordan,

Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Dem. Rep. of the Congo, Syria, Sudan, Swaziland, Togo and Zambia, the allocation of the band 2483.5-2500 MHz to the radiodetermination-satellite service (space-to-Earth) is on a primary basis (see No. **S5.33**), subject to agreement obtained under No. **S9.21** from countries not listed in this provision. (WRC-97)

S5.401 Not used

S5.402 The use of the band 2483.5 - 2500 MHz by the mobile-satellite and the radiodetermination-satellite services is subject to the coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**. Administrations are urged to take all practicable steps to prevent harmful interference to the radio astronomy service from emissions in the 2483.5 - 2500 MHz band, especially those caused by second-harmonic radiation that would fall into the 4990 -5000 MHz band allocated to the radio astronomy service worldwide.

S5.403 Subject to agreement obtained under No. **S9.21**, the band 2520 - 2535 MHz (until 1 January 2005 the band 2500 - 2535 MHz) may also be used for the mobile-satellite (space-to-Earth), except aeronautical mobile-satellite, service for operation limited to within national boundaries. The provisions of Resolution **46 (Rev.WRC-95)/No. S9.11A** apply.

S5.403A *Additional allocation:* in Japan, subject to agreement obtained under No. **S9.21**, the band 2515 - 2535 MHz may also be used for the mobile-satellite service (space-to-Earth) for operation limited to within its national boundary from 1 January 2000.

S5.404 *Additional allocation:* in India and the Islamic Republic of Iran, the band 2500 - 2516.5 MHz may also be used for the radiodetermination-satellite service (space-to-Earth) for operation limited to within national boundaries, subject to agreement obtained under No. **S9.21**.

S5.405 *Additional allocation:* in France, the band 2500 - 2550 MHz is also allocated to the radiolocation service on a primary basis. Such use is subject to agreement with the administrations having services operating or planned to operate in accordance with the Table which may be affected.

S5.406 Not used

S5.407 In the band 2500 - 2520 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/m²/4 kHz) in Argentina, unless otherwise agreed by the administrations concerned.

S5.408 *Additional allocation:* in the United Kingdom, the band 2500 - 2600 MHz is also allocated to the radiolocation service on a secondary basis.

S5.409 Administrations shall make all practicable efforts to avoid developing new tropospheric scatter systems in the band 2500 - 2690 MHz.

S5.410 The band 2500 - 2690 MHz may be used for tropospheric scatter systems in Region 1, subject to agreement obtained under No. **S9.21**.

S5.411

When planning new tropospheric scatter radio-relay links in the band 2 500 - 2 690 MHz, all possible measures shall be taken to avoid directing the antennae of these links towards the geostationary-satellite orbit.

- S5.412** *Alternative allocation:* in Azerbaijan, Bulgaria, Kyrgyzstan, Turkmenistan and Ukraine, the band 2 500-2 690 MHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-97)
- S5.413** In the design of systems in the broadcasting-satellite service in the bands between 2 500 MHz and 2 690 MHz, administrations are urged to take all necessary steps to protect the radio astronomy service in the band 2 690 - 2 700 MHz.
- S5.414** The allocation of the frequency band 2 500 - 2 520 MHz to the mobile-satellite service (space-to-Earth) shall be effective on 1 January 2005 and is subject to coordination under Resolution **46 (Rev.WRC-95)**/No. **S9.11A**.
- S5.415** The use of the bands 2 500 - 2 690 MHz in Region 2 and 2 500 - 2 535 MHz and 2 655 - 2 690 MHz in Region 3 by the fixed-satellite service is limited to national and regional systems, subject to agreement obtained under No. **S9.21**, giving particular attention to the broadcasting-satellite service in Region 1. In the direction space-to-Earth, the power flux-density at the Earth's surface shall not exceed the values given in Article **S21**, Table S21-4.
- S5.415A** *Additional allocation:* in Japan, subject to agreement obtained under No. **S9.21**, 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 its national boundary from 1 January 2000. (WRC-97)
- S5.416** The use of the band 2 520 - 2 670 MHz by the broadcasting-satellite service is limited to national and regional systems for community reception, subject to agreement obtained under No. **S9.21**. The power flux-density at the Earth's surface shall not exceed the values given in Article **S21**, Table S21-4.
- S5.417** *Alternative allocation:* in Germany and Greece, the band 2 520 - 2 670 MHz is allocated to the fixed service on a primary basis.
- S5.418** *Additional allocation:* in Bangladesh, Belarus, China, Rep. of Korea, India, Japan, Pakistan, Russia, Singapore, Sri Lanka, Thailand and Ukraine the band 2 535 - 2 655 MHz is also allocated to the broadcasting-satellite service (sound) and complementary terrestrial broadcasting service on a primary basis. Such use is limited to digital audio broadcasting and is subject to provisions of Resolution **528 (WARC-92)**. The provisions of No. **S5.416** and Article **S21**, Table S21-4, do not apply to this additional allocation.
- S5.419** The allocation of the frequency band 2 670 - 2 690 MHz to the mobile-satellite service shall be effective from 1 January 2005. When introducing systems of the mobile-satellite service in this band, administrations shall take all necessary steps to protect the satellite systems operating in this band prior to 3 March 1992. The coordination of mobile-satellite systems in the band shall be in accordance with Resolution **46 (Rev.WRC-95)**/No. **S9.11A**.
- S5.420** The band 2 655 - 2 670 MHz (until 1 January 2005 the band 2 655 - 2 690 MHz) may also be used for the mobile-satellite (Earth-to-space),

except aeronautical mobile-satellite, service for operation limited to within national boundaries, subject to agreement obtained under No. **S9.21**. The coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A** applies.

S5.420A *Additional allocation:* in Japan, subject to agreement obtained under No. **S9.21**, the band 2 670-2 690 MHz may also be used for the aeronautical mobile-satellite service (Earth-to-space) for operation limited to within its national boundary from 1 January 2000. (WRC-97)

S5.421 *Additional allocation:* in Germany and Austria, the band 2 690 - 2 695 MHz is also allocated to the fixed service on a primary basis. Such use is limited to equipment in operation by 1 January 1985.

S5.422 *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Brunei Darussalam, the Central African Republic, the Congo, Côte d'Ivoire, Cuba, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Georgia, Guinea, Guinea-Bissau, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kazakstan, Lebanon, Malaysia, Mali, Morocco, Mauritania, Moldova, Mongolia, Nigeria, Oman, Uzbekistan, Pakistan, the Philippines, Qatar, Syria, Kyrgyzstan, Dem Rep. of the Congo, Romania, Russian Federation, Somalia, Tajikistan, Tunisia, Turkmenistan, Ukraine, Yemen, Yugoslavia and Zambia, the band 2 690-2 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985. (WRC-97)

S5.423 In the band 2 700 - 2 900 MHz, ground-based radars used for meteorological purposes are authorized to operate on a basis of equality with stations of the aeronautical radionavigation service.

S5.424 *Additional allocation:* in Canada, the band 2 850 - 2 900 MHz is also allocated to the maritime radionavigation service, on a primary basis, for use by shore-based radars.

S5.425 In the band 2 900 - 3 100 MHz, the use of the shipborne interrogator-transponder system (SIT) shall be confined to the sub-band 2 930 -2 950 MHz.

S5.426 The use of the band 2 900 - 3 100 MHz by the aeronautical radionavigation service is limited to ground-based radars.

S5.427 In the bands 2 900 - 3 100 MHz and 9 300 - 9 500 MHz, the response from radar transponders shall not be capable of being confused with the response from radar beacons (racons) and shall not cause interference to ship or aeronautical radars in the radionavigation service, having regard, however, to No. **S4.9** of these Regulations.

S5.428 *Additional allocation:* in Azerbaijan, Bulgaria, Cuba, Kazakstan, Mongolia, Poland, Kyrgyzstan, Romania, Turkmenistan and Ukraine, the band 3 100-3 300 MHz is also allocated to the radionavigation service on a primary basis. (WRC-97)

S5.429 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, China, the Congo, the Republic of Korea, the United Arab Emirates, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan,

Jordan, Kuwait, Lebanon, Libya, Malaysia, Oman, Pakistan, Qatar, Syria, Democratic People's Republic of Korea and Yemen, the band 3 300 - 3 400 MHz is also allocated to the fixed and mobile services on a primary basis. The countries bordering the Mediterranean shall not claim protection for their fixed and mobile services from the radiolocation service.

- S5.430** *Additional allocation:* in Azerbaijan, Bulgaria, Cuba, Mongolia, Poland, Kyrgyzstan, Romania, Turkmenistan and Ukraine, the band 3 300-3 400 MHz is also allocated to the radionavigation service on a primary basis. (WRC-97)
- S5.431** *Additional allocation:* in Germany, Israel, Nigeria and the United Kingdom, the band 3 400 - 3 475 MHz is also allocated to the amateur service on a secondary basis.
- S5.432** *Different category of service:* in the Republic of Korea, Indonesia, Japan and Pakistan, the allocation of the band 3 400-3 500 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. **S5.33**). (WRC-97)
- S5.433** In Regions 2 and 3, in the band 3 400 - 3 600 MHz the radiolocation service is allocated on a primary basis. However, all administrations operating radiolocation systems in this band are urged to cease operations by 1985. Thereafter, administrations shall take all practicable steps to protect the fixed-satellite service and coordination requirements shall not be imposed on the fixed-satellite service.
- S5.434** (SUP - WRC-97)
- S5.435** In Japan, in the band 3 620 - 3 700 MHz, the radiolocation service is excluded.
- S5.436** Not used
- S5.437** *Additional allocation:* in Germany and Norway, the band 4 200-4 210 MHz is also allocated to the fixed service on a secondary basis. (WRC-97)
- S5.438** Use of the band 4 200 - 4 400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground. However, passive sensing in the earth exploration-satellite and space research services may be authorized in this band on a secondary basis (no protection is provided by the radio altimeters).
- S5.439** *Additional allocation:* in China, the Islamic Republic of Iran and Libya, the band 4 200-4 400 MHz is also allocated to the fixed service on a secondary basis. (WRC-97)
- S5.440** The standard frequency and time signal-satellite service may be authorized to use the frequency 4 202 MHz for space-to-Earth transmissions and the frequency 6 427 MHz for Earth-to-space transmissions. Such transmissions shall be confined within the limits of ± 2 MHz of these frequencies, subject to agreement obtained under No. **S9.21**.

- S5.441** The use of the bands 4 500-4 800 MHz (space-to-Earth), 6 725-7 025 MHz (Earth-to-space) by the fixed-satellite service shall be in accordance with the provisions of Appendix **S30B**. 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 **S30B**. 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 non-geostationary-satellite systems in the fixed-satellite service shall be in accordance with the provisions of Resolution **130 (WRC-97)**. (WRC-97)
- S5.442** In the bands 4 825 - 4 835 MHz and 4 950 - 4 990 MHz, the allocation to the mobile service is restricted to the mobile, except aeronautical mobile, service.
- S5.443** *Different category of service:* in Argentina, Australia and Canada, the allocation of the bands 4 825 - 4 835 MHz and 4 950 - 4 990 MHz to the radio astronomy service is on a primary basis (see No. **S5.33**).
- S5.444** The band 5 000 - 5 150 MHz is to be used for the operation of the international standard system (microwave landing system) for precision approach and landing. The requirements of this system shall take precedence over other uses of this band. For the use of this band, No. **S5.444A** and Resolution **114 (WRC-95)** apply.
- S5.444A** *Additional allocation:* the band 5 091 - 5 150 MHz is also allocated to the fixed-satellite service (Earth-to-space) on a primary basis. This allocation is limited to feeder links of non-geostationary mobile-satellite systems and is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**.
- In the band 5 091 - 5 150 MHz, the following conditions also apply:
- prior to 1 January 2010, the use of the band 5 091 - 5 150 MHz by feeder links of non-geostationary-satellite systems in the mobile-satellite service shall be made in accordance with Resolution **114 (WRC-95)**;
 - prior to 1 January 2010, the requirements of existing and planned international standard systems for the aeronautical radionavigation service which cannot be met in the 5 000 - 5 091 MHz band, shall take precedence over other uses of this band;
 - after 1 January 2008, no new assignments shall be made to stations providing feeder links of non-geostationary mobile-satellite systems;
 - after 1 January 2010, the fixed-satellite service will become secondary to the aeronautical radionavigation service.
- S5.445** Not used
- S5.446** *Additional allocation:* in the countries listed in Nos. **S5.369** and **S5.400**, the band 5 150 - 5 216 MHz is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis, subject to agreement obtained under No. **S9.21**. In Region 2, the band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis. In Regions 1 and 3, except those countries listed in Nos. **S5.369** and **S5.400**, the

band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a secondary basis. The use by the radiodetermination-satellite service is limited to feeder links in conjunction with the radiodetermination-satellite service operating in the bands 1 610 - 1 626.5 MHz and/or 2 483.5 - 2 500 MHz. The total power flux-density at the Earth's surface shall in no case exceed -159 dBW/m² in any 4 kHz band for all angles of arrival.

S5.447 *Additional allocation:* in Germany, Austria, Belgium, Denmark, Spain, Finland, France, Greece, Israel, Italy, Japan, Jordan, Lebanon, Liechtenstein, Luxembourg, Malta, Morocco, Norway, Pakistan, the Netherlands, Portugal, Syria, the United Kingdom, Sweden, Switzerland and Tunisia, the band 5 150 - 5 250 MHz is also allocated to the mobile service, on a primary basis, subject to agreement obtained under No. **S9.21**.

S5.447A The allocation to the fixed-satellite service (Earth-to-space) is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**.

S5.447B *Additional allocation:* the band 5 150 - 5 216 MHz is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis. This allocation is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to provisions of Resolution **46 (Rev.WRC-95)/No. S9.11A**. The power flux-density at the Earth's surface produced by space stations of the fixed-satellite service operating in the space-to-Earth direction in the band 5 150 - 5 216 MHz shall in no case exceed -164 dB(W/m²) in any 4 kHz band for all angles of arrival.

S5.447C Administrations responsible for fixed-satellite service networks in the band 5 150 - 5 250 MHz operated under Nos. **S5.447A** and **S5.447B** shall coordinate on an equal basis in accordance with Resolution **46 (Rev.WRC-95)/No. S9.11A** with administrations responsible for non-geostationary-satellite networks operated under No. **S5.446** and brought into use prior to 17 November 1995. Satellite networks operated under No. **S5.446** brought into use after 17 November 1995 shall not claim protection from, and shall not cause harmful interference to, stations of the fixed-satellite service operated under Nos. **S5.447A** and **S5.447B**.

S5.447D 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)

S5.448 *Additional allocation:* in Austria, Azerbaijan, Bulgaria, Libya, Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Turkmenistan and Ukraine, the band 5 250-5 350 MHz is also allocated to the radionavigation service on a primary basis. (WRC-97)

S5.448A The use of the frequency band 5 250-5 350 MHz by the earth exploration-satellite (active) and space research (active) services shall not constrain the future development and deployment of the radiolocation service. (WRC-97)

- S5.448B** The earth exploration-satellite (active) service operating in the 5 350 - 5460 MHz shall not cause harmful interference to, or constrain the future development, of the aeronautical radionavigation service on a primary basis.
- S5.449** The earth exploration-satellite (active) service operating in the band 5 350-5 460 MHz shall not cause harmful interference to, or constrain the use and development of, the aeronautical radionavigation service. (WRC-97)
- S5.450** *Additional allocation:* in Austria, Azerbaijan, Bulgaria, the Islamic Republic of Iran, Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Turkmenistan and Ukraine, the band 5470-5 650 MHz is also allocated to the aeronautical radionavigation service on a primary basis. (WRC-97)
- S5.451** *Additional allocation:* in the United Kingdom, the band 5470 - 5 850 MHz is also allocated to the land mobile service on a secondary basis. The power limits specified in Nos. **S21.2**, **S21.3**, **S21.4** and **S21.5** shall apply in the band 5 725 - 5 850 MHz.
- S5.452** Between 5 600 MHz and 5 650 MHz, ground-based radars used for meteorological purposes are authorized to operate on a basis of equality with stations of the maritime radionavigation service.
- S5.453** *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Central African Republic, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guinea, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Madagascar, Malaysia, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Democratic People's Republic of Korea, Singapore, Swaziland, Tanzania, Chad, and Yemen, the band 5 650-5 850 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-97)
- S5.454** *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Mongolia, Uzbekistan, Kyrgyzstan, Russian Federation, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 5 670-5 725 MHz to the space research service is on a primary basis (see No. **S5.33**). (WRC-97)
- S5.455** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Kazakstan, Latvia, Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 5 670 - 5 850 MHz is also allocated to the fixed service on a primary basis (see No. **S5.33**)
- S5.456** *Additional allocation:* in Germany and in Cameroon, the band 5 755 - 5 850 MHz is also allocated to the fixed service on a primary basis.
- S5.457** Not used
- S5.458** In the band 6425 - 7075 MHz, passive microwave sensor measurements are carried out over the oceans. In the band 7075 - 7250 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 6425 - 7025 MHz and 7075 - 7250 MHz.

- S5.458A** In making assignments in the band 6 700 - 7 075 MHz to space stations of the fixed-satellite service, administrations are urged to take all practicable steps to protect spectral line observations of the radio astronomy service in the band 6 650 - 6 675.2 MHz from harmful interference from unwanted emissions.
- S5.458B** The space-to-Earth allocation to the fixed-satellite service in the band 6 700 - 7 075 MHz is limited to feeder links for non-geostationary satellite systems of the mobile-satellite service and is subject to coordination under Resolution **46 (Rev.WRC-95)/No. S9.11A**. The use of the band 6 700 - 7 075 MHz (space-to-Earth) by feeder links for non-geostationary satellite systems in the mobile-satellite service is not subject to No. **S22.2**.
- S5.458C** Administrations making submissions in the band 7 025 - 7 075 MHz (Earth-to-space) for geostationary-satellite systems in the fixed-satellite service after 17 November 1995 shall consult on the basis of relevant ITU-R Recommendations with the administrations that have notified and brought into use non-geostationary-satellite systems in this frequency band before 18 November 1995 upon request of the latter administrations. This consultation shall be with a view to facilitating shared operation of both geostationary-satellite systems in the fixed-satellite service and non-geostationary-satellite systems in this band.
- S5.459** *Additional allocation:* in 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. **S9.21**. (WRC-97)
- S5.460** *Additional allocation:* the band 7 145 - 7 235 MHz is also allocated to the space research (Earth-to-space) service on a primary basis, subject to agreement obtained under No. **S9.21**. The use of the band 7 145 -7 190 MHz is restricted to deep space; no emissions to deep space shall be effected in the band 7 190 - 7 235 MHz.
- S5.461** 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)
- S5.461A** 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)
- S5.461B** The use of the band 7 750-7 850 MHz by the meteorological-satellite service (space-to-Earth) is limited to non-geostationary satellite systems. (WRC-97)
- S5.462** (SUP - WRC-97)
- S5.462A**

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 provisional values for angles of arrival (θ), without the consent of the affected administration:

–174 dB(W/m²) in a 4 kHz band for $0^\circ \leq \theta < 5^\circ$

–174 + 0.5 ($\theta - 5$) dB(W/m²) in a 4 kHz band for $5^\circ \leq \theta < 25^\circ$

–164 dB(W/m²) in a 4 kHz band for $25^\circ \leq \theta \leq 90^\circ$

These values are subject to study under Resolution **124 (WRC-97)**. (WRC-97)

S5.463 Aircraft stations are not permitted to transmit in the band 8 025-8 400 MHz. (WRC-97)

S5.464 (SUP - WRC-97)

S5.465 In the space research service, the use of the band 8 400 - 8 450 MHz is limited to deep space.

S5.466 *Different category of service:* in Israel, Malaysia, Singapore and Sri Lanka, the allocation of the band 8 400-8 500 MHz to the space research service is on a secondary basis (see No. **S5.32**). (WRC-97)

S5.467 *Alternative allocation:* in the United Kingdom, the band 8 400 - 8 500 MHz is allocated to the radiolocation and space research services on a primary basis.

S5.468 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burundi, Cameroon, China, the Congo, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guyana, Indonesia, the Islamic Republic of Iran, Iraq, Jamaica, Jordan, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, Nigeria, Oman, Pakistan, Qatar, Syria, Democratic People's Republic of Korea, Senegal, Singapore, Somalia, Swaziland, Tanzania, Chad, Togo, Tunisia and Yemen, the band 8 500-8 750 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-97)

S5.469 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakstan, Lithuania, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the band 8 500 - 8 750 MHz is also allocated to the land mobile and radionavigation services on a primary basis.

S5.469A 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)

S5.470 The use of the band 8 750 - 8 850 MHz by the aeronautical radionavigation service is limited to airborne Doppler navigation aids on a centre frequency of 8 800 MHz.

- S5.471** *Additional allocation:* in Algeria, Germany, Bahrain, Belgium, China, the United Arab Emirates, France, Greece, Indonesia, the Islamic Republic of Iran, Libya, the Netherlands, Qatar and Sudan, the bands 8 825 - 8 850 MHz and 9 000 - 9 200 MHz are also allocated to the maritime radionavigation service, on a primary basis, for use by shore-based radars only.
- S5.472** In the bands 8 850 - 9 000 MHz and 9 200 - 9 225 MHz, the maritime radionavigation service is limited to shore-based radars.
- S5.473** *Additional allocation:* in Armenia, Austria, Azerbaijan, Belarus, Bulgaria, Cuba, Georgia, Hungary, Kazakstan, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Russia, Tajikistan, Turkmenistan and Ukraine, the bands 8 850 - 9 000 MHz and 9 200 - 9 300 MHz are also allocated to the radionavigation service on a primary basis.
- S5.474** In the band 9 200 - 9 500 MHz, search and rescue transponders (SART) may be used, having due regard to the appropriate ITU-R Recommendation (see also Article **S31**).
- S5.475** The use of the band 9 300 - 9 500 MHz by the aeronautical radionavigation service is limited to airborne weather radars and ground-based radars. In addition, ground-based radar beacons in the aeronautical radionavigation service are permitted in the band 9 300 - 9 320 MHz on condition that harmful interference is not caused to the maritime radionavigation service. In the band 9 300 - 9 500 MHz, ground-based radars used for meteorological purposes have priority over other radiolocation devices.
- S5.476** In the band 9 300 - 9 320 MHz in the radionavigation service, the use of shipborne radars, other than those existing on 1 January 1976, is not permitted until 1 January 2001.
- S5.476A** In the band 9 500-9 800 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 radionavigation and radiolocation services. (WRC-97)
- S5.477** *Different category of service:* in Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, the Islamic Republic of Iran, Iraq, Jamaica, Japan, Jordan, Kuwait, Lebanon, Liberia, Malaysia, Nigeria, Oman, Pakistan, Qatar, Democratic People's Republic of Korea, Singapore, Somalia, Sudan, Sweden, Trinidad and Tobago, and Yemen, the allocation of the band 9 800-10 000 MHz to the fixed service is on a primary basis (see No. **S5.33**). (WRC-97)
- S5.478** *Additional allocation:* in Azerbaijan, Bulgaria, Kazakstan, Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania, Turkmenistan and Ukraine, the band 9 800-10 000 MHz is also allocated to the radionavigation service on a primary basis. (WRC-97)
- S5.479** The band 9 975 - 10 025 MHz is also allocated to the meteorological-satellite service on a secondary basis for use by weather radars.

- S5.480** *Additional allocation:* in Brazil, Costa Rica, Ecuador, Guatemala, Honduras and Mexico, the band 10-10.45 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-97)
- S5.481** *Additional allocation:* in Germany, Angola, China, Ecuador, Spain, Japan, Morocco, Nigeria, Oman, Democratic People's Republic of Korea, Sweden, Tanzania and Thailand, the band 10.45 - 10.5 GHz is also allocated to the fixed and mobile services on a primary basis.
- S5.482** In the band 10.6 - 10.68 GHz, stations of the fixed and mobile, except aeronautical mobile, services shall be limited to a maximum equivalent isotropically radiated power of 40 dBW and the power delivered to the antenna shall not exceed -3 dBW. These limits may be exceeded subject to agreement obtained under No. **S9.21**. However, in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Bangladesh, Belarus, China, the United Arab Emirates, Georgia, India, Indonesia, the Islamic Republic of Iran, Iraq, Japan, Kazakstan, Kuwait, Latvia, Lebanon, Moldova, Nigeria, Uzbekistan, Pakistan, the Philippines, Qatar, Syria, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the restrictions on the fixed and mobile, except aeronautical mobile, services are not applicable.
- S5.483** *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, China, Colombia, the Republic of Korea, Costa Rica, Egypt, the United Arab Emirates, Georgia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kazakstan, Kuwait, Latvia, Lebanon, Moldova, Mongolia, Uzbekistan, Pakistan, Qatar, Kyrgyzstan, Democratic People's Republic of Korea, Romania, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Yemen and Yugoslavia, the band 10.68-10.7 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985. (WRC-97)
- S5.484** In Region 1, the use of the band 10.7 - 11.7 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service.
- S5.484A** 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 non-geostationary- and geostationary-satellite systems in the fixed-satellite service is subject to the provisions of Resolution **130 (WRC-97)**. The use of the band 17.8-18.1 GHz (space-to-Earth) by non-geostationary fixed-satellite service systems is also subject to the provisions of Resolution **538 (WRC-97)**. (WRC-97)
- S5.485** In Region 2, in the band 11.7 - 12.2 GHz, transponders on space stations in the fixed-satellite service may be used additionally for transmissions in the broadcasting-satellite service, provided that such transmissions do not have a maximum e.i.r.p. greater than 53 dBW per television channel and do not cause greater interference or require more protection from interference than the

coordinated fixed-satellite service frequency assignments. With respect to the space services, this band shall be used principally for the fixed-satellite service.

- S5.486** *Different category of service:* in Mexico and the United States, the allocation of the band 11.7 - 12.1 GHz to the fixed service is on a secondary basis (see No. **S5.32**).
- S5.487** In the band 11.7 - 12.5 GHz in Regions 1 and 3, the fixed, fixed-satellite, mobile, except aeronautical mobile, and broadcasting services, in accordance with their respective allocations, shall not cause harmful interference to broadcasting-satellite stations operating in accordance with the provisions of Appendix **S30**.
- S5.487A** *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 the provisions of Resolution **538 (WRC-97)**. (WRC-97)
- S5.488** The use of the bands 11.7 - 12.2 GHz by the fixed-satellite service in Region 2 and 12.2 - 12.7 GHz by the broadcasting-satellite service in Region 2 is limited to national and subregional systems. The use of the band 11.7 - 12.2 GHz by the fixed-satellite service in Region 2 is subject to previous agreement between the administrations concerned and those having services, operating or planned to operate in accordance with the Table, which may be affected (see Articles **S9** and **S11**). For the use of the band 12.2 - 12.7 GHz by the broadcasting-satellite service in Region 2, see Appendix **S30**.
- S5.489** *Additional allocation:* in Peru, the band 12.1 - 12.2 GHz is also allocated to the fixed service on a primary basis.
- S5.490** In Region 2, in the band 12.2 - 12.7 GHz, existing and future terrestrial radiocommunication services shall not cause harmful interference to the space services operating in conformity with the Broadcasting-Satellite Plan for Region 2 contained in Appendix **S30**.
- S5.491** *Additional allocation:* in Region 3, the band 12.2 - 12.5 GHz is also allocated to the fixed-satellite (space-to-Earth) service on a primary basis, limited to national and sub-regional systems. The power flux-density limits in Article **S21**, Table S21-4 shall apply to this frequency band. The introduction of the service in relation to the broadcasting-satellite service in Region 1 shall follow the procedures specified in Article 7 of Appendix **S30**, with the applicable frequency band extended to cover 12.2 - 12.5 GHz.
- S5.492** Assignments to stations of the broadcasting-satellite service in conformity with the appropriate regional Plan in Appendix **S30** may also be used for transmissions in the fixed-satellite service (space-to-Earth), provided that such transmissions do not cause more interference or require more protection from interference than the broadcasting-satellite service transmissions operating in conformity with this Plan. With respect to the space services, this band shall be used principally for the broadcasting-satellite service. (WRC-97)

- S5.493** 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 dB(W/m²)/27 MHz for all conditions and for all methods of modulation at the edge of the service area. (WRC-97)
- S5.494** *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Cameroon, the Central African Republic, the Congo, Côte d'Ivoire, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Madagascar, Mali, Morocco, Mongolia, Nigeria, Qatar, Dem. Rep. of the Congo, Syria, Senegal, Somalia, Sudan, Chad, Togo and Yemen, the band 12.5-12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-97)
- S5.495** *Additional allocation:* in Bosnia and Herzegovina, Croatia, Denmark, France, Greece, Liechtenstein, Monaco, Norway, Uganda, Portugal, Romania, Slovenia, Switzerland, Tanzania, Tunisia and Yugoslavia, the band 12.5-12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis. (WRC-97)
- S5.496** *Additional allocation:* in Austria, Azerbaijan, Kyrgyzstan, Turkmenistan and Ukraine, the band 12.5-12.75 GHz is also allocated to the fixed service and the mobile, except aeronautical mobile, service on a primary basis. However, stations in these services shall not cause harmful interference to fixed-satellite service earth stations of countries in Region 1 other than those 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 Article **S21**, Table **S21-4**, for the fixed-satellite service shall apply on the territory of the countries listed in this footnote. (WRC-97)
- S5.497** The use of the band 13.25 - 13.4 GHz by the aeronautical radionavigation service is limited to Doppler navigation aids.
- S5.498** (SUP - WRC-97)
- S5.498A** 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)
- S5.499** *Additional allocation:* in Bangladesh, India and Pakistan, the band 13.25 -14 GHz is also allocated to the fixed service on a primary basis.
- S5.500** *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Madagascar, Malaysia, Mali, Malta, Morocco, Mauritania, Nigeria, Pakistan, Qatar, Syria, Senegal, Singapore, Sudan, Chad and Tunisia, the band 13.4-14 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-97)

- S5.501** *Additional allocation:* in Austria, Azerbaijan, Bulgaria, Hungary, Japan, Mongolia, Kyrgyzstan, Romania, the United Kingdom, Turkmenistan and Ukraine, the band 13.4-14 GHz is also allocated to the radionavigation service on a primary basis. (WRC-97)
- S5.501A** The allocation of the band 13.4-13.75 GHz 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)
- S5.501B** 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)
- S5.502** In the band 13.75 - 14 GHz, the e.i.r.p. of any emission from an earth station in the fixed-satellite service shall be at least 68 dBW, and should not exceed 85 dBW, with a minimum antenna diameter of 4.5 metres. In addition the e.i.r.p., averaged over one second, radiated by a station in the radiolocation or radionavigation services towards the geostationary-satellite orbit shall not exceed 59 dBW.
- S5.503** In the band 13.75 - 14 GHz, geostationary space stations in the space research service for which information for advance publication has been received by the Bureau prior to 31 January 1992 shall operate on an equal basis with stations in the fixed-satellite service; after that date, new geostationary space stations in the space research service will operate on a secondary basis. The e.i.r.p. density of emissions from any earth station in the fixed-satellite service shall not exceed 71 dBW in any 6 MHz band in the frequency range 13.772 - 13.778 GHz until those geostationary space stations in the space research service for which information for advance publication has been received by the Bureau prior to 31 January 1992 cease to operate in this band. Automatic power control may be used to increase the e.i.r.p. density above 71 dBW in any 6 MHz band in this frequency range to compensate for rain attenuation, to the extent that the power-flux density at the fixed-satellite service space station does not exceed the value resulting from use of an e.i.r.p. of 71 dBW in any 6 MHz band in clear sky conditions.
- S5.503A** Until 1 January 2000, stations in the fixed-satellite service shall not cause harmful interference to non-geostationary space stations in the space research and Earth exploration-satellite services. After that date, these non-geostationary space stations will operate on a secondary basis in relation to the fixed-satellite service. Additionally, when planning earth stations in the fixed-satellite service to be brought into service between 1 January 2000 and 1 January 2001, in order to accommodate the needs of spaceborne precipitation radars operating in the band 13.793 - 13.805 GHz, advantage should be taken of the consultation process and the information given in Recommendation ITU-R SA.1071.

- S5.504** The use of the band 14 - 14.3 GHz by the radionavigation service shall be such as to provide sufficient protection to space stations of the fixed-satellite service (see Recommendation **708***).
- S5.505** *Additional allocation:* in Algeria, Angola, Saudi Arabia, Australia, Bahrain, Bangladesh, Botswana, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lesotho, Lebanon, Malaysia, Mali, Morocco, Mauritania, Oman, Pakistan, the Philippines, Qatar, Syria, the Democratic People's Republic of Korea, Senegal, Singapore, Somalia, Sudan, Swaziland, Tanzania, Chad and Yemen, the band 14-14.3 GHz is also allocated to the fixed service on a primary basis. (WRC-97)
- S5.506** The band 14 - 14.5 GHz may be used, within the fixed-satellite service (Earth-to-space), for feeder links for the broadcasting-satellite service, subject to coordination with other networks in the fixed-satellite service. Such use of feeder links is reserved for countries outside Europe.
- S5.507** Not used
- S5.508** *Additional allocation:* in Germany, Austria, Bosnia and Herzegovina, France, Greece, Ireland, Iceland, Italy, The Former Yugoslav Republic of Macedonia, Libya, Liechtenstein, Portugal, the United Kingdom, Slovenia, Switzerland, Turkey and Yugoslavia, the band 14.25-14.3 GHz is also allocated to the fixed service on a primary basis. (WRC-97)
- S5.509** *Additional allocation:* in Japan and Pakistan the band 14.25 - 14.3 GHz is also allocated to the mobile, except aeronautical mobile, service on a primary basis.
- S5.510** The use of the band 14.5 - 14.8 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. This use is reserved for countries outside Europe.
- S5.511** *Additional allocation:* in Saudi Arabia, Bahrain, Bosnia and Herzegovina, Cameroon, Egypt, the United Arab Emirates, Guinea, the Islamic Republic of Iran, Iraq, Israel, Kuwait, Lebanon, Libya, Pakistan, Qatar, Syria, Slovenia, Somalia and Yugoslavia, the band 15.35-15.4 GHz is also allocated to the fixed and mobile services on a secondary basis. (WRC-97)
- S5.511A** Use of the band 15.43-15.63 GHz by the fixed-satellite service (space-to-Earth (see Resolution **123 (WRC-97)**) and Earth-to-space) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under No. **S9.11A**. In the space-to-Earth direction, the minimum earth station elevation angle above and gain towards the local horizontal plane and the minimum coordination distances to protect an earth

* *Note by the Secretariat:* Recommendation 708 was abrogated by WARC-92.

station from harmful interference shall be in accordance with Recommendation ITU-R S.1341. Also in the space-to-Earth direction, harmful interference shall not be caused to stations of the radio astronomy service using the band 15.35-15.4 GHz. The threshold levels of interference and associated power flux-density limits which are detrimental to the radio astronomy service are given in Recommendation ITU-R RA.769-1. Special measures will need to be employed to protect the radio astronomy service in the band 15.35-15.4 GHz. (WRC-97)

S5.511B (SUP - WRC-97)

S5.511C Stations operating in the aeronautical radionavigation service shall limit the effective e.i.r.p. in accordance with Recommendation ITU-R S.1340. The minimum coordination distance required to protect the aeronautical radionavigation stations (No. **S4.10** 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. (WRC-97)

S5.511D Fixed-satellite service systems for which complete information for advance publication has been received by the Bureau by 21 November 1997 may operate in the bands 15.4-15.43 GHz and 15.63-15.7 GHz in the space-to-Earth direction and 15.63-15.65 GHz in the Earth-to-space direction. In the bands 15.4-15.43 GHz and 15.65-15.7 GHz, emissions from a non-geostationary space station shall not exceed the power flux-density limits at the Earth's surface of -146 dB(W/m²/MHz) for any angle of arrival. In the band 15.63-15.65 GHz, where an administration plans emissions from a non-geostationary space station that exceed -146 dB(W/m²/MHz) for any angle of arrival, it shall coordinate under No. **S9.11A** with the affected administrations. Stations in the fixed-satellite service operating in the band 15.63-15.65 GHz in the Earth-to-space direction shall not cause harmful interference to stations in the aeronautical radionavigation service (No. **S4.10** applies). (WRC-97)

S5.512 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Bosnia and Herzegovina, Brunei Darussalam, Cameroon, the Congo, Costa Rica, Egypt, El Salvador, the United Arab Emirates, Finland, Guatemala, India, Indonesia, the Islamic Republic of Iran, Jordan, Kuwait, Libya, Malaysia, Morocco, Mozambique, Nepal, Nicaragua, Oman, Pakistan, Qatar, Singapore, Slovenia, Somalia, Sudan, Swaziland, Tanzania, Chad, Yemen and Yugoslavia, the band 15.7-17.3 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-97)

S5.513 *Additional allocation:* in Israel, the band 15.7 - 17.3 GHz is also allocated to the fixed and mobile services on a primary basis. These services shall not claim protection from or cause harmful interference to services operating in accordance with the Table in countries other than those included in No. **S5.512**.

S5.513A 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)

- S5.514** *Additional allocation:* in Algeria, Germany, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Bosnia and Herzegovina, Cameroon, Costa Rica, El Salvador, the United Arab Emirates, Finland, Guatemala, Honduras, India, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Libya, Nepal, Nicaragua, Oman, Pakistan, Qatar, Slovenia, Sudan, Sweden and Yugoslavia, the band 17.3-17.7 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits given in Nos. **S21.3** and **S21.5** shall apply. (WRC-97)
- S5.515** In the band 17.3 - 17.8 GHz, sharing between the fixed-satellite service (Earth-to-space) and the broadcasting-satellite service shall also be in accordance with the provisions of section 1 of Annex 4 of Appendix **S30A**.
- S5.516** The use of the band 17.3-18.1 GHz by geostationary-satellite systems in the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. For the use of the band 17.3-17.8 GHz in Region 2 by feeder links for the broadcasting-satellite service in the band 12.2-12.7 GHz, see Article **S11**. 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 the provisions of Resolution **538 (WRC-97)**. (WRC-97)
- S5.517** In Region 2, the allocation to the broadcasting-satellite service in the band 17.3 - 17.8 GHz shall come into effect on 1 April 2007. After that date, use of the fixed-satellite (space-to-Earth) service in the band 17.7 - 17.8 GHz shall not claim protection from and shall not cause harmful interference to operating systems in the broadcasting-satellite service.
- S5.518** *Different category of service:* in Region 2, the allocation of the band 17.7 - 17.8 GHz to the mobile service is on a primary basis until 31 March 2007.
- S5.519** *Additional allocation:* the band 18.1 - 18.3 GHz is also allocated to the meteorological-satellite service (space-to-Earth) on a primary basis. Its use is limited to geostationary satellites and shall be in accordance with the provisions of Article **S21**, Table S21-4.
- S5.520** The use of the band 18.1 - 18.4 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service.
- S5.521** *Alternative allocation:* in Germany, Denmark, the United Arab Emirates, Greece, Slovakia and the Czech Republic, the 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. **S5.33**). The provisions of No. **S5.519** also apply. (WRC-97)
- S5.522** In making assignments to stations in the fixed and mobile services, administrations are invited to take account of passive sensors in the earth-exploration satellite and space research services operating in the band 18.6 - 18.8 GHz. In this band, administrations should endeavour to limit as far as possible both the power delivered by the transmitter to the antenna and the e.i.r.p. in order to reduce the risk of interference to passive sensors to the minimum.

- S5.523** In assigning frequencies to stations in the fixed-satellite service in the direction space-to-Earth, administrations are requested to limit as far as practicable the power flux-density at the Earth's surface in the band 18.6 - 18.8 GHz, in order to reduce the risk of interference to passive sensors in the earth exploration-satellite and space research services.
- S5.523A** The use of the bands 18.8-19.3 GHz (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. **S9.11A** and No. **S22.2** 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. **S9.11A** 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 **S4** notification information is considered as having been received by the Bureau prior to 18 November 1995. (WRC-97)
- S5.523B** The use of the band 19.3 - 19.6 GHz (Earth-to-space) by the FSS is limited to feeder links for non-GSO systems in the MSS. Such use is subject to the application of the provisions of Resolution **46 (Rev.WRC-95)/No. S9.11A**, and No. **S22.2** does not apply.
- S5.523C** No. **S22.2** of the Radio Regulations 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 **S4** coordination information, or notification information, is considered as having been received by the Bureau prior to 18 November 1995. (WRC-97)
- S5.523D** 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. **S9.11A**, but not subject to the provisions of No. **S22.2**. The use of this band for other non-geostationary fixed-satellite service systems, or for the cases indicated in Nos. **S5.523C** and **S5.523E**, is not subject to the provisions of No. **S9.11A** and shall continue to be subject to Articles **S9** (except No. **S9.11A**) and **S11** procedures, and to the provisions of No. **S22.2**. (WRC-97)
- S5.523E** No. **S22.2** of the Radio Regulations 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 **S4** coordination information, or notification information, is considered as having been received by the Bureau by 21 November 1997. (WRC-97)
- S5.524** *Additional allocation:* in Afghanistan, Algeria, Angola, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the

Republic of Korea, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Nigeria, Oman, Pakistan, the Philippines, Qatar, Dem. Rep. of the Congo, Syria, Democratic People's Republic of Korea, Singapore, Somalia, Sudan, Tanzania, Chad, Togo and Tunisia, the band 19.7-21.2 GHz is also allocated to the fixed and mobile services on a primary basis. This additional use shall not impose any limitation on the power flux-density of space stations in the fixed-satellite service in the band 19.7-21.2 GHz and of space stations in the mobile-satellite service in the band 19.7-20.2 GHz where the allocation to the mobile-satellite service is on a primary basis in the latter band. (WRC-97)

S5.525 In order to facilitate interregional coordination between networks in the mobile-satellite and fixed-satellite services, carriers in the mobile-satellite service that are most susceptible to interference shall, to the extent practicable, be located in the higher parts of the bands 19.7 - 20.2 GHz and 29.5 - 30 GHz.

S5.526 In the bands 19.7 - 20.2 GHz and 29.5 - 30 GHz in Region 2, and in the bands 20.1 - 20.2 GHz and 29.9 - 30 GHz in Regions 1 and 3, networks which are both in the fixed-satellite service and in the mobile-satellite service may include links between earth stations at specified or unspecified points or while in motion, through one or more satellites for point-to-point and point-to-multipoint communications.

S5.527 In the bands 19.7 - 20.2 GHz and 29.5 - 30 GHz, the provisions of No. **S4.10** do not apply with respect to the mobile-satellite service.

S5.528 The allocation to the mobile-satellite service is intended for use by networks which use narrow spot-beam antennas and other advanced technology at the space stations. Administrations operating systems in the mobile-satellite service in the band 19.7 - 20.1 GHz in Region 2 and in the band 20.1 - 20.2 GHz shall take all practicable steps to ensure the continued availability of these bands for administrations operating fixed and mobile systems in accordance with the provisions of No. **S5.524**.

S5.529 The use of the bands 19.7 - 20.1 GHz and 29.5 - 29.9 GHz by the mobile-satellite service in Region 2 is limited to satellite networks which are both in the fixed-satellite service and in the mobile-satellite service as described in No. **S5.526**.

S5.530 In Regions 1 and 3, the allocation to the broadcasting-satellite service in the band 21.4 - 22 GHz shall come into effect on 1 April 2007. The use of this band by the broadcasting-satellite service after that date and on an interim basis prior to that date is subject to the provisions of Resolution **525 (WARC-92)**.

S5.531 *Additional allocation:* in Japan, the band 21.4 - 22 GHz is also allocated to the broadcasting service on a primary basis.

S5.532 The use of the band 22.21 - 22.5 GHz by the earth exploration-satellite (passive) and space research (passive) services shall not impose constraints upon the fixed and mobile, except aeronautical mobile, services.

S5.533

The inter-satellite service shall not claim protection from harmful interference from airport surface detection equipment stations of the radionavigation service.

S5.534 *Additional allocation:* in Japan, the band 24.65 - 25.25 GHz is also allocated to the radionavigation service on a primary basis until 2008.

S5.535 In the band 24.75 - 25.25 GHz, feeder links to stations of the broadcasting-satellite service shall have priority over other uses in the fixed-satellite service (Earth-to-space). Such other uses shall protect and shall not claim protection from existing and future operating feeder-link networks to such broadcasting satellite stations.

S5.535A The use of the band 29.1-29.5 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. **S9.11A**, but not subject to the provisions of No. **S22.2**, except as indicated in Nos. **S5.523C** and **S5.523E** where such use is not subject to the provisions of No. **S9.11A** and shall continue to be subject to Articles **S9** (except No. **S9.11A**) and **S11** procedures, and to the provisions of No. **S22.2**. (WRC-97)

S5.536 Use of the 25.25 - 27.5 GHz band by the inter-satellite service is limited to space research and Earth exploration-satellite applications, and also transmissions of data originating from industrial and medical activities in space.

S5.536A Administrations installing earth exploration-satellite earth stations cannot claim protection from fixed and mobile stations operated by neighbouring administrations. In addition, earth stations operating in the earth exploration-satellite service should take into account Recommendation ITU-R SA.1278. (WRC-97)

S5.536B In Germany, Saudi Arabia, Austria, Belgium, Brazil, Bulgaria, China, the Republic of Korea, Denmark, Egypt, United Arab Emirates, Spain, Estonia, Finland, France, Hungary, India, Islamic Republic of Iran, Ireland, Israel, Italy, Jordan, Kenya, Kuwait, Lebanon, Libya, Liechtenstein, Lithuania, Moldova, Norway, Oman, Uganda, Pakistan, the Philippines, Poland, Portugal, Syria, Slovakia, Czech Republic, Romania, the United Kingdom, Singapore, Sweden, Switzerland, Tanzania, Turkey, Viet Nam and Zimbabwe, earth stations operating in the Earth exploration-satellite 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-97)

S5.537 Space services using non-geostationary satellites operating in the inter-satellite service in the band 27 - 27.5 GHz are exempt from the provisions of No. **S22.2**.

S5.538 *Additional allocation:* the bands 27.500 - 27.501 GHz and 29.999 - 30.000 GHz are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis for the beacon transmissions intended for up-link power control. Such space-to-Earth transmissions shall not exceed an equivalent isotropically radiated power (e.i.r.p.) of +10 dBW in the direction of

adjacent satellites on the geostationary-satellite orbit. In the band 27.500 - 27.501 GHz, such space-to-Earth transmissions shall not produce a power flux-density in excess of the values specified in Article **S21**, Table S21-4 on the Earth's surface.

S5.539 The band 27.5 - 30 GHz may be used by the fixed-satellite service (Earth-to-space) for the provision of feeder links for the broadcasting-satellite service.

S5.540 *Additional allocation:* the band 27.501 - 29.999 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a secondary basis for beacon transmissions intended for up-link power control.

S5.541 In the band 28.5 - 30 GHz, the earth exploration-satellite service is limited to the transfer of data between stations and not to the primary collection of information by means of active or passive sensors.

S5.541A Feeder links of non-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 **S4** 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 **S4** information for coordination before this date are encouraged to utilize these techniques to the extent practicable. These methods are also subject to review by ITU-R (see Resolution **121 (Rev.WRC-97)**). (WRC-97)

S5.542 *Additional allocation:* in Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guinea, India, the Islamic Republic of Iran, Iraq, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Pakistan, the Philippines, Qatar, Syria, Democratic People's Republic of Korea, Somalia, 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. **S21.3** and **S21.5** shall apply. (WRC-97)

S5.543 The band 29.95 - 30 GHz may be used for space-to-space links in the earth exploration-satellite service for telemetry, tracking, and control purposes, on a secondary basis.

S5.544 In the band 31 - 31.3 GHz the power flux-density limits specified in Article **S21**, Table S21-4 shall apply to the space research service.

S5.545 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Mongolia, Kyrgyzstan, Russian Federation, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 31-31.3 GHz to the space research service is on a primary basis (see No. **S5.33**). (WRC-97)

- S5.546** *Different category of service:* in Saudi Arabia, Armenia, Azerbaijan, Belarus, Bulgaria, Egypt, United Arab Emirates, Spain, Estonia, Finland, Georgia, Hungary, the Islamic Republic of Iran, Israel, Jordan, Kazakstan, Latvia, Lebanon, Moldova, Mongolia, Uzbekistan, Poland, Syria, Kyrgyzstan, Romania, the United Kingdom, Russian Federation, Tajikistan, Turkmenistan, Turkey and Ukraine, the allocation of the band 31.5-31.8 GHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **S5.33**). (WRC-97)
- S5.547** The bands 31.8-33.4 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 **726 (WRC-97)**). (WRC-97)
- S5.547A** Use of the band 31.8-33.4 GHz by the fixed service shall be in accordance with Resolution **126 (WRC-97)**. (WRC-97)
- S5.547B** *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)
- S5.547C** *Alternative allocation:* in the United States, the band 32-32.3 GHz is allocated to the inter-satellite, radionavigation and space research (deep space) (space-to-Earth) services on a primary basis. (WRC-97)
- S5.547D** *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)
- S5.547E** *Alternative allocation:* in the United States, the band 33-33.4 GHz is allocated to the radionavigation service on a primary basis. (WRC-97)
- S5.548** In designing systems for the inter-satellite and radionavigation services in the band 32 - 33 GHz, and for the space research service (deep space) in the band 31.8 - 32.3 GHz, administrations shall take all necessary measures to prevent harmful interference between these services, bearing in mind the safety aspects of the radionavigation service (see Recommendation **707**).
- S5.549** *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Egypt, the United Arab Emirates, Gabon, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malaysia, Mali, Malta, Morocco, Mauritania, Nepal, Nigeria, Oman, Pakistan, the Philippines, Qatar, Dem. Rep. of the Congo, Syria, Senegal, Singapore, Somalia, 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-97)
- S5.550** *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Kazakstan, Mongolia, Uzbekistan, Kyrgyzstan, Russian Federation, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 34.7-35.2 GHz to the space research service is on a primary basis (see No. **S5.33**). (WRC-97)

- (SUP - WRC-97)
- S5.551**
- S5.551A** In the band 35.5-36.0 GHz, 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 meteorological aids service and other services allocated on a primary basis. (WRC-97)
- S5.551B** The use of the band 41.5-42.5 GHz by the fixed-satellite service (space-to-Earth) is subject to Resolution **128 (WRC-97)**. (WRC-97)
- S5.551C** *Alternative allocation:* in the French overseas territories in Regions 2 and 3, the Republic of Korea and India, the band 40.5-42.5 GHz is allocated to the broadcasting, broadcasting-satellite and fixed services on a primary basis. (WRC-97)
- S5.551D** *Additional allocation:* in Algeria, Saudi Arabia, Bahrain, Benin, Cameroon, Egypt, United Arab Emirates, Israel, Jordan, Kuwait, Lebanon, Libya, Mali, Morocco, Mauritania, Nigeria, Oman, Qatar, Syria, Tunisia and Yemen, the band 40.5-42.5 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis. The use of this band by the fixed-satellite service shall be in accordance with Resolution **134 (WRC-97)**. (WRC-97)
- S5.551E** Use of the band 40.5-42.5 GHz by the fixed-satellite service shall be in accordance with Resolution **134 (WRC-97)**. (WRC-97)
- S5.551F** *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. **S5.33**). (WRC-97)
- S5.552** The allocation of the spectrum for the fixed-satellite service in the bands 42.5 - 43.5 GHz and 47.2 - 50.2 GHz for Earth-to-space transmission is greater than that in the band 37.5 - 39.5 GHz for space-to-Earth transmission in order to accommodate feeder links to broadcasting satellites. Administrations are urged to take all practicable steps to reserve the band 47.2 - 49.2 GHz for feeder links for the broadcasting-satellite service operating in the band 40.5 - 42.5 GHz.
- S5.552A** The allocation to the fixed service in the bands 47.2-47.5 GHz and 47.9-48.2 GHz is designated for use by high altitude platform stations. The use of the bands 47.2-47.5 GHz and 47.9-48.2 GHz is subject to the provisions of Resolution **122 (WRC-97)**. (WRC-97)
- S5.553** In the bands 43.5 - 47 GHz, 66 - 71 GHz, 95 - 100 GHz, 134 - 142 GHz, 190 - 200 GHz and 252 - 265 GHz, stations in the land mobile service may be operated subject to not causing harmful interference to the space radiocommunication services to which these bands are allocated (see No. **S5.43**).
- S5.554** In the bands 43.5 - 47 GHz, 66 - 71 GHz, 95 -100 GHz, 134 - 142 GHz, 190 - 200 GHz and 252 - 265 GHz, satellite links connecting land stations at specified fixed points are also authorized when used in conjunction with the mobile-satellite service or the radionavigation-satellite service.

- S5.555** *Additional allocation:* the bands 48.94 - 49.04 GHz, 97.88 - 98.08 GHz, 140.69 - 140.98 GHz, 144.68 - 144.98 GHz, 145.45 - 145.75 GHz, 146.82 - 147.12 GHz, 250 - 251 GHz and 262.24 - 262.76 GHz are also allocated to the radio astronomy service on a primary basis.
- S5.555A** The band 50.2-50.4 GHz is also allocated, on a primary basis, to the fixed and mobile services until 1 July 2000. (WRC-97)
- S5.556** In the bands 51.4 - 54.25 GHz, 58.2 - 59 GHz, 64 - 65 GHz, 72.77 - 72.91 GHz and 93.07 - 93.27 GHz, radio astronomy observations may be carried out under national arrangements.
- S5.556A** 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/m²/100 MHz) for all angles of arrival. (WRC-97)
- S5.556B** *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)
- S5.557** *Additional allocation:* in Japan, the band 55.78-58.2 GHz is also allocated to the radiolocation service on a primary basis. (WRC-97)
- S5.558** In the bands 55.78 - 58.2 GHz, 59 - 64 GHz, 66 - 71 GHz, 116 - 134 GHz, 170 - 182 GHz and 185 - 190 GHz, stations in the aeronautical mobile service may be operated subject to not causing harmful interference to the inter-satellite service (see No. **S5.43**).
- S5.558A** 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/m²/100 MHz) for all angles of arrival. (WRC-97)
- S5.559** In the bands 59 - 64 GHz and 126 - 134 GHz, airborne radars in the radiolocation service may be operated subject to not causing harmful interference to the inter-satellite service (see No. **S5.43**).
- S5.560** In the band 78 - 79 GHz radars located on space stations may be operated on a primary basis in the earth exploration-satellite service and in the space research service.
- S5.561** In the band 84 - 86 GHz, stations in the fixed, mobile and broadcasting services shall not cause harmful interference to broadcasting-satellite stations operating in accordance with the decisions of the appropriate frequency assignment planning conference for the broadcasting-satellite service.
- S5.562**

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)

S5.563

Additional allocation: in the United Kingdom, the band 182 - 185 GHz is also allocated to the fixed and mobile services on a primary basis.

S5.564

Additional allocation: in Germany, Argentina, Spain, Finland, France, India, Italy and the Netherlands, the band 261-265 GHz is also allocated to the radio astronomy service on a primary basis. (WRC-97)

S5.565

The frequency band 275 - 400 GHz may be used by administrations for experimentation with, and development of, various active and passive services. In this band a need has been identified for the following spectral line measurements for passive services:

- radio astronomy service: 278 - 280 GHz and 343 - 348 GHz;
- space research service (passive) and earth exploration-satellite service (passive): 275 - 277 GHz, 300 - 302 GHz, 324 - 326 GHz, 345 - 347 GHz, 363 - 365 GHz and 379 - 381 GHz.

Future research in this largely unexplored spectral region may yield additional spectral lines and continuum bands of interest to the passive services. Administrations are urged to take all practicable steps to protect these passive services from harmful interference until the next competent world radio conference.